



Tub and Shower Installations

CITY OF NEWARK, CALIFORNIA

BUILDING INSPECTION DIVISION

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GENERAL

Building permits must be obtained prior to installing or making major repairs to bathtubs, shower stalls, and tub/shower combinations. Permits can be obtained at the Building Inspection counter located at City Hall. The Building and Plumbing Codes set forth minimum standards for the installation of tub and showers. The most common of those standards are included below.

PEST CONTROL REPORTS

Often, repairs to existing showers are a result of a pest control investigation. If a pest control report was written for this work, provide two copies to the Building Inspection Division when applying for a permit.

TUB ONLY INSTALLATIONS

The installation or replacement of a bathtub without a shower needs a single plumbing inspection only. Enclosures, waterproof wall surfaces, shower curtains and doors are not required by code provided the bathtub does not have the ability to be converted to a shower.

GENERAL SHOWER ENCLOSURE STANDARDS

There are a number of size, configuration, and construction standards for showers which are listed below:

- Minimum interior dimension = 30"
- Minimum interior area = 1,024 square inches
- Waterproof wall finishes must extend a minimum 70" above shower drain.
- Shower heads must discharge below the top edge of waterproof wall finish.
- Control valves must be of the pressure balance or thermostatic mixing valve types.
- Hinged shower doors must swing outward.

(See Figures B and C for additional detail.)

TUB/SHOWER STALL WINDOWS

The glazing in all windows located within a tub or shower enclosure and having a sill which is less than 60 inches above the drain shall be tempered glass. Sills shall be sloped to drain back into the shower stall as shown in Figure A.

WATERPROOF WALL FINISHES

The materials most commonly used for shower walls are ceramic, marble or synthetic tiles, factory built one-piece fiberglass units, and job-assembled fiberglass panels. The installation standards for each type are provided below.

FACTORY BUILT ONE-PIECE FIBERGLASS UNITS

Factory built one-piece showers or tub/shower combination units must be installed following the manufacturer's printed instructions. Generally, factory built one-piece units can be installed directly to unfinished framed walls without any backer boards (see Figure F).

JOB-ASSEMBLED FIBERGLASS PANELS, MARBLE, OR ONYX

Factory built and job assembled fiberglass, stone or acrylic panels must be installed following the manufacturer's printed instructions. Generally, backer boards are not required by code (see Figure E).

TILE INSTALLATIONS

Ceramic, synthetic, and natural stone tiles are installed over an appropriate backing. Such backing can be either a job built mortar bed or commercially available backer boards.

Mortar Bed: For mortar bed installations use water resistant gypsum board (green board) as a backer board. The backer board must be covered with one layer of 15 pound asphalt impregnated felt. Metal lath or 18 gauge stucco mesh must be nailed over the felt. Self-furring lath with integral building paper can also be used. All fasteners must penetrate framing members. A mortar base is then applied forming the mounting surface for the tile (see Figure J).

Cementitious Backer Board: (Two examples of commercially available cement board are Durock™ and Wonder-Board™.) Framing must be covered with one layer of 15 pound asphalt impregnated felt. Over the felt, fasten one layer of ½" thick cement board to the framing with 1½" galvanized roofing nails or manufacturer approved corrosion resistant screws, no more than eight inches on center. All wall joints and corners are covered with two inch wide vinyl coated glass fiber mesh tape and the tape is embedded in bonding mortar (see Figure G).

Fiberglass Faced Water Resistant Gypsum Backer Board: (An example of a product is Dens-Shield™.) This product 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 board is ½" thick. Boards are installed with the uncoated side toward the wall framing. Boards are attached directly to the framing with 1¼" long Type W screws spaced 6" on center. Vapor barriers are not installed behind this board. All wall joints and corners are covered with two inch wide glass fiber mesh tape and the tape is embedded in adhesive (see Figure D).

Water Resistant Gypsum Board, aka "Green Board": This product is not approved as a backing board for shower enclosures using thin set tiles (see Figure H).

SHOWER PAN RECEPTORS

Shower pan receptors can be either factory built or site built. Bathtubs which have wall flanges can be used as shower receptors. Self-rimming bathtubs which are placed on a platform cannot be used as a shower receptor. All shower receptors must meet the following minimum standards:

- All inside dimensions no less than 30". Bathtubs have an inside dimension of less than 30" but are excluded from this requirement. Standard 30" by 60" tubs can be used as shower receptors.
- Shower receptors must have a floor area of no less than 1,024 square inches. Please note that a 30 inch square (inside dimensions) shower has only 900 square inches of floor space.
- Floor slope for drainage must be a minimum 1/4" to maximum 1/2" per foot.

(See Figures B and C for additional detail.)

