

## Using Existing Pavements to More Quickly Reconstruct Highway Projects

*New guidelines help agencies use existing pavement for rapid and cost-effective reconstruction*

State and local transportation agencies continue to seek innovative ways to speed up the delivery of needed infrastructure improvements at lower costs. New research from the second Strategic Highway Research Program (SHRP2) offers new guidance for incorporating existing pavement into pavement rehabilitation projects with cost-effective results.

The new guide identifies the optimal conditions for using existing pavements and the best approaches for ensuring they last longer when they are incorporated. These pavements have the potential to serve 50 years and can reduce the need for more costly and time-consuming reconstruction projects using all new materials. The end results are **longer-lasting pavements that cost substantially less, use substantially less new material, and can be constructed more quickly.**

### *Using Existing Pavement in Place*

## The Solution

This web-based scoping tool and accompanying report, *Using Existing Pavement in Place and Achieving Long Life*, provide much-needed guidance for deciding where and under what conditions to use existing pavement as part of roadway renewal projects. The products include approaches for using existing pavements in-place to ensure longer service life for roadways using asphalt, concrete, and other innovative materials. They also identify new alternatives to renewal approaches. In addition, they can provide realistic scoping assessments; they document successful practices; and they provide model specifications.

Reconstructing the nation's busiest roads faster with less new material

FOCUS AREA:  
Renewal (R23)

Web-based scoping tool and easy-to-follow guide with model specifications and case studies for incorporating existing pavements into rapid renewal road construction projects.

### Save Lives

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



### Save Money

- Reusing existing pavement reduces costs, including hauling and dumping costs, and shrinks construction timelines.



### Save Time

- Projects are accelerated by reusing existing pavement, alleviating the need to remove and dispose of it offsite.
- The traveling public experiences fewer traffic delays because of shorter construction windows.



The report and accompanying materials describe:

- ▶ The range of approaches for using existing pavement in renewal projects;
- ▶ The advantages and disadvantages of each approach and under what circumstances each should be considered;
- ▶ Construction techniques; and
- ▶ The method for integrating recycled concrete with adjacent materials and road structures.



Photo Credit: Iowa DOT / HNTB

## The Benefits

The web-based tool can complement an agency's existing processes to encourage design and construction using onsite materials. Other benefits:

- ▶ Time savings based on rapid reuse of existing materials;
- ▶ Cost savings from reduced need for new pavement and a shorter construction phase;
- ▶ Shorter construction time, resulting in reduced exposure of travelers and construction workers to work zone hazards;
- ▶ A better return on investment for the public based on a longer pavement service life; and
- ▶ Reduced environmental footprints, based on decreased use of new materials.

## How has this strategy been used by states?

The Washington Department of Transportation estimates it will realize a 30 percent cost savings over the life of the new pavement and a 50 percent reduction in user delay by applying this method. This approach delivers long-lasting value by promoting durable and dependable roads.

## How can you learn more?

The TRB report, *Using Existing Pavement in Place and Achieving Long Life*, will be available in early 2013. For more information, contact Steve Mueller at FHWA, [steve.mueller@dot.gov](mailto:steve.mueller@dot.gov); Keith Platte at AASHTO, [kplatte@aaashto.org](mailto:kplatte@aaashto.org); or James Bryant at TRB, [jbryant@nas.edu](mailto:jbryant@nas.edu).

### About SHRP2 Implementation



The second Strategic Highway Research Program is a national partnership of key transportation organizations: the Federal Highway Administration, the American Association of State Highway and Transportation Officials, and the Transportation Research Board. Together, these partners conduct research and deploy products that will help the transportation community enhance the productivity, boost the efficiency, increase the safety, and improve the reliability of the Nation's highway system.

### Strategic Highway Research Program

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