

Feds Push More Use Of *Pavement Preservation*

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As state and federal tax revenues slated for transportation construction have continued to shrink, a quiet evolution has taken place in highway management decision making. This important development has transformed a highway program of construction and re-construction to one of preserve, maintain and operate.

It heralds a major departure for the construction industry while holding promise for cutting an estimated backlog of \$500 billion of unfunded but needed highway and bridge repairs and reconstruction.

A Lesson Learned

"We learned you could preserve the road if you selected the right preventive maintenance treatment at the right time for the right road," said Jim Sorenson, senior construction and preservation engineer for FHWA's Office of Asset Management.

During the 1990s, the applicability of FHWA aid for preventive maintenance treatments was broadened considerably through congressional legislation, and the agency clarified this eligibility through a series of memorandums. Arguably the most far-reaching memo was released by the agency in October 2004. This memo stated unequivocally that preventive maintenance extended the service life of a road in a cost-effective manner and was eligible for federal-aid funding.

Partnering With States

The memo encouraged FHWA field offices to promote preservation and work closely with their counterparts in the states departments of transportation. It suggested FHWA offices work with their state partners to establish a

"preservation" component of preventive maintenance. The agency now considers allocating an even greater percentage of highway funds to pavement preservation techniques, particularly given the nation's current economic situation.

Economics Drives Change

FHWA now encourages states to maintain and preserve the roads they have, providing incentive for them not to wait until roads deteriorate so badly they have to be totally reconstructed. Said Sorenson, "This worst-first scenario is just too expensive and not the way to go." He added that the benefit-to-cost ratio for pavement preservation far exceeds that of reconstructing a road that has been allowed to deteriorate too long.

Defining Pavement Preservation

FHWA's September 12, 2005, policy memo noted that pavement preservation consists of three components: preventive maintenance, minor rehabilitation (non structural), and some routine maintenance activities. Examples of preventive treatments included asphalt crack sealing, chip sealing, slurry or micro-surfacing, thin and ultra-thin hot-mix asphalt overlay, and others.

A Strong Advocate

FHWA's Sorenson has spent much of his time in recent years as a strong advocate of pavement preservation. In line with this, he partners with state DOTs and works closely with organizations that promote concepts of systems preservation. One of the most effective groups is the National Center for Pavement Preservation (NCPPI).

Working With Industry

As part of its activities, NCPPI is conducting a study for FHWA and its Federal Lands Highway Division (FLHD) on polymer-modified asphalt emulsions, a study expected to help officials decide what types of modifiers and additives to blend with asphalt binders used in surface treatments. The study also involves nationwide testing of materials used on such projects.

Private industry is providing pro bono and at-cost testing for the study. Samples of aggregate and emulsions from a number of selected projects are being sent to laboratories of BASF Corporation, PRI Asphalt Technologies Inc., and Paragon Technical Services Inc. BASF Corporation is funding the at-cost material testing in conjunction with NCPPI.

Changes In Store

The fundamental change in FHWA's approach to the funding of pavement preservation applications – coupled with the cooperation of private industry and academia, plus efforts of groups like NCPPI, AASHTO and others – is expected to have a profound effect on transportation asset management.

Driven by economics, major transformations in the kinds of construction materials and equipment and even types of contractors and engineers involved may result as billions of federal aid dollars are made available for pavement preservation. ■

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