

NCHRP 20-68A – “US Domestic Scan Program”

Scan 16-01 Leading Practices in the Use of the Highway Safety Manual for Planning, Design and Operations

Performance based processes that use data driven safety performance offer significant potential for project and operating cost reduction. The Highway Safety Manual (HSM) is a resource that provides safety knowledge and tools in a useful form to facilitate improved decision-making based on such safety performance. While other initiatives have focused on analytical examples of implementation of the Highway Safety Manual (HSM), this Domestic Scan will provide an opportunity for critical conversations around processes and the work force components not usually included in HSM implementation related presentations or meetings that occur elsewhere.

This scan will evaluate the processes, job aids/tools, workforce training, and manner in which states have institutionalized the HSM as part of performance based processes and asset management in planning, design and operations. The fiscally constrained environment that state DOTs operate in today require revisiting assumptions about safety performance benefits as well as processes and decisions that drive meeting full safety standards. The HSM provides tools to allow agencies to change their design for safety of a facility from traditional “design standards” of the AASHTO Green Book, Roadside Guide, MUTCD and state design manual to a more performance based statistical approach. Utilization of the HSM will help a DOT satisfy existing societal values of providing the highest level of safety performance for the financial and other resources provided to the DOT. .

The scan will focus on safety performance analysis using the HSM in planning, design and operations in transportation agencies. It is proposed that the scan engage the central and regional offices participating in the planning, design and operations of facilities in the States of Missouri, Florida, Idaho, Illinois, Kentucky, New York, Oregon, Washington, and Utah. In some states implementation will vary across regions and much value can be gained from learning about practices beyond the central office

The scan is envisioned to be conducted as a Type 2 Scan (Reverse Scan). The scan results will be documented in a report focusing on business processes, job tools/aids, workforce and training, and ways in which state DOTs implemented the HSM in planning, design and operations as part of a performance-based approach. The audience would be all state DOTs given the anticipated changes to the FHWA’s 13 controlling criteria for geometric design. The report will cover lessons learned and key components of success. A webinar or series of webinars can be hosted where participating states share their individual implementation experiences and lessons learned.

Original Scan Proposal Title(s): Using the Highway Safety Manual for decisions in planning, design and operations

Execution Schedule

Milestone	Anticipated Date
Chairs and Team Members Identified	February 2017
Desk Scan Completed	May 2017
Prescan Meeting Held	May 2017
Scan Conducted	October-November 2017
Draft PowerPoint submitted by SME	December 2017
Draft Report Delivered to NCHRP and Panel	March 2018
Final Report Delivered to NCHRP	June 2018

Estimated Scan Cost: \$175,000

Anticipated Duration: 2 weeks (type 2 scan)

Last Reviewed/Revised March 7, 2017