INFORMATION BULLETIN

IB-0223

Eff: 01-01-2023:

2022 California Electrical Code
Significant Changes

The purpose of this Information Bulletin (IB) is to outline some of the significant changes that went into effect on January 1, 2023, with the adoption of the 2022 California Electrical Code (CEC). Additional amendments to the 2022 CEC are noted within the Redondo Beach Municipal Code as adopted by Ordinance 3247-22. It is recommended prior to obtaining a permit and performing work that these codes be referenced for the most current code changes. Note that this IB is informational only and shall not be construed as all-inclusive.

210.8 Ground-Fault Circuit-Interrupter (GFCI) Protection for Personnel

GFCI protection for personnel shall be provided as required in 210.8(A) through (F). The GFCI shall be installed in a readily accessible location.

(A) Dwelling Units- All 125-volt through 250-volt receptacles installed in the locations specified in 210.8(A)(1) through (A)(11) and supplied by single-phase branch circuits rated 150 volts or less to ground shall have GFCI protection for personnel.

1. Bathrooms
2. Garages and also accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use
3. Outdoors

The exception to (3): Receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.

4. Crawl spaces — at or below grade level
5. Basements

The exception to (5): A receptacle supplying only a permanently installed fire alarm or burglar alarm system shall not be required to have GFCI protection.

Informational Note: See 760.41(B) and 760.121(B) for power supply requirements for fire alarm systems.

Receptacles installed under the exception to 210.8(A)(5) shall not be considered as meeting the requirements of 210.52(G).

6. Kitchens — where the receptacles are installed to serve the countertop surfaces
7. Sinks — where receptacles are installed within 6 feet from the top inside edge of the bowl of the sink
8. Boathouses
9. Bathtubs or shower stalls — where receptacles are installed within 6 feet of the outside edge of the bathtub or shower stall
10. Laundry areas

The exception to (1) through (3), (5) through (8), and (10): List locked support and mounting receptacles utilized in combination with compatible attachment fittings installed for the purpose of serving a ceiling luminaire or ceiling fan
shall not be required to be GFCI protected. If a general-purpose convenience receptacle is integral to the ceiling luminaire or ceiling fan, GFCI protection shall be provided.

11. Indoor damp and wet locations

(C) Crawl Space Lighting Outlets- GFCI protection shall be provided for lighting outlets not exceeding 120 volts installed in crawl spaces.

(D) Specific Appliances- Unless GFCI protection is provided in accordance with 422.5(B)(3) through (B)(5), the outlets supplying the appliances specified in 422.5(A) shall have GFCI protection in accordance with 422.5(B)(1) or (B)(2).

(F) Outdoor Outlets- All outdoor outlets for dwellings, other than those covered in 210.8(A)(3), Exception to (3), that are supplied by single-phase branch circuits rated 150 volts to ground or less, 50 amperes or less, shall have GFCI protection for personnel. This requirement shall become effective on January 1, 2023, for mini-split-type heating/ventilating/air-conditioning (HVAC) equipment and other HVAC units employing power conversion equipment as a means to control compressor speed. (Applies to heat pumps and air conditioner condensers.)

Informational Note: Power conversion equipment is the term used to describe the components used in HVAC equipment that is commonly referred to as a variable speed drive. The use of power conversion equipment to control compressor speed differs from multistage compressor speed control.

Exception: GFCI protection shall not be required on lighting outlets other than those covered in 210.8(C).

210.11 Branch Circuits Required- Branch circuits for lighting and for appliances, including motor-operated appliances, shall be provided to supply the loads calculated in accordance with 220.10. In addition, branch circuits shall be provided for specific loads not covered by 220.10 where required elsewhere in this Code and for dwelling unit loads as specified in 210.11(C).

(C) Dwelling Units

(1) Small-Appliance Branch Circuits- In addition to the number of branch circuits required by other parts of this section, two or more 20-ampere small-appliance branch circuits shall be provided for all receptacle outlets specified by 210.52(B).

(2) Laundry Branch Circuits- In addition to the number of branch circuits required by other parts of this section, at least one additional 20-ampere branch circuit shall be provided to supply the laundry receptacle outlet(s) required by 210.52(F). This circuit shall have no other outlets.

(3) Bathroom Branch Circuits- In addition to the number of branch circuits required by other parts of this section, one or more 120-volt, 20-ampere branch circuit shall be provided to supply bathroom(s) receptacle outlet(s) required by 210.52(D) and any countertop and similar work surface receptacle outlets. Such circuits shall have no other outlets. Exception: Where the 20-ampere circuit supplies a single bathroom, outlets for other equipment within the same bathroom shall be permitted to be supplied in accordance with 210.23(A)(1) and (A)(2).

(4) Garage Branch Circuits- In addition to the number of branch circuits required by other parts of this section, at least one 120-volt, 20-ampere branch circuit shall be installed to supply receptacle outlets required by 210.52(G)(1) for attached garages and in detached garages with electric power. This circuit shall have no other outlets. Exception: This circuit shall be permitted to supply readily accessible outdoor receptacle outlets.
210.52 (C) (2) (a) and (C) (2) (b) Island and Peninsular Countertops and Work Surfaces
Receptacle outlets shall be installed in accordance with 210.52(C)(2)(a) and (C)(2)(b).

