



Bathroom Inspection

On-site Built-up Shower Receptors

Approved Tile Backer Methods for Shower & Tub Compartment

[See Shower Wall Guidelines \(click here\)](#)

Not Allowed:

Green Board, Purple Board, Mold-resistant Board, ANY Paper-faced board is not allowed in shower & tub compartments. Unless one-piece shower wall panels

Fasteners:

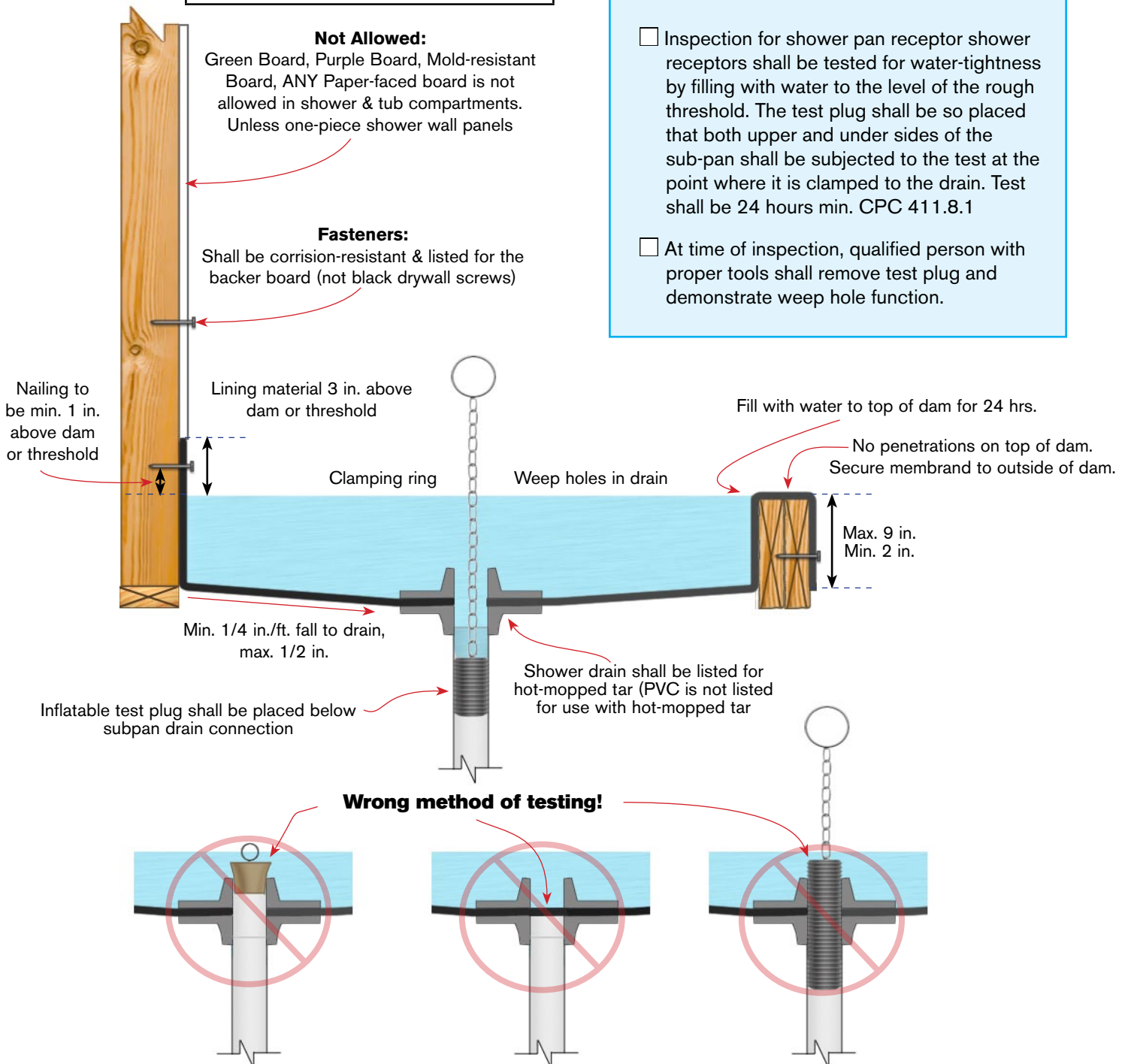
Shall be corrosion-resistant & listed for the backer board (not black drywall screws)

