

Article 3. Electrical Requirements

§ 2130. Application and Scope.

(a) The requirements of this article shall apply to all parks, accessory buildings or structures, and units (except within permanent buildings), in all parts of the state, to the construction, installation, alteration, repair, use, and maintenance of all electrical wiring and equipment for supplying electrical energy to all units.

(b) Existing electrical construction, connections, and installations made before the effective date of the requirements of this chapter may continue in use so long as they were in compliance with requirements in effect at the date of their installation and are not found to be substandard.

NOTE: Authority cited: Sections 18865, 18872 and 18873.3, Health and Safety Code. Reference: Sections 18872 and 18873.3, Health and Safety Code.

§ 2132. Permanent Building Electrical Regulations

Requirements for electrical equipment and installations within permanent buildings in parks are found in the California Electrical Code.

NOTE: Authority cited: Sections 18865, 18873 and 18873.3, Health and Safety Code. Reference: Section 18873.3, Health and Safety Code.

§ 2134. Basic Electrical Regulations.

(a) Except as otherwise permitted or required by this article, all electrical equipment and installations outside of permanent buildings in parks shall comply with the requirements for installations of 600 volts or less found in the California Electrical Code.

(b) All park-owned overhead electrical equipment of park electrical systems shall also comply with the applicable requirements of the California Public Utilities Commission Rules for Overhead Electric Line Construction, General Order No. 95. If there is any conflict between the provisions contained in the California Electrical Code and General Order 95, the provisions of General Order 95 shall prevail.

(c) All park-owned underground electric equipment of park electrical systems shall also comply with the applicable requirements of the current California Public Utilities Commission, Rules for Construction of Underground Electric Supply and Communication Systems, General Order No. 128. If there is any conflict between the provisions contained in the California Electrical Code and General Order 128, the provisions of General Order 128 shall prevail.

(d) All additions or alterations to existing or new parks shall have plans submitted in compliance with section 2034 of this chapter.

(e) Except as otherwise permitted or required, all high voltage(exceeding 600 volts) electrical installations outside of permanent buildings within parks, shall comply with the applicable requirements of Title 8, California Code of Regulations, Chapter 4, Subchapter 5, Group 2, High Voltage Electrical Safety Orders.

(f) If there is any conflict between the provisions of this chapter, General Order 95, General Order 128, or the California Electrical Code, the provisions of this chapter shall prevail.

Note: General Order Numbers 95 and 128 may be obtained from the California Public Utilities Commission (CPUC), Technical Library, 505 Van Ness Ave., San Francisco, CA 94102 or by calling the CPUC at (415) 703-1713. They may also be viewed on line at www.cpuc.ca.gov.

NOTE: Authority cited: Sections 18865, 18865.05, and 18873.3, Health and Safety Code. Reference: Sections 18872 and 18873.3, Health and Safety Code.

§ 2136. Conductors and Equipment.

(a) Six-hundred (600) volts or less. For purposes of this chapter, all electrical conductors and equipment rated at 600 volts or less, installed outside of permanent buildings in park electrical wiring systems constructed, or approved for construction, shall be listed and labeled as approved for their intended use.

(b) Greater than 600 volts. Conductors and equipment installed in systems operated at more than 600 volts shall comply with the applicable provisions contained in the California Electrical Code, Article 490, and the High Voltage Safety Orders contained in Title 8, California Code of Regulations, Chapter 4, Subchapter 5, Group 2.

(c) A grounded neutral conductor may be a bare conductor when properly isolated from phase conductors. A bare neutral conductor, or a bare concentric stranded conductor of a cable used as a grounded neutral conductor, shall be copper when installed underground. These systems shall be solidly grounded.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Section 18873.3, Health and Safety Code.

§ 2138. Energizing

Lot electrical equipment and installations shall not be energized until inspected and approved by the enforcement agency.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Section 18873.3, Health and Safety Code.

§ 2140. Distribution System.

(a) The park electrical wiring system shall be designed to supply adequate electrical energy to all lots and all other connected loads, as determined by this article.

(b) Electrical energy supplied to a lot and all other connected loads shall be nominal 120/240 volts, single phase.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Section 18873.3, Health and Safety Code.

