

ITEM 10606.3020 M - PORTABLE PRECAST CONCRETE BARRIER
ITEM 10606.3120 M - PORTABLE PRECAST CONCRETE BARRIER TAPERED END
SECTIONS

DESCRIPTION

Under this work, the Contractor shall provide all labor, materials, plant, equipment, insurance and incidental necessary for the construction and placement of portable precast concrete barrier and tapered end sections on the existing pavement and interim roadway as shown on the plans and in accordance with the specifications and directions of the Engineer.

MATERIALS

Materials shall meet the requirements specified in the following subsections of Section 700 "Materials Details."

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| Bar Reinforcement - Grade 420 | 709-01 |
| White Pigmented Membrane Curing Compound | 711-05 |
| Structural Steel | 715-01 |

Concrete shall meet the requirements for Class A Concrete specified in Section 501 "Portland Cement Concrete-General," except that the desired air content shall be 7.0 percent, with a minimum of 5.0 percent and a maximum of 9.0 percent.

CONSTRUCTION DETAILS

All the provisions of Subsection 606-3.05 "Concrete Barrier" shall apply except for the following modifications:

Delete Subsections A, B and C of 606-3.05 "Concrete Barrier" and substitute the following:

- A. **Fabrication.** Concrete barriers shall be cast in conformance with the Standard Sheet for Temporary Concrete Barrier. The Contractor shall provide the Engineer with shop drawings and detailed specifications for the fabrication and construction of the barrier. The shop drawings shall show the location of and type of all reinforcement in the precast concrete barriers. They shall be delivered to the Engineer for approval 10 working days before fabrication is to begin. No work shall begin until the drawings are approved.

The tolerance on placement of reinforcing steel in the barrier shall be ± 6 mm. The chairs, spacers or other devices used to maintain the reinforcement in position shall be made from a non-corrosive material; or the devices shall have rust resistant tips so that no spots will show on the finished faces.

If the precast concrete barrier sections are steam cured, the sections shall be cured in an enclosure free from outside drafts, and cured in a moist atmosphere. The temperature shall be maintained between 52 degrees and 71 degrees C, by the injection of steam for a period of not less than 12 hours.

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Steam curing shall not begin in less than 2 hours from the time that the last concrete was placed. Care shall be taken by the Contractor to prevent localized "hot spots" caused by the steam lines. A continuous temperature time recorder is required for each enclosure.

The temperature of the curing atmosphere for any method shall not be increased or decreased at a greater than 4°C per hour.

- B. Placement. The precast concrete barrier shall be placed as shown on the plans and as directed by the Engineer. The exact locations of the placement of precast concrete barrier and tapered end sections are shown on the plans.

Each section of the precast concrete barrier is separated by connecting pin at each end. They shall be placed in uniform sections and in accordance with the lines and grades shown on the plans or as directed by the Engineer. The connecting pins shall be spot welded to the barrier after final placement at locations shown on the plans.

- C. Repair. If approved by the Regional Director or his representative, occasional imperfections in manufacture or those caused by mishandling may be repaired. The repairs shall be properly finished and cured. The color of the repaired area shall match as closely as possible with the rest of the barrier color. The repairs shall be made with a mixture of sand and cement. The repairs shall be made to the satisfaction of the Regional Director or his representative.
- D. Basis of Acceptance. The precast concrete barrier sections shall be accepted at the precast site based on testing and inspection performed by the Department. After the sections are transported to the project, they shall be subject to inspection for geometric features needed for proper placement and imperfections caused by mishandling.

METHOD OF MEASUREMENT

- A. Portable Precast Concrete Barrier. This work will be measured by the number of linear meters of concrete barrier actually furnished and placed in accordance with the plans, specifications and orders of the Engineer.
- B. Portable Precast Concrete Barrier Tapered End Sections. This work will be measured by the number of end sections actually furnished and placed in accordance with the plans, specifications and orders of the Engineer.

BASIS OF PAYMENT

The unit price bid per meter of concrete barrier or of each tapered end section furnished and placed shall include the costs of all labor, materials and equipment necessary to complete the work. This includes forms, connecting pins, spot welding, concrete, reinforcing bars, and any other work or materials required to satisfactorily complete the work.