(a) At least one receptacle shall be provided for the first 0.84 m² (9 ft²), or fraction thereof, of the countertop or work surface. A receptacle outlet shall be provided for every additional 1.7 m² (18 ft²), or fraction thereof, of the countertop or work surface. 
(b) At least one receptacle outlet shall be located within 600 mm (2 ft) of the outer end of a peninsular countertop or work surface. Additional required receptacle outlets shall be permitted to be located as determined by the installer, designer, or building owner. The location of the receptacle outlets shall be in accordance with 210.52(C)(3).

230.67 Surge Protection
(A) Surge Protective Device- All services supplying dwelling units shall be provided with a surge-protective device (SPD).
(B) Location- The SPD shall be an integral part of the service equipment or shall be located immediately adjacent thereto. Exception: The SPD shall not be required to be located in the service equipment as required in (B) if located at each next level distribution equipment downstream toward the load.
(C) Type- The SPD shall be a Type 1 or Type 2 SPD.
(D) Replacement- Where service equipment is replaced, all of the requirements of this section shall apply.

230.70 (A) (1), RBMC Service Equipment- Disconnecting Means
(A) (1) The service disconnecting means shall be installed at a readily accessible location outside of the building. The service disconnecting means may be located inside nearest the point of entrance of the service conductors where approved by the Building Official.

230.71 Maximum Number of Disconnects
Each service shall have only one disconnecting means unless the requirements of 230.71(B) are met. (You can no longer have multiple disconnects in the same enclosure without a main disconnect.)

314.27 (C) Boxes at Ceiling-Suspended (Paddle) Fan Outlets
Outlet boxes or outlet box systems used as the sole support of a ceiling-suspended (paddle) fan shall be listed, shall be marked by their manufacturer as suitable for this purpose, and shall not support ceiling-suspended (paddle) fans that weigh more than 70 lbs. For outlet boxes or outlet box systems designed to support ceiling-suspended (paddle) fans that weigh more than 35 lbs., the required marking shall include the maximum weight to be supported.

Outlet boxes mounted in the ceilings of habitable rooms of dwelling occupancies in a location acceptable for the installation of a ceiling-suspended (paddle) fan shall comply with one of the following:
(1) Listed for the sole support of ceiling-suspended (paddle) fans 
(2) An outlet box complying with the applicable requirements of 314.27 and providing access to structural framing capable of supporting of a ceiling-suspended (paddle) fan bracket or equivalent

406.9 (C) Bathtub and Shower Space Receptacles
Receptacles shall not be installed within a zone measured 3 feet horizontally and 8 feet vertically from the top of the bathtub rim or shower stall threshold. The identified zone is all-encompassing and shall include the space directly over the tub or shower stall.
Exception No. 1: In bathrooms with less than the required zone the receptacle(s) shall be permitted to be installed opposite the bathtub rim or shower stall threshold on the farthest wall within the room.

Exception No. 2: In a dwelling unit, a single receptacle shall be permitted for an electronic toilet or personal hygiene device such as an electronic bidet seat. The receptacle shall be readily accessible and located on one of the following:
1. The wall behind the toilet but not behind the tank
2. The opposite side of the toilet from the bathtub or shower

408.8(A) Panelboards

California Energy Code Requirements for Panelboards in Single-Family Buildings [CEC]

In single-family residential buildings that include one or two dwellings, panelboards serving the individual dwelling unit shall be provided with circuit breaker spaces for heat pump water heaters, heat pump space heaters, electric cooktops and electric clothes dryers as specified in California Energy Code Section 150.0 (n), (t), (u) and (v). (This may require a larger panel.)

410.10 (D) Luminaires in Bathtub and Shower Areas

A luminaire installed in a bathtub or shower area shall meet all of the following requirements:
1. No parts of cord-connected luminaires, chain-, cable-, or cord-suspended luminaires, lighting track, pendants, or ceiling-suspended (paddle) fans shall be located within a zone measured 3 feet horizontally and 8 feet vertically from the top of the bathtub rim or shower stall threshold. This zone is all-encompassing and includes the space directly over the tub or shower stall.
2. Luminaires located within the actual outside dimension of the bathtub or shower to a height of 8 feet vertically from the top of the bathtub rim or shower threshold shall be marked suitable for damp locations or marked suitable for wet locations. Luminaires located where subject to shower spray shall be marked suitable for wet locations.

445.18 (A) (B) (C) (D) Generator Disconnecting Means and Emergency Shutdown

(A) Disconnecting Means- Generators other than cord-and-plug-connected portable generators shall have one or more disconnecting means. Each disconnecting means shall simultaneously open all associated ungrounded conductors. Each disconnecting means shall be lockable open in accordance with 110.25.

(B) Emergency Shutdown of Prime Mover- Generators shall have provisions to shut down the prime mover. The means of shutdown shall comply with all of the following:
1. Be equipped with provisions to disable all prime mover start control circuits to render the prime mover incapable of starting
2. Initiate a shutdown mechanism that requires a mechanical reset

The provisions to shut down the prime mover shall be permitted to satisfy the requirements of 445.18(A) where it is capable of being locked in the open position in accordance with 110.25.

(C) Remote Emergency Shutdown- Generators with greater than 15 kW rating shall be provided with a remote emergency stop switch to shut down the prime mover. The remote emergency stop switch shall be located outside the equipment room or generator enclosure and shall also meet the requirements of 445.18(B)(1) and (B)(2).

(D) Emergency Shutdown in One- And Two-Family Dwelling Units- For other than cord-and-plug-connected portable generators, an emergency shutdown device shall be located outside the dwelling unit at a readily accessible location.