



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: August 12, 2011

SUBJECT: LRFD Culvert Design and Rating

To be in compliance with FHWA regulations, reinforced concrete box culverts shall be designed in accordance with the *AASHTO LRFD Bridge Design Specifications*.

Culverts designed by the LRFD method shall also be rated in accordance with the Load and Resistance Factor Rating (LRFR) provisions of the *AASHTO Manual for Bridge Evaluation*. Include the LRFR summary after the plan sheet showing the culvert profile and location sketch for all culverts.

The following standard drawings for culvert ratings have been developed and should be used in plan development.

- LRFR5 – LRFR Summary for Reinforced Concrete Box Culverts (Non-Interstate Traffic)
- LRFR6 – LRFR Summary for Reinforced Concrete Box Culverts (Interstate Traffic)

This policy is effective with the January 2012 letting. The standard drawings are available via Structure Design's web site. The Design Manual will be updated at a later date.

GRP/WMC

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