



# Performance Specifications for Rapid Renewal (R07)

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U.S. Department of Transportation  
Federal Highway Administration

AMERICAN ASSOCIATION  
OF STATE HIGHWAY AND  
TRANSPORTATION OFFICIALS

**AASHTO**

# Agenda



Photos courtesy: Gallivan Consulting Inc., David Peshkin

## Agenda SHRP2 Performance Measures Showcase (R07) March 14-15, 2017

**Utah Department of Transportation  
Holiday Inn Express Salt Lake City 206 South West Temple, SLC, UT 84101**

*Join us for a dynamic conversation considering the benefits and uses of Performance specifications in a variety of areas such as pavement, materials, construction, traffic management, and asset warranties. We will present the Performance Specification tools developed by the SHRP2 research and provide current state experiences.*

**Tuesday, March 14, 2017**

Time	Topic	Speakers
8:00-8:20 am	Welcome	Jennifer Balis, FHWA Pamela Hutton, AASHTO Ivan Marrero, FHWA Division Administrator
8:20-8:30 am	<ul style="list-style-type: none"> <li>Introduction to Utah and Introduction of Attendees</li> </ul>	Scott Andrus, Utah State Engineer for Materials
8:30-9:00 am	Introduction of Showcase	Keith Platte, AASHTO
	<ul style="list-style-type: none"> <li>Purpose of the Showcase</li> <li>Detail of Significant Points</li> </ul>	



# SHRP2 at a Glance

- **SHRP2 Solutions** – 63 products
- **Solution Development** – processes, software, testing procedures, and specifications
- **Field Testing** – refined in the field
- **Implementation** – More than 430 transportation projects; adopt as standard practice
- **SHRP2 Education Connection** – connecting next-generation professionals with next-generation innovations



