



CITY OF DANA POINT
COMMUNITY DEVELOPMENT, BUILDING AND SAFETY

**DESIGN REQUIREMENTS
FOR
RESIDENTIAL BATHROOM ALTERATIONS**



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INTRODUCTION

Bathroom alterations and renovations generally require a Building Permit. The following information can be used as a guideline for the bathroom requirements.

A bathroom renovation includes the removal and/or relocation of vanity cabinets, sinks, tub & showers, replacement/changes to the lighting or removal & replacement of the wall board



Typical bathroom renovation.



Typical bathroom renovation requiring the complete electrical and mechanical upgrades.

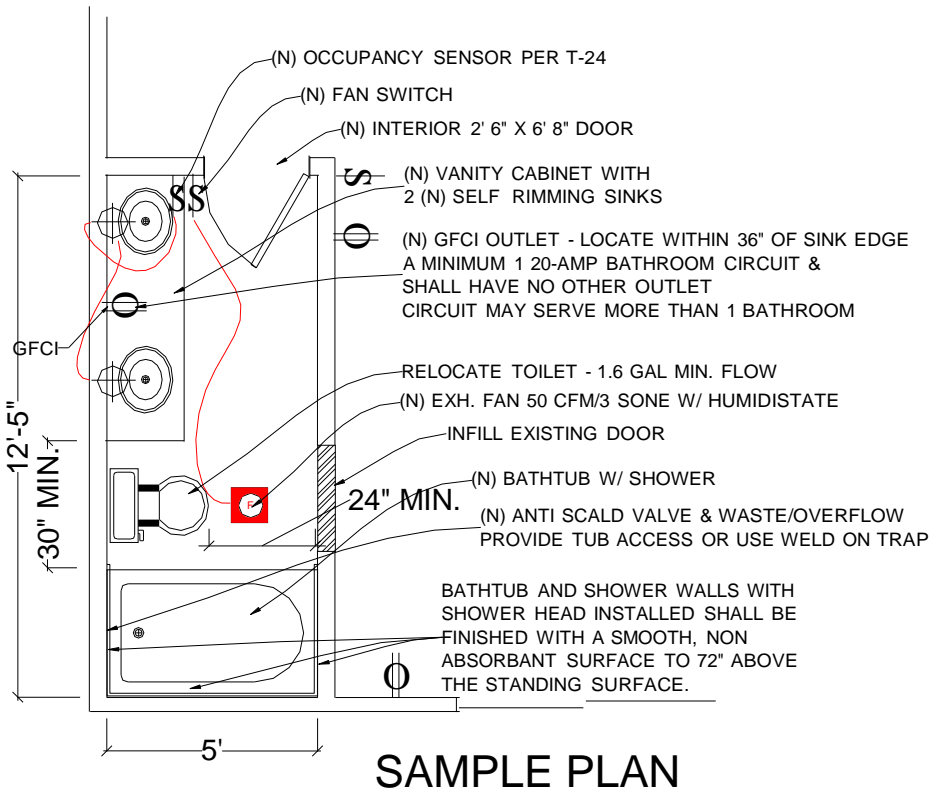
The replacement of the towel bars, mirrors, paint, floor coverings, etc. is considered maintenance and no permit is required for these items.

The City of Dana Point requires, at a minimum, a floor plan depicting the layout of the alteration/renovation. The minimum size is 11" x 17". A sample plan and graph style work sheet is available for homeowner/builder use. The following details the minimum requirements of the bathroom electrical, mechanical and plumbing systems and may be attached to your plan as general compliance notes:

CODES

Bathroom alterations and renovations require compliance with the:

