PART 1 GENERAL

1.1 SECTION INCLUDES

A. Concrete Block.

B. Concrete Block Veneer.

C. Brick Veneer.

D. Mortar and Grout.

E. Reinforcement and Anchorage.

F. Metal Flashings.

G. Embedded Flashing.

H. Accessories.

1.2 RELATED REQUIREMENTS

A. Section 01 40 13 - Freestanding Mockup: Mockup requirements.

B. Section 01 62 00 - Delegated Design: Masonry veneer anchors.

C. Section 03 30 00 - Cast-in-Place Concrete: Installation of dovetail slots for masonry anchors.

D. Section 05 12 00 - Structural Steel Framing: Anchor sections of adjustable masonry anchors for connecting to structural frame.

E. Section 05 50 00 - Metal Fabrications: Loose steel lintels.

F. Section 06 10 00 - Rough Carpentry: Nailing strips built into masonry.

G. Section 07 11 13 - Bituminous Dampproofing: Dampproofing parged masonry surfaces.

H. Section 07 19 00 - Water Repellents and Anti-Graffiti Coatings.

I. Section 07 21 00 - Thermal Insulation: Insulation for cavity spaces.

J. Section 07 25 00 - Weather Barriers: Water-resistive barriers or air barriers applied to the exterior face of the backing sheathing or masonry.

K. Section 07 62 00 - Sheet Metal Flashing and Trim: Through-wall masonry flashings.

L. Section 07 84 00 - Firestopping: Firestopping at penetrations of fire-rated masonry and at top of fire-rated walls.

M. Section 07 92 00 - Joint Sealants: Sealing control and expansion joints.

N. Section 08 91 00 - Louvers: Louver frames installed in masonry walls.

1.3 REFERENCE STANDARDS

A. ACI 530/530.1/ERTA - Building Code Requirements and Specification for Masonry Structures and Related Commentaries; 2011.

B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2009.

C. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon Steel Bars for Concrete Reinforcement; 2015.

D. ASTM A641/A641M - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire; 2009a (Reapproved 2014).

E. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2015.

F. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete; 2015.

G. ASTM C90 - Standard Specification for Loadbearing Concrete Masonry Units; 2014.

H. ASTM C91/C91M - Standard Specification for Masonry Cement; 2012.

I. ASTM C129 - Standard Specification for Nonloadbearing Concrete Masonry Units; 2011.

J. ASTM C140/C140M - Standard Test Methods of Sampling and Testing Concrete Masonry Units and Related Units; 2014.

K. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar; 2011.

L. ASTM C150/C150M - Standard Specification for Portland Cement; 2015.

M. ASTM C216 - Standard Specification for Facing Brick (Solid Masonry Units Made From Clay or Shale); 2014.

N. ASTM C270 - Standard Specification for Mortar for Unit Masonry; 2014a.

O. ASTM C404 - Standard Specification for Aggregates for Masonry Grout; 2011.

P. ASTM C476 - Standard Specification for Grout for Masonry; 2010.

Q. ASTM C780 - Standard Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry; 2012.

R. ASTM C1072 - Standard Test Method for Measurement of Masonry Flexural Bond Strength; 2013.

S. ASTM C1148 - Standard Test Method for Measuring the Drying Shrinkage of Masonry Mortar; 1992a (Reapproved 2008).

T. ASTM C1314 - Standard Test Method for Compressive Strength of Masonry Prisms; 2014.

U. ASTM E514/E514M - Standard Test Method for Water Penetration and Leakage Through Masonry; 2014.

V. BIA Technical Notes No. 7 - Water Penetration Resistance – Design and Detailing; 2005.

W. BIA Technical Notes No. 13 - Ceramic Glazed Brick Exterior Walls; 2017.

X. BIA Techical Notes No. 28B - Brick Veneer/Steel Stud Walls; 2005.

Y. BIA Technical Notes No. 46 - Maintenance of Brick Masonry; 2005.

Z. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures; 2016.

AA. UL (FRD) - Fire Resistance Directory; current edition.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene a preinstallation meeting one week before starting work of this section; require attendance by all relevant installers.

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, mortar, and masonry accessories.

C. Manufacturer's Certificate: Certify that masonry units meet or exceed specified requirements.

D. Manufacturer's Certificate: Certify that water repellent admixture manufacturer has certified masonry unit manufacturer as an approved user of water repellent admixture in the manufacture of concrete block.

E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 01 60 00 - Product Requirements, for additional provisions.

