

RHODE ISLAND

DEPARTMENT OF TRANSPORTATION

Standard Specifications for Road and Bridge Construction

AMENDED AUGUST 2013

~~NOT THIS PART~~

There will be a maximum charge of one inspector for precast operations and two inspectors for prestress operations. The Contractor will be credited 50 percent when a plant is performing operations for two or more Department contracts.

The compensation payment for out-of-state inspection services shall be paid as a progress payment deduction.

SECTION 810

REINFORCING STEEL

810.01 DESCRIPTION. This work consists of providing reinforcing steel, both plain and deformed, and coated and uncoated; spiral wire; and welded wire fabric, of the quality, type, size and at the locations indicated on the Plans or as directed by the Engineer, all in accordance with these Specifications.

This work also includes the drilling and grouting of reinforcing dowels.

810.02 MATERIALS. The following materials shall conform to the applicable requirements of the indicated **Subsections of PART M; MATERIALS:**

a. **Subsection M.05.01; Bar Reinforcement.**

b. **Subsection M.05.02.1; Wire Fabric.**

c. **Subsection M.05.02.2; Spiral Wire.**

d. **Epoxy Coatings.** Materials and application of epoxy coatings shall conform to the requirements of **Subsection M.05.05; Epoxy Coatings for Bar Reinforcement**, of these Specifications.

1. Prequalified Epoxy Powders. The current list of epoxy powders which has been prequalified by the National Bureau of Standards is presented in the Special Provisions of the Contract.

2. Patching Material. The patching or repair material shall be compatible with the epoxy coating and shall be inert in concrete. The material shall be supplied by the epoxy resin manufacturer, and it must be suitable for repairs made by the installation contractor on areas damaged during fabrication or handling in the field.

3. Basis of Acceptance for Coated Bars. The coating applicator shall furnish Certificates of Compliance with each shipment of coated bars. The Certificate of Compliance shall state that the coated bars conform to the requirements of this Specification and those of relevant ASTM Specifications.

	Location	Minimum Cover
(a)	Concrete cast against or permanently exposed to earth (footings, abutment and wall faces, backwalls, etc.):	3 inches
(b)	Stirrups, ties and spirals:	1½ inches
(c)	Slabs:	
	Without wearing surface: top;	2½ inches (+1/4", -0")
	bottom;	1 inch (+1/8", -0")
	With wearing surface: top;	2 inches (+1/4", -0")
	bottom;	1 inch (+1/8", -0")
(d)	All other bars:	2 inches
(e)	Work exposed to sea water:	4 inches

4. Support Systems. All bars shall be maintained the correct distance from the forms by means of blocks, hangers, chairs or other approved devices. The use of pieces of stone, brick, wood or metal pipe will not be permitted. If required, precast concrete blocks placed with the small face down may be used.

5. Fastening. Bars shall be securely tied with wire at all intersections except where spacing is less than 1 foot in each direction, in which case alternate intersections may be tied. Welding of crossbars shall not be permitted unless specifically authorized.

All wire ties and miscellaneous hardware used for placement of epoxy coated reinforcing shall also be either epoxy or plastic coated, or have plastic tips protecting the ends which may rest against formwork.

All reinforcement shall be placed and tied, inspected and approved by the Engineer before placement of concrete commences.

6. Splicing Reinforcing Steel. All reinforcement bars shall be furnished in full lengths as indicated on the Plans. Splicing of bars and wire fabric reinforcing, except where so indicated, will not be permitted without the written approval of the Engineer. Splices shall be staggered as far as possible.

Lapped splices shall not be used for bar sizes larger than #11.

Unless otherwise shown on the Plans all reinforcing shall be lapped according to the following table. Lengths in parentheses are for epoxy coated reinforcement.

Bar Size	Class of Concrete	
	(AE)	XX(AE)
4	12"(12")	12"(12")
5	12"(12")	12"(12")
6	12"(14")	14"(16")