



Illinois Department of Transportation

Memorandum

To: ALL BRIDGE DESIGNERS 23.3

From: Jayme F. Schiff

Subject: Full Lane Sealant Waterproofing System

Date: October 30, 2023

A handwritten signature in blue ink that reads "Jayme F. Schiff".

The Department has developed a waterproofing system to be used as an alternative to the Waterproofing Membrane System specified in Section 581 of the Standard Specifications for Road and Bridge Construction. This system, titled Full Lane Sealant Waterproofing System, creates a cost-effective, high-performance substitution for the traditional waterproofing membrane system for concrete bridge decks. The system uses a combination of highly polymerized asphalt interlayers of Full Lane Sealant (FLS) with dense, high-quality hot-mix asphalt (HMA) to create a waterproofing system that is easier to construct and prevents the ingress of water and deicing chemicals to protect concrete bridge decks from chloride ingress and subsequent spalling and corrosion.

When used, the details for the waterproofing membrane system and HMA overlay should be replaced with the attached detail. The pay items used shall be as follows:

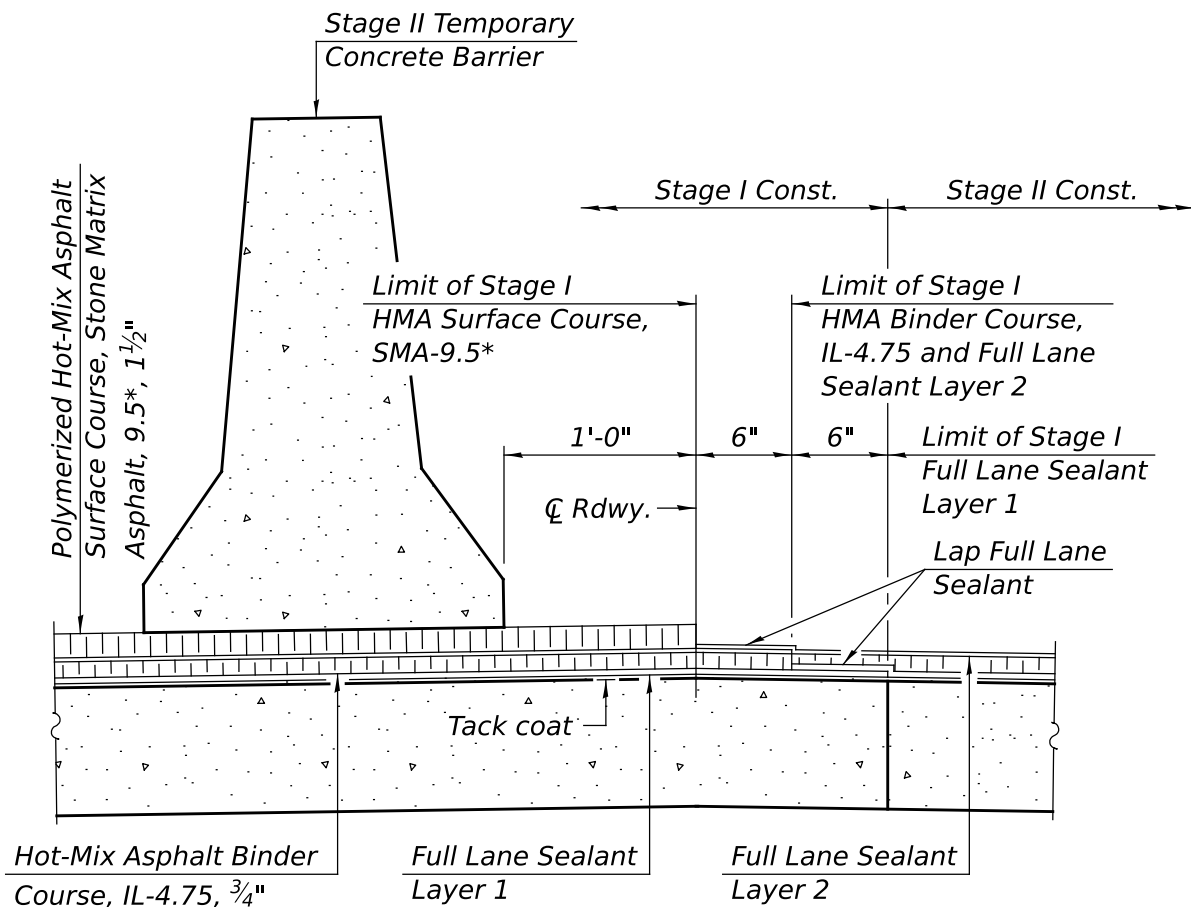
- FULL LANE SEALANT WATERPROOFING SYSTEM, which includes the tack coat, both layers of FLS, and the $\frac{3}{4}$ in. thick layer of IL-4.75 HMA Binder Course.
- POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, 9.5, which includes the $1\frac{1}{2}$ in. thick layer of SMA-9.5 Surface Course.

The minimum thickness of the system is 2.25 inches. When required, additional thickness may be added by increasing the thickness of the HMA Binder layer.

The Bureau of Design and Environment maintains a special provision FULL LANE SEALANT WATERPROOFING SYSTEM, which shall be inserted into contracts containing this system.

This system may be implemented on applicable projects beginning with the January 2024 letting. Please direct questions to Mark Shaffer, Bridge Design Engineer, by telephone at (217) 785-2914 or email at mark.shaffer@illinois.gov.

Attachment



WATERPROOFING STAGING

Full Lane Sealant Waterproofing System consists of an initial tack coat to promote bonding, Layer 1 of Full Lane Sealant, a layer of Hot-Mix Asphalt Binder Course, IL-4.75, and Layer 2 of Full Lane Sealant.

* Mix and N-number to be determined in design.

**FULL LANE SEALANT
WATERPROOFING SYSTEM**