



DESIGN & CONSTRUCTION GUIDELINES

DIVISION 04 MASONRY

DIVISION 04 MASONRY

SECTION 04 01 20 MASONRY RESTORATION AND CLEANING 2

SECTION 04 05 00 GENERAL PROVISIONS 3

SECTION 04 05 13 MORTAR 4

SECTION 04 05 23 MASONRY ACCESSORIES 5

SECTION 04 20 00 UNIT MASONRY 6

SECTION 04 28 00 CONCRETE UNIT MASONRY 7

SECTION 04 01 20 MASONRY RESTORATION AND CLEANING**1.1 EXPERIENCE CLAUSE**

- A. Subcontractor's record of ten (10) years of experience is required. Include the following paragraph in the specifications.

CERTIFICATION OF EXPERIENCE:

Work shall be performed by experienced and skilled mechanics. The General Contractor shall furnish evidence that the subcontractor for restoration work has been engaged in the business of masonry restoration for a period of at least ten (10) consecutive years prior to the date of these specifications. Evidence or certification of experience shall be in letter form which, in addition to statement of experience, shall contain a list of at least five (5) projects of comparable size and complexity which have been satisfactorily completed, a statement that proper equipment is available for use, and a statement that the work will be under the direct supervision of skilled mechanics only.

END OF SECTION 04 01 20

SECTION 04 05 00 GENERAL PROVISIONS**1.1 SPLIT COURSING**

A. Only full coursing will be permitted at the head of any type of opening.

1.2 OVERHANGING MASONRY

A. Construction where the masonry units are suspended using mechanical devices, or where the units extend beyond lower courses and mechanical support devices are required, are not to be used. Buildings being renovated/restored, which have such overhanging structures, shall be examined for safety and a report of condition provided.

1.3 MARKING PENS

A. Use of ink marking pens on surfaces of any kind of material is prohibited. Experience has shown that such marks bleed through paint and other finishes.

1.4 ACID FOR MASONRY CLEANING

A. The cleaning solution must be included in applicable sections of the Specifications. Type of solution shall be approved by the USF Facilities Management (USF-FM) and USF-FM Environmental Health & Safety (FM-EHS) departments.

1.5 BRICK SURFACE TREATMENT

A. Treating of brick surface with stain or other surface treatment or simulation to obtain a color blend is prohibited.

1.6 CODES AND STANDARDS

- A. Comply with provisions of the following codes:
1. American Concrete Institute (ACI) 530, Building Code Requirements for Masonry Structures.
 2. American Concrete Institute (ACI) 530.1, Specifications for Masonry Structures.

1.7 QUALITY ASSURANCE

A. Engage a masonry work certified technical inspector to supervise, on a full-time basis, all masonry work.

END OF SECTION 04 05 00

SECTION 04 05 13 MORTAR**1.1 MORTAR FOR LAYING MASONRY**

- A. May be ready-mixed or job mixed. Specify by types listed in American Society for Testing and Materials (ASTM), ASTM C-270. Do not specify mortar which may corrode steel reinforcement or structure (i.e., Sara-bond). Use Type S Mortar for above grade and Type M Mortar for below grade.

1.2 POINTING MORTAR

- A. Pointing mortar for clay facing tile masonry shall be made with white silica sand and white Portland cement.

END OF SECTION 04 05 13

SECTION 04 05 23 MASONRY ACCESSORIES**1.1 WALL TIES**

- A. Flex-O-Lok or equal stainless steel wall ties are approved for masonry veneer or facing installation. Install with stainless steel bolts and nuts and stainless steel washers for attachment to the metal studs; sheet metal screws and similar attachments are not acceptable.
- B. Do not use galvanized steel brick ties.

1.2 JOINT REINFORCEMENT

- A. Wire mesh type is prohibited.

]

1.3 WEEP HOLES

- A. Cell vents of size to fit head joints in brick work or plastic tubing are preferred over treated sash cord or rope. If cord or rope is specified, specify that the material be left in place and cut off flush with the joint.

1.4 PLUG ANCHORAGE

- A. Plug anchorage by use of wood, lead, or plastic is prohibited.

END OF SECTION 04 05 23

SECTION 04 20 00 UNIT MASONRY**1.1 BRICK MASONRY**

- A. Color and blend of face brick shall generally be specified to match brickwork in a specific adjacent building. Consult the USF-Project Manager (USF-PM) regarding this requirement.

1.2 EFFLORESCENCE TEST FOR FACE BRICK

- A. Submit to the USF-PM manufacturer's certification that bricks show no efflorescence when tested in accordance with ASTM Method C67.

1.3 SAMPLE PANEL

- A. Include the following paragraph in the specifications: Before starting work, build one sample panel for inspection and approval. Build panel on a firm foundation, in location indicated by the Consultant. Panel shall be F-shaped, with long side a minimum of 5 feet-4 inches long by 3 feet-4 inches high, with one corner return at least 2 feet long and with one intersecting 6 inches thick concrete block wall 2 feet long. Construct long side and return of 8 inch concrete block and face brick. Panel shall show color range and texture of masonry units, bond, mortar joints, and workmanship. Completed masonry work in the building shall be equal to that shown in the approved panel. Do not remove panel until masonry work is completed or until removal is authorized. Panel to include sample of openings.

1.4 COURSING

- A. Brick shall be laid with modular coursing, three courses to 8 inches, unless otherwise required to match existing coursing.

1.5 DESIGN

- A. Face brick elevations shall include structural considerations for division of such elevations into panels to accomplish structural support of the brick face and expansion joints for control of thermal expansion damage. Provide masonry control joints and expansion joints in accordance with Brick Industry Association technical guidelines.

1.6 NON-STANDARD BRICK

- A. Non-standard brick is prohibited. Brick shall be standard size.

END OF SECTION 04 20 00

SECTION 04 28 00 CONCRETE UNIT MASONRY**1.1 INTERIOR PARTITION**

- A. Concrete block shall be used wherever feasible for interior wall finish in student areas. ASTM tests shall be indicated on all materials used below per ACI requirements.

1.2 CINDER BLOCK

- A. The use of cinder block is prohibited.

1.3 CONCRETE BLOCK, TYPES AND USES

- A. LOAD-BEARING: normal weight, standard size.
B. NON-LOAD-BEARING: normal weight, standard size.
C. EXPOSED EXTERIOR: washed crushed limestone coarse aggregate and washed limestone sand, only, shall be used.
D. CONTROL JOINTS: to control cracking, follow recommendations of the Concrete Masonry Handbook published by the Portland Cement Association (PCA).
E. SPLIT FACE BLOCK: Single wythe split face block wall construction shall not be used in the exterior envelope where adjacent interior space is mechanically conditioned.

END OF SECTION 04 28 00