§ 2146. Voltage Drop.

The voltage drop shall not exceed five (5) percent on the park electrical wiring system from the park service to the most remote outlet on the system, except that taps to compensate for below normal full capacity voltage may be used on the primary side of secondary distribution transformers to correct for voltage drop on the primary feeders. The voltage of secondary systems shall not exceed a nominal 240 volts.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18873.3, Health and Safety Code.

§ 2148. Overcurrent Protection.

(a) Conductors shall be protected by overcurrent protective devices. A fuse or circuit breaker rating shall not be greater than the allowable ampacity of the conductors to be protected as specified in Tables 310-16 through 310-19 in the California Electrical Code, except as provided in Articles 210, 240, and 430.

(b) All electrical equipment and devices, including service equipment, transformers and receptacles, shall be protected by overcurrent protective devices rated at not more than the rating of the equipment or device, except as provided in Articles 210, 240, 430, and 450 of the California Electrical Code.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18873.3, Health and Safety Code.

§ 2150. Park Electrical Disconnecting Means.

(a) Each service equipment enclosure for the park shall be provided with a single main disconnect switch or circuit breaker lockable in the open position for disconnecting the electrical wiring system or systems of the park.

(b) A disconnecting means shall be provided for disconnecting each distribution transformer. When the disconnecting means is not installed immediately adjacent to the distribution transformer, it shall be identified as to its usage and shall be arranged to be locked in the open position.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18873.3, Health and Safety Code.

§ 2151. Lot Electrical Disconnecting Means.

A single disconnecting switch or circuit breaker shall be provided in the lot service equipment for disconnecting the power supply to the unit. The disconnecting switch, circuit breaker or its individual enclosure shall be clearly marked to identify the lot serviced.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18873.3, Health and Safety Code.

§ 2152. Ground-Fault Protection.

Ground-fault protection of park service equipment shall be provided for solidly grounded wye electrical services of more than 150 volts to ground, but not exceeding 600 volts phase-to-phase for each service disconnecting means rated at 1,000 amperes or more.

Each service disconnecting means rated 1000-amperes or more shall be performance tested when first installed, as required by the California Electrical Code, Section 230-95. The test shall be conducted in accordance with approved instructions, which shall be provided with the equipment. A written record of this test shall be made and shall be available to the enforcement agency.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18873.3, Health and Safety Code.

§ 2153. Equipment Grounding.

Exposed noncurrent-carrying metal parts of fixed electrical equipment shall be grounded as required by the California Electrical Code, Article 250.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18873.3, Health and Safety Code.

§ 2154. Primary System Grounding- 600 Volts or Less

(a) When the park electrical service is supplied by a grounded system operated at 600 volts or less, an equipment grounding conductor shall be run with the feeders of the park primary electrical system to all equipment supplied by the primary electrical system.

(b) Park primary electrical systems within the park operated at 600 volts or less supplied by an ungrounded system shall not be grounded.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18873.3, Health and Safety Code.

§ 2156. Primary System Grounding- Over 600 Volts.

(a) Park primary electrical systems within the park operated at more than 600 volts supplied by a grounded system shall be grounded at the park service.

(b) Park primary electrical systems within the park operated at more than 600 volts supplied by an ungrounded system shall not be grounded.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18873.3, Health and Safety Code.

§ 2158. Secondary Systems- Lot Service Equipment.

The neutral conductor of all secondary systems supplying lot service equipment shall be grounded at both the secondary system source and the lot service equipment.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Section 18873.3, Health and Safety Code.

§ 2160. Secondary Systems-Other than Lot Service Equipment.

The neutral conductor of all secondary systems supplying equipment other than lot service equipment shall be grounded as required by the California Electrical Code, article 250.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18873.3, Health and Safety Code.

§ 2162. Grounding Connections.

System grounding conductors and equipment grounding conductors shall be connected as required by the California Electrical Code, article 250. The connection of a grounding conductor to a grounding electrode shall be exposed and readily accessible.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18873.3, Health and Safety Code.

§ 2163. Grounding of Units.

