

SECTION 04200
UNIT MASONRY



JUN 19 2012

PART 1 - GENERAL

1.01 DESCRIPTION

- A. All Hollow Masonry Block work, precast lintels, anchors and accessories.
- B. All masonry reinforcing and concrete fill for vertical cells.
- C. Related work specified elsewhere:
 - 1. Cast-In-Place Concrete: Section 03300
 - 2. Sealing and Caulking: Section 07951

1.02 QUALITY ASSURANCE

- A. Materials shall conform to the requirements of the American Society for Testing and Materials specifications listed, and these specifications, unless specifically indicate otherwise on the drawings.
- B. All mortar and masonry units of all types shall be free of materials of any kind which will cause stains, popping or any other detrimental occurrence when installed in locations required by the drawings. Ferrous materials, except in approved forms, shall not be present in a form that can cause stains.
- C. Workmanship shall conform to the following: requirements of local building code requirements for masonry Structures, ACI 530/ASCE 5-92, specifications for masonry structures, ACI 530.1/ASCE 6-92, instructions of each materials manufacturer, and the requirements of these specifications unless otherwise indicated on the drawings.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Portland Cement ASTM C150, Types I, II or III as best suited to job conditions.
- B. Masonry Cement ASTM C-91
- C. Hydrated lime for masonry purposes ASTM C207, Type S
- D. Lime, putty, from quicklime conforming to ASTM C5-5A and shall be prepared in a plant specially built to slake and age

quicklime for use in masonry mortar.

E. Aggregates:

1. Aggregates for normal weight masonry units: ASTM C33.
2. Aggregates for light weight masonry units: ASTM C331.
3. Aggregate for masonry mortar ASTM C144.

F. Water shall be clean and potable.

G. Hollow load-bearing normal weight concrete masonry units, ASTM C90, Grade N-II shall be 8 x 8 x 16 inches in size, nominal. Provide all necessary supplementary masonry units for complete job.

H. Anchors and ties shall be adjustable rectangular and eye and pintle types of galvanized steel in conformance with local code, but at least equal in strength, size and numbers to conform with requirements of Standard Building Code Requirements for Masonry. Dovetail anchors to code materials and strength may be used to bond masonry to concrete.

I. Reinforcing Bars: Deformed Billet-Steel, ASTM A615 Grade 60.

J. Horizontal masonry joint reinforcement shall be fabricated from zinc-coated cold-drawn steel wire conforming to ASTM A82 and shall consist of two deformed longitudinal wires No. 8 gauge or larger, weld connected with No. 9 gauge cross wires spaced 16" on centers in ladder design. Out-to-out spacing of longitudinal wires shall be 1-5/8" plus or minus 1/8", less than the actual width of the respective wall. Zinc coating shall conform to ASTM A116, Class 2. Joint reinforcement shall be furnished in flat sections, ten (10) feet to twenty (20) feet in length, except that corner reinforcements and other special shapes may be less in length.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Handle materials carefully and avoid damaging them. Protect materials from contact with earth and cover with weatherproof material until used.
- B. Promptly remove damaged materials from the site or dispose of them outside in an approved manner.
- C. Brace walls laterally and protect against freezing as required by codes.

- D. Cover tops and top two (2) inches of each side of all walls with strong waterproof membrane securely anchored, except when masonry work is actually in progress or permanent protection from rain is provided otherwise.
- E. Lay only surface dry units, and stop work and cover walls when it rains unless work is protected by weather tight floor or roof construction.
- F. Bond all intersections of masonry walls of all types by laying a true bond with at least 50% of the units at the intersection or bond with approved anchors except at shear wall intersections which must be masonry bonded.
- G. Prepare mortar with only materials herein before specified and in conformance with "proportion specification" of ASTM C476, mortar for unit masonry. 1. Type S mortar shall be used for all walls.
- H. Lay masonry in running bond, unless otherwise shown. Bond walls at every second block course with horizontal reinforcing unless otherwise shown.
- I. Reinforce all walls horizontally with joint reinforcement placed at every 16" course vertically (unless otherwise shown). Reinforcing shall be continuous with side rods lapped at least eight (8) inches at splices and run continuous around corners by cutting and lapping inside wire, or using prefabricated corners and tees. Reinforcement shall be placed to assure 5/8" mortar cover on exterior face of walls and 1/2" on interior. Add an additional reinforcement eight (8) inches above and below and extending two (2) feet beyond all openings in wall.
- K. Tool all joints in concrete block work, including block in contact with earth, with approved round jointer slightly larger than width of mortar joint. L. Lay all hollow units with full mortar coverage on outer and inner shells of bed and head joints, except webs also shall be bedded in all courses of piers, columns, pilasters and adjacent to spaces grouted and in starting courses at solid walls and footings.
- M. Lay all masonry plumb and true to lines. Minimum length of any unit in exposed work shall be a half unit, or finished end of a unit. All cuts shall be made with saws. Tothing is not permitted. Exposed surfaces of units shall be free of mortar; failing this, work shall be cleaned with methods recommended by manufacturer of unit. Clean equipment used for mixing, moving, or storing mortar at the end of each days work.

- N. . Cut out defective joints; fill joints solidly and tool to match adjacent work. Fill any holes in mortar joints.
- O. Clean concrete, concrete block, and Brickwork, as work progresses, keeping surfaces free of mortar daubs and other blemishes with wire brush and trowel. Do not wet wall. Leave wall clean in uniformly finished condition.
- P. Contractor shall furnish, maintain and move all scaffolding and hoists he may require for the execution of the work included in this section of the specifications. He shall construct and maintain this equipment in strict accordance with local laws and ordinances.
- Q. Lay all sills, couplings, lintels and solid units with full bed and head joints.

END OF SECTION