EXPRESS TERMS
FOR
PROPOSED BUILDING STANDARDS
OF THE
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
REGARDING THE ADOPTION OF THE
2019 CALIFORNIA RESIDENTIAL CODE (CRC)
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2.5

(HCD 14-18)

The Department of Housing and Community Development (HCD) proposes to adopt the 2018 edition of the International Residential Code (IRC) for codification into the 2019 edition of the California Residential Code (CRC) as presented on the following pages, including any necessary amendments.

LEGEND FOR EXPRESS TERMS:

1. **IRC language with new California amendments:** IRC language shown in normal Arial 9-point; California amendments to IRC text shown *underlined and in italics* with vertical bar in left margin.

2. **Existing California amendments being modified**: All such language shown in *italics,* modified language is *underlined* or shown in ~~*strikeout*~~ with vertical bar in left margin.

3. **Repealed text**: All language shown in ~~strikeout~~, with vertical bar in left margin.

4. **Existing California amendments to the model code not being modified***:* All such existing language shown in *italics,* modified model code language shown in ~~strikeout~~.

5. **Existing California amendments not being modified**: Section number and title followed by "No change to text."

6. **Amended, adopted or repealed language after 45-day public comment period or public hearing:** All language is shown in double underline or ~~double strikeout~~, with vertical bar in left margin.

7. **Notation:** Authority and Reference citations are provided at the end of each action.

Acronyms:

CBC	California Building Code
CEC	California Electrical Code
CMC	California Mechanical Code
CPC	California Plumbing Code
CRC	California Residential Code
CALGreen	California Green Building Standards Code
HCD	Department of Housing and Community Development

SUMMARY OF REGULATORY ACTION

HCD PROPOSES TO:

- Repeal the 2015 edition of the International Residential Code (IRC)
- Repeal the 2016 edition of the California Residential Code (CRC), including existing California amendments to the model code that are no longer necessary
- Adopt sections from the 2018 IRC into the 2019 CRC **without amendments**
- Adopt sections from the 2018 IRC into the 2019 CRC **with existing amendments**
- Bring forward existing California amendments from the 2016 CRC for adoption into the 2019 CRC **without modifications**
- Bring forward existing California amendments from the 2016 CRC for adoption into the 2019 CRC **with nonsubstantive editorial modifications**
- Adopt sections from the 2018 CRC into the 2019 CRC **with new amendments that do not change the regulatory effect**
- Bring forward existing California amendments from the 2016 CRC for adoption into the 2019 CRC **with new modifications that do not change the regulatory effect**
- Adopt sections from the 2018 IRC into the 2019 CRC **with new amendments**
- Bring forward existing California amendments from the 2016 CRC for adoption into the 2019 CRC **with modifications**
- Adopt new amendments into the 2019 CRC
- Not adopt specified sections of the 2018 IRC

1. HCD proposes to bring forward existing California Amendments in Chapter 1, Division I, Sections 1.1 and 1.8, from the 2016 California Residential Code for adoption into the 2019 California Residential Code with modifications as follows:

CHAPTER 1
SCOPE AND ADMINISTRATION

DIVISION I
CALIFORNIA ADMINISTRATION

SECTION 1.1
GENERAL

1.1.1 Title. *These regulations shall be known as the California Residential Code, may be cited as such and will be referred to herein as "this code." The California Residential Code is Part 2.5 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 ~~2015~~ 2018 International Residential Code of the International Code Council with necessary California amendments.*

1.1.2 Purpose. *(No change to text)*

1.1.3 Scope. *(No change to text)*

1.1.3.1 Classification. *(No change to text)*

1.1.3.1.1 Residential Group R. *Residential Group R includes, among others, the use of a building or structure, or a portion thereof, for sleeping purposes when not classified as an Institutional Group I. Residential occupancies shall include the following:*

R-3 Residential occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-2.1, R-3.1, R-4 or I, including:

Buildings that do not contain more than two dwelling units.
Townhouses not more than three stories above grade in height with a separate means of egress.
Adult facilities that provide accommodations for six or fewer persons of any age for less than 24-hours.
Licensing categories that may use this classification include, but are not limited to:
Adult Day Programs.
Child care facilities that provide accommodations for six or fewer persons of any age for less than 24-hours.
Licensing categories that may use this classification include, but are not limited to:
Day-care Center for Mildly Ill Children, Infant Care Center and School Age Child Day-care Center.

Family Day-care Homes that provide accommodations for 14 or fewer children, in the provider's own home for less than 24-hours.
Congregate living facilities or congregate residences with 16 or fewer persons.

R-3.1 This occupancy group may include facilities licensed by a governmental agency for a residentially based 24-hour care facility providing accommodations for six or fewer clients of any age. Clients may be classified as ambulatory, nonambulatory or bedridden. A Group R-3.1 occupancy shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in Section R335 Special Provisions For Licensed 24-Hour Care Facilities in a Group R-3.1 Occupancy. This group may include:

Adult Residential Facilities ~~Congregate Living~~
Congregate Living Health Facilities
Foster Family Homes
Group Homes
Intermediate Care Facilities for the developmentally disabled habilitative
Intermediate Care Facilities for the developmentally disabled nursing
Nurseries for the full-time care of children under the age of six, but not including "infants" as defined in Section 202
Residential Care Facilities for the Elderly
Small Family Homes and Residential Care Facilities for the chronically ill

Exception: *Foster Family Homes or Group Homes licensed by the Department of Social Services which provide nonmedical board, room and care for six or fewer ambulatory children or children two years of age or younger, and which do not have any nonambulatory clients shall not be subject to regulations found in Section R335.*

Pursuant to Health and Safety Code Section 13143 with respect to these exempted facilities, no city, county or public district shall adopt or enforce any requirement for the prevention of fire or for the protection of life and property against fire and panic unless the requirement would be applicable to a structure regardless of the special occupancy. Nothing shall restrict the application of state or local housing standards to such facilities if the standards are applicable to residential occupancies and are not based on the use of the structure as a facility for ambulatory children. For the purpose of this exception, ambulatory children does not include relatives of the licensee or the licensee's spouse.

Large Family Day-Care Homes. See Section R336.

1.1.3.1.2 Utility and Miscellaneous Group U. *(No change to text)*

1.1.3.2 Regulated buildings, structures and applications. *The model code, state amendments to the model code, and/or state amendments where there are no relevant model code provisions shall apply to detached one- and two-family dwellings, lodging houses, live/work units, townhouses, and structures accessory thereto. State agencies with regulatory authority as specified in Sections 1.2 through 1.14, except where modified by local ordinance pursuant to Section 1.1.8. When adopted by a state agency, the provisions of this code shall be enforced by the appropriate enforcing agency, but only to the extent of authority granted to such agency by the state legislature.*

Note: *See Preface to distinguish the model code provisions from the California provisions.*

1. *One- and two-family dwellings, townhouses, employee housing, factory-built housing and other types of dwellings containing sleeping accommodations with common toilets or cooking facilities. See Section 1.8.2.1.1.*
2. *Permanent buildings and permanent accessory buildings or structures constructed within mobile-home parks and special occupancy parks regulated by the Department of Housing and Community Development. See Section 1.8.2.1.3.*

1.1.4 Appendices. *(No change to text)*

1.1.5 Referenced codes. *(No change to text)*

1.1.6 Nonbuilding standards, orders and regulations. *(No change to text)*

1.1.7 Order of precedence and use. *(No change to text)*

1.1.7.1 Differences. *(No change to text)*

1.1.7.2 Specific provisions. *(No change to text)*

1.1.7.3 Conflicts. *(No change to text)*

1.1.7.3.1 Detached one- and two-family dwellings. *Detached one-and two-family dwellings, lodging houses, live/work units, townhouses not more than three stories above grade plane in height with a separate means of egress, and their accessory structures may be designed and constructed in accordance with this code or the California Building Code, but not both, unless the proposed structure(s) or element(s) exceed the design limitations established in this code, and the code user is specifically directed by this code to use the California Building Code.*

1.1.8 City, county, or city and county amendments, additions or deletions. *(No change to text)*

1.1.8.1 Findings and filings.

1. The city, county, or city and county shall make express findings for each amendment, addition or deletion based upon climatic, topographical or geological conditions.

Exception*: Hazardous building ordinances and programs mitigating unreinforced masonry buildings.*

2. The city, county, or city and county shall file the amendments, additions or deletions expressly marked and identified as to the applicable findings. Cities, counties, cities and counties, and fire departments shall file the amendments, additions or deletions, and the findings with the California Building Standards Commission at 2525 Natomas Park Drive, Suite 130, Sacramento, CA 95833.

3. Findings prepared by fire protection districts shall be ratified by the local city, county, or city and county and filed with the California Department of Housing and Community Development, Division of Codes and Standards, P.O. Box 1407, Sacramento, CA 95812-1407 or 2020 ~~W.~~ West El Camino Avenue, Suite ~~250~~ 200, Sacramento, CA 95833-1829.

***1.1.9 Effective date of this code**. Only those standards approved by the California Building Standards Commission that are effective at the time an application for building permit is submitted shall apply to the plans and specifications for, and to the construction performed under, that permit. For the effective dates of the provisions contained in this code, see the History Note page of this code.*

***(HCD 1 & HCD 2) Exception:** Plans approved by the Department of Housing and Community Development or a Department-approved design approval agency for factory built housing as defined by Health and Safety Code Section 19971. Approved plans, pursuant to the California Code of Regulations, Title 25, Division 1, Chapter 3, Subchapter 1, Article 3, Section 3048 remain valid for a period of 36 months from the date of plan approval.*

***1.1.10 Availability of codes.** (No change to text)*

***1.1.11 Format.** This part fundamentally adopts the International Residential Code by reference on a chapter-by-chapter basis. When a specific chapter of the International Residential Code is not printed in the code and is marked "Reserved", such chapter of the International Residential Code is not adopted as a portion of this code. When a specific chapter of the International Residential Code is marked "Not Adopted by the State of California" but appears in the code, it may be available for adoption by local ordinance.*

***Note:** Matrix Adoption Tables at the front of each chapter may aid the code user in determining which chapter or sections within a chapter are applicable to buildings under the authority of a specific state agency, but they are not to be considered regulatory.*

***1.1.12 Validity.** (No change to text)*

SECTION 1.8
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT (HCD)

***1.8.1 Purpose.** (No change to text)*

SECTION 1.8.2
AUTHORITY AND ABBREVIATIONS

***1.8.2.1 General.** (No change to text)*

***1.8.2.1.1 Housing construction.** (No change to text)*

1.8.2.1.2 Housing accessibility.

***Application** – Covered multifamily dwellings as defined in Chapter 2 of the California Building Code including, but not limited to, lodging houses, dormitories, timeshares, condominiums, shelters for homeless persons, congregate residences, apartments, dwellings, employee housing, factory-built housing and other types of dwellings containing sleeping accommodations with or without common toilet or cooking facilities.*

~~Disabled access regulations promulgated under HCD authority are located in Chapter 11A of the California Building Code and are identified by the abbreviation "HCD 1-AC."~~ Sections of this code identified by the abbreviation "HCD 1-AC" require specific accommodations for persons with disabilities as defined in Chapter 2 of the California Building Code. The application of such provisions shall be in conjunction with other requirements of the Building Standards Code and apply only to newly constructed covered multifamily dwellings as defined in Chapter 2 of the California Building Code. "HCD 1-AC" applications include, but are not limited to, the following:

1. All newly constructed covered multifamily dwellings as defined in Chapter 2 of the California Building Code.

2. *New common use areas as defined in Chapter 2 of the California Building Code serving existing covered multifamily dwellings.*

3. *Additions to existing buildings, where the addition alone meets the definition of covered multifamily dwellings as defined in Chapter 2 of the California Building Code.*

4. *New ~~C~~common use areas serving new covered multifamily dwellings.*

5. *Where any portion of a building's exterior is preserved, but the interior of the building is removed, including all structural portions of floors and ceilings, the building is considered a new building for ~~the purpose of~~ determining the application of California Building Code, Chapter 11A.*

"HCD 1-AC" building standards generally do not apply to public use areas or public accommodations such as hotels and motels, ~~or~~ and public housing. Public use areas, public accommodations, and public housing, as defined in Chapter 2 of the California Building Code, are subject to the Division of the State Architect (DSA-AC) in Chapter 11B and are referenced in California Building Code Section 1.9.1.

Enforcing Agency–*Local building department or the Department of Housing and Community Development.*

Authority cited–*Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.*

Reference–*Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.*

1.8.2.1.3 Permanent buildings in mobilehome parks and special occupancy parks. *(No change to text)*

SECTION 1.8.3
LOCAL ENFORCING AGENCY

1.8.3.1 Duties and powers. *The building department of every city, county, or city and county shall enforce all the provisions of law, this code, and the other rules and regulations promulgated by the Department of Housing and Community Development pertaining to the installation, erection, construction, reconstruction, movement, enlargement, conversion, alteration, repair, removal, demolition or arrangement of apartments, condominiums, hotels, motels, lodging houses and dwellings, including accessory buildings, facilities and uses thereto.*

The provisions regulating the erection and construction of dwellings and appurtenant structures shall not apply to existing structures as to which construction is commenced or approved prior to the effective date of these regulations. Requirements relating to use, maintenance and occupancy shall apply to all dwellings and appurtenant structures approved for construction or constructed before or after the effective date of this code.

For additional information regarding the use and occupancy of existing buildings and appurtenant structures, see California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1, commencing with Article 1, Section 1.

For additional requirements regarding additions, alterations, or repairs to existing buildings and appurtenant structures, see the California Existing Building Code.

1.8.3.2 Laws, rules and regulations. *(No change to text)*

1.8.3.2.1 State Housing Law. (*No change to text)*

1.8.3.2.2 Mobilehome Parks Act. *(No change to text)*

1.8.3.2.3 Special Occupancy Parks Act. *(No change to text)*

1.8.3.2.4 Employee Housing Act. *(No change to text)*

1.8.3.2.5 Factory-Built Housing Law. *(No change to text)*

SECTION 1.8.4
PERMITS, FEES, APPLICATIONS AND INSPECTIONS

1.8.4.1 Permits. *(No change to text)*

1.8.4.2 Fees. *(No change to text)*

1.8.4.3 Plan review and time limitations. *(No change to text)*

1.8.4.3.1 Retention of plans. (No change to text)

1.8.4.4 Inspections. *Construction or work for which a permit is required shall be subject to inspection by the building official~~,~~ and such construction or work shall remain accessible and exposed for inspection purposes until approved. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or other regulations of the Department of Housing and Community Development. Required inspections are listed in Chapter 1, Scope and Application, Division II, Administration, Sections R109.1.1, R109.1.1.1, R109.1.3, R109.1.4, R109.1.4.1, R109.1.4.2, R109.1.5, R109.1.5.1, R109.1.5.2, R109.1.5.3, R109.1.6, R109.1.6.1 and R109.1.6.2.*

SECTION 1.8.5
RIGHT OF ENTRY FOR ENFORCEMENT

1.8.5.1 General. *(No change to text)*

SECTION 1.8.6
LOCAL MODIFICATION BY ORDINANCE OR REGULATION

1.8.6.1 General. *(No change to text)*

1.8.6.2 Findings, filings and rejections of local modifications. *(No change to text)*

SECTION 1.8.7
ALTERNATE MATERIALS, DESIGNS, TESTS AND METHODS OF CONSTRUCTION

1.8.7.1 General. *The provisions of this code, as adopted by the Department of Housing and Community Development, are not intended to prevent the use of any alternate material, appliance, installation, device, arrangement, design or method of construction not specifically prescribed by this code. Consideration and approval of alternates shall comply with Section 1.8.7.2 for local building departments and Section 1.8.7.3 for the Department of Housing and Community Development.*

1.8.7.2 Local building departments. *(No change to text)*

1.8.7.2.1 Approval of alternates. *(No change to text)*

1.8.7.3 Department of Housing and Community Development*. (No change to text)*

SECTION 1.8.8
APPEALS BOARD

1.8.8.1 General. *(No change to text)*

1.8.8.2 Definitions. *(No change to text)*

1.8.8.3 Appeals. *(No change to text)*

SECTION 1.8.9
UNSAFE BUILDINGS OR STRUCTURES

1.8.9.1 Authority to enforce. *(No change to text)*

1.8.9.2 Actions and proceedings. *(No change to text)*

SECTION 1.8.10
OTHER BUILDING REGULATIONS

~~***1.8.10.1 Existing structures.*** *Subject to the requirements of California Health and Safety Code Sections 17912, 17920.3, 17922, 17922.3, 17958.8 and 17958.9, provisions relating to existing structures (additions, alterations and repairs) shall only apply as identified in the California Existing Building Code, Matrix Adoption Table under the authority of the Department of Housing and Community Development as listed in Sections 1.8.2.1.1 through 1.8.2.1.3 of this code.*~~

1.8.10.1 Existing structures. *Notwithstanding other provisions of law, the replacement, retention, and extension of original materials and the use of original methods of construction for any existing building or accessory structure, or portions thereof, shall be permitted in accordance with the provisions of this code and the California Existing Building Code, as adopted by the Department of Housing and Community Development. For additional information, see California Health and Safety Code, Sections 17912, 17920.3, 17922 and 17958.8.*

~~***1.8.10.2 Moved structures.*** *Subject to the requirements of California Health and Safety Code Sections 17922.3 and 17958.9, provisions relating to a moved residential structure are located in the California Existing Building Code and shall only apply as identified in the California Existing Building Code Matrix Adoption Table under the authority of the Department of Housing and Community Development as listed in Sections 1.8.2.1.1 through 1.8.2.1.3 of this code.*~~

1.8.10.2 Moved structures. *Subject to the requirements of California Health and Safety Code Sections 17922, 17922.3 and 17958.9, local ordinances or regulations relating to a moved residential building or accessory structure thereto, shall permit the replacement, retention, and extension of original materials and the use of original methods of construction so long as the structure does not become or continue to be a substandard building.*

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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2. HCD proposes to adopt Chapter 1, Division II, Sections R105.2 (*Building: 1 – 10 only*), R106.1, R106.1.1, R106.1.3, R106.1.4, R106.1.5, R106.2, R109.1, R109.1.1, R109.1.1.1, R109.1.3, R109.1.4, R109.1.4.1, R109.1.4.2, R109.1.5, R109.1.5.1, R109.1.5.2, R109.1.5.3, R109.1.6, R109.1.6.1 and R109.1.6.2 ONLY from the 2018 International Residential Code into the 2019 California Residential Code with new and existing amendments as follows:

DIVISION II
ADMINISTRATION

Division II is not adopted by the Department of Housing and Community Development or the State Fire Marshal except where specifically indicated.

