

State Planning and Research Program Quarterly Report

PROJECT TITLE: Utilization of AVL/GPS Technology: Case Studies

OBJECTIVES: The goal of this project is to help state DOTs make more informed decisions with respect to implementation of AVL/GPS technology for winter maintenance. Much is known about what winter maintenance AVL/GPS technologies are available from different vendors as well as which highway agencies are making use of them. Highway agencies will significantly benefit from a deeper examination of winter maintenance AVL/GPS implementation. Detailed agency case studies developed in this project will bring to light more nuanced issues related to winter maintenance AVL/GPS. The project will highlight the types of issues that agencies should consider, provide guidance for successful implementation, and serve as possible templates for agencies to get the best value out of different levels of AVL/GPS applications.

PERIOD COVERED: January 1, 2018 – March 31, 2018

PARTICIPATING AGENCIES: Minnesota Department of Transportation and the Clear Roads Technical Advisory Committee

PROJECT MANAGER:

Debra Fick/ Tom Peters

LEAD AGENCY: Mn/DOT

PRINCIPAL INVESTIGATOR:

Ming-Shiun Lee, PhD, PE

SP&R PROJECT NO:

MnDOT Contract No.
1026092

Federal Project Number:
TPF-5(218)

PROJECT IS:

Planning
 Research & Development

ANNUAL BUDGET: \$113,697.53 (Project Budget)

PROJECT EXPENDITURES TO DATE: \$94,912.16

WORK COMPLETED:

- Task 3: Interviews and Case Studies (95% complete) – Based on the survey results, six agencies were selected for interviews and case studies. Interviews with five of the six agencies were conducted in November and December 2017. Interviews with the sixth agency were conducted in January 2018. Interview summaries and draft case study reports were submitted for review in March 2018.
- Task 4: Recommendations (95% complete) – Finding from Tasks 1 through 3 were synthesized and summarized in a Recommendations document that highlights recommended best practices and key considerations for implementation and utilization of AVL/GPS for winter maintenance activities. The Recommendation document has been drafted for submittal in early April.
- Task 5: Final Report (5% complete) – Initiated the development of an outline for the final report.

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

- Task 3: Interviews and Case Studies – Finalize the six case study reports in May 2018 based on project subcommittee's comments.
- Task 4: Recommendations – The draft Recommendations document will be submitted for review in early April. Based on the project subcommittee's comments, the document will be revised and finalized in June 2018.
- Task 5: Final Report – Draft final project report to incorporate all findings and results from previous tasks. Submit the draft final report for the project subcommittee's review.

STATUS AND COMPLETION DATE:

Due to challenges with scheduling on-site interviews, the project is about 2 months behind schedule. The project is on budget and is expected to be completed by August 31, 2018. A request for a time-extension amendment has been submitted.