ADMINISTRATIVE INFORMATION:

- This Engineering Instruction (EI) is effective beginning with projects submitted for the lettings on or after January 1, 2019.
- Superseded Issuances: No issuances are superseded. Modifies EI 92-044 “Pavement Marking Policy Epoxy Pavement Markings 6” Wide Pavement Markings Wet Night Visibility Spheres.”
- The revisions issued with this EI will be incorporated into the next update of Highway Design Manual Chapter 11 – Signs, Signals and Delineation.
- The revisions issued with this EI will be incorporated into the Standard Sheets that will be effective on January 1, 2019.

PURPOSE: The purpose of this EI is to use of 6” wide edge lines on rural high-speed highway segments with posted speeds of 45 MPH or more.

TECHNICAL INFORMATION:

- 6” wide edge lines are currently used on all freeways and expressways.
- Wider edge line pavement markings have been shown to have a positive safety relationship on rural two-lane two-way highways. They provide a very high benefit-cost ratio on these roadways and will help vehicle safety/autonomous systems recognize edge lane markings.
- High-speed highway segments are defined as those with a posted speed of 45 MPH or more.
- Only the white edge lines are modified since the yellow centerline marking is doubled and centerline rumble strips are used on most high-speed highways.
- Details and plan sheets for rural high-speed highways are to require 6” wide edge lines instead of 4” wide edge lines.
- Based on cost estimates, the increased width will add $0.03 per foot upstate and $0.05 per foot downstate to bid prices. Designers should make appropriate changes to their engineer’s estimate.
- Placement of the edge line shall be in accordance with NYSDOT Standard Sheet 685-01 (Sheet 1 of 9), which has been revised to be consistent with this issuance.

IMPLEMENTATION:

- 6” wide edge lines should be used for all rural, high-speed highway segments with posted speeds of 45 MPH or more. They may be used for short sections of other roadways to avoid having to adjust the spray head.
The revision to Standard Sheet 685-01 (Sheet 1 of 9) is available on the Department’s website at: https://www.dot.ny.gov/main/business-center/engineering/cadd-info/drawings/standard-sheets-us-repository/685-01_082718.pdf

BACKGROUND: Initially, 6” wide edge lines were reserved for the Interstate System. EI 92-044 expanded the use to include expressways, defined for this purpose as any limited access highway with 4 or more lanes. In 2012, a Texas A&M Transportation Institute (TTI) study found that using 6” wide edge lines instead of 4” wide edge lines on rural 2 lane highways reduce total crashes by 15% to 30%, and fatal and injury crashes by 15% to 38%. The study was FHWA sponsored and based on Michigan DOT crash data. The benefit cost ratio is between 33:1 and 55:1.

Additionally, wider edge lines can assist the optical lane recognition systems used in autonomous and semi-autonomous vehicles.

REFERENCES:


CONTACT: Designers with questions or comments regarding this issuance should be directed to Richard D. Wilder, P.E., Director of the Office of Design at (518) 457-1030, or via e-mail at Rick.Wilder@dot.ny.gov. All other questions should be directed to Robert Limoges, P.E., Director of the Office of Traffic Safety and Mobility at (518) 457-2452 or via e-mail at Robert.Limoges@dot.ny.gov.