TILE ON SHOWER RECEPTORS
319 SR/BF/C-2019-2021

DETAIL A – CURBLESS/BARRIER-FREE SHOWER CONSTRUCTION ON RECESSED CONCRETE SLAB

SUITABLE SUBSTRATES
- Wood or metal studs, maximum 406 mm o.c.
- Waterproofing membrane over structural base.
- Wall constructed in accordance with Details 305W-2019-2021 Detail A or B.

MATERIALS
- Cementitious backer unit (ANSI A118.9) or nominal 11 mm thick fibre-cementbacker board meeting ASTM C1288 or coated glass mat backer board (ASTMC1178) – minimum 13 mm thick.
- TILE
- DRAIN - With integrated bonding flange complying with CSA B-79-94.
- MORTAR BED – minimum of 32 mm to 51 mm sloped drain. See Tile Guide Specification Section Mixes 2.9.2.5.
- TAPE – 51 mm wide fibre-mesh tape.
- BOND COAT – Single or two component liquid latex-Portland cement mortar (minimum acceptable standard ANSI A118.4 or ISO 13007 C2S1).
- GROUT – Portland cement or latex-Portland cement (minimum acceptablestandard ANSI A118.6 or ISO 13007 CG1), epoxy grout (minimum acceptable standard ANSI A118.3 or ISO 13007 RG), or RTU grout.

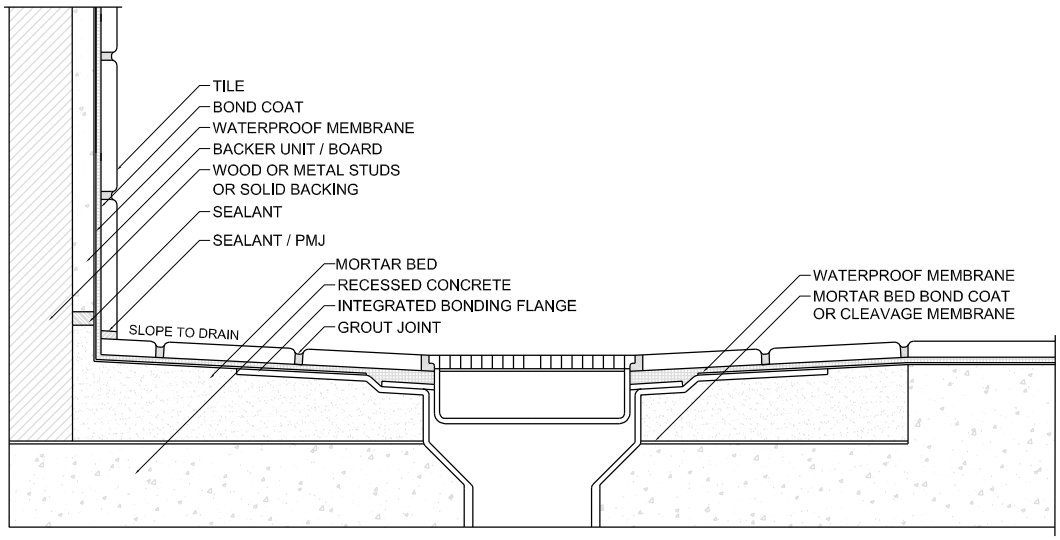
APPLICATION
- Attach backer unit or coated glass mat backer board to studs with rust resistant screws or nails. Fasteners shall be spaced 150 mm o.c. Backer unit must be table, plumb and square with coated grey side of coated glass mat backer board away from the studs. Drive fasteners flush with coated surface. Do not countersink. Surface variation in the backing not to exceed 6 mm in 3000 mm or 2 mm in 300 mm and can be applied either parallel or perpendicular to framing. For large format tile where any side is greater than 380 mm, surface variation should not exceed 3 mm in 3000 mm and 1.5 mm in 600 mm. Apply levelling coat, if required. All joints and angles must be taped with alkali-resistant 51 mm fibre-mesh tape, filled with a latex-Portland cement mortar and sanded. Do not sand coated glass mat backer board. For all joints and angles embed analkali-resistant 51 mm wide fibre-mesh tape in the same bond coat material used to set the tiles and let dry. Use proper notched trowel to ensure adequate bond. With pressure, apply a coat of mortar by using the trowel's flat side to key the mortar into the substrate. Apply additional mortar, combing it in a single direction parallel to the tile's shortest dimension, with the trowel's notched side. Place the tiles firmly into the wet bond coat. Push the tiles back and forth in a direction perpendicular to trowel lines, to collapse the mortar ridges and to help achieve maximum coverage. Ensure proper contact between mortar, tile and substrate by periodically lifting a few tiles to check for acceptable coverage. Use sufficient bond coat to ensure minimum 95% contact with back of tile (it may be necessary to back-butter the tile in order to meet this requirement.. Beat mosaic tile into position. Remove excess mortar from the joint areas so that at least 2/3 of the tile depth is available for grouting. Allow bond coat to cure. Force grout into the joints with a rubber grout float. Make sure all joints are well-compacted and free of voids and gaps. Remove excess grout from the tile surface and clean.