SECTION R105
PERMITS

R105.2 Work exempt from permit. Exemption from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. Permits shall not be required for the following:

Building:

1. One-story detached accessory structures, provided the floor area does not exceed ~~200~~ *120* square feet (~~18.58~~ *11.15* m²).

SECTION R106
CONSTRUCTION DOCUMENTS

R106.1.5 Exterior elevated elements. *Where exterior elevated elements are exposed to water, including but not limited to, rain, snow, or irrigation, and the structural framing is protected by an impervious moisture barrier, the construction documents shall include details for all elements of the impervious moisture barrier system. The construction documents shall include manufacturer's installation instructions.*

SECTION R109
INSPECTIONS

R109.1 Types of inspections. For on-site construction, from time to time the building official, upon notification from the permit holder or his agent, shall make or cause to be made any necessary inspections and shall either approve that portion of the construction as completed or shall notify the permit holder or his or her agent wherein the same fails to comply with this code. *The enforcing agency upon notification of the permit holder or their agent shall within a reasonable time make the inspections set forth in Sections R109.1.1, R109.1.1.1, R109.1.3, R109.1.4, R109.1.4.1, R109.1.4.2, R109.1.5, R109.1.5.1, R109.1.5.2, R109.1.5.3, R109.1.6, R109.1.6.1 and R109.1.6.2.*

Note: *Reinforcing steel or structural framework of any part of any building or structure shall not be covered or concealed without first obtaining the approval of the enforcing agency.*

R109.1.1 Foundation inspection. Inspection of the foundation *and footings* shall be made after poles or piers are set or trenches or basement areas are excavated and any required forms erected and any required reinforcing steel is in place and supported prior to the placing of concrete. The foundation *or footing* inspection shall include excavations for thickened slabs intended for the support of bearing walls, partitions, structural supports, or equipment and special requirements for wood foundations. *Materials for the foundation shall be on the job site except where concrete is ready-mixed in accordance with ASTM C 94. Under this circumstance, concrete is not required to be at the job site.*

R109.1.1.1 Concrete slab and under-floor inspection. *(No change to text)*

R109.1.3 Floodplain inspections. (No change to text)

R109.1.4 Frame and masonry inspection. Inspection of framing and masonry construction shall be made after the roof, masonry, framing, firestopping, draftstopping and bracing are in place and after ~~the plumbing, mechanical and electrical rough inspections~~ *chimneys and vents to be concealed are completed and the rough electrical, plumbing, heating, wires, pipes and ducts* are approved.

R109.1.4.1 Moisture content verification. *(No change to text)*

R109.1.4.2 Lath and gypsum board inspection. *(No change to text)*

R109.1.5 Other inspections. In addition to inspections in Sections R109.1.1 through ~~R109.1.~~4 *R109.1.4.2*, the building official shall have the authority to make or require any other inspections to ascertain compliance with this code and other laws enforced by the building official.

R109.1.5.1 Fire-resistance-rated construction inspection. (No change to text)

R109.1.5.2 Special Inspections. *(No change to text)*

R109.1.5.3 Weather-exposed exterior elevated element waterproofing. *Where exterior elevated elements are exposed to water, including but not limited to, rain, snow or irrigation, and the structural framing is protected by an impervious moisture barrier, all elements of the impervious moisture barrier system shall not be concealed until inspected and approved.*

Exception: *Where special inspections are provided in accordance with California Building Code Section 1705.1.1, Item 3.*

R109.1.6.2 Operation and maintenance manual. *(No change to text)*

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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3. HCD proposes to adopt Chapter 2 from the 2018 International Residential Code into the 2019 California Residential Code with new and existing amendments as follows:

CHAPTER 2
DEFINITIONS

SECTION R201
GENERAL

R201.3 Terms defined in other codes. Where terms are not defined in this code such terms shall have the meanings ascribed in ~~other code publications of the International Code Council~~ *the California Building Standards Code, Title 24, California Code of Regulations.*

SECTION R202
DEFINITIONS

ADDITION. An extension or increase in floor area, number of stories or height of a building or structure. ~~For the definition applicable in Chapter 11, see Section N1101.6.~~

AIR-IMPERMEABLE INSULATION. An insulation having an air permanence equal to or less than 0.02 L/s-m^2 at 75 Pa pressure differential as tested in accordance with ASTM E2178 or E283. ~~For the definition applicable in Chapter 11, see Section N1101.6.~~

ALTERATION. Any construction~~, retrofit~~ or renovation to an existing structure other than repair or addition ~~that requires a permit. Also, a change in a building, electrical, gas, mechanical or plumbing system that involves an extension, addition or change to the arrangement, type or purpose of the original installation that requires a permit~~. ~~For the definition applicable in Chapter 11, see Section N1101.6.~~

APPROVED. (HCD 1) *(No change to text)*

APPROVED AGENCY. An established and recognized agency that is regularly engaged in conducting tests, furnishing inspection services or furnishing product certification, and has been approved by the building official. ~~For definition applicable in Chapter 11, see Section N1101.6.~~ *(HCD 1) "Approved agency" shall mean "Listing agency" and "Testing agency."*

APPROVED LISTING AGENCY. *(No change to text)*

APPROVED TESTING AGENCY. *(No change to text)*

BUILDING. Any one- or two-family dwelling or portion thereof, including townhouses, used or intended to be used for human habitation, for living, sleeping, cooking or eating purposes, or any combination thereof, or any *accessory structure*. ~~For the definition applicable in Chapter 11, see Section N1101.6.~~

Exceptions: *For applications listed in Section 1.8.2 regulated by the Department of Housing and Community Development, "Building" shall not include the following:*

1. *Any mobilehome as defined in Health and Safety Code Section 18008.*
2. *Any manufactured home as defined in Health and Safety Code Section 18007.*
3. *Any commercial modular as defined in Health and Safety Code Section 18001.8 or any special purpose commercial modular as defined in Section 18012.5.*
4. *Any recreational vehicle as defined in Health and Safety Code Section 18010.*
5. *Any multifamily manufactured home as defined in Health and Safety Code Section 18008.7.*

   For additional information, see Health and Safety Code Section 18908.

BUILDING OFFICIAL. The officer or other designated authority charged with the administration and enforcement of this code, or duly authorized representative. ~~For the definition applicable in Chapter 11, see Section N1101.6.~~

CLIMATE ZONES *(No change to text)*

DEPARTMENT. *(No change to text)*

DUCT SYSTEM. ~~A continuous passageway for the transmission of air that, in addition to ducts, includes duct fittings, dampers, plenums, fans and accessory air-handling equipment and appliances. For definition applicable in Chapter 11, see Section N1101.6.~~ *All ducts, duct fittings, plenums and fans when assembled to form a continuous passageway for the distribution of air.*

DWELLING UNIT. A single unit providing complete independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation. ~~For the definition applicable in Chapter 11, see Section N1101.6.~~

ENFORCEMENT. *(No change to text)*

ENFORCEMENT AGENCY. *(No change to text)*

ENFORCING AGENCY. *(No change to text)*

EXTERIOR ELEVATED ELEMENTS. *Elevated balconies, decks, porches, stairways, landings, walkways, including their supports and railings, extending beyond exterior walls of a building or structure, with a walking surface, and designed for human occupancy or use.*

FAMILY. (HCD 1) *(No change to text)*

FENESTRATION. ~~Products classified as either vertical fenestration or skylights and sloped glazing, installed in such a manner as to preserve the weather-resistant barrier of the wall or roof in which they are installed. Fenestration includes products with glass or other transparent or translucent materials.~~
~~For the definition applicable in Chapter 11, see Section N1101.6.~~ *See "Fenestration Product" as defined in the California Energy Code.*

~~**Skylights.** For the definition applicable in Chapter 11, see Section N1101.6.~~
~~**Vertical fenestration.** For the definition applicable in Chapter 11, see Section N1101.6.~~

GUARD *OR GUARDRAIL*. A building component or a system of building components located near the open sides of elevated walking surfaces that minimizes the possibility of a fall from the walking surface to the lower level.

INSULATING SHEATHING. An insulating board having a thermal resistance of not less than R-2 of the core material. ~~For definition applicable in Chapter 11, see Section N1101.6.~~

LABELED. (HCD 1) *(No change to text)*

LIMITED-DENSITY OWNER-BUILT RURAL DWELLINGS. *(No change to text)*

LISTED. ***(HCD 1)*** (No change to text)

LISTING AGENCY. (HCD 1 & HCD 2) *(No change to text)*

LODGING HOUSE*. (HCD 1)* ~~A one-family dwelling where one or more occupants are primarily permanent in nature, and rent is paid for guestrooms.~~ *Any building or portion thereof containing not more than five guest rooms where rent is paid in money, goods, labor or otherwise, and that is occupied by the proprietor as the residence of such proprietor.*

PASSIVE SOLAR ENERGY COLLECTOR. *(No change to text)*

REPAIR. The reconstruction, replacement or renewal of any part of an existing building for the purpose of its maintenance or to correct damage. ~~For definition applicable in Chapter 11, see Section N1101.6.~~

REROOFING. The process of recovering or replacing an existing roof covering. See "Roof recover." ~~For the definition applicable in Chapter 11, see Section N1101.6.~~

ROOF RECOVER. The process of installing an additional roof covering over a prepared existing roof covering without removing the existing roof covering. ~~For the definition applicable in Chapter 11, see Section N1101.6.~~

ROOF REPAIR. Reconstruction or renewal of any part of an existing roof for the purposes of its maintenance. ~~For the definition applicable in Chapter 11, see Section N1101.6.~~

ROOF REPLACEMENT. The process of removing the existing roof covering, repairing any damaged substrate and installing a new roof covering. ~~For the definition applicable in Chapter 11, see Section N1101.6.~~

SUNROOM. A one-story structure attached to a dwelling with a glazing area in excess of 40 percent of the gross area of the structure's exterior walls and roof. ~~For definition applicable in Chapter 11, see Section N1101.6.~~

TESTING AGENCY. *(No change to text)*

VENTILATION. The natural or mechanical process of supplying conditioned or unconditioned air to, or removing such air from, any space. ~~For definition applicable in Chapter 11, see Section N1101.6.~~

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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4. HCD proposes to NOT adopt the following Chapter 2 definitions from the 2018 International Residential Code:

CHAPTER 2
DEFINITIONS

SECTION R202 DEFINITIONS (NON-ADOPTED)

~~**ABOVE-GRADE WALL.** For the definition applicable in Chapter 11, see Section N1101.6.~~

~~**ACCESSIBLE.**~~

ACCESSORY STRUCTURE.
AIR ADMITTANCE VALVE.
AIR BARRIER.
AIR BREAK (DRAINAGE SYSTEM).
AIR CIRCULATION, FORCED.
AIR CONDITIONING SYSTEM.
AIR GAP, DRAINAGE SYSTEM.
AIR GAP, WATER-DISTRIBUTION SYSTEM.
ANTISIPHON.
APPLIANCE.
AUTOMATIC.
BACKFLOW, DRAINAGE.
BACKFLOW PREVENTER.
BACKFLOW PREVENTER, REDUCED- PRESSURE ZONE TYPE.
BACKFLOW, WATER DISTRIBUTION.
BACKPRESSURE.
BACKPRESSURE, LOW HEAD.
BACKSIPHONAGE.
BACKWATER VALVE.

BASEMENT WALL. For the definition applicable in Chapter 11, see Section N1101.6.

BATHROOM GROUP.
BEND.
BOILER.
BRANCH.
BRANCH, FIXTURE.
BRANCH, HORIZONTAL.
BRANCH INTERVAL.
BRANCH, MAIN.
BRANCH, VENT.
BTU/H.
BUILDING DRAIN.
BUILDING SEWER.

BUILDING SITE. For the definition applicable in Chapter 11, see Section N1101.6

BUILDING THERMAL ENVELOPE. For the definition applicable in Chapter 11, see Section N1101.6.

CHIMNEY CONNECTOR.
CHIMNEY TYPES.
CIRCUIT VENT.
CIRCULATING HOT WATER SYSTEM.
CLEANOUT.
CLIMATE ZONE.
COLLECTION PIPE.
COMBINATION WASTE AND VENT SYSTEM
COMMON VENT.
CONDENSING APPLIANCE.

CONDITIONED FLOOR AREA. For the definition applicable in Chapter 11, see Section N1101.6.

CONDITIONED SPACE. For the definition applicable in Chapter 11, see Section N1101.6.

CONTAMINATION.

CONTINUOUS AIR BARRIER. For the definition applicable in Chapter 11, see Section N1101.6.

CONTINUOUS INSULATION (ci) For the definition applicable in Chapter 11, see Section N1101.6.

CONTINUOUS WASTE.

CONTROL, LIMIT.
CONTROL, PRIMARY SAFETY.
CONVECTOR.

CRAWL SPACE WALL. For the definition applicable in Chapter 11, see Section N1101.6.

CROSS CONNECTION.
CURTAIN WALL.
DAMPER, VOLUME.
DEMAND RECIRCULATION WATER SYSTEM.
DEVELOPED LENGTH.
DILUTION AIR.
DIRECT SYSTEM.
DIRECT-VENT APPLIANCE.
DRAFT.
DRAFT HOOD.
DRAFT REGULATOR.
DRAIN.
DRAIN-BACK SYSTEM.

DRAINAGE FITTING. A pipe fitting designed to provide connections in the drainage system that have provisions for establishing the desired slope in the system. These fittings are made from a variety of both metals and plastics. The methods of coupling provide for required slope in the system.

DUCT. For the definition applicable in Chapter 11, see Section N1101.6.

DWV.
EFFECTIVE OPENING.
ELBOW.

ENERGY ANANYSIS. For the definition applicable in Chapter 11, see Section N1101.6.

ENERGY COST. For the definition applicable in Chapter 11, see Section N1101.6.

ENERGY SIMULATION TOOL. For the definition applicable in Chapter 11, see Section N1101.6.

EQUIPMENT.
EQUIVALENT LENGTH.
ERI REFERENCE DESIGN.
ESSENTIALLY NONTOXIC TRANSFER FLUIDS.
ESSENTIALLY TOXIC TRANSFER FLUIDS.
EVAPORATIVE COOLER.
EXCESS AIR.
EXHAUST HOOD, FULL OPENING.
EXISTING INSTALLATIONS.

EXTERIOR WALL. For the definition applicable in Chapter 11, see Section N1101.6.

FACTORY-MADE AIR DUCT.

FENESTRATION, VERTICAL. Windows that are fixed or movable, opaque and glazed doors, glazed block and combination opaque and glazed doors installed in a wall at less than 15 degrees from vertical.
For the definition applicable in Chapter 11, see Section N1101.6.

FENESTRATION PRODUCT, SITE-BUILT. For The definition applicable in Chapter 11, see Section N1101.6.

FIXTURE.
FIXTURE BRANCH, DRAINAGE.
FIXTURE BRANCH, WATER-SUPPLY.
FIXTURE DRAIN.
FIXTURE FITTING.

FIXTURE GROUP, MAIN.
FIXTURE SUPPLY.
FIXTURE UNIT, DRAINAGE (d.f.u.)
FIXTURE UNIT, WATER SUPPLY (w.s.f.u.).
FLEXIBLE AIR CONNECTOR.
FLOOD-LEVEL RIM.
FLOOR DRAIN.
FLOOR FURNACE.
FLOW PRESSURE.

FLUE. See "Vent."

FLUE, APPLIANCE.
FLUE COLLAR.

FLUE GASES. Products of combustion plus excess air in *appliance* flues or heat exchangers.

FLUSH VALVE.
FLUSHOMETER TANK.
FLUSHOMETER VALVE.
FUEL-PIPING SYSTEM.

FULL-OPEN VALVE. A water control or shutoff component in the water supply system piping that, where adjusted for maximum flow, the flow path through the component's closure member is not a restriction in the component's through-flow area.

FULLWAY VALVE.
FURNACE.
GRADE, PIPING.
GRAY WATER.
GRIDDED WATER DISTRIBUTION SYSTEM.
GROUND-SOURCE HEAT PUMP LOOP SYSTEM.
HAZARDOUS LOCATION.
HEAT PUMP.

HEATED SLAB. For the definition applicable in Chapter 11, see Section N1101.6.

HIGH-EFFICACY LAMPS.
HIGH-TEMPERATURE (H.T.) CHIMNEY
HISTORIC BUILDING.
HORIZONTAL BRANCH, DRAINAGE.
HORIZONTAL PIPE.
HOT WATER.
HYDROGEN GENERATING APPLIANCE.
IGNITION SOURCE.
INDIRECT SYSTEM.
INDIRECT WASTE PIPE.
INDIVIDUAL SEWAGE DISPOSAL SYSTEM
INDIVIDUAL VENT.
INDIVIDUAL WATER SUPPLY.

INFILTRATION. For the definition applicable in Chapter 11, see Section N1101.6.

INSULATED SIDING.

LOCKING-TYPE TAMPER-RESISTANT CAP. A cap designed to be unlocked by a specially designed tool or key to prevent removal of the cap by means of hand-loosening or by commonly available tools.

MACERATING TOILET SYSTEMS.
MAIN.
MAIN SEWER.

MANIFOLD WATER DISTRIBUTION SYSTEMS.

MANUAL. For the definition applicable in Chapter 11, see Section N1101.6.

MANUFACTURED HOME.
MASS WALL.
MECHANICAL DRAFT SYSTEM.
MECHANICAL EXHAUST SYSTEM.
MECHANICAL JOINT.
MECHANICAL SYSTEM.
NATURAL DRAFT SYSTEM.
OFFSET.
ON-SITE NONPOTABLE WATER REUSE SYSTEMS.
OPAQUE DOOR.
PITCH.
PLUMBING.

PLUMBING APPLIANCE. An energized household appliance with plumbing connections, such as a dishwasher, food waste disposer, clothes washer or water heater.

PLUMBING APPURTENANCE

PLUMBING FIXTURE. A receptacle or device that is connected to a water supply system or discharges to a drainage system or both. Such receptacles or devices require a supply of water; or discharge liquid waste or liquidborne solid waste; or require a supply of water and discharge waste to a drainage system.