All exposed, noncurrent-carrying metal parts of a unit, when connected to the lot service equipment, shall be grounded by means of a grounding conductor run with the circuit conductors or in a listed power supply cord provided with an approved polarized multi-prong plug. One prong of the plug shall be for the sole purpose of connecting that grounding conductor, by means of a listed and approved grounding receptacle, to the grounded terminal at the lot service. The conductor shall be insulated and identified by a green color.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18871 and 18873.3, Health and Safety Code.

§ 2164. Feeder Assembly.

The neutral conductor and the equipment grounding conductor of the feeder assembly supplying service equipment shall be connected to the grounding electrode at each lot service enclosure.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Section 18873.3, Health and Safety Code.

§ 2166. Grounding Conductors.

Only copper grounding conductors shall be used to connect electrical systems to a grounding electrode. Grounding conductors shall be protected from physical damage by cabinet enclosures, raceways or cable armor.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18873.3, Health and Safety Code.

§ 2170. Protection of Outdoor Equipment.

(a) All electrical equipment, including switches, circuit breakers, receptacles, lighting fixtures, control equipment, and metering devices located in either damp or wet locations or outside of a unit, accessory building or structure, or a building component designed as a weatherproof structure shall be constructed of, or installed in, equipment approved for damp or wet locations.

(b) Meter sockets, without meters installed, shall be blanked off with an approved blanking plate before the service is energized.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18873.3, Health and Safety Code.

§ 2176. Aluminum Conductors.

(a) Connections of aluminum conductors shall be made only inside boxes or equipment enclosures which are designed and installed to prevent the entry or accumulation of moisture within the enclosure.

(b) Only connectors which are listed for use with aluminum conductors shall be used to connect aluminum conductors. If more than one conductor is connected to a connector, the connector shall be provided with a terminal fitting for each conductor.

(c) Prior to inserting an aluminum conductor into the connector, the conductor from which the insulation has been removed shall be wire-brushed and sealed with an approved oxide-inhibiting joint compound.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18873.3, Health and Safety Code.

§ 2178. Mechanical Protection.

Where subject to physical damage from vehicular traffic or other causes, the lot service equipment shall be protected by posts, fencing or other barriers approved by the enforcement agency.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Section 18873.3, Health and Safety Code.

§ 2180. Lot Service Equipment.

(a) The rating of the overcurrent protection in the lot service equipment shall not exceed the rating of the connected feeder assembly. Lot service equipment may contain any or all of the approved receptacles conforming with section 2186 of this chapter.

(b) Lot service equipment may also contain the means for supplying accessory structures or other electrical equipment located on the lot, provided the lot service equipment is designed and listed for such application.

(c) Only one (1) power supply connection shall be made to a unit.

(d) Lot service equipment may also contain additional receptacles for supplying portable electrical equipment, provided that such receptacles are listed grounding type receptacles. All 120-volt, single-phase, 15- and 20-ampere receptacle outlets in lot service equipment shall be protected by ground-fault circuit protection.. The requirement for ground-fault circuit protection shall not apply to equipment or installations constructed, installed, or approved for construction or installation prior to September 1, 1975.

(e) When an electrical meter is installed as an integral component of the lot service equipment, it shall be of a class or rating that will accurately measure all loads up to the rated ampacity of the lot service equipment.

NOTE: Authority cited: Section 18865 and 18871.10, Health and Safety Code. Reference: Sections 18871, 18871.10 and 18873.3, Health and Safety Code.

§ 2182. Installation of Lot Service Equipment.

(a) Approved lot service equipment supplied by underground feeders may be of the self-supporting type and shall be stabilized by concrete not less than three and one-half (3 ½) inches thick and surrounding the equipment base by not less than six (6) inches beyond the equipment base in all directions.

(b) Approved lot service equipment supplied by underground feeders requiring installation on a mounting post shall be securely fastened to a nominal four (4) inches by four (4) inches (4" x 4") redwood or pressure treated post or equivalent. The post shall be installed not less than 24 inches in the earth and stabilized by a concrete pad. The concrete pad shall be not less than three and one-half (3 ½) inches thick, surrounding the post base by not less than six (6) inches beyond the post base in all directions. The equipment shall be mounted with the bottom of the equipment not less than twelve (12) inches above the stabilizing concrete pad.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Section 18873.3, Health and Safety Code.

