



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

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DATE: August 22, 2025

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FROM: Steve Smallwood, PE  
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Signed by:  
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SUBJECT: Superelevation Along Detours

Temporary detour designs are often required to maintain traffic on-site during project construction. In the past there have been challenges meeting design speed for temporary detours when applying the 2018 AASHTO Green Book Superelevation Tables 3-8 to 3-12, which are based on a Method 5 superelevation distribution. While Method 5 superelevation distribution remains the desired methodology for permanent designs and detours where constraints allow, a more flexible method is acceptable for temporary detour designs.

The NCDOT Roadway Design Manual currently does not provide specific guidance on reducing the superelevation when temporary detours are designed, which impacts the effective design speed associated with Method 5 superelevation distribution.

Many agencies have allowed the use of Method 2 superelevation distribution for temporary detours. The 2018 AASHTO Green Book recommends the use of Method 2 superelevation distribution on low-speed urban facilities. NCHRP 581 "Design of Construction Work Zones on High-Speed Highways" (2007) includes detailed descriptions and methodologies for desirable practices to employ while designing high speed temporary detours. Both the AASTHO Green book and NCHRP 581 provide details of guidance on superelevation distribution methodology.

This memorandum is to serve as a notification of the updated guidance for the design of these temporary detours. The Roadway Design Manual Section 2.10 will be updated to include as follows:

Design temporary on-site detours with Method 5 superelevation distribution as the desirable methodology. Use Method 2 superelevation distribution as the minimum criteria if constraints exist that make the desirable superelevation based on method 5 distribution not feasible.

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Use engineering judgement to determine the appropriate superelevation for the conditions.

This will be included in the November 2025 Roadway Design Manual update and can be found at the following location:

<https://connect.ncdot.gov/projects/Roadway/pages/RDM.aspx>

If you have any questions related to this update in guidance, please contact Mike Lindgren, PE at (919) 707-6207 or [mdlindgren@ncdot.gov](mailto:mdlindgren@ncdot.gov).

SS/ML

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