



Preservation Guidelines for High-Volume Roadways

Kelly L. Smith, Senior Engineer
Applied Pavement Technology, Inc.



U.S. Department of Transportation
Federal Highway Administration



TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES

Renewal Focus Area



Develop design and construction methods that cause minimal disruption to the traveling public and produce long-lived facilities to renew the aging highway infrastructure.

Products address:

Bridges, nondestructive testing techniques, pavements, project delivery, utilities, and railroads.

Benefits:

- Rapidly installed, longer-lasting facilities that require less maintenance
- Reduced cost through rapid interventions that extend service life of original assets and streamline project planning
- Shorter construction times lead to less overall congestion
- Improved safety through shorter work zone exposure

Renewal Focus Area



Develop design and construction methods that cause minimal disruption to the traveling public and produce long-lived facilities to renew the aging highway infrastructure.

Products address:

Bridges, nondestructive testing techniques, pavements, project delivery, utilities, and railroads.

Benefits:

- Rapidly installed, longer-lasting facilities that require less maintenance
- **Reduced costs through rapid interventions that extend service life of original assets** and streamline project planning
- Shorter construction times lead to less overall congestion
- Improved safety through shorter work zone exposure

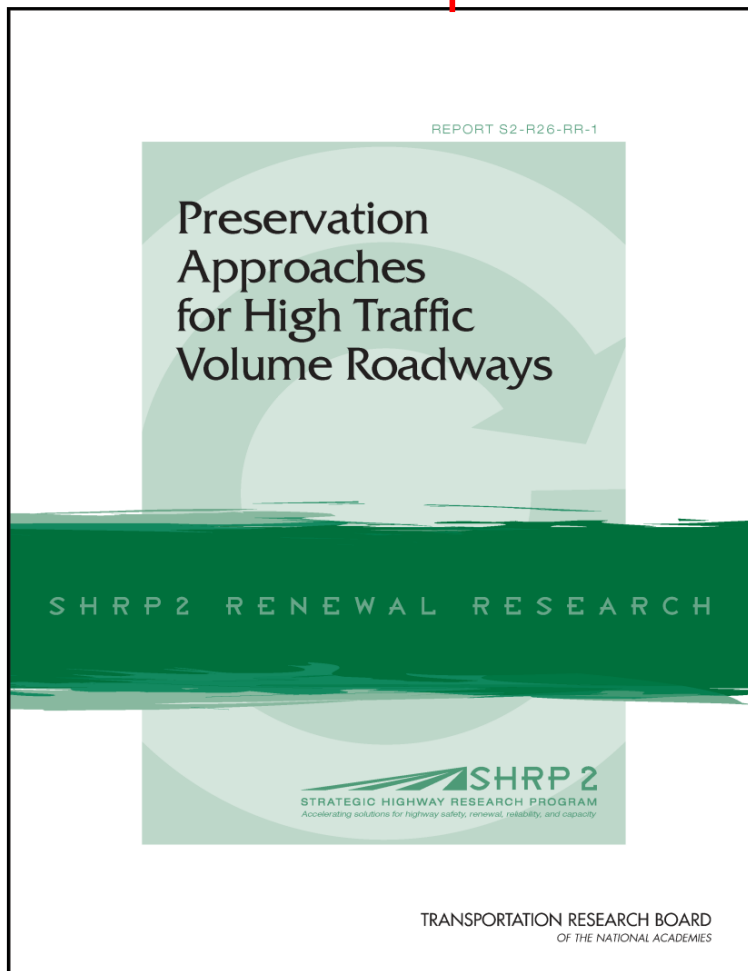
SHRP 2 R26—Preservation Approaches for High Traffic Volume (HTV) Roadways

- State of the practice
 - Comprehensive highway agency survey
 - Detailed literature review
 - Factors influencing treatment selection
 - Performance attributes
 - Constructability issues
- Treatment selection process
 - Treatment feasibility matrixes
 - Cost-effectiveness analysis
 - Treatment decision matrix

