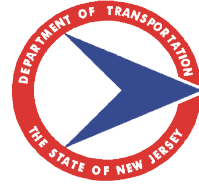


*New Jersey Department of Transportation*  
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## *Baseline Document Change Announcement*

**ANNOUNCEMENT: BDC22MR-04**

**DATE: March 1, 2023**

**SUBJECT: AASHTO References**

- **Revision to the 2015 Roadway Design Manual, in accordance with AASHTO – A Policy on Geometric Design of Highways and Streets, 7th Ed., 2018 and AASHTO – A Policy on Design Standards – Interstate System, May 2016**

The 2015 Roadway Design Manual has been revised in accordance with AASHTO – A Policy on Geometric Design of Highways and Streets, 7th Ed., 2018 and AASHTO – A Policy on Design Standards – Interstate System, May 2016.

### **DESCRIPTION OF THE CHANGES:**

- **Section 1 - Introduction**
  - Referenced publications updated to current editions.
- **Section 2 – General Design Criteria**
  - Section 2.3.3 - added discussion of design speed transition zone between high and low speed zones and different functional classifications.
  - Table 2-2 Design Vehicles- removed the Delivery Truck design vehicle.
  - Additional revisions were made for clarification.
- **Section 3 – Definitions and Terminology**
  - Removed outdated publication.
  - Additional revisions were made for clarification.
- **Section 4 – Basic Geometric Design Elements**
  - Table 4-8 Maximums Grades (%), Freeways - mountainous terrain exception has been removed from the note.
  - Added additional design consideration for sag vertical curves at under-crossings.
  - Additional revisions were made for clarification.
- **Section 5 – Major Cross Sectional Elements**
  - Section 5.4.4 - clarified the use of turnouts and referenced AASHTO for

turnouts intended for passing opportunities.

- Section 5.14.1 – add new sentence on rumble strips.
- Additional revisions were made for clarification.
- **Section 6 – At Grade Intersection**
  - Section 6.1 - updated the factors to be considered in the design of an intersection per AASHTO.
  - Section 6.2.2 - added reference to the State Access Code for the spacing of traffic signals.
  - Section 6.2.3.1 - changed the angle definition of skewed intersections and added different mitigation measures. Added paragraph regarding older drivers.
  - Section 6.5.1 - reference to AASHTO figures for the design of corner islands and allow the use of 3-centered curves.
  - Section 6.5.2.4 - added for urban areas a 4 ft offset to be provided for bicyclists along concrete islands.
  - Section 6.5.4 - deleted the Design Vehicle-Control Radius table.
  - Additional revisions were made for clarification.
- **Section 7 - Interchange**
  - Section 7.3.1 - added discussion on how to avoid wrong-way entry of interchanges.
  - Table 7-1 – Upgrades on Ramps design speed was updated for 3-5 percent maximum upgrade range.
  - Updated the AASHTO reference for auxiliary lane lengths.
  - Additional revisions were made for clarification.
- **Section 11 – Highway Lighting Systems**
  - Additional revisions were made for clarification.
- **Section 13 – Ground Mounted Sign Supports**
  - Updated the reference to the current AASHTO.
- **Section 14 – Traffic Control Plans and Details**
  - Updated references to the Bureau of Traffic Engineering
  - Quality Control Checklist for Designers - Geometry Section – has been updated to state that “Work Zone Transition areas and taper length should meet or exceed the minimum standards set forth in the MUTCD section 6C-08.”
- **Section 15 -Traffic Calming**
  - Updated the reference to the current AASHTO.

