



ABOUT THIS PROJECT

PROJECT NAME: [Bridge Construction Schedule Compression](#)

PROJECT NUMBER: HR-3053

PROJECT FUNDING PROGRAM: Iowa Highway Research Board

PROJECTED END DATE: March 2025

PROJECT CHAMPION:
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RESEARCH IN PROGRESS

Exploring the costs of compressed construction schedules to minimize disruption

In building safe, affordable bridges, Iowa DOT wants to minimize the inconvenience to the traveling public. Accelerated bridge construction (ABC) uses innovative materials and methods to decrease road closures to as little as 24 hours. Because specialized contractors, materials, and equipment result in high initial costs, Iowa DOT has limited its application of ABC.

The agency regularly uses staged construction, in which a reduced number of lanes remain open to avoid traveler detours but costs are an estimated 10 percent more than a traditional bridge project without staging. Staged construction can also increase risk to workers and increases the overall project time. A third alternative for bridge construction is a compressed schedule, which increases the crew size or adds subcontractors,

involves working overtime, uses more advanced equipment, or re-sequences the project.

“While a compressed schedule would minimize disruption to the traveling public, the costs of quicker construction are uncertain,” explained Michael Nop, bridge project development engineer, Iowa DOT Bridges and Structures Bureau. “We’ve studied the costs of ABC methods. Now we want the same information for a traditional bridge construction under a compressed schedule.”

This project will identify the methods used and the cost differences of ABC and compare them to a regular construction timeline. Researchers will review contract documents, time-lapse photography, and construction inspection diaries to understand the construction timeline before meeting

with the contractor after project completion to collect nonproprietary cost and method information.

“These results will identify the relationship between cost and time in a compressed construction schedule,” Nop said, providing Iowa DOT with a potential tool to ensure safe, cost-effective bridges are constructed with as little disruption as possible to the traveling public.

The research is expected to conclude in March 2025.

To learn more about this project and subscribe to updates, visit [Idea #3963](#).

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