



Railroad-DOT Mitigation Strategies (R16)

July 18, 2013



U.S. Department of Transportation
Federal Highway Administration



TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES
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Agenda

- SHRP2 Overview
 - What is SHRP2?
 - Focus Areas
 - Implementation Assistance
- Technical Product Description
- Product Implementation
- Implementation Timeline
- Questions?



Source: Missouri DOT

What is SHRP2?

(Second Strategic Highway Research Program)

Save lives. Save money. Save time.



- Products developed from objective, credible research
- Solutions that respond to transportation community challenges – safety, aging infrastructure, congestion
- Tested products, refined in the field

SHRP2 Solutions offer new technologies and processes to enhance the efficiency of transportation agencies

Why is SHRP2 Important?

Tools for the Road Ahead

SHRP2 Solutions have the power to change the way transportation agencies do business.

- ➔ *By providing new research-based tools and innovative products and processes...*
- ➔ *That will create more efficiencies and a smarter use of state and federal investments of taxpayer dollars.*



Focus Areas



Safety: fostering safer driving through analysis of driver, roadway, and vehicle factors in crashes, near crashes, and ordinary driving



Renewal: rapid maintenance and repair of the deteriorating infrastructure using already-available resources, innovations, and technologies



Capacity: planning and designing a highway system that offers minimum disruption and meets the environmental and economic needs of the community

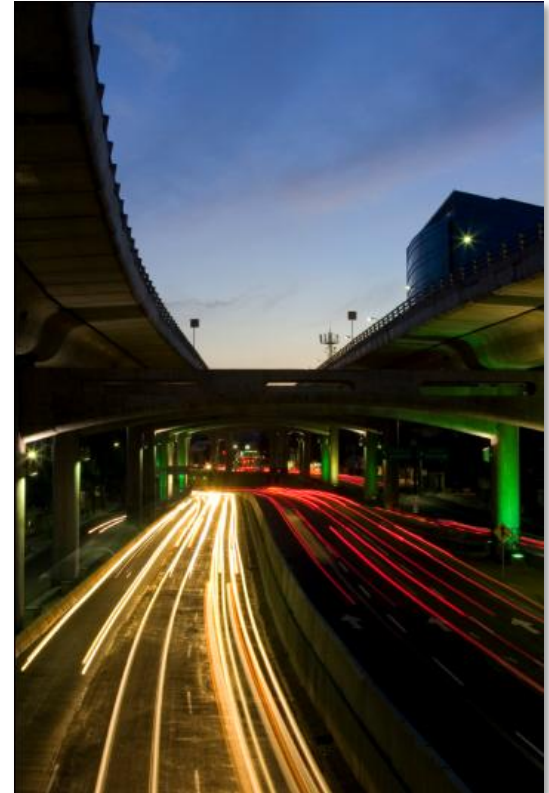


Reliability: reducing congestion and creating more predictable travel times through better operations

Implementing SHRP2 Solutions

Moving Forward

- Approximately 66 high-priority products introduced over the next several years
- Users run the gamut of the transportation industry
- Selected products integrated into current transportation practices



SHRP2 Implementation Assistance Program

Proof of Concept Pilot

- Funds for piloting products to evaluate readiness for implementation
- Contractor support to collect data and evaluate the application

Lead Adopter Incentive

- Funds for early adopters to offset implementation cost and mitigate risks
- Recipients required to provide specific deliverables designed to further refine the product, and possibly “champion” the product to other states and localities

