DIVISION 4

MASONRY SPECIFICATIONS

SECTION 04200

PART I - GENERAL

1.01 RELATED DOCUMENTS

A Drawings and General Provisions of Contract, including General and Supplementary Conditions and Division 01 Specification sections, apply to work of this section.

1.02 DESCRIPTION OF WORK

A Extent of each type of masonry work is indicated on drawings and schedule.

B Types of masonry work required include:

1. Concrete Unit Masonry.
2. Brick Masonry.
3. Architectural units:
   a. Pre-faced Unit Masonry.
   b. Polished Face Unit Masonry.
   c. Ground Face Unit Masonry.
   d. Split Face Unit Masonry.
   e. Smooth Face Unit Masonry.
   f. Split-Ribbed Unit Masonry.
4. Acoustical Unit Masonry.
5. Reinforced Unit Masonry.
6. Insulated Unit Masonry.

1.03 RELATED WORK

A Install work furnished under other sections, which must be built into unit masonry work, including, but not limited to:

1. Glass Unit Masonry.
2. Anchorage Devices.
3. Flashings.
4. Loose Steel Lintels.

1.04 QUALITY ASSURANCE

A Fire Performance Characteristics: Where indicated, provide materials and construction which are identical to those of assemblies, equivalent thickness, whose fire endurance has been determined by testing in compliance with ASTM E 119 by means acceptable to authorities having jurisdiction.

B Single Source Responsibility for Masonry Units: Obtain exposed masonry units of uniform

texture and color, or a uniform blend within the ranges accepted for these characteristics, from one manufacturer for each different product required for each continuous surface or visually related surfaces.

C Single Source Responsibility for Mortar Materials: Obtain mortar ingredients of uniform quality including color for exposed masonry, from one manufacturer for each cementitious component and from one source and producer for each aggregate.

D Field Constructed Mock-Ups: Prior to installation of masonry work, erect representative sample wall panels to further verify selections made for color and texture characteristics, under sample submittals of masonry units and mortar, and to establish a standard for completed masonry work for qualities of appearance, materials, construction and workmanship.

E Build mock-ups for the following types of masonry in sizes approximately 6' long by 4' high, by full thickness, including face and back-up whythes, as well as accessories.

1. Each type of exposed unit masonry work.
2. Typical exterior face brick wall.
3. Typical interior brick wall.

1.05 SUBMITTALS

A Product Data: Submit manufacturer's product data for each type of masonry unit, accessory and other manufactured products.

B Compliance: Submit certifications that each type complies with specified requirements.

C Color Selection: For initial selection submit:

1. Unit masonry samples showing full extent of colors and textures available for each type of exposed masonry unit required.
2. Colored mortar samples showing full extent of colors available.

D Samples: For verification purposes submit:

1. Unit masonry samples for each type of exposed masonry unit, include full range of color and texture to be expected in completed work.
2. For selection of brick, submit products of all manufacturers that the manufacturers or their agents consider to be their closest match. Re-submit until match meets approval of Architect.
3. Colored masonry mortar samples for each color required showing the full range of color which can be expected in the finished work. Label samples to indicate type and amount of colorant used.

1.06 REFERENCED STANDARDS

A Comply with the current applicable provisions of all codes, standards and specifications referenced in this section, except as modified by the requirements of these Contract

Documents, including, but not limited to, the following:

ACI 531 - Building Code Requirements for Masonry Structures.

ACI 531R - Commentary on Building Code Requirements for Masonry Structures.

ACI 530.1 - Specification for Masonry Construction.

ASTM C-90 - Load Bearing Masonry Units.

ASTM C-129 - Non-Load Bearing Masonry Units.

ASTM C-140 - Testing Concrete Masonry Units.

ASTM C-744 - Specification for Pre-Faced Concrete and Calcium Silicate Masonry Units.

ASTM E-119 - Fire Tests with Building Construction and Materials.

BIA - Technical Notes on Brick Construction.

NCMA - TEK Bulletins.