1.6 QUALITY ASSURANCE

A. Comply with provisions of ACI 530/530.1/ERTA, except where exceeded by requirements of the contract documents.
   1. Maintain one copy of each document on project site.

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

C. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.7 MOCK-UP

A. Refer to Section 01 40 13 - Freestanding Mockup for mockup requirements.

B. Construct a free-standing masonry wall (per Section 01 40 13) as a mock-up panel sized at least 8 feet long by 6 feet high; include mortar and accessories and structural backup in mock-up. Coat a portion of the wall with Water Repellent and Anti-graffiti coating. (See Section 07 19 00- Water Repellants and Antigrafitti coating) Coordinate with mock-up requirements of other Sections to include openings and all associated flashings, membranes and sealants.

C. Locate where directed.

D. Mock-up may remain as part of the Work.

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 ACI 530/530.1/ERTA or applicable building code, whichever is more stringent.

PART 2 PRODUCTS

2.1 CONCRETE MASONRY UNITS

A. Manufacturers:
1. Mutual Materials Company, www.mutualmaterials.com.
2. Substitutions: Section 01 60 00 - Product Requirements.

B. Concrete Block: Comply with referenced standards and as follows:
1. Load-Bearing Units **CMU-3**: ASTM C90, normal weight.
a. Hollow block, as indicated.
b. Exposed Faces: Manufacturer's standard color and texture where indicated, as follows:
1) Ground Face.
c. Color: Natural.
d. Texture: Ground Face at Stair-side face and at Corridor-side face (end face). Other faces to be smooth, painted.
e. Size: Standard units with nominal face dimensions of 16 by 8 inches and nominal depth of 8 inches. Shapes as indicated on drawings.
f. Special Shapes: Provide blocks configured for corners and other detailed conditions.
g. Coating: Anti-graffiti coating. Refer to Section 07 19 00 Water Repellents and Anti-Graffiti Coatings.
2. Non-Loadbearing Veneer Units **CMU-1**: ASTM C129.
a. Hollow block, as indicated.
b. Normal weight.
c. Exposed Faces: Manufacturer's standard color and texture, as follows:
1) Smooth.
d. Color: Natural.
e. Texture: Smooth.
f. Size: Standard units with nominal face dimensions of 16 by 8 inches and nominal depth of 4 inches. Shapes as indicated on drawings.
g. Coating: Anti-graffiti coating. Refer to Section 07 19 00 Water Repellents and Anti-Graffit Coatings.
3. Load-Bearing Units **CMU-2**: ASTM C90, normal weight.
a. Size: Standard units with nominal face dimensions of 16 by 8 inches and nominal depth of 8 inches. Shapes as indicated on drawings.
b. Special Shapes: Provide blocks configured for corners and other detailed conditions.
c. Hollow block, as indicated.
d. Exposed Faces: Manufacturer's standard color and texture, as follows:
1) Smooth Face.
e. Color: Natural.
f. Texture: Smooth Face.
g. Coating: Paint
4. Units with Integral Water Repellent: Concrete block units as specified in this section with polymeric liquid admixture added to concrete masonry units at the time of manufacture.
a. Performance of Units with Integral Water Repellent:
1) Water Permeance: When tested per ASTM E514/E514M and for a minimum of 72 hours.
(a) No water visible on back of wall above flashing at the end of 24 hours.

(b) No flow of water from flashing equal to or greater than 0.032 gallons per hour at the end of 24 hours.
(c) No more than 25 percent of wall area above flashing visibly damp at end of test.
2) Flexural Bond Strength: ASTM C1072; minimum 10 percent increase.
3) Compressive Strength: ASTM C1314; maximum 5 percent decrease.
4) Drying Shrinkage: ASTM C1148; maximum 5 percent increase in shrinkage.
b. Use only in combination with mortar that also has integral water repellent admixture.
c. Use water repellent admixtures for masonry units and mortar by a single manufacturer.
d. Manufacturers:
1) W.R. Grace - DRY-BLOCK Block Admixture.
2) Substitutions: See Section 01 60 00 - Product Requirements.

2.2 BRICK UNITS

A. Manufacturers:
1. Mutual Materials Company: www.mutualmaterials.com.
2. Substitutions: See section 01 60 00 - Product Requirements.

B. Facing Brick **BR-1**: ASTM C216, Type FBX, Grade SW.
1. Color and texture: Color: Mountain Blend. Texture: Mission.
2. Nominal size: Standard units with nominal face dimensions of 12 by 3 inches and nominal depth of 4 inches (Norman). Shapes as indicated on dr awings.
3. Special shapes: Molded units as required by conditions indicated, unless standard units can be sawn to produce equivalent effect.
4. Coating: Anti-graffiti coating. Refer to Section 07 19 00 Water Repellents and Anti-Graffiti Coating.

