



# RESIDENTIAL BATHROOM REMODEL

THESE REQUIREMENTS APPLY TO BUILDING PERMITS SUBMITTED ON OR AFTER JANUARY 1, 2023

---

## BUILDING DIVISION REQUIREMENTS

A permit is required for bathroom remodels that include the replacement of the tub/shower enclosure. A permit is not required for replacement of plumbing fixtures (sink or toilet) in the same location. If a permit is required, it shall be obtained prior to the start of the remodel.

**BEFORE YOU BEGIN YOUR CONSTRUCTION PROJECT, take photos of the entire bathroom. The photos shall show the existing configuration of the bathroom. Please have the photos ready at the first inspection.**

Following is a listing of the general requirements based on the 2022 California Building Code, 2022 California Residential Code, 2022 California Electrical Code, 2022 California Plumbing Code, 2022 California Green Building Standards (CalGreen), and 2022 California Energy Efficiency Standards. This brochure is intended to provide general information, contact the Building Safety Division for any questions or additional information.

## Aging-in-Place Design & Fall Prevention

At least one entry level bathroom in new dwellings shall have grab bar reinforcement except one and two family dwellings constructed under the 2019 CBC/CRC or earlier, covered multifamily dwellings designed and constructed in accordance with CBC Chapter 11A & public house and places of public accommodation required to comply with CBC Chapter 11B.

### 2022 CRC327.1.1 Reinforcement for Grab Bars Specifics

- 1.Reinforcement shall be 2 x 8 solid lumber or other approved material located between 32” to 39-1/4” above finish floor.
- 2.Water closet reinforcement shall be installed on both side walls of the fixture or on one side wall and the back wall.
- 3.Bathtub and shower/tub reinforcement shall be continuous on each end of the bathtub and the back wall. Additionally, back wall reinforcement for a lower grab bar shall be provided with bottom edge located no more than 6” above the bathtub rim.

(2022 CRC R327.1)

## Ceiling Height

Bathrooms, toilet rooms and laundry rooms shall have a ceiling height of not less than 6’-8”.

### Exceptions:

- 1.For rooms with sloped ceilings, the required floor area of the room shall have a ceiling height of not less than 5 feet and not less than 50% of the required floor area shall have a sloped ceiling height of not less than 7 feet
- 2.The ceiling height above bathroom and toilet room fixtures shall be such that fixture is capable of being used for it’s intended purpose. A shower or a tub equipped with a showerhead shall have a ceiling height of not less than 6’-8” above an area of not less than 30” by 30” at the showerhead.

(2022 CRC R305.1)

## General Requirements:

### Electrical and Lighting Requirements

- All receptacles shall be GFCI protected and tamper-resistant (TR). The bathroom shall have a dedicated 20-amp circuit. At least one receptacle shall be installed within 3’ of edge of sink no more than 12” below sink or countertop. (CEC 210.8(A)(1), CEC 406.12, 210.11(C)( 3), (CEC 210.51(D)

- Energy Star exhaust fans ducted to outside with a minimum ventilation rate of 50 CFM intermittent operation and 20 CFM continuous operation are required in all bathrooms, even if an operable window is installed. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a manual or automatic humidity control capable of adjustment between  $\leq 50\%$  to 80% maximum. A readily accessible manual control designed to be operated as needed or an automatic control shall be provided for intermittent operations. (CMC 403.7, CMC 405.3, 405.3.1, CRC R303.3.1, CEES 150.0(k), 150.0(o)1Giii)
- Lighting fixtures located within 3 feet horizontally and 8 feet vertically of the bathtub rim or shower stall threshold shall be listed for a damp location, or listed for wet locations where subject to shower spray. (CEC 410.10(D))
- Receptacles installed in a wet location shall have a weather proof enclosure. (CEC 406.9(B))
- Receptacles shall not be installed within or directly over a bathtub or shower stall. (CEC 406.9(C))
- All installed lighting fixtures shall be high efficacy installed in accordance with CEES Table 150.0-A and 150.0(k). (CEES 150.0(k)(1)(A))
- At least one light fixture shall be controlled by an occupancy or vacancy sensor switch providing automatic off functionality. (CEES 150.0(k)(2)(E))
- Screw base lamps shall contain shall contain lamps that comply with Reference Joint Appendix JA8.
- Recessed lighting shall be installed (air tight), be sealed/caulked between the fixture housing and ceiling, shall not contain a screw base socket and meet the clearance and installation requirements of CEC 410.116 (CEES 150.0(k)(1)( C )

## Tempered Glazing

Tempered glazing shall be installed in the locations listed below. Tempered glazing shall be permanently identified by a manufacturer marking that is permanently applied and cannot be removed without being destroyed (e.g. sand blasted, acid etched, ceramic fired, laser etched, or embossed).