1.07 DELIVERY, STORAGE AND HANDLING

A Deliver masonry materials to project in undamaged condition. Store and handle materials to prevent their deterioration or damage due to moisture, temperature changes, contaminants, corrosion or other causes.

B Limit moisture absorption of concrete masonry units during delivery and until time of installation.

C Store cementitious materials off the ground, under cover and in a dry location.

D Store and protect aggregates where grading and other required characteristics can be maintained.

E Store and protect masonry accessories including metal items to prevent deterioration by corrosion and accumulation of dirt.

1.08 PROJECT CONDITIONS

A Protection of Work: During erection, cover top of walls with waterproof sheeting at end of each day's work. Cover partially completed structures when work is not in progress.

1. Extend cover a minimum of 24" down both sides and hold cover securely in place.

B Do not apply uniform floor or roof loading for at least 12 hours after building masonry walls or columns.

C Staining: Prevent grout, mortar or soil from staining the face of masonry to be left exposed or painted. Remove grout or mortar in contact with such masonry immediately.

D Do not apply concentrated loads for at least 3 days after building masonry walls or columns.

E Protect base of walls from rain-splashed mud and/or mortar splatter by means of coverings spread on ground and over wall surfaces.

F Protect sills, ledges and projections from droppings of mortar.

G Cold Weather Protection:

1. Do not lay masonry units that are wet or frozen.
2. Remove any ice or snow formed on masonry bed by carefully applying heat until top surface is dry to the touch.
3. Remove masonry damaged by freezing conditions.
4. For clay masonry units with initial rates of absorption which require them to be wetted before laying, comply with the following:
   a. For units with surface temperature above 32 Degrees F, wet with water heated to above 70 Degrees F.
   b. For units with surface temperature below 32 Degrees F, wet with water heated to above 130 Degrees F.

H Perform the following construction procedures while masonry work is progressing. Temperature ranges indicated below apply to air temperature existing at time of installation, except for grout:

1. For Grout: Temperature ranges apply to anticipated minimum night temperatures. In heating mortar and grout materials, maintain mixing temperature selected within 10 Degrees F.
2. 40 Degrees F to 32 Degrees F:
   a. Mortar: Heat mixing water to produce mortar temperature between 40 Degrees F and 120 Degrees F.
   b. Grout: Follow normal masonry procedures.
3. 32 Degrees F to 25 Degrees F:
   a. Mortar: Heat mixing water and sand to produce mortar temperatures between 40 Degrees F and 120 Degrees F. Maintain temperature of mortar on boards above freezing.
   b. Grout: Heat grout materials to 90 Degree F to produce in-place grout temperature of 70 Degree F at end of work day.
4. 25 Degrees F to 20 Degrees F:
   a. Mortar: Heat mixing water and sand to produce mortar temperatures between 40 Degrees F and 120 Degrees F. Maintain temperature of mortar on boards above freezing.
   b. Grout: Heat grout materials to 90 Degrees F to produce in-place grout temperature of 70 Degrees F at end of work day.
   c. Heat both sides of walls under construction using salamanders or other heat sources.
   d. Use windbreaks or enclosures when wind is in excess of 15 mph.
5. 20 Degrees F and Below:
   a. Mortar: Heat mixing water and sand to produce mortar temperatures between 40 Degrees F and 120 Degrees F.

b. Grout: Heat grout materials to 90 Degrees F to produce in-place grout temperature of 70 Degrees F at end of work day.

c. Masonry Units: Heat masonry units so that they are above 20 Degrees F at time of laying.

d. Provide enclosure and auxiliary heat to maintain an air temperature of at least 40 Degrees F for 24 hours after laying units.

e. Do not heat mixing water for mortar and grout to above 160 Degrees F.

I Protect completed masonry and masonry not being worked on in the following manner: (Temperature ranges indicated apply to mean daily air temperatures except for grouted masonry; if for grouted masonry, temperature ranges apply to anticipated minimum night temperatures.)

