

**State Planning and Research Program
Quarterly Report**

PROJECT TITLE: The Effects of Implements of Husbandry on Pavement Performance TPF (148)

OBJECTIVES: 1. Determine pavement responses to selected farm equipment.
2. Compare pavement damage/response to typical 5-axle semi.

PERIOD COVERED: April, 2009- June, 2009

PARTICIPATING AGENCIES: MnDOT, Minnesota Local Road Research Board, Iowa DOT, Illinois DOT, Professional Nutrient Applicators Association of Wisconsin.

PROJECT MANAGER: Dr. Shongtao Dai

SP&R PROJECT NO:

PROJECT IS:

LEAD AGENCY: Mn/DOT

TPF-148

Planning
 Research &
Development

PRINCIPAL INVESTIGATOR: Lev Khazanovich.

ANNUAL BUDGET:

\$430,000 for 3 years

PROJECT EXPENDITURES TO DATE:

About \$158,300 was spent on the construction of the test sections and \$125,000 was spend on testing plan development, data collection, and data analysis.

WORK COMPLETED:

The research team conducted a data reduction process of the data collected in Fall 08 and Spring 09 tests. The analysis of video files for determination of traffic wander has been completed. Pick-Peak analysis of asphalt strains and subgrade stresses was completed for 10mph loading with 50% and 80% of the maximum weights. A preliminary data analysis has been initiated. Worked with the private section to arrange Tekscan tests for the tested equipment. Bi-weekly project meetings have been held to review data analysis. A draft plan has been developed on how to repair and instrument the failed section of Cell 83.

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

The research team will complete the data reduction process of the data collected in Fall 08 and Spring 09 tests.

STATUS AND COMPLETION DATE:

The completion date of the project: Spring, 2010.