# APPROVED BY THE CALIFORNIA BUILDING STANDARDS COMMISSION JANUARY 18, 2022

# **FINAL EXPRESS TERMS** FOR PROPOSED BUILDING STANDARDS OF THE CALIFORNIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT REGARDING THE **2022 CALIFORNIA RESIDENTIAL COD**E CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART **2.5**

# (HCD 06/21)

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

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

## LEGEND for EXPRESS TERMS

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* Repealed model code language appears ~~upright and in strikeout~~
* Repealed California amendments appear in *~~italic and strikeout~~*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

The California Department of Housing and Community Development (HCD) proposes to adopt the 2021 edition of the International Residential Code (IRC) for codification and effectiveness into the 2022 edition of the California Residential Code (CRC) as presented on the following pages, including any necessary amendments.

**Acronyms:**

CBC California Building Code

CEC California Electrical Code

CMC California Mechanical Code

CPC California Plumbing Code

CRC California Residential Code

CALGreen California Green Building Standards Code

HCD California Department of Housing and Community Development

## SUMMARY OF REGULATORY ACTION

**HCD PROPOSES TO:**

* Adopt sections from the 2021 IRC into the 2022 CRC without amendments.
* Adopt sections from the 2021 IRC into the 2022 CRC with existing amendments.
  + Bring forward existing California amendments from the 2019 CRC for adoption into the 2022 CRC without modifications.
  + Bring forward existing California amendments from the 2019 CRC for adoption into the 2022 CRC with nonsubstantive editorial modifications or new modifications that do not change the regulatory effect.
* Adopt sections from the 2021 IRC into the 2022 CRC with new amendments.
* Adopt sections from the 2021 IRC into the 2022 CRC with new amendments that do not change the regulatory effect.
* Repeal existing California amendments from the 2019 CRC and not bring them forward into the 2022 CRC.
* Not adopt specified sections of the 2021 IRC.

## FINAL EXPRESS TERMS

### Item 1: HCD proposes to bring forward existing California Amendments in Chapter 1, Division I, Sections 1.1 and 1.8, from the 2019 CRC for adoption into the 2021 CRC 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 ~~2018~~ 2021 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*.** (No change to existing California amendment.)

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

***1.1.3.1.1 Utility and Miscellaneous Group U*.** (No change to existing California amendment.)

***1.1.3.2******Regulated buildings, structures and applications.***(No change to existing California amendment.)

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

***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. (No change to existing California amendment.)
2. (No change to existing California amendment.)
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~~ 278180, Sacramento, CA ~~95812-1407~~ 95827-8180 or 9342 Tech Center Drive ~~#~~Suite 500, Sacramento, CA 95826-~~2581~~2582*.

***1.1.9******Effective date of this code****.* (No change to existing California amendment.)

***1.1.10 Availability of codes.***(No change to existing California amendment.)

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

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

***1.8.2.1.1 Housing construction.***

***Application—****Hotels, motels, lodging houses, apartments, dwellings, dormitories, condominiums, shelters for homeless persons, congregate residences, employee housing, factory-built housing and other types of dwellings containing sleeping accommodations with or without common toilet or cooking facilities including accessory buildings, facilities and uses thereto. Sections of this code which pertain to applications listed in this section are identified using the abbreviation “HCD 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, 17926, 17927, 17928, 17958.12, ~~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—****Business and Professions Code, Division 5;**Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.6, 18941, 19890, 19891, 19892 and 19960 through 19997; Civil Code Sections 832, 1101.4, 1101.5, ~~and~~ 1954.201, 1954.202 and 5551; ~~and~~ Government Code Sections 8698.4, 12955.1 and 12955.1.1~~.~~; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.*

***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.*

*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 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, 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, 17926, 17927, 17928, 17958.12, ~~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 Sections 12955.1 and 12955.11.*

***Reference—****Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.6, 18941, 19890, 19891, 19892 and 19960 through 19997; Civil Code Sections 1101.4, 1101.5, ~~and~~ 1954.201 and 1954.202; ~~and~~ Government Code Sections 12955.1 and 12955.1.1~~.~~; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.*

* + - * 1. ***Permanent buildings in mobilehome parks and special occupancy parks.***

***Application—****Permanent buildings, and permanent accessory buildings or structures, constructed within mobilehome parks and special occupancy parks that are under the control and ownership of the park operator. Sections of this code which pertain to applications listed in this section are identified using the abbreviation “HCD 2.”*

***Enforcing agency—****The Department of Housing and Community Development, local building department or other local agency that has assumed responsibility for the enforcement of Health and Safety Code, Division 13, Part 2.1, commencing with Section 18200 for mobilehome parks and Health and Safety Code, Division 13, Part 2.3, commencing with Section 18860 for special occupancy parks.*

***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, 17958.12, ~~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, 18941, 19890, 19891, 19892 and 19960 through 19997; Civil Code Sections 1101.4, 1101.5 and 1954.201; ~~and~~ Government Code Sections 12955.1 and 12955.1.1~~.~~; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.*

***SECTION 1.8.3  
LOCAL ENFORCING AGENCY***

***1.8.3.1 Duties and powers.***(No change to existing California amendment.)

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

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

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

***1.8.10.2 Moved structures.***(No change to existing California amendment.)

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 17958.12, 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 Sections 12955.1 and 12855.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.6, 18941, 18941.5, 19890, 19891, 19892 and 19960 through 19997; Civil Code Sections 1101.4, 1101.5, 1954.201, 1954.202 and 5551; and Government Code Sections 8698.4, 12955.1, 12955.1.1 and 65852.2. California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

### Item 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, R106.1.6 (formerly 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 2021 IRC into the 2022 CRC 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.** Building Items 1 through 10. (No change to existing Californiaamendment.)

**SECTION R106  
CONSTRUCTION DOCUMENTS**

***R106.1.6 (Formerly R106.1.5) Exterior balconies and elevated walking surfaces.*** (No change to existing California amendment renumbered only.)

**SECTION R109  
INSPECTIONS**

**R109.1 Types of inspections.** (No change to existing California amendment.)

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

***R109.1.6.2 Operation and maintenance manual.***(No change to existing California amendment.)

**Notation**:

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 3: HCD proposes to adopt Chapter 2 from the 2021 IRC into the 2022 CRC 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.** (No change to existing California amendment.)

**AIR-IMPERMEABLE INSULATION.** (No change to existing California amendment.)

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

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

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

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

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

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

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

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

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

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

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

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

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

***ENTRY LEVEL.*** *For the purposes of Section R327, entry level is the floor or level of the dwelling unit on which an entry is located.*

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

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

**FENESTRATION, VERTICAL.** Windows that are fixed or movable, opaque doors, glazed doors, glazed block and combination opaque and glazed doors installed in a wall

at less than 15 degrees (0.26 rad) from vertical.

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

**GUARD *OR GUARDRAIL***. (No change to existing California amendment.)

**INSULATED SIDING.** A type of continuous insulation, with manufacturer-installed insulating material as an integral part of the cladding product, having a minimum R-value of R-2. ~~For the definition applicable in Chapter 11, see Section N1101.6.~~

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

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

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

**ROOF ASSEMBLY.** A system designed to provide weather protection and resistance to design loads. The system consists of a roof covering and roof deck or a single component serving as both the roof covering and the roof deck. A roof assembly can include an underlayment, thermal barrier, ignition barrier, insulation or a vapor retarder. ~~For the definition applicable in Chapter 11, see Section N1101.6.~~

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

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

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

**SKYLIGHTS AND SLOPED GLAZING.** Glass or other transparent or translucent glazing material installed at a slope of 15 degrees (0.26 rad) or more from vertical. Unit skylights, tubular daylighting devices and glazing materials in solariums, sunrooms, roofs and sloped walls are included in this definition. ~~For the definition applicable in Chapter 11, see Section N1101.6.~~

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

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

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 4: HCD proposes to repeal the following California amendment from Chapter 2 of the 2019 CRC as follows:

**CHAPTER 2  
DEFINITIONS**

**SECTION R202  
DEFINITIONS**

***~~CLIMATE ZONES~~****~~. CLIMATE ZONES are the 16 geographic areas of California for which the California Energy Commission has established typical weather data, prescriptive packages and energy budgets. Climate zones are defined by ZIP code and listed in Reference Joint Appendix JA2.~~*

***~~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.~~*

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 5: HCD proposes to NOT adopt the following Chapter 2 definitions from the 2021 IRC:

