

New Jersey Department of Transportation **CONSTRUCTION ADVISORY**

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| NUMBER: 36 | Scabbing | 07/18/2018 |
| CATEGORY: Pavement | | |



Scabbing occurs when an existing layer of pavement is not fully removed during the milling operation. The RE should discuss scabbing and how to address this issue during the pre-paving meeting so a plan is in place prior to starting the milling operation.

Scabbing happens most often when milling over concrete pavement. It can also happen when milling HMA, if the layer between previously paved HMA lifts is close to the depth of milling. The scabbing may contribute to a lower IRI and density issues due to differential compaction between the scabbing and non-scabbing areas.


Although the Contractor is required to clean the milled surface with a mechanical sweeper (vacuum or vacuum assisted), presumably removing poorly bonded materials, the bond between the scabbed area and the underlying pavement may not be strong enough to take the loads produced by traffic and the newly place HMA layer may debond. This may lead to premature distress and/or failure in the pavement.

To prevent these potential issues, the RE should monitor the milling depth (particularly over concrete pavement) to ensure scabbing does not occur. If scabbing occurs during the milling operation, the RE will direct the Contractor to lower the milling head to fully remove the scabbing or drop back and perform another pass to fully remove the scabbing. The Contractor can also opt to have an additional milling machine to follow the primary milling machine to keep production going.

The RE must be careful not to mill too much HMA because this will impact the placed HMA thickness and may result in multiple lifts of HMA based on the mix design and thickness.

Depending on what is required in the Contract, the Contractor may request additional payment for re-milling areas. This should be balanced by the RE with the fact that the additional HMA will be paid for and that there should be less potential for ride quality and air voids adjustments.

Albert Balluch
Acting Director, Construction Services & Materials

A handwritten signature in blue ink that reads "Albert E. Balluch". The signature is written in a cursive style and is positioned above a horizontal line.