



IMPLEMENTATION SUMMARY

Questions?

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Investigator:

Michael Marti, SRF Consulting Group, Inc.

LRRB PROJECT COST:

\$99,963

System Preservation Strategies	Otter Tail
Jurisdictional Transfers	\$
Tiered Classification	☑
Reverted Surfaces	
Transportation Plans	\$
Preservation Performance Measures	
Project Prioritization	☑
Revenue Enhancements	☑
New Maintenance Techniques	

County experience with preservation strategies proves they work.



Putting Research Into Practice: Decision-Making Tools for Roadway Management

What Was the Need?

Minnesota counties continue to lack sufficient resources to maintain, repair or replace aging roads and bridges. The Federal Highway Administration estimates that each dollar spent on improvements to roads, highways and bridges results in an average benefit of \$5.20 in the form of improved safety and reduced vehicle maintenance and fuel consumption, travel delays, road and bridge maintenance costs, and emissions from improved traffic flows.

Despite the multiple benefits, preserving transportation systems can be resource-intensive and thus extremely challenging given continuing funding shortfalls.

In the last several years, the Local Road Research Board (LRRB) has worked to help city and county engineers decrease transportation funding gaps. [Previous research](#) reported in 2016 resulted in comprehensive groundwork—the [System Preservation Guide](#)—to support Minnesota transportation agencies. Preserving a transportation network, however, is a complex and multifaceted endeavor that requires agencies to evaluate needs, analyze options and choose workable strategies. Effectively communicating transportation system issues to the public and the officials making investment decisions is paramount.

Understanding the experience of local transportation engineers with the system preservation tools completed in 2016, including what worked and what still may be needed, the LRRB sought manageable guidance for local agencies to use their resources and expertise to manage transportation investments.

What Was Our Goal?

The goal of this project was to build on and implement the 2016 System Preservation Guide—which included research, tools and strategies for transportation system preservation—by producing training modules and other stand-alone guidance for local governments to take manageable steps to maintain and preserve their transportation networks. A secondary focus was to make sure all materials were applicable to both cities and counties.

What Did We Implement?

Investigators began by reviewing the existing System Preservation online tool and deconstructing the content into individual guides for managing transportation systems. Working closely with LRRB members, they produced a variety of materials suitable for local transportation agency staff with a range of expertise and resources. Guidance focused on individual issues and steps city and county engineers need to take to preserve their transportation assets.

What Was the Impact?

This project produced several products and tools to aid local agencies in evaluating needs and priorities, choosing strategies and communicating with the public and decision-makers to build consensus on the chosen strategies. These products allow city and county engineers to address

New guidance and a process framework will help local agency engineers with varying levels of expertise and resources benefit from the experiences of their peers. Using these tools, engineers can take manageable, proactive steps to prioritize investments that maintain and preserve transportation networks.

“System preservation in general is a massive undertaking, particularly for agencies with limited resources. This work gives local governments ideas of where to begin and a manageable path forward.”

—Andrew Witter,
Public Works Director/
County Engineer,
Sherburne County

“This project will allow city and county engineers to leverage what we’ve learned works and institutionalize some planning processes for their agencies so they can meet growing challenges into the future.”

—Susan Miller,
Principal, SRF Consulting
Group, Inc.

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The PowerPoint modules can be used in group webinars to assist local governments with system preservation one step at a time.

one issue at a time to successfully navigate and manage the challenges they face in planning for investments in their transportation networks.

The Resource Guide for Analysis and Investment Decision Making focuses on 11 methods or tools from the 2016 System Preservation Guide that were identified as effective resources by county engineers. The current guide updates the information, providing details about each resource, including applications for the tools, costs and contacts for more information.

Investigators developed eight separate System Preservation Strategies to minimize financial gaps in managing transportation infrastructure. These fact sheets are classified in four general categories:

- **System adjustments:** Jurisdictional transfers and reverted surfaces.
- **Planning and capital programming:** Transportation plans, standards and performance measures, and project prioritization.
- **Operations and maintenance:** System classification and maintenance standards/schedules, and new maintenance techniques.
- **Revenue enhancements:** New or expanded revenue sources.

The Framework for Implementing System Preservation Guidance details the process of identifying needs, developing strategies and implementing strategies, including working with elected officials who make investment decisions. It includes large group webinars, PowerPoint modules and opportunities for one-on-one coaching. Modules provide an overview of the process, gap analysis, strategy selection, peer-to-peer exchange and implementation support.

By unpacking the 2016 guide into more manageable modules, this project provided practical and useful tools for local agencies to more effectively go through the process that begins with identifying needs and concludes with investing in transportation infrastructure. These products will support local transportation engineers in moving from being reactive to adopting longer-term proactive solutions.

What's Next?

The next goal of this effort is to provide the coaching and other resources developed in this project to city and county engineers as they take steps to ensure wise investments in transportation infrastructure. Determining the best entity to facilitate the effort and identifying resources to share this information will benefit local agencies into the future as they plan for preserving their transportation systems.

This Implementation Summary pertains to the “Resource Guide for Analysis and Investment Decision Making,” “System Preservation Strategies” and System Preservation Implementation Modules 1-7. The guide and associated training tools can be accessed at lrrb.org/system-preservation-guide/. The history of the 2016 System Preservation Guide is detailed at mndot.gov/research/TS/2016/201634TS.pdf.