

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

(HCD 04/18)**

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

LEGEND FOR EXPRESS TERMS

1. Model Code language appears upright.
 2. Existing California amendments appear in *italics*.
 3. Amended model code or new California amendments appear *underlined and in italics*.
 4. Repealed model code language appears upright and in ~~strikeout~~.
 5. Repealed California amendments appear in ~~*italics and strikeout*~~.
-

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 existing California amendment).*

1.1.3 Scope. *The provisions of this code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every detached one- and two-family dwelling and townhouse not more than three stories above grade plane in height with a separate means of egress and structures accessory thereto throughout the State of California.*

Exceptions:

- Live/work units complying with the requirements of Section 419 of the California Building Code shall be permitted to be ~~built~~ constructed as one- and two-family dwellings or townhouses in accordance with this code, as applicable. Fire suppression required by Section 419.5 of the California Building Code when constructed under the California Residential Code for one- and two-family dwellings shall conform to Section 903.3.1.3 of the California Building Code.*
- Owner-occupied lodging houses with five or fewer guestrooms shall be permitted to be constructed in accordance with the California Residential Code for one- and two-family dwellings when equipped with a fire sprinkler system in accordance with Section R313.*

1.1.3.1 Classification. Structures or portions of structures shall be classified with respect to occupancy in one or more of the groups listed ~~below~~ in Chapter 3 of the California Building Code. A room or space that is intended to be occupied at different times for different purposes shall comply with all of the requirements that are applicable to each of the purposes for which the room or space will be occupied. Structures with multiple occupancies or uses shall comply with Section 508 of the California Building Code. Where a structure is proposed for a purpose that is not specifically provided for in this code, such structure shall be classified in the group that the occupancy most nearly resembles, according to the fire safety and relative hazard involved in accordance with this code or the California Building Code.

Note: Live/work units complying with the requirements of Section 419 of the California Building Code are classified as a Group R-2 occupancy and are permitted to be constructed as one- and two-family dwellings or townhouses in accordance with this code.

~~**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 congregare 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
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 existing California amendment).

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 mobilehome 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 existing California amendment).*

1.1.5 Referenced codes. *(No change to existing California amendment).*

1.1.6 Nonbuilding standards, orders and regulations. *(No change to existing California amendment).*

1.1.7 Order of precedence and use. *(No change to existing California amendment).*

1.1.7.1 Differences. *(No change to existing California amendment).*

1.1.7.2 Specific provisions. *(No change to existing California amendment).*

1.1.7.3 Conflicts. *(No change to existing California amendment).*

1.1.7.3.1 Detached one- and two-family dwellings. *Detached one-and two-family dwellings, lodging houses, live/work units, ~~and~~ 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 existing California amendment).*

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 existing California amendment).

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 existing California amendment).

SECTION 1.8
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT (HCD)

1.8.1 Purpose. (No change to existing California amendment).

SECTION 1.8.2
AUTHORITY AND ABBREVIATIONS

1.8.2.1 General. (No change to existing California amendment).

1.8.2.1.1 Housing construction. (No change to existing California amendment).

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 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; 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 existing California amendment).

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 existing California amendment).

1.8.3.2.1 State Housing Law. (No change to existing California amendment).

1.8.3.2.2 Mobilehome Parks Act. (No change to existing California amendment).

1.8.3.2.3 Special Occupancy Parks Act. (No change to existing California amendment).

1.8.3.2.4 Employee Housing Act. (No change to existing California amendment).

1.8.3.2.5 Factory-Built Housing Law. (No change to existing California amendment).

SECTION 1.8.4 PERMITS, FEES, APPLICATIONS AND INSPECTIONS

1.8.4.1 Permits. (No change to existing California amendment).

1.8.4.2 Fees. (No change to existing California amendment).

1.8.4.3 Plan review and time limitations. (No change to existing California amendment).

1.8.4.3.1 Retention of plans. (No change to existing California amendment).

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 existing California amendment).

**SECTION 1.8.6
LOCAL MODIFICATION BY ORDINANCE OR REGULATION**

1.8.6.1 General. *(No change to existing California amendment).*

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

**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 existing California amendment).*

1.8.7.2.1 Approval of alternates. *(No change to existing California amendment).*

1.8.7.3 Department of Housing and Community Development. *(No change to existing California amendment).*

**SECTION 1.8.8
APPEALS BOARD**

1.8.8.1 General. *(No change to existing California amendment).*

1.8.8.2 Definitions. *(No change to existing California amendment).*

1.8.8.3 Appeals. *(No change to existing California amendment).*

**SECTION 1.8.9
UNSAFE BUILDINGS OR STRUCTURES**

1.8.9.1 Authority to enforce. *(No change to existing California amendment).*

1.8.9.2 Actions and proceedings. *(No change to existing California amendment).*

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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. (No change to existing California amendment).

**SECTION R106
CONSTRUCTION DOCUMENTS**

R106.1.5 Exterior balconies and elevated walking surfaces. *Where balconies or other elevated walking surfaces are exposed to water from direct or blowing 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. (No change to existing California amendment).

R109.1.1.1 Concrete slab and under-floor inspection. (No change to existing California amendment).

R109.1.4 Frame and masonry inspection. (No change to existing California amendment).

R109.1.4.1 Moisture content verification. (No change to existing California amendment).

R109.1.4.2 Lath and gypsum board inspection. (No change to existing California amendment).

R109.1.5 Other inspections. (No change to existing California amendment).

