

PEDESTAL WALL

****From Warren ER-STP 013-4(36)**

- xx. DESCRIPTION. This work shall consist of designing, detailing, fabricating, furnishing, and erecting pedestal wall(s) and footing(s) at the location(s) specified and in conformance with the lines and grades shown on the Plans or as directed by the Engineer.
- xx. GENERAL REQUIREMENTS. The Contract Documents include a detailed design for cast-in-place pedestal walls and footings. Should the Contractor choose to provide precast concrete pedestal walls and footings as allowed in the Plans, then the design and submittal requirements of this Section will apply.
- xx. DESIGN REQUIREMENTS. Design shall be performed in accordance with the 2010 AASHTO *LRFD Bridge Design Specifications* and its latest interims, the *VTRANS Structures Design Manual*, and the design criteria specified in the Plans.
- xx. MATERIALS. Materials shall meet the following requirements:
- (a) Concrete.
 - (1) Precast Concrete. Precast concrete shall meet the requirements of Section 540.
 - (2) Cast-in-Place Concrete. Cast-in-place concrete shall meet the requirements of Section 501 for Concrete, High Performance Class B, unless otherwise specified in the Contract Documents.
 - (3) Reinforcing Steel. Reinforcing steel and mechanical bar connectors shall meet the requirements of Section 507.
- xx. GENERAL FABRICATION REQUIREMENTS.
- (a) Precast Concrete. The manufacturer of precast concrete shall meet the requirements of Subsection 540.03. Prior to performing the work, the manufacturer shall have received approval for all Fabrication Drawings and given the Structural Concrete Engineer at least seven (7) days advance notice. The Contractor shall bear full responsibility and costs for all materials ordered and work performed prior to approval of the Fabrication Drawings or written authorization from the Structures Engineer.

Failure to meet the Contract requirements will result in rejection of the component being fabricated and the termination of the ability to fabricate for the State.
The Fabricator shall maintain a Quality Control file that shall contain at a minimum the piece identification, date and time cast, concrete test results, quantity of concrete used per element, batch quantity printout, cylinder results, and aggregate gradation and moisture.
 - (b) Cast-in-Place Concrete. Cast-in-place concrete shall be formed, placed, finished, and cured in accordance with Section 501.

xx. SUBMITTALS. Working Drawings shall be submitted to the Structures Engineer in accordance with Section 105. The submittal shall include all detailed design computations and details, dimensions, quantities, and cross sections necessary to construct the wall and footings. In addition, the submittal shall include, but not be limited to, all of the following that apply to the particular wall type being constructed:

- (a) Complete design calculations substantiating that the proposed design satisfies the design parameters in the Contract Documents shall be submitted. The wall design calculations shall be signed and sealed by a Professional Engineer. The Contractor shall not start work for which Working Drawings are required until the drawings have been approved.
- (b) A plan view of the wall showing the limit of the widest component (footing, mesh, or strip) and the centerline of any drainage pipe which is behind or passes under or through the wall.
- (c) An elevation view of the wall which shall include the elevation at the top of the wall at all horizontal and vertical break points.
- (d) A typical cross-section or cross-sections showing the elevation relationship between ground conditions and proposed grades.
- (e) Details of the drainage systems or other facilities required to accommodate drainage.
- (f) The details for connection between the wall and the soil reinforcements.
- (g) The details for diverting soil reinforcements around obstructions such as piles, catch basins, and other utilities.
- (h) All reinforcing details, including reinforcing bar bending details.
- (i) Any general notes required for the construction of the wall and footings.
- (j) A listing of the summary of quantities on the elevation sheet for each wall.

Any Fabrication Drawings required for elements meeting the requirements of Section 540 shall be submitted and shall meet the requirements of Subsection 540.04.

All design and construction details will be checked by the Agency's Structures and Materials and Research Sections. Approval of the detailed design and plans, and notification to begin the work, will be made by the Structures Section.

The Agency assumes no responsibility for dimensions and other information calculated by the Fabricator. The Fabricator is responsible for the fit of all components. If errors occur that cause

problems during erection, the Contractor is responsible to make acceptable corrections.

The Agency is responsible for all principal dimensions and material properties contained in the Contract. The Fabricator and Contractor are responsible for bringing to the Agency's attention any errors or discrepancies they discover.

xx. METHOD OF MEASUREMENT. The quantity of Special Provision (Pedestal Wall) at the location specified to be measured for payment will be on a lump sum basis in the complete and accepted work. Measurement will include all precast or cast-in-place concrete components designed to support the bridge and wingwalls.

xx. BASIS OF PAYMENT. The accepted quantity of Special Provision (Pedestal Wall) at the location specified will be paid for at the Contract lump sum price. Payment will be full compensation for designing, detailing, fabricating or forming, curing, and installing the materials specified, including but not limited to concrete, bar reinforcement and welded steel wire fabric, PVC pipe, soil reinforcements, attachment devices, fasteners, bearing blocks, shims, geotextiles, sheet membrane, joint sealer, and expansion material; preparing and submitting Working Drawings; furnishing and implementing the erection plan; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Any grouting work, such as fairing out unevenness between adjacent concrete pieces and filling leveling screw holes, shear keys, transverse anchor recesses, and dowel holes, is considered incidental to the work for Special Provision (Pedestal Wall).

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.645 Special Provision (Pedestal Wall) (Abutment No. X)	Lump Sum