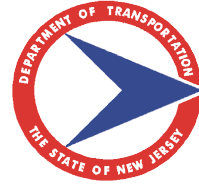


New Jersey Department of Transportation

1035 Parkway Avenue, PO Box 600, Trenton, New Jersey 08625-0600



Baseline Document Change Announcement

ANNOUNCEMENT: BDC17D-02

DATE: July 19, 2017

**SUBJECT: Barrier Curb, Guide Rail and Bridge Attachment Details
Revisions to CD-607 through CD-609, BCD-507-8 and BCD-507-9 of the Standard Construction Details 2016, Roadway and Bridge**

**REFERENCE: Revision to 2015 Roadway Design Manual Section 8, Guide Rail and Median Barriers
BDC17MR-02**

Midwest Guardrail System (MGS)
- **Revision to Subsections/Subparts 607.04, 609.03.01, 609.03.03, 609.04, 913.01.02 & 913.01.03 and addition of new Subparts 609.03.07, 609.03.08 & 609.03.09 to the 2007 Standard Specifications for Road and Bridge Construction.
BDC17S-07**

The Standard Construction Details sheets CD-607 through CD-609 of the current guide rail and barrier curb details in the *2016 Standard Roadway Construction-Traffic Control-Bridge Construction Details* booklet have been revised. Consequently, the Table of Content sheet No. 1 and the Index sheet No. 1 have been revised.

The changes are in conformance to the following:

- AASHTO Roadside Design Guide (RDG), 4th Edition 2011
- MASH implementation for guide rail and concrete barrier curb
- MASH crash tested 31" high Midwest Guide Rail System (MGS)

The current guide rail system is being revised to the MASH crash tested 31" high Midwest Guide Rail System (MGS) to improve its crash performance for the higher center of gravity vehicles. A higher concrete barrier curb (42" F Shape Barrier Curb) is also being implemented for this TL-5 barrier.

In addition to minor drafting changes, a summary of the major revisions are as follows:

1. CD-607-1

- CD-607-1.9 Lip Curb labeled Type A and B
- Note 2 replaced Attachment Table

2. **CD-607-2**
 - MASH test level designation added
3. **CD-607-3**
 - Barrier Curb at Lighting Pole Base Installation detail deleted
 - MASH test level designation added
4. **CD-607-4**
 - New detail – 42 inch F Shape Barrier Curb
5. **CD-607-5**
 - New detail – 42 inch F Shape Barrier Curb
6. **CD-607-6**
 - New detail - 32 inch and 42 inch Barrier Curb Tapered Ends
7. **CD-608-1**
 - CD-608-1.3 revised to show new end anchorage
 - CD-608-1.8 chart was revised
8. **CD-609-1**
 - Height of guide rail revised to 31 inches
 - Guide rail splice moved to between posts
 - Rub rail deleted
 - Detail for Guide Rail Post Installation in Rock moved to CD-609-8
 - MASH test level designation added.
9. **CD-609-2**
 - Height of guide rail revised to 31 inches
 - Guide rail splice moved to between posts
 - Rub rail deleted
 - MASH test level designation added
10. **CD-609-3**
 - On Rub Rail Section, curb and asterisk “Offset Shown on Plans” deleted
11. **CD-609-4**
 - Anchorage detail revised
 - Pay limit added
12. **CD-609-5**
 - Pay limits and splice location revised for Tangent and Flared Terminals
13. **CD-609-6**
 - CD-609-6.1, 36 ft. radii in table revised to 32 ft. and number of CRT posts reduced from 11 to 10
14. **CD-609-7**
 - Revised median guide rail treatments
 - Existing CD-609-7.4 Median Guide Rail Treatment at Adjacent Bridges moved to CD-609-7A
15. **CD-609-7A**

- New detail – Telescoping Guide Rail End Terminal Connected to Dual Faced Thrie Beam Guide Rail

16. CD-609-7B

- New details – Overlapping Dual Faced Median Beam Guide Rail, and Overlapping Dual Faced Median Beam Guide Rail with Concrete Pad

17. CD-609-8

- Clearance from guide rail to obstruction details revised. Additional posts and blockouts will be paid for under pay item “Beam Guide Rail Posts.”
- Where Rail Element With Spacer is Attached to Obstruction has been deleted
- Table for Additional Length Beam Guide Rail Posts was revised
- CD-609-8.3 Guide Rail Post Installation in Rock added

18. CD-609-8A

- New details for Unsupported Spans of 12’-6”, 18’-9” and 25’-0” added
- New detail for Rail Height Determination added

19. CD-609-9

- Height of guide rail revised from 27 ¼ inches to 31 inches
- Clearance from bottom of rail to ground in Note 2 revised to 21 inches

20. CD-609-10

- Standard and Alternate Grading details revised

21. CD-609-11

- Beam Guide Rail Attachment to Existing Balustrade moved to CD-609-12
- Detail for Modified Thrie Beam Guide Rail Attachment to Sidewalk added, previously on CD-609-12
- Pay limits for Beam Guide Rail , Bridge revised

22. CD-609-12

- Beam Guide Rail Attachment to Existing Balustrade moved to this sheet and pay limit for Beam Guide Rail, Bridge revised
- Beam Guide Rail Attached to Footing formerly CD-609-12.1 was deleted

