SHRP2 SOLUTIONS
TOOLS FOR THE ROAD AHEAD

Guidelines for the Preservation of High-Traffic-Volume Roadways (R26)

Your guide to the most-affordable options for extending pavement life

Challenge

For years, transportation agencies have successfully extended the life of certain types of roads by applying pavement preservation techniques. However, to realize the benefits of these techniques for a broader range of roadways, agencies need a systematic approach that takes into account a variety of road conditions and proper timing of treatments to reduce negative traffic impact.

Relatively small investments in preserving existing pavement can forestall the need for major reconstruction projects. Many effective pavement preservation techniques exist, but until now they have been used, especially in urban settings, primarily for low-volume roads.

Solution

A comprehensive SHRP2 report shows that many conventional techniques—and some new ones as well—can be used to extend the life of high-traffic-volume roads and avoid disruptive and costly major rehabilitation and reconstruction projects. Derived from an extensive literature review and a detailed survey of transportation agencies, the report documents successful current practices and provides selection matrices to help match specific high-volume-traffic situations with the best available treatments.

Preservation Approaches for High-Volume-Traffic Roadways and its companion guidelines clarify key factors that affect preservation treatment decisions, including traffic levels, pavement conditions, climate conditions, available work hours, and treatment performance and cost. Preliminary and final feasibility matrices for hot mix asphalt and Portland Cement Concrete-surfaced pavements allow engineers to quickly identify a particular treatment type (such as crack fill) and see whether it is recommended for particular distress types and severity levels. Example decision matrices simplify the complex factors involved and give steps for weighing technical inputs. Appendices summarize treatments and give examples of how the matrices have guided treatment selection.

Benefits

By helping engineers to more quickly and confidently select the right treatment at the right time for a given pavement, the guides can help transportation agencies embrace preservation as a key strategy in maintaining pavements, thereby saving scarce transportation dollars. And by focusing on more than 20 treatments that have proven cost-effective, these documents also help save money by reducing the risk of choosing preservation.

Follow-on benefits to choosing preservation strategies include reducing congestion and increasing worker and driver safety. Small problems can be fixed before they become big problems, and the public can enjoy a smoother ride.

Save Lives

Shorter construction periods reduce risks and enhance safety for the traveling public and construction workers.

Save Money

Preserving existing pavements reduces the need for major and costly major rehabilitation projects.

Save Time

The guides speed decision making about which preservation strategies to use, and the strategies themselves can be applied more rapidly and with less disruption than major rehabilitation efforts, saving everyone time.

RENEWAL

One of four SHRP2 focus areas, Renewal products help transportation organizations rapidly build and restore highway infrastructure that lasts longer while minimizing user disruption and delay.

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Visit: www.fhwa.dot.gov/GoSHRP2
Learn more about products, case studies, and implementation assistance.

The Implementation Assistance Program

Implementation assistance is available to help State departments of transportation (DOTs), metropolitan planning organizations (MPOs), and other interested organizations deploy SHRP2 Solutions. A range of opportunities is available to raise awareness of SHRP2 Solutions and to encourage early adoption of these products. Application periods are offered approximately twice per year. Each product selected for implementation assistance has the potential to deliver more efficient, cost-effective programs to meet the complex challenges facing transportation today.

How can you learn more?

Visit: www.fhwa.dot.gov/GoSHRP2

- Additional product information
- Information about how this product is being used in the field
- Contact information for peers who are familiar with this product
- Links to research reports

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About SHRP2 Implementation

The second Strategic Highway Research Program (SHRP2) is a partnership of the Federal Highway Administration (FHWA), the American Association of State Highway and Transportation Officials (AASHTO), and the Transportation Research Board (TRB). TRB completed the research, and now FHWA and AASHTO are jointly implementing the resulting SHRP2 Solutions that will help the transportation community enhance productivity, boost efficiency, increase safety, and improve the reliability of the Nation's highway system.