



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

MEMORANDUM TO: Project Engineers
Project Design Engineers

FROM: G. R. Perfetti, P.E.
State Bridge Design Engineer

DATE: June 22, 2010

SUBJECT: REVISIONS TO DESIGN MANUAL FIGURES

The following Design Manual Figures have been revised as indicated:

- Fig. 2-1 Updated for LRFD Seismic Zones.
- Fig. 2-3 Reinstated figure that was erroneously deleted.
- Fig. 4-8 Revised limits of silt fence in 4th note.
- Fig. 6-10 New figure for Vertical Face Concrete Barrier Rail on cored slab.
- Fig. 6-11 New figure for Vertical Face Concrete Barrier Rail on box beam.
- Fig. 6-16 Replaced sidewalk dowels with 'U' bars & provided dim. to 1st 'B' bar.
- Fig. 6-17 Revised to show 'G' bar, dbl. dim. sidewalk parapet, &. dim. to 1st 'B' bar.
- Fig. 6-18 Revised to show 'G' bar, dbl. dim. sidewalk parapet, &. dim. to 1st 'B' bar.
- Figs. 6-20, 6-21, 6-22, 6-23 Added a horizontal 'B' bar.
- Fig. 6-32 Added note for superelevation exceeding 5%.
- Fig. 6-33 Revised to show 2-piece 'S' bar.
- Fig. 6-35 Revised to show 2-piece 'S' bar.
- Figs. 6-36, 6-37 Miscellaneous revisions for clarity.
- Fig. 6-45 Added detail for Section B-B.
- Figs. 6-46, 6-48 Revised bolt length for consistency with standard drawing.
- Fig. 6-81 Revised to incorporate 24" cored slab & increase end diaphragm to 3'-0".
- Fig. 6-81a New figure for 21" cored slab with 8" & 10" voids.
- Figs. 6-82, 6-83 Revised for 0.6" ϕ P/T strand and 2½" ϕ P/T holes.
- Fig. 6-84 Revised for 0.6" ϕ P/T strand and standard bearing pads.
- Fig. 6-85 Revised 'S1' bars from #4 (#13) to #5 (#16).
- Fig. 6-86 Revised for 0.6" ϕ P/T strand.
- Fig. 6-86a New figure for P/T in 24" cored slab.
- Fig. 6-87 Revised for 0.6" ϕ P/T strand & dimensions for multiple P/T strands.
- Fig. 6-106 Deleted diaphragm member size.

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- Fig. 6-112 Clarified requirements for mill to bear, tight fit, and/or welding stiffener to flanges.
- Fig. 6-114 Revised skew limits for consistency with current practice.
- Fig. 6-119 New figure for steel girders on elastomeric bearings at integral end bent.
- Fig. 6-120 Renamed previous Fig. 119 to Fig. 120a for alt. integral end bent detail.
- Fig. 6-120a Added washer under top nut. Renamed previous Fig. 120 to Fig. 120a.
- Fig. 6-121 Revised to show matched 'D' & 'U' bars, and show 'S' bars in cap.
- Fig. 9-9 Deleted reference to leveling pad in the notes.
- Figs. 10-3, 10-4 Corrected reference to AASHTO LRFD Specifications.
- Fig. 11-3 Updated girder options & span lengths for LRFD.
- Fig. 12-16 Revised bolt length & distance to first hex bolt from 2" to 5" to match Fig. 6-47.
- Fig. 12-17 Replaced 'D' bars with 'U' bars. Provided edge distances to 'B' bars.
- Fig. 12-22 Corrected vertical and sloped dimensions for 2:1 slope.

These revisions are effective immediately. The online Design Manual figures have been updated.

GRP/GM

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