FINAL EXPRESS TERMS
FOR
PROPOSED BUILDING STANDARDS
OF THE
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
REGARDING THE ADOPTION BY REFERENCE OF THE
2014 EDITION OF THE NATIONAL ELECTRICAL CODE WITH PROPOSED AMENDMENTS
INTO THE 2016 CALIFORNIA ELECTRICAL CODE
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 3

(HCD 01/14)

The Department of Housing and Community Development (HCD) proposes to adopt the 2014 edition of the National Electrical Code (NEC) for codification and effectiveness into the 2016 edition of the California Electrical Code (CEC) as presented on the following pages, including any necessary amendments. HCD further proposes to:

- Repeal the 2011 edition of the National Electrical Code;
- Repeal the 2013 edition of the California Electrical Code, which includes amendments to the model code that are no longer necessary;
- Repeal or amend building standards that are not addressed by a model code;
- Relocate or codify existing adopted and necessary amendments to the model code into the format of the model code proposed for adoption, the action of which has no regulatory effect; adopt new necessary amendments to the model code proposed for adoption; and/or
- Adopt new building standards that are not addressed by the model code proposed for adoption.

LEGEND FOR EXPRESS TERMS:

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

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

3. **Existing California amendments with no modifications**: All such existing language shown in *italics*, modified model code language shown in ~~strikeout~~.

4. **Text not being modified:** All language not displayed in full is shown as "…" (i.e., ellipsis).

5. **Repealed text**: All language shown in ~~strikeout~~.

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

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1. HCD proposes to bring forward existing California amendments in Article 89, Sections 89.101, 89.101.1, 89.101.3.2, 89.101.8.1, 89.101.10, 89.108, 89.108.2.1.1, 89.108.2.1.2, 89.108.3.1, 89.108.3.2.1, 89.108.4.3.1, 89.108.7.2, 89.108.7.2.1, 89.108.7.3, 89.108.8, 89.108.8.1, 89.108.10, 89.108.10.1, and 89.108.10.2 from the 2013 California Electrical Code for adoption into the 2016 California Electrical Code with modifications as follows:

CALIFORNIA ARTICLE 89
GENERAL CODE PROVISIONS

SECTION 89.101
GENERAL

89.101.1 Title. *These regulations shall be known as the California Electrical Code, may be cited as such and will be referred to herein as "this code." The California Electrical Code is Part 3 of twelve parts of the official compilation and publication of the adoption, amendment, and repeal of electrical regulations to the California Code of Regulations, Title 24, also referred to as the California Building Standards Code. This part incorporates by adoption the ~~2011~~ 2014 National Electrical Code of the National Fire Protection Association with necessary California amendments.*

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89.101.3.2 State-Regulated Buildings, Structures, and Applications. *The model code, state amendments to the model code, and/or state amendments where there are no relevant model code provisions shall apply to the following buildings, structures, and applications regulated by state agencies and as specified in Sections 89.102 through 89.114, except where modified by local ordinance pursuant to Section 89.101.8. When adopted by a state agency, the provisions of this code shall be enforced by the appropriate enforcing agency, but only to the extent of authority granted to such agency by the state legislature.*

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

1. *State-owned buildings, including buildings constructed by the Trustees of the California State University, and to the extent permitted by California laws, buildings designed and constructed by the Regents of the University of California, and regulated by the Building Standards Commission. See Section 89.102 for additional scope provisions.*
2. *Reserved for Corrections Standards Authority. See Section 89.103 for additional scope provisions.*
3. *Reserved for the Department of Consumer Affairs. See Section 89.104 for additional scope provisions.*
4. *Reserved for the California Energy Commission. See Section 89.105 for additional scope provisions.*
5. *Reserved for the Department of Food and Agriculture. See Section 89.106 for additional scope provisions.*
6. *Organized camps, laboratory animal quarters, public swimming pools, radiation protection, commissaries serving mobile food preparation vehicles and wild animal quarantine facilities regulated by the California Department of Public Health (DPH). See Section 89.107 for additional scope provisions.*
7. *Hotels, motels, lodging houses, ~~apartment 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 toilets or cooking facilities. See Section 89.108.2.1.1 for additional scope provisions.*
8. *Accommodations for persons with disabilities in buildings containing newly constructed covered multifamily dwellings, new common use ~~spaces~~ areas serving existing covered multifamily dwellings, additions to existing buildings where the addition alone meets the definition of "~~COVERED MULTIFAMILY DWELLINGS,"~~ covered multifamily dwellings, and new common-use ~~spaces~~ areas serving new covered multifamily dwellings which are regulated by the Department of Housing and Community Development. See Section 89.108.2.1.2 for additional scope provisions.*
9. *Permanent buildings and permanent accessory buildings or structures constructed within mobilehome parks and special occupancy parks regulated by the Department of Housing and Community Development. See Section 89.108.2.1.3 for additional scope provisions.*
10. *Accommodations for persons with disabilities regulated by the Division of the State Architect. See Section 89.109.1 for additional scope provisions.*

11. *Public elementary and secondary schools, community college buildings, and state-owned or state-leased essential service buildings regulated by the Division of the State Architect. See Section 89.109.2 for additional scope provisions.*

12. *Qualified historical buildings and structures and their associated sites regulated by the State Historical Building Safety Board with the Division of the State Architect. See Section 89.109.3 for additional scope provisions.*

13. *General acute care hospitals, acute psychiatric hospitals, skilled nursing and/or intermediate care facilities, clinics licensed by the California Department of Public Health (DPH) and correctional treatment centers regulated by the Office of Statewide Health Planning and Development. See Section 89.110 for additional scope provisions.*

14. *Applications regulated by the Office of the State Fire Marshal include, but are not limited to, the following in accordance with Section 89.111:*

    1. Buildings or structures used or intended for use as an:

        1.1. Asylum, jail, prison.

        1.2. Mental hospital, hospital, home for the elderly, children's nursery, children's home or institution, school or any similar occupancy of any capacity.