- Within 60 inches of a tub/shower/sauna/steam room where the glazing is less than 60 inches above the walking surface.
- Glazing within 24 inches of either side of the door in the plane of the door in a closed position.
- Glazing is on a wall less than 180 degrees from the plane of the door in a closed position and within 24 inches of the hinge side of in-swinging door.

(CBC 2406.4.5 CRC R308.4.5 and R308.4.1)

## Tub/Shower Requirements

- The mixing valve in a shower (including over a tub) shall be pressure balancing set at a maximum 120° F. The water-filler valve in bathtubs/whirlpools shall have a temperature limiting device set at a maximum of 120° F. The water heater thermostat cannot be used to meet these provisions. (CPC 408.3, 409.4)
- New or reconfigured shower stalls shall be a minimum finished interior of 1,024 square inches, be capable of encompassing a 30 inch diameter circle. Any doors shall swing out of the enclosure have a clear opening of 22 inches minimum. (CPC 408.5, 408.6)
- Shower stalls and bathtubs with shower heads installed, shall have walls finished with a non-absorbent surface for a minimum of 6 feet above the floor. (CRC R307.2)
- Hydro-massage tubs (i.e. Jacuzzi tubs) and their associated electrical components shall be on an individual branch circuit(s) and protected by a readily accessible ground-fault circuit interrupter. All 125-volt, single-phase receptacles not exceeding 30 amperes and located within 6 ft measured horizontally of the inside walls of a hydromassage tub shall be protected by

a ground-fault circuit interrupter. All metal cables, fittings, piping, or other metal surfaces, within 5 feet of the inside wall of the Hydro-massage tub shall be properly bonded with a minimum #8 AWG bare copper wire and the bonding shall be accessible. (CEC 680.71)

- Underlayment material used as backers for wall tile or solid surface material in tub and shower enclosures shall be either glass mat gypsum backing, fiber-reinforced gypsum panels, non-asbestos fiber-cement/fiber mat back board. (CRC 702.4.2)
- Water-resistant gypsum board (i.e. purple board) may be used when attached directly to studs, overlaid with minimum Grade B building paper and wire lath. Tile shall be attached to the wire lath.  
But shall not be used over a vapor retarder in a shower or bathtub compartment or where there will be direct exposure to water or in areas subject to high humidity such as in a steam room. (CBC 2509.2, CBC 2509.3 and CRC R702.3.7)
- Shower floors shall be lined with an approved shower pan or an on-site built watertight approved lining (i.e. hot mop). On-site built shower linings shall extend a minimum of 3 inches vertically up the wall and shall be sloped  $\frac{1}{4}$ " per foot to weep holes. (CPC 408.7)
- A curb is required at showers. It shall be a minimum of 1 inch above the shower floor and between 2 inches and 9 inches above the top of the drain. A watertight nailing flange that extends a minimum of 1 inch high shall be installed where the shower floor meets the vertical surface of the shower compartment. The finished floor of the shower compartment shall be uniformly sloped between  $\frac{1}{8}$ " and  $\frac{1}{2}$ " per foot towards to the drain. (CPC 408.5)
- If installing a tub next to an existing fire rated wall/walls (i.e. between apartment units or townhomes, attached ADU, etc.) the integrity of the fire rated wall/walls construction shall be maintained (i.e., fire-blocking shall be installed in the wall/walls per R302.11 and R302.11.1 of the CRC and shall be constructed per CRC 302 Fire-Resistant Construction. Continuity of such fire-resistance-rated wall/walls shall be per R302.2.3 of the CRC. (i.e., continuity of protection shall be full height from foundation to underside of roof sheathing, etc.)
- A Fire Permit "FP" shall be required when remodeling structures that have existing fire sprinklers. A fire inspection shall be required prior to a building rough inspection all trades and a fire final inspection shall be required before a building final can be signed-off. Fire inspectors shall sign-off all fire inspections on the building permit.

