

SECTION 04812 (042012) – MECHANICALLY ATTACHED BRICK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Provide all labor and materials necessary to install the mechanically attached brick and accessories which include a moisture barrier, fasteners, adhesive, brick, brick mortar and sealants.
- B. Related work specified elsewhere:
 - 1. Division 3 Section 'Cast-In-Place Concrete'
 - 2. Division 4 Section 'Unit Masonry'
 - 3. Division 5 Section 'Cold-Formed Metal Framing'
 - 4. Division 6 Section 'Sheathing'
 - 5. Division 7 Section 'Joint Sealants'

1.3 DEFINITIONS

- 1. The BRICK-FAST™ Panel provides for a mechanical attachment for thin bricks manufactured with dove tail backs. Special tabs provide for proper alignment of horizontal joint spacing.
- 2. The BRICK-FAST™ Panel provides for a mechanical attachment of brick to panel and brick mortar to tabs designed to fall within the mortar joint.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection:
 - 1. For each product requiring color and texture selection, provide full size samples.
- C. Samples for Verification:
 - 1. For each product, color, and texture selected, provide six full-size units representing actual color and texture of products to be installed.
- D. Contractor shall submit evidence with the bid that he has received Brick-Fast installation instructions from the local distributor.

1.5 QUALITY ASSURANCE

- A. Contractor must be approved by the local distributor and follow manufacturers' details and application instructions.
- B. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, through one source from a single manufacturer for each product required.
- C. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from a single manufacturer for each cementitious component and from one source or producer for each aggregate.
- D. Sample Panels: Build sample panels to verify selections made under sample submittals and to demonstrate aesthetic effects. Comply with requirements in Division 1 Section "Quality Requirements" for mockups.
 - 1. Build sample panels for each type of exposed unit masonry construction in sizes approximately 48 inches long by 48 inches high.
 - 2. Clean one-half of exposed faces of panels with masonry cleaner indicated.
 - 3. Protect approved sample panels from the elements with weather-resistant membrane.
 - 4. Approval of sample panels is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; aesthetic qualities of workmanship; and other material and construction qualities specifically approved by Architect in writing.
 - a. Approval of sample panels does not constitute approval of deviations from the Contract Documents contained in sample panels unless such deviations are specifically approved by Architect in writing.
- E. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.6 PRODUCT, DELIVERY, STORAGE AND HANDLING

- A. All materials and accessories shall be properly marked and labeled along with MSDS for each project.
- B. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
 - 1. Deliver products on pallets, with individual faces protected; keep dry.
 - 2. Store units in protected area or under cover on level ground; keep dry.
 - 3. Do not double-stack pallets.
- C. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

- D. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.7 JOB SITE CONDITIONS

- A. Panels must be clean and free of any foreign matter before installing thin brick.
- B. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.
 - 1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
 - 2. Protect sills, ledges, and projections from mortar droppings.
 - 3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
- C. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions.
 - 1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and above and will remain so until masonry has dried, but not less than 7 days after completing cleaning.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Subject to compliance with requirements, provide the following:
 - 1. Attachment Panels:
 - a. BRICK-FAST™ Steel Panels by Astech Associates, Inc. 804-323-7088.
 - 2. Brick:
 - a. TBX grade brick with dove tail backs as manufactured by one of the following:
 - 1) Endicott Clay Products Company
 - 2) Metro Brick
 - b. Size: 1/2" - 1" x 2-1/4" x 7-5/8"
 - c. Size: 1/2" - 1" x 3-5/8" x 7-5/8"
 - d. Texture: Smooth

- e. Texture: Wirecut
- f. Texture: Sand Finish
- g. Color: _____
- h. Trim Units: Match Brick for texture and color.
- i. TBS grade with smooth back may be used with a ledge support panel only.

B. Substitutions: NOT PERMITTED

2.2 MATERIALS

A. Moisture Barrier:

1. To be used for exterior applications, provide one of the following:
 - a. Grade D Building Paper
 - b. 15 lb. Felt
 - c. Tyvek
 - d. Styrofoam Weathermate Plus Housewrap
2. Refer to manufacturers' installation instructions.

