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Good Results in Bad Times

Pavement preservation expert Larry Galehouse talks about tools and strategies that make sense for surviving the Great Recession

By Kirk Landers

"In times like these, the pavement manager's most basic strategy is to keep sound pavements sound and keep bad pavements from becoming unsafe or unusable."

So spoke Larry Galehouse, director of the National Center for Pavement Preservation, in an interview with Better Roads.

Indeed, Galehouse, one of the nation's foremost experts on pavement preservation, sees the diminished road budgets of the Great Recession as a litmus test for pavement management strategies.

"The agencies that have pursued the traditional 'worst first' strategy, giving priority to rebuilding bad pavements, are feeling the budget shortfalls most acutely," he notes. "Agencies that have given priority to prevention — to keep good pavements in good condition — are in much better shape."

And that homily is Galehouse's advice to pavement managers dealing with severely constrained budgets. "It costs a lot less to extend pavement life while the pavement is healthy than it does to rehabilitate or rebuild a pavement that has deteriorated too far," he observes.

The key to executing a pavement preservation strategy is to bring the right prevention tool to the right pavement at the right time, he says. The challenge is to select the treatment with the greatest benefit for that particular pavement, and Galehouse notes that it takes a lot of up-front work to make that diagnosis.

"For example," says Galehouse, "you need to identify subsurface failure spots, dig them out and repair them before applying a surface treatment."

And Galehouse stresses that pavement preservation priorities apply to concrete and asphalt pavements alike.

Asphalt Interventions

One of the least-expensive asphalt pavement treatments that Galehouse often recommends today is the use of a rejuvenator shortly after the surface course is laid. A true rejuvenation of an asphalt surface requires the introduction of maltene fractions. Thus, rejuvenators containing maltenes — the oily, resinous component of asphalt — increase the asphalt binders' resistance to oxidation by improving the chemistry and prolonging its flexibility.

Rejuvenator treatments can be repeated every few years to keep the surface pavement supple and weather-resistant, typically prolonging its life by two to three years. The maltene-based rejuvenator is clear and doesn't affect paint lines.

"It's important to get the true, maltene-based rejuvenator if a change in binder chemistry is desired," says Galehouse, adding that there are many other products on the market. "I suggest getting references from other agencies about how the product worked on past projects," he says.

Rejuvenators are often applied after a road pavement or airport landing strip has been retexturized, says Galehouse. "Today's retexturizing technology is fast and inexpensive, and it improves pavement friction."

The roughened surface accepts the rejuvenator treatment more efficiently and the process improves the tractive qualities of the aggregate. Galehouse warns that pavements with poor-quality aggregate will polish again relatively quickly, while good-quality aggregate will keep its texture for a long time.

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