

**EXPRESS TERMS FOR PROPOSED BUILDING STANDARDS
OF THE
CALIFORNIA BUILDING STANDARDS COMMISSION
(CBSC) or (BSC)
REGARDING THE ADOPTION BY REFERENCE
OF THE
2011 EDITION OF THE NATIONAL ELECTRICAL CODE (NEC)
WITH PROPOSED AMENDMENTS INTO
THE 2013 CALIFORNIA ELECTRICAL CODE (CEC)
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 3**

LEGEND FOR EXPRESS TERMS

1. Existing California amendments or code language being modified, as well as selected terms set forth in Chapter 2, Definitions are in italics when they appear in the model code text, independent of state amended definitions: All such language appears in *italics*, modified language is underlined.
2. New California amendments: All such language appears underlined and in italics.
Repealed text: All such language appears in ~~strikeout~~.

LEGEND FOR EXPRESS TERMS:

1. **Existing California amendments or code language being modified:** *All language will appear in italics; modified language is underlined or shown in ~~strikeout~~.*
2. **NEC language with new California amendments:** NEC language shown in normal Arial 9 point; California amendments to NEC text shown underlined and in italics.
3. **Repealed text:** All language appears in ~~strikeout~~.
4. **Notation:** Authority and Reference citations are provided at the end of each chapter.

The Building Standards Commission (BSC) proposes to adopt the 2011 edition of the National Electrical Code (NEC) for codification and effectiveness into the 2013 edition of the California Electrical Code (CEC) as presented on the following pages, including any necessary amendments. BSC further proposes to:

- Repeal the 2008 edition of the NEC and the 2010 CEC;
- Repeal 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

PART I: REPEALS, ADOPTIONS AND NEW AMENDMENTS

*CALIFORNIA ARTICLE 89
GENERAL CODE PROVISIONS*

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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 ~~as referenced in the Matrix Adoption Tables and~~ as specified in Article 89.101 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.

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89.101.11 Format. This part fundamentally adopts the International Building Code by reference on a chapter-by-chapter basis. ~~Such adoption is reflected in the Matrix Adoption Table of each chapter of this part. When the Matrix Adoption Tables make no reference to a specific chapter of the International Building Code such chapter of the International Building Code is not adopted as a portion of this code. When a specific chapter of the International Building Code is not printed in the code and is marked "Reserved", such chapter of the International Building Code is not adopted as a portion of this code. When a specific chapter of the International Building 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.

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NOTE: See Part II at the end of this document for existing California Amendments proposed to be carried forward from the 2010 CEC for adoption into 2013 CEC

ARTICLE 90 INTRODUCTION

BSC proposes to Adopt NEC ARTICLE 90, without amendments

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Notation

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

BSC proposes the adoption of CHAPTER 1, ARTICLES 100 and 110, from the 2011 National Electrical Code into the 2013 California Electrical Code with amendment as follows:

CHAPTER 1 GENERAL ARTICLE 100 Definitions

Ballasted Solar Photovoltaic System [BSC] A roof mounted system composed of 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.

CHAPTER 1 GENERAL 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. Wooded plugs driven into holes in masonry, concrete, plaster, or similar materials shall not be used.

Exception: [BSC] 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, Sections 17910 through 17995.5, Sections 18200 through 18700, Sections 18860 through 18874, and Sections 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

CHAPTERS 2 through 4

BSC proposes to adopt Chapter 2 through Chapter 4 (All Articles) of the 2011 NEC

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Notation

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

CHAPTER 5

BSC proposes to adopt CHAPTER 5- Special Occupancies- but not to adopt ARTICLES 517- (*Health Care Facilities*) and 550- (*Mobile Homes*)

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Notation

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

CHAPTERS 6 through 9

BSC proposes to adopt Chapters 6 through Chapter 9 (All Articles) of the 2011 NEC

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Notation

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

BSC proposes not to adopt the Annexes of the 2011 NEC

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Notation

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

PART II: BSC proposes to bring forward previously existing California building standards or amendments, which represent no change in their effect from the 2010 California Building Standards Code. Furthermore, BSC proposes to codify non-substantive editorial and formatting amendments from the format based upon the 2011 National Electrical Code to the format of the 2011 National Electrical Code.

**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 adoptions, 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 National Electrical Code of the National Fire Protection Association with necessary California amendments.*

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.*

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 as referenced in the Matrix Adoption Tables 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 (CCDPH). See Section 89.107 for additional scope provisions.*
7. *Hotels, motels, lodging houses, apartment houses, 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 serving existing covered multifamily dwellings, additions to existing buildings where the addition alone meets the definition of "COVERED MULTIFAMILY DWELLINGS," and common-use spaces serving 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 (CCDPH) 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,*
 - 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.

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.

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.

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.

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) (1) and (2).

89.101.11 Format. This part fundamentally adopts the National Electrical Code by reference on a chapter-by-chapter basis. Such adoption is reflected in the Matrix Adoption Table of each chapter of this part. When the Matrix Adoption Tables make no reference to a specific chapter of the National Electrical Code, such chapter of the National Electrical Code is not adopted as a portion of this code.

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 89.102 BUILDING STANDARDS COMMISSION

89.102.1 Specific scope of application of the agency responsible for enforcement, the enforcement agency, and the specific authority to adopt and enforce such provisions of this code, unless otherwise stated.

89.102.1.1 Specific scope of application of the agency responsible for enforcement, the enforcement agency, and the specific authority to adopt

and enforce such provisions of this code, unless otherwise stated.

1. State Buildings for all occupancies.

Application – State buildings (all occupancies), including buildings constructed by the Trustees of the California State University and the Regents of the University of California where no state agency has the authority to adopt building standards applicable to such buildings.

Enforcing Agency – State or local agency specified by the applicable provisions of law.

Authority Cited – Health and Safety Code section 18934.5.

Reference – Health and Safety Code, Division 13, Part 2.5, commencing with section 18901.

2. University of California, California State Universities, and California Community Colleges.

Application – Standards for lighting for parking lots and primary campus walkways at the University of California, California State Universities, and California Community Colleges.

Enforcing Agency – State or local agency specified by the applicable provisions of law.

Authority Cited – Government Code section 14617.

Reference – Government Code section 14617.

3. Existing State-Owned Buildings, including those owned by the University of California and by the California State University– Building seismic retrofit standards including abating falling hazards of structural and nonstructural components and strengthening of building structures. See also Division of the State Architect.

Enforcing Agency – State or local agency specified by the applicable provisions of law.

Authority Cited – Government Code section 16600

Reference – Government Code sections 16600 through 16604

4. Unreinforced Masonry Bearing Wall Buildings.

Application – Minimum seismic strengthening standards for buildings specified in Appendix Chapter 1A of the California Existing Building Code, except for buildings subject to building standards adopted pursuant to Part 1.5 (commencing with Section 17910)

Enforcing Agency – State or local agency specified by the applicable provisions of law.

Authority Cited – Health and Safety Code section 18934.6

Reference – Health and Safety Code sections 18901 through 18949

89.102.2 Alternative Materials, Design and Methods of Construction and Equipment.

The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where the building official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety.

89.102.2.1 Research reports. *Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources*

89.102.2.2 Tests. *Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the building official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the building official shall approve the testing procedures.*

Tests shall be performed by an approved agency. Reports of such tests shall be retained by the building official for the period required for retention of public records.

BSC proposes to bring forward all existing BSC California Amendments, Article 89, from the 2010 California Electrical Code without changes.

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Notation

Authority: Health and Safety Code §18934.5

References: Health and Safety Code §18934.5