

**SECTION 04 26 13
MASONRY VENEER**

PART 1 GENERAL

1.1 STIPULATIONS

- A. The specifications sections "General Conditions to the Construction Contract", "Special Conditions" and "Division 01 - General Requirements" form a part of this Section by this reference thereto, and shall have the same force and effect as if printed herewith in full.

1.2 SECTION INCLUDES

- A. Clay facing brick.
- B. Mortar.
- C. Reinforcement and anchorage.
- D. Flashings.
- E. Accessories.

1.3 RELATED REQUIREMENTS

- A. Section 07 92 00 - Joint Sealants

1.4 REFERENCE STANDARDS

- A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware 2016a.
- B. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement 2022.
- C. ASTM A641/A641M - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire 2019.
- D. ASTM A951/A951M - Standard Specification for Steel Wire for Masonry Joint Reinforcement 2022.
- E. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete 2022.
- F. ASTM C67/C67M - Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile 2021.
- G. ASTM C91/C91M - Standard Specification for Masonry Cement 2018.
- H. ASTM C150/C150M - Standard Specification for Portland Cement 2022.
- I. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes 2018.
- J. ASTM C216 - Standard Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale) 2022.

- K. ASTM C270 - Standard Specification for Mortar for Unit Masonry 2019a, with Editorial Revision.
- L. ASTM D226/D226M - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing 2017.
- M. ASTM D4637/D4637M - Standard Specification for EPDM Sheet Used in Single-Ply Roof Membrane 2015, with Editorial Revision (2022).

1.5 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data for masonry units, fabricated wire reinforcement, and mortar.
- C. Samples: Submit two samples of decorative block units to illustrate color, texture, and extremes of color range.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section with minimum three years of documented experience.

1.7 MOCK-UP

- A. Construct a masonry infill mock-up within a former window opening; include mortar and accessories and structural backup in mock-up.
- B. Locate where directed.
- C. Mock-up may remain as part of the Work, if approved by the Architect and Client Agency.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, handle, and store masonry units by means that will prevent mechanical damage and contamination by other materials.

1.9 FIELD CONDITIONS

- A. Cold and Hot Weather Requirements: Comply with requirements of TMS 402/602 or applicable building code, whichever is more stringent.

PART 2 PRODUCTS

2.1 BRICK UNITS

- A. Manufacturers:
 - 1. Endicott Clay Products Co; Face Brick: www.endicott.com/#sle.
 - 2. Metro Brick{CH#25670}: www.metrothinbrick.com/#sle.
 - 3. **Basis of Design:** Glen-Gery Corporation: www.glengery.com/#sle.
 - 4. Substitutions: See Section 01 25 00 - Substitution Procedures.

- B. Facing Brick: ASTM C216, Type FBS Smooth, Grade SW.
 - 1. Color and texture to match Architect's sample.
 - 2. Color and Texture: To be selected from standard colors.
 - 3. Nominal Size: As indicated on drawings.
 - 4. Compressive Strength: 3000 PSI, measured in accordance with ASTM C67/C67M.

2.2 MORTAR MATERIALS

- A. Masonry Cement: ASTM C91/C91M Type N.
 - 1. Colored Mortar: Premixed cement as required to match Architect's color sample.
 - 2. Substitutions: See Section 01 25 00 - Substitution Procedures.
- B. Portland Cement: ASTM C150/C150M, Type I; color as required to produce approved color sample.
- C. Hydrated Lime: ASTM C207, Type S.
- D. Water: Clean and potable.

2.3 REINFORCEMENT AND ANCHORAGE

- A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi) yield strength, deformed billet bars; galvanized.
- B. Joint Reinforcement Standard: ASTM A951/A951M.
 - 1. Type: Truss or ladder.
 - 2. Material: ASTM A1064/A1064M steel wire, mill galvanized to ASTM A641/A641M Class 3.
 - 3. Size: 0.1483 inch side rods with 0.1483 inch cross rods; width as required to provide not less than 5/8 inch of mortar coverage on each exposure.
 - 4. Manufacturers:
 - a. Blok-Lok Limited: www.blok-lok.com/#sle.
 - b. Hohmann & Barnard, Inc; HB 213 Veneer Anchor: www.h-b.com/#sle.
 - c. WIRE-BOND: www.wirebond.com/#sle.
 - d. **Basis of Design:** Dur-O-Wall: www.dur-o-wal.com/#sle.
 - e. Substitutions: See Section 01 25 00 - Substitution Procedures.
- C. Masonry Veneer Anchors: 2-piece anchors that permit differential movement between masonry veneer and structural backup, hot dip galvanized to ASTM A 153/A 153M, Class B.
 - 1. Anchor plates: Not less than 0.075 inch thick, designed for fastening to structural backup through sheathing by two fasteners; provide design with legs that penetrate sheathing

and insulation to provide positive anchorage.

