



City of Vacaville
Community Development
Building Division

Residential Bathroom Remodel

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.

Following is a listing of the general requirements based on the 2016 California Building Code, 2016 California Residential Code, 2016 California Electrical Code, 2016 California Plumbing Code, 2016 California Energy Efficiency Standards, and the California Civil Code. This brochure is intended to provide general information, contact the Building Safety Division for any questions or additional information.

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. (CBC 1210 and CRC R307.2)
- Hydro-massage tubs (i.e. Jacuzzi tubs) shall have access to the motor, be supplied by a GFCI protected dedicated circuit, and be listed by a recognized testing agency (i.e. UL). 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. Hydro-massage tubs shall be bonded with a minimum #8 AWG bare copper wire and the bonding shall be accessible. (CEC 680.70)
- Underlayment material used as backers for wall tile or solid surface material in tub and shower enclosures shall be either glass mat/fiber-reinforced gypsum backing panels (i.e. DensShield, Dens Armor Plus), non-asbestos fiber-cement mat back board (i.e. Hardibacker, cement board). All materials shall be installed in accordance with the manufacturer's recommendations.

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 (CBC 2509 and CRC R702.4)

- 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 ¼" per foot to weep holes. (CPC 408.7)
- When a curb is provided at a shower, 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 ¼" and ½" per foot towards to the drain. (CPC 408.5)

Where a curb is not provided at the shower compartment, the entire bathroom shall be considered a wet location. The flooring in the entire bathroom shall comply with the water proofing requirements described above for shower floors and all lighting fixtures shall be approved for wet locations.

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)

Tempered Glazing (CBC 2406.4, 2403.1 and CRC 308.1, R308.4)

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 a portion of wall enclosing a tub/shower where the bottom exposed edge of the glazing is less than 60 inches above the standing surface and drain inlet.
- Within 60 inches of a tub/shower where the glazing is less than 60 inches above the walking surface.
- Glazing on the hinge-side of an in-swinging door that is installed perpendicular to a door in a closed position and within 24 inches of the door.

Electrical/Lighting Requirements

- All receptacles shall be GFCI protected and tamper resistant (TR). If any new/additional outlets are installed, the bathroom shall have a dedicated 20amp circuit. (CEC 210.8, 210.11, 406.11)
- Exhaust fans with minimum ventilation rate of 50 CFM are required in all bathrooms, even if an operable window is installed. Exhaust fans and lighting shall have separate control switches (even if a combination unit is installed). The exhaust fan may need to be supplied by a GFCI protected circuit based on the manufacturer's requirements. (CEES 150.0 (k), 150.0(o))
- 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)
- All installed lighting fixtures shall be high efficiency.
At least one light fixture shall be controlled by a vacancy sensor switch that requires a manual on activation (does not automatically turn on) and automatically turns off within 30 minutes after the room is vacated. All other light fixtures shall be controlled by a vacancy sensor or dimmer.

All fixtures shall contain bulbs that are labeled as JA8-2016 (JA8-2016-E for sealed lens or recessed fixture). Screw base bulbs are permitted, except in recessed lighting fixtures.

Recessed lighting shall be listed as IC (zero clearance to insulation) and AT (air tight), be sealed/caulked between the fixture housing and ceiling, shall not contain a screw base socket, and contain bulbs marked with JA8-2016-E efficiency label. (CEES 150.0 (k))

Water Efficient Plumbing Fixtures (California Civil Code 1101.4(a))

The California Civil Code requires that all existing noncompliant plumbing fixtures (based on water efficiency) throughout the house be upgraded whenever a building permit is issued for remodeling improvements. Residential building constructed after January 1, 1994 are exempt from this requirement. The following table shows the fixtures that are considered to be non-complaint and the type of water conserving plumbing fixture that should be installed:

2016 California Green Building Standards Code, Section 4.303

Type of Fixture	Non-Complaint Plumbing Fixture	Required Water-Conserving Plumbing Fixture (maximum flow-rates)
Water Closet (Toilet)	Greater than 1.6 gallons/flush	1.28 gallons/flush
Showerhead	Greater than 2.5 gallons/minute	2.0 gallons/minute at 80psi
Faucet - Bathroom	Greater than 2.2 gallons/minute	1.2 gallons/minute at 60psi
Faucet - Kitchen	Greater than 2.2 gallons/minute	1.8 gallons/minute at 60psi

Smoke and Carbon Monoxide Alarms (CBC 907.2.11, CRC 314, CRC 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 10year battery.

Carbon monoxide alarms shall be installed on the ceiling or wall (above the door header) in each area/hallway adjacent to sleeping rooms, each story of the building, and any basement. Carbon monoxide alarms are not required if there is no fuel burning appliances and where the garage is detached from the house.