**The following Figures have been revised and incorporated:**

- **Figure 4-B: Values of Superelevation for Rural Highways and Rural or Urban Freeway** - revised incorrect minimum radius for 5% superelevation at a 30 mph design speed.
- **Figure 4-C1: Values of Superelevation for Low-Speed Urban Streets in Built-up Areas** - replaced “low type” surface with “unpaved” and replaced “high type” with “paved” surface. The spelling of “rainfall” was corrected.
- **Figure 5-F: Freeway Sections** - reference is made to A Policy on Geometric Design of Highways and Streets (AASHTO) and A Policy on Design Standards- Interstate System (AASHTO).
- **Figure 5-G: Freeway Sections** - reference is made to A Policy on Geometric Design of Highways and Streets (AASHTO) and A Policy on Design Standards- Interstate System (AASHTO).
- **Figure 5-I: Freeway Sections** - reference is made to A Policy on Geometric Design of Highways and Streets (AASHTO) and A Policy on Design Standards - Interstate System (AASHTO).
- **Figure 5-K: Lateral Bridge Clearances** - reference is made to A Policy on Geometric Design of Highways and Streets (AASHTO).
- **Figure 5-L: Lateral Bridge Clearances** - reference is made to A Policy on Geometric Design of Highways and Streets (AASHTO).
- **Figure 6-A: Sight Distance at Intersections for Left or Right Turning & Crossing Vehicles with Stop Control** - added to note 1, median widths should be converted to an equivalent number of lanes.
- **Figure 6-B: Yield Control** - added to table 15 mph design speed without an acceleration lane. Revised  $D_B$  length to 80 ft.
- **Figure 6-C: Intersection Turning Radii** - revised intersection skew angle to  $75^\circ$  and the minimum radius for a WB-40 truck to 40 ft.
- **Figure 6-D: Islands with No Shoulders** - corrected Large Island taper distance and Small & Intermediate Island  $W_2$  width.
- **Figure 6-H Land Service Highway Auxiliary Lane Lengths** - revised note 2 defining flat grades as less than 3% and updated reference to Table 10-5. Corrected note 3, the length “L” to be 300 ft minimum. Added note 4 for freeways a 1,200 ft acceleration lane is desirable.
- **Figure 6-I: Grass Median Opening** - Revised median opening width to provide 10 ft on either side of the crossroad width. Deleted note 3.
- **Figure 6-J: New Locations of Concrete Barrier Curb at Median Opening** - removed Note 4. Revised the last note to refer to Section 9 for crash cushion design.
- **Figure 6-M: Typical Left-Turn Slot** - Corrected the spelling of “vertical” in note 1 and updated the reference in note 5 to consult the Bureau of Traffic Engineering.

- **Figure 6-Q: Typical Type “C” Jughandle** - corrected overlapping linework in the jughandle ramp.
- **Figure 7-B: Design Widths of Pavement for Turning Roadways** - replaced note 3, stopping sight distance and auto-turn shall be used to determine if additional shoulder width is required.
- **Figure 7-C: Interstate and Freeway Ramp Terminal Treatment Single Lane Ramp** - corrected the 12 ft lane width dimension for acceleration lane and revised the taper to 250 ft for deceleration lanes
- **Figure 7-D: Interstate and Freeway Ramp Terminal Treatment Multi-Lane Ramp-**  
Added a new note 1, for high volumes “L” may go up to 2,000 ft.
- **Figure 7-E: Exit Terminal Treatment** - revised note for W use Case II, See Figure 7-B.
- **Figure 7-I: Arrangements for Successive Ramp Terminals** - corrected misspelling of word “Collector”. Revised note to all minimum lengths are measured from painted nose to painted nose.

#### REASON FOR THE CHANGES:

- The 2015 Roadway Design Manual has been updated to reflect changes within the *AASHTO, A Policy on Geometric Design of Highways and Streets, 7th Edition, 2018* relative to FHWA (23 CFR Part 625).
- The 2015 Roadway Design Manual has been updated to meet the current requirements of the *AASHTO, A Policy on Design Standards- Interstate System, May 2016*.


The following Sections of the *2015 Roadway Design Manual* have been revised and replace:

Section 1	Section 5 - Replaced	Section 13
• Page 1-1 (No change)		• Page 13-1
• Page 1-2	Section 6 - Replaced	• Page 13-2
• Page 1-3	Section 7 - Replaced	• Page 13-3
		• Page 13-4
Section 2 - Replaced	Section 11	• Page 13-7
	• Page 11-3 (No change)	• Page 13-8 (No change)
Section 3	• Page 11-4	• Page 13-17
• Page 3-1		• Page 13-18
• Page 3-2 (No change)		
• Page 3-5 (No change)		Section 14 – Replaced
• Page 3-6		
		Section 15
Section 4 - Replaced		• Page 15-1 (No change)
		• Page 15-2


**Implementation Code S (SPECIAL)**

Changes must be implemented in all applicable Department projects scheduled for Preliminary Engineering on or after February 2, 2023.

**Recommended By:**

  
\_\_\_\_\_  
Paul F. Schneider  
Director  
Capital Program Support

**Approved By:**

  
\_\_\_\_\_  
Parth Oza, P.E.  
Assistant Commissioner  
Capital Program Management

Attachments: BDC22MR-04 Attachment  
PS: NE: HP