**CHAPTER 2  
DEFINITIONS**

**SECTION R202 DEFINITIONS  
(NON-ADOPTED)**

**~~ABOVE-GRADE WALL.~~**

**~~ACCESSORY STRUCTURE.~~**

**~~AIR ADMITTANCE VALVE.~~**

**~~AIR BARRIER.~~**

**~~AIR BREAK (DRAINAGE SYSTEM).~~**

**~~AIR CIRCULATION, FORCED.~~**

**~~AIR GAP, DRAINAGE SYSTEM.~~**

**~~AIR GAP, WATER-DISTRIBUTION SYSTEM.~~**

**~~AIR-CONDITIONING SYSTEM.~~**

**~~ANCHORS.~~**

**~~ANTISIPHON.~~**

**~~APPLIANCE.~~**

**~~AUTOMATIC.~~**

**~~BACKFLOW, DRAINAGE.~~**

**~~BACKFLOW, WATER DISTRIBUTION.~~**

**~~BACKFLOW PREVENTER.~~**

**~~BACKFLOW PREVENTER, REDUCED–PRESSURE ZONE TYPE.~~**

**~~BACKPRESSURE.~~**

**~~BACKPRESSURE, LOW HEAD.~~**

**~~BACKSIPHONAGE.~~**

**~~BACKWATER VALVE.~~**

**~~BALANCED VENTILATION.~~**

**~~BALANCED VENTILATION SYSTEM.~~**

**~~BASEMENT WALL.~~**

**~~BATHROOM GROUP.~~**

**~~BEND.~~**

**~~BOILER.~~**

**~~BRANCH.~~**

**~~BRANCH, FIXTURE.~~**

**~~BRANCH, HORIZONTAL.~~**

**~~BRANCH, MAIN.~~**

**~~BRANCH, VENT.~~**

**~~BRANCH INTERVAL.~~**

**~~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.~~**

**~~DUCT SYSTEM.~~**

**~~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 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.~~**

**~~GRAYWATER.~~**

**~~GRIDDED WATER DISTRIBUTION SYSTEM.~~**

**~~GROUND-SOURCE HEAT PUMP LOOP SYSTEM.~~**

**~~HANGERS.~~**

**~~HAZARDOUS LOCATION.~~**

**~~HEAT PUMP.~~**

**~~HEATED SLAB.~~**

**~~HIGH-EFFICACY LIGHT SOURCES.~~**

**~~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.~~**

**~~LOW-VOLTAGE LIGHTING.~~**

**~~MACERATING TOILET SYSTEMS.~~**

**~~MAIN.~~**

**~~MAIN SEWER.~~**

**~~MANIFOLD WATER DISTRIBUTION SYSTEMS.~~**

**~~MANUAL.~~**

**~~MANUFACTURED HOME.~~**

**~~MECHANICAL DRAFT SYSTEM.~~**

**~~MECHANICAL EXHAUST SYSTEM.~~**

**~~MECHANICAL JOINT.~~**

**~~MECHANICAL SYSTEM.~~**

**~~NATURAL DRAFT SYSTEM.~~**

**~~OFFSET.~~**

**~~ON-SITE NONPOTABLE WATER REUSE SYSTEMS.~~**

**~~OPAQUE DOOR.~~**

**~~PELLET VENT.~~**

**~~PITCH.~~**

**~~PLUMBING.~~**

**~~PLUMBING APPLIANCE.~~**

**~~PLUMBING APPURTENANCE~~**

**~~PLUMBING FIXTURE.~~**

**~~PLUMBING SYSTEMS.~~**

**~~POLLUTION.~~**

**~~PORTABLE-FUEL-CELL APPLIANCE.~~**

**~~POTABLE WATER.~~**

**~~PRESS-CONNECT JOINT.~~**

**~~PRESSURE-RELIEF VALVE.~~**

**~~PROPOSED DESIGN.~~**

**~~PUBLIC SEWER.~~**

**~~PUBLIC WATER MAIN.~~**

**~~PURGE.~~**

**~~PUSH-FIT FITTING.~~**

**~~QUICK-CLOSING VALVE.~~**

**~~R-VALUE, THERMAL RESISTANCE.~~**

**~~RATED DESIGN.~~**

**~~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.~~**

**~~SLIP JOINT.~~**

**~~SLOPE.~~**

**~~SOIL STACK OR PIPE.~~**

**~~SOLAR HEAT GAIN COEFFICIENT (SHGC).~~**

**~~STACK.~~**

**~~STACK VENT.~~**

**~~STANDARD REFERENCE DESIGN.~~**

**~~STANDARD TRUSS.~~**

**~~STATIONARY FUEL CELL POWER PLANT~~*~~.~~***

**~~STORM SEWER, DRAIN.~~**

**~~SUBSOIL DRAIN.~~**

**~~SUMP.~~**

**~~SUMP PUMP.~~**

**~~SUPPORTS.~~**

**~~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.~~**

**~~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.~~**

**~~VENTING SYSTEM.~~**

**~~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.~~**

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 6: HCD proposes to adopt Chapter 3, except Figure R307.1 and Sections R313 and R322.1.9 from the 2021 IRC into the 2022 CRC 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.)

**R301.2.2.10 Anchorage of water heaters.** ~~In Seismic Design Categories D0, D1 and D2, and in townhouses in Seismic Design Category C, w~~Water heaters and thermal storage units shall be anchored against movement and overturning in accordance with ~~Section M1307.2 or P2801.8~~ *the California Plumbing Code.*

**TABLE R301.5 MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS** (No change to existing California amendment.)

**SECTION R302  
FIRE-RESISTANT CONSTRUCTION**

**R302.1 Exterior walls.** (No change to existing California amendment.)

**TABLE R302.1(2) EXTERIOR WALLS—DWELLINGS WITH FIRE SPRINKLERS** (No change to existing California amendment.)

**R302.2.2 Common walls.** (No change to existing California amendment.)

**R302.2.6 Structural independence.** Each townhouse unit shall be structurally independent.

**Exceptions:**

1. Foundations supporting exterior walls or common walls.
2. Structural roof and wall sheathing from each unit fastened to the common wall framing.
3. Nonstructural wall and roof coverings.
4. Flashing at termination of roof covering over common wall.
5. Townhouse units separated by a common wall as provided in Section R302.2.2, Item 1 or 2.
6. Townhouse units protected by a fire sprinkler system complying with ~~Section P2904~~ *Section R313* or NFPA 13D.

**R302.3 Two-family dwellings.** Dwelling units in two-family dwellings shall be separated from each other by wall and floor assemblies having not less than a 1-hour fire-resistance rating where tested in accordance with ASTM E119, UL 263 or 703.2.2 of the ~~International~~ *California* Building Code. Such separation shall be provided regardless of whether a lot line exists between the two dwelling units or not. Fire-resistance-rated floor/ceiling and wall assemblies shall extend to and be tight against the exterior wall, and wall assemblies shall extend from the foundation to the underside of the roof sheathing.

**Exceptions:**

1. A fire-resistance rating of 1 /2 hour shall be permitted in buildings equipped throughout with an automatic sprinkler system installed in accordance with ~~Section P2904~~ *Section R313*.
2. (No change to model code text.)

**R302.6 Dwelling/garage *and/or carport* fire separation.** (No change to existing California amendment.)

**R302.13 Fire protection of floors.** (No change to existing California amendment.)

**SECTION R303  
LIGHT, VENTILATION AND HEATING**

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

**Exceptions:**

1. For habitable rooms other than kitchens, the glazed areas need not be openable where the opening is not required by Section R310 and a whole-house mechanical ventilation system or a mechanical ventilation system capable of producing 0.35

air changes per hour in the habitable rooms is installed in accordance with ~~Section M1505~~ *the California Mechanical Code*.

2. For kitchens, the glazed areas need not be openable where the opening is not required by Section R310 and a local exhaust system is installed in accordance with ~~Section M1505~~ *the California Mechanical Code* .

3. The glazed areas need not be installed in rooms where Exception 1 is satisfied and artificial light is provided that is capable of producing an average illumination of 6 footcandles (65 lux) over the area of the room at a height of 30 inches (762 mm)

above the floor level.

4. Use of sunroom and patio covers, as defined in Section R202, shall be permitted for natural ventilation if in excess of 40 percent of the exterior sunroom walls are open, or are enclosed only by insect screening.

*~~4~~5. The windows, doors, louvers and other approved closeable openings not required by Section R310 may open into a passive solar energy collector for ventilation required by this section. The area of ventilation openings to the outside of the passive solar energy collector shall be increased to compensate for the openings required by the interior space.*

*~~5~~6. Glazed openings may open into a passive solar energy collector provided the area of exterior glazed opening(s) into the passive solar energy collector is increased to compensate for the area required by the interior space.*

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

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

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

**R303.5.1 Intake openings.** Mechanical and gravity outdoor air intake openings shall be located not less than 10 feet (3048 mm) from any hazardous or noxious contaminant, such as vents, chimneys, plumbing vents, streets, alleys, parking lots and loading docks.

For the purpose of this section, the exhaust from dwelling unit toilet rooms, bathrooms and kitchens shall not be considered as hazardous or noxious.

**Exceptions:**

1. The 10-foot (3048 mm) separation is not required where the intake opening is located 3 feet (914 mm) or greater below the contaminant source.
2. Vents and chimneys serving fuel-burning appliances shall be terminated in accordance with the applicable provisions of ~~Chapters 18 and 24~~ *the California Mechanical Code.*
3. Clothes dryer exhaust ducts shall be terminated in accordance with ~~Section M1502.3~~ *the California Mechanical Code*.

***R303.9.1.1******Passive solar energy collectors.***(No change to existing California amendment.)

**R303.10 Required heating.**(No change to existing Californiaamendment.)

**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.)

**R309.5 Fire sprinklers.** (No change to existing Californiaamendment.)

***R309.7 Extension garage door springs.*** (No change to existing Californiaamendment.)

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

**SECTION R310****EMERGENCY ESCAPE AND RESCUE OPENINGS**

**R310.1 Emergency escape and rescue opening required.** Basements, habitable attics and every sleeping room shall have not less than one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, an emergency escape and rescue opening shall be required in each sleeping room. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court having a minimum width of 36 inches (914 mm) that opens to a public way.

**Exceptions:**

1. Storm shelters and basements used only to house mechanical equipment not exceeding a total floor area of 200 square feet (18.58 m2).
2. Where the dwelling unit or townhouse unit is equipped with an automatic sprinkler system installed in accordance with ~~Section P2904~~ *Section R313*, sleeping rooms in basements shall not be required to have emergency escape and rescue openings provided that the basement has one of the following:
   1. One means of egress complying with Section R311 and one emergency escape and rescue opening.
   2. Two means of egress complying with Section R311.

**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**

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

**R315.6 Power source.** (No change to model code text)

**Exceptions:**

1. and 2. (No change to model code text.)

*3. Carbon monoxide alarms in Group R occupancies shall be permitted to receive their primary power from other power sources recognized for use by NFPA ~~720~~ 72.*

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

**R315.7.2 Location.** Carbon monoxide detectors shall be installed *and* *maintained* in the locations specified in Section R315.3 *or*

~~These locations supersede the locations specified in~~ NFPA ~~720~~ *72*.

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

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

**R317.1 Location required.** (No change to existing California amendment.)

***R317.1.6 Ventilation required beneath balcony or elevated walking surfaces.*** (No change to existing California amendment.)

**SECTION R320  
ACCESSIBILITY**

**R320.1 Scope.** ~~Where there are four or more dwelling units or sleeping units in a single structure, the provisions of Chapter 11 of the International Building Code for Group R-3 shall apply.~~ *Dwelling units in a building consisting of three or more dwelling units or four or more condominium units shall meet the requirements of the California Building Code Chapter 11A. Covered Multifamily Dwellings include but are not limited to dwelling units listed in Section 1.8.2.1.2. Dwelling units within a single structure separated by firewalls do not constitute separate buildings.* (No change to existing California amendment.)

**~~Exception:~~** ~~Owner-occupied lodging houses with five or fewer guestrooms are not required to be accessible.~~

**R320.2 Live/Work units.** ~~In live/work units, the nonresidential portion shall be accessible in accordance with Sections 508.5.9 and 508.5.11 of the International Building Code~~. In a structure where there are four or more live/work units, the dwelling portion of the live/work unit shall comply with ~~Section 1108.6.2.1~~ *Chapter 11A* of the ~~International~~ *California* Building Code*, as applicable*. *In a structure where there are one or more live/work units defined as public housing, the dwelling portion of the live/work unit shall comply with Chapter 11B of the California Building Code, as applicable. The work portion of the unit must comply with Chapter 11B if it is a public accommodation.*

**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.** **Exception:** (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.** Photovoltaic systems shall be designed and installed in accordance with Sections R324.3.1 through R324.7.1 and the manufacturer’s installation instructions. The electrical portion of solar PV systems shall be designed and installed in accordance with ~~NFPA 70~~ *the California Electrical Code*.

**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, 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. (No change to existing California amendment.)
3. These requirements shall not apply to roofs with slopes of two units vertical in 12 units horizontal (17-percent slope) or less.
4. BIPV systems listed in accordance with Section 690.12(B)(2) of ~~NFPA 70~~ *the California Electrical Code*, where the removal or cutting away of portions of the BIPV system during firefighting operations have been determined to not expose a firefighter to electrical shock hazards.

**R324.6.2.1 Alternative setback at ridge.** Where an automatic sprinkler system is installed within the dwelling in accordance with NFPA 13D or Section ~~P2904~~ *R313*, setbacks at ridges shall comply with one of the following:

* 1. For photovoltaic arrays occupying not more than 66 percent of the plan view total roof area, not less than an 18-inch (457 mm) clear setback is required on both sides of a horizontal ridge. (No change to model code text.)
  2. For photovoltaic arrays occupying more than 66 percent of the plan view total roof area, not less than a 36-inch (914 mm) clear setback is required on both sides of a horizontal ridge. (No change to model code text.)

**R324.6.3 Emergency escape and rescue openings.** Panels and modules installed on dwellings shall not be placed on the portion of a roof that is below an emergency escape and rescue opening. A pathway not less than 36 inches (914 mm) wide shall be provided to the emergency escape and rescue opening. (No change to model code text.)

**Exception:** BIPV systems listed in accordance with Section 690.12(B)(2) of ~~NFPA 70~~ *the California Electrical Code*, where the removal or cutting away of portions of the BIPV system during firefighting operations has been determined to not expose a firefighter to electrical shock hazards.

