

**New Jersey Department of Transportation**  
 1035 Parkway Avenue, PO Box 600, Trenton, New Jersey 08625-0600



**Baseline Document Change Announcement**

**ANNOUNCEMENT: BDC18S-20**

**DATE: April 15, 2019**

**SUBJECT: Pay Adjustment Equations (PAE) for Ride Quality**  
 - **Revision to the 2007 Standard Specifications for Road and Bridge Construction, Subpart 401.03.03.**

Subpart 401.03.03 of the 2007 Standard Inputs for Road and Bridge Construction has been revised to change the Pay Adjustment Equations (PAE) for Ride Quality.

The following revisions have been incorporated into the Standard Inputs (SI 2007).

**401.03.03 HMA Courses**

**J. Ride Quality Requirements.**

**4. Quality Acceptance.** The Department will determine acceptance and provide PA based on the following:

**a. Pay Adjustment.**

THE TABLE 401.03.03-7 AS IT APPEARS IN THE SI IS CHANGED TO:

Table 401.03.03-7 Pay Adjustment Equations (PAE) for Ride Quality			
Pay Equation Type	Exclusions		Pay Equations
PA1	As shown in the Special Provisions Table 401.03.03-9	IRI ≤ 170	PA1 = PAE
		IRI > 170	PA1 = -A or Corrective action
PA2	Will include, if tested	IRI ≤ 120	PA2 = \$0
		120 < IRI ≤ 170	PA2 = (IRI - 120) x (-\$10.00)
		IRI > 170	Maximum Negative Pay or Corrective action
PA3	Will include, if tested	IRI < T	PA3 = PAE
		T ≤ IRI ≤ 120	PA3 = 0
		120 < IRI ≤ 170	PA3 = PAE
		IRI > 170	PA3 = -A or Corrective action

$$PAE = \frac{A}{-37.75347 \times \log_e(T) + 194.87} - \frac{A}{-37.75347 \times \log_e(IRI) + 194.87}$$

$$A = 1267.2 \left[ \frac{M}{9} + \frac{PD}{150} \right]$$

P = Bid price of last lift of the pavement structure to be evaluated or price listed in table 401.03.03-7A as shown in the Special Provisions, whichever is higher, per Ton  
 D<sup>1</sup> = Design thickness of last lift to be evaluated, Inch  
 M = Bid price of Milling, per Square Yard  
 T = Target IRI

- For various design thicknesses of last lift to be evaluated within a segment, calculate the thickness using the following equation:

$$\text{Design thickness of last lift to be evaluated (D)} = \frac{D_1 N_1 + D_2 N_2 + \dots + D_N N_N}{N_1 + N_2 + N_3 + \dots + N_N}$$

Where:

D<sub>N</sub> = Design thickness of the last lift to be evaluated of N sections having same mix, Inch  
 N<sub>N</sub> = Number of lots of N section with design thickness D<sub>N</sub> of last lift to be evaluated

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 SEND EMAIL TO SME TO REQUEST MINIMUM VALUE OF P IN TABLE 401.03.03-7A FOR HMA SURFACE COURSE ITEMS WITHIN THE PROJECT AND INCLUDE THE FOLLOWING TABLE

**SME CONTACT – PAVEMENT & DRAINAGE MANAGEMENT & TECHNOLOGY UNIT**

FOLLOWING TABLE IS ADDED

Table 401.03.03-7A Minimum Value of P	
Surface Course Mix	P

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**Implementation Code R (ROUTINE)**

Changes must be implemented in all applicable Department projects scheduled for Final Design Submission at least one month after the date of the BDC announcement. This will allow designers to make necessary plan, specifications, and estimate/proposal changes without requiring the need for an addenda or postponement of advertisement or receipt of bids.

**Recommended By:**

  
 Paul F. Schneider  
 Director  
 Capital Program Support

**Approved By:**

  
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 Assistant Commissioner  
 Capital Program Management  
 and State Transportation Engineer