B. Starter angle and flashing:

1. Provide galvanized steel or aluminum continuous starter angle for starter course. All doors, window heads, terminations and dissimilar substrate or materials shall be properly flashed.

C. Support Panel:

1. Mechanical support and spacer panel to be 28 gauge architectural grade steel, hot dipped galvanized to G-60. Punched tabs provide a mechanical lock of thin brick with a dove tail back. Another row of punched tabs fall within the mortar joint that lock mortar to the panel.
2. Corner pieces provide a support ledge for corner pieces and spacing of joints that easily line up with standard 2' x 4' and 4' x 4' panels.
3. Panels must be clean and free of dirt, oil or any other surface contaminates.

D. Adhesive:

1. Adhesive to be Polyurethane base, sub-flooring compatible for bonding brick tile to metal. Adhesives to comply with local building codes and must be ASTM tested.
 - a. Acceptable Product: Polyurethane Premium Construction Adhesive by OSI, Surebond Power Sealer -2 and Loctite Power Grab. Substitutes may be used if product is polyurethane base and recommended for brick and metal bonding.

E. Mortar:

1. Field mix mortar must be latex modified. Add 1 quart per 80 lb. Bag of type S mortar. Contact manufacture for additional recommendations.

2. Fill all voids in joints with newly struck mortar in order to provide uniform color.
 - a. Acceptable Product: A. W. Cook Thin Brick Mortar specifically designed for thin brick applications. Meets ASTM C-109, ASTM C-882 and ASTM C-78. Also recommend Brick Set by United Products in Freemont, NE. Other mortar mixes may be used when modified with a acrylic latex.

F. Fasteners:

1. All fasteners must be rust resistant, galvanized or zinc coated.
2. Self tapping, cadmium plated screws or Versapin fastening system by Aerosmith or similar may be used to fasten panels to the substrate and into light gauge steel framing.
3. Twist shank masonry nails cadmium plated, or fastening system such as TrakFast by Ramset are recommended for fastening panels over concrete or masonry.
4. Galvanized annular ring nails or wood screws are recommended over wood frame construction.
5. Fastening pattern must be 1 per square foot minimum.

G. Sealants:

1. Acceptable Products: Urethane or Silicone. Use proper backer rod and sealant at all abutments to dissimilar materials and through wall expansion joints.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Installer must examine conditions under which brick panels are to be installed. Substrate must be smooth, sound, level and without projections. Any unsatisfactory conditions of the substrate must be corrected before beginning installing the thin brick panels.
- B. Consult with other trades prior to installing panels to avoid potential interference.

3.2 INSTALLATION

A. Panel layout:

1. Line-up on wall, establishing bottom of lowest panel course and mark level horizontal line at this point.
2. Lay out brick panels at corners working to the center of the wall.

B. Brick Installation:

1. Install thin brick in accordance with manufacturer's printed instructions.
2. Cut units where required for fitting or for installation of built-in items, using power tools; do not install units having chipped or cracked edges on sight-exposed surfaces.
3. Align base courses to follow accurate floor lines.

4. Align faces plumb, level, true and with uniform joint widths.
5. Size and portion units for best appearance, with joints arranged neat and symmetrical, free of imperfections detracting from overall appearance.

C. Control Joints/Expansion Joints:

1. Expansion joints must be placed at floor lines for wood frame and steel frame construction. Consult local building codes and BIA for placement for required expansion joints.
2. Vertical control joints are required to be placed in walls at 20' increments. The joint widths should be 1/2" with backer rod and urethane or silicone sealant.
3. Control joints must be installed where substrates change and when abutting to dissimilar materials.

3.3 FIELD QUALITY CONTROL

- A. Architect will observe appearance of installed units; installed masonry surfaces shall be free of imperfections which detract from overall appearance when viewed from a distance of 20 feet at 90 degrees normal to surface.

3.4 CLEANING

1. Clean installed masonry surfaces in accordance with manufacturer's instructions; do not clean units with products not specified in manufacturer's instructions.

END OF SECTION 04812 (042012)