1. 40 Degrees F to 32 Degrees F:
   a. Protect masonry from rain or snow for at least 24 hours by covering with weather-resistant membrane.
2. 32 Degrees F to 25 Degrees F:
   a. Completely cover masonry with weather-resistant membrane for at least 24 hours.
3. 25 Degrees F to 20 Degrees F:
   a. Completely cover masonry with weather-resistant insulating blankets or similar protection for at least 24 hours; 48 hours for grouted masonry.
4. 20 Degrees F and Below:
   a. Except as otherwise indicated, maintain masonry temperature above 32 Degrees F for 24 hours using enclosures and supplementary heat, electric heating blankets, infrared lamps or other methods proven to be satisfactory. For grouted masonry maintain heated enclosure to 40 Degrees F for 48 hours.

PART 2 - PRODUCTS

2.01 MASONRY UNITS, GENERAL

A Manufacturer: All concrete masonry units shall be manufactured by CLAYTON BLOCK CO., INC., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044.

B Obtain masonry units from one manufacturer, of uniform texture and color for each kind required, for each continuous area and visually related areas.

2.02 CONCRETE MASONRY UNITS

A General: Comply with referenced standards and other requirements indicated below applicable to each form of concrete masonry unit required.

B Provide special shapes where required for lintels, jambs, corners, sash, control joints, headers, bonding and other special conditions.

C Concrete Block: Provide units complying with characteristics indicated below for Face Size, Exposed Face, and under each form of block included for weight classification.

1. Size: Manufacturer's standard units with nominal face dimensions of 16" long x 8" high (15 5/8" x 7-5/8" actual) x thicknesses indicated.

D Hollow Load-Bearing Block: ASTM C-90, normal weight (125 lbs. per cubic foot dry weight).

E Solid Load-Bearing Block: ASTM C-90, normal weight (125 lbs. per cubic foot dry weight).

2.02 BRICK MADE FROM CLAY OR SHALE

A General: Comply with referenced standards and other requirements indicated below applicable to each form of brick required.

B Size: Provide brick manufactured to the following actual dimensions:

1. (INSERT SIZE AND/OR SPECIFIC BRICK AND MANUFACTURER)

C Provide special molded shapes where indicated and for application requiring brick of form, size and finish on exposed surfaces which cannot be produced from standard brick sizes by sawing.

D For sills, caps and similar applications resulting in exposure of brick surfaces which otherwise would be concealed from view, provide uncored or unfrogged units with all exposed surfaces finished.

E Facing Brick: ASTM C-216, and as follows:

1. Grade SW, except Grade MW or NW may be used for interior work only.
2. Type: FBS.
3. Texture and Color: (INSERT TYPE AND COLOR)

2.03 ARCHITECTURAL CMU

PRE FACED CONCRETE MASONRY UNITS: SPECTRA-GLAZE II

A Manufacturer: CLAYTON BLOCK CO., INC., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044, under license with The Burns & Russell Company, Baltimore, MD.

B All units shall conform to ASTM C-90.

1. Weight Classification: Lightweight.

C Sizes: Modular 8" x 16", 4" x 16", 8" x 8", 12" x 12", 16" x 16" including 1/4" exposed face joints; sizes as shown; long dimensions horizontal or vertical as shown.

D Pre-Faced Surfaces: All units shall meet all requirements of ASTM C-744.

1. Facing ingredients must be Spectra-Glaze Compound made with Spectra-Glaze polymers, supplied by The Burns & Russell Company, and other ingredients as required to meet or exceed ASTM C-744.

2 . Surface Burning Characteristics of Facing: ASTM E 84; flame spread less than 25; fuel contribution 0; smoke density less that 50. Products of combustion considered non-toxic as determined by BRC 4690 (toxicity testing).

E Colors: Select from manufacturer's established or custom colors.

F Shapes: Provide shapes to suit the condition shown.

G Cleaning Compound: Use masonry detergent cleaners such as Spectra brand of cleaners, or Vana-Trol in strict accordance with each manufacturer's directions. Do not use steel wool, or other abrasives or any product containing unbuffered hydrochloric acid or other acids.