R109.1.5.1 Fire-resistance-rated construction inspection. (No change to existing California amendment).

R109.1.5.2 Special Inspections. (No change to existing California amendment).

R109.1.5.3 Weather-exposed balcony and walking surface waterproofing.
Where balconies or other elevated walking surfaces are exposed to water from direct or blowing 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 existing California amendment).

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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. (No change to existing California amendment).

**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 permance equal to or less than 0.02 L/s-m² 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 existing California amendment).*

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 existing California amendment).*

APPROVED TESTING AGENCY. *(No change to existing California amendment).*

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 existing California amendment).*

DEPARTMENT. *(No change to existing California amendment).*

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 existing California amendment).*

ENFORCEMENT AGENCY. *(No change to existing California amendment).*

ENFORCING AGENCY. *(No change to existing California amendment).*

FAMILY. (HCD 1) *(No change to existing California amendment).*

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. *(No change to model code text).*

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 existing California amendment).*

LIMITED-DENSITY OWNER-BUILT RURAL DWELLINGS. *(No change to existing California amendment).*

LISTED. *(HCD 1) (No change to existing California amendment).*

LISTING AGENCY. *(HCD 1 & HCD 2) (No change to existing California amendment).*

LIVE/WORK UNIT. *A dwelling unit or sleeping unit in which a significant portion of the space includes a nonresidential use that is operated by the tenant or building owner.*

LODGING HOUSE. *(HCD 1) (No change to existing California amendment).*

PASSIVE SOLAR ENERGY COLLECTOR. *(No change to existing California amendment).*

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 existing California amendment).*

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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.**~~

~~**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.~~
~~BATHROOM GROUP.~~
~~BEND.~~
~~BOILER.~~
~~BRANCH.~~
~~BRANCH, FIXTURE.~~
~~BRANCH, HORIZONTAL.~~
~~BRANCH INTERVAL.~~
~~BRANCH, MAIN.~~
~~BRANCH, VENT.~~
~~BTU/H.~~
~~BUILDING DRAIN.~~
~~BUILDING SEWER.~~
~~BUILDING SITE.~~
~~BUILDING THERMAL ENVELOPE.~~
~~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.~~
~~CONDITIONED SPACE.~~
~~CONTAMINATION.~~
~~CONTINUOUS AIR BARRIER.~~
~~CONTINUOUS INSULATION (ci)~~
~~CONTINUOUS WASTE.~~
~~CONTROL, LIMIT.~~
~~CONTROL, PRIMARY SAFETY.~~
~~CONVECTOR.~~
~~CRAWL SPACE WALL.~~
~~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~~
~~DUCT.~~
~~DWV.~~
~~EFFECTIVE OPENING.~~
~~ELBOW.~~
~~ENERGY ANALYSIS.~~
~~ENERGY COST.~~
~~ENERGY SIMULATION TOOL.~~
~~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.~~
~~FACTORY-MADE AIR DUCT.~~
~~FENESTRATION, VERTICAL.~~
~~FENESTRATION PRODUCT, SITE-BUILT.~~
~~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.~~
~~FLUE, APPLIANCE.~~
~~FLUE COLLAR.~~
~~FLUE GASES.~~
~~FLUSH VALVE.~~
~~FLUSHOMETER TANK.~~
~~FLUSHOMETER VALVE.~~
~~FUEL-PIPING SYSTEM.~~
~~FULL-OPEN VALVE.~~

~~FULLWAY VALVE.~~
~~FURNACE.~~

~~GRADE, PIPING.~~
~~GRAY WATER.~~
~~GRIDDED WATER DISTRIBUTION SYSTEM.~~
~~GROUND SOURCE HEAT PUMP LOOP SYSTEM.~~
~~HAZARDOUS LOCATION.~~
~~HEAT PUMP.~~
~~HEATED SLAB.~~
~~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.~~
~~INSULATED SIDING.~~
~~LOCKING-TYPE TAMPER-RESISTANT CAP.~~
~~MACERATING TOILET SYSTEMS.~~
~~MAIN.~~
~~MAIN SEWER.~~
~~MANIFOLD WATER DISTRIBUTION SYSTEMS.~~
~~MANUAL.~~
~~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.~~
~~PLUMBING APPURTENANCE~~
~~PLUMBING FIXTURE.~~

~~PLUMBING SYSTEMS.
POLLUTION.
PORTABLE FUEL CELL APPLIANCE.
POTABLE WATER.
PRESSURE RELIEF VALVE.
PROPOSED DESIGN.
PUBLIC SEWER.
PUBLIC WATER MAIN.
PURGE.
QUICK CLOSING VALVE.
R-VALUE, THERMAL RESISTANCE.
RATED DESIGN.
READILY ACCESSIBLE.
RECEPTOR.
RECLAIMED WATER.
REFRIGERANT.
REFRIGERANT COMPRESSOR.
REFRIGERATING SYSTEM.
RELIEF VALVE, VACUUM.
RESIDENTIAL BUILDING.
RETURN AIR.
RISER (PLUMBING).
ROOM HEATER.
ROUGH IN.
R-VALUE (THERMAL RESISTANCE).
SANITARY SEWER.
SEPTIC TANK.
SERVICE WATER HEATING.
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.
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.~~

~~THERMAL RESISTANCE, R-VALUE.~~

~~THERMAL TRANSMITTANCE, U-FACTOR.~~

~~THERMOSTAT.~~

~~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.~~

~~VERTICAL PIPE.~~

~~VISIBLE TRANSMITTANCE (VT).~~

~~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.~~

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

-
-
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 existing California amendment).

