

Recommended Application Guidelines for Adhered Thin Brick Veneer

H. C. Muddox and Interstate Brick thin brick can be installed onto new and existing walls over a variety of different backup substrates. The following are general guidelines for each the different applications. As building code requirements differ from area to area, check with local building departments prior to installation.

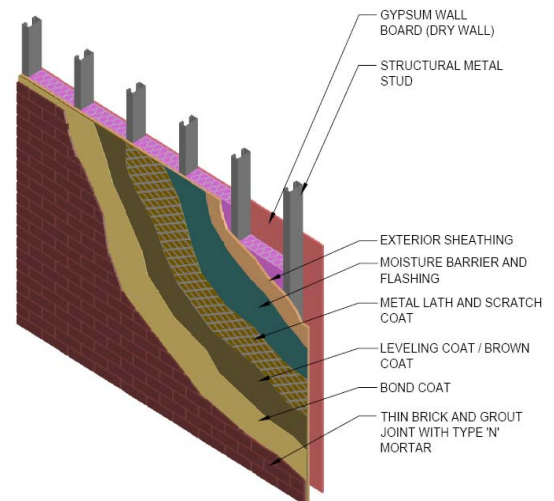
Approved Substrates for Adhered Thin Brick

Thin brick can be installed over a variety of construction substrates. The most common of these is thin brick directly adhered to a substrate of a scratch and brown stucco system. Thin Brick can also be adhered to Metal Panels, Concrete Masonry Units (CMU), Tilt-up or Poured in Place Concrete, Cement board or other approved cementitious substrates.

There are a number of options available for installing thin brick over wood and metal framing systems. A typical Thin Brick application of over a scratch and brown usually consists of a wall system similar to the detail at the right.

Thin Brick adhered to Scratch and Brown Stucco Over Metal or Wood Studs:

- Size stud framing for all design loads. Design deflections should be limited to $L/360$.
- Size and install sheathing as required for design loads.
- Apply moisture barrier, flashing and weeps as required to create positive drainage to the exterior.
- Attach self furring metal lath to studs as required for design loads.
- Locate and install control/expansion joints at corners, changes in wall heights, adjacent to change in materials, and at spacing not to exceed 15 ft on center in any direction.
- Apply "scratch" coat of stucco over metal lath - completely embed and cover. Allow to dry 24 hours.
- Apply "brown" or leveling coat of stucco to scratch coat to level and plumb surface. Allow to dry 7 days prior to installing thin brick.
- Blend thin brick from multiple cartons and multiple pallets to create a uniform distribution of color.
- Brown coat substrate may need to be slightly moistened to prevent desiccation from the bonding mortar. Apply thin brick to brown coat using specified Type S bonding mortar. Using a $\frac{1}{4}$ " notched trowel, coat the brown coat with a thin layer of bonding mortar from the substrate. Do not cover an area larger than can be completed in 10 minutes.
- "Back Butter" (coat) the back side of the thin brick and press into place. Allow to dry a minimum of 24 hours.
- Locate and install movement joints in the brick to match those in the backup.
- Grout all joints to receive mortar with Type N Portland cement mortar.
- Tool joint when mortar is thumb print hard.
- Clean brick using appropriate cleaning methods. Use low pressure cleaning method.
- Install backer rod and sealant at control/expansion joints.
- Apply water repellents where specified to control moisture and efflorescence.

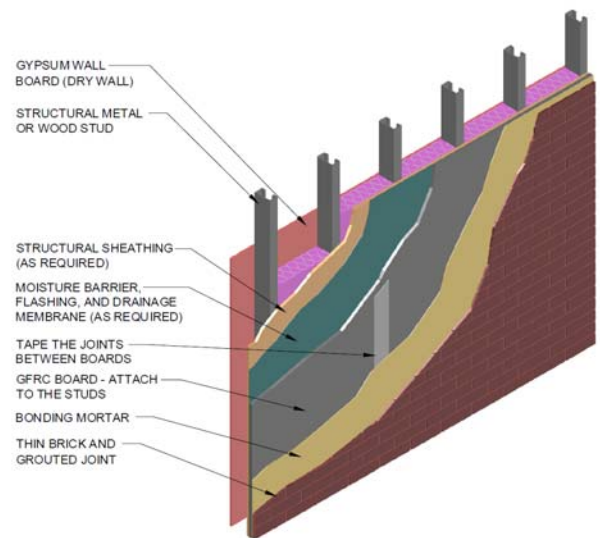


Recommended Application Guidelines for Adhered Thin Brick Veneer

Thin Brick Adhered to Cement Boards (GFRC) Over Metal or Wood Studs:

Cement Board can also serve as an excellent substrate for the application of adhered thin brick veneer. The benefit to this type of substrate is that the cement board can be fastened to the structure, and the application of the Thin Brick can begin immediately. The cement board substrate will eliminate the drying and curing time necessary for a scratch and brown stucco substrate system.

- Size stud framing for all design loads. Design deflections should be limited to $L/360$.
- Size and install sheathing as required for design loads.
- Apply moisture barrier, rain screen, flashing and weeps as required to create positive drainage to the exterior.
- Mechanically fasten cement board to studs as required for design loads
- Locate and install control joints at cement board seams at corners, changes in wall heights, adjacent to change in materials, and at spacing not to exceed 15 ft on center in any direction.
- Tape all seams between control joints.
- Blend from multiple cartons to create a uniform distribution of color.
- Apply thin brick to cement board using Type S bonding mortar. Using a $\frac{1}{4}$ " notched trowel, coat the cement board. Cement board may need to be moistened to prevent desiccation of the bonding mortar. Do not trowel an area larger than can be completed in 10 minutes.
- "Back Butter" (coat) the back side of the thin brick and press into place. Allow to dry a min of 24 hours.
- Locate and install movement joints in the brick to match those in the backup.
- Grout all joints to receive mortar with Type N Portland cement mortar.
- Tool joint when mortar is thumb print hard.
- Clean brick using appropriate cleaning methods. Use low pressure cleaning method.
- Install backer rod and sealant at control/expansion joints.
- Apply water repellents where specified to control moisture and efflorescence

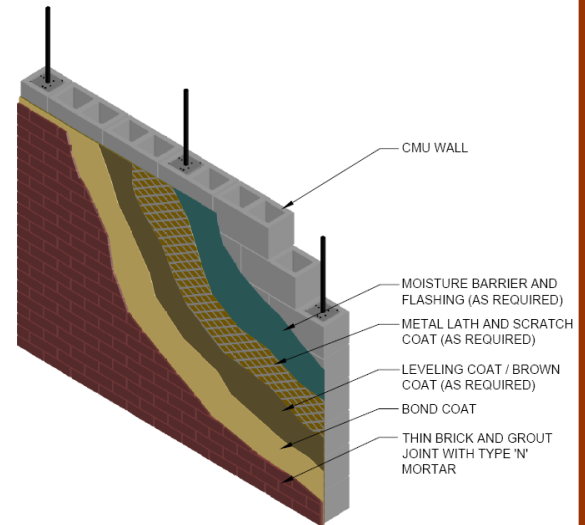


Recommended Application Guidelines for Adhered Thin Brick Veneer

Thin Brick adhered to CMU, Tilt-up, or Poured in Place Concrete walls:

- Size reinforced concrete/masonry for all design loads.

Clean and remove all bond breaking materials from surface to receive thin brick. (Where cleaning is omitted or moisture barrier is required, metal lath with scratch and brown coat must be installed). For Tilt-up and Poured-in-place concrete walls, the most important factor in achieving a proper bond to the concrete is the complete removal of any and all bond breaker used in the construction of the walls. This will require sand or bead blasting or chemical removal. If the bond breakers are not completely removed from the concrete substrate, the thin brick will not properly adhere to the concrete walls.