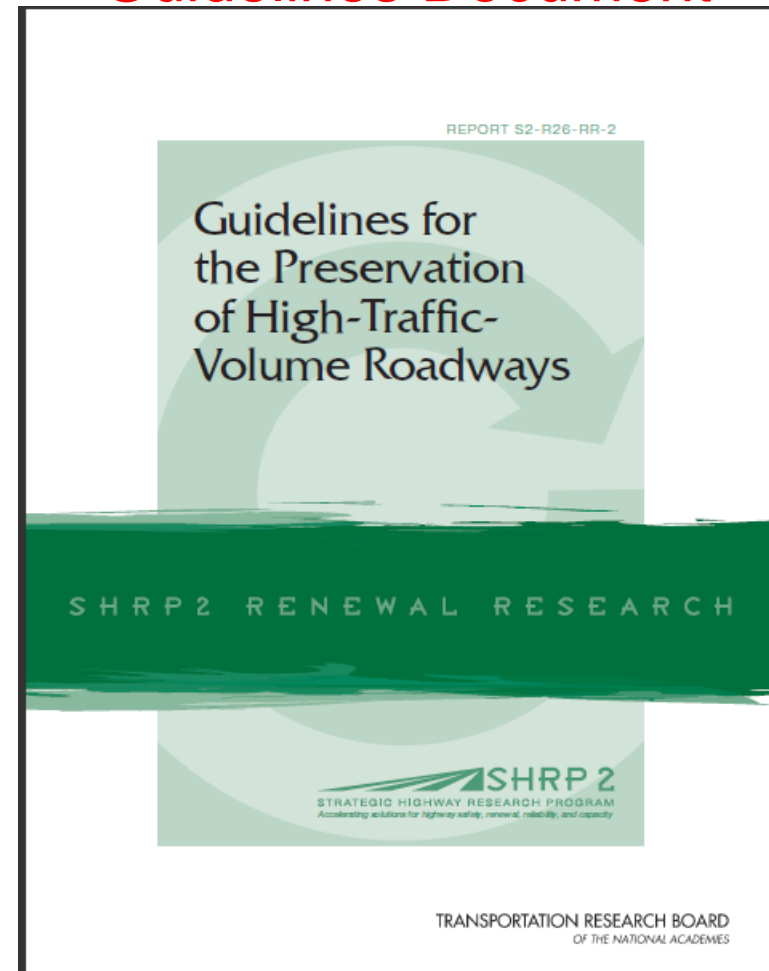


SHRP 2 R26 Products

Final Report



Guidelines Document



Pavement Preservation Guide

– The Benefits



- Smarter selection of pavement options for high-traffic volume roadways
- Save DOTs money by delaying the need for and reducing the frequency of more costly major rehabilitation
- Reduce risk through a more targeted treatment selection process
- Improve safety through shorter-duration maintenance and rehabilitation

Pavement Preservation Guide – Implementation

- Communicate and promote the value of the guidelines to states (and local governments)
- Provide technical assistance to early adopters and champions
- Develop a Technical Support Toolkit to support ongoing implementation efforts
- Host product demonstrations
- Conduct training



Implementation Assistance Program for R26

11 - Lead Adopter Incentives (\$120,000)

- Funds for early adopters to offset implementation cost and mitigate risks
- Recipients required to provide specific deliverables designed to further refine the product

3 User Incentives (\$75,000)

- Used to conduct internal assessments, build capacity, implement system process changes, organize peer exchanges, or offset other implementation costs

Kentucky's Approach

- Opportunity to **expand program through studying a variety of techniques.**
- Using **SHRP2 matrix** (ADT, distress number, etc) and **pavement management database**, to identify possible candidate segments
- Currently **assessing different sites** (different pavement conditions)
- Will analyze skid, IRI, cracking, rutting, and other distresses

Pennsylvania's Approach

- **Test several treatments**

- Polymer modified Thin Overlays
- Flexible Micro-Surfacing
- Asphalt Rubber Gap-Graded Overlay

- **Desired outcome:**

- Improve the performance of preservation treatments
- Keep good roads good and make them last longer
- Reduce traffic disruption due to construction
- Improve safety
- Increase smoothness

What's Your Role?

- Apply for the next round of implementation assistance
 - 2nd round webinars July 18-26
 - Perf Specs, Railroad-DOT issues/strategies, managing risk
- Become a champion or lead state for the products that fit your program
- Identify key technical stakeholders and advocates within your states
- Carry the message back to your colleagues and peers
- Provide panel members for upcoming Implementation Planning Workshops
- Participate in technical transfer opportunities to help implement products



Pavement Preservation Guide

Final report: www.trb.org/Finance/Bookstore.aspx

For more information:

- *Thomas Van FHWA thomas.van@dot.gov*
- *Greta Smith AASHTO gsmith@aashto.org*
- *David Peshkin Applied Pavement Technology, Inc.
dpeshkin@appliedpavement.com*

Questions?

Email: goSHRP2@dot.gov

SHRP2 Research:

www.TRB.org/SHRP2

SHRP2 at AASHTO:

<http://SHRP2.transportation.org>



R26 Implementation Assistance Program: State Summary

R26 - Preservation on High-Volume Roadways

Your guide to the best options for extending pavement life.

State	Entity	Assistance Opportunity	Projects
AZ	DOT	Lead Adopter	4
DE	DOT	Lead Adopter	2
DC	DOT	Lead Adopter	4
GA	DOT	Lead Adopter	3
KY	KYTC	Lead Adopter	4
ME	DOT	User Incentive	3
MA	DOT	Lead Adopter	4*
MN	DOT/MnRoad	Lead Adopter	1
MO	DOT	Lead Adopter	4
PA	DOT	Lead Adopter	3
RI	DOT	Lead Adopter	4
TN	DOT	User Incentive	4
WA	DOT	Lead Adopter	4
WI	DOT	User Incentive	4

*Massachusetts proposed one large project with four R26 technologies.