2.3 MORTAR AND GROUT MATERIALS

A. Masonry Cement: ASTM C91/C91M, Type N for masonry veneer, Type S for loadbearing and at below-grade masonry.

B. Portland Cement: ASTM C150/C150M, Type I; color as required to produce approved color sample.

C. Mortar Aggregate: ASTM C144.

D. Grout Aggregate: ASTM C404.

E. Water: Clean and potable.

F. Integral Water Repellent Admixture for Mortar: Polymeric liquid admixture added to mortar at the time of manufacture.
1. Performance of Mortar and Grout with Integral Water Repellent:
a. Water Permeance: When tested per ASTM E514 for a minimum of 72 hours.
1) No water visible on back of wall above flashing at the end of 24 hours.
2) No flow of water from flashing equal to or greater than 0.032 gallons per hour at the end of 24 hours.
3) No more than 25% of wall area above flashing visibly damp at end of test.
b. Flexural Bond Strength: ASTM C1357; minimum 10% increase.
c. Compressive Strength: ASTM C1314; maximum 5% decrease.
d. Drying Shrinkage: ASTM C1148; maximum 5% increase in shrinkage.

2. Use only in combination with masonry units manufactured with integral water repellent admixture.
3. Use only water repellent admixture for mortar from the same manufacturer as water repellent admixture in masonry units.
4. Meet or exceed performance specified for water repellent admixture used in masonry units.
5. Manufacturers:
   a. W.R. Grace DRY-BLOCK Mortar Admixture.
   b. Substitutions: See Section 01 60 00 - Product Requirements.

2.4 REINFORCEMENT AND ANCHORAGE

A. Manufacturers:
   1. Hohmann & Barnard, Inc; HB 213 Veneer Anchor with insulation restraining washer www.h-b.com/#sle.
   2. WIRE-BOND: www.wirebond.com/#sle.
   3. Substitutions: See Section 01 60 00 - Product Requirements.

B. Reinforcing Steel: ASTM A615/A615M, Grade 40 (40,000 psi), deformed billet bars; galvanized.

C. Single Wythe Joint Reinforcement: Truss or ladder type; ASTM A1064/A1064M steel wire, mill galvanized to ASTM A641/A641M, Class 3; 0.1483 inch side rods with 0.1483 inch cross rods; width as required to provide not more than 1 inch and not less than 1/2 inch of mortar coverage on each exposure.

D. Flexible Anchors: 2-piece anchors that permit differential movement between masonry and building frame, sized to provide not more than 1 inch and not less than 1/2 inch of mortar coverage from masonry face.

E. 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.

2.5 FLASHINGS

A. Metal Flashing Materials:
   1. Stainless Steel Flashing: ASTM A666, Type 304, soft temper; 26 gage, 0.0187 inch thick; finish 2B to 2D.

B. Flashing Sealant/Adhesives: Silicone sealant recommended by flashing manufacturer; type capable of adhering to type of flashing used. At horizontal laps between lengths of stainless steel flashing, use the following sealant:
   1. Manufacturers, Silicone Products:
      a. Dow, Dowsil 795 Silicone Building Sealant: www.consumer.dow.com.
      b. Tremco Commercial Sealants & Waterproofing, Spectrem 2 Silicone Sealant: www.tremcosealants.com.
      c. Substitutions: See Section 01 60 00 - Product Requirements.

C. Lap Sealants and Tapes: As recommended by flashing manufacturer; compatible with membrane and adhesives.

2.6 ACCESSORIES

A. Joint Filler: Closed cell polyvinyl chloride; oversized 50 percent to joint width; self expanding; in maximum lengths available.

B. Mortar Diverter: Semi-rigid mesh designed for installation at flashing locations.
   1. Manufacturers:
      a. Advanced Building Products Inc; Mortar Break: www.advancedflashing.com/#sle.
      b. CavClear/Archovations, Inc; CavClear Masonry Mat MDCD-10" tall: www.cavclear.com.
      c. Mortar Net Solutions: www.mortarnet.com/#sle.
      d. Dur-O-Wall ; Product DA1008 Mortar Net: www.dur-o-wal.com
      e. Substitutions: See Section 01 60 00 - Product Requirements.