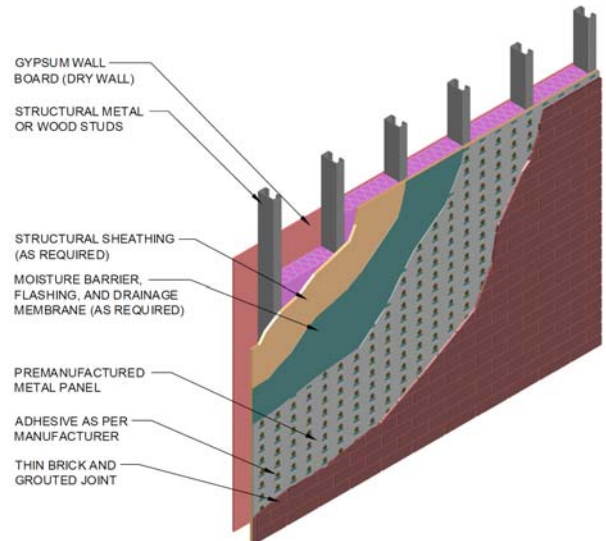
- Where metal lath is applied to the masonry wall, install control/expansion joints to match movement joints in substrate, changes in wall heights, adjacent to change in materials and not to exceed 20 ft on center.
- Where bond coat is applied directly to the masonry wall place control/expansion joints in the brick to match those in the backup, changes in wall heights, adjacent to change in materials and not to exceed 20 ft on center horizontally and vertically.
- Substrate may need to be moistened to prevent desiccation of the bonding mortar.
- Apply thin brick to substrate using Type S bonding mortar using a ¼" notched trowel. Do not trowel an area larger than can be completed in 10 minutes.
- Blend from multiple cartons to create a uniform distribution of color.
- "Back Butter" (coat) the back side of the thin brick and press into place. Allow to dry a min of 24 hours.
- Grout all joints to receive mortar with Type N Portland cement mortar.
- Tool joint when mortar is thumb print hard.
- Clean brick using appropriate cleaning methods. Use low pressure cleaning method.
- Install backer rod and sealant at control/expansion joints.
- Apply water repellents where specified to control moisture and efflorescence.



Recommended Application Guidelines for Adhered Thin Brick Veneer

Thin Brick adhered to Metal Panel Over Metal or Wood Studs:

- Size stud framing for all design loads. Design deflections should be limited to $L/360$.
- Size and install sheathing as required for design loads.
- Apply moisture barrier or rain screen, flashing and weeps as required to create positive drainage to the exterior.
- Attach metal panel to studs as required for design loads.
- Locate and install control/expansion joints at corners, changes in wall heights, adjacent to change in materials, and at spacing not to exceed 15 ft on center in any direction.
- Locate and install movement joints in the brick to match those in the backup.
- Adhere thin brick to metal panel using approved adhesive.
- Grout all joints to receive mortar with Type N Portland cement mortar.
- Tool joints when mortar is thumb print hard.
- Clean brick using appropriate cleaning methods. Use low pressure cleaning method.
- Install backer rod and sealant at control/expansion joints.
- Apply water repellents where specified to control moisture and efflorescence.



Additional Information: Installation

1. Proper layout of the thin brick and coursing is generally specified in the construction documents and special attention should be given to the specific job exterior wall details. Bonding patterns, corner and lintel details, and placement of soldier and header courses all affect the overall layout strategy. The attention to detail in this area is critical to a quality application.
2. Start at the outside corner of walls. Use corner units, full units and half units to obtain the desired bonding patterns.
3. Bonding mortars shall be ASTM Type S Portland Cement Mortar gauged with an approved latex additive for additional shear bond strength. There are several types of bonding mortars and additives available for specific exterior and interior applications.
4. It is important to use standard brick mortar for grouting joints. If joints are grouted with bonding mortars, the latex additive is very difficult to remove from the face of the brick.
5. For additional information, contact your local H. C. Muddox or Interstate Brick representative.

For additional information on Adhered Brick veneer:

DIRECT ADHERED CERAMIC TILE, STONE AND THIN BRICK FACADES
TECHNICAL DESIGN MANUAL, Richard P. Glodberg, Architect AIA, CSI