



BATHROOM REMODEL Shower/Tub Replacement

INFORMATION GUIDELINE

October 2011

City of Concord • Building Division • 1950 Parkside Drive, MS/51 • Concord, CA 94519 • (925) 671-3107 • Fax (925) 680-4877

Water Closets:

- ◆ Water Closets shall be located in a space not less than 30-inch clear width. The clear space in front of the toilet shall not be less than 24 inches. The center of the toilet shall not be located closer than 15 inches to an adjacent obstruction or wall. (2010 CPC Section 407.5)

Ceiling Height:

- ◆ Required ceiling height is 7 feet minimum.
- ◆ If the bathroom has a sloped ceiling, the 7' ceiling height is required in only one-half the area thereof. No portion of the room measuring less than 5' from the finished floor to the finished ceiling shall be included in any computation of the minimum area thereof.

Light and Ventilation:

- ◆ Remodel of existing dwellings prior to January 1, 2008: Bathrooms shall be provided with natural ventilation by means of operable exterior openings with an area not less than 4% of the floor area with a minimum of 1½ s.f. Alternatively, provide a mechanical ventilation system with 5 air changes per hour, with point of exhaust at least 3' from openings into building. Bathrooms containing only a water closet and/or lavatory may use a re-circulating fan that only removes odors.
- ◆ New Construction: Rooms containing bathtubs, showers, spas and similar bathing fixtures shall be mechanically ventilated in accordance with the 2010 CMC (2010 CBC Section 1203.4.2.1)

Required Electrical Outlets:

- ◆ For bathroom remodels where basin cabinets are completely removed and reinstalled or replaced, an electrical outlet shall be provided at each basin within 36 inches as required under the *2010 California Electrical Code*. Where more than one basin is provided, a receptacle outlet shall be provided at each separate basin. One outlet may serve two basins provided the outlet is located between the two basins and the basins share a common counter top. The outlet serving the basin shall be located within the vertical projection of the counter space.

GFCI Protected Outlets:

- ◆ Ground-Fault Circuit Interrupters are required at each re-located or new receptacle outlet within bathrooms. New outlets are required to be on a dedicated 20amp circuit. When existing outlets are removed from their outlet box, the replacement outlet shall be GFCI protected. Non-GFCI-protected outlets shall not be reused. GFCI protection may be accomplished by use of either listed GFCI outlets or by listed GFCI breakers protecting the circuit associated with the outlets in the bathroom.

Showers (including tub/showers):

- ◆ Showers shall be at least 1024 square inches in floor area, and shall be capable of encompassing a 30" circle. (CPC Section 411.7)
- ◆ Showers and tubs with showers require a non-absorbent surface up to 70" above the drain inlet. (CPC Section 411.7)
- ◆ Shower doors shall open outward and have a minimum clear door opening width of 22 inches with a minimum 2" to a maximum 9" dam. (CPC Section 411.6)
- ◆ Where shower valves are replaced or are new, they must be either of the pressure balancing or the thermostatic mixing valve type.
- ◆ Concealed slip joint traps and overflows shall have access panels or utility space at least 12" in dimension and so arranged without obstructions as to make such connections accessible for inspection and repair. (2010 CPC Section 404.2)
- ◆ Shower pans can be replaced by several approved types: (2010 CPC Section 411.8)
- ◆ Fiberglass and cast stone types must be labeled and installed per CPC or IAPMO.

- ◆ Most pans are required to be mechanically secured in place (screws or nails depending on installation instructions).
- ◆ Job-formed pans composed of flexible type materials such as Composite, Choraloy and Composeal must be labeled by CPC, IAPMO or ICC and installed per the approval.
- ◆ Job-formed pans shall slope ¼" per foot toward the drain
- ◆ Some brands require 15# felt under line. *Check Your Listing.*
- ◆ Some brands require that their preformed corners are used. *Check Your Listing.*
- ◆ **INSPECTIONS:** After the shower drain is installed and connected to the waste. The drain shall be plugged and the pan filled to the dam to test the drain and pan installation. The installation shall not leak regardless of location.

Water Supply:

- ◆ Valve assembly must be blocked and strapped.
- ◆ Shower head wing shall be screwed (not nailed) to the blocking.
- ◆ Dissimilar materials must have dielectric fittings. (2010 CPC Section 316.2.4)
- ◆ Shower and tub/shower combinations shall be provide with individual control valves of pressure balance or thermostatic mixing valve type. Existing valve in good condition may remain. (2010 CPC Section 418.0)

Sub-floor Repair or Replacement:

- ◆ If you have damage under the tub or shower, replace or repair damage per your pest control report and the Building Code.
- ◆ Call for an inspection of repair before covering.