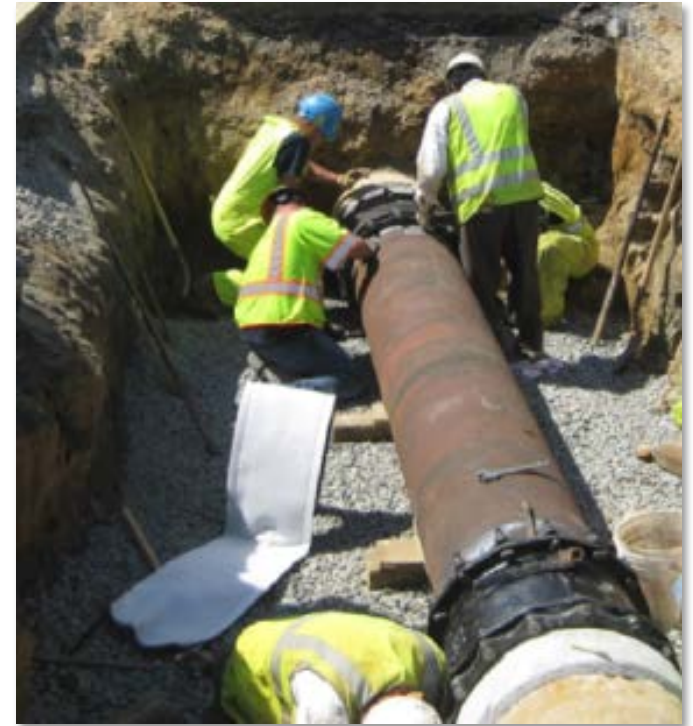
User Incentive

- Funds for implementation support activities after early adopter use
- Used to conduct internal assessments, build capacity, implement system process changes, organize peer exchanges, or offset other implementation costs

Round 1 Implementation Assistance

First Round at a Glance

- 34 states and the District of Columbia
- 6 SHRP2 Solutions at work on 108 transportation projects
- 2 proof of concept pilots
- 74 lead adopter incentives
- 24 user incentives
- Limited technical assistance to 8 states



Round 2 Implementation Assistance



Capacity

- Expediting Project Delivery (C19)



Renewal

- Performance Specifications for Rapid Renewal (R07)
- Managing Risk in Rapid Renewal Projects (R09)
- Railroad-DOT Mitigation Strategies (R16)

Product Implementation Assistance Opportunities

Product	Proof of Concept Pilot	Lead Adopter Incentive	User Incentive
C19: Expediting Project Delivery		5	5
R07: Performance Specifications for Rapid Renewal		4	
R09: Managing Risk in Rapid Renewal		4	
R16: Railroad-DOT Mitigation Strategies		4	4

Implementation Assistance Selection Criteria

General Criteria for Participants (will vary somewhat among products)

- Geographic diversity of participants
- Demonstrated culture to implement new products or processes
- Demonstrated past interest and/or efforts to implement similar products or processes
- High commitment to making institutional/organizational changes
- Commitment to conduct demonstration workshops
- Willingness to share experience by facilitating peer-to-peer activities
- Commitment to dedicate staff to the implementation project

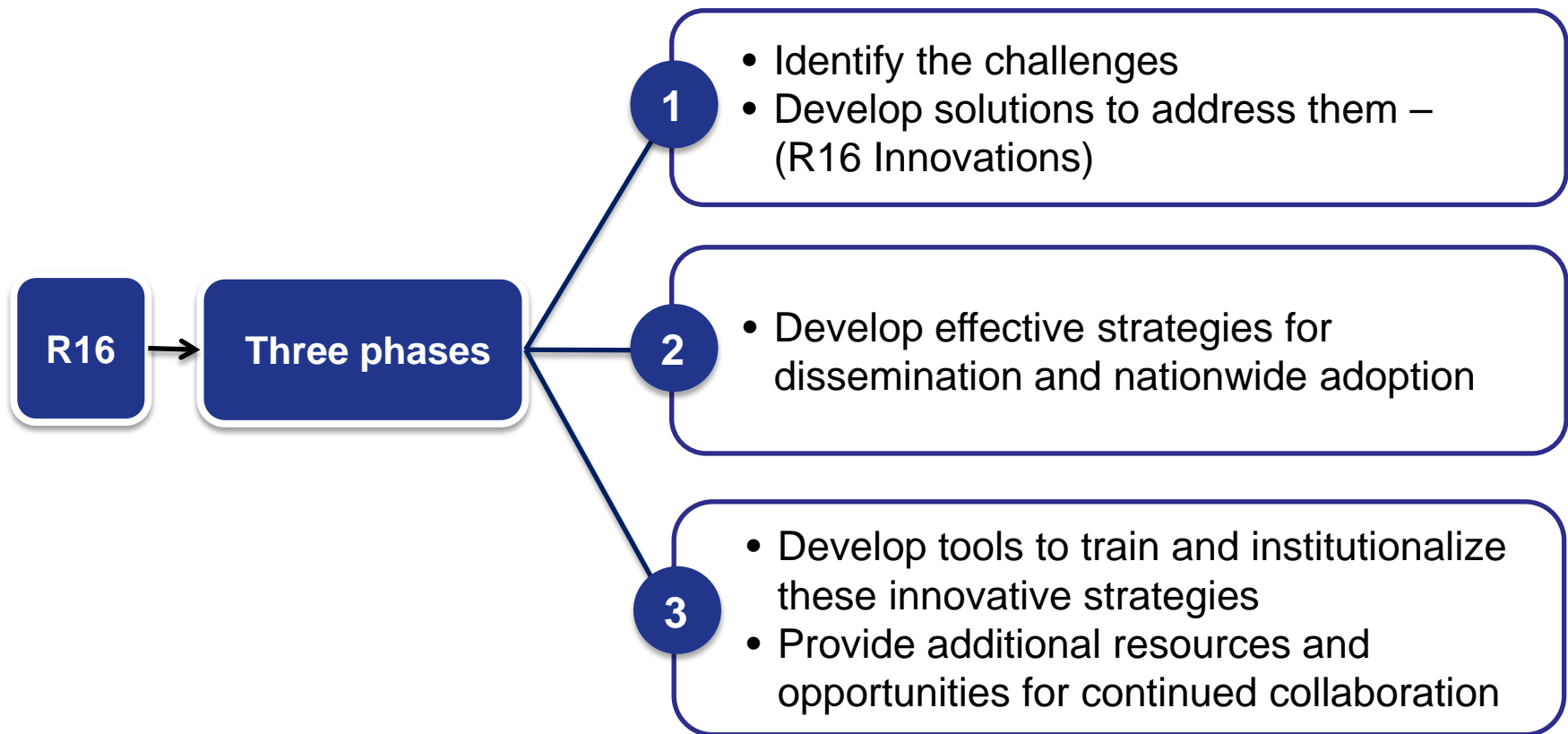
Practical Solutions to Rapidly Reconstruct our Aging Highways