R300.2 Grading and paving. (No change to existing California amendment).

**SECTION R301
DESIGN CRITERIA**

R301.1.1.1 Alternative provisions for limited-density owner-built rural dwellings. (No change to existing California amendment).

R301.1.3.1 California licensed architect or engineer. (No change to existing California amendment).

R301.1.3.2 Woodframe structures greater than two-stories (No change to existing California amendment).

R301.1.3.3 Structures other than woodframe. (No change to existing California amendment).

TABLE R301.2(1) CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA (No change to existing California amendment).

R301.2.2.10 (Formerly R301.2.2.3.7) Anchorage of water heaters. (Model code section renumbered and no change to existing California amendment).

**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. (No change to existing California amendment).

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. (No change to existing California amendment).

R302.6 Dwelling-garage fire separation. (No change to existing California amendment).

R302.14 Combustible insulation clearance. (No change to existing California amendment).

SECTION R303 LIGHT, VENTILATION AND HEATING

R303.1 Habitable rooms. (No change to existing California amendment).

R303.3 Bathrooms. (No change to existing California amendment).

R303.3.1 Bathroom exhaust fans. (No change to existing California amendment).

R303.4 Mechanical Ventilation. (No change to existing California amendment).

~~R303.8.1.1~~ **R303.9.1.1 Passive solar energy collectors.** (California amendment renumbered to align with model code renumbering. No change to existing California amendment).

R303.10 (Formerly R303.9) Required heating. (Model code section renumbered and no change to existing California amendment).

SECTION R304 MINIMUM ROOM AREAS

R304.2 Minimum dimensions. (No change to existing California amendment).

SECTION R307 TOILET, BATH AND SHOWER SPACES

R307.1 Space required. (No change to existing California amendment).

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

SECTION R309 GARAGES AND CARPORTS

R309.4 Automatic garage door openers. (No change to existing California amendment).

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 existing California amendment).*

SECTION R310 EMERGENCY ESCAPE AND RESCUE OPENINGS

R310.2.2 Window sill height. (No change to existing California amendment).

SECTION R312 GUARDS AND WINDOW FALL PROTECTION

R312.1.2 Height. (No change to existing California amendment).

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

SECTION R315 CARBON MONOXIDE ALARMS

R315.1 General. (No change to model code text).

R315.1.1 Listings. (No change to existing California amendment).

R315.2 Where required. (No change to existing California amendment).

R315.2.1 Existing buildings and new construction. (No change to existing California amendment).

R315.2.2 Alterations, repairs and additions. (No change to existing California amendment).

R315.3 Location. (No change to existing California amendment).

R315.4 Combination alarms. (No change to existing California amendment).

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. (No change to existing California amendment).

~~**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. (No change to existing California amendment).

R315.7.4 (Formerly R315.6.4) Combination detectors. (No change to existing California amendment).

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

R317.1 Location required. Protection of wood and wood-based 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 where closer than 18 inches (457 mm) or wood girders where 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 beneath balcony or elevated walking surfaces. Enclosed framing in exterior balconies and elevated walking surfaces that are exposed 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. (No change to existing California amendment).

~~**R320.1.1 Guestrooms.** (NOT ADOPTED BY HCD)~~

SECTION R321 ELEVATORS AND PLATFORM LIFTS

R321.3 Accessibility. (No change to existing California amendment).

SECTION R322 FLOOD-RESISTANT CONSTRUCTION

R322.1.6 Protection of mechanical, plumbing and electrical systems. (No change to existing California amendment).

R322.1.7 Protection of water supply and sanitary sewage systems. (No change to existing California amendment).

~~**R322.1.9 Manufactured homes.** (NOT ADOPTED BY HCD)~~

SECTION R324 SOLAR ENERGY SYSTEMS

R324.2 Solar thermal systems. (No change to existing California amendment).

R324.3 Photovoltaic systems. (No change to existing California amendment).

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. Access and minimum spacing shall be required to provide emergency access to the roof, to provide pathways to specific areas of the roof, to provide for smoke ventilation opportunity areas, and to provide emergency egress from the roof.

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 Fire separation distances. (No change to existing California amendment).

**SECTION R326
SWIMMING POOLS, SPAS AND HOT TUBS
(NOT ADOPTED BY HCD)**

**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 existing California amendment).

**SECTION R340
POLLUTANT CONTROL**

R340.1 Finish material pollutant control. (No change to existing California amendment).

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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. (No change to existing California amendment).

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 existing California amendment).

R401.4.1.1.1 Preliminary soil report. (No change to existing California amendment).

R401.4.1.1.2 Soil investigation by lot, necessity, preparation, and recommendations. (No change to existing California amendment).

R401.4.1.1.3 Approval, building permit conditions, appeal. (No change to existing California amendment).

R401.4.1.1.4 Liability. (No change to existing California amendment).

R401.4.1.1.5 Alternate procedures. (No change to existing California amendment).

SECTION R404 FOUNDATION AND RETAINING WALLS

R404.5.1 Design. (No change to existing California amendment).

SECTION R408 UNDER-FLOOR SPACE

R408.3 Unvented crawl space. (No change to existing California amendment).

R408.4 Access. (No change to existing California amendment).

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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. (No change to existing California amendment).

R502.11.1 Design. (No change to existing California amendment).