LIMITATIONS
- Manufacturer's recommendations must be followed. Coated glass mat backerboard should not be used where prolonged exposure to heat exceeds 52ºC and not to be used for exterior use. It is not recommended for use with passive solar heat systems. Maximum tile size is 356 mm x 356 mm x 10 mm. Do not apply directly over concrete or masonry block.
- Coated glass mat backer board should not be used in shower floors.

OTHER CONSIDERATIONS

- Movement joints, spacing and minimum gauge of steel studs as per instructions of manufacturer of cementitious backer board (CBU) or coated glass mat backer board.
- Provide 6 mm in 300 mm slope to drain in floor. Carry membrane or pan at least 75 mm above shower curb, or 150 mm above floor in showers without curbs. Latex additive use in place of water is recommended for Portland cement bond coat and may be used in modification of mortar bed.
- Drains should be designed to permit drainage of water at the tile surface and the surface of the waterproofing membrane. For drainage see Detail 326DR-2019-2021.
- For high use showers (hotels, gang showers, sports facilities, etc.) a waterproofing membrane shall be used over cementitious backer unit (CBU).*
- Waterproofing membrane (ANSI A118.10), follow manufacturer's recommendations.
- The waterproofing membrane should be installed at least to the shower-head or preferably to the ceiling.
- All openings and cuts must be treated to ensure waterproof integrity.
- Refer to Notes For The Professional and 301MJ-2019-2021.
- A waterproof membrane or vapour retarder not to be used behind coated glass-mat backer board.
- Vapour retarder must be used when recommended by manufacturer.
- Plywood even if exterior grade is not recommended for wet areas on walls dueto potential warpage from humidity and seasonal changes.
- All horizontal surfaces including: seats, curbs, pony-wall, window ledges and shampoo shelves need to be sloped to drain assembly.
- A prefabricated shower tray may be used as an alternative to the mortar bed Minimum compressive strength .24 N/mm^2.
- A water/flood test is strongly recommended before setting tile to verify a successful installation. Wait 24 hours minimum after the membrane installation is complete to allow for final set of thin-set mortar and ensure waterproof performance at seams and connections.

*If the shower is high use or is actually a steam shower, and the waterproofing membrane is acting as both the waterproofing membrane and the vapor retarder the waterproofing membrane must have a perm rating of .5 or less using ASTM E96 Procedure E with 90% humidity. If the waterproofing membrane has a perm rating higher then .5 then a vapor retarder should be used behind the solid backing that has a perm rating 1.0 or less when tested with ASTM E96 Procedure A.



TILE ON SHOWER RECEPTORS
319 SR/BF/C-2019-2021

DETAIL B – CURBLESS/BARRIER-FREE SHOWER CONSTRUCTION ON WOOD-FRAME CONSTRUCTION

SUITABLE SUBSTRATES

- Interior showers with curbless access.
- Over wood subfloors. See the Base information under Requirements (below) for details.
- Wood or metal studs, maximum 406 mm o.c.
- Waterproofing membrane over structural base
- Wall constructed in accordance with Details 305W-2019-2021 Detail A or B.

MATERIALS

- Cementitious backer unit (ANSI A118.9) or nominal 11 mm thick fibre-cement backer board meeting ASTM C1288 or coated glass mat backer board (ASTM C1178) –minimum 13 mm-thick.
- TILE
- DRAIN - With integrated bonding flange complying with CSA B-79-94.
- MORTAR BED – minimum of 32 mm to 51 mm sloped drain. See Tile Guide Specification Section Mixes 2.9.2.5.
- TAPE – 51 mm wide fibre-mesh tape.
- Prefabricated Sloped Tray - minimum compressive strength .24 N/mm^2.
- BOND COAT – Single or two component liquid latex-Portland cement mortar (minimun acceptable standard ANSI A118.4 or ISO 13007 C2S1).
- GROUT – Portland cement or latex-Portland cement (minimum acceptable standard ANSI A118.6 or ISO 13007 CG1), epoxy grout (minimum acceptable standard ANSI A118.3 or ISO 13007 RG), or RTU grout.

