

RESIDENTIAL BATHROOM REMODEL

Introduction

This information is intended to provide general guidance on a bathroom remodel for a single family residences.

This handout summarizes information contained in the 2016 California Residential Code (CRC) 2016 California Electrical Code (CEC) 2016 California Plumbing Code (CPC) 2016 California Energy Code (CEnC) 2016 California Green Code (CalGreen) 2016 California Mechanical Code (CMC). If conditions are encountered that are not covered, please consult the appropriate code books.

- A building permit is required when alterations to the framing, electrical, mechanical, or plumbing systems are to be done.

Before plan review approval and issuance of a building permit, applicant shall submit three (3) sets of plans (minimum size 11"x 17"), which are drawn to scale (minimum 1/4":1 ft.), readable, legible, and include the following information:

Title Sheet including the following:

- Project address, and Owner contact information.
- Contact information and signature of person preparing the plans.
- Sheet index.
- Scope of work statement.
- Building data like, type of construction, stories, square footage, and sprinkler location.
- Vicinity map.
- Site Plan/ Plot plan, specify the lot dimensions and distances from the building to property lines and projections. (For addition only)

Existing Floor Plan for a floor/story where the remodeled bathroom is located. Specify the existing use of all rooms and areas.

Proposed Bathroom Floor Plan showing type and location of proposed interior cabinetry, countertops, plumbing fixtures, etc. Include construction legend identifying and describing new work and clearly showing the difference between the existing and proposed conditions.

Electrical Plan Lighting / Reflected Ceiling Plan. (may be combined with floor plan).

Construction details for any new/reframed interior walls, interior/ exterior openings, etc.

Minimum Requirements for bathrooms electrical, mechanical, and plumbing systems.

Electrical

- All receptacle outlets serving a bathroom of dwelling units to be 20 amp GFCI protected. [CEC 210.11(C) (3)]
- All 125volt, 15-ampere and 20-ampere receptacles shall be listed tamper resistant receptacle if under 5'6". [CEC 406.12]
- Receptacles are to be located within 36" from the edge of the sink, and not lower than 12" below the basin. [CEC 210.52 (D)]
- All installed luminaires shall be high efficacy; either listed by source type or by being JA8-2016 certified and labeled.
- Screw based luminaires shall meet all of the following:
 - The luminaires shall not be recessed down light luminaires in ceilings.
 - The luminaires shall contain lamps that comply with Reference Joint Appendix JA8; and the installed lamps shall be marked with JA8-2016 or JA8-2016-E.
- Recessed light fixtures in insulated ceilings shall be approved, listed, zero-clearance insulation cover (IC) type, Certified Air Tight (ASTM E283) and sealed with a gasket or caulked between housing and ceiling, and shall be certified to comply with Section 110.9 and allow ballast maintenance and replacement to be readily accessible to building occupants from below. [CEnC 150.0(k)1C]
- Vacancy sensor is required for at least one luminaire in each bathroom.
- For occupancies with a horizontal rated separation (floor/ceiling assembly), the recessed fixtures must be protected to the rating of the separation (1 hour) or be listed to the required protection. This generally applied to residential condominium construction where units are above or below other units.

Mechanical

- Exhaust system vented to outdoors shall have a minimum exhaust rate of 50 CFM.(CMC 403.7)
- Exhaust fans shall be Energy Star compliant.

- Exhaust fans shall be ducted to the outside of the building, and shall have a humidity control capable of adjustment between a relative humidity range of min 50% - max 80%. (CEnC 4.506)

Plumbing

- Faucets shall not have a flow rate of greater than 1.2 gpm at 60 psi. (CGC 4.303.1.4.1)
- Water closets 1.28 GPF. (CGC 4.303.1.1)
- Showerhead(s) shall not have a flow rate of greater than 2.0 gpm at 80 psi. (CGC 4.303.1.3.2)
- Shower door shall swing out and have a min clear width of 22". (CPC 408.5)
- Shower compartments shall have a minimum finished interior of 1024 square inches and shall also be capable of encompassing a 30" circle. (CPC 408.6)

Smoke & Carbon Monoxide Alarms

- Show location(s) of interconnected hard-wired "SMOKE ALARM" with battery backup in the following: [R314]
 - In each sleeping room.
 - Outside of each separate sleeping area in the immediate vicinity of the bedrooms.
 - On each additional story of the dwelling, including basements and habitable attics, but not including crawl spaces and uninhabitable attics.
 - Provide a note: "SMOKE ALARM shall be interconnected hard-wired with battery backup."
 - Battery smoke alarm permitted in existing buildings where no construction is taking place.
- For buildings with fuel-burning appliances and/or attached garages, provide an approved CARBON MONOXIDE ALARM at: [R315.1].
 - Outside of each separate sleeping area in the immediate vicinity of the bedrooms
 - On every level of a dwelling unit including basements.
 - Provide a note: "CARBON MONOXIDE ALARM shall be interconnected hard-wired with battery backup."
 - Battery carbon monoxide alarm is permitted in existing dwelling units where no construction is taking place.

Windows

- Exterior windows/doors added and/or replaced as part of the remodeling project shall be clearly identified on the plans and shall have a fenestration U-Factor and Solar Heat Gain Coefficient SHGC of 0.25 or less. [CEnC Table 150.1-A]
- All fenestration NFRC labels shall remain available for inspection.
- Windows under 60" and within 60" of a wet location must be tempered. (CRC R308.4.5)