POLISHED FACE CMU & GLASSTONE™ CMU

A Manufacturer: CLAYTON BLOCK CO., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044.

B All units will conform to ASTM C-90.

1. Weight Classification: Normal Weight.
2. Mininum Net Compressive Strength 4000 PSI

C Sizes: Manufacturers Standard Nominal Sizes.

D Color: Shall be as manufactured by CLAYTON BLOCK CO., INC., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044, and selected from CLAYTON ARCHITECTURAL POLISHED BLOCK SERIES OR CLAYTON GLASSTONE™.

E Provide integral water-repellant in all CLAYTON ARCHITECTURAL POLISHED BLOCK SERIES OR CLAYTON GLASSTONE™, as manufactured by CLAYTON BLOCK CO., INC., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044. Basis of Design: AquaShield™, Great Eastern Technologies, LLC.

F All CLAYTON ARCHITECTURAL POLISHED BLOCK SERIES OR CLAYTON GLASSTONE™ shall be sound and free of cracks or other defects that would interfere with the proper placing of the units or impair the strength or performance of the construction.

G Protection: All CLAYTON ARCHITECTURAL POLISHED BLOCK SERIES OR CLAYTON GLASSTONE™ shall be delivered to the jobsite on wood pallets and packaged with protective cushions between all POLISHED BLOCK/GLASSTONE™ layers to eliminate chipping. Each pallet to be protected with a plastic cover.

H Cleaning: No muriatic acid or acid-based solutions shall be used in the cleaning of CLAYTON ARCHITECTURAL POLISHED BLOCK SERIES or CLAYTON GLASSTONE™. Products and Procedures shall be as outlined in Clayton Block Co. “Architectural CMU Cleaning Recommendations.”

GROUND FACE CMU

A Manufacturer: CLAYTON BLOCK CO., INC., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044.

B All units will conform to ASTM C-90.

1. Weight Classification: Normal Weight.
2. Mininum Net Compressive Strength 4000 PSI

C Sizes: Manufacturers Standard Nominal Sizes.

D Color: Shall be as manufactured by CLAYTON BLOCK CO., INC., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044, and selected from CLAYTON ARCHITECTURAL GROUND FACE BLOCK SERIES.

E Provide integral water-repellant in all CLAYTON ARCHITECTRUAL GROUND FACE BLOCK SERIES, as manufactured by CLAYTON BLOCK CO., INC., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044. Basis of Design: AquaShield™, Great Eastern Technologies, LLC.

F All CLAYTON ARCHITECTURAL GROUND FACE BLOCK SERIES shall be sound and free of cracks or other defects that would interfere with the proper placing of the units or impair the strength or performance of the construction.

G Protection: All CLAYTON ARCHITECTURAL GROUND FACE BLOCK SERIES shall be delivered to the jobsite on wood pallets and packaged with protective cushions between all GROUND FACE BLOCK layers to eliminate chipping. Each pallet to be protected with a plastic cover.

H Cleaning: No muriatic acid or acid-based solutions shall be used in the cleaning of CLAYTON ARCHITECTURAL GROUND FACE BLOCK SERIES. Products and Procedures shall be as outlined in Clayton Block Co. "Architectural CMU Cleaning Recommendations."

SPLIT FACE CMU

A Manufacturer: CLAYTON BLOCK CO., INC., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044.

1. Face design shall be split face as manufactured by CLAYTON BLOCK CO., INC.

B All units will conform to ASTM C-90.

1. Weight Classification: Normal Weight.
2. Minimum Net Compressive Strength 1900 PSI.

C Sizes: Manufacturers Standard Nominal Sizes.

D Color: Shall be as manufactured by CLAYTON BLOCK CO., INC., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044, and selected from CLAYTON ARCHITECTURAL SPLIT FACE BLOCK SERIES.