**SECTION R506
CONCRETE FLOORS (ON GROUND)**

R506.2.3.1 Capillary break. (No change to existing California amendment).

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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. (No change to existing California amendment).

R602.3.4.1 Rodent proofing. (No change to existing California amendment).

**SECTION R606
GENERAL MASONRY CONSTRUCTION**

R606.1.1 Professional registration. (No change to existing California amendment).

**SECTION R608
EXTERIOR CONCRETE WALL CONSTRUCTION**

R608.1 General. (No change to existing California amendment).

**SECTION R610
STRUCTURAL INSULATED PANEL WALL CONSTRUCTION**

R610.1 General. (No change to existing California amendment).

R610.4 SIP wall panels. (No change to existing California amendment).

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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. (No change to existing California amendment).

R702.7.1 Class III vapor retarders. (No change to existing California amendment).

~~TABLE R702.7.1 CLASS III VAPOR RETARDERS (NOT ADOPTED BY HCD).~~

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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. (No change to existing California amendment).

R802.10.2 Design. (No change to existing California amendment).

**SECTION R806
ROOF VENTILATION**

R806.2 Minimum vent area. (No change to existing California amendment).

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. ...
2. ...
3. ...
4. (No change to existing California amendment).
- 4.1 (No change to existing California amendment)
5. ...
 - 5.1. (No change to existing California amendment)
 - 5.1.1. ...
 - 5.1.2. ...
 - 5.1.3. ...
 - 5.1.4. ...
 - 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 ...
 - 5.2.2 ...
 - 5.2.3 ...
 - 5.2.4 ...

- 5.2.5 ...
- 5.2.6 ...
- 5.2.7 ...
- 5.2.8 ...
- 5.2.9 ...
- 5.2.10...
- 5.3 ...

TABLE R806.5 INSULATION FOR CONDENSATION CONTROL (No change to existing California amendment).

**SECTION R807
ATTIC ACCESS**

R807.1 Attic access. (No change to existing California amendment).

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, 17926, 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, 1101.5 and 1954.201; 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. (No change to existing California amendment).

**SECTION R905
REQUIREMENTS FOR ROOF COVERINGS**

R905.16 Photovoltaic shingles. (No change to existing California amendment).

**SECTION R907
ROOFTOP-MOUNTED PHOTOVOLTAIC PANEL SYSTEMS**

R907.1 Rooftop-mounted photovoltaic panel systems. (No change to existing California amendment).

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, 17926, 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, 1101.5 and 1954.201; 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. (No change to existing California amendment).

R1001.4 Seismic anchorage. (No change to existing California amendment).

TABLE R1001.1 SUMMARY OF REQUIREMENTS FOR MASONRY FIREPLACES AND CHIMNEYS (No change to existing California amendment).

**SECTION R1003
MASONRY CHIMNEYS**

R1003.3 Seismic reinforcing. (No change to existing California amendment).

R1003.4 Seismic anchorage. (No change to existing California amendment).

R1003.11.3 Gas appliances. (No change to existing California amendment).

R1003.14 Flue area (appliance). (No change to existing California amendment).

**SECTION R1004
FACTORY-BUILT FIREPLACES**

R1004.1.1 Factory-built wood burning fireplaces. (No change to existing California amendment).

~~R1004.4 Unvented gas log heaters. (NOT ADOPTED BY HCD).~~

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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 Z21.22b—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
G2451.4

Z83.20—08: Gas-fired Low-intensity Infrared Heaters Outdoor Decorative Appliances
G2451.4

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 American Society of Mechanical Engineers
Two Park Avenue
New York, NY 10016-5990

A112.1.2—2012: Air Gaps in Plumbing Systems (For Plumbing Fixtures and Water Connected Receptors)
P2717.1, Table P2902.3, P2902.3.1

A112.1.3—2000 (Reaffirmed 2015): Air Gap Fittings for Use with Plumbing Fixtures, Appliances and Appurtenances
Table P2701.1, P2717.1, Table P2902.3, P2902.3.1

A112.3.1—2007(R2012): Stainless Steel Drainage Systems for Sanitary, DWV, Storm and Vacuum Applications Above and Below Ground
Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table P3002.3, Table P3302.1

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

A112.4.1—2009: Water Heater Relief Valve Drain Tubes
P2804.6.1

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

A112.4.3—1999 (R2010): Plastic Fittings for Connecting Water Closets to the Sanitary Drainage System
P3003.14

A112.4.14—2004 (R2016): Manually Operated, Quarter-turn Shutoff Valves for Use in Plumbing Systems
Table P2903.9.4

A112.6.2—2000 (R2016): Framing-affixed Supports for Off-the-floor Water Closets with Concealed Tanks
Table P2701.1, P2702.4

A112.6.3—2001 (R2016): Floor and Trench Drains

Table P2701.1

A112.14.1—03(2012): Backwater Valves

P3008.3

A112.18.1—2017/CSA B125.1—2017: Plumbing Supply Fittings

Table P2701.1, P2708.5, P2722.1, P2722.3, P2727.2, P2902.2, Table P2903.9.4

A112.18.2—2015/CSA B125.2—2015: Plumbing Waste Fittings

Table P2701.1, P2702.2

A112.18.3—2002(R2012): Performance Requirements for Backflow Protection Devices and Systems in Plumbing Fixture Fittings

P2708.5, P2722.3

A112.18.6—2017/CSA B125.6—17: Flexible Water Connectors

P2906.7

A112.19.1—2013/CSA B45.2—2013: Enameled Cast Iron and Enameled Steel Plumbing Fixtures