§ 2183. Access to Electrical Equipment.

All park or lot service equipment shall be accessible by an unobstructed entrance or passageway not less than twenty-four (24) inches in width and seventy-eight (78) inches high, and shall have a working space not less than thirty (30) inches wide and thirty-six (36) inches deep in front of any panel opening on the service equipment used for examination, servicing, adjustment, or maintenance. The lot service equipment shall be located and maintained not less than twelve (12) inches nor more than seventy-eight (78) inches above the stabilizing pad.

EXCEPTION: parks constructed prior to July 1, 1979, shall have a working space not less than 30 inches wide and 30 inches deep in front of and centered on the service equipment.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18871 and 18873.3, Health and Safety Code.

§ 2185. Electrical Appliances and Equipment.

(a) When electrical equipment or fixed appliances are installed to serve an accessory structure, the installation shall be supplied by means of a permanent wiring method to the lot service equipment, provided the lot service equipment is designed and listed for the additional load.

(b) If the park electrical system or the feeder supplying the lot electrical service equipment does not have the ampacity to supply the equipment in addition to its connected load, a permit to construct, as required in section 2018 of this chapter, shall be obtained for alteration of the required service supply and equipment.

(c) All electrical appliances and equipment not located within enclosed weatherproof structures must be approved for use in wet locations.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18873.3, Health and Safety Code.

§ 2186. Lot Receptacles.

(a) A receptacle used to supply electrical energy to a unit shall conform with the American National Standards Institute-National Electrical Manufacturers Association (ANSI-NEMA) Standard , WD-6, 1997 for one of the following configurations:

(1) 125/250 volts, 50-amperes, 3 pole, 4 wire, grounding type for 120/240 volt systems.

(2) 125 volts, 30-amperes, 2 pole, 3 wire, grounding type for 120 volt systems.

(3) 125 volts, 20-amperes, 2 pole, 3 wire, grounding type for supplying units having only one 15 or 20-ampere branch circuit.

(b) ANSI-NEMA Standards may be obtained on-line from www.nema.org or by calling (703) 841-3200 or by writing to NEMA, Communications Department, 1300 North 17th Street, Rosslyn, Virginia, 22209.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18873.3, Health and Safety Code.

§ 2188. Existing Electrical Installations.

(a) Lot service equipment shall have the capacity to supply the unit, appliance, accessory building or structure, and building component located on the lot. The park operator may prohibit the installation of a unit, appliance, accessory building or structure, or building component that exceeds the rated capacity of the lot electrical service, unless the load in the unit, appliance, accessory building or structure, or building component is reduced. If the unit or electrical appliance is allowed to be installed by the park and the connected load on the lot exceeds the rated capacity of the lot electrical service equipment, the lot electrical service equipment and feeders shall be replaced with equipment and conductors properly rated to supply the unit, appliance, or accessory building or structure. Notwithstanding the provisions of this subsection, park approval is required when an alteration or addition to the existing electrical system of the unit, appliance, accessory building or structure, or building component will exceed the rated capacity of the lot service equipment.

(b) The enforcement agency may order unsafe installations of existing electrical systems or portions thereof to be reconstructed or altered, if necessary for the protection of life and property.

(c) The use of electrical equipment and installations in existence prior to the effective date of applicable amendments to this chapter may be continued, provided such equipment and installations are maintained in safe operating condition and the calculated connected loads do not exceed the rated ampacity of such equipment and installations.

(d) Lot electrical service equipment may continue supplying accessory buildings or structures or building components or other electrical equipment located outside the unit, provided the lot electrical service has the capacity to serve them and the equipment is maintained in a safe operating condition.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18871, 18871.10, 18872 and 18873.3, Health and Safety Code.

§ 2190. Authority to Order Disconnect-Electrical.

The enforcement agency is authorized to require any electrical installation or equipment found to be defective, and in such condition as to endanger life or property, to be disconnected. Installations which have been disconnected shall not be re-energized until a permit has been obtained to repair the electrical installation or equipment and the work has been inspected and approved by the enforcement agency.

NOTE: Authority cited: Section 18865, Health and Safety Code. Reference: Sections 18871 and 18873.3, Health and Safety Code.