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(August 3, 2015)

Masonry Wall Workmanship

The Contractor shall construct the masonry wall in accordance with the standards of masonry installation specified in Chapter 21 of the International Building Code.

All masonry wall construction workers shall be thoroughly trained and experienced in the necessary crafts, shall be completely familiar with the specified requirements and methods needed for proper completion of the work, and shall be supervised at the construction site at all times by the supervising journeyman masons.

Sample Masonry Wall Panel

The Contractor shall demonstrate workmanship by constructing a 48 inch by 48 inch sample panel of each type of masonry wall and submitting them as Type 2 Working Drawings. The sample panel shall be constructed by the supervising journeyman mason specified by the Contractor. The sample panel shall show the general construction and appearance of the installed concrete masonry units. The Contractor shall construct the sample panel on a transportable platform, and shall relocate the sample panel as specified by the Engineer as construction progresses.

If any of the supervising journeyman masons are replaced during the project, each replacement supervising journeyman mason shall construct another sample panel as a requirement for being accepted by the Engineer for the supervising position.

The Contractor shall construct all masonry walls in accordance with the quality of the sample panel. All masonry wall construction not consistent with the quality of the accepted sample panel shall be reconstructed by the Contractor at no additional cost to the Contracting Agency.

The Contractor shall maintain the sample panel at the project site until all the noise barrier walls are accepted by the Engineer, at which time all sample panels shall become the property of the Contractor and shall be disposed of in accordance with Section 2-02.3.

General Requirements

All masonry materials stored on the project site shall be stored off the ground and protected from weather. Concrete masonry units that are chipped, cracked, or spalled on the faces or edges shall not be used.

The Contractor shall lay up all walls in running bond, unless otherwise shown in the Plans, and all walls shall be plumb, level, and true to the lines and dimensions as shown in the Plans. All head and bed joints shall be solidly filled with mortar for a distance in from the face of the wall or unit not less than the thickness of the longitudinal face shells.

Mortar

Mortar joints shall be of uniform thickness, ½ inch maximum. The Contractor shall not change coursing or bonding after beginning work on a wall. The Contractor shall tool all joints flush with adjacent surfaces to a dense brushed finish. The split face side of wall shall have a concave smooth joint. The scored split faces shall have a rake joint to match the depth of the scores.

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Temperature

When air temperatures fall below 40F, grout mixing water and aggregate shall be heated to produce a grout temperature between 40F and 120F. While grouting the concrete masonry units, and for at least 24 hours after grouting the units, the Contractor shall maintain the temperature of the concrete masonry units above freezing. When atmospheric temperatures fall below 20F, the Contractor shall erect enclosures around the concrete masonry units being grouted, and shall maintain the enclosures for at least 24 hours after grouting the units.

The Contractor shall not perform masonry wall work when the air temperature is below 40F on a falling thermometer, or when it is likely that the temperature will fall below 40F before the mortar has set, except when appropriate provisions have been made to heat and enclose the concrete masonry units and the work area. The Contractor may begin masonry wall work at 34F on a rising thermometer.

Grouting Cells

Cells with steel reinforcing bars shall be grouted solid and compacted. Vertical cells with steel reinforcing bars shall be aligned and filled to provide a continuous unobstructed opening of the dimensions indicated, but in no case less than two inches by three inches. The Contractor shall provide cleanout openings at the bottom of all cells to be filled at each stage of grout placement where the height of grout placement is greater than four feet. The Contractor shall remove all overhanging mortar and other obstructions and debris from the insides of the cells being grouted. The Contractor shall seal all cleanouts, after the Engineer has inspected and accepted the cells. The Contractor shall place grout in lifts of eight feet or less.

Top Course

The Contractor shall cover the tops of all exposed walls not being worked on with a waterproof membrane, secured in place. All unfinished work shall be stepped back for joining to new work. Toothing shall not be performed.

The top course shall be a solid grouted bond beam unit. The Contractor shall apply a parge coat to the top of the wall.

Cleaning Exposed Surfaces

The Contractor shall clean all exposed masonry at the end of each day's work. After final pointing, the Contractor shall remove all mortar spots and droppings. The Contractor shall cut out all defective joints and repoint the joints solidly with mortar. The Contractor shall protect all work from damage, stain, and discoloring.

The Contractor shall perform additional final cleaning prior to applying the pigmented sealer. The Contractor shall remove all large particles of mortar before wetting the wall. The Contractor shall saturate the concrete masonry units with clean water and shall flush all loose mortar and dirt from the wall surface. The Contractor shall scrub the wall surface with a stiff brush and a masonry cleaning solution, in accordance with the cleaning solution manufacturer's instructions. The Contractor shall thoroughly wash the wall surface of all cleaning solution, dirt, and mortar crumbs with clean pressurized water. The Contractor shall not use acid cleaning solutions to clean the wall surface. The Contractor shall protect all wall surfaces adjacent to the sections of wall being cleaned.

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Masonry Sealer

All exposed masonry surfaces shall receive two coats of masonry sealer, applied to either one foot minimum below finish ground line or to the base of the bottom row of masonry blocks, whichever is higher, from one of the masonry sealer products specified in Section 6-12.2 as supplemented in these Special Provisions. The masonry sealer shall be applied in accordance with the manufacturer's recommendations.