## Water Closet Requirements

- The water closet shall have a clearance of 30 inches wide (15 inches on center) and 24 inches in front. (CPC 402.5)
- Where the water closet (or other plumbing fixture) comes into contact with the wall or floor, the joint shall be caulked and sealed to be watertight. (CPC 402.2)

## Water Efficient Plumbing Fixtures (CalGreen 301.1.1, 4.303)

Residential buildings undergoing permitted alterations, additions, or remodels are required to replace all non-compliant plumbing fixtures (based on water efficiency) throughout the house with water-conserving plumbing fixtures. The following table shows what is considered to be a non-compliant plumbing fixture and the current water efficiency standards for various plumbing fixtures. All existing non-compliant plumbing fixtures shall be replaced with fixtures meeting the current standards.

Plumbing Fixture	Non-Complaint Plumbing Fixture	Current Standard for the Maximum Flow Rate of Newly Installed Plumbing Fixtures
Water Closet (Toilet)	Greater than 1.6 gallons/flush	1.28 gallons/flush
Showerhead	Greater than 2.5 gallons/minute	1.8 gallons/minute at 80 psi
Faucet - Bathroom	Greater than 2.2 gallons/minute	1.2 gallons/minute at 60 psi
Faucet - Kitchen	Greater than 2.2 gallons/minute	1.8 gallons/minute at 60 psi (average)

*Residential building constructed after January 1, 1994 are exempt from this requirement.*

## Smoke and Carbon Monoxide Alarms (CBC 907.2.10, CRC 314 and 315)

Smoke alarms shall be installed on the ceiling or wall (between 4” and 12” of the ceiling) in all sleeping rooms, each area/hallway adjacent to sleeping rooms, each story of the building, and in any basement. Smoke alarms shall be replaced 10 years after the date of manufacture listed on the alarm (if no date is listed the alarm shall be replaced). Newly installed smoke alarms shall have a 10-year battery.

Carbon monoxide (CO) alarms shall be installed on the ceiling or wall (above the door header) in each area/hallway adjacent to sleeping rooms, each occupiable story, and within a bedroom if the bedroom or attached bathroom contains a fuel-burning appliance. CO alarms are not required if there is no fuel-burning appliance or fireplace in the house and where the garage is detached from the house.

## Curbless Showers (CPC 408.5, CRC R101.2)

Curbless showers that alter subfloor framing in ANY WAY require framing plans. Framing and floor plans are required. Curbless showers shall have a linear drain at the shower entrance in addition to the required primary drain. Both drains shall be individually trapped and vented. The entire bathroom is considered a wet location. The waterproof membrane under the shower shall extend beyond the shower into the entire bathroom area.

The inside of the shower shall have a floor slope of a minimum ¼ inch per foot and a maximum of ½ inch per foot toward the primary drain.

## Additional Scope (CRC 310.2)

When the scope of work exceeds a bathroom remodel, such as removing sheetrock throughout the house and bringing the interior down to the studs, bedroom windows are to be lowered to meet the requirements for emergency escape and rescue openings. Non-compliant windows will need to be replaced and meet Title 24 requirements. Note that any added scope shall be submitted to the Building Department for review and approval.

## PERMIT PROCESS

### Building Permit Review

1. Upload plans for bathroom remodels at [E-OneStop Online Services](#).
2. To schedule an over-the-counter appointment, please email [pcappointment@sunnyvale.ca.gov](mailto:pcappointment@sunnyvale.ca.gov) after you have uploaded your plans.

### Inspections

1. As stated above, have the photos of the original bathroom available to give to the inspector during the first inspection.

### Building Permit Application Requirements

- An approval letter from the Homeowner’s Association (if applicable).
- A completed Building and Fire Permit Application (available at the [Permit Center, Application, Fees and Forms](#)).
- Provide a floor plan showing the existing and proposed conditions, including any affected walls.

2. The number of inspections required depends on the type of underlayment used in the tub/shower enclosure and the scope of the project. Following are the minimum inspections required; information about additional required inspections can be provided when the building permit is issued.
3. A rough plumbing and electrical inspection should be scheduled for the tub/shower valve and electrical wiring prior to the installation of any wallboard.
4. The next inspections scheduled should be for the underlayment and the shower pan test, if applicable.
5. Fire inspections shall be completed prior to rough inspection and final inspection.
6. The final inspection should be scheduled after all the work is completed.