INSPECTIONS

For shower replacement projects which involve the installation of backer boards there will be three inspections. For projects using factory built one piece shower units only two inspections are needed.

First Inspection: Made after all framing has been installed and/or repaired and before any backer board or felt is installed. Any new piping or valve installations will also be inspected at this time. If a site-built shower pan receptor is being constructed, it will be inspected during this inspection unless the floor is being repaired. Plug the drain and fill the pan with water and let it sit until after the inspection. If the floor is being repaired, it should be inspected along with the wall framing prior to the installation of the site-built shower pan. The site-built shower pan will then be inspected during the second inspection.

Second Inspection: Made after the backer board has been installed and all joints taped and sealed. For mortar bed projects, an inspection is made after the vapor barrier and lath has been installed. For projects using factory-built one-piece shower units this inspection is not needed.

Third Inspection: Made after all work has been completed.

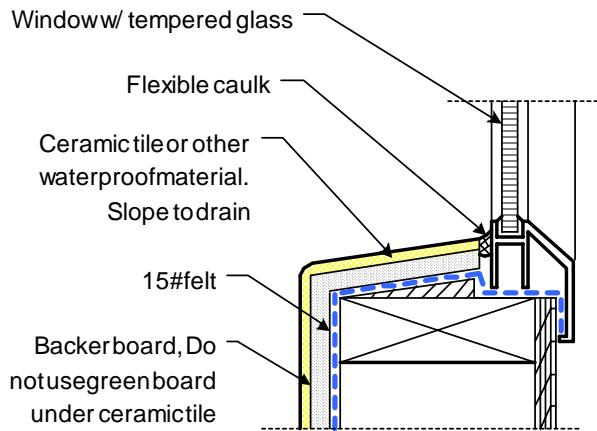


Figure A
Window Sill at Shower

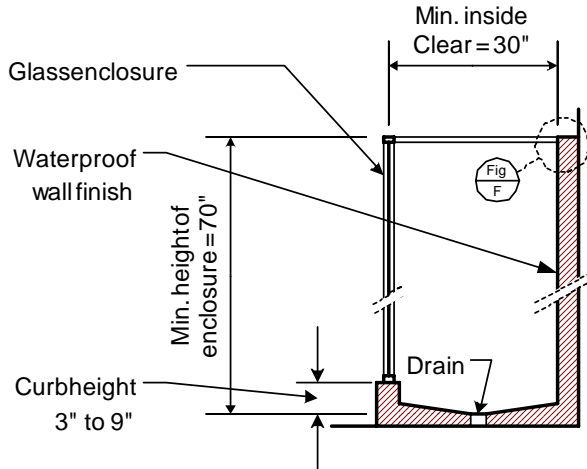


Figure B (Section View)
Minimum Shower Dimensions

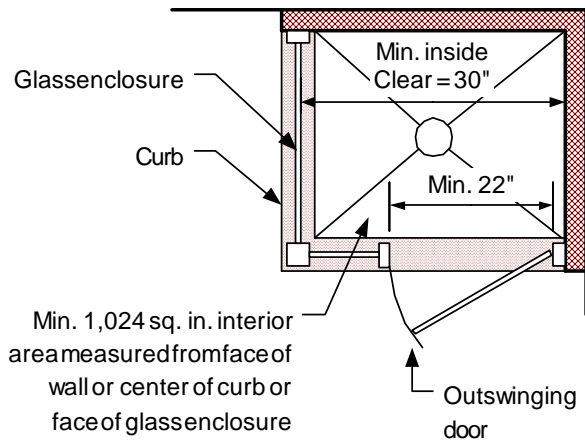


Figure C (Plan View)
Minimum Shower Dimensions

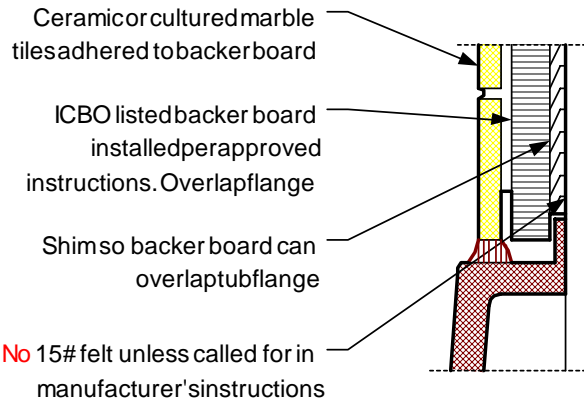


Figure D
Tile on ICBO "Listed" Board
(Dens-Shield, etc.)

