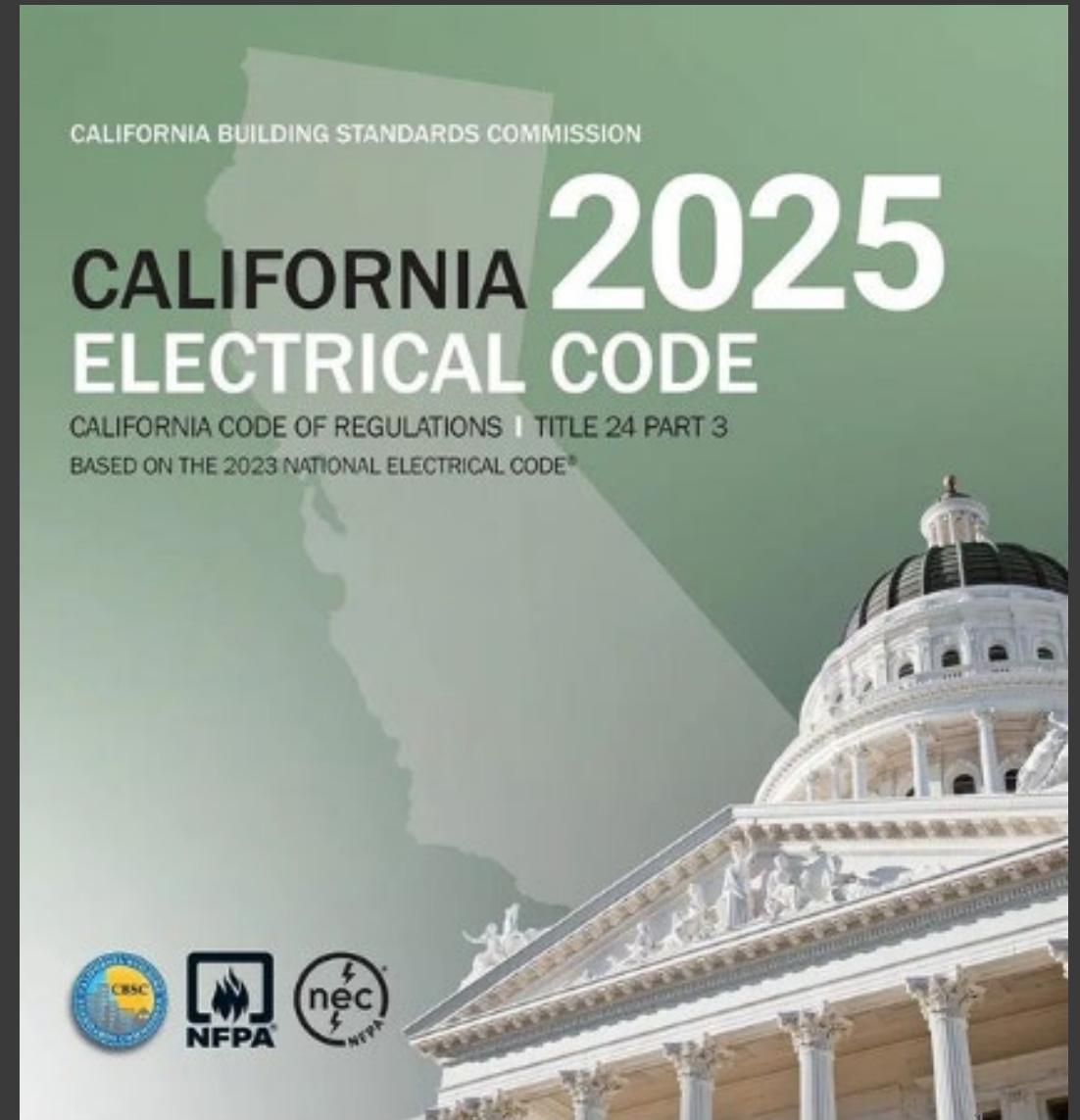


Most Significant Changes to the 2025 California Electrical Code

Tim Fiske, CBO, MCP, CASp
Chief Building Official, City of Ventura
ICC Region I, Treasurer



Important Notes

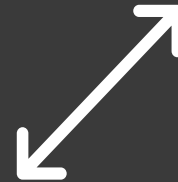
- This is not a comprehensive overview of ALL of the changes
- Focus today is mainly on residential changes that will result in corrections on plan review or inspection



Key for the Training



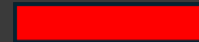
New Code Section



Expanded



Clarification



Deleted/Reduced

Section 110.26(A)(6) – Grade, Floor, or Working Platform



New Code Section

110.26(A)(6) The grade, floor, or platform in the required working space shall be kept clear, and the floor, grade, or platform in the working space shall be as level and flat as practical for the entire required depth and width of the working space.



