Applicable codes are the 2013 editions of the California Residential Code (CRC), California Electrical Code (CEC), California Plumbing Code (CPC), California Mechanical Code (CMC), California Energy Code (CNC), and the California Green Building Standards Code (GRN).

Permits:

- A plumbing permit is not required if the kitchen sink is being replaced in the same location and no plumbing alteration is made.
- An electrical permit is not required for replacing outlets, switches or appliances in the same locations and where no alteration is made.
- A mechanical permit is not required to replace a recirculating hood/fan that does not have an outside air vent.
- Any added or new electrical, plumbing, or mechanical fixtures require a permit.
- A building permit is not required for replacement of countertops and cabinets or re-facing of cabinets. A building permit is required if more than 32 square feet of wall and/or ceiling finishes are removed and replaced.

Smoke and Carbon Monoxide Alarms

- When alterations, additions, or repairs take place and require a permit, smoke alarms must be located in the same areas required for new dwellings, including each sleeping room, outside each sleeping area (e.g., hallways), and on each story. [CRC 314.3.1]
- In dwellings equipped with gas appliances or a fireplace or an attached garage, carbon monoxide detectors shall be located outside each sleeping area (e.g., hallways) and on each floor level. [CRC 315.2.2 & 315.2.3.2]
- When remodeling includes removal of existing wall or ceiling finishes, the alarms shall be hardwired and the smoke alarms interconnected. New hardwired alarms must be on an AFCI-protected circuit. For projects with no removal of floor or ceiling finishes, or with no accessible attic or crawlspace, battery-powered alarms are acceptable. [CRC 314.4&5, 315.2.4]

KITCHENS

Electrical - Lighting:

- 50% of the lighting (based on wattage) shall be high efficacy (internal cabinet lighting is exempt). [CNC 150.0(k)3A]
- High efficacy and low efficacy light fixtures must be controlled separately. [CNC 150.0(k)2]
- Up to 50 watts for houses ≤ 2,500 sq. ft., or 100 watts for houses > 2,500 sq. ft. may be exempted from the 50% rule if all kitchen lighting is controlled by vacancy sensors. [CNC 150.0(k)3 exception]
- Blank covers are counted as 180 watts of low-efficacy lighting. [CNC 150.0(k)1C]
- Areas adjacent to the kitchen are considered part of the kitchen if the lighting is on the same switch. [CNC 150.0(k)3B]

Electrical – Branch Circuits:

- A minimum of two 20-amp small appliance branch circuits are required to serve countertop and wall receptacles in the kitchen, pantry and dining room [CEC 210.11A]. No built-in appliances are allowed on these circuits (except an electric clock or the ignition of a gas range).
- Individual (dedicated) circuits are required for garbage disposals, microwaves, compactors, and dishwashers.
KITCHENS (Continued)

**Electrical – Receptacles:**

- Receptacles shall be installed at each countertop space ≥ 12 in. in width [CEC 210.52C1]. Receptacles shall be installed so that no point along the wall line is more than 24 inches horizontally from an outlet in that space [CEC 210.52C1]. The maximum spacing between receptacles, measured on the wall-countertop line, is 48 inches.

- Corner sinks separate the space on each side when the distance between the corner and the sink is < 18 inches. If ≥ 18 in., the 2 ft. / 4 ft. rule continues behind the sink [CEC 210.52C4].
- All receptacles serving kitchen countertop surfaces shall have GFCI protection [210.8A6].
- The 24-inch/48-inch rule does not apply to island or peninsular countertops. These require only one receptacle per countertop space, regardless of length [CEC 210.52C2&3]. An island or peninsula is considered divided into separate countertop spaces when a sink or range is installed and does not have 12 inches of space behind it. See the diagram above.
- On islands and peninsulas only, receptacles are allowed on the side of the cabinet, not more than 12 inches below the countertop and with no overhanging countertop greater than 6 inches [CEC 210.52C5 exc.]
- Bar-type counters are considered wall space. Wall spaces ≥ 2 ft. require receptacles so that no portion of the wall is more than 6 ft. from a receptacle outlet, measured at the floor/wall line [CEC 210.52A1&2].
- Countertop receptacles shall not be installed in a face up position [CEC 406.5E]. Listed “pop-up” receptacles are allowed [CEC 210.52C5]. Receptacles or strip outlets can be installed on the underside of the cabinet above the countertop if within 20 inches of the countertop.
- A range hood / microwave combination can be cord-and-plug connected if the circuit is an individual (dedicated) branch circuit. The receptacle outlet shall be a single type, not a duplex receptacle that would accept two plugs [CEC 422.16B4].
**KITCHENS (Continued)**