**R324.7.1 Fire separation distances.** (No change to existing California amendment.)

**SECTION R325  
MEZZANINES**

**R325.3 Area limitation.** The aggregate area of a mezzanine or mezzanines shall be not greater than one-third of the floor area of the room or space in which they are located. The enclosed portion of a room shall not be included in a determination of the floor area of the room in which the mezzanine is located.

**Exception:** The aggregate area of a mezzanine located within a dwelling unit equipped with an automatic sprinkler system in accordance with Section ~~P2904~~ *R313* shall not be greater than one-half of the floor area of the room, provided that the mezzanine meets all of the following requirements:

1. Except for enclosed closets and bathrooms, the mezzanine is open to the room in which such mezzanine is located.
2. The opening to the room is unobstructed except for walls not more than 42 inches (1067 mm) in height, columns and posts.
3. The exceptions to Section R325.5 are not applied.

**SECTION R326  
HABITABLE ATTICS**

**R326.3 Story above grade plane.** A habitable attic shall be considered a story above grade plane.

**Exceptions:** A habitable attic shall not be considered to be a story above grade plane provided that the habitable attic meets all the following:

1. The aggregate area of the habitable attic is:
   1. Not greater than one-third of the floor area of the story below,
   2. Not greater than one-half of the floor area of the story below where the habitable attic is located within a dwelling unit equipped with a fire sprinkler system in accordance with Section ~~P2904~~ *R313*.
2. The occupiable space is enclosed by the roof assembly above, knee walls, if applicable, on the sides and the floor-ceiling assembly below.
3. The floor of the habitable attic does not extend beyond the exterior walls of the story below.
4. Where a habitable attic is located above a third story, the dwelling unit or townhouse unit shall be equipped with a fire sprinkler system in accordance with Section ~~P2904~~ *R313.*

**SECTION R327 ~~SWIMMING POOLS, SPAS AND HOT TUBS~~**

***AGING-IN-PLACE DESIGN AND FALL PREVENTION***

**~~R327.1 General.~~** ~~The design and construction of pools and spas shall comply with the International Swimming Pool and Spa Code.~~

***R327.1 Aging-in-place design and fall prevention.*** *Newly constructed dwellings subject to the requirements of this code shall be designed and constructed in accordance with Sections R327.1.1 through R327.1.4.*

***Exceptions:***

1. *Covered multifamily dwellings designed and constructed in accordance with Chapter 11A of the California Building Code.*
2. *Public housing and places of public accommodation required to comply with Chapter 11B of the California Building Code.*

***R327.1.1 Reinforcement for grab bars.*** *At least one bathroom on the entry level shall be provided with reinforcement installed in accordance with this section. Where there is no bathroom on the entry level at least one bathroom on the second or third floor of the dwelling shall comply with this section.*

1. *Reinforcement shall be solid lumber or other construction materials approved by the enforcing agency.*
2. *Reinforcement shall not be less than 2 by 8 inch nominal lumber.  
   (1-1/2 inch by 7-1/4 inch actual dimension) or other construction material providing equal height and load capacity. Reinforcement shall be located between 32 inches (812.8 mm) and 39-1/4 inches (997 mm) above the finished floor) flush with the wall framing.*
3. *Water closet reinforcement shall be installed on both side walls of the fixture, or one side wall and the back wall.*
4. *Shower reinforcement shall be continuous where wall framing is provided.*
5. *Bathtub and combination bathtub/shower reinforcement shall be continuous on each end of the bathtub and the back wall. Additionally, back wall reinforcement for a lower grab bar shall be provided with the bottom edge located no more than 6 inches (152.4 mm) above the bathtub rim.*

***Exceptions:***

1. *Where the water closet is not placed adjacent to a side wall capable of accommodating a grab bar, the bathroom shall have provisions for installation of floor mounted, foldaway or similar alternate grab bar reinforcements approved by the enforcing agency.*
2. *Reinforcement shall not be required in wall framing for pre-fabricated shower enclosures and bathtub wall panels with integral factory installed grab bars or when factory installed reinforcement for grab bars is provided.*
3. *Shower enclosures that do not permit installation of reinforcement and/or grab bars shall be permitted, provided reinforcement for installation of floor mounted grab bars or an alternate method is approved by the enforcing agency.*
4. *Bathtubs with no surrounding walls, or where wall panels do not permit the installation of reinforcement shall be permitted, provided reinforcement for installation of floor mounted grab bars adjacent to the bathtub or an alternate method is approved by the enforcing agency.*
5. *Reinforcement of floors shall not be required for bathtubs and water closets installed on concrete slab floors.*

***R327.1.1.1 Documentation for grab bar reinforcement.*** *Information and/or drawings identifying the location of grab bar reinforcement shall be placed in the operation and maintenance manual in accordance with the California Green Building Standards Code, Chapter 4, Division 4.4.*

***R327.1.2 Electrical receptacle outlet, switch and control heights.*** *Electrical receptacle outlets, switches, and controls (including controls for heating, ventilation, and air conditioning) intended to be used by occupants, shall be located no more than 48 inches (1219.2 mm) measured from the top of the outlet box and not less than 15 inches (381 mm) measured from the bottom of the outlet box above the finish floor.*

***Exceptions:***

1. *Dedicated receptacle outlets; floor receptacle outlets; controls mounted on ceiling fans and ceiling lights; and controls located on appliances.*
2. *Receptacle outlets required by the California Electrical Code on a wall space where the distance between the finished floor and a built-in feature above the finish floor, such as a window, is less than 15 inches.*

***R327.1.3 Interior doors.*** *Effective July 1, 2024,* *at least one bathroom and one bedroom on the entry level shall provide a doorway with a net clear opening of not less than 32 inches (812.8 mm), measured with the door positioned at an angle of 90 degrees from the closed position; or, in the case of a two- or three-story single family dwelling, on the second or third floor of the dwelling if a bathroom or bedroom is not located on the entry level.*

***R327.1.4 Doorbell buttons.*** *Doorbell buttons or controls, when installed, shall not exceed 48 inches (1219.2 mm) above exterior floor or landing, measured from the top of the doorbell button assembly. Where doorbell buttons integrated with other features are required to be installed above 48 inches (1219.2 mm) measured from the exterior floor or landing, a standard doorbell button or control shall also be provided at a height not exceeding 48 inches (1219.2 mm) above exterior floor or landing, measured from the top of the doorbell button or control.*

**SECTION R328 (formerly R327)  
ENERGY STORAGE SYSTEMS**

**R328.1 (formerly R327.1) General.** Energy storage systems (ESS) shall comply with the provisions of this section.

**Exceptions:**

* 1. ESS listed and labeled in accordance with UL 9540 and marked “For use in residential dwelling units”, where installed in accordance with the manufacturer’s instructions and ~~NFPA 70~~ *the California Electrical Code*.
  2. ESS less than 1 kWh (3.6 megajoules).

**R328.6 (formerly R327.6 Electrical installation.** (No change to existing California amendment.)

**R328.9 (formerly R327.9 Ventilation.** (No change to existing California amendment.)

**R328.10 Electric vehicle use.** The temporary use of an owner or occupant's electric powered vehicle to power a dwelling unit while parked in an attached or detached garage or outdoors shall comply with the vehicle manufacturer's instructions and ~~NFPA 70~~ *the California Electrical Code*.

**SECTION R329  
STATIONARY ENGINE GENERATORS**

**R329.2 Installation.** The installation of stationary engine generators shall be in an approved location and in accordance with the listing, the manufacturer’s installation instructions, and ~~Chapters 34 through 43~~ *the California Electrical Code*.

***SECTION R334  
CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING***

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

***SECTION R340  
POLLUTANT CONTROL***

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

**Notation**:

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 7: HCD proposes to repeal the following California amendments from Chapter 3 of the 2019 CRC as follows:

…

**TABLE R301.2(1)  
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA  
(No change to the Table)**

e. ~~The outdoor design dry-bulb temperature shall be selected from the columns of 971/2-percent values for winter from Appendix D of the~~ *~~International Plumbing Code~~*~~. Deviations from the Appendix D temperatures~~ *Temperatures* shall be permitted to reflect local climates or local weather experience as determined by the building official.

**R302.5.1 Opening protection. (2019 CRC)** Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8 inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than 1 3/8 inches (35 mm) thick, or 20-minute fire-rated doors, equipped with self-closing or automatic-closing *~~and self-latching~~* device*s.*

**R302.14 Combustible insulation clearance. (2019 CRC)** Combustible insulation shall be separated not less than 3 inches (76 mm) from recessed luminaires, fan motors and other heat-producing devices.

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

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

**R310.2.2 Window sill height. (2019 CRC)** Where a window is provided as the emergency escape and rescue opening, it shall have *~~the bottom of the clear opening not greater than 44 inches (1118 mm) measured from the floor~~*~~;~~ where the sill height is below grade, it shall be provided with a window well in accordance with Section R310.2.3.

**Notation**:

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 8: HCD proposes to adopt Chapter 4 from the 2021 IRC into the 2022 CRC with existing amendments as follows:

**CHAPTER 4  
FOUNDATIONS**

**SECTION R401  
GENERAL**

**R401.2 Requirements.** (No change to existing Californiaamendment.)

***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.**

* 1. Plenum in existing structures complying with ~~Section M1601.5~~ *the California Mechanical Code*, if under-floor space is used as a plenum. (No change to existing Californiaamendment to 2.3).

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 9: HCD proposes to repeal the following California amendment from Chapter 4 of the 2019 CRC as follows:

**CHAPTER 4  
FOUNDATIONS**

**R408.3 Unvented crawl space.** For unvented under-floor spaces, the following items are shall be provided:

1. Exposed earth shall be covered with a continuous Class I vapor retarder. Joints of the vapor retarder shall overlap by 6 inches (152 mm) and shall be sealed or taped. The edges of the vapor retarder shall extend not less than 6 inches (152 mm) up the stem wall and shall be attached and sealed to the stem wall or insulation.
2. One of the following shall be provided for the under-floor space:
   1. Continuously operated mechanical exhaust ventilation at a rate equal to 1 cubic foot per minute (0.47 L/s) for each 50 square feet (4.7 m2) of crawl space floor area, including an air pathway to the common area (such as a duct or transfer grille), and perimeter walls insulated in accordance with Section N1102.2.10.1 of this code.
   2. Conditioned air supply sized to deliver at a rate equal to 1 cubic foot per minute (0.47 L/s) for each 50 square feet (4.7 m2) of under-floor area, including a return air pathway to the common area (such as a duct or transfer grille), and perimeter walls insulated in accordance with Section N1102.2.10.1 of this code. *~~Crawl space perimeter walls shall be insulated in accordance with the minimum insulation requirements established in the California Energy Code. Crawl space insulation shall be permanently fastened to the wall and extend downward from the floor to the finished grade level and then vertically and/or horizontally for at least an additional 24 inches (610 mm).~~*
   3. Plenum in existing structures complying with ~~Section M1601.5~~ *the California Mechanical Code*, if under-floor space is used as a plenum.
   4. Dehumidification sized accordance with manufacturer’s specifications. (No change to existing Californiaamendment to 2.3).

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 10: HCD proposes to adopt Chapter 5 from the 2021 IRC into the 2022 CRC 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.)

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 11: HCD proposes to adopt Chapter 6 from the 2021 IRC into the 2022 CRC with 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 ~~not required.~~**(No change to existing California amendment in body of text.)

**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.)

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 12: HCD proposes to adopt Chapter 7 from the 2021 IRC into the 2022 CRC with existing amendments and repeal of existing 2019 CRC amendments as follows.

