

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-804-12

CODE: (IS)

DATE: 7/5/2000

SUBJECT: Bridge Deck Smoothness

Section 804, Concrete Bridges and Structures, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-804.03.19--Finishing Concrete Surfaces.

907-804.03.19.7--Finishing Bridge Floors.

At the end of Subsection 804.03.19.7.3 on page 804-44, add the following:

907-804.03.19.7.4--Acceptance Procedure for Bridge Deck Smoothness. After the bridge decks and bridge end slabs are completed, they shall be tested for ride quality using a Contractor furnished profilograph. Profile Index Values shall be determined in accordance with Department SOPs and these specifications. The profilograph shall meet the requirements of Subsection 907-401.02.6.5. Profiles will be obtained in the wheel paths of the main thru lanes and, where conditions allow, in the wheel paths of any auxiliary lanes or tapers. Profile Index Values for bridge decks and bridge end slabs shall be obtained for all state roads with four lanes or more, on state roads three lanes or less where the current traffic count is 2,000 ADT or higher, or as designated on the plans. Ride quality tests will begin at a point where the rearmost wheel of the profilograph is as close to the beginning of the bridge end slab as possible and shall proceed forward across the remainder of the bridge end slab, across the bridge deck and continue across the next bridge end slab to a point where the frontmost wheel of the profilograph reaches the farthest edge of the bridge end slab. Bridges and bridge end slabs not requiring a ride quality test must meet a 1/8 inch in 10-foot straightedge requirement in longitudinal and transverse directions. Bridges in horizontal curves having a radius of less than 1,000 feet at the centerline and bridges within the superelevation transition of such curves are excluded from a test with the profilograph.

The Profile Index Value for bridge decks including the bridge end slabs shall be averaged for the left and right wheel path for each lane and where applicable, each auxiliary lane and taper, and shall not exceed 20 inches per mile for each lane. In addition, individual bumps or depressions exceeding 0.3 of an inch, when measured from a chord length of 25 feet shall be corrected, and the surface shall meet a 1/8 inch in 10-foot straightedge check made transversely across the deck or slab.

Bridge decks and bridge end slabs not meeting the preceding requirements shall be corrected. Corrective work shall be done at no additional cost to the Department. Corrective work shall consist of diamond grinding in accordance with Special Provision No. 907-501, Diamond Grinding and Grooving. Concrete removal by grinding shall be limited such that the concrete cover over the deck or slab reinforcing steel has a minimum cover of two (2) inches. In cases where this cannot be achieved, other corrective work may be required as directed by the Engineer. Final riding surface of bridge decks and bridge end slabs subjected to a ride quality test shall comply with this specification and the requirements of Special Provision No. 907-501, Diamond Grinding and Grooving, as it applies to grooved finish. All decks and slabs

that are ground shall be re-tested using the profilograph to ensure the ride quality meets the requirements of this specification. All corrective work shall precede final surface texturing. All surface areas, corrected by grinding, shall be sealed with a sealant approved by the Bridge Engineer.

In case the bridge end slabs are to be constructed on a future project, the bridge deck(s) alone shall be tested for ride quality using the acceptance procedure outlined above, except that the ride quality test will begin at a point where the rearmost wheel of the profilograph is as close to the beginning of the bridge as possible and shall proceed forward across the bridge deck to a point where the frontmost wheel of the profilograph reaches the farthest edge of the bridge.

Expansion joint installation shall be delayed and the joint temporarily bridged to facilitate operation of the profilograph and grinding equipment across the joint wherever feasible.

It shall be the Contractor's responsibility to schedule profilograph testing. The Contractor shall notify the Department at least five (5) days in advance of profilograph testing. The Contractor shall ensure that the area to be tested has been cleaned and cleared of all obstructions. Profilograph testing of bridge decks and bridge end slabs shall be performed by the Contractor under supervision of the Engineer. All profilograph testing shall be performed at no additional cost to the Department. The Contractor will be responsible for traffic control associated with this testing operation.