

SECTION 042000

UNIT MASONRY SYSTEM

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Concrete masonry, reinforcement, anchorage, and accessories.

1.2 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 530 and ACI 530.1.

1.3 ENVIRONMENTAL REQUIREMENTS

- A. Cold Weather Requirements: IMIAC - Recommended Practices and Guide Specifications for Cold Weather Masonry Construction.
- B. Hot Weather Requirements: IMIAC - Recommended Practices and Guide Specifications for Hot Weather Masonry Construction.

PART 2 PRODUCTS

2.1 CONCRETE MASONRY UNITS

- A. Manufacturers:
 - 1. D'Agostino Building Blocks, Inc.
 - 2. Duke Concrete Products, Inc.
 - 3. Zappala Block Co., Inc.
- B. Hollow Load Bearing Block Units: ASTM C90, Grade N, Type I - Moisture Controlled; normal weight.
- C. Size and Shape: Nominal modular size of 8x8x16 inches. Provide special units for 90 degree corners.

2.2 REINFORCEMENT AND ANCHORAGE

- A. Single Wythe Joint Reinforcement: Truss type; steel wire, hot dip galvanized to ASTM A641 Class 3 after fabrication.
 - 1. Manufacturers:
 - a) Durowall
 - b) National Wire
 - c) Wire Bond
- B. Reinforcing Steel: ASTM A615, 60 ksi yield grade, deformed billet bars, uncoated finish.
- C. Wall Ties: Triangle tie 3/16 inch thick, adjustable, hot dip galvanized to ASTM A123 uncoated steel finish.

1. Manufacturers:
 - a) Durowall
 - b) National Wire
 - c) Wire Bond

2.3 MORTAR AND GROUT

- A. Mortar and Grout: As specified in Section 041000.

2.4 FLASHINGS

- A. Plastic Flashings: Sheet polyvinyl chloride.
- B. Lap Sealant: Butyl type as specified in Section 079200.

2.5 ACCESSORIES

- A. Preformed Control Joints: Rubber material. Provide with corner and tee accessories, heat fused joints.
 1. Manufacturers:
 - a) Durowall
 - b) Hohmann & Barnard
 - c) Wire Bond
 - d) National Wire
- B. Joint Filler: Closed cell polyethylene foam; oversized 50 percent to joint width; self expanding.
- C. Air Infiltration Barrier - See Section 071900
- D. Cleaning Solution: Non-acidic, not harmful to masonry work or adjacent materials, recommended by masonry unit manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Verify that field conditions are acceptable and are ready to receive Work.
- B. Coordinate placement of anchors supplied to other Sections.

3.2 COURSING

- A. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
- B. Concrete Masonry Units:
 1. Bond: Running.
 2. Coursing: One unit and one mortar joint to equal 8 inches.
 3. Mortar Joints: Concave.

3.3 PLACING AND BONDING

- A. Isolate masonry partitions from vertical structural framing members with a control joint as

indicated.

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

3.4 REINFORCEMENT AND ANCHORAGE - SINGLE WYTHE MASONRY

- A. Install horizontal joint reinforcement 16 inches oc. Place joint reinforcement continuous in first and second joint below top of walls.
- B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of opening.
- C. Reinforce joint corners and intersections with anchors 16 inches oc.

3.5 MASONRY FLASHINGS

- A. Extend flashings horizontally at foundation walls, above ledge or shelf angles and lintels, under parapet caps, and at bottom of walls.
- B. Turn flashing up minimum 8 inches and bed into mortar joint of masonry.
- C. Lap end joints and seal watertight.
- D. Turn flashing, fold, and seal at corners, bends, and interruptions.

3.6 LINTELS

- A. Install loose steel, lintels over openings.
- B. Install reinforced unit masonry lintels over openings where steel or precast concrete lintels are not scheduled.
- C. Maintain minimum 8 inch bearing on each side of opening.

3.7 GROUTED COMPONENTS

- A. Support and secure reinforcing bars from displacement. Maintain position within 1/2 inch of dimensioned position.
- B. Place and consolidate grout fill without displacing reinforcing.
- C. At bearing locations, fill masonry cores with grout for a minimum 12 inches either side of opening.

3.8 CONTROL AND EXPANSION JOINTS

- A. Do not continue horizontal joint reinforcement through control and 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 elliptical core with grout fill. Rake joint at

exposed unit faces for placement of backer rod and sealant.

- C. Size control joint in accordance with Section 079200 for sealant performance.
- D. Form expansion joint as detailed.

3.10 BUILT-IN WORK

- A. As work progresses, install built-in metal door and glazed frames, fabricated metal frames, window frames and other items to be built in the work furnished by other Sections.
- B. Bed anchors of metal door and glazed frames in adjacent mortar joints. Fill frame voids solid with grout. Fill adjacent masonry cores with grout minimum 12 inches from framed openings.

3.11 TOLERANCES

- A. Maximum Variation from Plumb: 1/4 inch per story non-cumulative; 1/2 inch in two stories or more.
- B. Maximum Variation from Level Coursing: 1/8 inch in 3ft and 1/4 inch in 10ft; 1/2 inch in 30ft.

3.12 CUTTING AND FITTING

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

3.13 CLEANING

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

END OF SECTION