Accelerating solutions for highway safety, renewal, reliability, and capacity
Procurement

Design

Planning

Construction

Operations & Maint

Get in, Get out, Stay out
28 Research Projects $32 million

Rapid Approaches
- R01. Locating Utilities*
- R02. Geotech Solutions
- R03. Worker Fatigue
- R04. Innovative Bridge Designs
- R05. Modular Pavement
- R06. High-Speed NDT*
- R07. Performance Specs
- R09. Risk Manual
- R10. Project Management for Large Projects

Minimize Disruption
- R11. Strategic Approaches at Corridor/Network Level
- R15. Integrating Utility and Transportation Agency Priorities*
- R16. Railroad-DOT Mitigation Strategies

Long-Lived Facilities
- R19. Bridges for Service Life of 100 Years*
- R21. Composite Systems
- R23. Using Existing In-place Pavement & Achieving long Life
- R26. Preservation Approaches

Technology Related
Project Delivery Related
* Indicates Multiple Projects
Focus on
- Improving existing and prove promising concepts for systems, subsystems, and components that historically limit the service life of bridges
- New design codes that incorporate a rational approach based on Service Limit State

What SHRP 2 is doing ... 100-Year Bridges

- Recommendations for LRFD Design and LOAD RATING Specs
- Analysis methods, details
- SLS approach, method for recalibration, toolbox database, examples
- Implementation plan

Recommendations for LRFD CONSTRUCTION Specs


Stand-alone guide devoted to Design for Life.
Innovative Bridges for Rapid Renewal

Focus on

Developing standardized approaches to designing, constructing, and reusing complete bridge systems

What SHRP 2 is doing... Accelerating construction

- Recommendations for LRFD Design Specs
- Analysis methods
- Details

Recommendations for LRFD CONSTRUCTION Specs
Reducing Worker, Inspector and Manager Fatigue in Rapid Renewal Environments

Focus on developing a best practices toolbox that can be used in reducing workforce fatigue on rapid renewal projects.

Tool Box:
• Recommendations for reducing fatigue and improving safety
• Fatigue risk management plans
• Implementation guidelines & training materials

What SHRP 2 is doing ... Improving safety
Focus on

- Developing performance specifications and identifying strategies to manage and minimize the risk to all parties involved in rapid highway renewal projects
- Addressing risk and risk transfer decisions associated with the differing contracting approaches that may be used for rapid renewal

• Performance specifications for rapid renewal scenarios
• Guide for implementing risk management processes
• Training materials for implementing risk management guide
What SHRP 2 is doing ... Inspection

Construction QA/QC

- Evaluation of Field Spectroscopy Devices

Condition Assessment

- NDT to Identity Bridge Deck Deterioration
- NDT for Tunnel Linings
## Potential Users and Beneficiaries

<table>
<thead>
<tr>
<th>Taxpayers</th>
<th>Auto manufacturers and suppliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motorists</td>
<td>MPOs</td>
</tr>
<tr>
<td>Commercial drivers</td>
<td>Law enforcement providers</td>
</tr>
<tr>
<td>Bus riders</td>
<td>Firefighters</td>
</tr>
<tr>
<td>Shipping and logistics professionals</td>
<td>EMS providers</td>
</tr>
<tr>
<td>Environmental agencies</td>
<td>State and local transportation agencies</td>
</tr>
<tr>
<td>Communities, businesses and event owners</td>
<td>Highway designers, contractors and suppliers</td>
</tr>
<tr>
<td>Railroads</td>
<td></td>
</tr>
<tr>
<td>Utilities</td>
<td></td>
</tr>
</tbody>
</table>
TRB S.R. 296 Recommendations: Summary

1. A SHRP 2 implementation program should be established
2. FHWA should serve as the principal implementation agent in partnership with AASHTO, NHTSA and TRB
3. Funding: $400 million for 1st 6 years
4. Establish a formal stakeholder advisory structure
5. Develop detailed implementation plans
Implementation Activities

• TRB, FHWA and AASHTO implementation staff
• Form SHRP 2 Implementation Steering Committee
• Form Communication and Marketing work group
• Prepare product lists based on a strategic approach
• “Early products”— Railroads, Utilities, Land Use, TCAPP, Performance Measures
• Extensive national and international outreach program: meetings and presentations
Thank you for listening

www.trb.org/shrp2

mstarnes@nas.edu