Renewal Focus Area –
Railroad-DOT Mitigation
Strategies

R16: Big Picture

Uses a collaborative approach to address challenges associated with expediting roadway-railroad projects



R16 Objectives

Phase 1

- Identify strategies and institutional arrangements
- Research and develop innovative partnering techniques
- Identify barriers that impact effectiveness and propose remedies
- Develop draft model agreements and streamlined processes

Phases 2 and 3

- Outreach and buy-in
- Create a Community of Interest
- Build an environment of partnering
- Engage the Community to facilitate widespread adoption
- Create Champion Pairs (DOT-RR)
- Develop tools to institutionalize the use of the R16 products
- Provide access to resources

Collaboration and participation by both parties

R16 Products

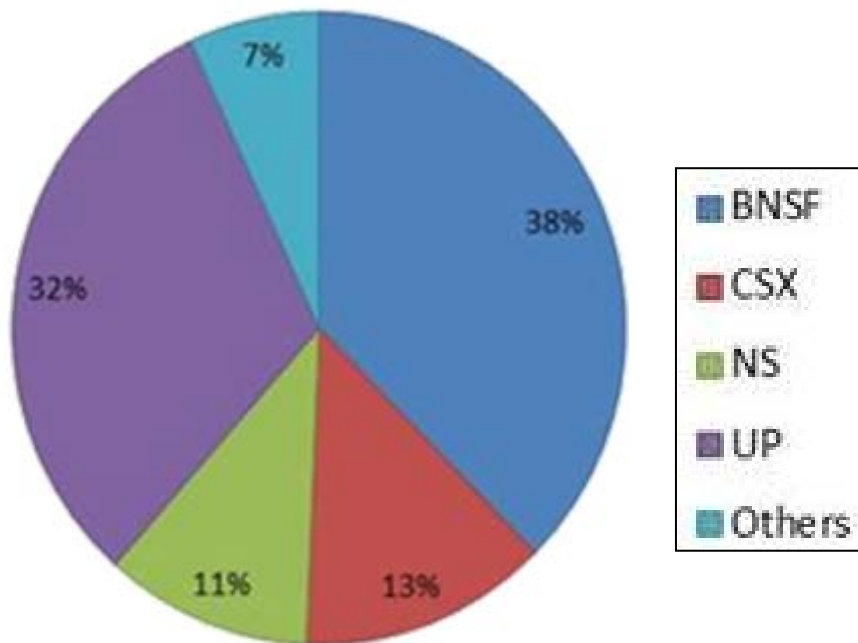
- Best practices and streamlined processes
 - Internal streamlining
 - External streamlining
 - Strategies to ensure collaboration and frequent communication
 - Escalation and issue resolution
 - Institutional arrangements
 - Innovative partnering techniques
- Standardized (Master) agreements
- Dissemination and Outreach
 - Community of Interest for stakeholders
 - Champion Pairs (DOTs and railroads)