**CHAPTER 7  
WALL COVERING**

**SECTION R702  
INTERIOR COVERING**

**R702.7 Vapor retarders.** (2019 CRC) Class I or II vapor retarders are required on the interior side of frame walls in Climate Zones 5, 6, 7, 8 and Marine 4 *~~14 and 16. See the California Energy Code, Figure 100.1-A —California Climate Zones.~~*

**Exceptions:**

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

**R702.7.1 Class III vapor retarders.** (2019 CRC) Class III vapor retarders shall be permitted where any one of the *~~following materials are used. The material options include vented cladding over fiberboard, vented cladding over gypsum, or insulated sheathing with an R-value equal to or greater than R-4. If insulated sheathing is used the R-value shall be included as part of the compliance toward the California Energy Code.~~*

*~~Spray foam with a minimum density of 2 lb/ft3 applied to the interior cavity side of OSB, plywood, fiberboard, insulated sheathing or gypsum is deemed to meet the insulated sheathing requirement where the spray foam R-value meets or exceeds the specified insulated sheathing R-value.~~*

**TABLE 702.7(3) (formerly TABLE 702.7.1) Class III vapor retarders.**

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 13: HCD proposes to adopt Chapter 8 from the 2021 IRC into the 2022 CRC with existing and new 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**

(Proposal to add a new Note is withdrawn)

**SECTION R807  
ATTIC ACCESS**

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 14: HCD proposes to repeal the following California amendments from Chapter 8 of the 2019 CRC as follows:

**SECTION R806  
ROOF VENTILATION**

**R806.2 Minimum vent area.** (2019 CRC) The minimum net free ventilating area shall be 1 /150 of the area of the vented space**.**

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

1. In Climate Zones 6, 7 and 8 *~~14 and 16~~*, a Class I or II vapor retarder is installed on the warm-in-winter side of the ceiling.
2. Not less than 40 percent and not more than 50 percent of the required ventilating area is provided by ventilators located in the upper portion of the attic or rafter space. Upper ventilators shall be located not more than 3 feet (914 mm) below the ridge or highest point of the space, measured vertically. The balance of the required ventilation provided shall be located in the bottom one-third of the attic space. Where the location of wall or roof framing members conflicts with the installation of upper ventilators, installation more than 3 feet (914 mm) below the ridge or highest point of the space shall be permitted.

**R806.5 Unvented attic and unvented enclosed rafter assemblies.** (2019 CRC)Unvented attics and unvented enclosed roof framing assemblies created by ceilings that are applied directly to the underside of the roof framing members and structural roof sheathing applied directly to the top of the roof framing members/rafters, shall be permitted where all the following conditions are met:

1. The unvented attic space is completely within the building thermal envelope.
2. Interior Class I vapor retarders are not installed on the ceiling side (attic floor) of the unvented attic assembly or on the ceiling side of the unvented enclosed roof framing assembly.
3. Where wood shingles or shakes are used, a minimum 1 /4- inch (6.4 mm) vented airspace separates the shingles or shakes and the roofing underlayment above the structural sheathing.
4. In Climate Zones 5, 6, 7 and 8 *~~California Climate Zones 14 and 16~~*~~,~~ any air-impermeable insulation shall be a Class II vapor retarder, or shall have a Class II vapor retarder coating or covering in direct contact with the underside of the insulation.
   1. *~~A Class I or Class II vapor retarder shall be installed on the indirectly conditioned space side of all insulation in an unvented attic with air-permeable insulation, for condensation control.~~*

*~~See the California Energy Code, Figure 100.1- A —California Climate Zones.~~*

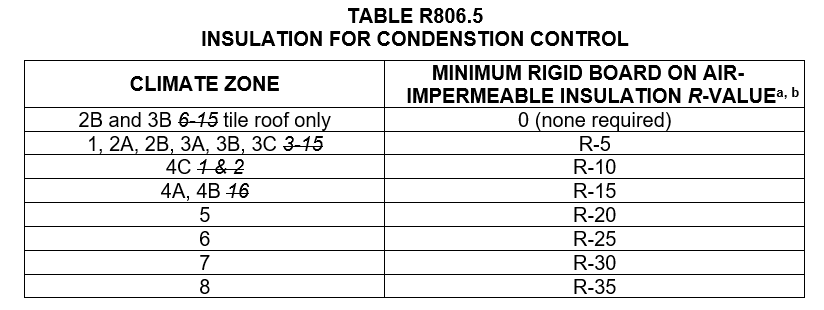
1. Insulation shall comply with Item 5.3 and either Item 5.1 or 5.2:
   1. Item 5.1.1, 5.1.2, 5.1.3 or 5.1.4 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing. *~~No insulation shall be required when roof tiles, wood shingles or wood shakes, or any other roofing system using battens and no continuous underlayment is installed. A continuous underlayment shall be considered to exist if sheathing, roofing paper or any continuous layer having a perm rate of no more than one perm under the dry cup method is present.~~* 
      1. Where only air-impermeable insulation is provided, it shall be applied in direct contact with the underside of the structural roof sheathing.
      2. Where air-permeable insulation is installed directly below the structural sheathing, rigid board or sheet insulation shall be installed directly above the structural roof sheathing in accordance with the R-values in Table R806.5 for condensation control.
      3. Where both air-impermeable and air-permeable insulation are provided, the air-impermeable insulation shall be applied in direct contact with the underside of the structural roof sheathing in accordance with Item 5.1.1 and shall be in accordance with the R-values in Table R806.5 for condensation control. The air-permeable insulation shall be installed directly under the air-impermeable insulation.
      4. Alternatively, sufficient rigid board or sheet insulation shall be installed directly above the structural roof sheathing to maintain the monthly average temperature of the underside of the structural roof sheathing above 45°F (7°C). For calculation purposes, an interior air temperature of 68°F (20°C) is assumed and the exterior air temperature is assumed to be the monthly average outside air temperature of the three coldest months.
   2. In Climate Zones 1, 2 and 3 *~~3-15~~*, air-permeable insulation installed in unvented attics shall meet the following requirements:
      1. An approved vapor diffusion port shall be installed not more than 12 inches (305 mm) from the highest point of the roof, measured vertically from the highest point of the roof to the lower edge of the port.
      2. The port area shall be greater than or equal to 1:600 of the ceiling area. Where there are multiple ports in the attic, the sum of the port areas shall be greater than or equal to the area requirement.
      3. The vapor-permeable membrane in the vapor diffusion port shall have a vapor permeance rating of greater than or equal to 20 perms when tested in accordance with Procedure A of ASTM E96.
      4. The vapor diffusion port shall serve as an air barrier between the attic and the exterior of the building.
      5. The vapor diffusion port shall protect the attic against the entrance of rain and snow.
      6. Framing members and blocking shall not block the free flow of water vapor to the port. Not less than a 2-inch (51 mm) space shall be provided between any blocking and the roof sheathing. Air-permeable insulation shall be permitted within that space.
      7. The roof slope shall be greater than or equal to 3:12 (vertical/horizontal).
      8. Where only air-permeable insulation is used, it shall be installed directly below the structural roof sheathing, on top of the attic floor, or on top of the ceiling.
      9. Air-impermeable insulation, where used in conjunction with air-permeable insulation shall be directly above or below the structural roof sheathing and is not required to meet the R-value in Table 806.5. Where directly below the structural roof sheathing, there shall be no space between the air-impermeable insulation and air-permeable insulation.
      10. Where air-permeable insulation is used and is installed directly below the roof structural sheathing, air shall be supplied at a flow rate greater than or equal to 50 CFM (23.6 L/s) per 1,000 square feet (93 m2) of ceiling. The air shall be supplied from ductwork providing supply air to the occupiable space when the conditioning system is operating. Alternatively, the air shall be supplied by a supply fan when the conditioning system is operating.

**Exceptions:**

1. Where both air-impermeable and air-permeable insulation are used, and the R-value in Table 806.5 is met, air supply to the attic is not required.

2. Where only air-permeable insulation is used and is installed on top of the attic floor, or on top of the ceiling, air supply to the attic is not required.

* 1. Where preformed insulation board is used as the air-impermeable insulation layer, it shall be sealed at the perimeter of each individual sheet interior surface to form a continuous layer.



**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 15: HCD proposes to adopt Chapter 9 from the 2021 IRC into the 2022 CRC with new and 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.)

**R905.17 Building-integrated Photovoltaic (BIPV) roof panels applied directly to the roof deck.** The installation of BIPV roof panels shall comply with the provisions of this section, Section R324 and ~~NFPA 70~~ *the California Electrical Code*.

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

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 16: HCD proposes to adopt Chapter 10, except Section 1004.4, from the 2021 IRC into the 2022 CRC with existing amendments as follows:

**CHAPTER 10  
CHIMNEYS AND FIREPLACES**

**SECTION R1001  
MASONRY FIREPLACES**

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

**R1001.3 Seismic reinforcing.** (No change to existing California amendment.)

**R1001.4 Seismic anchorage.** (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).***

**Notation**:

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 17: HCD proposes to NOT adopt Part IV, Energy Conservation, which includes Chapter 11, from the 2021 IRC.

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 18: HCD proposes to NOT adopt Part V, Mechanical, which includes Chapters 12 through 23, from the 2021 IRC.

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 19: HCD proposes to NOT adopt Part VI, Fuel Gas, which includes Chapter 24, from the 2021 IRC.

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 20: HCD proposes to NOT adopt Part VII, Plumbing, which includes Chapters 25 through 33, from the 2021 IRC.

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 21: HCD proposes to NOT adopt Part VIII, Electrical, which includes Chapters 34 through 43, from the 2021 IRC.

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 22: HCD proposes to adopt Part IX, Chapter 44, from the 2021 IRC into the 2022 CRC 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

1900 E. Golf Road, Suite 1250

Schaumburg, IL 60173

**AAMA/WDMA/CSA 101/I.S.2/A440—17: North American Fenestration Standards/Specifications for Windows, Doors and Skylights**

~~N1102.4.3~~, R308.6.9, R609.3

**ACCA** Air Conditioning Contractors of America

2800 Shirlington Road, Suite 300

Arlington, VA 22206

**ANSI/ACCA 1 Manual D—2016: Residential Duct Systems**

Table R301.2(1), ~~M1601.1, M1602.2~~

**~~ANSI/ACCA 2 Manual J—2016 Residential Load Calculation~~**

~~N1103.7, M1401.3~~

**~~ANSI/ACCA 3 Manual S—2014 Residential Equipment Selection~~**

~~N1103.7, M1401.3~~

**~~AMCA~~**

**~~ANCE~~**

**ANSI** American National Standards Institute

25 West 43rd Street, 4th Floor

New York, NY 10036

**~~A118.10—14 Specification for Load-bearing, Bonded, Waterproof Membranes for Thin-set Ceramic Tile and Dimension Stone Installation~~**

~~P2709.2, P2709.2.4~~

**~~ANSI/CSA FC 1—2014 Fuel Cell Technologies—Part 3-100: Stationary Fuel Cell Power Systems—Safety~~**

~~M1903.1~~

**~~LC1/CSA 6.26—2016 Fuel Gas Piping Systems Using Corrugated Stainless Steel Tubing (CSST)~~**

~~G2411.3, G2414.4.4, G2415.5~~

**~~LC4/CSA 6.32—12 Press-connect Metallic Fittings for Use in Fuel Gas Distribution Systems~~**

~~G2414.9.1, G2414.9.2, G2414.9.3 G2415.5~~

**~~Z21.1—2016 Household Cooking Gas Appliances~~**

~~M1503.2, G2447.1~~

**~~Z21.5.1/CSA 7.1—2017 Gas Clothes Dryers—Volume I—Type I Clothes Dryers~~**

~~G2438.1~~

**~~Z21.8—94 (R2012) Installation of Domestic Gas Conversion Burners~~**

~~G2443.1~~

**~~Z21.10.1/CSA 4.1—2012~~**

**~~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—2017~~**

**~~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—2016 Gas-fired Room Heaters—Volume II—Unvented Room Heaters~~**