PLUMBING SYSTEMS. Includes the water distribution pipes; plumbing fixtures and traps; water-treating or water-using equipment; soil, waste and vent pipes; and building drains; in addition to their respective connections, devices and appurtenances within a structure or premises; and the water service, building sewer and building storm sewer serving such structure or premises.

POLLUTION.
PORTABLE-FUEL-CELL APPLIANCE.
POTABLE WATER.
PRESSURE-RELIEF VALVE.

PROPOSED DESIGN. For the definition applicable in Chapter 11, see Section N1101.6

PUBLIC SEWER.

PUBLIC WATER MAIN.
PURGE.
QUICK-CLOSING VALVE.
R-VALUE, THERMAL RESISTANCE.
RATED DESIGN.

READILY ACCESSIBLE. For the definition applicable in Chapter 11, see Section N1101.6.

RECEPTOR.
RECLAIMED WATER.
REFRIGERANT.
REFRIGERANT COMPRESSOR.
REFRIGERATING SYSTEM.
RELIEF VALVE, VACUUM.

RESIDENTIAL BUILDING. For the definition applicable in Chapter 11, see Section N1101.6.

RETURN AIR.
RISER (PLUMBING).
ROOM HEATER.
ROUGH-IN.

~~***R*-VALUE (THERMAL RESISTANCE).~~
~~SANITARY SEWER.~~
~~SEPTIC TANK.~~
~~**SERVICE WATER HEATING.** For the definition applicable in Chapter 11, see Section N1101.6.~~

~~SEWAGE.~~
~~SEWAGE PUMP.~~
~~SKYLIGHT.~~
~~SKYLIGHT, UNIT.~~
~~SKYLIGHTS AND SLOPED GLAZING.~~
~~SLIP JOINT.~~
~~SLOPE.~~
~~SOIL STACK OR PIPE.~~
~~SOLAR HEAT GAIN COEFFICIENT (SHGC).~~
~~STACK.~~
~~STACK VENT.~~
~~STANDARD TRUSS.~~

~~**STANDARD REFERENCE DESIGN.** For the definition applicable in Chapter 11, see Section N1101.6.~~

~~STATIONARY FUEL CELL POWER PLANT.~~
~~STORM SEWER, DRAIN.~~
~~SUBSOIL DRAIN.~~
~~SUMP.~~
~~SUMP PUMP.~~
~~SUPPLY AIR.~~
~~SWEEP.~~
~~TEMPERATURE- AND PRESSURE-RELIEF (T AND P) VALVE.~~
~~TEMPERATURE RELIEF VALVE.~~

~~**THERMAL ISOLATION.** For the definition applicable in Chapter 11, see Section N1101.6.~~

~~THERMAL RESISTANCE, *R*-VALUE.~~
~~THERMAL TRANSMITTANCE, *U*-FACTOR.~~

~~**THERMOSTAT.** For the definition applicable in Chapter 11, see Section N1101.6.~~

~~THIRD-PARTY CERTIFICATION AGENCY.~~
~~THIRD PARTY CERTIFIED.~~
~~THIRD-PARTY TESTED.~~
~~TRAP.~~
~~TRAP ARM.~~
~~TRAP PRIMER.~~
~~TRAP SEAL.~~
~~U-FACTOR, THERMAL TRANSMITTANCE.~~
~~VACUUM BREAKERS.~~
~~VENT COLLAR.~~
~~VENT CONNECTOR.~~
~~VENT DAMPER DEVICE, AUTOMATIC.~~
~~VENT GASES.~~
~~VENT STACK.~~
~~VENT SYSTEM.~~

~~**VENTILATION AIR.** For the definition applicable in Chapter 11, see Section N1101.6.~~

~~VERTICAL PIPE.~~

~~**VISIBLE TRANSMITTANCE (VT).** For the definition applicable in Chapter11, see Section N1101.6.~~

~~WASTE.~~
~~WASTE PIPE OR STACK.~~

~~**WASTE RECEPTOR.**~~
~~**WATER-DISTRIBUTION SYSTEM.**~~
~~**WATER HEATER.**~~
~~**WATER MAIN.**~~
~~**WATER OUTLET.**~~
~~**WATER-SERVICE PIPE.**~~

~~**WATER SUPPLY SYSTEM.**~~
~~**WET VENT.**~~
~~**WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM.**~~
~~**WINDBORNE DEBRIS REGION.**~~

~~**ZONE.** For the definition applicable in Chapter 11, see Section N1101.6.~~

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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5. HCD proposes to adopt Chapter 3, except Figure R307.1, and Sections R313, R320.1.1, R322.1.9 and R326 from the 2018 International Residential Code into the 2019 California Residential Code with new and existing amendments as follows:

CHAPTER 3
BUILDING PLANNING

SECTION R300
SITE DRAINAGE

R300.1 Storm water drainage and retention during construction*. (No change to text)*

R300.2 Grading and paving. *(No change to text)*

SECTION R301
DESIGN CRITERIA

R301.1.1.1 Alternative provisions for limited-density owner-built rural dwellings. *(No change to text)*

R301.1.3.1 California licensed architect or engineer. *(No change to text)*

R301.1.3.2 Woodframe structures greater than two-stories *(No change to text)*

R301.1.3.3 Structures other than woodframe. *(No change to text)*

TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD	WIND DESIGN				SEISMIC DESIGN CATEGORY[f]	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP[e]	ICE BARRRIER UNDER-LAYMENT REQUIRED[h]	FLOOD HAZARDS[g]	AIR FREEZING INDEX [i]	MEAN ANNUAL TEMP[j]
	Speed[d] (mph)	Topographic Effects [k]	Special wind region[l]	Wind-borne debris zone[m]		Weathering[a]	Frostline depth [b]	Termite [c]					

MANUAL J DESIGN CRITERIA[n]							
Elevation	Lattitude	Winter heating	Summer cooling	Altitude Correction factor	Indoor design Temperature	Design temperature cooling	Heating temperature difference
Cooling temperature difference	Wind velocity heating	Wind velocity cooling	Coincident wet bulb	Daily range	Winter humidity	Summer humidity	

For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447m/s.

a. Where weathering requires a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code, the frost line depth strength required for weathering shall govern. The weathering column shall be filled in with the weathering index, “negligible,” “moderate” or “severe” for concrete as determined from Figure R301.2(4). The grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C 652.
b. Where the frost line depth requires deeper footings than indicated in Figure R403.1(1). The frost line depth strength required for weathering shall govern. The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.
c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.
d. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map (Figure R301.2(5)A).Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.
e. ~~The outdoor design dry-bulb temperature shall be selected from the columns of 971/2-percent values for winter from Appendix D of the *International Plumbing Code*. Deviations from the Appendix D temperatures~~ *Temperatures* shall be permitted to reflect local climates or local weather experience as determined by the building official. (Also see Figure R301.2(1)).
f. The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.
g. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction’s entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the Flood Insurance Study and (c) the panel numbers and dates of all currently effective FIRMs and FBFMs or other flood hazard map adopted by the authority having jurisdiction, as amended.
h. In accordance with Sections R905.1.2, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with “YES.” Otherwise, the jurisdiction shall fill in this part of the table with “NO.”
i. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99 percent) value on the National Climatic Data Center data table “Air Freezing Index- USA Method (Base 32°F).”
j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table “Air Freezing Index-USA Method (Base 32°F).
k. In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the jurisdiction shall fill in this part of the table with “YES.” Otherwise, the jurisdiction shall indicate “NO” in this part of the table.
l. In accordance with Figure R301.2(5)A, where there is local historical data documenting unusual wind conditions, the jurisdiction shall fill in this part of the table with “YES” and identify any specific requirements. Otherwise, the jurisdiction shall indicate “NO” in this part of the table.
m. In accordance with Section R301.2.1.2, the jurisdiction shall indicate the wind-borne debris wind zone(s). Otherwise, the jurisdiction shall indicate “NO” in this part of the table.
n. The jurisdiction shall fill in these sections of the table to establish the design criteria using Table 1a or 1b from ACCA Manual J or established criteria determined by the jurisdiction.
o. The jurisdiction shall fill in this section of the table using the Ground Snow Loads in Figure R 301.2(6).

TABLE R301.5
MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS
(in pounds per square foot)

USE	LIVE LOAD
Uninhabitable attics without storage[b]	10
Uninhabitable attics with limited storage[b, g]	20
Habitable attics and attics served with fixed stairs	30
Balconies (exterior) and decks[e]	~~40~~ *60*
Fire escapes	40
Guards and handrails[d]	200[h]
Guard in-fill components[f]	50[h]
Passenger vehicle garages[a]	50[a]
Rooms other than sleeping rooms	40
Sleeping rooms	30
Stairs	40[c]

SECTION R302
FIRE-RESISTANT CONSTRUCTION

R302.1 Exterior walls. Construction, projections, openings and penetrations of exterior walls of dwellings and accessory buildings shall comply with Table R302.1(1); or dwellings *and accessory buildings* equipped throughout with an automatic sprinkler system installed in accordance with Section ~~P2904~~ *R313* shall comply with Table R302.1(2).

Exceptions: … (No change to text)

R302.2.2 (Formerly R302.2.) Common walls. Common walls separating townhouses shall be assigned a fire-resistance rating in accordance with Item 1 or 2. The common wall shared by two townhouses shall be constructed without plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be in accordance with ~~Chapter 34 through 43~~ *the California Electrical Code*. Penetrations of the membrane of common walls for electrical outlet boxes shall be in accordance with Section R302.4.

1. Where a fire sprinkler system in accordance with Section ~~P2904~~ *R313* is provided, the common wall shall be not less than a 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119, UL 263 or Section 703.3 of the ~~International~~ *California* Building Code.
2. Where a fire sprinkler system in accordance with Section ~~P2904~~ *R313* is not provided, the common wall shall be not less than a 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119, UL 263 or Section 703.3 of the ~~International~~ *California* Building Code.

R302.5.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8 inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than 1 3/8 inches (35 mm) thick, or 20-minute fire-rated doors, equipped with a self-closing or automatic-closing *and self-latching* device.

R302.6 Dwelling-garage fire separation. The garage shall be separated as required by Table R302.6. Openings in garage walls shall comply with Section R302.5. Attachment of gypsum board shall comply with Table R702.3.5. The wall separation provisions of Table R302.6 shall not apply to garage walls that are perpendicular to the adjacent dwelling unit wall. *A separation is not required between the dwelling unit and a carport, provided the carport is entirely open on two or more sides and there are not enclosed areas above.*

R302.14 Combustible insulation clearance. Combustible insulation shall be separated not less than 3 inches (76 mm) from recessed luminaires, fan motors and other heat-producing devices.

Exception: Where heat-producing devices are listed for lesser clearances, combustible insulation complying with the listing requirements shall be separated in accordance with the conditions stipulated in the listing.

Recessed luminaires installed in the building ~~thermal~~ envelope shall meet *or exceed* the requirements ~~of Section N1102.4.5 of this code~~ *specified in the California Energy Code for recessed luminaires installed in insulated ceilings.*

SECTION R303
LIGHT, VENTILATION AND HEATING

R303.1 Habitable rooms. Habitable rooms shall have an aggregate glazing area of not less than 8 percent of the floor area of such rooms. Natural ventilation shall be through windows, skylights, doors, louvers or other approved openings to the outdoor air. Such openings shall be provided with ready access or shall otherwise be readily controllable by the building occupants. The openable area to the outdoors shall be not less than 4 percent of the floor area being ventilated.

Exceptions:

1. The glazed areas need not be openable where the opening is not required by Section R310 and a whole-house mechanical ventilation system is installed in accordance with ~~Section M1507~~ *the California Mechanical Code*.
2. The glazed areas need not be installed in rooms where Exception 1 is satisfied and artificial light is provided that is capable of producing an average illumination of 6 footcandles (65 lux) over the area of the room at a height of 30 inches (762 mm) above the floor level.
3. Use of sunroom and patio covers, as defined in Section R202, shall be permitted for natural ventilation if in excess of 40 percent of the exterior sunroom walls are open, or are enclosed only by insect screening.
4. *The windows, doors, louvers and other approved closeable openings not required by Section R310 may open into a passive solar energy collector for ventilation required by this section. The area of ventilation openings to the outside of the passive solar energy collector shall be increased to compensate for the openings required by the interior space.*
5. *Glazed openings may open into a passive solar energy collector provided the area of exterior glazed opening(s) into the passive solar energy collector is increased to compensate for the area required by the interior space.*

R303.3 Bathrooms. Bathrooms, water closet compartments and other similar rooms shall be provided with aggregate glazing area in windows of not less than 3 square feet (0.3 m^2), one-half of which shall be openable.

Exception: The glazed areas shall not be required where artificial light and a local exhaust system are provided. The minimum local exhaust rates shall be ~~determined~~ *50 cubic feet per minute (25 L/s) for intermittent ventilation or 20 cubic feet per minute (10 L/s) for continuous ventilation* in accordance with ~~Section M1505~~ *the California Mechanical Code, Chapter 4.* Exhaust air from the space shall be exhausted directly to the outdoors.

R303.3.1 Bathroom exhaust fans. *(No change to text)*

R303.4 ~~Mechanical~~ *V*entilation. ~~Where the air infiltration rate of a dwelling unit is 5 air changes per hour or less where tested with a blower door at a pressure of 0.2 inch w.c (50 Pa) in accordance with Section N1102.4.1.2, the dwelling unit shall be provided with whole-house mechanical ventilation in accordance with M1507.3~~ *Ventilation air rates shall be in compliance with the California Mechanical Code.*

~~R303.8.1.1~~ R303.9.1.1 Passive solar energy collectors. *When a passive solar energy collector is designed as a conditioned area it shall comply with the California Energy Code. Nonconditioned passive solar energy collectors are exempt from the California Energy Code.*

R303.10 (Formerly R303.9) Required heating. Where the winter design temperature in Table R301.2(1) is below 60°F (16°C), every dwelling unit shall be provided with heating facilities capable of maintaining a room temperature of not less than 68°F (20°C) at a point 3 feet (914 mm) above the floor and 2 feet (610 mm) from exterior walls in all habitable rooms at the design temperature. The installation of one or more portable space heaters shall not be used to achieve compliance with this section.

Note: *See Section R301.1.1.1 for limited-density owner-built rural dwellings.*

SECTION R304
MINIMUM ROOM AREAS

R304.2 Minimum dimensions. Habitable rooms shall be not less than 7 feet (2134 mm) in any horizontal dimension.

Exceptions:

1. Kitchens.
2. *Limited-density owner-built rural dwellings. See Section R301.1.1.1.*

SECTION R307
TOILET, BATH AND SHOWER SPACES

R307.1 Space required. Fixtures shall be spaced in accordance with ~~Figure R307.1, and in accordance with the requirements of Section P2705.1~~ *the California Plumbing Code.*

~~**FIGURE R307.1**~~
~~**MINIMUM FIXTURE CLEARANCES**~~
(*NOT ADOPTED IN CA*)

SECTION R309
GARAGES AND CARPORTS

R309.4 Automatic garage door openers. Automatic garage door openers, if provided, shall be listed and labeled in accordance with UL 325. *See Health and Safety Code Sections 19890 and 19891 for additional provisions for residential garage door openers.*

R309.7 Extension garage door springs. *Every extension garage door spring sold or offered for sale, whether new or sold as a replacement, or installed in any garage or carport which is accessory to a dwelling covered by this code, shall conform to the requirements for garage door springs located in Section ~~1211~~ 1210 of the California Building Code.*

R309.8 Electric vehicle (EV) charging infrastructure. *(No change to text)*

SECTION R310
EMERGENCY ESCAPE AND RESCUE OPENINGS

R310.2.2 Window sill height. Where a window is provided as the emergency escape and rescue opening, it shall have ~~a sill height of not more than 44 inches (1118 mm) above the floor~~ *the bottom of the clear opening not greater than 44 inches (1118 mm) measured from the floor*; where the sill height is below grade, it shall be provided with a window well in accordance with Section R310.2.3.

SECTION R312
GUARDS AND WINDOW FALL PROTECTION

R312.1.2 Height. Required guards at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than ~~36~~ *42* inches (~~914~~ *1067* mm) in height as measured vertically above the adjacent walking surface or the line connecting the nosings.

Exceptions: … (No change to text)

SECTION R313
AUTOMATIC FIRE SPRINKLER SYSTEMS
(NOT ADOPTED BY HCD)

SECTION R315
CARBON MONOXIDE ALARMS

R315.1 General. (No change to text)

R315.1.1 Listings. Carbon monoxide alarms shall be listed in accordance with UL 2034. Combination carbon monoxide and smoke alarms shall be listed in accordance with UL 2034 and UL 217.

No person shall install, market, distribute, offer for sale, or sell any carbon monoxide device in the State of California unless the device and instructions have been approved and listed by the Office of the State Fire Marshal.

R315.2 Where required. Carbon monoxide alarms shall be provided in accordance with Sections R315.2.1 and R315.2.2.

Pursuant to Health and Safety Code Section 17926, carbon monoxide device shall be installed in all existing dwelling units as required in this section.

R315.2.1 *Existing buildings and* new construction. For *existing buildings and* new construction, carbon monoxide alarms shall be provided in dwelling units where either or both of the following conditions exist.

1. The dwelling unit contains a fuel-fired appliance *or fireplace.*
2. The dwelling unit has an attached garage with an opening that communicates with the dwelling unit.

R315.2.2 Alterations, repairs and additions. ~~Where alterations, repairs or additions requiring a permit occur, the individual dwelling unit shall be equipped with carbon monoxide alarms located as required for new dwellings.~~*Where an addition is made to an existing dwelling, or a fuel-burning heater, appliance, or fireplace is added to an existing dwelling, not previously required to be provided with carbon monoxide alarms, new carbon monoxide alarms shall be installed in accordance with Section R315.*

~~**Exceptions:**~~

~~1. Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck.~~

~~2. Installation, alteration or repairs of plumbing or mechanical systems.~~

R315.3 Location. Carbon monoxide alarms in dwelling units shall be installed *and maintained in accordance with the manufacturer's published instructions in the following locations:*

1. Outside of each separate sleeping area in the immediate vicinity of the bedrooms.

2. On every occupiable level of a dwelling unit, including basements.

3. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.

