

MATERIALS AND METAL PRODUCTS

3301 REINFORCEMENT BARS

3301.1 SCOPE

Provide deformed and plain reinforcing steel for use as reinforcement in concrete construction.

3301.2 REQUIREMENTS

Provide reinforcement bars, other than wire, meeting the requirements of the following AASHTO specifications for the size, type and grade as shown on the plans or as required by the contract:

Table 3301-1 AASHTO Specifications Per Bar Type	
Reinforcement Bars	AASHTO Specification Requirement
Billet steel bars	AASHTO M 31
Rail steel bars	AASHTO M 322 M/AASHTO M 322
Axle steel bars	AASHTO M 322 M/AASHTO M 322

If the plans or specifications do not specify the type or grade of reinforcement bars, provide Grade 60 [Grade 420] of any type except as modified by the following:

- (1) Provide deformed billet steel reinforcement bars for use in a concrete bridges, including precast units, box culverts, and retaining walls.
- (2) Provide deformed reinforcement bars of any type or grade for use in all other concrete structures, and
- (3) If required or allowed by the contract, weld bars meeting the requirements of ASTM A 706 and having a yield point of at least 60,000 psi [414 MPa].

If required in the plans, provide epoxy coated reinforcement bars meeting the requirements of AASHTO M 284. Apply the coating in a fusion bonded epoxy coating plant certified by the CRSI.

Ensure the plant's quality control office maintains documentation required by CRSI certification, including test data and measurements taken at times and locations as directed by the Materials Engineer.

Fabricate, store, and place reinforcement in accordance 2472, "Metal Reinforcement."

3301.3 SAMPLING AND TESTING

Sample and test reinforcement bars in accordance with the Schedule of Materials Control. If the Materials Engineer determines that the fusion bonded epoxy coating plant is not following approved coating procedures, correct the process and repair or replace the unacceptable material as directed by the Materials Engineer.

3302 DOWEL BARS

3302.1 SCOPE

Provide dowel bars for use in portland cement concrete pavements and other concrete applications as shown on the plans.

3302.2 REQUIREMENTS

Provide Grade 40 or Grade 60 steel dowel bars meeting the requirements of AASHTO M 31. Provide an epoxy coating meeting the requirements of AASHTO M 254. Epoxy coat the ends of the dowel bars as required by the manufacturer. Apply epoxy coating in a fusion bonded epoxy coating plant certified by the CRSI or another organization approved by the Materials Engineer. Use alternate dowel bar materials as required by the contract.