



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

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GOVERNOR

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MEMORANDUM TO: Project Engineers  
Project Design Engineers

FROM: G. R. Perfetti, P. E.  
State Structures Engineer

DATE: October 9, 2012

SUBJECT: SCOUR NOTES

The FHWA document *Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges* (a.k.a. Federal Coding Guide) requires all bridges over waterways to be evaluated for scour vulnerability. In order to be in compliance with this requirement, the Hydraulic Design Unit uses guidelines in the FHWA Hydraulics Engineering Circulars 18 (HEC 18) titled *Evaluating Scour at Bridges* for scour evaluations, and a note is placed on the structure plans stating the structure has been evaluated for scour vulnerability.

To this end the following notes were inadvertently omitted from the Design Manual. Effective immediately, on all stream crossings place the following note on the structure plans:

***This structure has been designed in accordance with "HEC 18 – Evaluating Scour at Bridges."***

Also place the following note(s) on the structure plans, as applicable.

- For bridges utilizing spread footings:

***The scour critical elevation for Bent(s) no. \_\_\_ is the bottom of footing elevation. Scour critical elevations are used to monitor possible scour problems during the life of the structure.***

- For bridges utilizing pile bents, footings on piles or drilled piers:

***The scour critical elevation for Bent(s) no. \_\_\_ is elevation \_\_\_\_\_. Scour critical elevations are used to monitor possible scour problems during the life of the structure.***

In addition, for stream crossings, in the General Drawing section along the centerline survey or workline, note the approximate natural ground elevations are along the edge of the bridge on the upstream side.

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The online Design Manual has been updated.

GRP/BCH/GM/GDT

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