R315.4 Combination alarms. Combination carbon monoxide and smoke alarms shall be permitted to be used in lieu of carbon monoxide alarms.

Combination carbon monoxide/smoke alarms shall comply with Section R315 and all requirements for listing and approval by the Office of the State Fire Marshal for smoke alarms.

R315.5 Interconnectivity. Where more than one carbon monoxide alarm is required to be installed within an individual dwelling unit in accordance with Section R315.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual dwelling unit. Physical interconnection of carbon monoxide alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

Exception: Interconnection of carbon monoxide alarms in existing ~~areas~~ *buildings, built prior to January 1, 2011,* shall not be required *under any of the following conditions*:

1. ~~where~~ *Where* alterations or repairs do not result in removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available that could provide access for interconnection without the removal of interior finishes.

2. *No construction is taking place.*

3. *Repairs or alterations are limited to the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck.*

4. *Work is limited to the installation, alteration or repair of plumbing, mechanical, or electrical systems, which do not result in the removal of interior wall or ceiling finishes exposing the structure in areas/spaces where carbon monoxide alarms are required.*

R315.6 (Formerly R315.5) Power source. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and, where primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.

Exceptions:

1. Carbon monoxide alarms shall be permitted to be battery operated where installed in buildings without commercial power.
2. Carbon monoxide alarms installed in accordance with Section R315.2.2 shall be permitted to be battery powered.
3. *Carbon monoxide alarms in Group R occupancies shall be permitted to receive their primary power from other power sources recognized for use by NFPA 720.*
4. *Carbon monoxide alarms in Group R occupancies shall be permitted to be battery-powered or plug-in with a battery backup in existing buildings built prior to January 1, 2011, under any of the following conditions:*
   - *4.1. No construction is taking place.*
   - *4.2. Repairs or alterations do not result in the removal of interior wall and ceiling finishes exposing the structure in areas/spaces where carbon monoxide alarms are required.*
   - *4.3. Repairs or alterations are limited to the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck.*
   - *4.4. Work is limited to the installation, alteration or repair of plumbing, mechanical or electrical systems, which do not result in the removal of interior wall or ceiling finishes exposing the structure in areas/spaces where carbon monoxide alarms are required.*

~~***R315.7 Interconnection.*** *Where more than one carbon monoxide alarm is required to be installed within a dwelling unit or within a sleeping unit in Group R occupancies, the alarms shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit.*~~

~~***Exception:*** *Interconnection is not required in existing buildings built prior to January 1, 2011, under any of the following conditions:*~~

~~*1. Physical interconnection is not required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.*~~

~~*2. No construction is taking place.*~~

~~*3. Repairs or alterations do not result in the removal of interior wall and ceiling finishes exposing the structure in areas/spaces where carbon monoxide alarms are required.*~~

~~*4. Repairs or alterations are limited to the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck.*~~

~~*5. Work is limited to the installation, alteration or repair of plumbing, mechanical, or electrical systems, which do not result in the removal of interior wall or ceiling finishes exposing the structure in areas/spaces where carbon monoxide alarms are required.*~~

R315.7.2 (Formerly R315.6.2) Location. Carbon monoxide detectors shall be installed *and maintained* in the locations specified in Section R315.3 *or NFPA 720.* ~~These locations supersede the locations specified in NFPA 720.~~

R315.7.4 (Formerly R315.6.4) Combination detectors. Combination carbon monoxide and smoke detectors installed in carbon monoxide detection systems in lieu of carbon monoxide detectors shall be listed in accordance with UL 2075 and UL 268.

Combination carbon monoxide/smoke detectors shall comply with all requirements for listing and approval by the Office of the State Fire Marshal for smoke alarms.

SECTION R317
PROTECTION OF WOOD AND WOOD-BASED PRODUCTS AGAINST DECAY

R317.1 Location required. Protection of wood and woodbased products from decay shall be provided in the following locations by the use of naturally durable wood or wood that is preservative-treated in accordance with AWPA U1.

1. Wood joists or the bottom of a wood structural floor when closer than 18 inches (457 mm) or wood girders when closer than 12 inches (305 mm) to the exposed ground in crawl spaces or unexcavated area located within the periphery of the building foundation.

2. Wood framing members that rest on concrete or masonry exterior foundation walls and are less than 8 inches (203 mm) from the exposed ground.

3. Sills and sleepers on a concrete or masonry slab that is in direct contact with the ground unless separated from such slab by an impervious moisture barrier.

4. The ends of wood girders entering exterior masonry or concrete walls having clearances of less than 1/2 inch (12.7 mm) on tops, sides and ends.

5. Wood siding, sheathing and wall framing on the exterior of a building having a clearance of less than 6 inches (152 mm) from the ground or less than 2 inches (51 mm) measured vertically from concrete steps, porch slabs, patio slabs and similar horizontal surfaces exposed to the weather.

6. Wood structural members supporting moisture-permeable floors or roofs that are exposed to the weather, such as concrete or masonry slabs, unless separated from such floors or roofs by an impervious moisture barrier. *The impervious moisture barrier system protecting the structure supporting floors shall provide positive drainage of water that infiltrates the moisture-permeable floor topping.*

7. Wood furring strips or other wood framing members attached directly to the interior of exterior masonry walls or concrete walls below grade except where an approved vapor retarder is applied between the wall and the furring strips or framing members.

R317.1.6 Ventilation of exterior elevated elements. *Enclosed framing in exterior elevated elements that are exposed to water, including but not limited to, rain, snow or drainage from irrigation shall be provided with openings that provide a net free cross-ventilation area not less than 1/150 of the area of each separate space.*

SECTION R320
ACCESSIBILITY

R320.1 Scope. ~~Where there are four or more dwelling units or sleeping units in a single structure, the provisions of Chapter 11 of the International Building Code for Group R-3 shall apply.~~ *Dwelling units in a building consisting of three or more dwelling units or four or more condominium units shall meet the requirements of the California Building Code Chapter 11A. Covered Multifamily Dwellings include but are not limited to dwelling units listed in Section 1.8.2.1.2. Dwelling units within a single structure separated by firewalls do not constitute separate buildings.*

~~**R320.1.1 Guestrooms.** A dwelling with guestrooms shall comply with the provisions of Chapter 11 of the International Building Code for Group R-3. For the purpose of applying the requirements of Chapter 11 of the International Building Code, guestrooms shall be considered to be sleeping units.~~

~~**Exception:** Owner-occupied lodging houses with five or fewer guestrooms constructed in accordance with the International Residential Code are not required to be accessible.~~

SECTION R321
ELEVATORS AND PLATFORM LIFTS

R321.3 Accessibility. Elevators or platform *(wheelchair)* lifts that are part of an accessible route required by Chapter 11*A* of the ~~International~~ *California* Building Code, shall comply with ~~ICC A117.1~~ *the requirements in Chapter 11A of the California Building Code.*

SECTION R322
FLOOD-RESISTANT CONSTRUCTION

R322.1.6 Protection of mechanical, plumbing and electrical systems. Electrical systems, equipment and components; heating, ventilating, air-conditioning; plumbing appliances and plumbing fixtures; duct systems; and other service equipment shall be located at or above the elevation required in Section R322.2 or R322.3. If replaced as part of a substantial improvement, electrical systems, equipment and components; heating, ventilating, air-conditioning and plumbing appliances and plumbing fixtures; duct systems; and other service equipment shall meet the requirements of this section. Systems, fixtures, and equipment and components shall not be mounted on or penetrate through walls intended to break away under flood loads.

Exception: Locating electrical systems, equipment and components; heating, ventilating, air conditioning; plumbing appliances and plumbing fixtures; duct systems; and other service equipment is permitted below the elevation required in Section R322.2 or R322.3 provided that they are designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to the design flood elevation in accordance with ASCE 24. Electrical wiring systems are permitted to be located below the required elevation provided that they conform to the provisions of the ~~electrical part of this code for~~ *California Electrical Code* for wet locations.

R322.1.7 Protection of water supply and sanitary sewage systems. ~~New and replacement w~~ *W*ater supply systems shall be designed to minimize or eliminate infiltration of flood waters into the ~~systems in accordance with the plumbing provisions of this code~~ *water supply and distribution system*. ~~New and replacement s~~*S*anitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into *sanitary drainage* systems and discharges from *sanitary drainage* systems into floodwaters ~~in accordance with the plumbing provisions of this code and Chapter 3 of the International Private Sewage Disposal Code~~.

R322.1.9 Manufactured homes. (*NOT ADOPTED IN CA)*

SECTION R324
SOLAR ENERGY SYSTEMS

R324.2 Solar thermal systems. Solar thermal systems shall be designed and installed in accordance with ~~Chapter 23~~ the *California Plumbing Code* and the ~~International~~ *California* Fire Code.

R324.3 Photovoltaic systems. Photovoltaic systems shall be designed and installed in accordance with Sections R324.3.1 through R324.7.1, ~~NFPA 70~~ *the California Electrical Code* and the manufacturer's installation instructions.

R324.6 Roof access and pathways. Roof access, pathways and setback requirements shall be provided in accordance with Sections R324.6.1 through R324.6.2.1.

Exceptions:

1. Detached, nonhabitable structures, including but not limited to detached garages, parking shade structures, carports, solar trellises and similar structures, shall not be required to provide roof access.
2. Roof access, pathways and setbacks need not be provided where the ~~code official~~ *enforcing agency* has determined that rooftop operations will not be employed.
3. These requirements shall not apply to roofs with slopes of two units vertical in 12 units horizontal (17-percent slope) or less.

R324.7.1 (Formerly R324.6.1) Fire separation distances. Ground-mounted photovoltaic systems shall be subject to the fire separation distance requirements determined by the ~~local jurisdiction~~ *enforcing agency*.

~~SECTION R326~~
~~SWIMMING POOLS, SPAS AND HOT TUBS~~

~~**R326.1 General.** The design and construction of pools and spas shall comply with the *International Swimming Pool and Spa Code*.~~

SECTION R327
STATIONARY STORAGE BATTERY SYSTEMS

R327.2 Equipment listings. Stationary storage battery systems shall be listed and labeled for residential use in accordance with UL 9540.

Exceptions:

1. Where approved, repurposed unlisted battery systems from electric vehicles are allowed to be installed outdoors or in detached sheds located not less than 5 feet (1524 mm) from exterior walls, property lines and public ways.

2. Battery systems that are an integral part of an electric vehicle are allowed provided that the installation complies with Section 625.48 of ~~NFPA 70~~ *the California Electrical Code*.

3. Battery systems less than 1 kWh (3.6 megajoules).

R327.4 Electrical installation. Stationary storage battery systems shall be installed in accordance with ~~NFPA 70~~ *the California Electrical Code*. Inverters shall be listed and labeled in accordance with UL 1741 or provided as part of the UL 9540 listing. Systems connected to the utility grid shall use inverters listed for utility interaction.

R327.5 Ventilation. Indoor installations of stationary storage battery systems that include batteries that produce hydrogen or other flammable gases during charging shall be provided with ventilation in accordance with ~~Section M1307.4~~ *the California Mechanical Code*.

SECTION R334
CONSTRUCTION WASTE REDUCTION,
DISPOSAL AND RECYCLING

R334.1 Construction waste management. *(No change to text)*

SECTION R340
POLLUTANT CONTROL

R340.1 Finish material pollutant control. *(No change to text)*

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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6. HCD proposes to adopt Chapter 4 from the 2018 International Residential Code into the 2019 California Residential Code with existing amendments as follows:

CHAPTER 4
FOUNDATIONS

SECTION R401
GENERAL

R401.2 Requirements. Foundation construction shall be capable of accommodating all loads according to Section R301 and of transmitting the resulting loads to the supporting soil. Fill soils that support footings and foundations shall be designed, installed and tested in accordance with accepted engineering practice.

Note: *See Section R301.1.1.1 for limited-density owner-built rural dwellings.*

R401.4.1.1 General and where required for applications listed in Section 1.8.2.1.1 regulated by the Department of Housing and Community Development. *(No change to text)*

R401.4.1.1.1 Preliminary soil report. *(No change to text)*

R401.4.1.1.2 Soil investigation by lot, necessity, preparation, and recommendations. *(No change to text)*

R401.4.1.1.3 Approval, building permit conditions, appeal. *(No change to text)*

R401.4.1.1.4 Liability. *(No change to text)*

R401.4.1.1.5 Alternate procedures. *(No change to text)*

SECTION R404
FOUNDATION AND RETAINING WALLS

R404.5.1 Design. Precast concrete foundation walls shall be designed in accordance with accepted engineering practice. The design and manufacture of precast concrete foundation wall panels shall comply with the materials requirements of Section R402.3 or ACI 318. The panel design drawings shall be prepared by a registered design professional ~~where required by the statutes of the jurisdiction in which the project is to be constructed in accordance with Section R106.1~~.

SECTION R408
UNDER-FLOOR SPACE

R408.3 Unvented crawl space. Ventilation openings in under-floor spaces specified in Sections R408.1 and R408.2 shall not be required where the following items are provided:

1. Exposed earth is covered with a continuous Class I vapor retarder. Joints of the vapor retarder shall overlap by 6 inches (152 mm) and shall be sealed or taped. The edges of the vapor retarder shall extend not less than 6 inches (152 mm) up the stem wall and shall be attached and sealed to the stem wall or insulation.
2. One of the following is provided for the under-floor space:
    2.1. Continuously operated mechanical exhaust ventilation at a rate equal to 1 cubic foot per minute (0.47 L/s) for each 50 square feet (4.7 m^2) of crawl space floor area, including an air pathway to the common area (such as a duct or transfer grille), ~~and perimeter walls insulated in accordance with Section N1102.2.11 of this code.~~
    2.2. Conditioned air supply sized to deliver at a rate equal to 1 cubic foot per minute (0.47 L/s) for each 50 square feet (4.7 m^2) of under-floor area, including a return air pathway to the common area (such as a duct or transfer grille)~~, and perimeter walls insulated in accordance with Section N1102.2.11 of this code~~. *Crawl space perimeter walls shall be insulated in accordance with the minimum insulation requirements established in the California Energy Code. Crawl space insulation shall be permanently fastened to the wall and extend downward from the floor to the finished grade level and then vertically and/or horizontally for at least an additional 24 inches (610 mm).*
    2.3. Plenum in ~~existing~~ structures complying with ~~Section M1601.5~~, *the California Mechanical Code*, if under-floor space is used as a plenum.
    2.4. Dehumidification sized to provide 70 pints (33 liters) of moisture removal per day for every 1,000 square feet (93 m2) of crawl space floor area.

R408.4 Access. Access shall be provided to all under-floor spaces. Access openings through the floor shall be not smaller than 18 inches by 24 inches (457 mm by 610 mm). Openings through a perimeter wall shall be not less than 16 inches by 24 inches (407 mm by 610 mm). Where any portion of the through-wall access is below grade, an areaway not less than 16 inches by 24 inches (407 mm by 610 mm) shall be provided. The bottom of the areaway shall be below the threshold of the access opening. Through wall access openings shall not be located under a door to the residence. See ~~Section M1305.1.4~~ *the California Mechanical Code* for access requirements where mechanical equipment is located under floors.

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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7. HCD proposes to adopt Chapter 5 from the 2018 International Residential Code into the 2019 California Residential Code with existing amendments as follows:

CHAPTER 5
FLOORS

SECTION R502
WOOD FLOOR FRAMING

R502.1.1 Sawn lumber. Sawn lumber shall be identified by a grade mark of an accredited lumber grading or inspection agency and have design values certified by an accreditation body that complies with DOC PS 20. In lieu of a grade mark, a certificate of inspection issued by a lumber grading or inspection agency meeting the requirements of this section shall be accepted.

Note: *See Section R301.1.1.1 for limited-density owner-built rural dwellings.*

R502.11.1 Design. Wood trusses shall be designed in accordance with approved engineering practice. The design and manufacture of metal-plate-connected wood trusses shall comply with ANSI/TPI 1. The truss design drawings shall be prepared by a registered *design* professional ~~where required by the statutes of the jurisdiction in which the project is to be constructed in accordance with Section R106.1~~.

SECTION R506
CONCRETE FLOORS (ON GROUND)

R506.2.3.1 Capillary break. *(No change to text)*

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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8. HCD proposes to adopt Chapter 6 from the 2018 International Residential Code into the 2019 California Residential Code with new and existing amendments as follows:

CHAPTER 6
WALL CONSTRUCTION

SECTION R602
WOOD WALL FRAMING

R602.1.1 Sawn lumber. Sawn lumber shall be identified by a grade mark of an accredited lumber grading or inspection agency and have design values certified by an accreditation body that complies with DOC PS 20. In lieu of a grade mark, a certification of inspection issued by a lumber grading or inspection agency meeting the requirements of this section shall be accepted.

Note: *See Section R301.1.1.1 for limited-density owner-built rural dwellings.*

R602.3.4.1 Rodent proofing. *(No change to text)*

SECTION R606
GENERAL MASONRY CONSTRUCTION

R606.1.1 Professional registration ~~not required.~~ *~~Where the~~ E*mpirical design provisions of Appendix A of TMS 402, the provisions of TMS 403, or the provisions of this section are used to design masonry, project drawings, typical details and specifications ~~are not required to bear the seal of the architect or engineer responsible for design, unless otherwise required by the state law of the jurisdiction having authority.~~ *shall not exempt construction documents from the requirement to be stamped by a California licensed architect or engineer. Notwithstanding other sections of law, the law establishing these provisions is found in Business and Professions Code Sections 5537.1 and 6737.1.*

SECTION R608
EXTERIOR CONCRETE WALL CONSTRUCTION

R608.1 General. Exterior concrete walls shall be designed and constructed in accordance with the provisions of this section or in accordance with the provisions of PCA 100 or ACI 318. Where PCA 100, ACI 318 or the provisions of this section are used to design concrete walls, project drawings, typical details and specifications ~~are not required to bear the seal of the architect or engineer responsible for design, unless otherwise required by the state law of the jurisdiction having authority.~~ *shall not exempt construction documents from the requirement to be stamped by a California licensed architect or engineer. Notwithstanding other sections of law, the law establishing these provisions is found in Business and Professions Code Sections 5537.1 and 6737.1.*

SECTION R610
STRUCTURAL INSULATED PANEL WALL CONSTRUCTION

R610.1 General. Structural insulated panel (SIP) walls shall be designed in accordance with the provisions of this section. Where the provisions of this section are used to design structural insulated panel walls, project drawings, typical details and specifications ~~are not required to bear the seal of the architect or engineer responsible for design, unless otherwise required by the state law of the jurisdiction having authority.~~ *shall not exempt construction documents from the requirement to be stamped by a California licensed architect or engineer. Notwithstanding other sections of law, the law establishing these provisions is found in Business and Professions Code Sections 5537.1 and 6737.1.*

R610.4 SIP wall panels. SIPs shall comply with Figure R610.4 and shall have minimum panel thickness in accordance with Tables R610.5(1) and R610.5(2) for above-grade walls. SIPs shall be identified by grade mark or certificate of inspection issued by an approved agency in accordance with ANSI/APA PRS 610.1.

