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Shower and Tub Installations

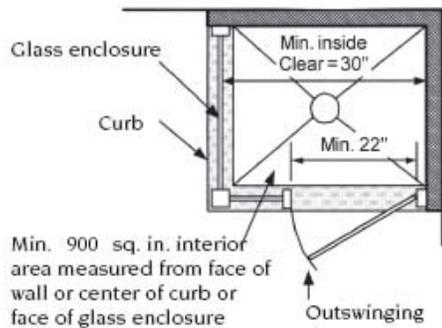
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Residential Permit Requirements Under the 2012 IRC

Requirements

Water Resistant Gypsum (Green Board) is no longer allowed in wet locations. Green board shall not be used in the following locations:

1. Over a vapor retarder in shower or bathtub compartments.
2. Where there will be direct exposure to water or in areas of high humidity.
3. On ceilings where frame spacing exceeds 12 inches on center for ½ inch-thick board.



Minimum Shower Dimensions

Shower Pan Receptors can be either factory built or site built. All showers must meet the following standards:

1. All inside dimensions 30 inches minimum.
Exceptions:
 - Fold-down seats shall be permitted in the shower, provided the required 900 square inch dimension is maintained when the seat is folded down.
 - Shower compartments having not less than 25 inches in minimum dimension measured from the finished interior dimension of the compartment provided the shower compartment has the minimum of 1,300 square inches of cross-section area
2. Floor slope for drainage must be ¼ inch minimum per foot.
3. Shower doors must open outward and have a clear door opening of 22 inches minimum.
4. Shower walls shall have a smooth, hard, nonabsorbent surface to a height of 72 inches above the drain inlet.
5. Shower pan linings must extend 3 inches minimum above curb*. No punctures (staples/nails) allowed less than 1 inch above threshold.

Tests for Shower Receptors that are site built shall be by filling with water to the level of the rough threshold. The test plug shall be placed so that both the upper and under sides of the sub-pan are subjected to the test. All lining material shall be pitched ¼ inch per foot to weep holes in the sub-drain of a smooth and solidly formed sub-base. When drained, no water should remain in the pan, the weep system should drain freely and be protected from clogging. At the time of inspection a qualified person shall open drain and demonstrate the weep system is functioning properly. Documentation shall be provided that the liner material used is an approved product per IRC 2709.1 (ASTM D 4068 or ASTM D 4551).

* P2709.1 –The curb shall be not less than 2” and not more than 9” deep when measured from the top of the curb to the top of the drain.

Shower And Tub Installations

A building permit is required when changing or installing a new shower stall, bathtub, or tub/shower combination. The number of inspections will depend on the type of project. The first inspection would be after all framing and any plumbing has been completed, but before any backer board or felt is installed, if a site-built shower pan is being constructed it can also be inspected and tested at the same time. The second inspection would be after the backer board has been installed and any vapor barrier and lath has been installed. For some projects this is not necessary. Final inspection would be after all work has been completed.

Waterproof Wall Finishes

Materials commonly used for wet locations are ceramic, marble, or synthetic tiles, factory built one-piece fiberglass units and site assembled panels.

Factory built one-piece showers or tub/shower combinations are to be installed per manufacturer's installation instructions. Some one-piece units can be installed directly to unfinished framed walls without backer boards.

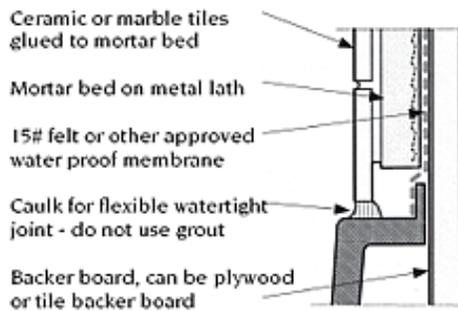
Job assembled panels of fiberglass; stone or acrylic are to be installed per manufacturer's installation instructions and in a manner that prevents moisture from entering the walls.

Tiles are to be installed over an approved backing. The backing can be either a lath/mortar or approved backer board.

Gypsum backer boards shall conform to ASTM C1396, C1178 or C1278.

Cement, Fiber-Cement and Glass Mat Gypsum backer boards shall conform to ASTM C1288, C1325, C1178 or C1278.

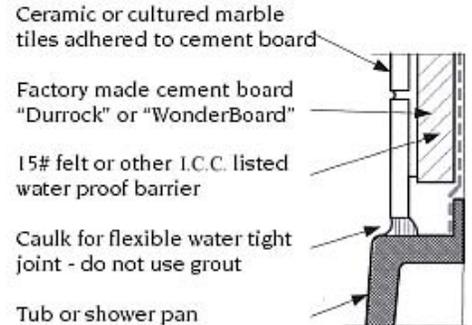
Mortar Bed installations require a water resistant backer board. The backer board must be covered with a minimum of one layer of 15# asphalt felt, or another approved material. Metal lath must be nailed over the felt using corrosion resistant fasteners that penetrate framing members. Mortar then applied forming the mounting surface for the tile.



Tile on Mortar Bed

Cement Type Backer Boards require framing be covered with one layer of 15# felt, or other approved material. Then the cement board is attached to the framing with the manufacture approved corrosion resistant fasteners or 1 1/2 inch galvanized roofing nails spaced 8 inches on center

All wall joints and corners are covered with 2 inch wide glass fiber mesh tape embedded in adhesive.



Tile on Cement Board

Fiberglass Faced Water Resistant Gypsum Backer Board consists of a water resistant gypsum core with glass fiber mat facings. The exposed side is additionally surfaced with a factory applied acrylic based coating. The boards are installed with the uncoated side toward the wall framing. Boards are attached directly to the framing with 1 1/4 inch long corrosion resistant fasteners spaced 6 inches on center. Moisture barriers are not installed behind this type of board. All wall joints and corners should be taped and sealed with a moisture resistant product.

