To:		*New York State Department of Transportation* **ENGINEERING INSTRUCTION**	**EI 10-012**

Title: **SHOULDER EDGE WEDGE FOR HOT MIX ASPHALT (HMA) PAVEMENTS**

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Approved:

/s/Richard W. Lee for
Daniel D'Angelo, P.E.
Deputy Chief Engineer, Design

4/14/10
Date

ADMINISTRATIVE INFORMATION:

- This Engineering Instruction (EI) is effective beginning with projects submitted for the Letting of 09/02/2010.
- This EI does not supersede any issuance.
- The revisions issued with this EI are incorporated into the revision of Section 402 issued with EI 10-009.
- Design guidance will be incorporated into a future update of the Highway Design Manual's Chapter 3, Typical Sections.

PURPOSE: The purpose of this EI is to announce the requirement for the use of shoulder edge wedges for Binder and Top courses under Section 402, *Hot Mix Asphalt (HMA) Pavements*.

TECHNICAL INFORMATION: This EI implements the use of shoulder edge wedge during the construction of Binder and Top courses under Section 402 of the Standard Specifications.

Cost Impact. It is anticipated that there will be a minimal cost increase due to implementation of this EI. The cost increase may be attributed to the fabrication or purchase of the shoulder wedge former on the paving machines and additional HMA material in and under the wedges.

Design Guidance: For new and reconstructed pavements, where curbs are not present, the top and binder courses of asphalt concrete shall be built with a shoulder edge wedge. The designer shall detail the shoulder edge wedge in the plans. The angle, to the horizontal, of this wedge shall be specified as 35° maximum. Typical CADD cell details have been created for roadways with and without underdrain and can be found in Microstation. Designers can find the shoulder edge wedge details in the nym_detail_miscellaneous.cel (Metric) and nyu_detail_miscellaneous.cel (US Customary) cell libraries. The cell names are:

OMSE - DETAIL, MISCELLANEOUS, SAFETY EDGE
OMSEU - DETAIL, MISCELLANEOUS, SAFETY EDGE WITH UNDERDRAIN

Please modify these details as necessary for your project.

IMPLEMENTATION: The requirement for the shoulder edge wedge will be implemented with the use of revised Section 402. Main Office Design Quality Assurance Bureau will be inserting the revised Section 402 shelf note into contract proposals beginning with projects submitted for the letting of 09/02/10.

TRANSMITTED MATERIALS: None.

BACKGROUND: A requirement for shoulder edge wedge is included in the revised Section 402 for Binder and Top courses. This safety feature is recommended by the FHWA based on the study done in New York, Georgia, and other states. The wedge at the edge of the shoulder is expected to improve safety. The wedge is intended to allow vehicles that have wandered off the edge of pavement to smoothly traverse the wedge, back up onto the pavement, rather than fighting against a steep edge, catching and shooting across into opposing traffic.

CONTACT: Direct questions regarding this issuance to Pratip Lahiri of the Design Quality Assurance Bureau at (518) 457-4092 or via e-mail at plahiri@dot.state.ny.us.