        1.3. Theater, dancehall, skating rink, auditorium, assembly hall, meeting hall, nightclub, fair building, or similar place of assemblage where 50 or more persons may gather together in a building, room or structure for the purpose of amusement, entertainment, instruction, deliberation, worship, drinking or dining, awaiting transportation, or education.

        1.4. Small family day care homes, large family day care homes, residential facilities and residential facilities for the elderly and residential care facilities.

        1.5. State institutions or other state-owned or state-occupied buildings.

        1.6. High rise structures.

        1.7. Motion picture production studios.

        1.8. Organized camps.

        1.9. Residential structures.

    2. Tents, awnings or other fabric enclosures used in connection with any occupancy.

    3. Fire alarm devices, equipment and systems in connection with any occupancy.

    4. Hazardous materials, flammable and combustible liquids.

    5. Public school automatic fire detection, alarm, and sprinkler systems.

    6. Wildland-Urban Interface (WUI) fire areas.

15. *Reserved for the State Librarian. See Section 89.112 for additional scope provisions.*

16. *Reserved for the Department of Water Resources. See Section 89.113 for additional scope provisions.*

17. *Reserved for the California State Lands Commission. See Section 89.114 for additional scope provisions.*

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89.101.8.1 Findings and Filings.

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

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

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

3. *Findings prepared by fire protection districts shall be ratified by the local city, county, or city and county and*

filed with the California Department of Housing and Community Development, Division of Codes and Standards, P.O. Box 1407, Sacramento, CA 95812-1407 or at ~~1800 3rd Street, Room 260, Sacramento, CA 95811~~ 2020 W. El Camino Avenue, Suite 250, Sacramento, CA 95833-1829.

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89.101.10 Availability of Codes. *At least one complete copy each of Titles 8, 19, 20, 24, and 25 with all revisions shall be maintained in the office of the building official responsible for the administration and enforcement of this code. Each state department concerned and each city, county or city and county shall have an up-to-date copy of the code available for public inspection. See Health and Safety Code Section 18942 ~~(d)~~(e)(1) and (2).*

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SECTION 89.108
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

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89.108.2.1.1 Housing Construction. *Application - Hotels, motels, lodging houses, ~~apartment 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, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.*

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

89.108.2.1.2 Housing Accessibility. *Application – Covered multifamily dwellings as defined in Chapter ~~11A~~ 2 of the California Code of Regulations, Title 24, Part 2, also known as the California Building Code ~~(CBC)~~ including, but not limited to, lodging houses, dormitories, timeshares, condominiums, shelters for homeless persons, congregate residences, ~~apartment houses~~ 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~~," persons with disabilities, as defined in ~~CBC~~ Chapter ~~11A~~ 2 of the California Building Code. The application of such provisions shall be in conjunction with other requirements of this code and apply only to newly-constructed ~~"COVERED MULTIFAMILY DWELLINGS"~~ covered multifamily dwellings as defined in ~~CBC~~ Chapter ~~11A~~ 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"~~ covered multifamily dwellings as defined in ~~CBC~~ Chapter ~~11A~~ 2 of the California Building Code.

(2) New ~~"COMMON USE AREAS"~~ common use areas as defined in ~~CBC~~ Chapter ~~11A~~ 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"~~ covered multifamily dwellings as defined in ~~CBC~~ Chapter ~~11A~~ 2 of the California Building Code.

(4) Common use areas serving 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 ~~CBC~~, the 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 ~~which is publicly funded~~ as defined in Chapter 2 of the ~~CBC~~ California Building Code are subject to the Division of the State Architect (DSA-AC) and are referenced in Section ~~109.1~~ 1.9.1.

Newly constructed covered multifamily dwellings, which can also be defined as public housing, shall be subject to the requirements of Chapter 11A and Chapter 11B.

***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, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18944.11, and 19990; and Government Code Section 12955.1.*

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

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

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

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

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***89.108.3.2.1 State Housing Law.** Refer to the State Housing Law, California Health and Safety Code, Division 13, Part 1.5, commencing with Section 17910 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1, commencing with Section 1, for the erection, construction, reconstruction, movement, enlargement, conversion, alteration, repair, removal, demolition or arrangement of ~~apartment houses~~ apartments, condominiums, hotels, motels, lodging houses and dwellings, including accessory buildings, facilities, and uses thereto.*

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***89.108.4.3.1 Retention of Plans.** The building department of every city, county or city and county shall maintain an official copy, microfilm, or electronic or other type of photographic copy of the plans of every building, during the life of the building, for which the department issued a building permit.*

Exceptions:

1. *Single or multiple dwellings not more than two stories and basement in height.*
2. *Garages and other structures appurtenant to buildings listed in Exception (1).*
3. *Farm or ranch buildings appurtenant to buildings listed in Exception (1).*
4. *Any one-story building where the span between bearing walls does not exceed 25 feet (7620 mm), except a steel frame or concrete building.*

All plans for common interest developments as defined in Section ~~1351~~ 4100 of the California Civil Code shall be retained. For additional information regarding plan retention and reproduction of plans by an enforcing agency, see Health and Safety Code Sections 19850 through 19852.

