# State Planning and Research Program
# Quarterly Report

**PROJECT TITLE**: ***Develop Test Bed Software to Quality Plug & Play Technology***

**OBJECTIVES**: Develop a software suite that will be used to validate and certify candidate Spreader Controllers and AVL Equipment for compliance with the current Clear Roads Universal In-Cab Performance Specification and Communications Protocol.

**PERIOD COVERED**: 2019-04 to 2019-06

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

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| **PROJECT MANAGER**:<br>Lisa Jansen / Tom Peters<br><br>**LEAD AGENCY**: Mn/DOT<br><br>**PRINCIPAL INVESTIGATOR**:<br>Russ Brookshire, Parsons | **SP&R PROJECT NO**:<br>MnDOT Contract No. 132007<br><br>Federal Project Number:<br>TPF-5(218) | PROJECT IS:<br><br>____ Planning<br>__X__ Research & Development |
| **ANNUAL BUDGET**: $108,160.67 | **PROJECT EXPENDITURES TO DATE**: $ 97,947.60 | |

**WORK COMPLETED:**

- Task 1 – Needs Assessment
- Task 2 – Software Suite Development
- Task 3 – Pilot Test
- Task 4 – Guides and Instructions
- Task 5 – Disaster Recovery Plan

**SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER**:

- Task 6 – Continued Support

**STATUS AND COMPLETION DATE**:

During the quarter, Parsons staff continued to interact and work with Bosch Rexroth development staff as they completed testing of their interface. During this testing it was found that the test procedure and test bed software required the spreader controller to support a soft power switch – the procedure required that the spreader controller send a packet after the power switch is turned off. It is typical for spreader controllers to support instead a hard power switch – all functions of the spreader controller are powered off when the power switch is turned off. The test procedure and test bed software have been updated to reflect this change.

Current Schedule for Next Quarter

- 2019-07 – Continued Support
- 2019-08 – Continued Support