Table P2701.1, P2711.1

A112.19.2—2013/CSA B45.1—2013: Ceramic Plumbing Fixtures

Table P2701.1, P2705.1, P2711.1, P2712.1, P2712.2, P2712.9

A112.19.3—2008/CSA B45.4—08 (R2013): Stainless Steel Plumbing Fixtures

Table P2701.1, P2705.1, P2711.1, P2712.1

A112.19.5—2017/CSA B45.15—2017: Flush Valves and Spuds for Water Closets, Urinals and Tanks

Table P2701.1

A112.19.7—2017/CSA B45.10—2017: Hydro-massage Bathtub Systems

Table P2701.1

A112.19.12—2014: Wall-mounted and Pedestal-mounted, Adjustable, Elevating, Tilting, and Pivoting Lavatory and Sink, and Shampoo Bowl Carrier Systems and Drain Waste Systems

Table P2701.1, P2711.4, P2714.2

A112.19.14—2013: Six-Liter Water Closets Equipped with Dual Flushing Device

P2712.1

A112.19.15—2012: Bathtub/Whirlpool Bathtubs with Pressure-sealed Doors

Table P2701.1, P2713.2

A112.36.2m—1991 (R2012): Cleanouts
P3005.2.10.2

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

B1.20.1—2013: Pipe Threads, General-purpose (Inch)
G2414.9, P3003.3.3, P3003.6.4, P3003.7.1, P3003.9.3

B16.3—2016: Malleable-iron-threaded Fittings, 150 and 300
Table P2906.6

B16.4—2016: Gray-iron-threaded Fittings
Table P2906.6, Table P3002.3

B16.9—2012: Factory-made, Wrought-steel Butt welding Fittings
Table P2906.6

B16.11—2016: Forged Fittings, Socket-welding and Threaded
Table P2906.6

B16.12—2009 (R2014): Cast-iron-threaded Drainage Fittings
Table P3002.3

B16.15—2013: Cast-Alloy-threaded Fittings: Classes 125 and 250
Table P2906.6, Table P3002.3

B16.18—2012: Cast-copper-alloy Solder Joint Pressure Fittings
Table P2906.6, Table P3002.3

B16.22—2013: Wrought-copper and Copper-alloy Solder Joint Pressure Fittings
Table P2906.6, Table P3002.3

B16.23—2016: Cast-copper-alloy Solder Joint Drainage Fittings (DWV)
Table P3002.3

B16.26—2016: Cast-copper-alloy Fittings for Flared Copper Tubes
Table P2906.6, Table P3002.3

B16.28—1994: Wrought-steel Butt welding Short Radius Elbows and Returns
Table P2906.6

B16.29—2012: Wrought-copper and Wrought-copper-alloy Solder Joint Drainage Fittings (DWV)
Table P3002.3

~~B16.33—2012: Manually Operated Metallic Gas Valves for Use in Gas Piping Systems up to 125 psig (Sizes 1/2 through 2)~~

~~Table G2420.1.1~~

~~B16.34—2015: Valves—Flanged, Threaded and Welding End~~

~~Table P2903.9.4~~

~~B16.44—2012: Manually Operated Metallic Gas Valves for Use in Above-ground Piping Systems up to 5 psi~~

~~Table G2420.1.1~~

~~B16.51—2013: Copper and Copper Alloy Press-Connect Pressure Fittings~~

~~Table M2101.1, M2103.3, Table P2906.6~~

~~B36.10M—2004(R2015): Welded and Seamless Wrought-steel Pipe~~

~~G2414.4.2~~

~~BPVC—2015: ASME Boiler and Pressure Vessel Code (Sections I, II, IV, V, VI and VIII)~~

~~M2001.1.1, G2452.1~~

~~CSD-1—2016: Controls and Safety Devices for Automatically Fired Boilers~~

~~M2001.1.1, G2452.1~~

~~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~~

ASSE

ASSE International

18927 Hickory Creek Drive, Suite 220

Mokena, IL 60448

~~1001—2016: Performance Requirements for Atmospheric-type Vacuum Breakers~~

~~Table P2902.3, P2902.3.2~~

~~ASSE 1002—2015/ASME A112.1002—2015/CSA B125.12—15: Anti-Siphon Fill Valves~~

~~Table P2701.1, Table P2902.3, P2902.4.1~~

~~1003—2009: Performance Requirements for Water-pressure-reducing Valves for Domestic Water Distribution Systems~~
P2903.3.1

~~1008—2006: Performance Requirements for Plumbing Aspects of Residential Food Waste Disposer Units~~
Table P2701.1

~~1010—2004: Performance Requirements for Water Hammer Arresters~~
P2903.5

~~1011—2016: Performance Requirements for Hose Connection Vacuum Breakers~~
Table P2902.3, P2902.3.2

~~1012—2009: Performance Requirements for Backflow Preventers with Intermediate Atmospheric Vent~~
Table P2902.3, P2902.3.3, P2902.5.1, P2902.5.5.3

~~1013—2017: Performance Requirements for Reduced Pressure Principle Backflow Preventers and Reduced Pressure Principle Fire Protection Backflow Preventers~~
Table P2902.3, P2902.3.5, P2902.5.1, P2902.5.5.3

~~1015—2017: Performance Requirements for Double Check Backflow Prevention Assemblies and Double Check Fire Protection Backflow Prevention Assemblies~~
Table P2902.3, P2902.3.6