C. Drip Edge: Stainless steel; compatible with membrane and adhesives.

D. Weeps:
   1. Type: Molded PVC grilles, insect resistant.
   2. Color(s): As selected by Architect from manufacturer's standard range.
      a. Manufacturers:
         1) Advanced Building Products, Inc: www.advancedbuildingproducts.com/#sle.
         2) Hohmann & Barnard, Inc: www.h-b.com/#sle.
         3) Mortar Net Solutions: www.mortarnet.com/#sle.
         4) WIRE-BOND; Wire Bond Cell Vent 3601: www.wirebond.com.
         5) Mortar Net USA, Ltd; Product ____: www.mortarnet.com.
         6) Substitutions: See Section 01 60 00 - Product Requirements.

E. Cavity Vents:
   1. Type: Molded PVC grilles, insect resistant.
   2. Color(s): As selected by Architect from manufacturer's standard range.
      a. Manufacturers:
         1) Hohmann & Barnard, Inc: www.h-b.com/#sle.
         2) Mortar Net Solutions: www.mortarnet.com/#sle.
         3) WIRE-BOND; Wire Bond Cell Vent 3601: www.wirebond.com.
         4) Substitutions: See Section 01 60 00 - Product Requirements.

F. Cleaning Solution: Non-acidic, not harmful to masonry work or adjacent materials. Use only materials approved by the masonry manufacturer

G. Sealing and Protection of Masonry: See Section 07 19 00

2.7 MORTAR AND GROUT MIXES

A. Mortar for Unit Masonry: ASTM C270, using the Proportion Specification.

B. Colored Mortar: Proportion selected pigments and other ingredients to match Architect's sample, without exceeding manufacturer's recommended pigment-to-cement ratio.

C. Grout: ASTM C476; consistency required to fill completely volumes indicated for grouting; fine grout for spaces with smallest horizontal dimension of 2 inches or less; coarse grout for spaces with smallest horizontal dimension greater than 2 inches.

D. Admixtures: Add to mixture at manufacturer's recommended rate and in accordance with manufacturer's instructions; mix uniformly.

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.

C. Verify that built-in items are in proper location, and ready for roughing into masonry work.

3.2 PREPARATION

A. Direct and coordinate placement of metal anchors supplied for installation under other sections.

B. Provide temporary bracing during installation of masonry work. Maintain in place until building structure provides permanent bracing.

3.3 COLD AND HOT WEATHER REQUIREMENTS

A. Maintain materials and surrounding air temperature to minimum 40 degrees F prior to, during, and 48 hours after completion of masonry work.

B. Maintain materials and surrounding air temperature to maximum 90 degrees F prior to, during, and 48 hours after completion of masonry work.

3.4 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. Concrete Masonry Units: Smooth face
   1. Bond: Running.
   2. Coursing: One unit and one mortar joint to equal 8 inches.
   3. Mortar Joints: Concave.

D. Concrete Masonry Units: Ground face
   1. Bond: Running.
   2. Coursing: One unit and one mortar joint to equal 8 inches.
   3. Mortar Joints: Concave.

E. Brick Units:
   1. Bond: Running.
   2. Coursing: Three units and three mortar joints to equal 8 inches.
   3. Mortar Joints: Concave.

3.5 PLACING AND BONDING

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

B. Lay hollow masonry units with face shell bedding on head and bed joints.

C. Buttering corners of joints or excessive furrowing of mortar joints is not permitted.

D. Remove excess mortar and mortar smears as work progresses.

E. Remove excess mortar with water repellent admixture promptly. Do not use acids, sandblasting or high pressure cleaning methods.

F. Interlock intersections and external corners.

G. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.

H. Perform job site cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.

I. Cut mortar joints flush where wall tile is scheduled or resilient base is scheduled.

J. Isolate masonry partitions from vertical structural framing members with a control joint as indicated.

K. Isolate top joint of masonry partitions from horizontal structural framing members and slabs or decks with compressible joint filler.

L. Lay clay tile flue linings vertically, embedded in concrete block units.

3.6 WEEPS/CAVITY VENTS

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

B. Install cavity vents in veneer and cavity walls at 32 inches on center horizontally below shelf angles and lintels and near top of walls.

3.7 CAVITY MORTAR CONTROL

A. Do not permit mortar to drop or accumulate into cavity air space or to plug weep/cavity vents.

B. Install cavity mortar diverter at base of cavity and at other flashing locations as recommended by manufacturer to prevent mortar droppings from blocking weep/cavity vents.

3.8 REINFORCEMENT AND ANCHORAGE - GENERAL

A. Unless otherwise indicated on drawings or specified under specific wall type, install horizontal joint reinforcement 16 inches on center.

B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of opening.