**Plumbing:**
- Dishwashers shall be connected with an approved drainage air gap devices located above the flood level rim of the sink [CPC 807.4].
- Newly installed kitchen faucets shall not exceed 1.8 gallons per minute [GRN 4.303.1.4.4]. **All Existing plumbing fixtures not included in the scope of new work shall be replaced if necessary to comply with SB407 Plumbing Fixtures Replacement requirements – See Water Conservation Certification Form.**
- All piping ¾ inch or more in diameter and all hot water pipes from the heating source to the kitchen fixtures must be insulated with min. 1-inch thick insulation [CNC 150.0(j)2]. Existing inaccessible piping does not require insulation.

**Mechanical:**
- A Mechanical permit is required to replace a kitchen exhaust hood that includes an outside air vent. The vent must terminate on the building exterior at least 3 ft. from other openings into the building [CMC504.5]. Flexible (corrugated) ducting is not allowed for exhaust hoods [CMC 504.2].

**BATHROOMS**

**Bath Electrical:**
- A minimum of one luminaire in each bathroom shall be high efficacy. All other lighting shall be high efficacy or controlled by a manual-on automatic-off vacancy sensor switch. High efficacy light fixtures and low efficacy light fixtures must be controlled separately [CNC 150.0(k)2].
- All receptacle outlets shall be GFCI protected [CEC 210.8A1]. A receptacle outlet is required within 3 feet of each wash basin location. It may be on the wall, or an adjacent partition, or on the face of side of the cabinet not more than 12 inches below the top of the basin [CEC 210.52D]. Receptacles cannot be face-up in a vanity surface; listed pop-up receptacles are allowed [CEC 406.5E & 210.52D].
- A minimum of one 20-amp circuit is required for the receptacles in the bathroom(s). This circuit can have no other outlets, including lights [CEC 210.11C3]. If a 20-amp circuit serves only one (1) bathroom, lights and fans can be on the same circuit with the receptacles in that bathroom [CEC 210.11C3 exception].
- Hydro-massage tubs require an individual (dedicated) branch circuit and GFCI protection [CEC 680.71]. An access door is required and must be large enough to remove the motor and pump. Cord-connected equipment must have the receptacle facing the opening and no more than one foot behind the access hatch [CEC 680.73].
- Recessed light fixtures in shower enclosures must be listed for a damp or wet location [CEC 410.10A]
- Pendant light fixtures, track lights, and paddle fans shall not be installed lower than 8 feet above the flood-level rim of a tub, including the area 3 feet past the edge of the tub [CEC 410.10D].
- Electrical panels shall not be installed in bathrooms [CEC 240.24E].
- Switches and receptacles are not allowed in bathtub or shower spaces [CEC 404.4C & 406.9C].
BATHROOMS (Continued)