23. CD-609-13

- Bridge Attachment Types moved to this sheet. Formerly on CD-609-14, 15, 16 & 17.
- 6”x8”x22” blockout for TL-2 attachments added
- Thrie Beam Transition Section moved to CD-609-20
- General Notes for bridge attachments added to this sheet

24. CD-609-14

- New guide rail attachment detail for 42 inch high F Shape Barrier Parapet
- Applicable for design speeds greater than 45 mph with no approach roadway curbing
- Approach Guide Rail Transition pay limit added

25. CD-609-15

- New guide rail attachment detail for 42 inch high F Shape Barrier Parapet
- Applicable for design speeds greater than 45 mph with approach roadway curbing
- Approach Guide Rail Transition pay limit added

26. CD-609-15A

- New guide rail attachment detail for 42 inch high F Shape Barrier Parapet
- Applicable for design speeds 45 mph or less with no approach curbing
- Approach Guide Rail Transition pay limit added

27. CD-609-15B

- New guide rail attachment detail for 42 inch high F Shape Barrier Parapet
- Applicable for design speeds 45 mph or less with approach roadway curbing
- Approach Guide Rail Transition pay limit added

28. CD-609-16

- New guide rail attachment detail for 42 inch high One Rail Steel Bridge Railing Parapet with sidewalk
- Applicable for design speeds greater than 45 mph
- Approach Guide Rail Transition pay limit added

29. CD-609-16A

- New guide rail attachment detail for 42 inch high One Rail Steel Bridge Railing Parapet with sidewalk
- Applicable for design speeds 45 mph or less
- Approach Guide Rail Transition pay limit added

30. CD-609-17

- Revised guide rail attachment detail for 4 Bar Open Steel Bridge Railing Parapet with sidewalk
- Applicable for design speeds greater than 45 mph
- Length of thrie beam attachment increased
- Approach guide rail height increased to 31 inches
- Approach Guide Rail Transition pay limit added
- MASH test level designation added

31. CD-609-17A

- New guide rail attachment detail for 4 Bar Open Steel Bridge Railing Parapet with sidewalk
- Applicable for design speeds 45 mph or less
- Approach Guide Rail Transition pay limit added

32. CD-609-17B

- Revised guide rail attachment detail, formerly CD-609-14
- Applicable for design speeds greater than 45 mph
- Length of thrie beam attachment increased
- Approach guide rail height increased to 31 inches
- Approach Guide Rail Transition pay limit added
- MASH test level designation added

33. CD-609-17C

- Revised guide rail attachment detail, formerly CD-609-15

- Applicable for design speeds greater than 45 mph
- Length of thrie beam attachment increased
- Approach guide rail height increased to 31 inches
- Approach Guide Rail Transition pay limit added
- MASH test level designation added

34. CD-609-17D

- New guide rail attachment to 34 inch high NJ Shape Barrier Parapet
- Applicable for design speeds 45 mph or less with no approach roadway curbing
- Approach Guide Rail Transition pay limit added

35. CD-609-17E

- New guide rail attachment to 34 inch high NJ Shape Barrier Parapet
- Applicable for design speeds 45 mph or less with approach roadway curbing
- Approach Guide Rail Transition pay limit added

36. CD-609-18

- CD-609-18.2 Terminal Treatment deleted

37. CD-609-19

- Minor drafting changes

38. CD-609-20

- New detail
- Thrie Beam Bridge Attachment Sections
- Thrie Beam to W-beam Asymmetrical and Symmetrical Transition Sections
- Modified Thrie Beam to Beam Guide Rail transition

The Standard Bridge Construction Details sheets BCD-507-8 and BCD-507-9 have been revised to add transition details and notes for a bridge pylon to rail system section to comply with new MASH standards.

A summary of the revisions is as follows:

BCD-507-8 4'-2" High Heavy Truck Parapet

- Parapet Elevation and Plan Views have pylon transition elongated with Note reference.
- Added note No. 11 and 12.
- Added 2- 3"~ Rigid Metallic Conduits to base of parapet.

BDC-507-9 3'-6" High F-Shape Parapet Details

- 3'-6" High F-Shape Parapet backside made straight down to the deck to allow for 2- 3"~ Rigid Metallic Conduits installation.
- Elevation View elongated with pylon to show reinforcement detail for pylon and transition zone.
- Added note No. 8 and 9.

This revision must be read in conjunction with the two referenced BDC Announcements.

Implementation Code S (Special)

Changes must be implemented in all applicable scheduled Department projects that have a project letting date after December 31, 2017. The letting date is the receipt and opening of bids - "Activity 5040 Receive bids". This will allow designers to make necessary plan, specifications, and estimate/proposal changes without requiring the need for an addenda or postponement of advertisement or receipt of bids.

Recommended By:



Paul F. Schneider
Director
Capital Program Support

PS: KS: YB

Approved By:



Eli D. Lambert III, P.E.
Assistant Commissioner
Capital Program Management

Attachments: Standard Construction Details 2016, Roadway and Bridge, revised sheets CD-607 through CD-609 (Total of 38 Construction Detail sheets), BCD-507-8 and BCD-507-9. Table of Content sheet No. 1 and the Index sheet No. 1