

**Date:** May 29, 2015

**To:** MAG Specifications and Details Committee

**From:** Brian Gallimore, Chairman Materials Working Group

**Subject:** Revisions to Sections 321

**Case # 15-10**

**PURPOSE:** Incorporate revisions to Section 321, "*Rehabilitation Work*" into the MAG Specifications.

**REVISIONS:**

321.10.5.3 - Added this subsection to allow for some relief on asphalt density when provisions for reworking substandard bases (removals) or existing asphalts (overlays) to meet Section 310 or Section 321 for overlays are missing from bid documents or scope of work.

Currently, industry is being held to same standards on spot removals and edge mill/overlays as new construction over optimal base materials.

or any unconfined edge will be excluded from testing. The Engineer may exclude areas from the compaction lot that are not accessible by normal compaction equipment.

The Contractor will provide the traffic control to facilitate any coring operations necessary for compaction acceptance.

Cores will be taken per the Asphalt Concrete Coring Method. This method can be found in Section [321.14](#). Acceptance testing results will be furnished to the contractor within five working days of receipt of samples by the acceptance laboratory.

If the pavement density has in-place voids of 8.0% or less, the asphalt concrete will be paid for at the contract unit price. If the pavement density has in-place voids greater than 8.0%, the deficient area will be evaluated within the subplot by coring at maximum intervals of 100 feet from the deficient core(s). If both cores in a subplot are deficient, 3 to 4 additional cores may be necessary to re-evaluate acceptance. The in-place voids of all the original core(s), whether deficient or acceptable, will be averaged with the in-place voids of the cores taken for re-evaluation to determine compliance with the acceptance requirements. If the average of the in-place voids is greater than 8.0% then Table [321-8](#) shall apply to the subplot. Additional cores may be required to define the limits of the deficient area, and shall not be used for re-evaluating acceptance.

TABLE 321-8		
PAVEMENT DENSITY PENALTIES		
Limits of In-place Air Voids for design lift thicknesses 1.5 inches and greater	When the contracting agency is the owner: Payment Reduction (\$ per ton of asphalt concrete)	When the contracting agency is not the owner (i.e. permits): Corrective Action
Below 3.0%	Removal* or EA	Removal* or EA
3.0% to below 4.0%	\$10.00	EA and Type II Surry Seal
4.0% to 8.0%	Full Payment	No Corrective Action
Greater than 8.0% to less than 9.0%	\$6.00	EA
9.0% to 10.0%	\$10.00	EA and Type II Surry Seal
Greater than 10.0%	Removal* or EA	Removal* or EA

NOTES: \*The Contractor shall remove and replace the entire subplot that is deficient.  
EA = Engineering Analysis per Section [321.10.6](#)  
Removal for In-place Air Voids greater than 11.0% is not eligible for Section [321.10.6](#).

**321.10.5.3 Rehabilitation Work**

In-place voids on rehabilitation work should take into consideration the underlying base materials and not be subject to penalties in Table 321-8, other than in place voids shall not exceed 10%. Rehabilitation work shall be considered any mill and overlays or remove and replace projects that do not have provisions for reworking the base materials to compaction standards set forth in Section 310 or Section 321 (overlays).

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**321.10.6 Engineering Analysis (EA):** Within 10 working days after receiving notice that a lot or subplot of asphalt concrete is deficient and is found to fall within the “Removal or EA” band per Table(s) [321-4](#), [321-5](#), and/or [321-8](#) the contractor may submit a written proposal (Engineering Analysis) to accept the material in place at the applicable penalties along with possible remediation(s) listed in the “Removal or EA” category. Engineering Analysis can also be proposed for non-removal categories of “Corrective actions” when the contracting agency is not the owner (i.e. permits).