(HCD 1 and HCD 2) Note*: See the California Factory-Built Housing Law, Health and Safety Code Section 19960 et seq.; and the California Code of Regulations, Title 25, Division 1, Chapter 3; which require building components as addressed in the definition of "factory-built housing" to bear insignia of approval issued by the Department of Housing and Community Development, as specified.*

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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9. HCD proposes to adopt Chapter 7 from the 2018 International Residential Code into the 2019 California Residential Code with existing amendments as follows:

CHAPTER 7
WALL COVERING

SECTION R702
INTERIOR COVERING

R702.7 Vapor retarders. Class I or II vapor retarders are required on the interior side of frame walls in Climate Zones ~~5, 6, 7, 8 and Marine 4~~ *14 and 16*. *See the California Energy Code, FIGURE 100.1-A —California Climate Zones.*

Exceptions:

1. Basement walls.
2. Below-grade portion of any wall.
3. Construction where moisture or its freezing will not damage the materials.

R702.7.1 Class III vapor retarders. Class III vapor retarders shall be permitted where any one of ~~the conditions in Table R702.7.1 is met.~~ *the following materials are used. The material options include vented cladding over fiberboard, vented cladding over gypsum, or insulated sheathing with an R-value equal to or greater than R-4. If insulated sheathing is used the R-value shall be included as part of the compliance toward the California Energy Code.*

Spray foam with a minimum density of 2 lb/ft^3 applied to the interior cavity side of OSB, plywood, fiberboard, insulated sheathing or gypsum is deemed to meet the insulated sheathing requirement where the spray foam R-value meets or exceeds the specified insulated sheathing R-value.

~~**TABLE R702.7.1**~~
~~**CLASS III VAPOR RETARDERS**~~

~~CLIMATE ZONE~~	~~CLASS III VAPOR RETARDERS PERMITTED FOR:[a]~~
~~Marine 4~~	~~Vented cladding over wood structural panels.~~ ~~Vented cladding over fiberboard.~~ ~~Vented cladding over gypsum.~~ ~~Continuous insulation with R-value ≥ 2.5 over 2 x 4 wall.~~ ~~Continuous insulation with R-value ≥ 3.75 over 2 x 6 wall.~~
~~5~~	~~Vented cladding over wood structural panels.~~ ~~Vented cladding over fiberboard.~~ ~~Vented cladding over gypsum.~~ ~~Continuous insulation with R-value ≥ 5 over 2 x 4 wall.~~ ~~Continuous insulation with R-value ≥ 7.5 over 2 x 6 wall.~~
~~6~~	~~Vented cladding over fiberboard.~~ ~~Vented cladding over gypsum.~~ ~~Continuous insulation with R-value ≥ 7.5 over 2 x 4 wall.~~ ~~Continuous insulation with R-value ≥ 11.25 over 2 x 6 wall.~~
~~7 and 8~~	~~Continuous insulation with R-value ≥ 10 over 2 x 4 wall.~~ ~~Continuous insulation with R-value ≥ 15 over 2 x 6 wall.~~

~~For SI: 1 pound per cubic foot = 16 kg/m^3~~

~~a. Spray foam with a maximum permeance of 1.5 perms at the installed thickness, applied to the interior cavity side of wood structural panels, fiberboard, insulating sheathing or gypsum is deemed to meet the continuous insulation requirement where the spray foam *R*-value meets or exceeds the specified continuous insulation *R* value.~~

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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10. HCD proposes to adopt Chapter 8 from the 2018 International Residential Code into the 2019 California Residential Code with existing amendments as follows:

CHAPTER 8
ROOF-CEILING CONSTRUCTION

SECTION R802
WOOD ROOF FRAMING

R802.1.1 Sawn lumber. Sawn lumber shall be identified by a grade mark of an accredited lumber grading or inspection agency and have design values certified by an accreditation body that complies with DOC PS 20. In lieu of a grade mark, a certificate of inspection issued by a lumber grading or inspection agency meeting the requirements of this section shall be accepted.

Note: *See Section R301.1.1.1 for limited-density owner-built rural dwellings.*

R802.10.2 Design. Wood trusses shall be designed in accordance with accepted engineering practice. The design and manufacture of metal-plate-connected wood trusses shall comply with ANSI/TPI 1. The truss design drawings shall be prepared by a registered *design* professional ~~where required by the statutes of the jurisdiction in which the project is to be constructed in accordance with Section R106.1~~.

SECTION R806
ROOF VENTILATION

R806.2 Minimum vent area. The minimum net free ventilation area shall be 1/150 of the area of the vented space.

Exception: The minimum net free ventilation area shall be 1/300 of the vented space provided both of the following conditions are met:

1. In Climate Zones ~~6, 7 and 8~~ *14 and 16*, a Class I or II vapor retarder is installed on the warm-in-winter side of the ceiling.
2. (No change to text)

R806.5 Unvented attic and unvented enclosed rafter assemblies. Unvented attics and unvented enclosed roof framing assemblies created by ceilings that are applied directly to the underside of the roof framing members and structural roof sheathing applied directly to the top of the roof framing members/rafters, shall be permitted where all the following conditions are met:

1. The unvented attic space is completely within the building thermal envelope.
2. Interior Class I vapor retarders are not installed on the ceiling side (attic floor) of the unvented attic assembly or on the ceiling side of the unvented enclosed roof framing assembly.
3. Where wood shingles or shakes are used, a minimum 1/4-inch (6.4 mm) vented airspace separates the shingles or shakes and the roofing underlayment above the structural sheathing.

4. In Climate Zones ~~5, 6, 7 and 8,~~ *14 and 16,* any air-impermeable insulation shall be a Class II vapor retarder, or shall have a Class II vapor retarder coating or covering in direct contact with the underside of the insulation.

   4.1 A Class I or Class II vapor retarder shall be installed on the indirectly conditioned space side of all insulation in an unvented attic with air-permeable insulation, for condensation control.

See the California Energy Code, FIGURE 100.1-A —California Climate Zones.

5. Insulation shall comply with Item 5.3 and either Item 5.1 or 5.2:

   5.1. Item 5.1.1, 5.1.2, 5.1.3 or 5.1.4 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing. *No insulation shall be required when roof tiles, wood shingles or wood shakes, or any other roofing system using battens and no continuous underlayment is installed. A continuous underlayment shall be considered to exist if sheathing, roofing paper or any continuous layer having a perm rate of no more than one perm under the dry cup method is present.*

      5.1.1. Where only air-impermeable insulation is provided, it shall be applied in direct contact with the underside of the structural roof sheathing.

      5.1.2. Where air-permeable insulation is installed directly below the structural sheathing, rigid board or sheet insulation shall be installed directly above the structural roof sheathing in accordance with the R-values in Table R806.5 for condensation control.

      5.1.3. Where both air-impermeable and air-permeable insulation are provided, the air-impermeable insulation shall be applied in direct contact with the underside of the structural roof sheathing ~~in accordance with Item 5.1.1~~ and shall be in accordance with the R-values in Table R806.5 for condensation control. The air-permeable insulation shall be installed directly under the air-impermeable insulation.

      5.1.4. Alternatively, sufficient rigid board or sheet insulation shall be installed directly above the structural roof sheathing to maintain the monthly average temperature of the underside of the structural roof sheathing above 45°F (7°C). For calculation purposes, an interior air temperature of 68°F (20°C) is assumed and the exterior air temperature is assumed to be the monthly average outside air temperature of the three coldest months.

5.2. In Climate Zones ~~1, 2 and 3,~~ *3-15,* air-permeable insulation installed in unvented attics shall meet the following requirements:

5.2.1 (no change to text)
5.2.2 (no change to text)
5.2.3 (no change to text)
5.2.4 (no change to text)
5.2.5 (no change to text)
5.2.6 (no change to text)
5.2.7 (no change to text)
5.2.8 (no change to text)
5.2.9 (no change to text)
5.2.10 (no change to text)

5.3 (no change to text)

TABLE R806.5
INSULATION FOR CONDENSATION CONTROL

CLIMATE ZONE	MINIMUM RIGID BOARD ~~ON~~ *OR* AIR-IMPERMEABLE INSULATION R-VALUE[~~a, b~~]
~~2B and 3B~~ *6-15* tile roof only	0 (none required)
~~1, 2A, 2B, 3A, 3B, 3C~~ *3-15*	R-5
~~4C~~ *1&2*	R-10
~~4A, 4B~~ *16*	R-15
~~5~~	~~R-20~~
~~6~~	~~R-25~~
~~7~~	~~R-30~~
~~8~~	~~R-35~~

~~a. Contributes to but does not supersede the requirements in Section N1102.~~
~~b. Alternatively, sufficient continuous insulation shall be installed directly above the structural roof sheathing to maintain the monthly average temperature of the underside of the structural roof sheathing above 45°F (7°C). For calculation purposes, an interior air temperature of 68°F (20°C) is assumed and the exterior air temperature is assumed to be the monthly average outside air temperature of the three coldest months.~~

SECTION R807
ATTIC ACCESS

R807.1 Attic access. Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that have a vertical height of 30 inches (762 mm) or greater over an area of not less than 30 square feet (2.8 m^2). The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members.

The rough-framed opening shall be not less than 22 inches by 30 inches (559 mm by 762 mm) and shall be located in a hallway or other location with ready access. Where located in a wall, the opening shall be not less than 22 inches wide by 30 inches high (559 mm wide by 762 mm high). Where the access is located in a ceiling, minimum unobstructed headroom in the attic space shall be 30 inches (762 mm) at some point above the access measured vertically from the bottom of ceiling framing members. See ~~Section M1305.1.3~~ *the California Mechanical Code* for access requirements where mechanical equipment is located in attics.

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

11. HCD proposes to adopt Chapter 9 from the 2018 International Residential Code into the 2019 California Residential Code with existing amendments as follows:

CHAPTER 9
ROOF ASSEMBLIES

SECTION R903
WEATHER PROTECTION

R903.4.1 Secondary (emergency overflow) drains or scuppers. Where roof drains are required, secondary emergency overflow roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason. Overflow drains having the same size as the roof drains shall be installed with the inlet flow line located 2 inches (51 mm) above the low point of the roof, or overflow scuppers having three times the size of the roof drains and having a minimum opening height of 4 inches (102 mm) shall be installed in the adjacent parapet walls with the inlet flow located 2 inches (51 mm) above the low point of the roof served. The installation and sizing of overflow drains, leaders and conductors shall comply with ~~Sections 1106 and 1108 of~~ the ~~International~~ *California* Plumbing Code~~, as applicable~~.

~~Overflow drains shall discharge to an approved location and shall not be connected to roof drain lines.~~

SECTION R905
REQUIREMENTS FOR ROOF COVERINGS

R905.16 Photovoltaic shingles. The installation of photovoltaic shingles shall comply with the provisions of this section, Section R324 and ~~NFPA 70~~ *the California Electrical Code*.

SECTION R907
ROOFTOP-MOUNTED PHOTOVOLTAIC PANEL SYSTEMS

R907.1 Rooftop-mounted photovoltaic panel systems. Rooftop mounted photovoltaic panel systems shall be designed and installed in accordance with Section R324 and ~~NFPA 70~~ *the California Electrical Code*.

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

12. HCD proposes to adopt Chapter 10 except Section 1004.4, from the 2018 International Residential Code into the 2019 California Residential Code with existing amendments as follows:

CHAPTER 10
CHIMNEYS AND FIREPLACES

SECTION R1001
MASONRY FIREPLACES

R1001.3 Seismic reinforcing. Masonry or concrete chimneys in *all structures regulated by this code assigned to* Seismic Design Category *C,* D_0, D_1 or D_2 shall be reinforced. Reinforcing shall conform to the requirements set forth in Table R1001.1 and Section R606.

R1001.4 Seismic anchorage. Masonry or concrete chimneys in *all structures regulated by this code assigned to* Seismic Design Categories *C,* D_0, D_1 or D_2 shall be anchored at each floor, ceiling or roof line more than 6 feet (1829 mm) above grade, except where constructed completely within the exterior walls. Anchorage shall conform to the requirements of Section R1001.4.1.

TABLE R1001.1
SUMMARY OF REQUIREMENTS FOR MASONRY FIREPLACES AND CHIMNEYS

…. (No Changes to Table)

Note: This table provides a summary of major requirements for the construction of masonry chimneys and fireplaces. Letter references are to Figure R1001.1, which shows examples of typical construction. This table does not cover all requirements, nor does it cover all aspects of the indicated requirements. For the actual mandatory requirements of the code, see the indicated section of text.

a. The letters refer to Figure R1001.1.
b. Not required in Seismic Design Category ~~A, B or C~~ *A or B.*

SECTION R1003
MASONRY CHIMNEYS

R1003.3 Seismic reinforcing. Masonry or concrete chimneys shall be constructed, anchored, supported and reinforced as required in this chapter. In *all structures regulated by this code assigned to* Seismic Design Category *C,* D_0, D_1 or D_2 masonry and concrete chimneys shall be reinforced and anchored as detailed in Section R1003.3.1, R1003.3.2 and R1003.4. In Seismic Design Category ~~A, B or C~~ *A or B*, reinforcement and seismic anchorage are not required.

R1003.4 Seismic anchorage. Masonry and concrete chimneys and foundations in *all structures regulated by this code assigned to* Seismic Design Category *C,* D_0, D_1 or D_2 shall be anchored at each floor, ceiling or roof line more than 6 feet (1829 mm) above grade, except where constructed completely within the exterior walls. Anchorage shall conform to the requirements in Section R1003.4.1.

R1003.11.3 Gas appliances. Flue lining systems for gas appliances shall be in accordance with ~~Chapter 24~~ *the California Mechanical Code.*

R1003.14 Flue area (appliance). Chimney flues shall not be smaller in area than that of the area of the connector from the appliance (see Tables R1003.14(1) and R1003.14(2)). The sizing of a chimney flue to which multiple appliance venting systems are connected shall be in accordance with ~~Section M1805.3~~ *the California Mechanical Code.*

SECTION R1004
FACTORY-BUILT FIREPLACES

R1004.1.1 Factory-built wood burning fireplaces. *(No change to text)*

~~**R1004.4 Unvented gas log heaters.** An unvented gas log heater shall not be installed in a factory-built fireplace unless the fireplace system has been specifically tested, listed and labeled for such use in accordance with UL 127.~~

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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13. HCD proposes to NOT adopt Part IV, Energy Conservation, which includes Chapter 11, from the 2018 International Residential Code.

Part IV—Energy Conservation
(Note: Part IV is not adopted. See California Energy Code, Title 24, Part 6.)

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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14. HCD proposes to NOT adopt Part V, Mechanical, which includes Chapters 12 through 23, from the 2018 International Residential Code.

Part V—Mechanical
(Note: Part V is not adopted. See California Mechanical Code, Title 24, Part 4.)

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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15. HCD proposes to NOT adopt Part VI, Fuel Gas, which includes Chapter 24, from the 2018 International Residential Code.

Part VI—Fuel Gas
(Note: Part VI is not adopted. See California Mechanical Code and California Plumbing Code, Title 24, Parts 4 and 5.)

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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16. HCD proposes to NOT adopt Part VII, Plumbing, which includes Chapters 25 through 33, from the 2018 International Residential Code.

Part VII—Plumbing
(Note: Part VII is not adopted. See California Plumbing Code, Title 24, Part 5.)

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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17. HCD proposes to NOT adopt Part VIII, Electrical, which includes Chapters 34 through 43, from the 2018 International Residential Code.

Part VIII—Electrical
(Note: Part VIII is not adopted. See California Electrical Code, Title 24, Part 3.)

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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18. HCD proposes to adopt Part IX, Chapter 44, from the 2018 International Residential Code into the 2019 California Residential Code with amendments as follows:

Part IX—Referenced Standards

CHAPTER 44
REFERENCED STANDARDS

Notwithstanding California laws and regulations, these referenced standards shall be applicable only to those California Residential Code Sections that are adopted.

User note:
About this chapter: *The one- and two-family dwelling code contains numerous references to standards promulgated by other organizations that are used to provide requirements for materials, products and methods of construction. Chapter 44 contains a comprehensive list of all standards that are referenced in this code. These standards, in essence, are part of this code to the extent of the reference to the standard.*

This chapter lists the standards that are referenced in various sections of this document. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and title, and the section or sections of this document that reference the standard. The application of the referenced standards shall be as specified in Section R102.4.

AAMA

American Architectural Manufacturers Association
1827 Walden Office Square, Suite 550
Schaumburg, IL 60173

AAMA/WDMA/CSA 101/I.S.2/A440—17: North American Fenestration Standards/Specifications for Windows, Doors and Skylights
R308.6.9, R609.3, ~~N1102.4.3~~

ACCA

Air Conditioning Contractors of America
2800 Shirlington Road, Suite 300
Arlington, VA 22206

Manual D—2016: Residential Duct Systems
Table R301.2(1), ~~M1601.1, M1602.2~~

~~**Manual J—2016: Residential Load Calculation—Eighth Edition**~~
~~N1103.7, M1401.3~~

~~**Manual S—2014: Residential Equipment Selection**~~
~~N1103.7, M1401.3~~

~~AMCA~~

~~Air Movement and Control Association International~~
~~30 West University Drive~~
~~Arlington Heights, IL 60004~~

~~**ANSI/AMCA 210-ANSI/ASHRAE 51—07: Laboratory Methods of Testing Fans for Aerodynamic Performance Rating**~~
~~Table M1505.3~~

ANCE

Association of the Electric Sector
Av. Lázaro Cardenas No. 869
Col. Nueva Industrial Vallejo
C.P. 07700 México D.F.