E Provide integral water repellant in all CLAYTON ARCHITECTURAL SPLIT FACE BLOCK SERIES as manufactured by CLAYTON BLOCK CO., INC., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044. Basis of Design: AquaShield™, Great Eastern Technologies, LLC.

F All CLAYTON ARCHITECTURAL SPLIT FACE BLOCK SERIES shall be sound and free of cracks or other defects that would interfere with the proper placing of the units or impair the strength or performance of construction.

G Cleaning: No muriatic acid or acid-based solutions shall be used in the cleaning of CLAYTON ARCHITECTURAL SPLIT FACE BLOCK SERIES. Products and Procedures shall be as outlined in Clayton Block Co. "Architectural CMU Cleaning Recommendations."

SMOOTH TEXTURE PIGMENTED CMU

A Manufacturer: CLAYTON BLOCK CO., INC., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044.

B All units will conform to ASTM C-90.

1. Weight Classification: Normal Weight.
2. Minimum Net Compressive Strength 1900 PSI.

C Sizes: Manufacturers Standard Nominal Sizes.

D Color: Shall be as manufactured by CLAYTON BLOCK CO., INC., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044 and selected from CLAYTON ARCHITECTURAL SPLIT FACE BLOCK SERIES.

E Provide integral water repellant in all CLAYTON ARCHITECTURAL SMOOTH TEXTURE PIGMENTED BLOCK SERIES as manufactured by CLAYTON BLOCK CO., INC., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044. Basis of Design: AquaShield™, Great Eastern Technologies, LLC.

F All CLAYTON ARCHITECTURAL SMOOTH TEXTURE PIGMENTED BLOCK SERIES shall be sound and free of cracks or other defects that would interfere with the proper placing of the units or impair the strength or performance of the construction.

G Cleaning: No muriatic acid or acid-based solutions shall be used in the cleaning of CLAYTON ARCHITECTURAL SMOOTH TEXTURE PIGMENTED BLOCK SERIES. Products and Procedures shall be as outlined in Clayton Block Co. "Architectural CMU Cleaning Recommendations."

SPLIT RIBBED CMU

A Manufacturer: CLAYTON BLOCK CO., INC., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044.

B All units will conform to ASTM C-90.

1. Weight Classification: Normal Weight.
2. Minimum Net Compressive Strength 1900 PSI.

C Sizes: Manufacturers Standard Nominal Sizes.

D Color: Shall be as manufactured by CLAYTON BLOCK CO., INC., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044 and selected from CLAYTON ARCHITECTURAL SPLIT FACE BLOCK SERIES.

E Provide an integral water repellant in all CLAYTON ARCHITECTURAL SPLIT RIBBED BLOCK SERIES as manufactured by CLAYTON BLOCK CO., INC., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044. Basis of Design: AquaShield™, Great Eastern Technologies, LLC.

F All CLAYTON ARCHITECTURAL SPLIT RIBBED BLOCK SERIES shall be sound and free of cracks or other defects that would interfere with the proper placing of the units or impair the strength or performance of the construction.

G Cleaning: No muriatic acid or acid-based solutions shall be used in the cleaning of CLAYTON ARCHITECTURAL SPLIT RIBBED BLOCK SERIES. Products and Procedures shall be as outlined in Clayton Block Co. "Architectural CMU Cleaning Recommendations."

2.04 ACOUSTICAL CMU

A Manufacturer: SOUNDBLOX as produced by CLAYTON BLOCK CO., INC., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044, under license from The Proudfoot Co., Inc., Botsford, CT.

B All units will confirm to ASTM C-90.

C SOUNDBLOX Type RSC, RSC/RF call for filter elements of specially fabricated incombustible fibrous material having metal septa laminated to one side installed with septa facing away from the slots.

D SOUNDBLOX Type Q, 8" units shall have only a bare metal septum.

E Sound Absorption: Shall be in accordance with ASTM C-423.

F All SOUNDBLOX Units shall be sound and free of cracks or other defects that would interfere with the proper placing of the units or impair the strength or performance of the construction.