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***89.108.7.2 Local Building Departments.** The building department of any city, county or city and county may approve alternates for use in the erection, construction, reconstruction, movement, enlargement, conversion,*

alteration, repair, removal, demolition or arrangement of ~~an apartment house~~ apartments, condominiums, hotels, motels, lodging houses, dwellings, or ~~an~~ accessory structures, except for the following:

1. *Structures located in mobilehome parks as defined in California Health and Safety Code Section 18214.*
2. *Structures located in special occupancy parks as defined in California Health and Safety Code Section 18862.43.*
3. *Factory-built housing as defined in California Health and Safety Code Section 19971.*

89.108.7.2.1 Approval of Alternates. *The consideration and approval of alternates by a local building department shall comply with the following procedures and limitations:*

1. *The approval shall be granted on a case-by-case basis.*
2. *Evidence shall be submitted to substantiate claims that the proposed alternate, in performance, safety, and protection of life and health, conforms to, or is at least equivalent to, the standards contained in this code and other rules and regulations promulgated by the Department of Housing and Community Development.*
3. *The local building department may require tests performed by an approved testing agency at the expense of the owner or owner's agent as proof of compliance.*
4. *If the proposed alternate is related to accessibility in covered multifamily dwellings or in facilities serving ~~"COVERED MULTIFAMILY DWELLINGS"~~ covered multifamily dwellings as defined in ~~CBC~~ Chapter ~~11A~~ 2, of the California Building Code, the proposed alternate must also meet the threshold set for ~~"EQUIVALENT FACILITATION"~~ equivalent facilitation as defined in ~~CBC~~ Chapter ~~11A~~ 2 of the California Building Code.*

   For additional information regarding approval of alternates by a local building department pursuant to the State Housing Law, see California Health and Safety Code Section 17951(e) and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1.

89.108.7.3 Department of Housing and Community Development. *The Department of Housing and Community Development may approve alternates for use in the erection, construction, reconstruction, movement, enlargement, conversion, alteration, repair, removal or demolition of ~~an apartment house~~ apartments, condominiums, hotels, motels, lodging houses, dwellings, or an accessory thereto. The consideration and approval of alternates shall comply with the following:*

1. *The department may require tests at the expense of the owner or owner's agent to substantiate compliance with the California Building Standards Code.*
2. *The approved alternate shall, for its intended purpose, be at least equivalent in performance and safety to the materials, designs, tests, or methods of construction prescribed by this code.*

89.108.8 APPEALS BOARD

89.108.8.1 General. *Every city, county, or city and county shall establish a process to hear and decide appeals of orders, decisions, and determinations made by the enforcing agency relative to the application and interpretation of this code and other regulations governing construction, use, maintenance and change of occupancy. The governing body of any city, county, or city and county may establish a local appeals board and a housing appeals board to serve this purpose. Members of the appeals board(s) shall not be employees of the enforcing agency and shall be knowledgeable in the applicable building codes, regulations and ordinances as determined by the governing body of the city, county, or city and county.*

Where no such appeals boards or agencies have been established, the governing body of the city, county, or city and county shall serve as the local appeals board or housing appeals board as specified in California Health and Safety Code Sections 17920.5 and 17920.6.

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89.108.10 OTHER BUILDING REGULATIONS

~~***89.108.10.1 Existing Structures****. Subject to the requirements of California Health and Safety Code Sections 17912, 17920.3, 17922, 17922.3, 17958.8 and 17958.9, the provisions contained in Chapter 34 of the CBC relating to existing structures shall only apply as identified in the Matrix Adoption Table under the authority of the Department of Housing and Community Development as listed in Sections 89.108.2.1.1 through 89.108.2.1.3 of this code.*~~

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

~~***89.108.10.2 Moved Structures.*** *Subject to the requirements of California Health and Safety Code Sections 17922, 17922.3 and 17958.9, the provisions relating to a moved residential structure shall, after July 1, 1978, permit the retention of existing materials and methods of construction so long as the structure does not become or continue to be a substandard building.*~~

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

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

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

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2. HCD proposes to bring forward existing California amendments in Article 89, Sections 89.101.2, 89.101.3, 89.101.3.1, 89.101.3.3, 89.101.4 – 89.101.7, 89.101.7.1 – 89.101.7.3, 89.101.8, 89.101.9, 89.101.11, 89.101.12, 89.108.1, 89.108.2, 89.108.2.1, 89.108.2.1.3, 89.108.3.2, 89.108.3.2.2 – 89.108.3.2.5, 89.108.4.1, - 89.108.4.3, 89.108.4.4, 89.108.5.1, 89.108.6.1, 89.108.6.2, 89.108.7.1, 89.108.8.2, 89.108.8.3, 89.108.9.1, and 89.108.9.2, from the 2013 California Electrical Code for adoption into the 2016 California Electrical Code without modification as follows:

CALIFORNIA ARTICLE 89
GENERAL CODE PROVISIONS

SECTION 89.101
GENERAL

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89.101.2 Purpose. *The purpose of this code is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, stability, access to persons with disabilities, sanitation, adequate lighting and ventilation, and energy conservation; safety to life and property from fire and other hazards attributed to the built environment; and to provide safety to fire fighters and emergency responders during emergency operations.*

89.101.3 Scope. *The provisions of this code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such building or structures throughout the State of California.*

89.101.3.1 Nonstate-Regulated Buildings, Structures, and Applications. *Except as modified by local ordinance pursuant to Section 89.101.8, the building standards in the California Code of Regulations, Title 24,*

Parts 2, 2.5, 3, 4, 5, 6, 9, 10 and 11 shall apply to all occupancies and applications not regulated by a state agency.