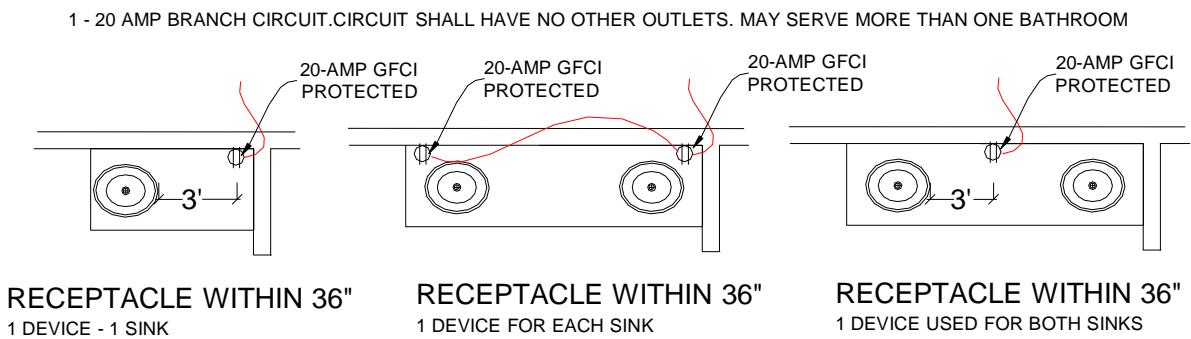
- 2016 California Residential Code (CRC);
 - 2016 California Plumbing Code (CPC);
 - 2016 California Mechanical Code (CMC);
 - 2016 California Electric Code (CEC);
 - 2016 California Energy Efficiency Standards (CEES);
 - 2016 California Green Building Standards (CGBS)
- and City of Dana Point Local Ordinances.



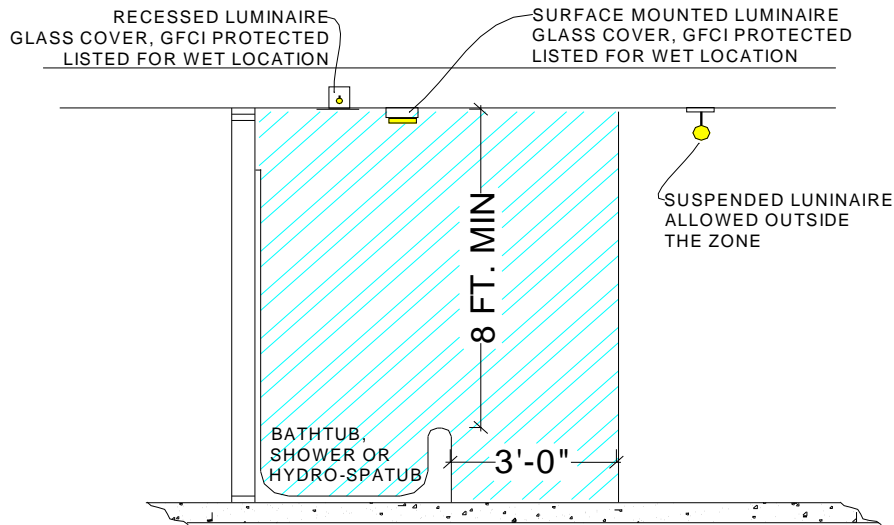
ELECTRICAL

Alteration and/or renovation of the bathroom trigger the upgrade to current electrical code compliance consisting of the following:

- Provide a 20 AMP GFCI protected electrical outlet within 36" of the outside edge of each bathroom sink basin. Outlet shall be located on a wall or partition that is adjacent to the basin or installed on the side or face of the basin cabinet not more than 12" below the countertop. For a double sink configuration, a single duplex outlet, located between the sinks will supply both sinks provided the 36" maximum distance is provided.
- A minimum of (1) 20 amp branch circuit is required for bath rooms. Such circuits shall have no other outlets. This circuit may serve more than one bathroom. CEC 210.52d



- No cord connected or hanging pendant, track light or suspended ceiling fan fixtures in zone 3' away from the edge of the tub/shower and/or 8' above the bathtub or shower flood level. This is the Electrical Exclusion Zone.