~~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

~~1017—2010: Performance Requirements for Temperature-actuated Mixing Valves for Hot Water Distribution Systems~~
P2724.1, P2802.1, P2803.2

~~1018—2017: Performance Requirements for Trap Seal Primer Valves; Potable Water Supplied~~
P3201.2.1, P3201.2.2

~~1019—2016: Performance Requirements for Freeze-resistant, Wall Hydrants, Vacuum Breaker, Draining Types~~
Table P2701.1, Table P2902.3, P2902.3.2

~~1020—2004: Performance Requirements for Pressure Vacuum Breaker Assembly~~
Table P2902.3, P2902.3.4

~~1023—2016: Performance Requirements for Hot Water Dispensers, Household-storage-type—Electrical~~

~~Table P2701.1~~

~~1024—2016: Performance Requirements for Dual Check Backflow Preventers, Anti-siphon-type, Residential Applications~~

~~Table P2902.3, P2902.3.7~~

~~1035—2008: Performance Requirements for Laboratory Faucet Backflow Preventers~~

~~Table P2902.3, P2902.3.2~~

~~ASSE 1037—2015/ASME A112.1037—2015/CSA B125.37—15: Performance Requirements for Pressurized Flushing Devices for Plumbing Fixtures~~

~~Table P2701.1~~

~~1044—2010: Performance Requirements for Trap Seal Primer Devices Drainage Types and Electronic Design Types~~

~~P3201.2.1.3~~

~~1047—2017: Performance Requirements for Reduced Pressure Detector Fire Protection Backflow Prevention Assemblies~~

~~Table P2902.3, P2902.3.5~~

~~1048—2017: Performance Requirements for Double Check Detector Fire Protection Backflow Prevention Assemblies~~

~~Table P2902.3, P2902.3.6~~

~~1050—2009: Performance Requirements for Stack Air Admittance Valves for Sanitary Drainage Systems~~

~~P3114.1~~

~~1052—2016: Performance Requirements for Hose Connection Backflow Preventers~~

~~Table P2701.1, Table P2902.3, P2902.3.2~~

~~1056—2013: Performance Requirements for Spill-resistant Vacuum Breakers~~

~~Table P2902.3, P2902.3.4~~

~~1060—2016: Performance Requirements for Outdoor Enclosures for Fluid-conveying Components~~

~~P2902.6.1~~

~~1061—2015: Performance Requirements for Push Fit Fittings~~

~~Table P2906.6, P2906.21~~

~~1062—2016: Performance Requirements for Temperature-actuated, Flow Reduction (TAFR) Valves for Individual Supply Fittings~~

~~Table P2701.1, P2724.2~~

~~1066—2016: Performance Requirements for Individual Pressure Balancing In-line Valves for Individual Fixture Fittings~~

~~P2722.4~~

~~ASSE 1070—2015/ASME A112.1070—2015/CSA B125.70—15 : Performance Requirements for Water-temperature-limiting Devices~~

~~P2713.3, P2721.2, P2724.1~~

~~1072—2007: Performance Requirements for Barrier-type Floor Drain Trap Seal Protection Devices~~

~~P3201.2.1.4~~

ASTM

ASTM International
100 Barr Harbor Drive, P.O. Box C700
West Conshohocken, PA 19428

~~A53/A53M—12: Specification for Pipe, Steel, Black and Hot-dipped, Zinc-coated Welded and Seamless~~

~~R407.3, Table M2101.1, G2414.4.2, Table P2906.4, Table P2906.5, Table P3002.1(1)~~

~~A74—15: Specification for Cast iron Soil Pipe and Fittings~~

~~Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table P3002.3, P3005.2.6, Table P3302.1~~

~~A106/A106M—14: Specification for Seamless Carbon Steel Pipe for High-temperature Service~~

~~Table M2101.1, G2414.4.2~~

~~A126—04(2014): Gray Iron Castings for Valves, Flanges and Pipe Fittings~~

~~Table P2903.9.4~~

~~A254—12: Specification for Copper Brazed Steel Tubing~~

~~Table M2101.1, G2414.5.1~~

~~A268—2010: Standard Specification for Seamless and Welded Ferritic and Martensitic Stainless Steel Tubing for General Service~~

~~G2414.5.2~~

~~A269—2015: Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service~~

~~G2414.5.2~~

~~A312/A312M—15A: Specification for Seamless, Welded and Heavily Cold Worked Austenitic Stainless Steel Pipes~~

~~Table P2906.4, Table P2906.5, Table P2906.6, P2906.13.2~~

~~A539—99: Specification for Electric-resistance-welded Coiled Steel Tubing for Gas and Fuel Oil Lines~~

~~M2202.1~~

~~A653/A653M—15: Specification for Steel Sheet, Zinc-coated (Galvanized) or Zinc-iron Alloy-coated (Galvannealed) by the Hot-dip Process~~

~~R317.3.1, R505.2.2, Table R507.2.3, R603.2.2, Table R606.3.4.1, R608.5.2.3, R804.2.2, R804.2.3, Table R905.10.3(1), Table R905.10.3(2), M1601.1.4~~

~~A778/A778M—15: Specification for Welded Unannealed Austenitic Stainless Steel Tubular Products~~

~~Table P2906.4, Table P2906.5, Table P2906.6~~

~~A888—15: Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste and Vent Piping Application~~

~~Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table P3002.3, Table P3302.1~~