~~G2445.1~~

**~~Z21.13/CSA 4.9—2017 Gas-fired Low-pressure Steam and Hot Water Boilers~~**

~~G2452.1~~

**~~Z21.15/CSA 9.1—09(R2014)~~**

**~~Manually Operated Gas Valves for Appliances, Appliance Connector Valves and Hose End Valves~~**

~~Table G2420.1.1~~

**~~Z21.22—99 (R2003)~~**

**~~Relief Valves for Hot Water Supply Systems—with Addenda Z21.22a—2000 (R2003) and 21.22b—2001 (R2003)~~**

~~P2804.2, P2804.7~~

**~~Z21.24/CSA 6.10—2015 Connectors for Gas Appliances~~**

~~G2422.1, G2422.2~~

**~~Z21.40.1/CSA 2.91—96 (R2017) Gas-fired, Heat-activated Air-conditioning and Heat Pump Appliances~~**

~~G2449.1~~

**~~Z21.40.2/CSA 2.92—96 (R2017)~~**

**~~Gas-fired Work Activated Air-conditioning and Heat Pump Appliances (Internal Combustion)~~**

~~G2449.1~~

**~~Z21.41/CSA 6.9-2014 Quick disconnect devices for use with gas fuel appliances~~**

~~G2422.1~~

**~~Z21.42—2013 Gas-fired Illuminating Appliances~~**

~~G2450.1~~

**~~Z21.47/CSA 2.3—2016 Gas-fired Central Furnaces~~**

~~G2442.1~~

**~~Z21.50/CSA 2.22—2016 Vented Decorative Gas Fireplaces~~**

~~G2434.1~~

**~~Z21.54—2014 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—2015 Outdoor Cooking Gas Appliances~~**

~~G2447.1~~

**~~Z21.60/CSA 2.26—2017 Decorative Gas Appliances for Installation in Solid Fuel-burning Fireplaces~~**

~~G2432.1~~

**~~Z21.69/CSA 6.16—2015 Connectors for Movable Gas Appliances~~**

~~G2422.1.5~~

**~~Z21.75/CSA 6.27—2016 Connectors for Outdoor Gas Appliances and Manufactured Homes~~**

~~G2422.1~~

**~~Z21.80/CSA 6.22—11(R2016) Line Pressure Regulators~~**

~~G2421.1~~

**~~Z21.84—2017~~**

**~~Manually Lighted, Natural Gas Decorative Gas Appliances for Installation in Solid Fuel-burning Appliances~~**

~~G2432.1, G2432.2~~

**~~Z21.86/CSA 2.32—2016 Vented Gas-fired Space Heating Appliances~~**

~~G2436.1, G2437.1, G2446.1~~

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

~~G2435.1~~

**~~Z21.90/CSA 6.24-2015 Gas convenience outlets and optional enclosures~~**

~~G2422.1~~

**~~Z21.91—2017 Ventless Firebox Enclosures for Gas-fired Unvented Decorative Room Heaters~~**

~~G2445.7.1~~

**~~Z21.93/CSA 6.30—2017 Excess Flow Valves for Natural Gas and Propane Gas with Pressures up to 5 psig~~**

~~G2421.4~~

**~~Z21.97—2014 Outdoor Decorative Gas Appliances~~**

~~G2453.1~~

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

~~G2451.1~~

**~~Z83.8/CSA 2.6—2016 Gas Unit Heaters, Gas Packaged Heaters, Gas Utility Heaters, and Gas-fired Duct Furnaces~~**

~~G2444.1~~

**~~Z83.19—2009 (R2014) Gas-fired High-intensity Infrared Heaters~~**

~~G2451.1~~

**~~Z83.20—08 Gas-fired Low-intensity Infrared Heaters Outdoor Decorative Appliances~~**

~~G2451.1~~

**~~APSP~~**

**~~ASHRAE~~**

**ASME** American Society of Mechanical Engineers

Two Park Avenue

New York, NY 10016-5990

**~~A112.1.2—2012 (R2022) 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 2020) 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(R2022)~~**

**~~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—2020/CSA B45.9—20 Macerating Toilet Systems and Related Components~~**

~~{ Table P2701.1 }, { P3007.5 }~~

**~~A112.4.1—2019 Water Heater Relief Valve Drain Tubes~~**

~~{ P2804.6.1 }~~

**~~A112.4.3—1999 (R2020) Plastic Fittings for Connecting Water Closets to the Sanitary Drainage System~~**

~~{ P3003.14 }~~

**~~A112.4.4—2017 Plastic Push-Fit Drain, Waste, and Vent (DWV) Fittings~~**

~~{ Table P3002.3 }, { P3003.9.4 }~~

**~~A112.4.14—2004 (R2019) Manually Operated Valves for Use in Plumbing Systems~~**

~~{ Table P2903.9.4 }~~

**~~A112.6.2—2022 Framing-affixed Supports for Off-the-floor Water Closets with Concealed Tanks~~**

~~{ Table P2701.1 }, { P2702.4 }~~

**~~A112.6.3—2019 Floor and Trench Drains~~**

~~{ Table P2701.1 }~~

**~~A112.14.1—03(2022) Backwater Valves~~**

~~{ P3008.3 }~~

**~~A112.18.1—2020/CSA B125.1—2020 Plumbing Supply Fittings~~**

~~{ Table P2701.1 }, { P2708.5 }, { P2722.1 }, { P2722.3 }, { P2902.2 }, { Table P2903.9.4 }~~

**~~A112.18.2—2019/CSA B125.2—2019 Plumbing Waste Fittings~~**

~~{ Table P2701.1 }, { P2702.2 }~~

**~~A112.18.3M—2002(R2020)~~**

**~~Performance Requirements for Backflow Protection Devices and Systems in Plumbing Fixture Fittings~~**

~~{ P2708.5 }, { P2722.3 }~~

**~~A112.18.6—2021/CSA B125.6—21 Flexible Water Connectors~~**

~~{ P2906.7 }~~

**~~A112.19.1—2020/CSA B45.2—2020 Enameled Cast-iron and Enameled Steel Plumbing Fixtures~~**

~~{ Table P2701.1 }, { P2711.1 }~~

**~~A112.19.2—2020/CSA B45.1—2020 Ceramic Plumbing Fixtures~~**

~~{ Table P2701.1 }, { P2705.1 }, { P2711.1 }, { P2712.1 }, { P2712.2 }, { P2712.9 }~~

**~~A112.19.3—2021/CSA B45.4—08 (R2021) Stainless Steel Plumbing Fixtures~~**

~~{ Table P2701.1 }, { P2705.1 }, { P2711.1 }, { P2712.1 }~~

**~~A112.19.5—2021/CSA B45.15—2021 Flush Valves and Spuds for Water-closets, Urinals and Tanks~~**

~~{ Table P2701.1 }~~

**~~A112.19.7—2012/CSA B45.10—2012 (R2021) Hydromassage Bathtub Systems~~**

~~{ Table P2701.1 }~~

**~~A112.19.12—2019~~**

**~~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 (R2018) Six-Liter Water Closets Equipped with Dual Flushing Device~~**

~~{ P2712.1 }~~

**~~A112.19.15—2012 (R2017) Bathtub/Whirlpool Bathtubs with Pressure-sealed Doors~~**

~~{ Table P2701.1 }, { P2713.2 }~~

**~~A112.36.2M—1991 (R2017) Cleanouts~~**

~~{ P3005.2.10.2 }~~

**~~ASME A112.4.2—2020/CSA B45.16—20 Water-closet Personal Hygiene Devices~~**

~~{ P2722.5 }~~

**~~ASSE 1002—2020/ASME A112.1002—2020/CSA B125.12—20 Anti-Siphon Fill Valves~~**

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

**~~ASSE 1016—2020/ASME 112.1016—2020/CSA B125.16—2020~~**

**~~Performance Requirements for Automatic Compensating Valves for Individual Showers and Tub/Shower~~**

**~~Combinations~~**

~~{ Table P2701.1 }, { P2708.4 }, { P2722.2 }~~

**~~ASSE 1070—2020/ASME A112.1070—2020 Performance Requirements for Water-temperature-limiting Devices~~**

~~{ P2713.3 }, { P2721.2 }~~

**~~B1.20.1—2019 Pipe Threads, General-purpose (Inch)~~**

~~{ G2414.9 }, { P3003.3.3 }, { P3003.6.4 }, { P3003.7.1 }, { P3003.9.3 }~~

**~~B16.3—2021 Malleable-iron-threaded Fittings, 150 and 300~~**

~~{ Table P2906.6 }~~

**~~B16.4—2021 Gray-iron-threaded Fittings~~**

~~{ Table P2906.6 }, { Table P3002.3 }~~

**~~B16.9—2018 Factory-made, Wrought-steel Buttwelding Fittings~~**

~~{ Table P2906.6 }~~

**~~B16.11—2021 Forged Fittings, Socket-welding and Threaded~~**

~~{ Table P2906.6 }~~

**~~B16.12—2009 (R2019) Cast-iron-threaded Drainage Fittings~~**

~~{ Table P3002.3 }~~

**~~B16.15—2018 Cast-Alloy-threaded Fittings: Classes 125 and 250~~**

~~{ Table P2906.6 }, { Table P3002.3 }~~

**~~B16.18—2018 Cast-copper-alloy Solder Joint Pressure Fittings~~**

~~{ Table P2906.6 }, { Table P3002.3 }~~

**~~B16.22—2018 Wrought-copper and Copper-alloy Solder Joint Pressure Fittings~~**

~~{ Table P2906.6 }, { Table P3002.3 }~~

**~~B16.23—2021 Cast-copper-alloy Solder Joint Drainage Fittings (DWV)~~**

~~{ Table P3002.3 }~~

**~~B16.26—2018 Cast-copper-alloy Fittings for Flared Copper Tubes~~**

~~{ Table P2906.6 }, { Table P3002.3 }~~

**~~B16.28—1994 Wrought-steel Buttwelding Short Radius Elbows and Returns~~**

~~{ Table P2906.6 }~~

**~~B16.29—2017 Wrought-copper and Wrought-copper-alloy Solder Joint Drainage Fittings (DWV)~~**

~~{ Table P3002.3~~

**~~B16.33—2012 (R2017)~~**

**~~Manually Operated Metallic Gas Valves for Use in Gas Piping Systems up to 125 psig (Sizes ½ through 2)~~**

~~{ Table G2420.1.1 }~~

**~~B16.34—2020 Valves—Flanged, Threaded and Welding End~~**

~~{ Table P2903.9.4 }~~

**~~B16.44—2012 (R2017) Manually Operated Metallic Gas Valves for Use in Above-ground Piping Systems up to 5 psi~~**

~~{ Table G2420.1.1 }~~

**~~B16.51—2018 Copper and Copper Alloy Press-Connect Pressure Fittings~~**

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

**~~B36.10M—2018 Welded and Seamless Wrought-steel Pipe~~**

~~{ G2414.4.2 }~~

**~~BPVC—2019 ASME Boiler and Pressure Vessel Code (Sections I, II, IV, V, VI and VIII)~~**

~~{ M2001.1.1 }, { G2452.1 }~~

**~~CSD-1—2021 Controls and Safety Devices for Automatically Fired Boilers~~**

~~{ M2001.1.1 }, { G2452.1 }~~

**~~ASSE~~**

**ASTM** ASTM International

100 Barr Harbor Drive, P.O. Box C700

West Conshohocken, PA 19428

**A53/A53M—2018 Specification for Pipe, Steel, Black and Hot-dipped, Zinc-coated Welded and Seamless**

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

**~~A74—2017 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—2018 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—2010(2018) Specification for Copper Brazed Steel Tubing~~**