G Installation: SOUNDBLOX units shall be seated in a full horizontal bed of mortar. The slots shall be exposed to the area where the sound absorption is desired. Care shall be taken to insure that the slots are kept free of mortar and debris.

H SOUNDBLOX workmanship shall conform to all requirements of the General Specifications for masonry work.

2.05 REINFORCED CMU

A Manufacturer: GROUT BLOCK as produced by CLAYTON BLOCK CO., INC., P.O. Box 3015, Lakewood, NJ 08701, 800-662-3044.

B All units will comply with the following properties:

1. All units will conform to ASTM C-90.
2. Weight Classification: Normal Weight.
3. Minimum Net Compressive Strength: 3000 PSI.

C Reinforcement Bars: Provide deformed bars of following grades complying with ASTM A-615, except as otherwise indicated:

1. Provide Grade 40 for Bars No. 3 to No. 6, except as otherwise indicated.
2. Provide Grade 60 for Bars No. 6 to No. 18, except as otherwise indicated.
3. Shop fabricate reinforcement bars which are shown to be bent or hooked.

D Mortar: Type M conforming to ASTM C-270.

E Concrete Fill: 3,000 PSI, minimum slump of 8".

2.06 INSULATION

A Provide expanded polystyrene masonry block inserts (INSERT TYPE) as manufactured by Korfil, W. R. Grace & Co. Construction Products, Cambridge, MA, or approved equal.

B All units will comply with the following properties:

1. Dimensional Stability: 0.55% when tested in accordance with ASTM D-2126.
2. Water Vapor Transmission: 1.71% for Type I, 1.27% for Type II when tested in accordance with ASTM DC-355.
3. Thermal Resistance: -75 Degrees - 3.85 for Type I, 4.08 for Type II, when tested in accordance with ASTM C-518.
4. Flame Spread - 75 Maximum; Smoke Development - 450 Maximum; when tested in accordance with ASTM E-84.

2.07 MORTAR AND GROUT MATERIALS

A Portland Cement: ASTM C-150, Type I, except use Type III for construction below 40 Degrees F. Provide natural color or white cement as required to produce required mortar color.

B Hydrated Lime: ASTM C-207, Type S.

C Aggregate for Mortar: ASTM C-144, except for joints less than 1/4 inch use aggregate graded with 100% passing the No. 16 sieve.

1. White Aggregates: Natural white sand or ground white stone.

D Aggregate for Grout: ASTM C-404.

E Water: Clean and potable.

F Accelerators: Subject to compliance with requirements, non-chloride admixtures may be used in cold weather construction. Acceptable products are: Chemstrong CF™ - Great Eastern Technologies, LLC.

G Integral Water Repellant Admixture: Basis for Design: Aquashield™ - Great Eastern Technologies, LLC.

2.08 MORTAR AND GROUT MIXES

A General: Use only the specified additives to mortar and grout mixes.

1. Do not use calcium chloride in mortar or grout.

B Mixing: Combine and thoroughly mix cementitious materials, water, aggregates and admixtures in a mechanical batch mixer. Comply with applicable ASTM standards and material manufacturer's recommendations for mixing time and water content. Measure and batch materials by volume so that required proportions can be accurately controlled and maintained. Measurement of sand by shovel will not be permitted; measure using container constructed for consistent volume measurement.

C Mortar for Unit Masonry: Comply with ASTM C-270, Proportion Specifications, Cement-Lime Mortar, for types of mortar required, unless otherwise indicated.

1. Use Type M mortar for masonry below grade and in contact with earth, and where indicated.
   a. Air Content: 8-12% Maximum.
2. Use Type N mortar for interior non-loadbearing walls.
   a. Air Content: 8-14% Maximum.
3. Use Type S mortar for all other masonry.
   a. Air Content: 8-12% Maximum.

D Colored Aggregate Mortar: Produce mortar of color required by use of colored aggregates in combination with selected cementitious materials.