Top Three Missed/inspection Failures:

1. Wrong Backer Board
2. Wrong Fasteners
3. Wrong testing plug

Inspection for shower pan receptor shower receptors shall be tested for water-tightness by filling with water to the level of the rough threshold. The test plug shall be so placed that both upper and under sides of the sub-pan shall be subjected to the test at the point where it is clamped to the drain. Test shall be 24 hours min. CPC 411.8.1

At time of inspection, qualified person with proper tools shall remove test plug and demonstrate weep hole function.





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WARNING

Failure to complete items below prior to inspection may result in a re-inspection fee.

GREEN BUILDING TIPS:

- Possible rebates available, check the City of Oakland website: www2.oaklandnet.com/Government/o/CEDA/OAK022997
- Installing low flow faucets/aerators saves up to 40% on hot & cold water use.
- Energy Star appliances use 10–50% less energy & water than standard models.

NOT ALLOWED

- Paperbacked gypsum board products such as “Green board”, “Purple board”, & “Mold Resistance board” shall not be used as a backer for tile lath or concrete/ hardy board. DensShield® Tile Backer is recommended.
- In-line booster fans are considered an Alternate Method & shall be pre-approved by City of Oakland prior to installation. This method is discouraged because of accessibility & maintenance issues. (Not allowed in under floor/crawlspace areas.)
- Air admittance valves are not allowed.

REQUIRED INSPECTIONS

- All trades: Rough mechanical, plumbing, electrical, shower pan, tub test, & frame
- Fire protection between dwelling units
- Insulation: If applicable
- Drywall /tile backer
- Final: Smoke & carbon monoxide alarms, torque new breakers, GFCI test, remove debris from crawl space

Miscellaneous inspections:

- Tile lath: When possible, combine this inspection with shower-pan inspection.
See “Tile Lath” Inspection Guidelines (Click Here).
- Shower pan: Water test

INSPECTION

Mechanical

- Exhaust fans are required in all bathrooms, even if an operable window is installed. For new construction additions, alterations over 1,000 sf. Min. 50 cu. ft./minute. CA Energy Efficiency Standards §150. *See Exhaust Duct Guide handout.*
- Bathroom fan exhaust shall terminate a min. of 3’ from property line & 3’ from any openings into a building. CMC 504.3.1
- Exhaust fans with integral/combo lighting system shall be switched separately from lighting system OR have a lighting system that can be manually turned on & off while allowing the fan to continue to operate for an extended period of time. Lighting integral to an exhaust fan must be high-efficacy. CA Energy Code § 150
- Exhaust fans over showers shall be listed for wet location & shall be GFCI protected.



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Electrical

- Nail plate protection for wiring required when hole edge is 1-1/4" from face of framing.
- All 125-volt, 15- & 20-ampere receptacles shall be listed tamper resistant receptacles. CEC 406.11, 210.52
- An upgrade of the existing electrical service may be required based on the number of & ampacity of the new & existing circuits. CEC 220
- Cannot add circuits to panels in closets, dog houses or other unapproved locations.
- Check electrical panel for new wiring & labeling.
- Circuit breakers to match manufacturer of panel requirements. Contractor shall torque at final inspection.
- Min. (1) 20 amp circuit for bathrooms receptacles CEC 210.11 (C) (3)
- GFCI protection shall be provided for all outlets in bathrooms, with at least one outlet 36" inches of the outside edge of each basin. CEC 210-8(a) (1) & 210-52 (d)
- Light fixtures in wet locations shall be protected by GFCI circuit CEC 410.4 (A)(D) (Per the manufacturer's installation instructions)
- Separate circuits for lights & receptacle outlets. CEC 210-11 (c)(3)

