

SECTION 03150 CONCRETE ACCESSORIES

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Section includes specifications for accessories for concrete structures.

1.02 REFERENCE STANDARDS

- A. American Railway Engineering and Maintenance-of Way Association (AREMA):
 - 1. Manual for Railway Engineering (AREMA Manual)
- B. State of California, Department of Transportation, Standard Specifications (Caltrans):
 - 1. Section 51 Concrete Structures
 - 2. Section 68 Subsurface Drains
 - 3. Section 75 Miscellaneous Metals
 - 4. Section 95 Epoxy

1.03 SUBMITTALS

- A. Submit product data and manufacturer's instructions for elastomeric bearing pads, waterstops, mortar, epoxies, and other items.

1.04 DELIVERABLES

- A. Certificates of Compliance: Submit certificates of compliance for joint seals and elastomeric bearing pads.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Concrete Anchorage Devices, Bolts and Inserts: Conform to the provisions of Caltrans Standard Specifications, Section 75, Miscellaneous Metal.
- B. Expansion Joints, Joint Fillers and Sealers: Conform to the provisions in Caltrans Standard Specifications, Section 51, and AREMA Manual, Chapter 8. See Section 07250, Joint Sealants, for additional requirements.
- C. Elastomeric Bearing Pads: Elastomeric bearing pads for railroad bridges shall conform to the details shown on the Contract Drawings and the requirements of AREMA Manual, Chapter 15, and the following additional requirements:

1. Elastomeric bearing pads shall be plain pads as specified in Caltrans Standard Specifications, Section 51, unless otherwise indicated, with a thickness as dimensioned on the Contract Drawings.
 2. Provide holes as shown on the Contract Drawings for pads located at girder anchor rods.
- D. Waterstops: Conform to the provisions in Caltrans Standard Specifications, Section 51-1.14, Waterstops.
- E. Mortar: Conform to the provisions in Caltrans Standard Specifications, Section 51-1.135, Mortar.
- F. Drain Pipe: Conforming to the provisions for pipe for edge drains and edge drain outlets in Caltrans Standard Specifications, Section 68-3, Edge Drains.
- G. Embedded Junction Boxes and Conduit: Refer to Division 16, Electrical.
- H. Embedded Drains, Drain Pipes, Reducers, and Fittings: Refer to Section 02630, Storm Drainage System
- I. Gel-Type Epoxy: Delta AS23-18 A&B gel-type epoxy or Engineer approved equal.
- J. Epoxy binder: Conforming to the provisions in Caltrans Standard Specifications, Sections 95-1, General, and 95-2.01, Binder (Adhesive), Epoxy Resin Base.

2.02 MORTAR AND GROUT MIXES

- A. Gel-Type Epoxy Sand Mortar: Mix mortar consisting of equal parts by volume of gel-type epoxy and dry silica sand in accordance with manufacturer's instructions,
- B. Epoxy Grout: One part epoxy binder to three parts dry silica sand (fine aggregate), by volume.
- C. Grout for baseplates and bedplates: Refer to Section 03300, Cast-In-Place Concrete.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Coordinate installation of accessories with Section 03300, Cast-in-Place Concrete, and related concrete sections.
- B. Elastomeric Bearing Pads:
1. Bond pads to abutment seats and pier caps with epoxy.
 2. Clean top and bottom surface of bearing pads with methyl ethyl ketone to remove all traces of mold release agents. When mating surfaces are

clean and dry, apply gel-type epoxy to a 5 mil thickness on the bridge seat and the bottom side of the bearing pad and then set pad and hold in the proper location on the bridge seat until the epoxy takes its initial set.

3. Just before setting beams, spread gel-type epoxy sand mortar on top of bearing pads to a thickness of approximately 1/4 inch to obtain uniform bearing. Scrape excess mortar from around bearing pads after beams are set.
- C. Waterstops: Install waterstops as specified in Caltrans Standard Specifications, Section 51-1.14, Waterstops, and waterstop manufacturer's written instructions.
- D. Epoxy Grout: Apply where indicated on the Contract Drawings. Use in accordance with manufacturer's instructions.
1. Follow manufacturer instructions regarding maximum pot life. In the event of high air temperatures, the time shall be shortened so that placement of the grout occurs while the material is still sufficiently liquid to adhere.

END OF SECTION