# 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.

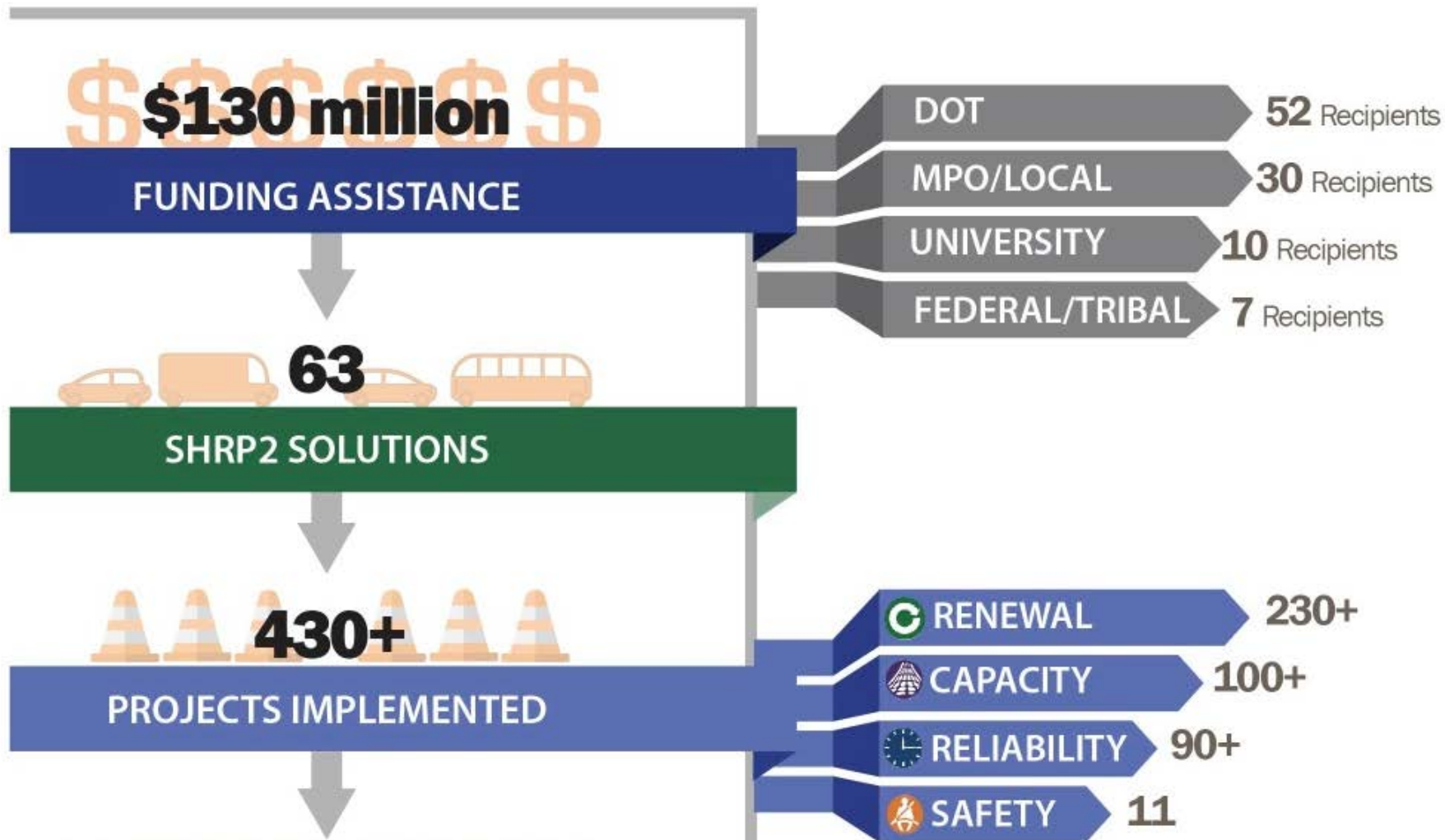


**Capacity:** planning and designing a highway system that offers minimum disruption and meets the environmental, and economic needs of the community.



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

# SHRP2 Implementation: INNOVATE.IMPLEMENT.IMPROVE.



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# Performance Specifications for Rapid Renewal (R07)

## Challenge

- Conventional approaches to highway construction use prescriptive requirements that place the burden on owners to design, specify, and control the work.
- These requirements often hinder the innovation needed to deliver projects faster or find methods that minimize disruption.

## Solution

- Performance specifications that emphasize desired results and encourage innovation.



# Implementation Assistance Rounds 2 and 5, and Targeted Recipients



**Alabama:** Use of Intelligent Compaction as a basis for performance specification



**Maine:**

- Performance specifications for asphalt pavement and concrete bridge deck
- Performance-based Asphalt Mix Designs



**Missouri:** Performance-related specifications for "Shadow" asphalt pavement.



**Vermont:** Performance specifications for full depth reclaimed (FDR) pavement and cement-stabilized base



**Pennsylvania:** Performance specifications for all elements of highway construction and maintenance as part of its P3 program