C. Place continuous joint reinforcement in first and second joint below top of walls.

D. Lap joint reinforcement ends minimum 6 inches.

E. Fasten anchors to structural framing and embed in masonry joints as masonry is laid. Unless otherwise indicated on drawings or closer spacing is indicated under specific wall type, space anchors at maximum of 36 inches horizontally and 24 inches vertically.

3.9 REINFORCEMENT AND ANCHORAGE - SINGLE WYTHE MASONRY

A. Install horizontal joint reinforcement 8 inches on center.

B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of opening.

C. Lap joint reinforcement ends minimum 6 inches.

3.10 REINFORCEMENT AND ANCHORAGE - MASONRY VENEER

A. Install horizontal joint reinforcement 16 inches on center.

B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of opening.

C. Place continuous joint reinforcement in first and second joint below top of walls.

D. Lap joint reinforcement ends minimum 6 inches.

E. Stud Back-Up: Secure veneer anchors to stud framed back-up and embed into masonry veneer at maximum 1.77 sq ft of wall surface per anchor. Place additional anchors at perimeter of openings and ends of panels, so maximum spacing of anchors is 8 inches on center.

F. Seismic Reinforcement: Connect veneer anchors with continuous horizontal wire reinforcement before embedding anchors in mortar.

3.11 MASONRY FLASHINGS

A. Whether or not specifically indicated, install masonry flashing to divert water to exterior at all locations where downward flow of water will be interrupted.
   1. Extend flashings full width at such interruptions and at least 6 inches, minimum, into adjacent masonry or turn up at least 8 inches, minimum, to form watertight pan at non-masonry construction.
   2. Remove or cover protrusions or sharp edges that could puncture flashings.
   3. Seal lapped ends and penetrations of flashing before covering with mortar.

B. Extend metal flashings to within 1/4 inch of exterior face of masonry.

C. Lap end joints of flashings at least 6 inches, minimum, and seal watertight with flashing sealant/adhesive.

3.12 LINTELS

A. Install loose steel lintels over openings.

B. Maintain minimum 4 inch bearing on each side of opening.

3.13 CONTROL AND EXPANSION JOINTS

A. Do not continue horizontal joint reinforcement through control or expansion joints.

B. Form control joint with a sheet building paper bond breaker fitted to one side of the hollow contour end of the block unit. Fill the resultant core with grout fill. Rake joint at exposed unit faces for placement of backer rod and sealant.

C. Provide sanded control joints. Broadcast sand onto freshly installed joint sealant. Sand color to match sand used in mortar.

D. Size control joints as indicated on drawings; if not indicated, 3/8 inch wide and deep.

E. Size control joint in accordance with Section 07 90 05 for sealant performance.

3.14 TOLERANCES

A. Maximum Variation from Alignment of Columns and Pilasters: 1/4 inch.

B. Maximum Variation From Unit to Adjacent Unit: 1/16 inch.

C. Maximum Variation from Plane of Wall: 1/4 inch in 10 ft and 1/2 inch in 20 ft or more.

D. Maximum Variation from Plumb: 1/4 inch per story non-cumulative; 1/2 inch in two stories or more.

E. Maximum Variation from Level Coursing: 1/8 inch in 3 ft and 1/4 inch in 10 ft; 1/2 inch in 30 ft.

F. Maximum Variation of Mortar Joint Thickness: Head joint, minus 1/4 inch, plus 3/8 inch.

G. Maximum Variation from Cross Sectional Thickness of Walls: 1/4 inch.

3.15 CUTTING AND FITTING

A. Cut and fit for pipes, conduit, and sleeves. Coordinate with other sections of work to provide correct size, shape, and location.

B. Obtain approval prior to cutting or fitting masonry work not indicated or where appearance or strength of masonry work may be impaired.

C. Cut to match slope of roof decks. Maintain a continuous sloping surface.

3.16 FIELD QUALITY CONTROL

A. An independent testing agency will perform field quality control tests, as specified in Section 01 40 00 - Quality Requirements.

B. Concrete Masonry Unit Tests: Test each variety of concrete unit masonry in accordance with ASTM C140/C140M for conformance to requirements of this specification.

C. Mortar Tests: Test each type of mortar in accordance with ASTM C780, testing with same frequency as masonry samples.

3.17 CLEANING

A. Remove excess mortar and mortar droppings.

B. Replace defective mortar. Match adjacent work.

C. Clean soiled surfaces with manufacturer approved cleaning solution.

D. Use non-metallic tools in cleaning operations.

3.18 SEALING MASONRY

A. Refer to Section 07 19 00 - Water Repellants and Anti-Grafitti Coatings

3.19 PROTECTION

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

END OF SECTION