APPLICATION

- Attach backer unit or coated glass mat backer board to studs with rust resistant screws or nails. Fasteners shall be spaced 150 mm o.c. Backer unit must be table, plumb and square with coated grey side of coated glass mat backer board away from the studs. Drive fasteners flush with coated surface. Do not countersink. Surface variation in the backing not to exceed 6 mm in 3000 mm or 2 mm in 300 mm and can be applied either parallel or perpendicular to framing. For large format tile where any side is greater than 380 mm, surface variation should not exceed 3 mm in 3000 mm and 1.5 mm in 600 mm. Apply levelling coat, if required. All joints and angles must be taped with alkali-resistant 51 mm fibre-mesh tape, filled with a latex- Portland cement mortar and sanded. Do not sand coated glass mat backer board. For all joints and angles embed an alkali-resistant 51 mm wide fibre-mesh tape in the same bond coat material used to set the tiles and let dry. Use proper notched trowel to ensure adequate bond. With pressure, apply a coat of mortar by using the trowel's flat side to key the mortar into the substrate. Apply additional mortar, combing it in a single direction parallel to the tile's shortest dimension, with the trowel's notched side. Place the tiles firmly into the wet bond coat. Push the tiles back and forth in a direction perpendicular to trowel lines, to collapse the mortar ridges and to help achieve maximum coverage. Ensure proper contact between mortar, tile and substrate by periodically lifting a few tiles to check for acceptable coverage. Use sufficient bond coat to ensure minimum 95% contact with back of tile (it may be necessary to back-butter the tile in order to meet this requirement.. Beat mosaic tile into position. Remove excess mortar from the joint areas so that at least 2/3 of the tile depth is available for grouting. Allow bond coat to cure. Force grout into the joints with a rubber grout float. Make sure all joints are well-compacted and free of voids and gaps. Remove excess grout from the tile surface and clean.

LIMITATIONS

- Manufacturer's recommendations must be followed. Coated glass mat backerboard should not be used where prolonged exposure to heat exceeds 52° C and not to be used for exterior use. It is not recommended for use with passive solar heat systems. Maximum tile size is 356 mm x 356 mm x 10 mm. Do not apply directly over concrete or masonry block.
- Coated glass mat backer board should not be used in shower floors.

OTHER CONSIDERATIONS

- Movement joints, spacing and minimum gauge of steel studs as per instructions of manufacturer of cementitious backer board (CBU) or coated glass mat backer board.
- Recessing the floor of a bathroom must be done in a way that preserves the structural integrity and safety of the construction. This may require the services of a qualified design professional (e.g., architect, engineer, etc.).
- Curbless tiled showers rely on the slope of the floor to effectively contain water in the immediate shower area and direct water to the drain. Given the wide range of potential configurations, it isn't possible to address them all in this manual.
- Waterproofing must be installed in all areas subject to water exposure. Install waterproofing membrane over mortar beds.

A water/flood test is strongly recommended before setting tile to verify a successful installation. Wait 24 hours minimum after the membrane installation is complete to allow for final set of thin-set mortar and ensure waterproof performance at seams and connections. Refer to local plumbing codes for any specific requirements in your area. For curbless showers a temporary dam (e.g., a 2x4 and silicone sealant, plastic sheeting and sand, etc.) must be provided at the threshold to perform the water test.

Drains should be designed to permit drainage of water at the tile surface and the surface of the waterproofing membrane. For drainage see Detail 326DR-2019-2021.

- For high use showers (hotels, gang showers, sports facilities, etc.) a waterproofing membrane shall be used over cementitious backer unit (CBU).*
- Waterproofing membrane (ANSI A118.10), follow manufacturer's recommendations.
- The waterproof membrane should be installed at least to the shower-head or preferably to the ceiling.
- All openings and cuts must be treated to ensure waterproof integrity.
- Refer to Notes For The Professional and 301MJ-2019-2021.
- A waterproofing membrane or vapour retarder not to be used behind coated glass-mat backer board.
- Vapour retarder must be used when recommended by manufacturer.
- Plywood even if exterior grade is not recommended for wet areas on walls due to potential warpage from humidity and seasonal changes.
- All horizontal surfaces including: seats, curbs, pony-wall, window ledges and shampoo shelves need to be sloped to drain assembly.

*If the shower is high use or is actually a steam shower, and the waterproofing membrane is acting as both the waterproofing membrane and the vapor retarder the waterproofing membrane must have a perm rating of .5 or less using ASTM E96 Procedure E with 90 % humidity. If the waterproofing membrane has a perm rating higher then .5 then a vapor retarder should be used behind the solid backing that has a perm rating 1.0 or less when tested with ASTM E96 Procedure A.