DESIGNATED ZONE

CHAIN, CABLE OR CORD SUSPENDED LUMINAIRES,
CORD CONNECTED LUMINAIRES, TRACK LIGHTING,
PENDANTS AND/OR CEILING-SUSPENDED FANS ARE
NOT PERMITTED WITHIN THE ZONE

- Approved Luminaires located within the actual outside dimensions of the tub or shower, up to 8 feet vertically from the top of the bathtub rim or shower threshold, shall be marked as suitable for damp locations, provided with a solid lens and be GFCI protected.
- Bathroom lighting shall be high efficacy luminaires or controlled by a vacancy (occupancy) sensor certified to comply with section 150.0(K) of the 2016 CEES. This is a manual on, auto off device approved by the energy commission. Automatic on/off or devices with an override switch position are not approved. High efficacy lighting, incandescent lighting and/or exhaust fans are required to be switched separately.
- Recessed luminaires installed in an insulated ceiling shall be IC (zero clearance) and AT (air tight) rated and shall be sealed and have a gasket between ceiling and housing. For occupancies with a horizontal (floor/ceiling assembly) rated separation, the recessed fixtures shall be protected to the rating of the separation (1 hour) or be listed for the required protection. This generally applies to residential condominium construction where units are above or below other units.

Kitchen renovations (projects over \$1,000) will require the smoke and carbon monoxide alarms for the dwelling to meet the current code. CRC sections R314 and R315

- Smoke alarms are required in all sleeping rooms, outside each sleeping area in the immediate vicinity of the bedrooms, on each floor level including basements and habitable attics, but no including crawl spaces and uninhabitable attics.
- Carbon Monoxide alarms are required in dwelling units and sleeping units when fuel-burning appliances are installed and/or dwelling units have attached garages. Either condition requires the alarms.
- When more than one alarm of either type is required to be installed within an individual dwelling unit, the alarm devices shall be interconnected in such a manner that activation of one alarm will activate all the other alarms.
- In existing conditions, alarms may be battery operated when the repairs or alterations do not result in the removal of the wall and ceiling finishes or there is no access by means of an attic, basement or crawlspace.
- Multipurpose alarms that combine both a smoke alarm and carbon monoxide alarm shall comply with all applicable standards of both CRC sections R314 and R315 and be listed by the office of the state fire marshal.

MECHANICAL

Alteration and/or renovation of the bathroom trigger the upgrade to current mechanical codes compliance consisting of the following:

- A bath exhaust fan w/ back draft damper is required regardless of the presence of a window. Exhaust must vent to outdoors in an approved duct. The outlet must terminate a minimum of 3' from an opening (window) or property line. CMC 402.5. A **minimum** rate of 50 ^{cfm} is required. Exhaust fan(s) shall meet the ASHRA standard 62.2. A **maximum** sound rating of 3 Sone is required. 2016 CEES
- Bathroom exhaust fans shall be ENERGY STAR compliant and unless the bathroom exhaust fan is part of the Whole House Ventilation System, fans must be controlled by a humidistat which shall be readily accessible. Humidistat controls shall be capable of adjustment between the relative humidity ranges of 50 to 80 percent. For the purpose of this section, a bathroom is a room that contains the bathing facilities. This includes a bathtub, shower, or tub/shower combination. Compliance may be accomplished by installation of a separate humidistat fan control (switch) or a control integral to the exhaust fan.

Alterations that do not replace or relocate the existing fan or when the ceiling finishes are not removed and/or there is no access available for the installation of an exhaust fan, may continue to use the existing exhaust fans provided they vent to the outside air. Bathrooms that do not include an existing fan must install a compliant fan at the time of the renovation. CGB 4.506.1

In some cases, the design of the structure will not allow the installation of a duct, typically in a multi-family unit (condo). In these cases an exemption may be applied for using the residential Request for Modification application and approval is based on a review by the Building Official.