Plywood/Board Damage:

- ◆ If the plywood/board structural floor is damaged, you can replace the damaged portion only by blocking all edges of the new plywood/boards and providing new equal sized material.
- ◆ Nail according to Nailing Schedule (2010 CBC Table 2304.9.1).
- ◆ If the damage extends under the floor , follow steps above for sub-floor repair.
- ◆ No inspection is required for removal or replacement of underlayment.

Framing:

- ◆ All framing shall be replaced per 2010 CBC and pest control report.
- ◆ **INSPECTION:** After framing is replaced, valves are replaced (optional) and pan is installed and full of water.
 - ◆ Frame inspection involving tubs need to be made **before** tub is installed since we cannot see past the tub perimeter blocking.
- ◆ Block tub at perimeter with typical 2x4 blocking
- ◆ Secure tub to the studs as needed.
- ◆ Call for another inspection on tubs after installed (before sheetrock).
- ◆ Outside wall Shower/tub replacement must have R-13 minimum in walls.
- ◆ Window replacement must be dual-pane with a U-Value of .75 or lower with the U-Value stated on the window.
 - If window is in shower enclosure, window must be tempered if exposed edge of glazing is less than 60" above a standing surface and drain inlet. (CBC 2406.4 Item #5)

Wetwalls:

Moisture Resistant Gypsum Board (blue/purple board can be used for solid surface materials only)

Backing that is permitted to be used as a base for wall tiles and panels in showers are covered as follows:

- All products must extend at least 70" above the drain inlet.
- All products must comply with ASTM C 1178, C 1288 or C 1325.
- All products must be installed in accordance with the manufacturer's installation instructions.

A. Fiberglass Mat Backer Board – (DensShield, GlasRoc or other approved products)

- Do not install a water-resistive moisture barrier behind Fiberglass Mat Backer Board.
- **INSPECTION:** Required after completion of taping.

B. Cement and fiber-cement Backer Boards (Hardi-backer, Glas-crete, Durock)

- ◆ A water-resistive moisture barrier is required behind cement board (such as 15# roofing felt or Grade D building paper).
- ◆ **INSPECTION**: Required after mesh tape is applied.

C. Original Mortar Backed Ceramic Tile (Lath and plaster)

- ◆ A water-resistive permeable barrier with a performance of one layer of No. 15 asphalt felt, or Type 1 felt or other approved materials is to be installed behind lath.
- ◆ A water-resistive permeable barrier with a performance of at least to two layers Grade D paper is required behind lath applied over wood base sheathing.
- ◆ **INSPECTION**: Required prior to mortar application.

Finishing the Project

- ◆ Complete the finishing material, ceramic tile, laminated plastic, (Marlite, etc.) or ICBO approved surfacing material.
- ◆ Caulk all penetrations of the surfacing material such as the shower head and valve body.
- ◆ Install shower/tub-shower enclosure. Approved enclosures include shower rod/curtains and safety glass
- ◆ Safety glass includes laminated glass and tempered glass.
- ◆ Install remaining plumbing fixtures; 1.6 gallon flush toilets (2010 CPC Section 402.2)
- ◆ Traps, valves and water supply lines shall be approved by UPC or IAPMO
- ◆ Smoke Detectors are required in all bedrooms (rooms with closets) and halls to bedrooms when the permit valuation is over \$1,000.00 (2010 CRC Section R314.6)
- ◆ Carbon Monoxide alarm is required when the permit valuation is over \$1,000 (2010 CRC Section R315.2).

Bathroom Lighting:

- ◆ Each room containing a shower or bathtub shall have at least one luminaire lamp(s) with an efficacy of 40 lumens per watt or greater. If there is more than one luminaire in the room, the high efficacy luminaire shall be switched at an entrance to the room.
- ◆ **2010 California Energy Code for Residential lighting:**
 - ◆ Exception to Section 150 (k) 10: Permanently installed luminaries that are not high efficacy shall be allowed provided that they are controlled by an occupant sensor(s) certified to comply with Section 119 (d). Such motion sensors shall not have a control that allows the luminaries to be turned on automatically or that has an override allowing the luminaries to be always on.
- ◆ Luminaries installed to meet the 40 lumens/watt requirements cannot contain medium base incandescent lamp sockets, and must be on separate switches from incandescent lighting.
- ◆ Incandescent lighting fixtures recessed into insulated ceilings must be approved for zero-clearance insulation cover (IC-rated) by Underwriters laboratories or other testing/rating laboratories recognized by the international Conference of Building Officials and "Air Tight" Certified.