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

**~~A268/A268M—2010(16) Standard Specification for Seamless and Welded Ferritic and Martensitic Stainless Steel Tubing for General Service~~**

~~{ G2414.5.2 }~~

**~~A269/A269M—2015A Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service~~**

~~{ G2414.5.2 }~~

**~~A312—2018 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—2017 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), ~~M1601.1.1~~

**~~A778M—2016 Specification for Welded Unannealed Austenitic Stainless Steel Tubular Products~~**

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

**~~A888—2018 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 P3002.1(1) }, { Table M2101.1 }, { Table P2906.4 }, { Table P2906.5 }~~

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

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

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

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

**~~B88—2016 Specification for Seamless Copper Water Tube~~**

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

**~~B135M—2017 Specification for Seamless Brass Tube~~**

~~{ Table M2101.1 }~~

**~~B251/B251M—2017 Specification for General Requirements for Wrought Seamless Copper and Copper-alloy Tube~~**

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

**~~B280—13: Standard Specification for Seamless Copper Tube for Air-Conditioning and Refrigeration Field Service~~**

~~G2414.4.3~~

**~~B302—2017 Specification for Threadless Copper Pipe, Standard Sizes~~**

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

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

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

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

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

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

~~{ Table P2906.4 }, { Table P2906.5 }~~

**~~B813—2016 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—2016 Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings~~**

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

**~~C4—2004(2018) 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—2018A Specification for Reinforced Concrete Culvert, Storm Drain and Sewer Pipe~~**

~~{ Table P3002.2 }~~

**C315—2007(2016): Specification for Clay Flue Liners and Chimney Pots**

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

**~~C411—2017 Test Method for Hot-surface Performance of High-temperature Thermal Insulation~~**

~~{ M1601.3 }~~

**~~C425—2004(2018) Specification for Compression Joints for Vitrified Clay Pipe and Fittings~~**

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

**~~C443—2012(2017) 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—2018 Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength and Perforated~~**

~~{ Table P3002.2 }, { Table P3002.3 }, { Table P3302.1 }~~

**~~C1277—2018 Specification for Shielded Couplings Joining Hubless Cast Iron Soil Pipe and Fittings~~**

~~{ P3003.4.3 }~~

**~~C1173—2018: Specification for Flexible Transition Couplings for Underground Piping Systems~~**

~~P3003.3.1, P3003.5, P3003.9.1, P3003.10, P3003.12.2, P3003.13~~

**~~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—2017 Specification for Thermoplastic Elastomeric (TPE) Gasket Materials for Drain, Waste and Vent (DWV), Sewer, Sanitary and Storm Plumbing Systems~~**

~~{ P3003.13 }~~

**~~C1460—2017 Specification for Shielded Transition Couplings for Use with Dissimilar DWV Pipe and Fittings Above Ground~~**

~~{ P3003.13 }~~

**~~C1461—2008(2017) 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—2018 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—2016 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—15E1 Specification for Poly (Vinyl Chloride)~~**

~~{ Table P2906.4 }~~

**~~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—2004(2016) 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 }~~

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

~~{ Table P2906.4 }~~

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

**~~D2412—2011(2018) 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—2017 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—2018A Specification for Gas Pressure Pipe, Tubing and Fittings~~**

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

**~~D2564—2012(2018) 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—2007(2015) Standard Practice for Heat Fusion-joining of Polyolefin Pipe Fittings~~**

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

**~~D2661—14E1 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 }~~

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

~~{ Table P2906.4 }~~

**~~D2680— 01(2014) Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) and Poly(Vinyl Chloride) (PVC) Composite Sewer Piping~~**

~~{ Table P3002.2 }~~

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

~~{ Table M2105.5 }, { M2105.11.1 }, { P2906.20.2 }, { P3002.3 }, { P3010.5 }~~

**~~D2729—2017 Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings~~** ~~{ P3009.11 }, { Table P3302.1 }~~

**~~D2737—2012A Specification for Polyethylene (PE) Plastic Tubing~~**

~~{ Table P2906.4 }~~

**~~D2751—05 Specification for Acrylonitrile-butadiene-styrene (ABS) Sewer Pipe and Fittings~~**

~~{ Table P3002.2 }, { Table P3002.3 }~~

**~~D2846/D2846M—2017BE1 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 }~~

**~~D2855—2015 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 }~~

**~~D3034—2016 Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings~~**

~~{ Table P3002.2 }, { Table P3002.3 }~~

**~~D3035—15 Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based On Controlled Outside Diameter~~**

~~{ Table M2105.4 }~~

**~~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—2016 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 }, { P2906.20.2 }~~

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

~~{ Table M2101.1 }~~

**~~D3311—2017 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—2017 Specification for Chlorinated Polyethylene (CPE) Sheeting for Concealed Water Containment Membrane~~**

~~{ P2709.2 }, { P2709.2.2 }~~

**~~D4551—2017 Specification for Poly (Vinyl Chloride) (PVC) Plastic Flexible Concealed Water-containment Membrane~~**

~~{ P2709.2 }, { P2709.2.1 }~~

**E84—2018B: 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—2016: Test Method for Water Vapor Transmission of Materials**

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

**~~E283—2004(2012) Test Method for Determining the Rate of Air Leakage through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences across the Specimen~~**

~~{ N1102.4.5 }, { R202 }~~

**~~E779—2010(2018) Standard Test Method for Determining Air Leakage Rate by Fan Pressurization~~**

~~{ N1102.4.1.2 }~~

**~~E1509—2012(2017) Standard Specification for Room Heaters, Pellet Fuel-burning Type~~**

~~{ M1410.1 }~~

**E1554/E1554 M—13(2018): Standard Test Methods for Determining Air Leakage of Air Distribution Systems by Fan Pressurization**

N1103.3.5

**~~E1827—2011(2017) Standard Test Methods for Determining Airtightness of Building Using an Orifice Blower Door~~**

~~{ N1102.4.1.2 }~~

**~~E2231—2018 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 }~~

**~~F409—2017 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—2017 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 }~~

**~~F442/F442M—13E1 Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)~~**

~~{ Table P2906.4 }, { Table P2906.5 }~~

**~~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—2012E2 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 }~~

**~~F656—2015 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 P3002.1(2) }, { Table P3002.2 }, { P3010.4 }~~

**~~F876—2017 Specification for Cross-linked Polyethylene (PEX) Tubing~~**

~~{ Table M2101.1 }, { Table P2906.4 }, { Table P2906.5 }~~

**~~F877—2018A Specification for Cross-linked Polyethylene (PEX) Plastic Hot- and Cold-water Distribution Systems~~**

~~{Table M2101.1 }, { Table P2906.6 }~~

**~~F891—2016 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 }~~

**~~F1055—2016A Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene and Crosslinked Polyethylene Pipe and Tubing~~**

~~{ Table M2105.5 }, { M2105.11.2 }, { P2906.20.2 }~~

**~~F1281—2017 Specification for Cross-linked Polyethylene/Aluminum/Cross-linked~~ Polyethylene (PEX-AL-PEX) Pressure Pipe**

~~{ P2506.12.1 }, { Table M2101.1 }, { Table P2906.4 }, { Table P2906.5 }, { Table P2906.6 }~~

**~~F1282—2017 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 }~~

**~~F1412—2016 Specification for Polyolefin Pipe and Fittings for Corrosive Waste Drainage~~**

~~{ Table P3002.1(2) }, { Table P3002.2 }, { Table P3002.3 }, { P3003.11.1 }~~

**~~F1488—14E1 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—2018 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—2018 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—2018 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—2013(2018) Standard Specification for Factory Assembled Anodeless Risers and Transition Fittings in Polyethylene (PE) and Polyamide 11 (PA 11) Fuel Gas Distribution Systems~~**

**~~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—2001(2011) Multilayer Pipe Type 2, Compression Joints for Hot and Cold Drinking Water Systems~~**

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

**~~F2080—2016 Specification for Cold-expansion Fittings with Metal Compression-sleeves for Cross-linked Polyethylene (PEX) Pipe~~**

~~{ Table P2906.6 }~~

**~~F2098—2015 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—2018 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—2017A Standard for Pressure-rated Polypropylene (PP) Piping Systems~~**

~~{ Table P2906.4 }, { Table P2906.5 }, { Table P2906.6 }, { P2906.11.1 }~~

**~~F2434—14 Standard Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Tubing~~**

~~{ Table P2906.6 }~~

**~~F2623—14 Standard Specification for Polyethylene of Raised Temperature (PE-RT) SDRG Tubing~~**

~~{ Table M2101.1 }~~

**~~F2735—2009(2016) 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—2018 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 }~~

**~~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 }~~

**~~F2945—2018 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 }~~

**~~F3226/F3226M—16 Standard Specification for Metallic Press-Connect Fittings for~~****~~Piping and Tubing Systems~~**

~~{ Table P2906.6 }~~

**~~F3253—2017 Standard Specification for Crosslinked Polyethylene (PEX) Tubing with Oxygen Barrier for Hot- and Cold-Water Hydronic Distribution Systems.~~**

~~{ Table M2101.1 }~~

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**~~A112.18.6—2021/CSA B125.6—2021 Flexible Water Connectors~~**

~~{ P2906.7 }~~

**~~A112.19.5—2017/CSA B45.15—2017 Flush Valves and Spuds for Water-closets, Urinals and Tanks~~**

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**~~A112.19.7—2012/CSA B45.10—2012 (R2021) Hydromassage Bathtub Systems~~**

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**~~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 }~~

**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 }~~

**~~ANSI/CSA/IGSHPA C448 Series—16 Design and Installation of ground source heat pump systems for commercial and residential buildings~~**

~~{ Table M2105.4 }, { Table M2105.5 }~~

**~~ASME A112.3.4—2013/CSA B45.9—18 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—2018/CSA B125.1—2018 Plumbing Supply Fittings~~**

~~{ Table P2701.1 }, { P2708.4 }, { P2708.5 }, { P2722.1 }, { P2722.3 }, { P2902.2 }, { Table P2903.9.4 }~~

**~~ASME A112.18.2—2019/CSA B125.2—2019 Plumbing Waste Fittings~~**

~~{ Table P2701.1 }, { P2702.2 }~~

**~~ASME A112.19.1—2018/CSA B45.2—18 Enameled Cast-iron and Enameled Steel Plumbing Fixtures~~**

~~{ Table P2701.1 }, { P2711.1 }~~

**~~ASME A112.19.2—2018/CSA B45.1—18 Ceramic Plumbing Fixtures~~**

~~{ Table P2701.1 }, { P2705.1 }, { P2711.1 }, { P2712.1 }, { P2712.2 }, { P2712.9 }~~