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89.101.3.3 Exempted from this Code. *This code does not cover:*

(A) *1. Installations in ships, watercraft other than floating dwelling units, railway rolling stock, aircraft, automotive vehicles, commercial coaches, mobilehomes, and recreational vehicles.*

(B) *2. Installations underground in mines, mine shafts and tunnels.*

(C) *3. Installations of railways for generation, transformation, transmission, or distribution of power used exclusively for operation of rolling stock or installations used exclusively for signaling and communication purposes.*

(D) *4. Installation of communication equipment under the exclusive control of communication utilities, located outdoors or in building spaces used exclusively for such installations.*

(E) *5. Installations under the exclusive control of electrical utilities for the purpose of communication, or metering; or for the generation, control, transformation, transmission, and distribution of electrical energy located in buildings used exclusively by utilities for such purposes or located outdoors on property owned or leased by the utility or on public highways, streets, roads, etc., or outdoors by established rights on private property.*

Exception to (D)4 and (E)5: *In places of employment, the following shall apply: installations of conductors, equipment and associated enclosures subject to the jurisdiction of the California Public Utilities Commission, that are owned, operated and maintained by an electric, communications or electric railway utility, but not including conduit, vaults, and other like enclosures containing conductors and equipment of such a utility when located indoors or on premises not used exclusively for utility purposes, but do not apply to the utility's conductors and equipment therein.*

(F) *6. Installations on highways or bridges.*

89.101.4 Annexes. *Provisions contained in the annexes of this code shall not apply unless specifically adopted by a state agency or adopted by a local enforcing agency in compliance with Health and Safety Code Section 18901 et seq. for Building Standards Law, Health and Safety Code Section 17950 for State Housing Law and Health and Safety Code Section 13869.7 for Fire Protection Districts. See Section 89.101.8 of this code.*

89.101.5 Referenced Codes. *The codes, standards and publications adopted and set forth in this code, including other codes, standards and publications referred to therein are, by title and date of publication, hereby adopted as standard reference documents of this code. When this code does not specifically cover any subject related to building design and construction, recognized architectural or engineering practices shall be employed. The National Fire Codes, standards and the Fire Protection Handbook of the National Fire Protection Association are permitted to be used as authoritative guides in determining recognized fire prevention engineering practices.*

89.101.6 Non-Building Standards, Orders and Regulations. *Requirements contained in the National Electrical Code, or in any other referenced standard, code or document, which are not building standards as defined in Health and Safety Code Section 18909 shall not be construed as part of the provisions of this code. For nonbuilding standards, orders, and regulations, see other titles of the California Code of Regulations.*

89.101.7 Order of Precedence and Use.

89.101.7.1 Differences. *In the event of any differences between these building standards and the standard reference documents, the text of these building standards shall govern.*

89.101.7.2 Specific Provisions. *Where a specific provision varies from a general provision, the specific provisions shall apply.*

89.101.7.3 Conflicts. *When the requirements of this code conflict with the requirements of any other part of the California Building Standards Code, Title 24, the most restrictive requirements shall prevail.*

89.101.8 City, County, or City and County Amendments, Additions or Deletions. *The provisions of this code do not limit the authority of city, county, or city and county governments to establish more restrictive and reasonably necessary differences to the provisions contained in this code pursuant to complying with Section 89.101.8.1. The effective date of amendments, additions, or deletions to this code by city, county or city and county filed pursuant to*

Section 89.101.8.1 shall be the date filed. However, in no case shall the amendments, additions or deletions to this code be effective any sooner than the effective date of this code.

Local modifications shall comply with Health and Safety Code Section 18941.5 for Building Standards Law, Health and Safety Code Section 17958 for State Housing Law or Health and Safety Code Section 13869.7 for Fire Protection Districts.

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

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

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

89.101.12 Validity. *If any chapter, article, section, subsection, sentence, clause or phrase of this code is for any reason held to be unconstitutional, contrary to statute, exceeding the authority of the state as stipulated by statutes, or otherwise inoperative, such decision shall not affect the validity of the remaining portion of this code.*

SECTION 89.108
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

89.108.1 Purpose. *The purpose of this code is to establish minimum standards to protect the health, safety, and general welfare of the occupant and the public against hazards that may arise from the use of electricity by governing the design, construction, reconstruction, installation, quality of materials, location, operation, and maintenance or use of electrical equipment, wiring and systems.*

89.108.2 AUTHORITY AND ABBREVIATIONS

89.108.2.1 General. *The Department of Housing and Community Development is authorized by law to promulgate and adopt building standards and regulations for several types of building applications. The applications under the authority of the Department of Housing and Community Development are listed in Sections 89.108.2.1.1 through 89.108.2.1.3.*

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89.108.2.1.3 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*— Local building department or other local agency responsible 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; or the Department of Housing and Community Development.*

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

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

89.108.3 LOCAL ENFORCING AGENCY

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89.108.3.2 Laws, Rules and Regulations. *Other than the building standards contained in this code, and notwithstanding other provisions of law, the statutory authority and location of the laws, rules, and regulations to be enforced by local enforcing agencies are listed by statute in Sections 89.108.3.2.1 through 89.108.3.2.5 below:*

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89.108.3.2.2 Mobilehome Parks Act. *Refer to the Mobilehome Parks Act, California Health and Safety Code, Division 13, Part 2.1, commencing with Section 18200 and California Code of Regulations, Title 25, Division 1, Chapter 2, commencing with Section 1000 for mobilehome park administrative and enforcement authority, permits, plans, fees, violations, inspections and penalties both within and outside mobilehome parks.*

Exception: *Mobilehome parks where the Department of Housing and Community Development is the enforcing agency.*

89.108.3.2.3 Special Occupancy Parks Act. *Refer to the Special Occupancy Parks Act, California Health and Safety Code, Division 13, Part 2.3, commencing with Section 18860 and California Code of Regulations, Title 25, Division 1, Chapter 2.2, commencing with Section 2000 for special occupancy park administrative and enforcement authority, permits, fees, violations, inspections and penalties both within and outside of special occupancy parks.*

Exception: *Special occupancy parks where the Department of Housing and Community Development is the enforcing agency.*

89.108.3.2.4 Employee Housing Act. *Refer to the Employee Housing Act, California Health and Safety Code, Division 13, Part 1, commencing with Section 17000 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 3, commencing with Section 600 for employee housing administrative and enforcement authority, permits, fees, violations, inspections and penalties.*