2. Wire ties: Manufacturer's standard shape, 0.1875 inch thick.
3. Vertical adjustment: Not less than 3-1/2 inches.
4. Seismic Feature: Provide lip, hook, or clip on end of wire ties to engage or enclose not less than one continuous horizontal joint reinforcement wire of 0.1483 inch diameter.
5. Manufacturers:
 - a. Hohmann & Barnard, Inc: www.h-b.com/#sle.
 - b. Substitutions: See Section 01 25 00 - Substitution Procedures.

2.4 FLASHINGS

A. Metal Flashing Materials:

1. Prefabricated Metal Flashing: Smooth fabricated 12 oz/sq ft stainless steel (type 304) flashing for surface mounted conditions.
 - a. Manufacturers:
 - 1) Hohmann & Barnard, Inc: www.h-b.com/#sle.
 - 2) Substitutions: See Section 01 25 00 - Substitution Procedures.

B. Membrane Asphaltic Flashing Materials:

1. Rubberized Asphalt Flashing: Self-adhering polymer modified asphalt sheet; 40 mils (0.040 inch) minimum total thickness; 8 mil cross-laminated polyethylene bonded to adhesive rubberized asphalt, with a removable release liner.
 - a. Manufacturers:
 - 1) Advanced Building Products, Inc: www.advancedbuildingproducts.com/#sle.
 - 2) Heckmann Building Products, Inc: www.heckmannbuildingprods.com/#sle
 - 3) WIRE-BOND: www.wirebond.com/#sle.
 - 4) Substitutions: See Section 01 25 00 - Substitution Procedures.

C. Membrane Non-Asphaltic Flashing Materials:

1. Composite Polymer Flashings - Self-Adhering: Composite polyethylene; 40 mil thick with pressure-sensitive adhesive and release paper.
 - a. Manufacturers:
 - 1) Hohmann & Barnard, Inc: www.h-b.com/#sle.
 - 2) Substitutions: See Section 01 25 00 - Substitution Procedures.
2. EPDM Flashing: ASTM D4637/D4637M, Type I, 0.040 inch thick.

- a. Manufacturers:
 - 1) Hohmann & Barnard, Inc: www.h-b.com/#sle.
 - 2) Substitutions: See Section 01 25 00 - Substitution Procedures.
- D. Factory-Fabricated Flashing Corners and Ends: Stainless steel.
 - 1. Manufacturers:
 - a. Hohmann & Barnard, Inc: www.h-b.com/#sle.
 - b. Substitutions: See Section 01 25 00 - Substitution Procedures.
- E. Flashing Sealant/Adhesives: Silicone, polyurethane, or silyl-terminated polyether/polyurethane, or other type required or recommended by flashing manufacturer; type capable of adhering to type of flashing used.
 - 1. Manufacturers, Synthetic Rubber Products:
 - a. Mortar Net Solutions; BTL-1 Butyl Sealant: www.mortarnet.com/#sle.
 - b. Substitutions: See Section 01 25 00 - Substitution Procedures.
- F. Termination Bars: Stainless steel; compatible with membrane and adhesives.
 - 1. Manufacturers:
 - a. Mortar Net Solutions; Termination Bars: www.mortarnet.com/#sle.
 - b. Substitutions: See Section 01 25 00 - Substitution Procedures.
- G. Drip Edge: Stainless steel; compatible with membrane and adhesives.
 - 1. Manufacturers:
 - a. Mortar Net Solutions; Metal Drip Edges: www.mortarnet.com/#sle.
 - b. Substitutions: See Section 01 25 00 - Substitution Procedures.