Plumbing

- Testing piping system: Drain, waste, & vent (DWV) system shall be tested with no less than 10' of head water above the system for 15 minutes OR 5 psi air test for 15 minutes. *Cannot use an air test on plastic Drainage, Waste, & Vent (DWV) piping. CPC 712.2, CPC 723
- Tub test: Fill water slightly above overflow. (fill tubs prior to inspection)
- Waste vents shall terminate vertically not less than 6" above roof, nor less than 1' from any vertical surface & 10' from or 3' above any opening such as windows, doors, air intake, nor less than 3' from any lot line. Side wall vent may not terminate under vented soffit. CPC 906.1, 2
- ABS piping not permitted in Oakland residential buildings over 2 stories in height and not permitted on exterior except vent pipes above the roof. Shall be protected with latex paint.
- Venting shall be vertical until 6" above the flood rim of the fixture. CPC 905.3
- Bathtub/whirlpools & shower valves shall be approved pressure-balanced or thermostatic mixing type adjusted to a maximum of 120 degrees. CPC 418, 414
- Use listed fittings only (i.e. water supply hoses) CPC 604
- Accessible full way control valve installed for each sink. CPC 605.5
- Check that sink cleanout is accessible. (if provided) [See handout for Required Cleanout Locations.](#)
- Contractor to water test sinks at time of inspection.
- Verify new penetrations at roof are properly sealed & flashed & painted if required.
- Provide a min. 12" access door for fixtures with concealed slip joint connections. CPC 404.2



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Frame

- The minimum ceiling height in a bathroom is 7' feet. CRC R305.1
Exception: For rooms with sloped ceilings, at least 50% of the floor area shall have a height of at least 7 ft. and no portion shall be less than 5 ft.
- Overcutting of sole or plates to accommodate plumbing pipes shall be repaired with 16 gage 1-1/2" wide metal strap & fastened with min. six 16d or eight 10d nails on each side cut. Strap to extend 6" min. past the opening. ORC R6202.6.1
- Use 2x6 studs when plumbing pipes are over 3." *See Building Details, Diagrams & Tables: Cutting, Notching And Boring Of Wood Studs (click here)*
- Blocking for rails & cabinets.

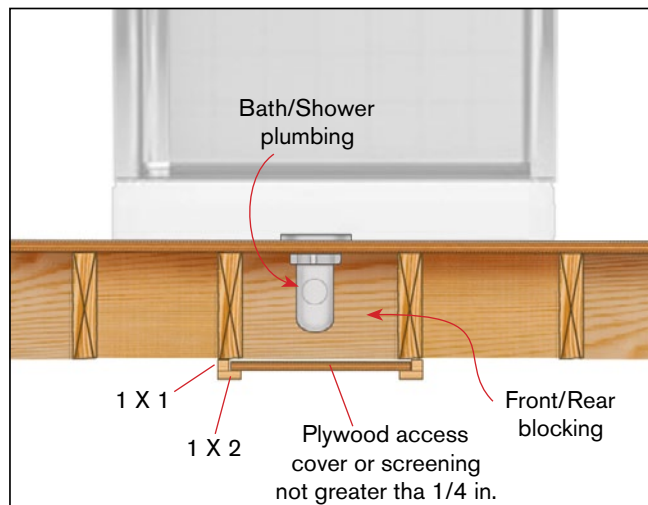
Fire blocking at ceiling & floor penetrations, & top & bottom of walls