NMX-J-521/2-40-ANCE—2014/CAN/CSA-22.2 No. 60335-2-40—12/UL 60335-2-40: Safety of Household and Similar Electric Appliances, Part 2-40: Particular Requirements for Heat Pumps, Air-Conditioners and Dehumidifiers
M1403.1, M1412.1, M1413.1

ANSI

American National Standards Institute
25 West 43rd Street, 4th Floor
New York, NY 10036

A118.10—99: Specification for Load-bearing, Bonded, Waterproof Membranes for Thin-set Ceramic Tile and Dimension Stone Installation
P2709.2, P2709.2.4

LC1/CSA 6.26—13: Fuel Gas Piping Systems Using Corrugated Stainless Steel Tubing (CSST)
G2414.5.4, G2411.3, G2415.5

LC4/CSA 6.32—12: Press-connect Metallic Fittings for Use in Fuel Gas Distribution Systems
G2414.10.1, G2414.10.2, G2414.10.3, G2415.5

Z21.1—2010: Household Cooking Gas Appliances
G2447.1, M1503.2

Z21.5.1/CSA 7.1—14: Gas Clothes Dryers—Volume I—Type I Clothes Dryers
G2438.1

Z21.8—94 (R2002): Installation of Domestic Gas Conversion Burners
G2443.1

Z21.10.1/CSA 4.1—12: Gas Water Heaters—Volume I—Storage Water Heaters with Input Ratings of 75,000 Btu per hour or Less
G2448.1

Z21.10.3/CSA 4.3—11: Gas Water Heaters—Volume III—Storage Water Heaters with Input Ratings above 75,000 Btu per hour, Circulating and Instantaneous
G2448.1

Z21.11.2—11: Gas-fired Room Heaters—Volume II—Unvented Room Heaters
G2445.1

Z21.13/CSA 4.9—11: Gas-fired Low-pressure Steam and Hot Water Boilers
G2452.1

Z21.15/CSA 9.1—09: Manually Operated Gas Valves for Appliances, Appliance Connector Valves and Hose End Valves
Table G2420.1.1

Z21.22—99 (R2003): Relief Valves for Hot Water Supply Systems—with Addenda Z21.22a—2000 (R2003) and 21.22b—2001 (R2003)
P2804.2, P2804.7

Z21.24/CSA 6.10—06: Connectors for Gas Appliances
G2422.1, G2422.2

~~**Z21.40.1/CSA 2.91—96 (R2011): Gas-fired, Heat-activated Air-conditioning and Heat Pump Appliances**~~
~~G2449.1~~

~~**Z21.40.2/CSA 2.92—96 (R2011): Air-conditioning and Heat Pump Appliances (Thermal Combustion)**~~
~~G2449.1~~

~~**Z21.42—2014: Gas-fired Illuminating Appliances**~~
~~G2450.1~~

~~**Z21.47/CSA 2.3—12: Gas-fired Central Furnaces**~~
~~G2442.1~~

~~**Z21.50/CSA 2.22—16: Vented Gas Fireplaces**~~
~~G2434.1~~

~~**Z21.54—2009: Gas Hose Connectors for Portable Outdoor Gas-fired Appliances**~~
~~G2422.1~~

~~**Z21.56/CSA 4.7—17: Gas-fired Pool Heaters**~~
~~G2441.1~~

~~**Z21.58—95/CSA 1.6—13: Outdoor Cooking Gas Appliances**~~
~~G2447.1~~

~~**Z21.60/CSA 2.26—12: Decorative Gas Appliances for Installation in Solid Fuel-burning Fireplaces**~~
~~G2432.1~~

~~**Z21.69/CSA 6.16—09: Connectors for Movable Gas Appliances**~~
~~G2422.1.5~~

~~**Z21.75/CSA 6.27—07: Connectors for Outdoor Gas Appliances and Manufactured Homes**~~
~~G2422.1~~

~~**Z21.80/CSA 6.22—11: Line Pressure Regulators**~~
~~G2421.1~~

~~**ANSI/CSA FC 1—12: Stationary Fuel Cell Power Systems**~~
~~M1903.1~~

~~**Z21.84—12: Manually Listed, Natural Gas Decorative Gas Appliances for Installation in Solid Fuel-burning Fireplaces**~~
~~G2432.1, G2432.2~~

~~**Z21.86/CSA 2.32—08: Gas-fired Vented Space Heating Appliances**~~
~~G2436.1, G2437.1, G2446.1~~

~~**Z21.88/CSA 2.33—16: Vented Gas Fireplace Heaters**~~
~~G2435.1~~

~~**Z21.91—07: Ventless Firebox Enclosures for Gas-fired Unvented Decorative Room Heaters**~~
~~G2445.7.1~~

~~**Z21.93/CSA 6.30—13: Excess Flow Valves for Natural and LP Gas with Pressures up to 5 psig**~~
~~G2421.4~~

~~**Z21.97—12: Outdoor Decorative Appliances**~~
~~G2454.1~~

~~**Z83.6—90 (R1998): Gas-fired Infrared Heaters**~~
~~G2451.1~~

~~**Z83.8/CSA 2.6—09: Gas-fired Unit Heaters, Gas Packaged Heaters, Gas Utility Heaters and Gas-fired Duct Furnaces**~~
~~G2444.1~~

~~**Z83.19—01 (R2009): Gas-fuel High-intensity Infrared Heaters**~~
~~G2451.1~~

~~**Z83.20—08: Gas-fired Low-intensity Infared Heaters Outdoor Decorative Appliances**~~
~~G2451.1~~

~~APSP~~

~~The Association of Pool & Spa Professionals~~
~~211 Eisenhower Avenue, Suite 500~~
~~Alexander, VA 22314~~

~~**ANSI/APSP/ICC 14—2014: American National Standard for Portable Electric Spa Energy Efficiency**~~
~~N1103.11~~

~~**ANSI/APSP/ICC 15a—2011: American National Standard for Residential Swimming Pool and Spa Energy Efficiency—includes Appendix A Approved January 9, 2013**~~
~~N1103.12~~

ASCE/SEI

American Society of Civil Engineers
Structural Engineering Institute
1801 Alexander Bell Drive
Reston, VA 20191-4400

7—16: Minimum Design Loads and Associated Criteria for Buildings and Other Structures
R301.2.1.1, R301.2.1.2, R301.2.1.2.1, R301.2.1.5, R301.2.1.5.1, Table R608.6(1), Table R608.6(2), Table R608.6(3), Table R608.6(4), Table R608.7(1A), Table R608.7(1B), Table R608.7(1C), R608.9.2, R608.9.3, R609.2, R609.6.2, ~~AH107.4.3~~

~~ASHRAE~~

~~ASHRE~~
~~1791 Tullie Circle NE~~
~~Atlanta, GA 30329~~

~~**ASHRAE—2001: 2001 ASHRAE Handbook of Fundamentals**~~
~~Table N1105.5.2(1)~~

~~**ASHRAE—2017: ASHRAE Handbook of Fundamentals**~~
~~N1102.1.5, P3001.2, P3101.4~~

~~**ASHRAE 193—2010(RA 2014): Method of Test for Determining Air Tightness of HVAC Equipment**~~
~~N1103.3.2.1~~

~~**34—2016: Designation and Safety Classification of Refrigerants**~~
~~M1411.1~~

ASME

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~~**D3350—14: Specification for Polyethylene Plastic Pipe and Fitting Materials**~~
~~Table M2101.1~~

~~**D4068—15: Specification for Chlorinated Polyethylene (CPE) Sheeting for Concealed Water Containment Membrane**~~
~~P2709.2, P2709.2.2~~

~~**D4551—12: Specification for Poly (Vinyl Chloride) (PVC) Plastic Flexible Concealed Water-containment Membrane**~~
~~P2709.2, P2709.2.1~~

E84—2016: Standard Test Method for Surface Burning Characteristics of Building Materials
R202, R302.9.3, R302.9.4, R302.10.1, R302.10.2, R316.3, R316.5.9, R316.5.11, R507.2.2.2, R703.14.3, R802.1.5, ~~M1601.3, M1601.5.2, P2801.6~~

E96/E96M—2015: Test Method for Water Vapor Transmission of Materials

R202, Table R806.5, ~~M1411.6, M1601.4.6~~

~~E283—04(2012): Test Method for Determining the Rate of Air Leakage through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences across the Specimen~~
~~R202, N1102.4.5~~

~~E779—10: Standard Test Method for Determining Air Leakage Rate by Fan Pressurization~~
~~N1102.4.1.2~~

~~E1509—12: Standard Specification for Room Heaters, Pellet Fuel-burning Type~~
~~M1410.1~~

~~E1827—11: Standard Test Methods for Determining Airtightness of Building Using an Orifice Blower Door~~
~~N1102.4.1.2~~

~~E2231—15: Standard Practice for Specimen Preparation and Mounting of Pipe and Duct Insulation Materials to Assess Surface Burning Characteristics~~
~~M1601.3~~

~~F405—05: Specification for Corrugated Polyethylene (PE) Pipe and Fittings~~
~~Table P3009.11, Table P3302.1, Table AG101.1~~

~~F409—12: Specification for Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings~~
~~Table P2701.1, P2702.2, P2702.3~~

~~F437—15: Specification for Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80~~
~~Table P2906.6~~

~~F438—15: Specification for Socket-type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40~~
~~Table P2906.6~~

~~F439—13: Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80~~
~~Table P2906.6~~

~~F441/F441M—15: Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80~~
~~Table P2906.4, Table P2906.5, Table AG101.1~~

~~F442/F442M—13E1: Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)~~
~~Table P2906.4, Table P2906.5, Table AG101.1~~

~~F477—14: Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe~~
~~P2906.18, P3003.13~~

~~F493—14: Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings~~
~~P2906.9.1.2, P2906.9.1.3, P2906.18.2~~

~~F628—12E1: Specification for Acrylonitrile-butadiene-styrene (ABS) Schedule 40 Plastic Drain, Waste and Vent Pipe with a Cellular Core~~
~~Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table P3002.3, P3003.3.2, Table AG101.1~~

~~F656—15: Specification for Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride)(PVC) Plastic Pipe and Fittings~~
~~P2906.9.1.4, P3003.9.2~~

~~F714—13: Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter~~
~~Table P3002.2, Table P3002.1(2), P3010.4~~

~~**F876—15A: Specification for Cross-linked Polyethylene (PEX) Tubing**~~
~~Table M2101.1, Table P2906.4, Table P2906.5, Table AG101.1~~

~~**F877—2011A: Specification for Cross-linked Polyethylene (PEX) Plastic Hot- and Cold-water Distribution Systems**~~
~~Table M2101.1, Table P2906.6~~

~~**F891—10: Specification for Coextruded Poly (Vinyl Chloride) (PVC) Plastic Pipe with a Cellular Core**~~
~~Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table P3302.1, Table AG101.1~~

~~**F1055—13: Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene and Crosslinked Polyethylene Pipe and Tubing**~~
~~Table M2105.5, M2105.11.2, Table P2606.6, P2906.20.2~~

~~**F1281—11: Specification for Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene (PEX-AL-PEX) Pressure Pipe**~~
~~Table M2101.1, Table P2906.4, Table P2906.5, Table P2906.6, P2506.12.1, Table AG101.1~~

~~**F1282—10: Specification for Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe**~~
~~Table M2101.1, Table P2906.4, Table P2906.5, Table P2906.6, P2906.12.1, Table AG101.1~~

~~**F1412—09: Specification for Polyolefin Pipe and Fittings for Corrosive Waste Drainage**~~
~~Table P3002.1(2), Table P3002.2, Table P3002.3, P3003.11.1~~

~~**F1488—14: Specification for Coextruded Composite Pipe**~~
~~Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table P3009.11~~

~~**F1504—2014: Standard Specification for Folded Poly (Vinyl Chloride) (PVC) for Existing Sewer and Conduit Rehabilitation**~~
~~P3011.4~~

~~**F1807—15: Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing**~~
~~Table M2101.1, Table P2906.6~~

~~**F1866—13: Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings**~~
~~Table P3002.3~~

~~**F1871—2011: Standard Specification for Folded/Formed Poly (Vinyl Chloride) Pipe Type A for Existing Sewer and Conduit Rehabilitation**~~
~~P3011.4~~

~~**F1924—12: Standard Specification for Plastic Mechanical Fittings for Use on Outside Diameter Controlled Polyethylene Gas Distribution Pipe and Tubing**~~
~~M2105.11.1~~

~~**F1960—15: Specification for Cold Expansion Fittings with PEX Reinforcing Rings for Use with Cross-linked Polyethylene (PEX) Tubing**~~
~~Table M2101.1, Table P2906.6~~

~~**F1970—12E1: Standard Specification for Special Engineered Fittings, Appurtenances or Valves for Use in Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Systems**~~
~~M2105.5, Table 2903.9.4~~

~~**F1973—13E1: Standard Specification for Factory Assembled Anodeless Risers and Transition Fittings in Polyethylene (PE) and Polyamide 11 (PA 11) Fuel Gas Distribution Systems**~~
~~G2415.15.2~~

~~**F1974—09(2015): Specification for Metal Insert Fittings for Polyethylene/Aluminum/Polyethylene and Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene Composite Pressure Pipe**~~

Table P2906.6, P2906.12.1

F1986—01(2011): Multilayer Pipe Type 2, Compression Joints for Hot and Cold Drinking Water Systems
Table P2906.4, Table P2906.5, Table P2906.6

F2080—15: Specification for Cold-expansion Fittings with Metal Compression-sleeves for Cross-linked Polyethylene (PEX) Pipe
Table P2906.6

F2098—08: Standard Specification for Stainless Steel Clamps for Securing SDR9 Cross-linked Polyethylene (PEX) Tubing to Metal Insert and Plastic Insert Fittings
Table M2101.1, Table P2906.6

F2159—14: Standard Specification for Plastic Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing
Table P2906.6

F2262—09: Standard Specification for Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene Tubing OD Controlled SDR9
Table P2906.4, Table P2906.5

F2389—15: Standard for Pressure-rated Polypropylene (PP) Piping Systems
Table M2105.12.1, Table P2906.4, Table P2906.5, Table P2906.6, P2906.11.1, Table AG101.1

F2434—14: Standard Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for Polyethylene/Aluminum/Cross-linked Polyethylene (PEX-AL-PEX) Tubing
Table P2906.6

F2623—14: Standard Specification for Polyethylene of Raised Temperature (PE-RT) SDRG Tubing
Table M2101.1, Table AG101.1

F2735—09: Standard Specification for Plastic Insert Fittings for SDR9 Cross-linked Polyethylene (PEX) and Polyethylene of Raised Temperature (PE-RT) Tubing
Table M2101.1, Table P2906.6

F2769—14: Polyethylene or Raised Temperature (PE-RT) Plastic Hot and Cold-Water Tubing and Distribution Systems
Table M2101.1, Table P2906.4, Table P2906.5, Table P2906.6, Table AG101.1

F2806—10(2015): Standard Specification for Acrylonitrile-butadiene-styrene (ABS) Plastic Pipe (Metric SDR-PR)
Table M2101.1

F2855—12: Standard Specification for Chlorinated Poly (Vinyl Chloride)/Aluminum/Chlorinated Poly (Vinyl Chloride) (CPVC-AL-CPVC) Composite Pressure Tubing
Table P2906.4, Table P2906.5, Table AG101.1

F2945—2015: Standard Specification for Polyamide 11 Gas Pressure Pipe, Tubing and Fittings
G2414.6

F2969—12: Standard Specification for Acrylonitrile-butadiene-styrene (ABS) IPS Dimensioned Pressure Pipe
Table M2101.1

AWS American Welding Society
8669 NW 36 Street, #130
Miami, FL 33166

A5.8M/A5.8—2011: Specifications for Filler Metals for Brazing and Braze Welding
P3003.6.1

ANSI/AWS A5.31M/A5.31—2012: Specification for Fluxes for Brazing and Braze Welding Edition: 2nd
M2103.3, M2202.2, P2906.15

AWWA

American Water Works Association
6666 West Quincy Avenue
Denver, CO 80235

C104/A21.4—13: Cement-mortar Lining for Ductile-iron Pipe and Fittings
P2906.4

C110/A21.10—12: Ductile-iron and Gray-iron Fittings
Table P2906.6, P3002.3

C115/A21.15—11: Flanged Ductile-iron Pipe with Ductile-iron or Gray-iron Threaded Flanges
Table P2906.4

C151/A21.51—09: Ductile-iron Pipe, Centrifugally Cast, for Water
Table P2906.4

C153/A21.53—11: Ductile-iron Compact Fittings for Water Service
Table P2906.6

C500—09: Standard for Metal-seated Gate Valves for Water Supply Service
Table P2903.9.4

C504—10: Standard for Rubber-seated Butterfly Valves
Table P2903.9.4

C507—15: Standard for Ball Valves, 6 In. Through 60 In. (150 mm through 1,500 mm)
Table P2903.9.4

C510—07: Double Check Valve Backflow Prevention Assembly
Table P2902.3, P2902.3.6
C511—07: Reduced-pressure Principle Backflow Prevention Assembly
Table P2902.3, P2902.3.5, P2902.5.1

C901—16: Polyethylene (PE) Pressure Pipe and Tubing 1/2 in. (13 mm) through 3 in. (76 mm) for Water Service
P2906.4, Table AG101.1

C903—16: Polyethylene-aluminum-polyethylene (PE-AL-PE) Composite Pressure Pipe, 12 mm (1/2 in.) through 50 mm (2 in.), for Water Service
Table M2101

C904—16: Cross-linked Polyethylene (PEX) Pressure Tubing, 1/2 in. (13 mm) through 3 in. (76 mm) for Water Service
P2906.4, Table AG101.1

CISPI

Cast Iron Soil Pipe Institute
2401 Fieldcrest Drive
Mundelein, IL 60060

301—12: Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste and Vent Piping Applications
Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table P3002.3, Table P3302.1

310—12: Standard Specification for Coupling for Use in Connection with Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste and Vent Piping Applications
P3003.4.3

CSA

CSA Group
8501 East Pleasant Valley Road
Cleveland, OH 44131-5516

AAMA/WDMA/CSA 101/I.S.2/A440—17: North American Fenestration Standard/Specification for Windows, Doors and Unit Skylights
R308.6.9, R609.3, ~~N1102.4.3~~