89.108.3.2.5 Factory-Built Housing Law. *Refer to the Factory-Built Housing Law, California Health and Safety Code, Division 13, Part 6, commencing with Section 19960 and California Code of Regulations, Title 25, Division 1, Chapter 3, Subchapter 1, commencing with Section 3000 for factory-built housing administrative and enforcement authority, permits, fees, violations, inspections and penalties.*

89.108.4 PERMITS, FEES, APPLICATIONS AND INSPECTIONS

89.108.4.1 Permits. *(a) Except as exempted in paragraph (b) of this subsection, a written construction permit shall be obtained from the enforcing agency prior to the erection, construction, reconstruction, installation, movement, or alteration of any electrical system.*

(b) Consistent with the requirements of Section 17960 of the Health and Safety Code, the local enforcing agency shall enforce the requirements of this code, but shall exempt the following activities from the requirement for a permit or inspection.

1. *Listed cord and plug connected temporary decorative lighting.*
2. *Reinstallation of attachment plug receptacles, but not the outlets therefore.*
3. *Repair or replacement of branch circuit overcurrent devices of the required capacity in the same location.*
4. *Installation or maintenance of communications wiring, devices, appliances, apparatus or equipment.*

Exemptions from permit and inspection requirements shall not be deemed to grant authorization for any work to be done in any manner in violation of any other provision of law or this code.

89.108.4.2 Fees*. Subject to other provisions of law, the governing body of any city, county or city and county may prescribe fees to defray the cost of enforcement of rules and regulations promulgated by the Department of Housing and Community Development. The amount of the fees shall not exceed the amount reasonably necessary to administer or process permits, certificates, forms, or other documents, or to defray the costs of enforcement. For additional information, see State Housing Law, Health and Safety Code, Division 13, Part 1.5,*

Section 17951 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1, Article 3, commencing with Section 6.

89.108.4.3 Plan Review and Time Limitations. *Subject to other provisions of law, provisions related to plan checking, prohibition of excessive delays and contracting with or employment of private parties to perform plan checking are set forth in State Housing Law, Health and Safety Code Section 17960.1, and for employee housing, in Health and Safety Code Section 17021.*

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89.108.4.4 Inspections. *Construction or work for which a permit is required shall be subject to inspection by the building official and such construction or work shall remain accessible and exposed for inspection purposes until approved. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or other regulations of the Department of Housing and Community Development.*

89.108.5 RIGHT OF ENTRY FOR ENFORCEMENT

89.108.5.1 General. *Subject to other provisions of law, officers and agents of the enforcing agency may enter and inspect public and private properties to secure compliance with the rules and regulations promulgated by the Department of Housing and Community Development. For limitations and additional information regarding enforcement, see the following:*

1. *For applications subject to State Housing Law as referenced in Section 89.108.3.2.1 of this code, refer to Health and Safety Code, Division 13, Part 1.5, commencing with Section 17910 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1, commencing with Section 1.*
2. *For applications subject to the Mobilehome Parks Act as referenced in Section 89.108.3.2.2 of this code, refer to Health and Safety Code, Division 13, Part 2.1, commencing with Section 18200 and California Code of Regulations, Title 25, Division 1, Chapter 2, commencing with Section 1000.*
3. *For applications subject to the Special Occupancy Parks Act as referenced in Section 89.108.3.2.3 of this code, refer to Health and Safety Code, Division 13, Part 2.3, commencing with Section 18860 and California Code of Regulations, Title 25, Division 1, Chapter 2.2, commencing with Section 2000.*
4. *For applications subject to the Employee Housing Act as referenced in Section 89.108.3.2.4 of this code, refer to Health and Safety Code, Division 13, Part 1, commencing with Section 17000 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 3, commencing with Section 600.*
5. *For applications subject to the Factory-Built Housing Law as referenced in Section 89.108.3.2.5 of this code, refer to Health and Safety Code, Division 13, Part 6, commencing with Section 19960 and California Code of Regulations, Title 25, Division 1, Chapter 3, Subchapter 1, commencing with Section 3000.*

89.108.6 LOCAL MODIFICATION BY ORDINANCE OR REGULATION

89.108.6.1 General. *Subject to other provisions of law, a city, county or city and county may make changes to the provisions adopted by the Department of Housing and Community Development. If any city, county or city and county does not amend, add, or repeal by local ordinances or regulations the provisions published in this code or other regulations promulgated by the Department of Housing and Community Development, those provisions shall be applicable and shall become effective 180 days after publication by the California Building Standards Commission. Amendments, additions, and deletions to this code adopted by a city, county or city and county pursuant to California Health and Safety Code Sections 17958.5, 17958.7 and 18941.5, together with all applicable portions of this code, shall also become effective 180 days after publication of the California Building Standards Code by the California Building Standards Commission.*

89.108.6.2 Findings, Filings, and Rejections of Local Modifications. *Prior to making any modifications or establishing more restrictive building standards, the governing body shall make express findings and filings, as required by California Health and Safety Code Section 17958.7, showing that such modifications are reasonably necessary due to local climatic, geological, or topographical conditions. No modification shall become effective or operative unless the following requirements are met:*

1. *The express findings shall be made available as a public record.*
2. *A copy of the modification and express finding, each document marked to cross-reference the other, shall be filed with the California Building Standards Commission for a city, county or city and county and with the Department of Housing and Community Development for fire protection districts.*

3. The California Building Standards Commission has not rejected the modification or change.

Nothing in this section shall limit the authority of fire protection districts pursuant to California Health and Safety Code Section 13869.7(a).