1. Color: To be selected by Architect.

E Limit cementitious materials in mortar to Portland cement - lime.

F Grout for Unit Masonry: Comply with ASTM C-476. Use grout of consistency which at time of placement will completely fill all spaces intended to receive grout.

1. Mix: Portland cement, sand, gravel and water, proportioned as required to provide a 28-day minimum compressive strength of 3000 PSI.
2. Use for reinforced masonry lintels or bond beams, reinforced masonry piers, and wherever grouting full is indicated or specified.

2.09 JOINT REINFORCEMENT, TIES AND ANCHORS

A Materials: Comply with requirements indicated below for basic materials, as well as requirements for each form of joint reinforcement, tie and anchor for size and other characteristics.

B Hot-Dip Galvanized Steel Wire: ASTM A-82 for uncoated wire and with ASTM A-153, Class B-2 (1.5 oz. per sq. ft. of wire surface) for zinc coating applied after pre-fabrication into units.

C Joint Reinforcement: Welded-wire units prefabricated with deformed continuous side rods and plain cross rods into straight lengths of not less than 10'-0", with prefabricated corner and tee units.

1. Width: Approximately 2" less than nominal width of walls and partitions, to provide mortar coverage of not less than 5/8" on joint faces exposed to exterior and 1/2" elsewhere.
2. Wire Size for Side Rods: 9 gauge.
3. Wire Size for Cross Rods: 9 gauge.
4. Wire Size for Two-Part Reinforcing: 3/16" diameter in exterior walls.
5. Configuration:
   a. Single-Wythe Masonry: Truss design with continuous diagonal cross rods spaced not more than 16" o.c.
   b. Multi-Wythe Masonry: For cavity or composite masonry walls, provide adjustable wall tie pintle section fitting into eye section of rectangular box-type cross ties spaced not more than 16" o.c. Truss type units with side rods spaced for embedment within each face shell of back-up wythe and ties extended to within 1" of exterior face of facing wythe.

D Flexible Anchors: Where flexible anchors are indicated for connecting masonry to structural framework, provide 2-piece anchors as described below which permit vertical or horizontal differential movement between wall and framework parallel to, but resist tension and compression forces perpendicular to, plane of wall.

1. Anchorage to Steel Framework: Provide manufacturer's standard anchors with crimped 1/4" diameter wire anchor section for welding to steel framework and triangular-shaped wire tie section sized to extend within 1" of exterior face of facing wythe.

E Unit Type Masonry Inserts in Concrete: Furnish cast iron or malleable iron inserts of type and size indicated.

F Dovetail Slots: Furnish dovetail slots, with filler strips, of slot size indicated, fabricated from 0.0336" (22 gauge) sheet metal.

G Anchor Bolts: Provide steel bolts with hex nuts and flat washers complying with ASTM A-307, Grade A, hot-dip galvanized to comply with ASTM C-153, Class C, in sizes and configuration indicated.

H Pencil Rods at Construction Joints: As shown, dowels dipped in tar for half of length.

I Reinforcing Bars: Deformed steel, ASTM A-615, Grade 60 for Bars No. 3 to No. 18.

J Available Manufacturers: Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:

1. AA Wire Products Co.
2. Dur-O-Wal, Inc.
3. Heckman Building Products, Inc.
4. Hohmann & Barnard, Inc.
5. Masonry Reinforcing Corp. of America
6. National Wire Products Corp.

2.10 MISCELLANEOUS MASONRY ACCESSORIES

A Non-Metallic Expansion Joint Strips: Premolded, flexible cellular neoprene rubber filler strips complying with ASTM D-1056, Grade RE41E1, capable of compression up to 35%, of width and thickness indicated on drawings.

B Weepholes: Provide the following for weepholes:

1. Plastic Tubing: Medium density polyethylene, outside diameter and length as indicated below:

   a. 1/4" x 4"

2.11 INSULATION

See Section 07200

SECTION 3 - EXECUTION

3.01 INSTALLATION, GENERAL