

PRECAST CONCRETE GRAVITY RETAINING WALL

**\*\*The provisions for approved wall systems (shaded) may vary on a project basis, dependent on the type of wall required and the status of the Retaining Wall Committee's approved list.**

**\*\*From Waterbury IM 089-2(43)(Re-advertised)**

- xx. DESCRIPTION. This work shall consist of designing, fabricating, furnishing, and erecting precast concrete gravity retaining walls at the locations specified and in conformance with the lines and grades shown on the Plans or as directed by the Engineer.
- xx. DESIGN REQUIREMENTS. The design shall be performed in accordance with the AASHTO *LRFD Bridge Design Specifications* and the design criteria specified in the Plans.
- xx. APPROVED WALL SYSTEMS. The wall system for this project shall be one of the concrete prefabricated modular gravity walls appearing on the Agency's approved *Earth Retaining System Selection Chart*.
- xx. MATERIALS. Materials shall meet the following requirements:
- (a) Precast Concrete. Precast concrete shall meet the requirements of Section 540.
  - (b) Cast-in-Place Concrete. Concrete for support(s) and/or leveling pad(s), as recommended by the manufacturer, shall meet the requirements of Section 501 for Concrete, High Performance Class B.
  - (c) Reinforcing Steel. Reinforcing steel shall meet the requirements of Sections 507 and 713 for Level I (epoxy coated) reinforcing steel.
  - (d) Geotextile. Geotextile for wall construction shall be a non-woven fabric meeting the requirements of Section 649 for Geotextile Under Stone Fill.
  - (d) Backfill. Backfill material shall meet the requirements of Section 204 for Granular Backfill for Structures.
  - (e) Miscellaneous. Drain pipe, backfill for drain pipe, and materials for railing shall meet the requirements specified in the Plans.
- xx. PRECAST CONCRETE INSPECTION. Materials furnished and the work performed may be inspected by the Agency.

The Fabricator shall provide a tentative casting schedule to the Engineer and Structural Concrete Engineer for the following casting week a minimum of three (3) calendar days prior (a casting week will be Sunday to Saturday). The Fabricator shall also maintain a Quality Control file that shall contain at a minimum the block identification, date and time cast, concrete test results, quantity of concrete used per block, batch quantity printout, cylinder results, and aggregate gradation and moisture.

Advance notification of at least two (2) weeks shall be provided by the Fabricator to the Agency's Engineer and Structural Concrete Engineer concerning the proposed intention to commence work. A minimum of five (5) working days notification must be provided to the Structural Concrete Engineer by the Fabricator to confirm the fabrication start date.

The Inspector shall have the authority to reject any material or work that does not meet the requirements of these specifications.

Prior to shipment of any members, the Materials and Research Engineer will have approved all applicable material certifications required in accordance with Subsection 700.02.

- xx. SUBMITTALS. As soon as practical after the award of the Contract, all required information shall be prepared and submitted.

A complete copy of the structural design calculations for the precast concrete gravity retaining wall shall be submitted as Construction Drawings in accordance with Section 105. The design calculations shall substantiate that the proposed precast concrete gravity retaining wall satisfies the design parameters of the Contract. The design calculations shall be stamped by a Professional Engineer licensed in the State of Vermont and shall include any general construction notes required for the fabrication and construction of the precast concrete gravity retaining wall.

Fabrication Drawings for the precast concrete gravity retaining wall shall be submitted in accordance with Section 105. In addition to the requirements of Section 105, the Fabrication Drawings shall include dimensions of all precast concrete gravity retaining wall blocks used.

The Contractor shall supply a sample block for approval by the Engineer prior to installation.

- xx. METHOD OF MEASUREMENT. The quantity of Special Provision (Precast Concrete Gravity Retaining Wall) to be measured for payment will be the number of square meters (square feet) of wall surface area complete and in place in the accepted work, measured as the sum of the areas of panels actually erected in the wall.

xx. BASIS OF PAYMENT. The accepted quantity of Special Provision (Precast Concrete Gravity Retaining Wall) will be paid for at the Contract unit price per square meter (square foot). Payment will be full compensation for designing, fabricating, and installing the materials specified, including but not limited to geotextile fabric, concrete, backfill material, and expansion material; excavation; drainage system connection; miscellaneous materials including drain pipe, backfill for drain pipe, and railing and associated hardware; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.670 Special Provision (Precast Concrete Gravity Retaining Wall)	Square Foot
900.675 Special Provision (Precast Concrete Gravity Retaining Wall)	Square Meter (Square Yard)