- Approved materials: approved foam & caulking shall be certified materials that resist the free passage of flame & the products of combustion (such as Touch 'n Seal Gun Foam ii & listed fire blocking caulk). CBC 717.2.5, 712.4.2.2
- Fire blocking shall be installed at openings around vents, pipes, tub & shower traps, ducts, chimneys & fireplaces at ceiling & floor levels with approved materials. CBC 717.2.5, 712.4.2.2

Rodent Protection

- Tub waste openings in framed construction to crawl spaces shall be protected from rodent intrusion with no openings greater than 1/2" inch. See figure below for an approved method of protection/access. CPC 313.12.4

Crawl Space Bath/Shower Plumbing Access





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Lighting

- Hanging light fixtures are not allowed within 3' horizontal & 8' vertical from tub & shower. CEC 410.4 (d)

Frequently Missed/Inspection Failure

- All hardwired lighting shall be high efficacy OR controlled by a MANUAL-ON motion sensor. Energy Code section 150(K)
- All luminaries (fixtures) installed in wet locations shall be marked "Suitable for Wet Locations". Damp locations shall be marked "Suitable for Damp Locations" & shall have non-metallic trim. CEC 410.4 (A)
- Fan & Light/fan combo shall be separately switched from lights & may require GFCI protection in wet/damp locations. Install per manufacturers instructions. (provide Inspector with manufacturers instructions) Energy Code § 150 (k)
- Verify that light cans are AIR TIGHT at top floor ceiling or attic space, & IC rated if recessed into insulated ceilings.

Water closet & bidets (WC)

- WC shall have an average water consumption of 1.28 gallons per flush. CPC 402.2
- Provide caulking at the bottom of all WCs between WC and floor. CPC 407.2
- WC spaces shall be at least 30 inches wide; 15" min. from wall or other obstruction to center of WC nor closer than 30" center to center to any similar fixture, with at least 24 inches clear in front of the WC. CPC 407.6

Safety glazing

- Safety glazing is required at all windows that are less than 60" above the bottom of tub & shower floors & at tub & shower enclosure panels & doors (check for bug) CRC R308.4, CBC 2406.2, 2406.4

Fixture fittings/attachments

- Vacuum breakers are required for handheld shower heads. CPC 603.0
- Where two separate handles control the hot & cold water, the left-hand faucet shall control hot water. CPC 415.0

Airgap (Sink & Tub)

- Minimum 1" airgap separation between the flood level of sink & tub & the water supply outlet. CPC 603.2.1, Table 6-3

Steam shower

- See *Steam shower checklist* for all general requirements/recommendations.



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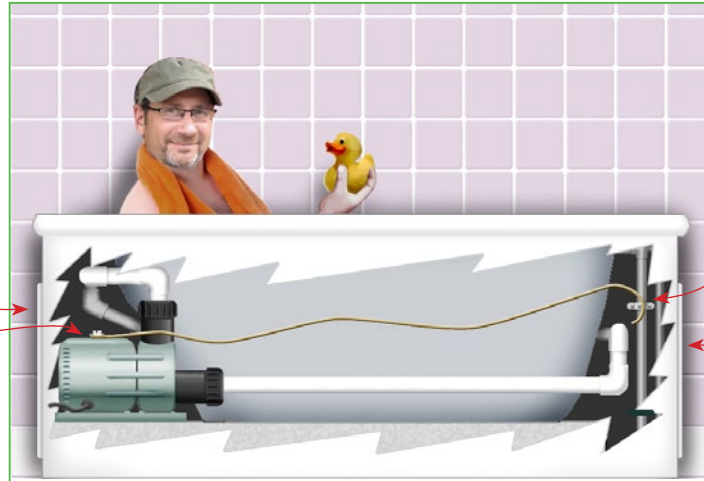
Hydromassage bathtub

- Motors shall be accessible, on a dedicated circuit with their own GFCI circuit & bonded with min. 8 AWG copper wire. provide access for the motor (CPC 414), GFCI receptacle (cec 680.70) & bond motor (see listing) & any metal parts in contact with circulating water. provide separate circuits for motor & heater if required. CEC 680.72 & 74, CPC 414.1.

