



COUNTY OF MENDOCINO

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Significant Changes Between the 2011 NEC and 2014 NEC Codes

The following code changes will become effective on January 1, 2017.

California Electric Codes: The following are a list of significant changes from the 2011 to the 2014 National Electrical Code (NEC) is not all inclusive, but does include these that have the most impact on electrical installations. Please refer to the Article in the NEC for the complete text.

Article 110:

- 110.26(C)(3) - Panic hardware requirements on personnel doors has been lowered from 1200 amps to 800 amps.
- 110.26(E)(2)(a)&(b) - Dedicated space code requirements has been extended to outdoor equipment.

Article 210:

- 210.5(C)(2) - New requirements for identification of conductors of ungrounded DC systems.
- 210.8(A)(7) - GFCI protection has been expanded to include all receptacles located within 6 ft. of dwelling kitchen sinks.
- 210.8(A)(9) - GFCI protection has been expanded to include all receptacles located within 6 ft. of dwelling tubs and showers.
- 210.8(A)(10) - GFCI protection is now required for dwelling laundry area receptacles.
- 210.8(D) - GFCI protection now required for dishwashers in dwellings.
- 210.12 - AFCI devices must be readily accessible.
- 210.12(A) - AFCI protection has been expanded to include devices, and kitchen and laundry areas of dwellings.
- 210.12(C) - AFCI protection is required in dormitory units.
- 210.13 - Ground Fault Protection of Equipment (GFPE) is required for branch circuits 1000 amps or more and over 150V to ground.
- 210.17—Outlets for Electric Vehicle (EV) charging must be on a separate branch circuit with no other outlets.
- 210.2(G)(1) - Dwelling garages must have a separate branch circuit with at least one receptacle for each car space.
- 210.64—Receptacles are required within 50 ft. of all non-dwelling service equipment.

Article 230:

- 230.82(3) - Meter disconnect switches are required to be labeled.

Article 250:

- 250.21(C) - Ungrounded systems are required to be marked with the voltage between conductors.
- 250.167 - Ungrounded DC systems are required to have ground fault detectors.

- 250.194 - New section for grounding and bonding of fences, etc. around substations.

Article 300:

- 300.22(C)(1) - Nonmetallic cable ties in plenums must be listed as low smoke and heat release properties. **Table 310.15(B)(3)(c)** – Has been revised to include cables on rooftops.

Article 314:

- Drywall screws are not permitted for installing devices or covers.

Article 334:

- Self-contained NM cable connectors only permitted for repair wiring.

Article 393:

- New article for low-voltage suspended ceiling power distribution system.

Article 406:

- 406.3(E) - New for a controlled requirement receptacle marking
- 406.4(D) – AFCI and GFCI replacement receptacles must be in readily accessible locations.
- 406.5(E) – Prohibition of face-up receptacles has been expanded to all occupancies.
- 406.5(F) – New prohibition of face-up receptacles in seating areas unless so listed.
- 406.9(B)(1) – In-use covers on all receptacles in wet locations will now need “extra-duty” type covers.

Article 408:

- 408.55 – New requirement for back wire-bending space for panelboard enclosures.

Article 410:

- 410.6 – Luminaire retrofit kits are required to be listed.
- 410.10(F) – Luminaires must also be no less than 1- ½ inches below metal roof decking.
- 410.130(G)(1) – Exception for ballast disconnects deleted for industrial applications with qualified persons.

Article 422:

- 422.5 – GFCI devices for all appliances must now be readily accessible.
- 422.23 – Tire inflation and auto vacuum machines now need GFCI protection.
- 422.29 – GFCI protection for high-pressure spray washers expanded to 208Y/120V and 60A or less.
- 422.51 – GFCI protection expanded to hard-wired vending machines.

Article 424:

- 424.66(A)&(B) New working space requirements for duct heaters.

Article 430:

- 430.233 – Minimum voltage for guarding of live parts of motors or controllers lowered to 50.

Article 450:

- 450.10– Grounding or Bonding terminals cannot be installed on or over the transformer vent screen.
- 450.11– Transformers can only be reverse wired if permitted in the manufacturer's instructions.

Article 517:

- 517.18(A) – New color and circuit marking requirements for general care receptacles on the critical branch.
- 517.18(B) – Number of general care bed location receptacles increased from 4 to 8.
- 517.19(B) – Number of critical care bed location receptacles increased from 6 to 14.
- 517.19(C) – Operating rooms now need 36 receptacles with at least 12 on the normal branch or a critical branch from a different transfer switch, and connected to the reference grounding point.

Article 551:

- 551.71 – Every RV site with a 50A receptacle must also have a 30A, 125V receptacle.

Article 590:

- 590.4(D)(2) – All in-use covers on receptacles in wet locations must now have “extra-duty” covers.
- 590.4(I) – Flexible cords and cables must be secured to boxes with fittings listed for the purpose.
- 590.4(J) – Temporary branch circuits and feeders cannot be laid on the floor or ground.

Article 600:

- 600.6(A)(1) – There must be a disconnect at the point where the circuit enters the sign.
- 600.7(A)(1) – Metal parts of skeleton tubing must also be connected to an EGC.

Article 645:

- 645.27- All OCP devices in critical operations data systems must be selectively coordinated.

Article 646: – New article on modular data centers.**Article 680:**

- 680.12 – Fountains must now also have a maintenance disconnect.
- 680.21(C) – All pool pump motors need GFCI protection regardless of amperage.
- 680.22(A)(1) – Receptacle requirement expanded to all permanently installed pools.

Article 690:

- 690.5(A) – Systems on other than dwellings no longer permitted without ground-fault protection.
- 690.12 – New requirement for rapid shutdown of systems on buildings.
- 690.35(C) – Ground-fault protection for ungrounded PV systems must be listed.
- 690.47 – Auxiliary grounding electrode system required for all ground- and pole-mounted systems, and as close as practicable to roof-mounted systems.

Article 694: – No longer limited to 100 kW wind electric systems.**Article 700:**

- 700.8 – New requirement for listed surge protective devices on all switchboards and panelboards.
- 700.12(F), Exception & 700.19 – Emergency lighting cannot be part of a multi-wire branch circuit.
- 700.24 – Emergency luminaires and controls must be individually listed for emergency use.
- 700.28 – Selective coordination for emergency systems must be designed by an engineer.

- 702.7(C) – Type of neutral connection must be posted for optional standby temporary power inlets.