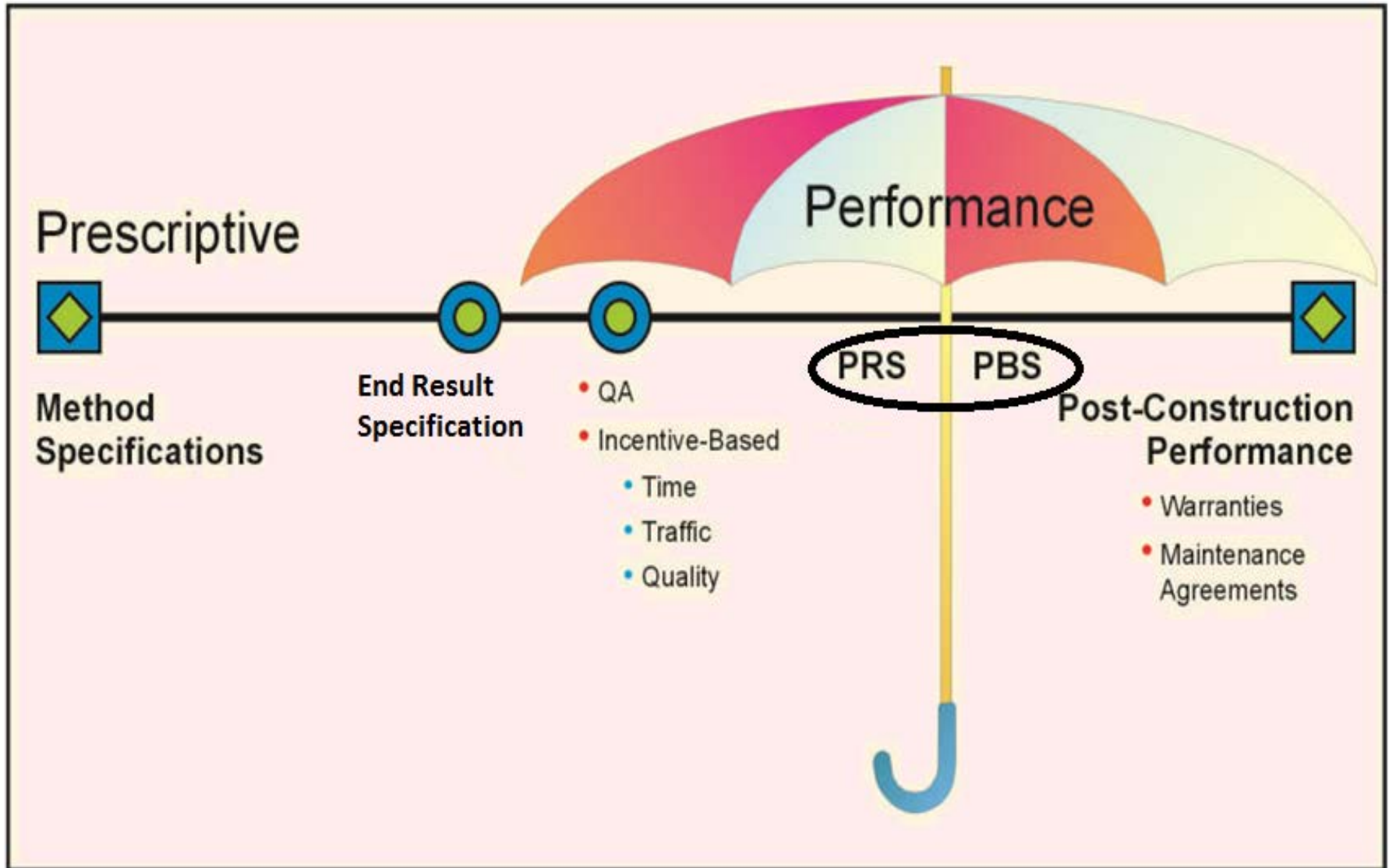


# Performance Specification Continuum

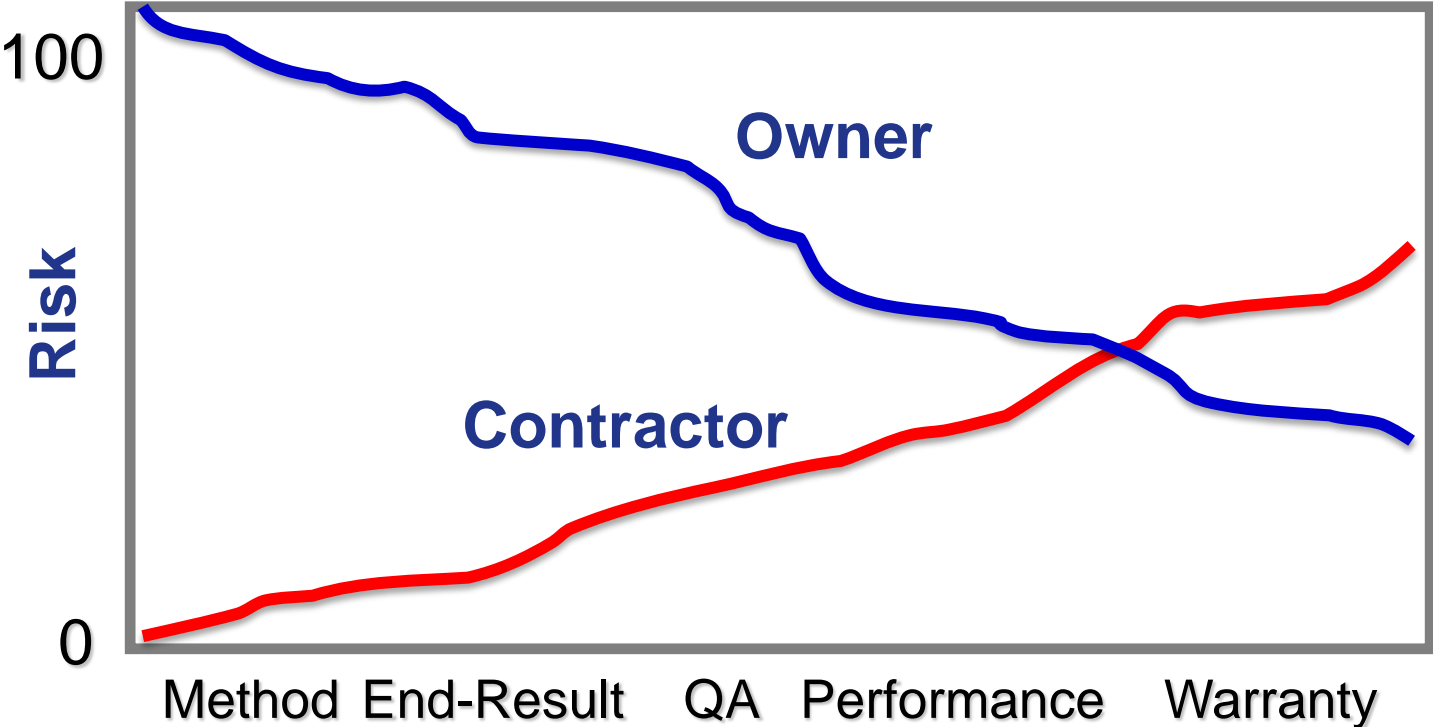


- In general, these specification types represent a **progression** toward increased use of higher-level acceptance parameters that are more indicative of how the finished product will perform over time.
- To varying degrees, they all attempt to **shift performance risk to the contractor** in exchange for limiting prescriptive requirements related to the selection of materials, techniques, and procedures.
- By relaxing such requirements, performance specifications have the potential to **foster contractor innovation and improve the quality or economy**, or both, of the end product.