**~~ASME A112.19.3—2017/CSA B45.4—2017 Stainless Steel Plumbing Fixtures~~**

~~{ Table P2701.1 }, { P2705.1 }, { P2711.1 }, { P2712.1 }~~

**~~ASSE 1002—2020/ASME A112.1002—2020/CSA B125.12—20 Anti-Siphon Fill Valves for water closet tanks~~**

~~{ 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 }~~

**~~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~~**

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**~~B64.1.1—11(R2016) Vacuum Breakers, Atmospheric Type (AVB)~~**

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**~~B64.1.2—11(R2016) Pressure Vacuum Breakers (PVB)~~**

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**~~B64.1.3—11(R2016) Spill Resistant Pressure Vacuum Breakers (SRPVB)~~**

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**~~B64.2—11(R2016) Vacuum Breakers, Hose Connection Type (HCVB)~~**

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**~~B64.2.1—11(R2016) Hose Connection Vacuum Breakers (HCVB) with Manual Draining Feature~~**

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**~~B64.2.1.1—11(2016) Hose Connection Dual Check Vacuum Breakers (HCDVB)~~**

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**~~B64.2.2—11(2016) Vacuum Breakers, Hose Connection Type (HCVB) with Automatic Draining Feature~~**

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**~~B64.3—11(2016) Dual Check Backflow Preventers with Atmospheric Port (DCAP)~~**

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**~~B64.4—11(2016) Backflow Preventers, Reduced Pressure Principle Type (RP)~~**

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**~~B64.4.1—11(2016) Reduced Pressure Principle for Fire Sprinklers (RPF)~~**

~~{ Table P2902.3 }, { P2902.3.5 }~~

**~~B64.5—11(2016) Double Check Backflow Preventers (DCVA)~~**

~~Table P2902.3 }, { P2902.3.6 }~~

**~~B64.5.1—11(2016) Double Check Valve Backflow Preventers, Type for Fire Systems (DCVAF)~~**

~~{ Table P2902.3 }, { P2902.3.6 }~~

**~~B64.6—11(2016) Dual Check Valve Backflow Preventers (DuC)~~**

~~{ Table P2902.3 }, { P2902.3.7 }~~

**~~B64.7—11(2016) Laboratory Faucet Vacuum Breakers (LFVB)~~**

~~{ Table P2902.3 }, { P2902.3.2 }~~

**~~B125.3—18 Plumbing Fittings~~**

~~{ Table P2701.1 }, { P2713.3 }, { P2721.2 }, { Table P2902.3 }, { P2902.4.1 }, { Table P2903.9.4 }~~

**~~B137.1—17 Polyethylene (PE) Pipe, Tubing and Fittings for Cold Water Pressure Services~~**

~~{ Table P2906.4 }, { Table P2906.6 }~~

**~~B137.2—17 Polyvinylchloride PVC Injection-moulded Gasketed Fittings for Pressure Applications~~**

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**~~B137.3—17 Rigid Poly (Vinyl Chloride) (PVC) Pipe for Pressure Applications~~**

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**~~B137.5—17 Cross-linked Polyethylene (PEX) Tubing Systems for Pressure Applications~~**

~~{ Table AG101.1 }, { Table P2906.4 }, { Table P2906.5 }, { Table P2906.6 }~~

**~~B137.6—17 Chlorinated polyvinylchloride CPVC Pipe, Tubing and Fittings For Hot- and Cold-water Distribution Systems~~**

~~{ Table AG101.1 }, { Table P2906.4 }, { Table P2906.5 }, { Table 2906.6 }~~

**~~B137.9—17 Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite~~ ~~Pressure Pipe Systems~~**

~~{ Table M2101.1 }, { Table P2906.4 }~~

**~~B137.10—17 Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene (PE-AL-PE) Composite Pressure Pipe Systems~~**

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**~~B137.11—17 Polypropylene (PP-R) Pipe and Fittings for Pressure Applications~~**

~~{ Table AG101.1 }, { Table P2906.4 }, { Table P2906.5 }, { Table P2906.6 }~~

**~~B137.18—17 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—18 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—18 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—18 Polyolefin and polyvinylidene (PVDF) Laboratory Drainage Systems~~**

~~{ Table P3002.1(1) }, { Table P3002.1(2) }, { Table P3002.2 }, { Table P3002.3 }, { P3003.11.1 }~~

**~~B182.1—18 Plastic Drain and Sewer Pipe and Pipe Fittings~~**

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**~~B182.2—18 PSM Type polyvinylchloride (PVC) Sewer Pipe and Fittings~~**

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**~~B182.4—18 Profile polyvinylchloride (PVC) Sewer Pipe & Fittings~~**

~~{ Table P3002.2 }, { Table P3302.1 }~~

**~~B182.6—18 Profile Polyethylene (PE) Sewer Pipe and Fittings for leak-proof Sewer Applications~~**

~~{ Table P3302.1 }~~

**~~B182.8—18 Profile Polyethylene (PE) Storm Sewer and Drainage Pipe and Fittings~~**

~~{ Table P3302.1 }~~

**~~B356—10(R2015) Water Pressure Reducing Valves for Domestic Water Supply Systems~~**

~~{ P2903.3.1 }~~

**~~B483.1—07(R2017) Drinking Water Treatment Systems~~**

~~{ P2909.1 }, { P2909.2 }~~

**~~B602—16 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 }~~

**~~C22.2 No. 218.1—13(R2017) Spas, Hot Tubs and Associated Equipment~~**

~~{ M2006.1 }~~

**~~C22.2 No. 236—15 Heating and Cooling Equipment~~**

~~{ M2006.1 }~~

**~~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 }~~

**~~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 }~~

**~~CSA B45.5—2017/IAPMO Z124—2017 with Errata dated August 2017 Plastic Plumbing Fixtures~~**

~~{ Table P2701.1 }, { P2711.1 }, { P2711.2 }, { P2712.1 }~~

**~~CSA B805-18/ICC 805-18 Rainwater Harvesting Systems~~**

~~{ P2912.1 }~~

**DASMA** Door & Access Systems Manufacturers Association

International

1300 Sumner Avenue

Cleveland, OH 44115-2851

**~~105—2017 Test Method for Thermal Transmittance and Air Infiltration of Garage Doors and Rolling Doors~~**

~~{ N1101.10.3 }~~

**~~DOTn~~**

**~~HVI~~**

**~~IAPMO~~**

**ICC** International Code Council, Inc.

500 New Jersey Avenue NW

6th Floor

Washington, DC 20001

**~~ANSI/RESNET/ICC 301—2019~~**

**~~Standard for the Calculation and Labeling of the Energy Performance of Low-rise Dwelling and Sleeping Units using the Energy Rating Index~~**

~~{ N1106.3 }~~

**~~ANSI/RESNET/ICC 380—2019~~**

**~~Standard for Testing Airtightness of Building, Dwelling Unit and Sleeping Unit Enclosures; Airtightness of Heating and Cooling Air Distribution Systems and Airflow of Mechanical Ventilation Systems~~**

~~{ N1102.4.1.2 }~~

**IBC—21 International Building Code ®**

{ R320.1.1 }, { R101.2 }, { R202 }, { R301.1.1 }, { R301.1.3 }, { R301.2.1.1 }, { R301.2.2.1.1 }, { R301.2.2.1.2 }, { R301.3 }, { Table R302.1(1) }, { Table R302.1(2) }, { R302.2.1 }, { R302.2.2 }, { R302.3 }, { R308.5 }, { R320.1 }, { 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—2020 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—2020 Solar Thermal Collector Standard~~**

~~{ M2301.3.1 }~~

**~~IECC—06 International Energy Conservation Code ®~~**

~~{ N1101.6 }~~

**~~IECC—21 International Energy Conservation Code ®~~**

~~{ N1101.1 }, { N1101.13.1 }, { N1103.8 }, { Table N1105.5.2(1) }~~

**IFC—21: International Fire Code®**

R102.7, R324.2, ~~M2201.7, G2402.3, G2412.2~~

**~~IFGC—21 International Fuel Gas Code ®~~**

~~{ G2401.1 }, { G2402.3 }, { G2423.1 }~~

**~~IMC—21 International Mechanical Code ®~~**

~~{ G2402.3 }~~

**~~IPC—21 International Plumbing Code ®~~**

~~{ Table R301.2(1) }, { R903.4.1 }, { G2402.3 }, { P2601.1 }~~

**~~IPMC—21 International Property Maintenance Code ®~~**

~~{ R102.7 }~~

**~~IPSDC—21 International Private Sewage Disposal Code ®~~**

~~{ R322.1.7 }~~

**~~IRC—21 International Residential Code ®~~**

~~{ Table N1106.4 }~~

**~~ISPSC—21 International Swimming Pool and Spa Code ®~~**

~~{ R326.1 }~~

**~~IEEE~~**

**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~~**

**~~NAIMA~~**

**~~NEMA~~**

**NFPA** National Fire Protection Association

1 Batterymarch Park

Quincy, MA 02169-7471

**13D—19: 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—20 Standard for the Installation of Oil-burning Equipment~~**

~~{ M1701.1 }, { M1801.3.1 }, { M1805.3 }, { M2201.2 }~~

**~~58—20 Liquefied Petroleum Gas Code~~**

~~{ G2412.2 }, { G2414.6.2 }~~

**~~70—20 National Electrical Code~~**

~~{ E3401.1 }, { E3401.2 }, { E4301.1 }, { Table E4303.2 }, { E4304.3 }, { E4304.4 }, { R107.3 }, { R324.3 }, { R327.2 }, { R327.4 }~~

**72—~~19~~ 22: National Fire Alarm and Signaling Code**

R314.1, R314.7.1, R315.6, R315.7.2

**~~85—19 Boiler and Combustion Systems Hazards Code~~**

~~{ G2452.1 }~~

**~~211—19 Standard for Chimneys, Fireplaces, Vents and Solid Fuel Burning Appliances~~**

~~{ G2427.5.5.1 }, { R1002.5 }~~

**~~853—20 Standard on the Installation of Stationary Fuel Cell Power Systems~~**

~~{ M1903.1 }~~

**~~NFRC~~**

**~~NGWA~~**

**~~NSF~~**

**~~SMACNA~~**

**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 }~~

**~~58—2018 Steel Underground Tanks for Flammable and Combustible Liquids~~**

~~{ 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 March 2017**

R202, R1005.3, ~~G2430.1~~

**127—2011: Factory-built Fireplaces—with revisions through July 2016**

~~N1102.4.2~~, R1001.11, R1004.1, R1004.4, R1004.5, R1005.4, ~~N1102.2.4, G2445.7~~

**~~174—2004 Household Electric Storage Tank Water Heaters—with revisions through December 2016~~**

~~{ M2005.1 }~~

**~~180—2012 Liquid-level Indicating Gauges for Oil Burner Fuels and Other Combustible Liquids with revisions through May 2017~~**

~~{ M2201.5 }~~

**~~181—2005 Factory-made Air Ducts and Air Connectors—with revisions through April 2017~~**

~~{ M1601.1.1 }, { M1601.4.1 }~~

**~~181A—2013 Closure Systems for Use with Rigid Air Ducts and Air Connectors—with revisions through March 2017~~**

~~{ M1601.2 }, { M1601.4.1 }~~

**~~181B—2013 Closure Systems for Use with Flexible Air Ducts and Air Connectors—with revisions through March 2017~~**

~~{ M1601.4.1 }~~

**~~343—2017 Pumps for Oil-burning Appliances~~**

~~{ M2204.1 }~~

**~~378—06 Draft Equipment—with revisions through September 2013~~**

~~{ M1804.2.6 }, { G2427.3.3 }~~

**~~441—16 Gas Vents—with revisions through July 2016~~**

~~{ G2426.1 }, { G2427.6.1 }~~

**~~467—13: Grounding and Bonding Equipment~~**

~~G2411.2.5~~

**~~507—2017 Electric Fans—with revisions through August 2018~~**

~~{ M1503.2 }~~

**~~508—2018 Industrial Control Equipment~~**

~~{ M1411.3.1 }~~

**~~515—11: Electrical Resistance Heat Tracing for Commercial and Industrial Applications Including Revisions through July 2015~~**