PLUMBING

Alteration and/or renovation of the bathroom are required to meet the current plumbing codes. Although each project is unique, the basic requirements consist of the following:

- Shower and Tub/shower control valves shall be pressure balancing/thermostatic (anti-scald) per CPC section 408.3
- Multiple showerheads serving one shower, the combined flow rate of all the showerheads shall not exceed the maximum flow rate specified in the 20% reduction column contained in the 2016 CGBS 4.303 or the shower shall be designed to allow only one showerhead to be in operation at a time. Control valves and shower heads shall be installed on the side wall or otherwise arranged so the shower head does not discharge directly at the entrance to the compartment and the bather can adjust the valves prior to stepping into the shower spray.
- Fixtures shall meet the following maximum flow rates set by the California Energy Commission:
Water Closets = 1.28 GPM - Shower Heads = 2.0 GPM - Sink Faucets = 1.5 GPM.
- The minimum shower size is 1024 square inches and contain an area providing a 30" circle per CPC section 408.6
- Stall shower door to open out a minimum of 22" wide opening. CPC 408.5
- Water closets (Toilet) require a total minimum 30" clear space, 15" from the center of the fixture to the wall, and a minimum of 24" clear space in front of the fixture per CPC section 402.5
- When additional water closets (toilets) are installed, a maximum of 3 water closets are allowed on a 3" waste line. Installation of a 4th. Water closet will require installation and/or verification of an existing 4" line.
- The hot water valve shall be installed on the left side. CPC 417.5
- A minimum 12" x 12" access panel is required when a slip joint p-trap waste & overflow is provided. The use of a weld on (glue) waste & overflow and p-trap eliminates the access door requirement.

SHOWER PAN

- Site built shower pans shall be of approved materials and constructed as to have a finished dam, curb or threshold that is not less than 1 inch lower than the sides and back. In no case shall the dam, curb or threshold be less than 2" or exceed 9" in depth when measured from the top of the dam, curb or threshold per CPC section 408.7

GLASS

- Where glass is provide, tempered glass is required at the tub/shower doors and at windows less than 60" from tub/shower drain (standing surface). Tempered glass must contain a permanent marking (bug) etched and visible on the glass. CRC 308.1

WHIRLPOOL/SPA

- Whirlpool (spa) bathtubs shall have a readily accessible access panel. CPC409.6
- The circulation pump shall be located above the crown weir of the trap. CPC409.6
- The pump and the circulation piping shall be self-draining to minimize water retention. CPC409.6
- Suction fittings on whirlpool bathtubs shall comply with the manufacturer's specifications. CPC409.6
- The maximum hot water temperature discharging from the bathtub filler is limited to 120° by a device that conforms to ASSE 1070 or CSA B125.3. The water heater thermostat shall not be considered a control for meeting this provision.
- Accessible disconnects and GFCI protection is required for the whirlpool (spa) pump, aerator and heater. CEC 210.8

BIDETS

- Bidets require a total minimum 30" clear space, 15" from the center of the fixture to the wall, and a minimum of 24" clear space in front of the fixture per CPC section 402.5
- The water supply shall be protected with an air gap or vacuum breaker. CPC410.2
- The maximum hot water temperature discharging from a bidet is limited to 110° by a device that conforms to ASSE 1070 or CSA B125.3. The water heater thermostat shall not be considered a control for meeting this provision.

Additional information is available from the following sources:

City of Dana Point, Building and Safety. www.danapoint.org

The California Building Code series is available for review at the City of Dana Point, Building & Safety counter.

California Energy Commission www.energy.ca.gov/title24

California Lighting Technology Center www.cltc.ucdavis.edu

Advanced lighting Guidelines www.newbuildings.org/lighting

California Association of Building Energy Consultants www.cabec.org/abouttitle24.php

Energy Star www.energystar.gov

Energy Videos available at www.energyvideos.com