# Performance Specification Continuum

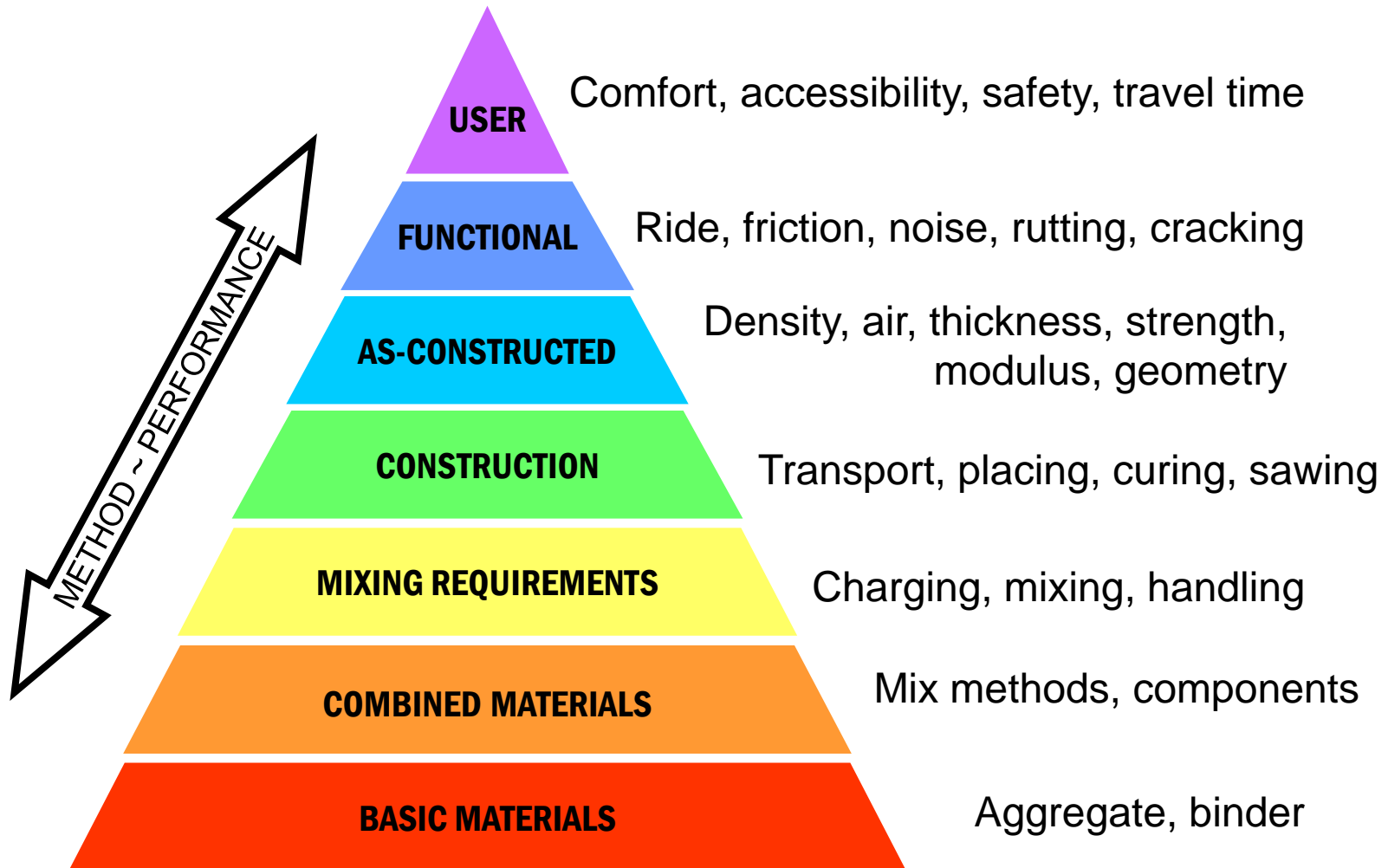


# Specifications Have Different Risk Profiles



**Type of Specification**

# Pyramid of Performance



# Performance Specs Report Results

- Performance specifications can also serve as a worthy adjunct to other management philosophies, such as lean construction, although this aspect is not specifically addressed in these guidelines.
- Consistent with lean principles, performance specifications aim to:
  - Eliminate unnecessary and non-value-added requirements;
  - Result in continuous improvement;
  - Align parties around the needs of the end user; and
  - Place risk on the party best able to manage it.

# Resources

FHWA: Jennifer Balis, [Jennifer.Balis@dot.gov](mailto:Jennifer.Balis@dot.gov)  
Richard Duvall, [Richard.Duval@dot.gov](mailto:Richard.Duval@dot.gov)  
AASHTO: Keith Platte, [kplatte@ashto.org](mailto:kplatte@ashto.org)

## *Relevant Websites:*

GoSHRP2 R07 Product Page:

[https://www.fhwa.dot.gov/goshrp2/Solutions/Renewal/R07/Performance\\_Specifications\\_for\\_Rapid\\_Renewal](https://www.fhwa.dot.gov/goshrp2/Solutions/Renewal/R07/Performance_Specifications_for_Rapid_Renewal)

AASHTO SHRP2 R07 Product Page:

[http://shrp2.transportation.org/Pages/R07\\_PerformanceSpecificationsforRapidRenewal.aspx](http://shrp2.transportation.org/Pages/R07_PerformanceSpecificationsforRapidRenewal.aspx)



# How and why do we need to use Performance Specifications?

*Discussion*

A decorative graphic consisting of several thick, parallel blue diagonal stripes that originate from the bottom-left and fan out towards the top-right, creating a sense of motion and depth.