~~B32—08(2014): Specification for Solder Metal~~

~~P3003.6.3~~

~~B42—2015A: Specification for Seamless Copper Pipe, Standard Sizes~~

~~Table M2101.1, Table P2906.4, Table P2906.5, Table P3002.1(1)~~

~~B43—15: Specification for Seamless Red Brass Pipe, Standard Sizes~~

~~Table M2101.1, Table P2906.4, Table P2906.5, Table P3002.1(1)~~

~~B75/B75M—11: Specification for Seamless Copper Tube~~

~~Table M2101.1, Table P2906.4, Table P2906.5, Table P3002.1(1), Table P3002.1(2), Table P3002.2~~

~~B88—14: Specification for Seamless Copper Water Tube~~

~~Table M2101.1, G2414.5.2, Table P2906.4, Table P2906.5, Table P3002.1(1), Table P3002.1(2),~~

~~Table P3002.2~~

~~B135—10: Specification for Seamless Brass Tube~~

~~Table M2101.1~~

~~B251—10: Specification for General Requirements for Wrought Seamless Copper and Copper-alloy Tube~~

~~Table M2101.1, Table P2906.4, Table P2906.5, Table P3002.1(1), Table P3002.1(2), Table P3002.2~~

~~B302—12: Specification for Threadless Copper Pipe, Standard Sizes~~

~~Table M2101.1, Table P2906.4, Table P2906.5, Table P3002.1(1)~~

~~B306—13: Specification for Copper Drainage Tube (DWV)~~

~~Table M2101.1, Table P3002.1(1), Table P3002.1(2)~~

~~B370—12: Specification for Copper Sheet and Strip for Building Construction~~

~~Table R905.2.8.2, Table R905.10.3(1), Table P2701.4~~

~~B447—12a: Specification for Welded Copper Tube~~

~~Table P2906.4, Table P2906.5~~

~~B813—10: Specification for Liquid and Paste Fluxes for Soldering Applications of Copper and Copper Alloy Tube~~

~~Table M2101.1, M2103.3, P2906.15, P3003.6.3~~

~~B828—02(2010): Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings~~

~~M2103.3, P2906.15, P3003.6.3~~

~~C4—04(2014): Specification for Clay Drain Tile and Perforated Clay Drain Tile~~

~~Table P3302.1~~

~~C14—15a: Specification for Non-reinforced Concrete Sewer, Storm Drain and Culvert Pipe~~

~~Table P3002.2~~

~~C76—15A: Specification for Reinforced Concrete Culvert, Storm Drain and Sewer Pipe~~

~~Table P3002.2~~

~~C315—07(2011): Specification for Clay Flue Liners and Chimney Pots~~

~~R1001.8, R1003.11.1, Table R1003.14(1), G2425.12~~

~~C411—11: Test Method for Hot-surface Performance of High-temperature Thermal Insulation~~

~~M1601.3~~

~~C425—04(2013): Specification for Compression Joints for Vitrified Clay Pipe and Fittings~~

~~Table P3002.2, P3003.10, P3003.13~~

~~C443—12: Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets~~

~~P3003.5, P3003.13~~

~~C564—14: Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings
P3003.4.2, P3003.4.3, P3003.13~~

~~C700—13: Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength and Perforated
Table P3002.2, Table P3002.3, Table P3302.1~~

~~C1173—10(2014): Specification for Flexible Transition Couplings for Underground Piping Systems
P3003.3.1, P3003.5, P3003.9.1, P3003.10, P3003.12.2, P3003.13~~

~~C1277—15: Specification for Shielded Couplings Joining Hubless Cast Iron Soil Pipe and Fittings
P3003.4.3~~

~~C1363—11: The Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus
N1101.10.4.1~~

~~C1440—08(2013): Specification for Thermoplastic Elastomeric (TPE) Gasket Materials for Drain, Waste and Vent (DWV), Sewer, Sanitary and Storm Plumbing Systems
P3003.13~~

~~C1460—2012: Specification for Shielded Transition Couplings for Use with Dissimilar DWV Pipe and Fittings Above Ground
P3003.13~~

~~C1461—08(2013): Specification for Mechanical Couplings Using Thermoplastic Elastomeric (TPE) Gaskets for Joining Drain, Waste and Vent (DWV) Sewer, Sanitary and Storm Plumbing Systems for Above and Below Ground Use
P3003.13~~

~~C1540—15: Specification for Heavy Duty Shielded Couplings Joining Hubless Cast-iron Soil Pipe and Fittings
P3003.4.3~~

~~C1668—13a: Standard Specification for Externally Applied Reflective Insulation Systems on Rigid Duct in Heating, Ventilation, and Air Conditioning (HVAC) Systems
M1601.3~~

~~D1248—12: Specification for Polyethylene Plastics Extrusion Materials for Wire and Cable
M1601.1.2~~

~~D1527—99(2005): Specification for Acrylonitrile-butadiene-styrene (ABS) Plastic Pipe, Schedules 40 and 80~~

~~Table P2906.4~~

~~D1693—15: Test Method for Environmental Stress-cracking of Ethylene Plastics~~

~~Table M2101.1~~

~~D1784—11: Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds~~

~~M1601.1.2~~

~~D1785—15: Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120~~

~~Table P2906.4, Table AG101.1~~

~~D1869—15: Specification for Rubber Rings for Fiber-Reinforced Cement Pipe~~

~~P2906.18, P3003.13~~

~~D2104—03: Specification for Polyethylene (PE) Plastic Pipe, Schedule 40~~

~~Table P2906.4~~

~~D2235—04(2011): Specification for Solvent Cement for Acrylonitrile-butadiene-styrene (ABS) Plastic Pipe and Fittings~~

