

## **0-7109: Synthesis for Best Practices for Preventive Maintenance Preparatory Work**

### **Background**

The synthesis study focused on pavement preparatory work performed before preventive maintenance (PM) surfacing contracts with the goal of answering, “What work needs to be performed to the roadway before a new surface is placed?” Preparatory work performed by in-house maintenance forces or maintenance contracts may include crack sealing, fog seal, repairs, milling, and level-up and should be performed well in advance of the PM contract. Both flexible and rigid pavements may require work in advance of a PM contract. Seal coats or thin overlays are typical PM surfacing projects.

The Texas Department of Transportation’s (TxDOT’s) 10-year 2022 Unified Transportation Program contains a budget of \$13,926,300 for preventive maintenance and rehabilitation projects. It is critical to the success of the program that roadways are prepared for the PM project.

### **What the Researchers Did**

In this synthesis study, the research team investigated preparing pavements for a future PM project by reviewing the current state of the practice and emerging research. A survey was developed and distributed to TxDOT personnel. Over 300 reports and websites were reviewed. Both rigid and flexible pavements were included, with the focus on flexible pavements and seal coat PM contracts. The factors evaluated were policies, procedures, methods, timing, materials, equipment resources, budgets, and the maintenance crew’s knowledge, skills, and abilities. The Atlanta and Bryan Districts provided information about best practices used within the districts to help determine repair areas.

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## What They Found

The survey showed that there are several best practices occurring throughout Texas. However, there are still concerns with the preparatory work being performed.

While there is a significant amount of research concerning individual treatments, there is not a lot of information specific to maintenance repairs in preparation for a PM treatment. The New Zealand and Australian literature provided the most details concerning preparing a roadway for a seal coat. It is emphasized in the literature that to have a successful seal coat, a uniform surface, both transverse and longitudinally, is needed.

## What This Means

Additional research is needed, specific to the repairs performed for a PM treatment. The researchers recommended the following:

- Develop general information and best practices information booklets, similar to the Austroad's "Pavement Work Tips" series.
  - Document the best practices for each type of repair.
  - Show how to best perform the repair with the PM treatment in mind.
  - Determine cure times before the PM treatment is placed.
  - Document the key components needed to perform the repairs.
- Develop a procedure to determine the limits of repairs.
- Develop a repair evaluation procedure.
- Develop training workshops.

### For More Information

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