89.108.7 ALTERNATE MATERIALS, DESIGNS, TESTS AND METHODS OF CONSTRUCTION

89.108.7.1 General. *The provisions of this code as adopted by the Department of Housing and Community Development are not intended to prevent the use of any alternate material, appliance, installation, device, arrangement, design or method of construction not specifically prescribed by this code. Consideration and approval of alternates shall comply with Section 89.108.7.2 for local building departments and Section 89.108.7.3 for the Department of Housing and Community Development.*

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89.108.8 APPEALS BOARD

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89.108.8.2 Definitions. *The following terms shall for the purposes of this section have the meaning shown.*

Housing Appeals Board. *The board or agency of a city, county or city and county which is authorized by the governing body of the city, county or city and county to hear appeals regarding the requirements of the city, county or city and county relating to the use, maintenance and change of occupancy of buildings and structures, including requirements governing alteration, additions, repair, demolition, and moving. In any area in which there is no such board or agency, "Housing Appeals Board" means the local appeals board having jurisdiction over the area.*

Local Appeals Board. *The board or agency of a city, county or city and county which is authorized by the governing body of the city, county or city and county to hear appeals regarding the building requirements of the city, county or city and county. In any area in which there is no such board or agency, "Local Appeals Board" means the governing body of the city, county or city and county having jurisdiction over the area.*

89.108.8.3 Appeals. *Except as otherwise provided by law, any person, firm, or corporation adversely affected by a decision, order, or determination by a city, county or city and county relating to the application of building standards published in the California Building Standards Code, or any other applicable rule or regulation adopted by the Department of Housing and Community Development, or any lawfully enacted ordinance by a city, county or city and county, may appeal the issue for resolution to the local appeals board or housing appeals board as appropriate.*

The local appeals board shall hear appeals relating to new building construction and the housing appeals board shall hear appeals relating to existing buildings.

89.108.9 UNSAFE BUILDINGS OR STRUCTURES

89.108.9.1 Authority to Enforce. *Subject to other provisions of law, the administration, enforcement, actions, proceedings, abatement, violations and penalties for unsafe buildings and structures are contained in the following statutes and regulations:*

1. For applications subject to State Housing Law as referenced in Section 89.108.3.2.1 of this code, refer to Health and Safety Code, Division 13, Part 1.5, commencing with Section 17910 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1, commencing with Section 1.

2. For applications subject to the Mobilehome Parks Act as referenced in Section 89.108.3.2.2 of this code, refer to Health and Safety Code, Division 13, Part 2.1, commencing with Section 18200 and California Code of Regulations, Title 25, Division 1, Chapter 2, commencing with Section 1000.

3. For applications subject to the Special Occupancy Parks Act as referenced in Section 89.108.3.2.3 of this code, refer to Health and Safety Code, Division 13, Part 2.3, commencing with Section 18860 and California Code of Regulations, Title 25, Division 1, Chapter 2.2, commencing with Section 2000.

4. For applications subject to the Employee Housing Act as referenced in Section 89.108.3.2.4 of this code, refer to Health and Safety Code, Division 13, Part 1, commencing with Section 17000 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 3, commencing with Section 600.

5. *For applications subject to the Factory-Built Housing Law as referenced in Section 89.108.3.2.5 of this code, refer to Health and Safety Code, Division 13, Part 6, commencing with Section 19960 and California Code of Regulations, Title 25, Division 1, Chapter 3, Subchapter 1, commencing with Section 3000.*

89.108.9.2 Actions and Proceedings. *Subject to other provisions of law, punishments, penalties and fines for violations of building standards are contained in the following statutes and regulations:*

1. *For applications subject to State Housing Law as referenced in Section 89.108.3.2.1 of this code, refer to Health and Safety Code, Division 13, Part 1.5, commencing with Section 17910 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1, commencing with Section 1.*
2. *For applications subject to the Mobilehome Parks Act as referenced in Section 89.108.3.2.2 of this code, refer to Health and Safety Code, Division 13, Part 2.1, commencing with Section 18200 and California Code of Regulations, Title 25, Division 1, Chapter 2, commencing with Section 1000.*
3. *For applications subject to the Special Occupancy Parks Act as referenced in Section 89.108.3.2.3 of this code, refer to Health and Safety Code, Division 13, Part 2.3, commencing with Section 18860 and California Code of Regulations, Title 25, Division 1, Chapter 2.2, commencing with Section 2000.*
4. *For applications subject to the Employee Housing Act as referenced in Section 89.108.3.2.4 of this code, refer to Health and Safety Code, Division 13, Part 1, commencing with Section 17000 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 3, commencing with Section 600.*
5. *For applications subject to the Factory-Built Housing Law as referenced in Section 89.108.3.2.5 of this code, refer to Health and Safety Code, Division 13, Part 6, commencing with Section 19960 and California Code of Regulations, Title 25, Division 1, Chapter 3, Subchapter 1, commencing with Section 3000.*

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

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

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3. HCD proposes to adopt Article 90 from the 2014 National Electrical Code into the 2016 California Electrical Code without amendment.

ARTICLE 90
Introduction

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

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

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4. HCD proposes to adopt Chapter 1, Articles 100 and 110, from the 2014 National Electrical Code, and to bring forward the existing California amendments from the 2013 California Electrical Code into the 2016 California Electrical Code as follows:

Chapter 1 General

ARTICLE 100
Definitions

Ballasted Solar Photovoltaic System. (BSC, SFM, HCD1 & HCD2) *A roof mounted system composed of solar photovoltaic panels and supporting members that are unattached or partially attached to the roof and must rely on their weight, aerodynamics and friction to counter the effect of wind and seismic forces.*

ARTICLE 110
Requirements for Electrical Installations

SECTION 110.13 MOUNTING AND COOLING OF EQUIPMENT

(A) Mounting. Electrical equipment shall be firmly secured to the surface on which it is mounted. Wooden plugs driven into holes in masonry, concrete, plaster, or similar materials shall not be used.