~~P2906.9.1.1, P3003.3.2~~

~~D2239—12A: Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter~~

~~Table P2906.4, Table AG101.1~~

~~D2241—15: Specification for Poly (Vinyl Chloride) (PVC) Pressure-rated Pipe (SDR Series)~~

~~Table P2906.4, Table AG101.1~~

~~D2282—99(2005): Specification for Acrylonitrile-butadiene-styrene (ABS) Plastic Pipe (SDR-PR)~~

~~Table P2905.4~~

~~D2412—11: Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-plate Loading~~

~~M1601.1.2~~

~~D2447—03: Specification for Polyethylene (PE) Plastic Pipe Schedules 40 and 80, Based on Outside Diameter~~

~~Table M2101.1~~

~~D2464—15: Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80~~

~~Table P2906.6~~

~~D2466—15: Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40~~

~~Table P2906.6~~

~~D2467—15: Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80~~

~~Table P2906.6~~

~~D2468—96a: Specification for Acrylonitrile-butadiene-styrene (ABS) Plastic Pipe Fittings, Schedule 40~~

~~Table P2906.6~~

~~D2513—2014e1: Specification for Gas Pressure Pipe, Tubing and Fittings~~

~~Table M2101.1, G2414.6, G2414.6.1, G2414.11, G2415.17.2~~

~~D2564—12: Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems~~

~~P2906.9.1.4, P3003.9.2~~

~~D2609—15: Specification for Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe~~

~~Table P2906.6~~

~~D2657—07: Standard Practice for Heat Fusion joining of Polyolefin Pipe Fittings~~

~~M2105.11.1, P2906.3.1, P2906.20.2, P3003.12.1~~

~~D2661—14: Specification for Acrylonitrile-butadiene-styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings~~

~~Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table P3002.3, P3003.3.2~~

~~D2665—14: Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste and Vent Pipe and Fittings~~

~~Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table P3002.3, Table AG101.1~~

~~D2672—14: Specification for Joints for IPS PVC Pipe Using Solvent Cement~~

~~Table P2906.4~~

~~D2683—14: Specification for Socket-type Polyethylene Fittings for Outside Diameter-controlled Polyethylene Pipe and Tubing~~

~~Table M2105.5, M2105.11.1, Table P2606.6, P2906.20.2, P3002.3, P3010.5~~

~~D2729—11: Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings~~
~~P3009.11, Table P3302.1, Table AG101.1~~

~~D2737—2012A: Specification for Polyethylene (PE) Plastic Tubing~~
~~Table P2906.4, Table AG101.1~~

~~D2751—05: Specification for Acrylonitrile-butadiene-styrene (ABS) Sewer Pipe and Fittings~~
~~Table P3002.2, Table P3002.3~~

~~D2846/D2846M—14: Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold-water Distribution Systems~~
~~Table M2101.1, Table P2906.4, Table P2906.5, Table P2906.6, P2906.9.1.2, P2906.9.1.3, Table AG101.1~~

~~D2855—96(2010): Standard Practice for Making Solvent-cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings~~
~~P3003.9.2~~

~~D2949—10: Specification for 3.25-in. Outside Diameter Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste and Vent Pipe and Fittings~~
~~Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table P3002.3, Table AG101.1~~

~~D3034—14a: Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings~~
~~Table P3002.2, Table P3002.3, Table P3202.1, Table AG101.1~~

~~D3035—15: Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based On Controlled Outside Diameter~~
~~Table M2105.4, Table AG101.1~~

~~D3138—04(2011): Standard Specification for Solvent Cements for Transition Joints Between Acrylonitrile-Butadiene-Styrene (ABS) and Poly (Vinyl Chloride) (PVC) Non-Pressure Piping Components~~
~~P3003.13.4~~

~~D3212—07(2013): Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals~~
~~P3003.3.1, P3003.9.1, P3003.12.2~~

~~D3261—12E1: Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing~~
~~Table M2101.1, Table M2105.5, M2105.11.1, M2105.13.3, Table P2606.6, P2906.20.2~~

~~D3309—96a(2002): Specification for Polybutylene (PB) Plastic Hot and Cold-water Distribution System~~

~~Table M2101.1~~

~~D3311—11: Specification for Drain, Waste and Vent (DWV) Plastic Fittings Patterns~~

~~P3002.3~~

~~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

~~**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 M2104~~

~~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 (Classes 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, 17926, 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, 1101.5 and 1954.201; 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, 17926, 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, 1101.5 and 1954.201; 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, 17926, 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, 1101.5 and 1954.201; 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, 17926, 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, 1101.5 and 1954.201; 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, 17926, 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, 1101.5 and 1954.201; 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, 17926, 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, 1101.5 and 1954.201; 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
RADON CONTROL METHODS**

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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 1206 “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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

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. (No change to existing California amendment).

**SECTION AS105
STRAWBALE WALLS—GENERAL**

AS105.6.2 Vapor retarders. (No change to existing California amendment).

AS105.6.3 Penetrations in exterior strawbale walls. (No change to existing California amendment).

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, 17926, 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, 1101.5 and 1954.201; 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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

39. HCD proposes to continue to adopt Appendix X from the 2016 California Residential Code into the 2019 California Residential Code with no modifications.

**APPENDIX X
EMERGENCY HOUSING**

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, 17926, 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, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.