Section 210.8 – Listed Class A GFCI



Clarification

210.8: A listed Class A GFCI shall provide protection in accordance with 210.8(A) through (F). The GFCI shall be installed in a readily accessible location.

For the purposes of this section, the distance from receptacles shall be measured as the shortest path the power supply cord connected to the receptacle would follow without piercing a floor, wall, ceiling, or fixed barrier.

Key Takeaways:

Terminology Update:

The term “ground-fault circuit interrupter” has been revised to “listed Class A GFCI” throughout Section 210.8, providing greater clarity on the required protection level (4–6 mA trip threshold).

Clarified Scope of Protection:

The phrase “of an appliance” has been replaced with “power supply cord” to clearly indicate that GFCI protection applies to all cord-connected equipment, not just appliances.



Section 210.8 (A)(6) – GFCI Protection



Expanded

CEC Definition:

Kitchen.

An area with a sink and permanent provisions for food preparation and cooking.

2022 CEC:

210.8 (A) Dwelling Units.

All 125-volt through 250-volt receptacles installed in the following locations and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel:

(6) Kitchens – where the receptacles are installed to serve the countertop surfaces

2025 CEC:

210.8 (A) Dwelling Units.

All 125-volt through 250-volt receptacles installed in the following locations and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel:

(6) Kitchens

Section 210.8 (A)(6) – GFCI Protection



Section 210.8 (A)(7) – Food, Bar, or Cooking Prep



New Code Section

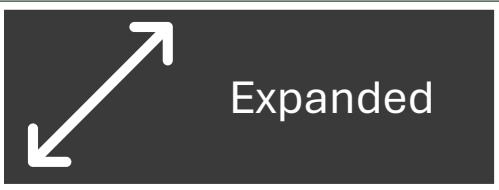
210.8 (A) Dwelling Units.

All 125-volt through 250-volt receptacles installed in the following locations and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel:

(7) Areas with sinks and permanent provisions for food preparation, beverage preparation, or cooking



Section 210.8 (B) – GFCI Protection



210.8(B):

(B) Other Than Dwelling Units.

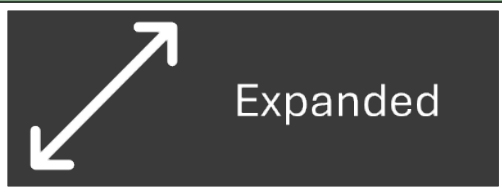
All 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less, and all receptacles supplied by three-phase branch circuits rated 150 volts or less to ground, 100 amperes or less, installed in the following locations shall be provided with GFCI protection:

(2) Kitchens

(3) Areas with sinks and permanent provisions for food preparation, beverage preparation, or cooking

(4) Buffet serving areas with permanent provisions for food serving, beverage serving, or cooking

Section 210.8 (D) – Specific Appliances

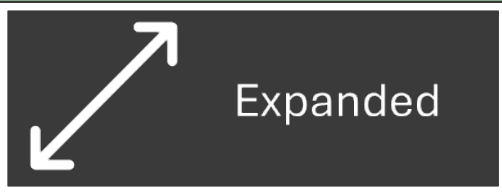


210.8(D): GFCI protection shall be provided for the **branch circuit or outlet** supplying the following appliances rated 150 volts or less to ground and 60 amperes or less, single- or 3-phase:

- (1) Automotive vacuum machines
- (2) Drinking water coolers and bottle fill stations
- (3) High-pressure spray washing machines
- (4) Tire inflation machines
- (5) Vending machines
- (6) Sump pumps
- (7) Dishwashers
- (8) Electric ranges
- (9) Wall-mounted ovens
- (10) Counter-mounted cooking units
- (11) Clothes dryers
- (12) Microwave ovens



Section 210.8 (F) – Outdoor Dwelling Unit Outlets



(F) Outdoor Outlets.