R16 Community of Interest: Successful Stakeholder Collaboration

For the first time ever

- Four Class I railroads and the largest short-line are collaborating with the largest states
- FRA, FHWA, AASHTO, TRB



COI Members include:

- Railroads
 - CSX
 - NS
 - BNSF
 - UP
 - Genesee & Wyoming
- DOTs
 - Texas
 - Florida
 - North Carolina
 - Pennsylvania
 - Illinois
 - Iowa
 - Washington
 - Michigan
 - Manitoba DOT

R16 Products *(cont.)*

Training Courses

- Institutionalize best practices
- Understand and benefit from the different organizational perspectives
- Standard agreements

Library *(one stop shop)*

Virtual Community

- Fosters on-going stakeholder discussions



Railroad-DOT Mitigation Strategies

– R16

Challenge

Railroad-DOT interaction requires a thorough review of the safety, engineering, and operating effects the roadway project will have on the respective railroad during construction and for decades thereafter. Rapid highway construction goals require a new approach that eases the project agreement process for both industries.

Solution

Recommended practices, model agreements, and training materials to help resolve potential conflicts.



Categories of R16 Products

- Best practices and streamlined processes
 - Institutional arrangements
 - Innovative partnering techniques
 - Approaches to ensure collaboration

(Facilitates beneficial relationships between railroads and public transportation agencies)
- Standardized (Master) agreements



Examples of R16 Innovations

Processes

- Streamlined internal and external coordination
- Single point of first contact and coordination
- Dedicated railroad project managers
- Formal agreed upon points of concurrence
- Formal project management
- Meetings
 - Annual
 - Pre-construction
 - Post-construction
- The 3Cs—frequent communication



Examples of R16 Innovations *(cont.)*

Processes *(cont.)*

- Process manual
- Standardized crossing improvement contract process
- **Streamlining flagging process**
- Expediting right-of-way access
- **Streamlined agreement processing**
- **Escalation process to expedite issues**
- **Partnering processes**
- Electronic workflow agreement process



Agreements

- Standardized (Master) agreements
- Partnering Memorandum of Understanding

Railroad-DOT Mitigation Strategies

– R16

Model documents and a compilation of best practices

- **Partnering Memorandum of Understanding**

Nonbinding agreement that can establish shared understandings, vocabulary, definition of success, and expected performance.

- **Master Project Agreement**

Legally-binding agreement with “boilerplate” provisions that both parties can incorporate by reference into all following agreements. Lays out funding responsibilities in partnering, particularly how the public agency will compensate the railroad for required reviews.

- **Preliminary Engineering Agreement**

Brief project details can be inserted into this standard preliminary engineering (PE) agreement to authorize engineering reviews by the railroad and expedite PE for the public agency.

Railroad-DOT Mitigation Strategies

– R16 *(model agreements cont.)*

- **Resurfacing Agreements**

Two model agreements (federally-funded or state-funded projects) that reflect the common needs of public agencies and railroads when resurfacing highway sections at railroad crossings, including railroad-specific issues and solutions to deliver the necessary smooth transitions to the adjacent pavement.

- **Highway Overpass Agreement**

Agreement with provisions that reflect safety and operational requirements critical to this type of project.



Railroad-DOT Mitigation Strategies

– R16 *(model agreements cont.)*

- **Warning Devices Agreement**

Agreement for projects involving installation, maintenance, improvements, and replacement of warning devices.

- **Pipe and Wire Agreement**

Agreement required for installation, construction, or maintenance of drainage pipes, pipelines, utility lines, and other linear structures that intersect a railway. Increased frequency of pipe and wire projects has led to standardized agreements and approaches to construction and maintenance.