Bathroom Plumbing:
- All piping ¾ inch or more in diameter and all hot water pipes associated with a recirculation system must be insulated with min. 1-inch thick insulation. Existing inaccessible piping does not require insulation [CNC 150.0(j)2].
- Toilets and bidets require a minimum 15 inches of clearance from the center line of the bowl to each side, and 24 inches of clearance from the front edge of the bowl [CPC 402.5]. The maximum flow rate is 1.28 GPF [CPC 403.2.1].
- The closet flange cannot be below the finished floor height [CPC 401.1].
- Showers require a minimum 2 inch drain and trap [CPC Table 702.1].
- All shower compartments shall have a minimum finished interior of 1024 square inches and shall be capable of encompassing a 30 inch diameter circle [CPC 408.6]. The curb may encroach on these size requirements. All surfaces shall be waterproof up to 72 inches above the drain inlet [CRC R307.2]. Thresholds shall be of sufficient width to accommodate a minimum 22 inch clear opening [CPC 408.5].
- Safety glass (tempered or laminated) is required for all glass shower doors and partitions and for windows in walls facing the shower and located less than 60 inches above the standing surface of the shower/tub and within 60 inches horizontally [CRC R308.4.1&5].
- The maximum water temperature to a tub is 120°F. The water heater thermostat cannot be used as the control for this temperature. Showers & tub-shower combinations shall be provided with anti-scald control valves that are either pressure-balanced, thermostatic, or combination pressure-balanced thermostatic [CPC 408.3].
- Newly installed plumbing fixtures shall be water-conserving in compliance with the California Plumbing Code and Green Building Code. Water closets shall not exceed 1.28 gallons per flush, showerheads shall not exceed 2.0 GPM and new lavatory faucets shall not exceed 1.5 GPM. **All Existing plumbing fixtures not included in the scope of new work shall be replaced if necessary to comply with SB407 Plumbing Fixtures Replacement requirements – See Water Conservation Certification Form.

Mechanical:
- Mechanical ventilation is required in all bathrooms. The fan must be a minimum 50 CFM and be separately switched from the lighting. The duct must terminate on the exterior not less than 3 feet from openings into the building [CRC R303.3.1]. Half baths with no tub or shower do not require mechanical ventilation if they are provided with an openable window [CRC R303.3].

Tile & Backing:
- Water-resistant gypsum board (purple board) can be used as a tile backer board in areas that are not subject to direct exposure to water or high humidity [CRC R702.3.8]. Examples would be a wall behind a toilet or above a vanity countertop. It cannot be used in a shower except behind a water-resistive membrane with mortar bed and lath. Cement board, fiber-cement or glass mat gypsum backers can be used as a backer board for tile in tub and shower areas and wall and ceiling panels in shower areas [CRC R702.4.1].
Laundry Rooms

Electrical:
- All altered lighting in laundry rooms, garages, and utility rooms shall be high-efficacy and be controlled by vacancy sensors [CNC 150.0(k)6].
- All 125-volt receptacles within 6 ft. of laundry sinks require GFCI protection. This applies to the washer receptacle when within 6 ft. of the laundry sink [CEC 210.8A7].
- A separate 20-amp circuit is required for the laundry equipment. The lights and other receptacles in the room cannot be on that circuit [CEC 210C2].

Plumbing:
- Clothes washer standpipes must be 2-inch diameter and readily accessible. The trap must be roughed in 6 – 18 inches above the floor; the standpipe must be 18 – 30 inches above the trap [CPC 804.1].

Mechanical:
- Clothes dryers in closets require a minimum of 100 sq. in. of makeup air, which can be supplied by louvers or undercutting the door [CMC 504.3.1].
- Dryer ducts must be smooth-walled metal 4-inch diameter and not more than 14 feet in length. Deduct 2 ft. for each 90° bend in excess of 2 [CMC 504.3.1.1&2].
- Ducts may not pass through plenums or be shared with other systems or vents. They cannot be connected with screws that penetrate the duct interior [CMC 504.3].
- Dryer ducts must terminate on the building exterior in a backdraft damper. Screens or louvers cannot be installed [CMC 504.3].
- Flexible transition ducts (connectors) between the dryer and the metal duct are allowed in lengths up to 6 feet and cannot be concealed within construction [CMC 504.3.1.1 exception]. They must be UL listed and labeled (L&L) as dryer transition ducts, and cannot be plastic.