For dwellings, all outdoor outlets, other than those covered in 210.8(A), Exception No. 1, including outlets installed in the following locations, and supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less, shall be provided with GFCI protection:

- (1) Garages that have floors located at or below grade level
- (2) Accessory buildings
- (3) Boathouses

If equipment supplied by an outlet covered under the requirements of this section is replaced, the outlet shall be supplied with GFCI protection.

Exception No. 1: GFCI protection shall not be required on lighting outlets other than those covered in 210.8(C).

Exception No. 2: GFCI protection shall not be required for listed HVAC equipment. This exception **shall expire September 1, 2026.**



Section 210.17 — Branch Circuits in Guest Rooms and Guest Suites



Expanded

210.17 Guest Rooms and Guest Suites.

Guest rooms and guest suites in the following occupancies that are provided with permanent provisions for cooking shall have branch circuits installed to meet the rules for dwelling units:

(1) Hotels

(2) Motels

(3) Assisted living facilities

Informational Note No. 1: See 210.11(C)(2) and 210.52(F), Exception No. 2, for information on laundry branch circuits and receptacle outlets.

Informational Note No. 2: See NFPA 101-2021, Life Safety Code, 3.3.198.12 and A.3.3.198.12(5), for the definition of assisted living facilities.



Section 210.23 – Permissible Loads, Multiple-Outlet Branch Circuits



New Code Section

210.23 Permissible Loads, Multiple-Outlet Branch Circuits.

In no case shall the load exceed the branch-circuit ampere rating. A branch circuit supplying two or more outlets or receptacles shall supply only the loads specified according to its size in accordance with 210.23(A) through (E) and as summarized in 210.24.

(A) 10-Ampere Branch Circuits.

A 10-ampere branch circuit shall comply with the requirements of 210.23(A)(1) and (A)(2).



Section 210.23 – Permissible Loads, Multiple-Outlet Branch Circuits

(1) Loads Permitted for 10-Ampere Branch Circuits.

A 10-ampere branch circuit shall be permitted to supply one or more of the following:

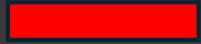
- (1) Lighting outlets
- (2) Dwelling unit exhaust fans on bathroom or laundry room lighting circuits
- (3) A gas fireplace unit supplied by an individual branch circuit

(2) Loads Not Permitted for 10-Ampere Branch Circuits.

A 10-ampere branch circuit shall not supply any of the following:

- (1) Receptacle outlets
- (2) Fixed appliances, except as permitted for individual branch circuits
- (3) Garage door openers
- (4) Laundry equipment

Section 210.52 (C)(2) Islands, Peninsular Countertops & Work Surfaces



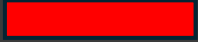
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(2) Island and Peninsular Countertops and Work Surfaces.

Receptacle outlets, if installed to serve an island or peninsular countertop or work surface, shall be installed in accordance with 210.52(C)(3). If a receptacle outlet is not provided to serve an island or peninsular countertop or work surface, provisions shall be provided at the island or peninsula for future addition of a receptacle outlet to serve the island or peninsular countertop or work surface.



Section 210.52 (C)(3) Receptacle Outlet Location



Reduced

(3) Receptacle Outlet Location.

Receptacle outlets shall be located in one or more of the following:

- (1) On or above, but not more than 500 mm (20 in.) above, a countertop or work surface
- (2) In a **countertop using receptacle** outlet assemblies listed for use in countertops
- (3) **In a work surface using receptacle outlet assemblies listed for use in work surfaces or listed for use in countertops**

Receptacle outlets rendered not readily accessible by appliances fastened in place, appliance garages, sinks, or rangetops as covered in 210.52(C)(1), Exception No. 1, or appliances occupying assigned spaces shall not be considered as these required outlets.

Informational Note No. 1: See 406.5(E) for installation of receptacles in countertops and 406.5(F) for installation of receptacles in work surfaces. See 380.10 for installation of multioutlet assemblies.