~~**ANSI/CSA FC I—2014: Fuel Cell Technologies—Part 3-100; Stationary fuel cell power systems-Safety**~~
~~M1903.1~~

~~**ASME A112.3.4—2013/CSA B45.9—13: Macerating Toilet Systems and Related Components**~~
~~Table P2701.1, P3007.5~~

~~**ASME A112.4.2—2015/CSA B45.16—15: Water-closet Personal Hygiene Device**~~
~~P2722.5~~

~~**ASME A112.18.1—2017/CSA B125.1—2017: Plumbing Supply Fittings**~~
~~Table P2701.1, P2708.4, P2708.5, P2722.1, P2722.3, P2902.2, Table P2903.9.4~~

~~**ASME A112.18.2—2015/CSA B125.2—2015: Plumbing Waste Fittings**~~
~~Table P2701.1, P2702.2~~

~~**A112.18.6—2017/CSA B125.6—2017: Flexible Water Connectors**~~
~~P2906.7~~

~~**ASME A112.19.1—2013/CSA B45.2—13: Enameled Cast iron and Enameled Steel Plumbing Fixtures**~~
~~Table P2701.1, P2711.1~~

~~**ASME A112.19.2—2013/CSA B45.1—13: Ceramic Plumbing Fixtures**~~
~~Table P2701.1, P2705.1, P2711.1, P2712.1, P2712.2, P2712.9~~

~~**ASME A112.19.3—2008/CSA B45.4—08 (R2013): Stainless Steel Plumbing Fixtures**~~
~~Table P2701.1, P2705.1, P2711.1, P2712.1~~

~~**ASSE 1002—2015/ASME A112.1002—2015/CSA B125.12—15: Anti-Siphon Fill Valves**~~
~~Table P2701.1, Table P2902.3, P2902.4.1~~

~~**ASSE 1016—2017/ASME 112.1016—2017/CSA B125.16—2017: Performance Requirements for Automatic Compensating Valves for Individual Showers and Tub/Shower Combinations**~~
~~Table P2701.1, P2708.4, P2722.2~~

~~**ASSE 1070—2015/ASME A112.1070—2015/CSA B125.70—15: Performance Requirements for Water-temperature-limiting Devices**~~
~~P2713.3, P2721.2, P2724.1~~

~~**A112.19.5—2011/CSA B45.15—2011: Flush Valves and Spuds for Water-closets, Urinals and Tanks**~~
~~Table P2701.1~~

~~**A112.19.7—2017/CSA B45.10—2017: Hydromassage Bathtub Systems**~~
~~Table P2701.1~~

~~**CSA 8—93: Requirements for Gas Fired Log Lighters for Wood Burning Fireplaces**~~
~~G2433.1~~

~~**CSA A257.1—2014: Non-reinforced Circular Concrete Culvert, Storm Drain, Sewer Pipe and Fittings**~~
~~Table P3002.2~~

~~**A257.2—14: Reinforced Circular Concrete Culvert, Storm Drain, Sewer Pipe and Fittings**~~
~~Table P3002.2, P3003.13~~

~~**A257.3—14: Joints for Circular Concrete Sewer and Culvert Pipe, Manhole Sections and Fittings Using Rubber Gaskets**~~
~~P3003.5, P3003.13~~

~~**B55.1—2015: Test Method for Measuring Efficiency and Pressure Loss of Drain Water Heat Recovery Units**~~
~~N1103.5.4~~

~~**B55.2—2015: Drain Water Heat Recovery Units**~~
~~N1103.5.4~~

~~**B64.1.1—16: Vacuum Breakers, Atmospheric Type (AVB)**~~
~~Table P2902.3, P2902.3.2~~

~~**B64.1.2—16: Pressure Vacuum Breakers (PVB)**~~
~~Table P2902.3, P2902.3.4~~

~~**B64.1.3—16: Spill Resistant Pressure Vacuum Breakers (SRPVB)**~~
~~Table P2902.3~~

~~**B64.2—16: Vacuum Breakers, Hose Connection Type (HCVB)**~~
~~Table P2902.3, P2902.3.2~~

~~**B64.2.1—16: Hose Connection Vacuum Breakers (HCVB) with Manual Draining Feature**~~
~~Table P2902.3, P2902.3.2~~

~~**B64.2.1.1—16: Hose Connection Dual Check Vacuum Breakers (HCDVB)**~~
~~Table P2902.3, P2902.3.2~~

~~**B64.2.2—16: Vacuum Breakers, Hose Connection Type (HCVB) with Automatic Draining Feature**~~
~~Table P2902.3, P2902.3.2~~

~~**B64.3—16: Dual Check Backflow Preventers with Atmospheric Port (DCAP)**~~
~~Table P2902.3, P2902.3.2, P2902.5.1~~

~~**B64.4—16: Backflow Preventers, Reduced Pressure Principle Type (RP)**~~
~~Table P2902.3, P2902.3.5, P2903.5.1~~

~~**B64.4.1—16: Reduced Pressure Principle for Fire Sprinklers (RPF)**~~
~~Table P2902.3, P2902.3.5~~

~~**B64.5—16: Double Check Backflow Preventers (DCVA)**~~
~~Table P2902.3, P2902.3.6~~

~~**B64.5.1—16: Double Check Valve Backflow Preventers, Type for Fire Systems (DCVAF)**~~
~~Table P2902.3, P2902.3.6~~

~~**B64.6—16: Dual Check Valve Backflow Preventers (DuC)**~~
~~Table P2902.3, P2902.3.7~~

~~**B64.7—16: Laboratory Faucet Vacuum Breakers (LFVB)**~~
~~Table P2902.3, P2902.3.2~~

~~**B125.3—12: Plumbing Fittings**~~
~~Table P2701.1, P2713.3, P2721.2, Table P2902.3, P2902.4.1, Table P2903.9.4~~

~~**B137.1—16: Polyethylene (PE) Pipe, Tubing and Fittings for Cold Water Pressure Services**~~
~~Table P2906.4, Table P2906.6~~

~~**B137.2—16: Polyvinylchloride PVC Injection-moulded Gasketed Fittings for Pressure Applications**~~
~~Table P2906.6~~

~~**B137.3—16: Rigid Poly (Vinyl Chloride) (PVC) Pipe for Pressure Applications**~~
~~Table P2906.4, Table P2906.6, P3003.9.2, Table AG101.1~~

~~**B137.5—16: Cross-linked Polyethylene (PEX) Tubing Systems for Pressure Applications**~~
~~Table P2906.4, Table P2906.5, Table P2906.6, Table AG101.1~~

~~**B137.6—16: Chlorinated polyvinylchloride CPVC Pipe, Tubing and Fittings For Hot- and Cold-water Distribution Systems**~~
~~Table P2906.4, Table P2906.5, Table 2906.6, Table AG101.1~~

~~**B137.9—16: Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe Systems**~~
~~Table M2101.1, Table P2906.4, P9506.12.1~~

~~**B137.10—13: Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene (PE-AL-PE) Composite Pressure Pipe Systems**~~
~~Table M2101.1, Table P2906.4, Table P2906.5, Table P2906.6, P2906.12.1~~

~~**B137.11—16: Polypropylene (PP-R) Pipe and Fittings for Pressure Applications**~~
~~Table P2906.4, Table P2906.5, Table P2906.6, Table AG101.1~~

~~**B137.18—13: Polyethylene of Raised Temperature (PE-RT) Tubing Systems for Pressure Applications**~~
~~Table M2101.1, Table M2105.4, Table M2105.5, Table P2906.4, Table P2906.5, Table P2906.6~~

~~**B181.1—15: Acrylonitrile-butadiene-styrene (ABS) Drain, Waste and Vent Pipe and Pipe Fittings**~~
~~Table P3002.1(1), Table P3002.1(2), Table P3002.3, P3003.3.2~~

~~**B181.2—15: Polyvinylchloride (PVC) and chlorinated polyvinylchloride (CPVC) Drain, Waste and Vent Pipe and Pipe Fittings**~~
~~Table P3002.1(1), Table P3002.1(2), P3003.9.2, P3008.3~~

~~**B181.3—15: Polyolefin and polyvinylidene (PVDF) Laboratory Drainage Systems**~~
~~Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table P3002.3, P3003.11.1~~

~~**B182.2—11: PSM Type polyvinylchloride (PVC) Sewer Pipe and Fittings**~~
~~Table P3002.2, Table P3302.1~~

~~**B182.4—15: Profile polyvinylchloride (PVC) Sewer Pipe & Fittings**~~
~~Table P3002.2, Table P3302.1~~

~~**B182.6—15: Profile Polyethylene (PE) Sewer Pipe and Fittings for leak-proof Sewer Applications**~~
~~Table P3302.1~~

~~**B182.8—15: Profile Polyethylene (PE) Storm Sewer and Drainage Pipe and Fittings**~~
~~Table P3302.1~~

~~**B356—10: Water Pressure Reducing Valves for Domestic Water Supply Systems**~~
~~P2903.3.1~~

~~**B483.1—07(R2012): Drinking Water Treatment Systems**~~
~~P2909.1, P2909.2~~

~~**B602—15: Mechanical Couplings for Drain, Waste and Vent Pipe and Sewer Pipe**~~
~~P3003.3.1, P3003.4.3,P3003.5, P3003.9.1, P3003.10, P3003.12.2, P3003.13~~

~~**CSA B45.5—17/IAPMO Z124—17: Plastic Plumbing Fixtures**~~
~~Table P2701.1, P2711.1, P2711.2, P2712.1~~

~~**C22.2 No. 218.1—M89(R2011): Spas, Hot Tubs and Associated Equipment**~~
~~M2006.1~~

~~C22.2 No. 236—15: Heating and Cooling Equipment~~
~~M2006.1~~

~~CSA C448 Series—16: Design and Installation of Earth Energy Systems~~
~~Table M2105.4, Table M2105.5~~

~~CAN/CSA/C22.2 No. 60335-2-40—2012: Safety of Household and Similar Electrical Appliances, Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers~~
~~M1403.1, M1412.1, M1413.1~~

DASMA

Door & Access Systems Manufacturers Association International
1300 Sumner Avenue
Cleveland, OH 44115-2851

~~105—2016: Test Method for Thermal Transmittance and Air Infiltration of Garage Doors and Rolling Doors~~
~~N1101.10.3~~

~~DOTn~~

~~U.S. Department of Transportation~~
~~1200 New Jersey Avenue SE~~
~~East Building, 2nd floor~~
~~Washington, DC 20590~~

~~49 CFR, Parts 192.281(e) & 192.283 (b) (2009): Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards~~
~~G2414.6.1~~

~~HVI~~

~~Home Ventilating Institute~~
~~1000 North Rand Road Suite 214~~
~~Wauconda, Il 60084~~

~~916—09 Airflow Test Procedure~~
~~Table N1103.6.1~~

~~IAPMO~~

~~IAPMO Group~~
~~4755 E. Philadelphia Street~~
~~Ontario, CA 91761-USA~~

~~CSA B45.5—17/IAPMO Z124—2017: Plastic Plumbing Fixtures~~
~~Table P2701.1, P2711.1, P2711.2, P2712.1~~

ICC

International Code Council, Inc.
500 New Jersey Avenue NW
6th Floor
Washington, DC 20001

~~ANSI/RESNET/ICC 301—2014: Standard for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings using the Energy Rating Index, March 7, 2014, republished 2016~~
~~N1106.3~~

~~ANSI/RESNET/ICC 380—2016: Standard for Testing Airtightness of Building Enclosures, Airtightness of Heating and Cooling Air Distribution and Airflow of Mechanical Ventilation Systems~~
~~N1102.4.1.2~~

~~IBC—18: International Building Code®~~
~~R101.2, R202, R301.1.1, R301.1.3, R301.2.1.1, R301.2.2.1.1, R301.2.2.1.2, Table R302.1(1), Table R302.1(2), R301.3, R302.2.1, R302.2.2, R302.3, R308.5, R320.1, R320.1.1, R321.3, R403.1.8, Table R602.10.3(3), Table R606.12.2.1, R609.2, R802.1.5.4, R905.10.3, G2402.3~~

ICC 400—17: Standard on the Design and Construction of Log Structures
R301.1.1, R502.1.4, R602.1.4, R703.1, R802.1.3, ~~N1102.1, Table N1102.4.1.1~~

~~ICC 900/SRCC 300—2015: Solar Thermal System Standard~~
~~M2301.2.2.2, M2301.2.3, M2301.2.6, M2301.2.7, M2301.2.8, M2301.2.10, M2301.4~~

~~ICC 901/SRCC 100—2015: Solar Thermal Collector Standard~~
~~M2301.3.1~~

~~IECC—18: International Energy Conservation Code®~~
~~N1101.1, N1101.13.1, N1103.8, Table N1105.5.2(1)~~

~~IECC—06: International Energy Conservation Code®~~
~~N1101.6~~

IFC—18: International Fire Code®
R102.7, R324.2, ~~M2201.7, G2402.3, G2412.2~~

~~IFGC—18: International Fuel Gas Code®~~
~~G2401.1, G2402.3, G2423.1~~

~~IMC—18: International Mechanical Code®~~
~~G2402.3~~

~~IPC—18: International Plumbing Code®~~
~~Table R301.2(1), R903.4.1, G2402.3, P2601.1~~

~~IPMC—18: International Property Maintenance Code®~~
~~R102.7~~

~~IPSDC—18: International Private Sewage Disposal Code®~~
~~R322.1.7~~

~~IRC—15: International Residential Code®~~
~~Table N1106.4~~

~~ISPSC—18: International Swimming Pool and Spa Code®~~
~~R326.1~~

~~IEEE~~

~~Institute of Electrical and Electronic Engineers, Inc.~~
~~3 Park Avenue, 17th Floor~~
~~New York, NY 10016-5997~~

~~515.1—2012: IEEE Standard for the Testing, Design, Installation and Maintenance of Electrical Resistance Trace Heating for Commercial Applications~~
~~N1103.5.1.2~~

ISO

International Organization for Standardization

Chemin de Blandonnet 8
CP 401
1214 Vernier
Geneva, Switzerland

15874—2002: Polypropylene Plastic Piping Systems for Hot and Cold Water Installations
Table M2101.1

MSS

Manufacturers Standardization Society of the Valve and Fittings Industry
127 Park Street, NE
Vienna, VA 22180

SP-42—2013: Corrosion Resistant Gate, Globe, Angle and Check Valves with Flanged and Butt Weld Ends (Glasses 150, 300 & 600)
Table P2903.9.4

SP-58—09: Pipe Hangers and Supports—Materials, Design, Manufacture, Selection, Application and Installation
G2418.2

SP-67—11: Butterfly Valves
Table P2903.9.4

SP-70—2011: Gray Iron Gate Valves, Flanged and Threaded Ends
Table P2903.9.4

SP-71—2013: Gray Iron Swing Check Valves, Flanged and Threaded Ends
Table P2903.9.4

SP-72—2010a: Ball Valves with Flanged or Butt-Welding Ends for General Service
P2903.9.4

SP-78—2011: Cast Iron Plug Valves, Flanged and Threaded Ends
Table P2903.9.4

SP-80—2013: Bronze Gate, Globe, Angle and Check Valves
Table P2903.9.4

SP-110—2010a: Ball Valves, Threaded, Socket Welded, Solder Joint, Grooved and Flared Ends
Table P2903.9.4

SP-122—2012: Plastic Industrial Ball Valves
Table P2903.9.4

SP-139—2014: Copper Alloy Gate, Globe, Angle, and Check Valves for Low Pressure/ Low Temperature Plumbing Applications
Table P2903.9.4

NAIMA

North American Insulation Manufacturers Association
11 Canal Center Plaza, Suite 101
Alexandria, VA 22314

AH 116—09: Fibrous Glass Duct Construction Standards, Fifth Edition
M1601.1.1

NFPA

National Fire Protection Association

1 Batterymarch Park
Quincy, MA 02169-7471

13D—16: Standard for the Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes
R313.1.1, R313.2.1, R324.6.2.1, ~~P2904.1, P2904.6.1~~

~~**31—16: Standard for the Installation of Oil-burning Equipment**~~
~~M1701.1, M1801.3.1, M1805.3, M2201.2~~

~~**58—17: Liquefied Petroleum Gas Code**~~
~~G2412.2, G2414.6.2~~

70—17: National Electrical Code
R107.3, R324.3, R327.2, R327.4, ~~E3401.1, E3401.2, E4301.1, Table E4303.2, E4304.3, E4304.4~~

~~**85—15: Boiler and Combustion Systems Hazards Code**~~
~~G2452.1~~

211—16: Standard for Chimneys, Fireplaces, Vents and Solid Fuel Burning Appliances
R1002.5, ~~G2427.5.5.1~~

~~**501—17: Standard on Manufactured Housing**~~
~~R202~~

~~**853—15: Standard on the Installation of Stationary Fuel Cell Power Systems**~~
~~M1903.1~~

~~NFRC~~

~~National Fenestration Rating Council, Inc.~~
~~6305 Ivy Lane, Suite 140~~
~~Greenbelt, MD 20770~~

~~**100—2017: Procedure for Determining Fenestration Products *U*-Factors**~~
~~N1101.10.3~~

~~**200—2017: Procedure for Determining Fenestration Product Solar Heat Gain Coefficients and Visible Transmittance at Normal Incidence**~~
~~N1101.10.3~~

~~**400—2017: Procedure for Determining Fenestration Product Air Leakage**~~
~~N1102.4.3~~

~~NGWA~~

~~National Ground Water Association~~
~~601 Dempsey Road~~
~~Westerville, OH 43081~~

~~**ANSI/NGWA 01—14: Water Well Construction Standard**~~
~~P2602.1~~

~~NSF~~

~~NSF International~~
~~789 N. Dixboro Road~~
~~P.O. Box 130140~~
~~Ann Arbor, MI 48105~~

~~**14—2015: Plastics Piping System Components and Related Materials**~~
~~M1301.4, P2609.3, P2909.3~~

41—2011: Nonliquid Saturated Treatment Systems (Composting Toilets)
P2725.1

42—2015: Drinking Water Treatment Units—Anesthetic Effects
P2909.1, P2909.3

44—2015: Residential Cation Exchange Water Softeners
P2909.1, P2909.3

50—2015: Equipment for Swimming Pools, Hot Tubs and Other Recreational Water Facilities
P2911.8.1

