



FACT SHEET

A Guide to Successfully Convert Severely Distressed Paved Roads to Engineered Unpaved Roads

Project Title

A Guide to Successfully Convert Severely Distressed Paved Roads to Engineered Unpaved Roads

Study Timeline

July 2018 – March 2020

Investigators

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Further Resources

- www.lrrb.org/unpave/

Problem

Across Minnesota, many local transportation agencies are faced with how to address aging low-volume paved roads in primarily rural areas. In the 1970s and 1980s, both asphalt and construction costs were relatively inexpensive, allowing many miles of rural roads to be paved. Over the decades, those paved roads have aged and deteriorated, while costs of resurfacing materials and labor have risen. At the same time, local city and county budgets have tightened, with agencies often working to do progressively more with fewer resources. Many road maintenance professionals today find themselves facing maintenance costs for distressed low-volume roads that their organizations simply cannot meet.



What We Did

The research team included representatives from the Western Transportation Institute and University of California, Davis who were members of the original [NCHRP 485 study cohort](#). A MnDOT Technical Advisory Panel and professionals from many Minnesota local agencies that manage low-volume roads also participated. For cases of this conversion, a low-volume road is defined as having an average daily vehicle count of fewer than 150 per day. The team's work involved selection and transformation of the extensive information presented in the 2015 study into a shorter scope and more visual format that would be comprehensive, succinct and accessible. First, they developed relevant reference materials along with a list of graphics, flowcharts and photographs for each chapter. Then they developed guidance for the following topics:

- Methods to determine if a road is a candidate for conversion
- Methods to convert a road from paved to unpaved
- Life-cycle cost analysis tools
- Tools to effectively inform and communicate with the public
- Safety implications of unpaving

Conclusions

The final guide and video, both titled "Converting Severely Distressed Low-Volume Paved Roads to Engineered Unpaved Roads," are designed to enable road managers to easily find answers among presentations of the most common questions and concerns regarding road conversion, from how to determine if a road is a good candidate for unpaving to methods of conversion and life-cycle cost. Researchers presented and recorded a [90-minute webinar](#) of the study in October 2019.

Potential Impacts

This is the first guide of its kind available for local agencies. It is based upon the earlier NCHRP Synthesis 485, making that information more accessible in a format that is "practitioner-ready."