Informational Note No. 2: See Informative Annex J and ANSI/ICC A117.1-2009, Standard on Accessible and Usable Buildings and Facilities, for additional information.

Section 210.52 (C)(3) Receptacle Outlet Location

(3) Receptacle Outlet Location.

Receptacle outlets shall be located in one or more of the following:

(1) **On or above**, but not more than 500 mm (20 in.) above, a countertop or work surface



Section 210.52 (C)(3) Receptacle Outlet Location

(3) Receptacle Outlet Location.

Receptacle outlets shall be located in one or more of the following:

(1) **On or above**, but not more than 500 mm (20 in.) above, a countertop or work surface



Section 210.52 (C)(3) Receptacle Outlet Location

(3) Receptacle Outlet Location.

Receptacle outlets shall be located in one or more of the following:

(1) On or above, but not more than 500 mm (20 in.) above, a countertop or work surface



Section 210.52 (C)(3) Receptacle Outlet Location

(3) Receptacle Outlet Location.
Receptacle outlets shall be located in one or more of the following:



(2) In a countertop using receptacle outlet assemblies **listed for use in countertops**

(3) In a work surface using receptacle outlet assemblies **listed for use in work surfaces or listed for use in countertops**



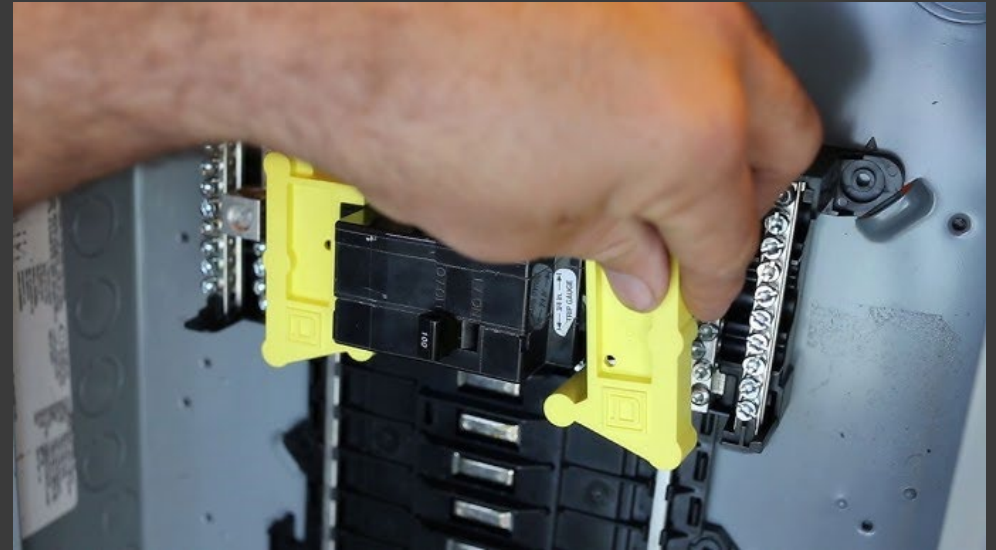
Section 215.15 – Barriers In Electrical Equipment



New Code Section

215.15 Barriers.

Barriers shall be placed such that no energized, uninsulated, ungrounded busbar or terminal is exposed to inadvertent contact by persons or maintenance equipment while servicing load terminations in panelboards, switchboards, switchgear, or motor control centers supplied by feeder taps in 240.21(B) or transformer secondary conductors in 240.21(C) when the disconnecting device, to which the tap conductors are terminated, is in the open position.



Section 220.5(C) – Calculations



New Code Section

(C) Floor Area.

The floor area for each floor shall be calculated from the outside dimensions of the building, dwelling unit, or other area involved. For dwelling units, the calculated floor area shall not include open porches or unfinished areas not adaptable for future use as a habitable room or occupiable space.



Section 225.41– Emergency Disconnects



New Code Section

225.41 Emergency Disconnects.

For one-and two-family dwelling units, an emergency disconnecting means shall be installed.

(A) General.

(1) Location.

The disconnecting means shall be installed in a readily accessible outdoor location on or within sight of the dwelling unit.

(2) Rating.

The disconnecting means shall have a short-circuit current rating equal to or greater than the available fault current.