> ***Exception: (BSC, SFM, HCD1 & HCD2)*** *Roof mounted ballasted solar photovoltaic systems provided that the wiring and interconnections are designed to accommodate for maximum system displacement.*

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

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

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5. HCD proposes to adopt Chapter 2, Articles 200, 210, 215, 220, 225, 230, 240, 250, 280 and 285, from the 2014 National Electrical Code into the 2016 California Electrical Code without amendment.

Chapter 2 Wiring and Protection

ARTICLES 200-285

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

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

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6. HCD proposes to adopt Chapter 3, Articles 300, 310, 312, 314, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 348, 350, 352, 353, 354, 355, 356, 358, 360, 362, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 393, 394, 396, 398 and 399, from the 2014 National Electrical Code, and to bring forward the existing California amendments from the 2013 California Electrical Code into the 2016 California Electrical Code with modification as follows:

Chapter 3 Wiring Methods and Materials

ARTICLE 334
Nonmetallic-Sheathed Cable: Types NM, NMC, and NMS

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334.10 Uses Permitted. Type NM, Type NMC, and Type NMS cables shall be permitted to be used in the following, except as prohibited in 334.12:

(1) One- and two-family dwellings and their attached or detached garages, and their storage buildings.

(2) Multifamily dwellings permitted to be of Types III, IV, and V construction.

(3) Other structures permitted to be of Types III, IV, and V construction. Cables shall be concealed within walls, floors, or ceilings that provide a thermal barrier of material that has at least a 15-minute finish rating as identified in listings of fire-rated assemblies.

Informational Note No. 1: Types of building construction and occupancy classifications are defined in NFPA 220-2012, *Standard on Types of Building Construction*, or the applicable building code, or both.

Informational Note No. 2: See Informative Annex E for determination of building types (NFPA 220, Table 3-1).

(4) Cable trays in structures permitted to be Types III, IV, or V where the cables are identified for the use.

Informational Note: See 310.15(A)(3) for temperature limitation of conductors.

(5) Types I and II construction where installed within raceways permitted to be installed in Types I and II construction.

Note: (HCD 1 and HCD 2) *Types I, II, III, IV, and V construction as referenced in Section 334.10 shall be as defined in ~~Title 24, Part 2,~~ the California Building Code.*

(**A**) **Type NM.** Type NM cable shall be permitted as follows:

(1) For both exposed and concealed work in normally dry locations except as prohibited in 334.10(3)

(2) To be installed or fished in air voids in masonry block or tile walls

(B) **Type NMC.** Type NMC cable shall be permitted as follows:

(1) For both exposed and concealed work in dry, moist, damp, or corrosive locations, except as prohibited by 334.10(3)

(2) In outside and inside walls of masonry block or tile

(3) In a shallow chase in masonry, concrete, or adobe protected against nails or screws by a steel plate at least 1.59 mm (1/16 in.) thick and covered with plaster, adobe, or similar finish

(C) **Type NMS.** Type NMS cable shall be permitted as follows:

(1) For both exposed and concealed work in normally dry locations except as prohibited by 334.10(3)

(2) To be installed or fished in air voids in masonry block or tile walls

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ARTICLE 394
Concealed Knob-and-Tube Wiring

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394.12 Uses Not Permitted. Concealed knob-and-tube wiring shall not be used in the following:

(1) Commercial garages

(2) Theaters and similar locations

(3) Motion picture studios

(4) Hazardous (classified) locations

(5) Hollow spaces of walls, ceilings, and attics where such spaces are insulated by loose, rolled, or foamed-in-place insulating material that envelops the conductors

Exception: (HCD 1) *This article is not intended to prohibit the installation of insulation where knob-and-tube wiring is present, provided the following are complied with:*

(1) The wiring shall be surveyed by an electrical contractor licensed by the State of California. Certification shall be provided by the electrical contractor that the existing wiring is in good condition with no evidence of deterioration or improper over-current protection, and no improper connections or splices. Repairs, alterations, or extensions to the electrical system will require permits and inspections by the authority having jurisdiction for the enforcement of this code.

(2) The certification form shall be filed with the authority having jurisdiction for the enforcement of this code, and a copy furnished to the property owner.

(3) All accessible areas in the building where insulation has been installed around knob-and-tube wiring shall be posted by the insulation contractor with a notice, clearly visible, stating that caution is required when entering these areas. The notice shall be printed in both English and Spanish.

(4) The insulation shall be noncombustible as defined in ~~Title 24, Part 2,~~ the California Building Code.

(5) The insulation shall not have any electrical conductive material as part of or supporting the insulation material.

(6) Nothing in this exception will prohibit the authority having jurisdiction for the enforcement of this code from requiring permits and inspections for the installations of thermal insulation.

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

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

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7. HCD proposes to adopt Chapter 4, Articles 400, 402, 404, 406, 408, 409, 410, 411, 422, 424, 426, 427, 430, 440, 445, 450, 455, 460, 470, 480 and 490, from the 2014 National Electrical Code and to bring forward the existing California amendment from the 2013 California Electrical Code into the 2016 California Electrical Code with modification as follows:

Chapter 4 Equipment for General Use

ARTICLE 450
Transformers and Transformer Vaults (Including Secondary Ties)

450.23 Less-Flammable Liquid-Insulated Transformers.

Transformers insulated with listed less-flammable liquids that have a fire point of not less than 300°C shall be permitted to be installed in accordance with 450.23(A) or 450.23(B).

(A) **Indoor Installations.** Indoor installations shall be permitted in accordance with one of the following:

(1) In Type I or Type II buildings, in areas where all of the following requirements are met:

a. The transformer is rated 35,000 volts or less.

b. No combustible materials are stored.

c. A liquid confinement area is provided.

d. The installation complies with all restrictions provided for in the listing of the liquid.

(2) With an automatic fire extinguishing system and a liquid confinement area, provided the transformer is rated 35,000 volts or less.