53—2015: Drinking Water Treatment Units—Health Effects
P2909.1, P2909.3

58—2015: Reverse Osmosis Drinking Water Treatment Systems
P2909.2, P2909.3

61—2015: Drinking Water System Components—Health Effects
P2609.5, P2722.1, P2903.9.4, P2906.4, P2906.5, P2906.6, P2909.3

350—2014: Onsite Residential and Commercial Water Reuse Treatment Systems
P2911.6.1

358-1—2014: Polyethylene Pipe and Fittings for Water-based Ground Source "Geothermal" Heat Pump Systems
M2105.4, M2105.5, Table AG101.1

358-2—2012: Polypropylene Pipe and Fittings for Water-based Ground Source "Geothermal" Heat Pump Systems
Table M2105.4, M2105.5

359—2012: Valves for Crosslinked Polyethylene (PEX) Water Distribution Tubing Systems
Table P2903.9.4

372—2011: Drinking Water Systems Components—Lead Content
P2906.2.1

SMACNA

Sheet Metal & Air Conditioning Contractors National Assoc. Inc.
4021 Lafayette Center Road
Chantilly, VA 22021

SMACNA—10: Fibrous Glass Duct Construction Standards (2003)
M1601.1.1, M1601.4.1

SMACNA/ANSI—2016: HVAC Duct Construction Standards—Metal and Flexible 4th Edition (ANSI) 2016
M1601.4.1

UL

UL LLC
333 Pfingsten Road
Northbrook, IL 60062

17—2008: Vent or Chimney Connector Dampers for Oil-fired Appliances—with revisions through September 2013
M1802.2.2
55A—04: Materials for Built-up Roof Coverings

~~R905.9.2~~

~~**58—96: Steel Underground Tanks for Flammable and Combustible Liquids—with Revisions through July 1998**~~
~~M2201.1~~

~~**80—2007: Steel Tanks for Oil-burner Fuel—with revisions through January 2014**~~
~~M2201.1~~

103—2010: Factory-built Chimneys for Residential Type and Building Heating Appliances—with revisions through July 2012
R202, R1005.3, ~~G2430.1~~

127—2011: Factory-built Fireplaces—with revisions through May 2015
R1001.11, R1004.1, R1004.4, R1004.5, R1005.4, ~~N1102.4.2, G2445.7~~

~~**174—04: Household Electric Storage Tank Water Heaters—with revisions through April 2015**~~
~~M2005.1~~

~~**180—2012: Liquid-level Indicating Gauges for Oil Burner Fuels and Other Combustible Liquids**~~
~~M2201.5~~

~~**181—05: Factory-made Air Ducts and Air Connectors—with revisions through May 2003**~~
~~M1601.1.1, M1601.4.1~~

~~**181A—2013: Closure Systems for Use with Rigid Air Ducts and Air Connectors—with revisions through December 1998**~~
~~M1601.2, M1601.4.1~~

~~**181B—2013: Closure Systems for Use with Flexible Air Ducts and Air Connectors—with revisions through August 2003**~~
~~M1601.4.1~~

~~**343—2008: Pumps for Oil-burning Appliances—with revisions through June 2013**~~
~~M2204.1~~

~~**378—06: Draft Equipment—with revisions through June 12, 2014**~~
~~M1804.2.6, G2427.3.3~~

~~**441—10: Gas Vents—with revisions through June 12, 2014**~~
~~G2426.1, G2427.6.1~~

~~**507—99: Standard for Electric Fans**~~
~~M1503.2~~

~~**508—99: Industrial Control Equipment—with revisions through October 2013**~~
~~M1411.3.1~~

~~**815—11:Electrical Resistance Heat Tracing for Commercial and Industrial Applications Including Revisions through July 2015**~~
~~N1103.5.1.2~~

~~**536—97: Flexible Metallic Hose—with revisions through December 2014**~~
~~M2202.3~~

641—2010: Type L, Low-temperature Venting Systems—with revisions through June 2013
R202, R1003.11.5, ~~M1804.2.4, G2426.1, G2427.6.1~~

~~**651—2011: Schedule 40 and Schedule 80 Rigid PVC Conduit and Fittings—with revisions through May 2014**~~
~~G2414.6.3~~

~~**705—04: Standard for Power Ventilators—with revisions through December 2013**~~
~~M1502.4.4~~

723—08: Standard for Test for Surface Burning Characteristics of Building Materials—with revisions through August 2013
R202, R302.9.3, R302.9.4, R302.10.1, R302.10.2, R316.3, R316.5.9, R316.5.11, R507.2.2.2, R703.14.3, R802.1.5, ~~M1601.3, M1601.5.2, P2801.6~~

~~**726—95: Oil-fired Boiler Assemblies—with revisions through October 2013**~~
~~M2001.1.1, M2006.1~~

~~**727—06: Oil-fired Central Furnaces—with revisions through October 2013**~~
~~M1402.1~~

~~**729—03: Oil-fired Floor Furnaces—with revisions through October 2013**~~
~~M1408.1~~

~~**730—03: Oil-fired Wall Furnaces—with revisions through October 2013**~~
~~M1409.1~~

~~**732—95: Oil-fired Storage Tank Water Heaters—with revisions through October 2013**~~
~~M2005.1~~

~~**737—2011: Fireplaces Stoves—with revisions through August 2015**~~
~~M1414.1, M1901.2~~

~~**795—2011: Commercial-industrial Gas Heating Equipment—with revisions through November 2013**~~
~~G2442.1, G2452.1~~

~~**834—04: Heating, Water Supply and Power Boilers—Electric—with revisions through December 2013**~~
~~M2001.1.1~~

~~**842—07: Valves for Flammable Fluids—with revisions through May 2015**~~
~~M2204.2~~

~~**858—05: Household Electric Ranges—with revisions through June 2015**~~
~~M1901.2, M1503.2~~

~~**875—09: Electric Dry-bath Heaters—with revisions through December 2013**~~
~~M1902.2~~

~~**896—93: Oil-burning Stoves—with revisions through November 2013**~~
~~M1410.1~~

~~**923—2013: Microwave Cooking Appliances—with revisions through June 2015**~~
~~M1504.1, M1503.2, M1901.2~~

~~**1026—2012: Electric Household Cooking and Food Serving Appliances—with revisions through August 2015**~~
~~M1901.2~~

~~**1042—2009: Electric Baseboard Heating Equipment—with revisions through September 2014**~~
~~M1405.1~~

~~**1261—01: Electric Water Heaters for Pools and Tubs—with revisions through July 2012**~~
~~M2006.1~~

1482—2011: Solid-Fuel-type Room Heaters—with revisions through August 2015
R1002.2, R1002.5, ~~M1410.1~~

~~**1563—2009: Standard for Electric Spas, Hot Tubs and Associated Equipment—with revisions through March 2015**~~

~~M2006.1~~

1618—09: Wall Protectors, Floor Protectors, and Hearth Extensions—with revisions through October 2015
R1004.2, ~~M1410.2~~

~~**1693—2010: Electric Radiant Heating Panels and Heating Panel Sets—with revisions through October 2011**~~
~~M1406.1~~

~~**1738—2010: Venting Systems for Gas-burning Appliances, Categories II, III and IV—with revisions through November 2014**~~
~~G2426.1, G2427.4.1, G2427.4.1.1, G2427.4.2~~

1777—07: Chimney Liners—with revisions through October 2015
R1003.11.1, R1003.18, ~~G2425.12, G2425.15.4, M1801.3.4, G2427.5.1, G2427.5.2~~

~~**1995—2011: Heating and Cooling Equipment—with revisions through July 2015**~~
~~M1402.1, M1403.1, M1407.1, M1412.1, M1413.1, M2006.1~~

~~**1996—2009: Electric Duct Heaters—with revisions through June 2014**~~
~~M1402.1, M1407.1~~

~~**2158A—2010: Outline of Investigation for Clothes Dryer Transition Duct**~~
~~M1502.4.3, G2439.7.3~~

~~**2523—09: Standard for Solid Fuel-fired Hydronic Heating Appliances, Water Heaters and Boilers—with revisions through February 2013**~~
~~M2005.1, M2001.1.1~~

~~**UL/CSA/ANCE 60335-2-40—2012: Standard for Household and Similar Electrical Appliances, Part 2: Particular Requirements for Motor-compressors**~~
~~M1403.1, M1412.1, M1413.1~~

~~US-FTC~~

~~United States Federal Trade Commission~~
~~600 Pennsylvania Avenue NW~~
~~Washington, DC 20580~~

~~**CFR Title 16(2015): R-value Rule**~~
~~N1101.10.4~~

WDMA

Window and Door Manufacturers Association
2025 M Street NW, Suite 800
Washington, DC 20036-3309

AAMA/WDMA/CSA 101/I.S2/A440—17: North American Fenestration Standard/Specifications for Windows, Doors and Skylights
R308.6.9, R609.3, ~~N1102.4.3~~

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

19. HCD proposes to NOT adopt Appendix A from the 2018 International Residential Code. HCD proposes Appendix A not be printed in the 2019 California Residential Code.

APPENDIX A
SIZING AND CAPACITIES OF GAS PIPING

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

20. HCD proposes to NOT adopt Appendix B from the 2018 International Residential Code. HCD proposes Appendix B not be printed in the 2019 California Residential Code.

APPENDIX B

SIZING OF VENTING SYSTEMS SERVING APPLIANCES EQUIPPED WITH DRAFT HOODS, CATEGORY I APPLIANCES AND APPLIANCES LISTED FOR USE WITH TYPE B VENTS

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

21. HCD proposes to NOT adopt Appendix C from the 2018 International Residential Code. HCD proposes Appendix C not be printed in the 2019 California Residential Code.

APPENDIX C
EXIT TERMINALS OF MECHANICAL DRAFT AND DIRECT-VENT VENTING SYSTEMS

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

22. HCD proposes to NOT adopt Appendix D from the 2018 International Residential Code. HCD proposes Appendix D not be printed in the 2019 California Residential Code.

APPENDIX D
RECOMMENDED PROCEDURE FOR SAFETY INSPECTION OF AN EXISTING APPLIANCE INSTALLATION

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

23. HCD proposes to NOT adopt Appendix E from the 2018 International Residential Code. HCD proposes Appendix E not be printed in the 2019 California Residential Code.

APPENDIX E
MANUFACTURED HOUSING USED AS DWELLINGS

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

24. HCD proposes to NOT adopt Appendix F from the 2018 International Residential Code.

APPENDIX F

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

RADON CONTROL METHODS

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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25. HCD proposes to NOT adopt Appendix G from the 2018 International Residential Code. HCD proposes Appendix G not be printed in the 2019 California Residential Code.

APPENDIX G
PIPING STANDARDS FOR VARIOUS APPLICATIONS

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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26. HCD proposes to adopt Appendix H from the 2018 International Residential Code into the 2019 California Residential Code with amendment.

APPENDIX H
PATIO COVERS

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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27. HCD proposes to NOT adopt Appendix I from the 2018 International Residential Code.

APPENDIX I
PRIVATE SEWAGE DISPOSAL

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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28. HCD proposes to NOT adopt Appendix J from the 2018 International Residential Code.

APPENDIX J
EXISTING BUILDINGS AND STRUCTURES

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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29. HCD proposes to NOT adopt Appendix K from the 2018 International Residential Code.

APPENDIX K
SOUND TRANSMISSION
(The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.
See Section 1207 "Sound Transmission" of the California Building Code, Title 24, Part 2, for requirements applicable to structures in this code.)

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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30. HCD proposes to NOT adopt Appendix L from the 2018 International Residential Code.

APPENDIX L
PERMIT FEES

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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31. HCD proposes to NOT adopt Appendix M from the 2018 International Residential Code.

APPENDIX M
HOME DAY CARE— R-3 OCCUPANCY

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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32. HCD proposes to NOT adopt Appendix N from the 2018 International Residential Code. HCD proposes Appendix N not be printed in the 2019 California Residential Code.

APPENDIX N
VENTING METHODS

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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33. HCD proposes to NOT adopt Appendix O from the 2018 International Residential Code.

APPENDIX O
AUTOMATIC VEHICULAR GATES

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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34. HCD proposes to NOT adopt Appendix P from the 2018 International Residential Code. HCD proposes Appendix P not be printed in the 2019 California Residential Code.

APPENDIX P
SIZING OF WATER PIPING SYSTEM

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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35. HCD proposes to adopt Appendix Q from the 2018 International Residential Code into the 2019 California Residential Code with amendments as follows:

APPENDIX Q
TINY HOUSES

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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36. HCD proposes to NOT adopt Appendix R from the 2018 International Residential Code.

APPENDIX R
LIGHT STRAW-CLAY CONSTRUCTION

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

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37. HCD proposes to adopt Appendix S from the 2018 International Residential Code into the 2019 California Residential Code with amendments as follows:

APPENDIX S
STRAWBALE CONSTRUCTION

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

SECTION AS104
FINISHES

AS104.2 Purpose, and where required. Strawbale walls shall be finished so as to provide mechanical protection, fire resistance and protection from weather and to restrict the passage of air through the bales, in accordance with this appendix and this code. Vertical strawbale wall surfaces shall receive a coat of plaster not less than 3/8 inch (10 mm) thick, or greater where required elsewhere in this appendix, or shall fit tightly against a solid wall panel or dense-packed cellulose insulation with a density of not less than 3.5 pounds per cubic foot (56kg/m^3) blown into an

adjacent framed wall. The tops of strawbale walls shall receive a coat of plaster not less than 3/8 inch (10 mm) thick where straw would otherwise be exposed.

Exception: Truth windows shall be permitted where a fire-resistance rating is not required. Weather-exposed truth windows shall be fitted with a weather-tight cover. Interior truth windows in Climate Zones ~~5, 6, 7, 8 and Marine 4~~ *14 and 16* shall be fitted with an air-tight cover.

SECTION AS105
STRAWBALE WALLS—GENERAL

AS105.6.2 Vapor retarders. Wall finishes shall have an equivalent vapor permeance rating of a Class III vapor retarder on the interior side of exterior strawbale walls in Climate Zones ~~5, 6, 7, 8 and Marine 4~~ *14 and 16*, as ~~defined in Chapter 11~~ *referenced in the California Energy Code*. Bales in walls enclosing showers or steam rooms shall be protected on the interior side by a Class I or Class II vapor retarder.

AS105.6.3 Penetrations in exterior strawbale walls. Penetrations in exterior strawbale walls shall be sealed with an approved sealant or gasket on the exterior side of the wall in all climate zones, and on the interior side of the wall in Climate Zones ~~5, 6, 7, 8 and Marine 4~~ *14 and 16*, as ~~defined in Chapter 11~~ *referenced in the California Energy Code*.

Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

38. HCD proposes to NOT adopt Appendix T from the 2018 International Residential Code.

APPENDIX T
SOLAR-READY PROVISIONS—DETACHED ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.

39. HCD proposes to adopt Appendix X from the 2016 California Residential Code.

APPENDIX X
EMERGENCY HOUSING

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

SECTION AX 101
GENERAL

AX 101.1 Scope. *(No change to text)*

SECTION AX 102
DEFINITIONS

AX 102.1 General. *(No change to text)*

SECTION AX 103
EMERGENCY HOUSING

AX 103.1 General. *(No change to text)*
AX 103.2 Existing buildings. *(No change to text)*
AX 103.2.1 New additions, alterations, and change of occupancy. *(No change to text)*
AX 103.3 Occupant load. *(No change to text)*
AX 103.4 Fire and life safety requirements not addressed in this appendix. *(No change to text)*
AX 103.5 Privacy. *(No change to text)*
AX 103.6 Heating. *(No change to text)*

SECTION AX 104
EMERGENCY SLEEPING CABINS

AX 104.1 General. *(No change to text)*
AX 104.2 Live loads. *(No change to text)*
AX 104.3 Minimum ceiling height. *(No change to text)*
AX 104.4 Means of egress. *(No change to text)*
AX 104.4.1 Egress window. *(No change to text)*
AX 104.5 Plumbing and gas service. *(No change to text)*
AX 104.6 Electrical. *(No change to text)*
AX 104.7 Ventilation. *(No change to text)*
AX 104.8 Smoke alarms. *(No change to text)*
AX 104.9 Carbon Monoxide Alarms. *(No change to text)*

SECTION AX 105
EMERGENCY TRANSPORTABLE HOUSING UNITS

AX 105.1 General. *(No change to text)*

SECTION AX 106
TENTS

AX 106.1 General. *(No change to text)*

SECTION AX 107
ACCESSIBILITY

AX 107.1 General. *(No change to text)*

SECTION AX 108
LOFTS IN EMERGENCY HOUSING

AX 108.1 Minimum loft area and dimensions. *(No change to text)*
AX 108.1.1 Minimum area. *(No change to text)*
AX 108.1.2 Minimum dimensions. *(No change to text)*

AX 108.1.3 Height effect on loft area. *(No change to text)*
AX 108.2 Loft access. *(No change to text)*
AX 108.2.1 Stairways. *(No change to text)*
AX 108.2.1.1 Width. *(No change to text)*
AX 108.2.1.2 Headroom. *(No change to text)*
AX 108.2.1.3 Treads and risers. *(No change to text)*
AX 108.2.1.4 Landing platforms. *(No change to text)*
AX 108.2.1.5 Handrails. *(No change to text)*
AX 108.2.1.6 Stairway guards. *(No change to text)*
AX 108.2.2 Ladders. *(No change to text)*
AX 108.2.2.1 Size and capacity. *(No change to text)*
AX 108.2.2.2 Incline. *(No change to text)*
AX 108.2.3 Alternating tread devices. *(No change to text)*
AX 108.2.4 Loft Guards. *(No change to text)*

SECTION AX 109
LOCATION, MAINTENANCE AND IDENTIFICATION

AX 109.1 Maintenance. *(No change to text)*
AX 109.1.1 Fire Hazards. *(No change to text)*
AX 109.3 Identification. *(No change to text)*

SECTION AX 110
EMERGENCY HOUSING FACILITIES

AX 110.1 Drinking Water. *(No change to text)*
AX 110.2 Kitchens. *(No change to text)*
AX 110.3 Toilet and bathing facilities. *(No change to text)*
AX 110.4 Garbage, waste and rubbish disposal. *(No change to text)*

NOTE:
Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4 and 1101.5; and Government Code Sections 12955.1 and 12955.1.1.