(3) Grouping.

If more than one disconnecting means is provided, they shall be grouped.

(B) Identification of Other Isolation Disconnects.

Where equipment for isolation of other energy source systems is not located adjacent to the emergency disconnect required by this section, a plaque or directory identifying the location of all equipment for isolation of other energy sources shall be located adjacent to the disconnecting means required by this section.

(C) Marking.

The disconnecting means shall be marked as EMERGENCY DISCONNECT.

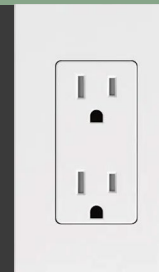
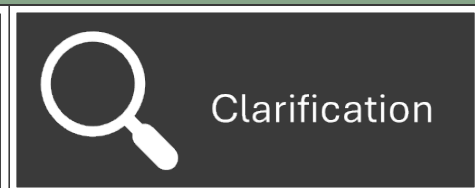
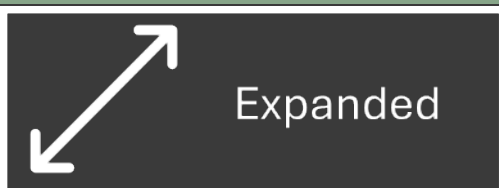
Markings shall comply with 110.21(B) and all of the following:

(1) The marking or labels shall be located on the outside front of the disconnect enclosure with red background and white text.

(2) The letters shall be least 13 mm (1/2 in.) high.

**EMERGENCY
DISCONNECT**

Section 406.12– Tamper Resistant Receptacles



406.12 Tamper-Resistant Receptacles.

All 15- and 20-ampere, 125- and 250-volt nonlocking-type receptacles in the following locations shall be listed tamper-resistant receptacles:

- (1) All dwelling units, boathouses, mobile homes and manufactured homes, including their attached and detached garages, accessory buildings, and common areas
- (5) Within clinics, medical and dental offices, and outpatient facilities, the following spaces:
 - a. Business offices accessible to the general public
 - b. Lobbies, and waiting spaces
 - c. Spaces of nursing homes and limited care facilities covered in 517.10(B)(2)
- (8) Residential care/assisted living facilities, social and substance abuse rehabilitation facilities, and group homes
- (9) Foster care facilities, nursing homes, and psychiatric hospitals
- (10) Areas of agricultural buildings accessible to the general public and any common areas²⁴

Section 410.184– Horticultural Lighting



Clarification



New Code Section

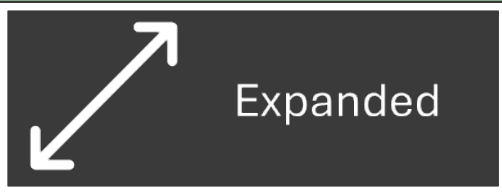
410.184 Ground-Fault Circuit-Interrupter (GFCI) Protection and Special Purpose Ground-Fault Circuit-Interrupter (SPGFCI) Protection.

Lighting equipment identified for horticultural use and employing flexible cord(s) with one or more **separable connector(s) or attachment plug(s)** shall be supplied by lighting outlets protected by a listed GFCI.

Exception: Circuits exceeding 150 volts to ground shall be protected by a listed SPGFCI.

Informational Note: See UL 943C, Outline of Investigation for Special Purpose Ground-Fault Circuit-Interrupters, for information on special purpose ground-fault circuit interrupters.

Section 440.11– Residential Disconnects



440.11 General.

Disconnecting means shall be capable of disconnecting air-conditioning and refrigerating equipment, including motor-compressors and controllers, from the circuit conductors. **If the disconnecting means is readily accessible to unqualified persons, any enclosure door or hinged cover of a disconnecting means enclosure that exposes energized parts when open shall require a tool to open or be capable of being locked.**



