



To: SUPERSEDED ^{BY} <i>EZ 00-031</i> <i>EFFECTIVE 9/11/00</i>		New York State Department of Transportation ENGINEERING INSTRUCTION	EI 00-011
Title: Requirements for Use of Specification Item 407- Tack Coat Between All Lifts of HMA			
Distribution: <input type="checkbox"/> Manufacturers (18) <input type="checkbox"/> Surveyors (33) <input checked="" type="checkbox"/> Main Office (30) <input checked="" type="checkbox"/> Consultants (34) <input type="checkbox"/> Local Govt. (31) <input checked="" type="checkbox"/> Contractors (39) <input checked="" type="checkbox"/> Regions/Agencies (32) <input type="checkbox"/> _____ ()	Approved:  Paul J. Mack, Deputy Chief Engineer (Research) <i>3/10/00</i> Date 		

EFFECTIVE DATE. This Engineering Instruction is effective with projects submitted for the letting of September 7, 2000.

PURPOSE. This EI issues:

1. Revisions to the Standard Specification Section 401-3.11 to now require tack coat to be applied between lifts of new Hot Mix Asphalt(HMA) base, binder, and top courses.
2. Revisions to §401- Plant Mix Pavements - General, §403 - Hot Mix Asphalt Concrete Pavement, and §407 - Tack Coat. §401 and §403 are revised to pay for tack coat separately under §407 - Tack Coat and recommended application rates have been added to §407.

BACKGROUND. In the past, Item 407.01 M was used only when HMA was placed on existing Portland Cement Concrete (PCC), on milled surfaces or on existing HMA pavement. Experience has shown it is also beneficial to use tack coat between lifts of new HMA. Tack coat enhances the bond between HMA lifts. This is particularly important for HMA mixtures which have lower binder contents than previously used.

DESIGN GUIDANCE. Section 401-3.11 now requires tack coat to be applied between all HMA lifts (excluding the surface of permeable base material), therefore, tack coat should be included in the design and shown on the typical section drawings.

ACTIONS BY MAIN OFFICE DESIGN QUALITY ASSURANCE BUREAU: The § 401, §403 and §407 shelf note will be inserted into proposals by Main Office DQAB.

COST IMPACT. There will be a cost increase of approximately \$0.17 /m² per pavement lift for the additional applications of tack coat.

CONTACT PERSON. Direct questions regarding this EI to Cathy Cowan of the Materials Bureau's Field Engineering II Section at (518) 457-4582.

TACK COAT

Make the following changes to the Standard Specifications of January 2, 1995:

Page 4-5, line 44-45 and page 4-6, line 1-3

Under 401 - 3.01 delete the last two sentences in the fifth paragraph and replace them with the following:

"In addition, any binder course, placed by the Contractor, which will be permanently incorporated into the work and left open to traffic over the winter shall be cleaned in accordance with Section 633 - Conditioning Existing Pavement at no additional expense to the state immediately prior to tack coating and overlaying. Tack coat shall be applied in accordance with Section 407 - Tack Coat immediately prior to overlaying."

Page 4-20, line 15

Under §401 - 3.11 add the following as the first paragraph:

"Contact surfaces between all Hot Mix Asphalt (HMA) pavement lifts shall be tack coated in accordance with Section 407 - Tack Coat prior to placing HMA mixture. Contact surfaces shall be coated regardless of time period between lifts or construction vehicle use. The only exceptions to this are the surface of permeable base courses or when the Engineer determines that a tack coat is not needed. Paving over a tack coat should not commence until the emulsion has broken (goes from brown to black)."

Page 4-30, line 10

Under §407-3.02 delete the first sentence in the second paragraph and replace it with the following:

"The tack coat shall not be applied on a wet pavement surface or when the ambient temperature is below 10°C."

Page 4-30, line 13

Under §407 - 3.02 add the following sentence and table at the end of the section:

"The following table contains recommended application rates for tack coat on various surfaces:

Table 407-1 Tack Coat Application Rates

Surface Type	Application Rate (liters/m ²)
New Hot Mix Asphalt	0.14 - 0.18
Milled Surfaces	0.21 - 0.25
Existing Hot Mix Asphalt	0.21 - 0.25
Portland Cement Concrete	0.17 - 0.30
Vertical Surfaces (curbs, concrete drainage structures and appurtenances)	0.27 - 0.32

TACK COAT

Make the following changes to Addendum No. 2 of the Standard Specifications of January 2, 1995:

Page IV - 15, line 11

Under §403-5 Basis of Payment delete the first sentence and replace it with the following:

"The unit bid price per ton for all pavement courses shall include the cost of furnishing all materials including any cleaning performed pursuant to §401 - 3.01, and all equipment and labor necessary to complete the work."

Item No.	Description	Unit	Quantity	Unit Price	Total Price
1
2
3
4
5