New Jersey Turnpike Authority
P.O. Box 5042, Woodbridge, NJ 07095

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Document Change Announcement

2016 Standard Supplementary Specifications
Guide Rail Anchorages and Buried End Terminals
DCA2025SS-03

Subject: Revisions to

Section 510 Guide Rail, Subsection 510.03 Methods of Construction
Section 915 Beam Guide Rail, Subsection 915.02 Posts and Recycled/Synthetic Blockouts
Subsection 915.03 Miscellaneous Hardware, Subsection 915.07 Terminals and Anchorages

Description of Change:

This DCA updates the current guide rail specifications to clarify installation and material standards for beam guide rail anchorages and buried end terminals.

Notice to New Jersey Turnpike Authority Staff and Design Consultants
Effective immediately, all contracts currently in the design phase shall incorporate the revisions herein. For advertised contracts awaiting the opening of bids this revision shall be incorporated via addendum. Contact your New Jersey Turnpike Authority Project Manager for instruction.

The revisions may be accessed on the Authority's webpage: https://www.njta.com/doing-business/professional-services

Recommended By:

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Distribution: Senior Staff Engineering, Law, Maintenance & Operations Depts., All Prequalified Consultant Firms, File

NOTE: All text herein are REVISIONS, as indicated by the tracked changes, to the latest version of the 2016 Standard Supplementary Specifications.

SECTION 510 – GUIDE RAIL

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510.03 Methods of Construction

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(D) TERMINALS AND ANCHORAGES

~~At least 10 days before beginning the work, submit the manufacturer's recommendations to the Engineer.~~ Install tangent guide rail terminals ~~and anchorages~~ according to the manufacturer's recommendations and Subsection 915.07. At least 10 days before beginning the work, submit the manufacturer's recommendations to the Engineer.

Install buried end terminals and anchorages in accordance with the standard drawings and Subsection 915.07.

Excavate for post holes and foundation tubes~~concrete anchorages~~ as specified in Subsection 206.03. Backfill and compact using the directed method as specified in Subsection 206.03.

Excavate cut slope as specified in Subsection 206.03 within the limits of the buried guide rail end terminal. Drive beam guide rail posts for buried guide rail terminal to the required position. Ensure that posts are driven plumb, properly spaced, and to the line and grade shown. Attach the beam guide rail element to the blockout at every post. Attach the beam guide rail element and plate to the terminal posts. Backfill with excavated material as specified in Subsection 206.03.

SECTION 915 – BEAM GUIDE RAIL

915.02 Posts and Recycled/Synthetic Blockouts

Steel posts shall be fabricated using structural steel conforming to ASTM A 709, Grade 36, and galvanized according to ASTM A 123.

Galvanized steel posts on the Garden State Parkway shall be pre-stained in accordance with Subsection 915.01.

Timber posts for ~~end~~ tangent guide rail terminals and anchorages shall conform to Subsection 910.05.

Use recycled/synthetic routed blockouts that are MASH 2016 test level 3 (TL-3) compliant. Ensure that the name of the manufacturer and model number are stamped on each blockout and that the blockouts are of the same material and dimensions as the spacers that were tested.

915.03 Miscellaneous Hardware

For galvanized beam guide rail, ensure that connections or splices, transition sections, nuts, bolts, washers, and plates conform to AASHTO M 180, except as follows:

(A) Parapet connections ~~attachments~~ and buried end terminals ~~end connectors~~

(1) Use structural steel plates and shapes conforming to AASHTO M270 and galvanized per AASHTO M111.

(2) Use steel for structural tubes conforming to ASTM A500 Grade B and galvanized.

(B) Anchorages

(1) Use steel foundation tubes conforming to ASTM A53 Grade B.

(2) Use strut and yoke assemblies conforming to ASTM A36 and galvanized per ASTM A 123.

(3) Use anchor cables conforming to ASTM 1023.

(4) Use swaged fitting for cable assemblies conforming to SAE Grade 5 and galvanized.

(5) Use breakaway cable terminal sleeve for cable assemblies conforming to ASTM A53 Grade B.

915.07 Terminals and Anchorages

Tangent guide rail ~~T~~terminals ~~and anchorages~~ shall be MASH compliant systems from the QPL. All materials and transition components as necessary to attach to beam guide rail shall be as specified by the device manufacturer in compliance with the MASH conforming configuration.

The MASH compliant tangent guide rail terminal system shall conform to MASH Test Level 3 (TL-3). MASH compliance shall include a FHWA Federal Aid eligibility letter, if issued by the FHWA, and documentation of MASH compliance including crash test videos, crash test results and/or analysis. Installation and materials shall conform to the manufacturer's detailed drawings and instructions used to determine MASH compliance.

Components from multiple tangent guide rail terminal systems shall not be intermixed.

The various beam guide rail components used to construct the buried end terminals and anchorages shall be fabricated in accordance with Subsections 915.01 through 915.06.