



RESEARCH PROJECT CAPSULE [12-2PF]

August 2012

TECHNOLOGY TRANSFER PROGRAM

Asphalt Surface Treatments for Pavement Preservation

JUST THE FACTS:

Start Date:
June 15, 2012

Duration:
12 months

End Date:
June 14, 2013

Funding:
SPR: Pooled Fund: TT-Fed

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Sponsored jointly by the Louisiana
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University

POINTS OF INTEREST:

Problem Addressed / Objective of
Research / Methodology Used
Implementation Potential

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The RAC Region II has initiated a collaborative research program consortium through the Transportation Pooled Fund (TPF) Program. The research program is called the Southeast Transportation Consortium (STC) and is intended to encourage coordination among member states, as well as provide resources and management of collaborative studies. The consortium intends to address high priority transportation research topics of common interest to the southeastern and adjoining states. Louisiana serves as the lead agency in the STC.



PROBLEM

It is no secret that all levels of government are facing an unprecedented level of deficit. While revenues are dropping, infrastructure needs are growing with age. The question of sustainability is taking the center stage. Can we afford to keep 3 million miles of paved roads in the United States? Pavements must be managed, not just maintained. That means finding the most cost-effective way.

The World Bank's Pavement Deterioration Model shows that, if a pavement is left to deteriorate, the cost of bringing it back to good condition may be four times the cost of maintaining it at a good/fair condition. Preventative maintenance is one of the most popular ways of managing roadway pavements.

Surface treatments fall under "Preventive Maintenance," which is generally applied to pavements in good condition and without much structural deterioration. Many types of surface treatments are available, including slurry seal, chip seal, micro surfacing, surface rejuvenation, fog seal, and newer types containing cement, polymer, rubber, or other agents. The relatively low cost and simplicity of application helps more agencies use them, especially in times of a low budget. The question is: are road agencies getting their money's worth on surface treatments?

The research conducted under this proposal will examine the state of practice in the United States, particularly the southeast region, with respect to pavement surface treatments. This synthesis study will summarize the results of surface treatment research completed to date, as well as state best practices and implementation status. Findings from this study should be a good reference for agencies that use or intend to use surface treatments, providing useful information on elements such as types of applications, best practices, cost, and documented performance.

OBJECTIVE

The objectives are to focus on research projects conducted in the southeast region (i.e., SASHTO states) on a specific synthesis topic and issue; perform a literature search on the synthesis topic to identify other on-going or completed research; review the commonality of project scopes and methodology of studies performed in the Southeast Transportation Region (STC); review the commonality of project results, conclusions, and recommendations; identify differences in results, conclusions, and/or recommendations that would affect regional implementation and practice; review implementation status of individual state project results and recommendations; recommend applicability of applying research results to other states within the southeast region; recommend additional research, if needed, to enhance implementation within the region; and organize, evaluate, and document the useful information acquired. This synthesis should be a good reference for agencies that use or intend to use surface treatments, providing useful information on elements such as types of applications, best practices, cost, and documented performance.

METHODOLOGY

The methodology utilized for this project involves creating a survey that asks all of the necessary questions in order to develop a useful guide. The survey will be designed after a literature review. It will then be distributed to state and local agencies. It is noted that local agencies seem to use more surface treatments than state DOTs. With higher volume roads, state DOTs seem to rely on milling and overlay. As a bonus, the survey may be expanded to other countries. This will be done with concurrence with the project manager. An electronic, on-line survey will be sent to agencies. Marketing techniques will be necessary to call recipients and remind them to participate. Once the responses have been received, the results will be organized in a report. Plots and graphs of the data will be developed to present statistics and tabulate the results. A comparison of current asphalt surface treatment specifications of the southern states will also be tabulated.

IMPLEMENTATION POTENTIAL

The final synthesis report shall help practitioners by offering a useful, clear, and concise reference of the state of practice. Such a reference should provide information to practitioners to refine their practices or encourage others to start implementing surface treatment, as appropriate.