

ITEM 557.89 09 – PRECAST CONCRETE BRIDGE DECK UNITS

DESCRIPTION

The work shall consist of furnishing and installing precast concrete slab units at the locations and in accordance with the details indicated on the Contract Plans.

MATERIALS

Materials used in this work shall conform to the following:

Concrete

Except 28 Day Compressive Strength shall be a minimum of 35 MPa.

PCCM §4.1 MATERIALS FOR CONCRETE

Reinforcing Steel

Epoxy-Coated Reinforcing Bars

§709-04 EPOXY-COATED BAR REINFORCEMENT

Steel Castings

Embedded Plates

§715-02 STEEL CASTINGS

CONSTRUCTION DETAILS

Drawings

Shop drawings shall be prepared and stamped by a professional engineer licensed to practice in the state of New York. Shop drawings shall be prepared based on the Contract Plans as well as any information gathered at the construction site. The shop drawings shall include details of lifting and handling of the precast slab units in the production facility and their storage, transportation, handling, and storage at the construction site.

Calculations showing actual concrete stresses based upon the proposed support locations and expected dynamic loading of the units during handling, storage and transportation of the precast slab units shall be prepared and stamped by a professional engineer licensed to practice in the state of New York and shall be submitted to the DCES along with the shop drawings.

Fabrication

Fabrication shall be according to the PCCM (Prestressed Concrete Construction Manual).

Steel embedment plates, if required, shall be installed in the shop based upon the locations shown in the shop drawings.

Installation

Installation of all precast slab units shall be according to the approved shop drawings. All units after installation and prior to backfilling will be inspected for cracks and other visible defects. All defective elements shall either be replaced or repaired using procedures approved by the DCES and at no additional cost to the State.

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Backfilling operations shall not begin until joint seals are properly placed and approved by the Engineer. Backfill material within 300 mm of any surface of the precast slab units shall be compacted with hand compaction equipment. Vibratory rollers shall not be used within 3.0 m of any surface of the precast units.

Construction equipment shall not travel or rest on any uncompleted portion of the precast slab units unless the designer of the units has evaluated the loading conditions, submitted calculations to the DCES, and has received written approval of the proposed loading. The Contractor shall repair any damage resulting from equipment passage at no additional cost to the State.

METHOD OF MEASUREMENT

Payment for the Precast Concrete Slab Units will be made at the unit bid price per square meter for the number of square meters shown in the Contract Plans. No field measurements will be made.

BASIS OF PAYMENT

The square meter bid price shall include the cost of all engineering, labor, materials, and equipment necessary to complete the work, including the furnishing, storing and protecting, transporting, unloading, and installation of all Precast Concrete Slab Units.