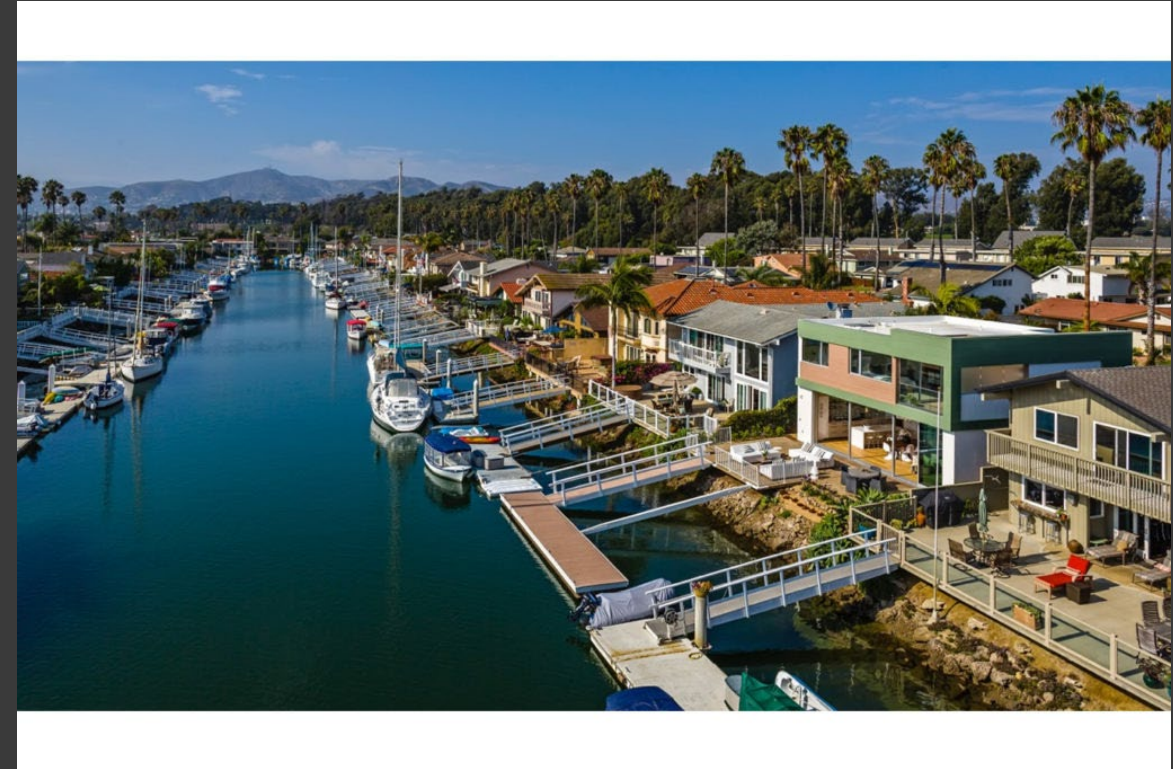
Section 555.4 – Service Equipment Near Docks



Expanded

555.4 Location of Service Equipment.

The service equipment for a floating building, dock, or marina shall be located on land **no closer than 1.5 m (5 ft) horizontally from** and adjacent to the structure served, but not on or in the structure itself or any other floating structure. **Service equipment shall be elevated a minimum of 300 mm (12 in.) above the electrical datum plane.**



Section 555.15 – Replacement Marine Equipment



New Code Section

555.15 Replacement of Equipment.

When modifications or replacements of electrical enclosures, devices, or wiring methods are necessary on a docking facility, they shall be required to comply with the requirements of this Code, and the installation shall require an inspection of the circuit. Existing equipment that has been damaged shall be identified, documented, and repaired by a qualified person to the minimum requirements of the edition of this Code to which it was originally installed.

Section 555.36 – Shore Power Disconnecting Means



New Code Section

**EMERGENCY
SHUT-OFF**

(C) Emergency Electrical Disconnect.

Each marina power outlet or enclosure that provides shore power to boats shall be provided with a listed emergency shutoff device or electrical disconnect that is clearly marked “Emergency Shutoff” in accordance with 110.22(A). The emergency shutoff device or electrical disconnect shall be within sight of the marina power outlet or other enclosure that provides shore power to boats, readily accessible, externally operable, manually resettable, and listed for use in wet locations. The emergency shutoff device or electrical disconnect shall de-energize the power supply to all circuits supplied by the marina power outlet(s) or enclosure(s) that provide shore power to boats. A circuit breaker handle shall not be used for this purpose.

Thank you!

Contact me at:

tfiske@cityofventura.ca.gov

