

Montana Department of Transportation
Research Programs
May 2014

**EXPERIMENTAL PROJECT
FOR THE EVALUATION OF AN AUTOMATED FIXED ANTI-ICING DEVICE FOR USE
ON HELENA AREA BRIDGE DECK**

Location: Helena, Montana/Lewis & Clark County: Railroad Overpass between Capitol and Cedar Interchanges: Interstate 15, approximate Reference Point 192

Project Name: Capitol Interchange/Cedar Interchange

Project Number: IM-IR 15-4(116)192

Type of Project: Installation of automated anti-icing device for use on Helena's area bridge using the Boschung 'Fixed Automated Spray Technology or 'FAST'. Project Work Type 220 – Bridge Replacement with Added Capacity

Principal Investigator: Craig Abernathy
Experimental Project Manager

Objective

The decision to add capacity to the subject structure has initiated the Great Falls District to nominate a fixed automated anti-icing device for the application of anti-icing agents to prevent the formation of ice or bonded snow in an effort to provide a safer driving condition for motorists.

Experimental Design

Installation of the Boschung FAST system based on manufacturer specifications and requirements. Work to be performed by Boschung. Research will document all phases of installation.

Evaluation Procedures

Compilation of system information based on this trial (frequency, date and time of unit

activation, surface data, weather statistics, maintenance problems etc.) will supplement the annual report. Safety data as appropriate will be added. Interviews with snowplow operators and highway patrol regarding the unit's performance will complement the analysis. Visual documentation of unit in use. The manufacturer will host a training session for maintenance staff in the proper practice in season start-up and shut-down of the system to insure maximum operation efficiency. Research will meet yearly with Maintenance to report on the systems effectiveness or problems occurred to be included in the annual report. Installation cost as well as annual operation costs to the unit will be documented.

Evaluation Schedule

Research will monitor performance for a period of five years annually, with every year up to ten years (informally) if required. This is in accordance with the Department's "Experimental Project Procedures". Delivery of a construction report, annual reports is required as well as a final project report (responsibility of Research).

2015:	Construction	Research Construction Report
2016-2019:	Annual Evaluation	Annual reports
2020:	Final Evaluation	Final Report



↑ View of existing structure over rail lines and Boulder Ave.: Interstate 15/RP 192