

## **DIVISION 4 - MASONRY**

### **Section 04200 - Unit Masonry**

#### **Introduction**

Red brick is used almost exclusively for exterior masonry elements and its appearance is important toward maintaining campus unity.

#### **Part 1 - General**

- For all new and infill masonry work adjacent to existing walls, require that a 3' x 3' mock up wall be constructed to insure that both the brick and the cured mortar colors are satisfactorily matched. Require minimum of 3 week curing time for evaluation of the mortar color.
- On new construction a similar appropriately sized mock up should be constructed to establish the standard of acceptance for all elements of the work, i.e., mortar color, flashing, coursing, pattern, control joints, accessories, etc.
- The tops of all exposed masonry walls shall receive a watertight cap, i.e., sheetmetal or precast concrete, to prohibit moisture infiltration and efflorescence.
- To minimize brick color variations, the project should be fired and supplied in one continuous run. If variations in color exist within the run, the differently shaded bricks shall be randomly intermixed as the wall is constructed. Obvious delineations in the brick color are not acceptable.

#### **Part 2 - Products**

- Selected brick color shall be as available from local southern Arizona suppliers.
- The use of mortar or grout admixtures, other than color pigments, shall not be allowed. Specifically prohibit the use of any mortar retarding agents due to their unpredictable nature.
- Mortar shall be consistently batched. Use pre-mix from batch plant or use gauge boxes on-site. The use of the shovel method for measuring and batching mortar mixes should be discouraged.

#### **Part 3 - Execution**

- Tolerances: Masonry work that does not conform to the following tolerances shall be repaired or replaced as directed by the Architect. Tolerances are based on ACTUAL DIMENSIONS.
  - Variations from plumb:
    - In lines or surfaces of columns, walls, and arises: in 10 feet -  $\frac{1}{4}$ "; in any story or 20 feet maximum -  $\frac{3}{8}$ "; in four stories or more -  $\frac{1}{2}$ ".
    - For external corners, control joints and other conspicuous lines: in any story or 20 feet maximum -  $\frac{1}{4}$ "; in 40 feet or more -  $\frac{1}{2}$ ".
  - Variations from the level or the grades indicated on the drawings:
    - For exposed lintels, sills, parapets, horizontal grooves and other conspicuous lines: in any bay or 20 feet maximum -  $\frac{1}{4}$ "; in 40 feet or more -  $\frac{1}{2}$ ".
  - Variation of the linear building lines from established position in plan and related portion of columns, walls and partitions:
    - In any bay or 20 feet maximum -  $\frac{1}{2}$ "; in 40 feet or more -  $\frac{3}{4}$ ".

- Variation in cross-sectional dimensions of columns and in the thickness of walls is plus or minus  $\frac{1}{4}$ ".
- The type of mortar joint should be specified. Tooled joints are preferred. Raked and flush joints are discouraged.
- Masonry anchoring
  - Anchor spacing to structural members shall be indicated, but not more than 24"o.c. vertically and 36"o.c. horizontally.
  - Anchor spacing to metal studs (single wythe masonry) shall be indicated, but not more than 16"o.c. vertically and 24"o.c. horizontally with not less than one anchor for each 2 sq. ft. of wall area. Install additional anchors within 1'-0" of openings and at intervals around perimeter not exceeding 8".
- Control Joints

Install control and expansion joints in unit masonry at 20' maximum. Joint width shall be not less than  $\frac{3}{8}$ " for installation of backer rod and sealant.
- Lintels

Provide masonry or steel lintels where shown and/or wherever openings are more than 1'-0" wide for brick size units and 2'-0" for block size units. Provide steel, precast or formed-in-place masonry lintels for all larger openings. Cure precast lintels before handling and installation. Temporarily support formed-in-place lintels.

**End of Section 04200**