2.5 ACCESSORIES

- A. Joint Filler: Closed cell polyvinyl chloride; oversized 50 percent to joint width; self expanding; in maximum lengths available.
 - 1. Manufacturers:
 - a. Hohmann & Barnard, Inc: www.h-b.com/#sle.
 - b. Substitutions: See Section 01 25 00 - Substitution Procedures.
- B. Building Paper: ASTM D226/D226M, Type I ("No. 15") asphalt felt.
- C. Weeps:
 - 1. Type: Preformed aluminum vents with sloping louvers.

2. Manufacturers:
 - a. Advanced Building Products, Inc: www.advancedbuildingproducts.com/#sle.
 - b. Hohmann & Barnard, Inc: www.h-b.com/#sle.
 - c. Substitutions: See Section 01 25 00 - Substitution Procedures.
- D. Drainage Fabric: Polyester mesh bonded to a water and vapor-permeable fabric.
 1. Manufacturers:
 - a. Mortar Net Solutions; DriPlane: www.mortarnet.com/#sle.
 - b. York Manufacturing, Inc; Weep Armor Weep Vent Protection: www.yorkmfg.com/#sle.
 - c. Substitutions: See Section 01 25 00 - Substitution Procedures.
- E. Cleaning Solution: Non-acidic, not harmful to masonry work or adjacent materials.

2.6 MORTAR MIXING

- A. Mortar for Unit Masonry: ASTM C270, Proportion Specification.
 1. Masonry below grade and in contact with earth; Type S.
 2. Exterior, non-loadbearing masonry; Type N.
- B. Colored Mortar: Proportion selected pigments and other ingredients to match Architect's sample, without exceeding manufacturer's recommended pigment-to-cement ratio.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive masonry.
- B. Verify that related items provided under other sections are properly sized and located.

3.2 COURSING

- A. Establish lines, levels, and coursing indicated. Protect from displacement.
- B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
- C. Brick Units:
 1. Bond: Running.
 2. Coursing: Three units and three mortar joints to equal 8 inches.
 3. Mortar Joints: Concave.

3.3 PLACING AND BONDING

- A. Lay solid masonry units in full bed of mortar, with full head joints, uniformly jointed with other work.

3.4 WEEPS/CAVITY VENTS

- A. Install weeps in veneer walls at 24 inches on center horizontally on top of through-wall flashing above shelf angles and lintels and at bottom of walls.

3.5 REINFORCEMENT AND ANCHORAGE - MASONRY VENEER

- A. Install horizontal joint reinforcement 16 inches on center.
- B. Lap joint reinforcement ends minimum 6 inches.
- C. Masonry Back-Up: Embed anchors to bond veneer at maximum 16 inches on center vertically and 36 inches on center horizontally. Place additional anchors at perimeter of openings and ends of panels, so maximum spacing of anchors is 8 inches on center.
- D. Stud Back-Up: Secure veneer anchors to stud framed back-up and embed into masonry veneer at maximum 16 inches on center vertically and 24 inches on center horizontally. Place additional anchors at perimeter of openings and ends of panels, so maximum spacing of anchors is 8 inches on center.
- E. Seismic Reinforcement: Connect veneer anchors with continuous horizontal wire reinforcement before embedding anchors in mortar.

3.6 LINTELS

- A. Install loose steel lintels over openings.
- B. Maintain minimum 4 inch bearing on each side of opening.

3.7 TOLERANCES

- A. Maximum Variation From Unit to Adjacent Unit: 1/16 inch.
- B. Maximum Variation from Plane of Wall: 1/4 inch in 10 ft and 1/2 inch in 20 ft or more.
- C. Maximum Variation from Plumb: 1/4 inch per story non-cumulative; 1/2 inch in two stories or more.
- D. Maximum Variation from Level Coursing: 1/8 inch in 3 ft and 1/4 inch in 10 ft; 1/2 inch in 30 ft.
- E. Maximum Variation of Mortar Joint Thickness: Head joint, minus 1/4 inch, plus 3/8 inch.

3.8 CLEANING

- A. Remove excess mortar and mortar smears as work progresses.
- B. Clean soiled surfaces with cleaning solution.

3.9 PROTECTION

- A. Without damaging completed work, provide protective boards at exposed external corners that are subject to damage by construction activities.

END OF SECTION