Hydromassage Bathtub

Access panel for motor

8 AWG conductor bonded
to motor lug intended for
bonding



Bond to metal piping
systems & any metal
piping in contact with
circulating water

Access panel for metal
parts in contact with
circulating water

Insulation

- R-13 min. required at all exterior walls, including behind bathtubs at exterior walls.
- IC-Rated recessed lights shall be covered with insulation.
- R-30 min. required at ceilings.

Shower Compartment

See Shower Wall Guidelines handout. ([click here](#))

- Shower enclosure doors shall open outward and maintain 22" clearance CPC 411.6
- All shower compartments, regardless of shape, shall have a minimum finished interior of 1024 square inches and shall also be capable of encompassing a 30" inch circle. Exception: Where existing bathtub is replaced by a shower receptor having min. overall dimensions of 30" wide by 60" long. CPC 411.7 and exception no. 2.
- Bathtub/shower compartments shall have nonabsorbent surface extending 72" above the floor. CRC R307.2
- Shower door or rod shall be installed prior to final.



Bathroom Inspection

Frequently Missed/Inspection Failure (SEE "TILE LATH" GUIDELINES [click here](#))

- Base for tile in shower and tub compartments: Cement, fiber-cement or glass mat gypsum backers shall be used as a base for wall and ceiling panels in shower and bathtub compartments and shall be installed per manufacturer's recommendations. CRC R702.4.2
- Fasteners: Cement, fiber-cement or glass mat gypsum backers shall be secured with its listed fasteners AND shall be CORROSION RESISTANT in shower/tub compartments.

- Water resistant gypsum board /green board/purple board shall **NOT** be used in the following locations:
 - In showers where used as the tile base or backer.
 - Where there will be direct exposure to water or in areas subject to continuous high humidity. CRC R702.4
 - On ceilings where frame spacing exceeds 12" on center for 1/2" wall board and more than 16" on center for 5/8" water-resistant drywall. CRC R702.3.8
- On-site built-up shower receptors:** All lining, hot-mopped or other approved materials shall be pitched one-quarter (1/4) inch per foot to weep holes in the sub drain of a smooth and solidly formed sub-base. All such lining materials shall extend upward on the rough jambs of the shower opening to a point no less than three (3) inches above the top of the finished dam or threshold and shall extend outward over the top of the rough threshold and be turned over and fastened on the outside face of both the rough threshold and the jambs. no perforations/nails lower than 1" above dam. CPC 411.8
- Factory built shower receptors:** No shower receptor shall be installed unless it conforms to acceptable standards/ listed as referenced in CPC table 14-1. The flange shall be watertight and extend vertically a min. of (1") above top of the sides of the receptor. CPC 411.6
- Floor drains shall be considered plumbing fixtures and each such drain shall be provided with an approved type strainer. Floor drains, floor receptors, and shower drains shall be of an approved type, suitably flanged to provide a watertight joint in the floor. CPC 411.1 and 404.1
- Linings shall be fastened to an approved backing and shall not be nailed or perforated at any point which may be less than one (1) inch above the finished dam or threshold. CPC 411.8 (1) (2)
- All showers, in all occupancies, shall have a smooth, hard, nonabsorbent surface to a height of not less than 72" inches above the drain inlet. Materials other than structural elements used in such walls shall be of a type that is not adversely affected by moisture. Wood windows installed less than 72" above the drain inlet are not allowed. CRC R307.2, CBC 1210.3
- Thresholds shall be of sufficient width to accommodate a minimum 22" door. CPC 411.6
- Curbless shower pan:** Refer to Building Services for installation requirements. Extend approved water proofing material a min. of 4' beyond threshold and maintain a 1/4" fall per foot for 4' to drain. **Note: Recommend extending water proofing over entire bathroom area.**