



ABOUT THIS PROJECT

PROJECT NAME: [Quantifying the Life Cycle Cost Implications of Preservation Treatments](#)

PROJECT NUMBER: TR-784

PROJECT FUNDING PROGRAM:
Iowa Highway Research Board

PROJECTED END DATE: January 2026

PROJECT CHAMPION:
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RESEARCH IN PROGRESS

Assessing the cost impacts of preservation treatments on pavements

Pavement preservation treatments can extend the life of roads by slowing deterioration and repairing small defects. Applying treatments at the appropriate time can result in savings in the long run while delaying pavement work can lead to the need for more intensive treatments, and premature maintenance can result in unnecessarily higher costs over a road's lifetime.

To continue developing Iowa DOT's *Pavement Preservation Guide*, the agency has studied the impacts of various preservation treatments and how they can extend road service life. Previous projects explored when treatments are most effective during the pavement life cycle. Guidance is still needed, however, on how to determine the cost impacts of preservation treatments on pavement life cycles.

"We'd like to understand the magnitude of savings over a pavement's life from a preventive treatment," explained Ashley Buss, pavement management lead, Transportation Development Division. "For each segment we work to maintain, the agency needs to know that the added cost of preservation treatments is justified."

In this project, researchers will compare asphalt and concrete pavements that undergo preservation treatments with those that do not, observing condition variables such as cracking, rutting, and faulting. Identifying key pavement performance indicators and enhancing the methodology for assessing pavement treatment effectiveness will help researchers quantify the condition improvement and increase in service life over time.

A pavement performance model quantifying the cost savings and pavement life extension, Buss said, can be incorporated into the agency's asset management process.

"The decision-making framework created in this project will support Iowa DOT in both prolonging pavement service life and optimizing our allocation of resources," she said.

The research is expected to conclude in January 2026.

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