Source: Oregon DOT

Benefits

- Fewer project delays
- Reduced planning costs
- Safer projects through standardized design requirements
- Safer work zones through standard work zone requirements



Source: Oregon DOT

Assistance Opportunities













Second Round - Aug 2013	Proof of Concept Pilot	Lead Adopter Incentive	User Incentive
R16 – Railroad-DOT Mitigation Strategies		4	4

- Pilots will evaluate and validate R16 by applying process to transportation projects
- DOT will provide feedback on process and benefits of product
- DOT will become champion for product implementation in other states or to other agencies

Application Tips

Do	Don't
Make your application clear and concise	Apply if you do not represent a state DOT, local agency, or MPO
Have your application relate to one or more of the resources	Rely on your attachments; narrative should be complete
Describe specifically what the funds will be spent on	Be late; applications are due by September 6
Describe the outcomes and deliverables you expect to achieve	Forget that implementation assistance is to advance Railroad-DOT Mitigation Strategies
Expect to share the results of your project	Forget to provide a response in each of the fields

Recipient Requirements

	Lead Adopter	User Incentive
Commitment from state DOT and railroad leadership		
Identification of a Class I railroad to participate in use		
Use of at least one R16 agreement on a project		
Creation of a process improvement plan to use an R16 model agreement, process, or best practice		
Willingness to share lessons learned		
Participation in regional/national events to share knowledge about product use (peer exchanges/conferences)		
Participation in an R16 product evaluation		

Round 2 Implementation Assistance Schedule

- Product Webinars held in July

R16 – Railroad-DOT Mitigation Strategies	July 18	2-3:30 p.m.
C19 – Expediting Project Delivery	July 23	12-1:30 p.m.
R07 – Performance Specifications for Rapid Renewal	July 24	12-1:30 p.m.
R09 – Managing Risk in Rapid Renewal	July 26	12-1:30 p.m.

- Implementation Assistant Timeline

- Application period opens August 2
- Application period closes September 6
- Awards announced Mid-October

- More information at www.fhwa.dot.gov/goshrp2

Additional Resources

- State Visits

- SHRP2 Tuesdays

C19 June 4 <http://www.trb.org/PlanningForecasting/Blurbs/168845.aspx>

R07 June 11 <http://www.trb.org/Pavements/Blurbs/168927.aspx>

R16 July 9 <http://www.trb.org/Railroads/Blurbs/169188.aspx>

R09 August 20 at 2:00 p.m. ET



SHRP2 on the Web

- **goSHRP2 (launches Aug. 2)**
www.fhwa.dot.gov/goSHRP2
 - Comprehensive information about SHRP2's implementation phase
 - Launch coincides with opening of Round 2 Implementation Assistance
- **SHRP2 @TRB**
www.TRB.org/SHRP2
 - Information about research phase
- **SHRP2 @AASHTO**
<http://SHRP2.transportation.org>
 - Implementation information for AASHTO members

SHRP2 SOLUTIONS
TOOLS FOR THE ROAD AHEAD

Home About Solutions Your SHRP2 Resources News & Events Get Involved FAQ

Save lives.
Save money.
Save time.

The second Strategic Highway Research Program (SHRP2) is at the forefront of transportation innovation—helping the Nation's transportation community improve safety, enhance productivity, boost efficiency, and increase reliability by introducing solutions that improve the country's highway network. [Read More](#)

Your SHRP2
Guides, training materials, and new technology—Real solutions to help you solve real problems.

Transportation Agencies
Private Industry
Research Community
Stakeholders and Users

Solution Spotlight
Implementing Eco-Logist
A practical guide to address ecological priorities in highway planning.

Get Involved
Apply for funding and support to deploy SHRP2 Solutions.

SHRP2 Nationwide
Locate SHRP2 Solutions projects in the field.

Talking About SHRP2
"If you can keep your treatment costs down for a longer period of time and push out those major repairs, then you've saved every real dollar."
— Jeff Tomlinson, Utah Division Director of Transportation

Tools You Can Use
Effective solutions to meet real challenges.
SHRP2 presents innovations that address the transportation topics you care about. Use the site to discover SHRP2 Solutions, available now or in progress, that can help save fuel, money, and time.

Resources
Webinars, videos, and fact sheets featuring SHRP2 information.

One Design: 10,000 Bridges.

Solutions by Focus Area

Safety Identifying the behaviors that cause and avert collisions.	Renewal Enabling faster, minimally disruptive, and longer-lasting improvements.	Reliability Diminishing predictable travel times.	Capacity Bringing greater collaboration to road building.
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Questions?

Application website: www.fhwa.dot.gov/goshrp2

Final report: www.trb.org/Publications/Blurbs/164283.aspx

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