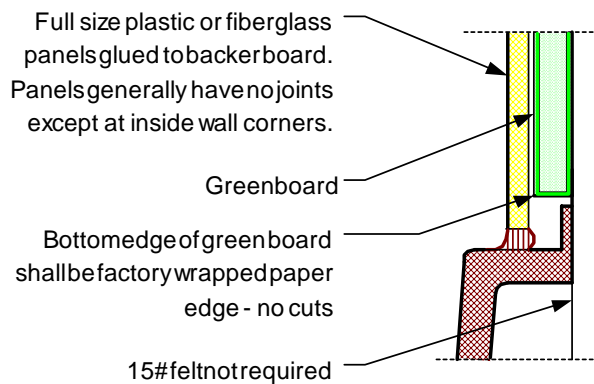


Figure E
Single Piece Panels on Green Board

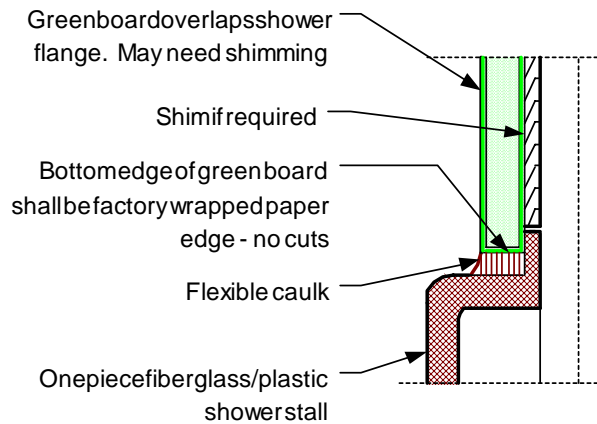


Figure F
One-Piece Fiberglass Shower

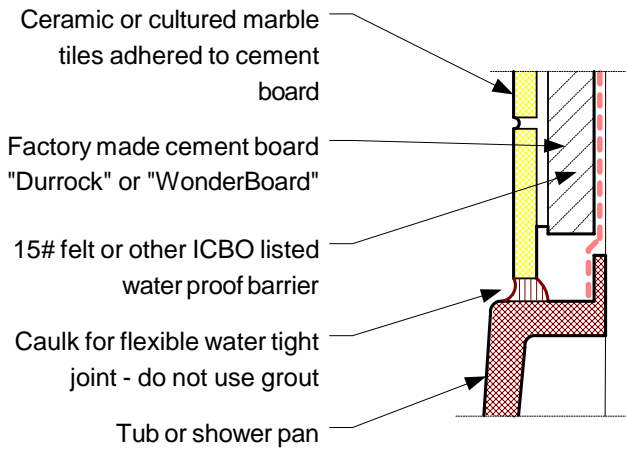


Figure G
Tile on Cement Board
 (Example: "Durock" or "Wonderboard")

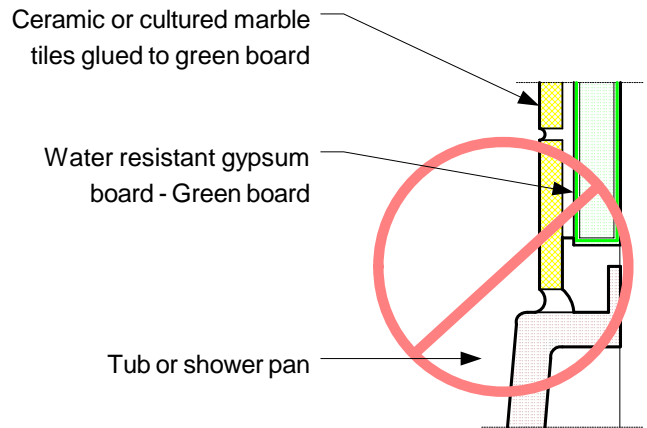


Figure H
Tile on Green Board
(Not Permitted)

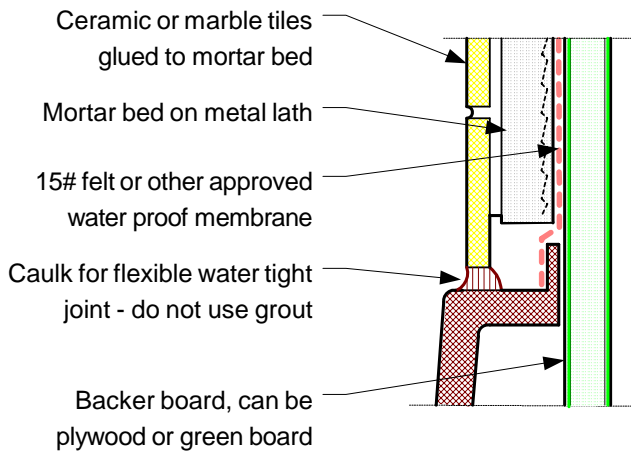


Figure J
Tile on Mortar Bed