~~N1103.5.1.2~~

**~~536—2014 Flexible Metallic Hose~~**

~~{ M2202.3 }~~

**641—2010: Type L, Low-temperature Venting Systems—with revisions through April 2018**

R202, R1003.11.5, ~~M1804.2.4, G2426.1, G2427.6.1~~

**~~651—2011 Schedule 40, Type EB and A Rigid PVC Conduit and Fittings—with revisions through June 2016~~**

~~{ G2414.6.3 }~~

**~~705—2017 Power Ventilators—with revisions through October 2018~~**

~~{ M1502.4.4 }~~

**723—2018: Standard for Test 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~~

**~~726—95 Oil-fired Boiler Assemblies—with revisions through October 2013~~**

~~{ M2001.1.1 }, { M2006.1 }~~

**~~727—2018 Oil-fired Central Furnaces~~**

~~{ M1402.1 }~~

**~~729—2003 Oil-fired Floor Furnaces~~**

~~{ M1408.1 }~~

**~~730—03 Oil-fired Wall Furnaces—with revisions through November 2016~~**

~~{ M1409.1 }~~

**~~732—2018 Oil-fired Storage Tank Water Heaters—with revisions through August 2018~~**

~~{ M2005.1 }~~

**~~737—2011 Fireplaces Stoves~~**

~~{ M1414.1 }, { M1901.2 }~~

**~~795—2016 Commercial-industrial Gas Heating Equipment~~**

~~{ G2442.1 }, { G2452.1 }~~

**~~834—2004 Heating, Water Supply and Power Boilers—Electric—with revisions through September 2018~~**

~~{ M2001.1.1 }~~

**~~842—2015 Valves for Flammable Fluids—with revisions through May 2015~~**

~~{ M2204.2 }~~

**~~858—2014 Household Electric Ranges—with revisions through June 2018~~**

~~{ M1503.2 }, { M1901.2 }~~

**~~875—09 Electric Dry-bath Heaters—with revisions through September 2017~~**

~~{ M1902.2 }~~

**~~896—1993 Oil-burning Stoves—with revisions through November 2016~~**

~~{ M1410.1 }~~

**~~923—2013 Microwave Cooking Appliances—with revisions through July 2017~~**

~~{ M1503.2 }, { M1504.1 }, { M1901.2 }~~

**~~1026—2012 Electric Household Cooking and Food Serving Appliances—with revisions through July 2018~~**

~~{ M1901.2 }~~

**~~1042—2009 Electric Baseboard Heating Equipment—with revisions through December 2016~~**

~~{ M1405.1 }~~

**~~1261—2016 Electric Water Heaters for Pools and Tubs—with revisions through September 2017~~**

~~{ M2006.1 }~~

**1482—2011: Solid-Fuel-type Room Heaters—with revisions through August 2015**

R1002.2, R1002.5, ~~M1410.1~~

**~~1563—2009 Electric Spas, Equipment Assemblies, and Associated Equipment—with revisions through October 2017~~**

~~{ M2006.1 }~~

**1618—2015: Wall Protectors, Floor Protectors, and Hearth Extensions—with revisions through January 2018**

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~~**

~~{ G2426.1 }, { G2427.4.1 }, { G2427.4.1.1 }, { G2427.4.2 }~~

**1777—07: Chimney Liners—with revisions through April 2014**

R1003.11.1, R1003.18, ~~M1801.3.4, G2425.12, G2425.15.4, G2427.5.1, G2427.5.2~~

**~~1995—2015 Heating and Cooling Equipment—with revisions through August 2018~~**

~~{ M1402.1 }, { M1403.1 }, { M1407.1 }, { M1412.1 }, { M1413.1 }, { M2006.1 }~~

**~~1996—2009 Electric Duct Heaters—with revisions through July 2016~~**

~~{ M1402.1 }, { M1407.1 }~~

**~~2158A—2013 Outline of Investigation for Clothes Dryer Transition Duct—with revisions through April 2017~~**

~~{ M1502.4.3 }, { G2439.7.3 }~~

**~~2523—2009 Standard for Solid Fuel-fired Hydronic Heating Appliances, Water Heaters and Boilers—with revisions through March 2018~~**

~~{ M2001.1.1 }, { M2005.1 }~~

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

~~{ M1402.1 }, { M1403.1 }, { M1412.1 }, { M1413.1 }, { M2006.1 }~~

**~~US-FTC~~**

**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~~ **Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 23: HCD proposes to NOT adopt Appendix AA from the 2021 IRC. HCD proposes Appendix AA not be printed in the 2022 CRC.

**APPENDIX AA  
SIZING AND CAPACITIES OF GAS PIPING**

**Notation:**

**Authority:** 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(s):** 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.

### Item 24: HCD proposes to NOT adopt Appendix AB from the 2021 IRC. HCD proposes Appendix AB not be printed in the 2022 CRC.

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

**Notation:**

**Authority:** 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(s):** 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.

### Item 25: HCD proposes to NOT adopt Appendix AC from the 2021 IRC. HCD proposes Appendix AC not be printed in the 2022 CRC.

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 26: HCD proposes to NOT adopt Appendix AD from the 2021 International Residential Code. HCD proposes Appendix AD not be printed in the 2022 California Residential Code.

**APPENDIX AD**

**RECOMMENDED PROCEDURE FOR SAFETY INSPECTION OF AN EXISTING APPLIANCE INSTALLATION**

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 27: HCD proposes to NOT adopt Appendix AE from the 2021 IRC. HCD proposes Appendix AE not be printed in the 2022 CRC.

**APPENDIX AE  
MANUFACTURED HOUSING USED AS DWELLINGS**

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 28: HCD proposes to NOT adopt Appendix AF from the 2021 IRC.

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 29: HCD proposes to NOT adopt Appendix AG from the 2021 IRC. HCD proposes Appendix AG not be printed in the 2022 CRC.

**APPENDIX AG  
PIPING STANDARDS FOR VARIOUS APPLICATIONS**

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 30: HCD proposes to adopt Appendix AH from the 2021 IRC into the 2022 CRC with existing amendment.

**APPENDIX AH  
PATIO COVERS**

*The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.* ***(No change to existing California amendment.)***

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 31: HCD proposes to NOT adopt Appendix AI from the 2021 IRC.

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 32: HCD proposes to NOT adopt Appendix AJ from the 2021 International Residential Code.

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 33: HCD proposes to NOT adopt Appendix AK from the 2021 IRC.

**APPENDIX AK  
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.)***

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 34: HCD proposes to NOT adopt Appendix AL from the 2021 IRC.

**APPENDIX AL  
PERMIT FEES**

*The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.* **(No change to existing California amendment.)**

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 35: HCD proposes to NOT adopt Appendix AM from the 2021 IRC.

**APPENDIX AM  
HOME DAY CARE— R-3 OCCUPANCY**

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 36: HCD proposes to NOT adopt Appendix AN from the 2021 IRC. HCD proposes Appendix AN not be printed in the 2022 CRC.

**APPENDIX AN  
VENTING METHODS**

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 37: HCD proposes to NOT adopt Appendix AO from the 2021 IRC.

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 38: HCD proposes to NOT adopt Appendix AP from the 2021 International Residential Code. HCD proposes Appendix AP not be printed in the 2022 California Residential Code.

**APPENDIX AP  
SIZING OF WATER PIPING SYSTEM**

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 39: HCD proposes to adopt Appendix AQ from the 2021 IRC into the 2022 CRC with amendments as follows:

**APPENDIX AQ  
TINY HOUSES**

*The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.* **(No change to existing California amendment.)**

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 40: HCD proposes to NOT adopt Appendix AR from the 2021 IRC.

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 41: HCD proposes to adopt Appendix AS from the 2021 IRC into the 2022 CRC with amendments and repeals as follows:

**APPENDIX AS  
STRAWBALE CONSTRUCTION**

*The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.* **(No change to existing California amendment.)**

(Proposal to add a new Note is withdrawn)

**SECTION AS104  
FINISHES**

**AS104.2 Purpose, and where required.** Strawbale walls shall be finished so as to provide mechanical protection, fire resistance and protection from weather and to restrict the passage of air through the bales, in accordance with this appendix and this code. Vertical strawbale wall surfaces shall receive a coat of plaster not less than 3 /8 inch (10 mm) thick, or greater where required elsewhere in this appendix, or shall fit tightly against a solid wall panel or dense-packed cellulose insulation with a density of not less than 3.5 pounds per cubic foot (56 kg/m3) blown into an adjacent framed wall. The tops of strawbale walls shall receive a coat of plaster not less than 3 /8 inch (10 mm) thick or be tightly covered by gypsum board or a roof-bearing assembly.

**Exception:** Truth windows shall be permitted where a fire-resistance rating is not required. Weather-exposed truth windows shall be fitted with a weather-tight cover. Interior truth windows in Climate Zones 5, 6, 7, 8 and Marine 4 *~~14 and 16~~* shall be fitted with an air-tight cover.

**SECTION AS105  
STRAWBALE WALLS—GENERAL**

**AS105.6.2 Vapor retarders.** Wall finishes shall have an equivalent vapor permeance rating of a Class III vapor retarder on the interior side of exterior strawbale walls in Climate Zones 5, 6, 7, 8 and Marine 4, as defined in Chapter 11*~~14 and 16, as referenced in the California Energy Code~~*. Bales in walls enclosing showers or steam rooms shall be protected on the interior side by a Class I or Class II vapor retarder.

**AS105.6.3 Penetrations in exterior strawbale walls.** Penetrations in exterior strawbale walls shall be sealed with an approved sealant or gasket on the exterior side of the wall in all climate zones, and on the interior side of the wall in Climate Zones5, 6, 7, 8 and Marine 4, as defined in Chapter 11 *~~14 and 16, as referenced in the California Energy Code~~*.

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 42: HCD proposes to NOT adopt Appendix AT from the 2021 IRC.

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 43: HCD proposes to NOT adopt Appendix AU from the 2021 IRC.

**APPENDIX AU****COB CONSTRUCTION (MONOLITHIC ADOBE)**

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 44: HCD proposes to NOT adopt Appendix AV from the 2021 IRC.

**APPENDIX AV****BOARD OF APPEALS**

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 45: HCD proposes to NOT adopt Appendix AW from the 2021 IRC.

**APPENDIX AW****3D-PRINTED BUILDING CONSTRUCTION**

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

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.

### Item 46: HCD proposes to continue to adopt Appendix AX from the 2019 CRC into the 2022 CRC without modifications except for the title.

***APPENDIX AX  
EMERGENCY HOUSING***

***SECTIONS AX101 TO AX110.4*** (No change to existing California amendments.)

**Notation:**

**Authority:** Health and Safety Code Sections 17040, 17920.9, 17921, 17921.6, 17922, 17922.6, 17922.15, 17926, 17927, 17958.12, 18552, 18620, 18691, 18865, 18871.3, 18873, 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

**Reference(s):** Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3, 19890, 19891, 19892 and 19960 through 19997; Business and Professions Code Sections 5537 and 6737.1; and Government Code Sections 8698.4, 12955.1, and 65852.2.