(3) In accordance with 450.26

(B) **Outdoor Installations.** Less-flammable liquid-filled transformers shall be permitted to be installed outdoors, attached to, adjacent to, or on the roof of buildings, where installed in accordance with (1) or (2):

(1) For Type I and Type II buildings, the installation shall comply with all restrictions provided for in the listing of the liquid.

Informational Note: Installations adjacent to combustible material, fire escapes, or door and window openings may require additional safeguards such as those listed in 450.27.

(2) In accordance with 450.27.

Informational Note No. 1: As used in this section, *Type I and Type II buildings* refers to Type I and Type II building construction as defined in NFPA 220-2012, *Standard on Types of Building Construction*. Combustible materials refers to those materials not classified as noncombustible or limited-combustible as defined in NFPA 220-2012.

Informational Note No. 2: See definition of *Listed* in Article 100.

Note: (HCD 1 and HCD 2) *Types I and II construction as referenced in Section 450.23 (A)(1) and (B)(1) shall be as defined in ~~Title 24, Part 2,~~ the California Building Code.*

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

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

8. HCD proposes to adopt Chapter 5, Articles 518, 545 and 590, from the 2014 National Electrical Code into the 2016 California Electrical Code without amendment.

Chapter 5 Special Occupancies

ARTICLES 518-590

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

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

9. HCD proposes to NOT adopt Chapter 5, Articles 500, 501, 502, 503, 504, 505, 506, 510, 511, 513, 514, 515, 516, 517, 520, 522, 525, 530, 540, 547, 550, 551, 552, 553 and 555, from the 2014 National Electrical Code.

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

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

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10. HCD proposes to adopt Chapter 6, Articles 600, 620, 625, 626, 646, 680, 682, 690, 692 and 694, from the 2014 National Electrical Code into the 2016 California Electrical Code with amendment as follows:

Chapter 6 Special Equipment

ARTICLES 600, 620, 625, 626, 646, 680, 682, 690, 692, and 694

625.1.1 (HCD 1) Electric Vehicle (EV) Charging for New Construction. *In addition to requirements in this Article, electric vehicle charging shall comply with the California Green Building Standards Code (CALGreen) Chapter 4, Division 4.1.*

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

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

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11. HCD proposes to repeal the California amendments to Chapter 6, Article 625, Section 625.13 "Electrical Vehicle Supply Equipment Connection" and Section 625.14 "Rating" from the 2013 California Electrical Code as follows:

Chapter 6 Special Equipment

ARTICLE 625
Electric Vehicle Charging System

~~**625.13** ***Electric Vehicle Supply Equipment Connection.*** *Electric vehicle supply equipment shall be permitted to be cord- and plug-connected to the premises wiring system in accordance with one of the following:*~~

~~***(A) Connections to 125-Volt, Single-Phase, 15- and 20-Ampere Receptacle Outlets.*** *Electric vehicle supply equipment intended for connection to nonlocking, 2-pole, 3-wire grounding-type receptacle outlets rated at 125 V, single phase, 15 and 20 amperes or from a supply of less than 50 volts dc.*~~

~~***(B) Connections to Other Receptacle Outlets.*** *Electric vehicle supply equipment that is rated 250 V maximum and complying with all of the following:*~~

~~*(1) It is intended for connection to nonlocking, 2-pole, 3-wire and 3-pole, 4-wire, grounding-type receptacle outlets rated not more than 50 amperes.*~~

~~*(2) EVSE is fastened in place to facilitate any of the following:*~~

~~*a. Ready removal for interchange*~~

~~*b. Facilitation of maintenance and repair*~~

~~*c. Repositioning of portable, movable, or EVSE fastened in place*~~

~~*(3) Power-supply cord length for electric vehicle supply equipment fastened in place is limited to 1.8 m (6 ft).*~~

~~*(4) Receptacles are located to avoid physical damage to the flexible cord.*~~

~~*All other electric vehicle supply equipment shall be permanently wired and fastened in place to the supporting surface, a wall, a pole, or other structure. The electric vehicle supply equipment shall have no exposed live parts.*~~

~~**625.14 Rating.** Electric vehicle supply equipment shall have sufficient rating to supply the load served. *Electric* vehicle charging loads shall be considered continuous loads *for the purposes of this article. Where an automatic load management system is used, the maximum electric vehicle supply equipment load on a service and feeder shall be the maximum load permitted by the automatic load management system.*~~

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

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

12. HCD proposes to NOT adopt Chapter 6, Articles 604, 605, 610, 630, 640, 645, 647, 650, 660, 665, 668, 669, 670, 675, 685 and 695, from the 2014 National Electrical Code.

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

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

13. HCD proposes to adopt Chapter 7, Articles 700, 702, 705, 708, 720, 725, 727, 728, 750 and 770, from the 2014 National Electrical Code into the 2016 California Electrical Code without amendment.

Chapter 7 Special Conditions

ARTICLES 700, 702, 705, 708, 720, 725, 727, 728, 750, and 770

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

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

14. HCD proposes to NOT adopt Chapter 7, Articles 701 and 760, from the 2014 National Electrical Code.

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

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

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15. HCD proposes to adopt Chapter 8, Articles 800, 810, 820, 830 and 840, from the 2014 National Electrical Code into the 2016 California Electrical Code without amendment.

Chapter 8 Communications Systems

ARTICLES 800-840

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

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

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16. HCD proposes to adopt Chapter 9, Tables 1, 2, 4, 5, 5A, 8, 9, 10, 11(A), 11(B), 12(A) and 12(B), from the 2014 National Electrical Code into the 2016 California Electrical Code without amendment.

Chapter 9 Tables

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

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

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17. HCD proposes to NOT adopt Annexes A, B, C, D, E, F, G, H, I and J from the 2014 National Electrical Code.

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

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