

**State of Wisconsin/Department of Transportation**  
RESEARCH PROGRESS REPORT FOR THE QUARTER ENDING June 30, 2007

<b>Program: SPR-0010(36) FFY99</b>	<b>Part: II Research and Development</b>
<b>Project Title: Perpetual Pavement Instrumentation For the Marquette Interchange Project Administrative Contact: Nikki Hatch</b>	<b>Project ID: 0092-06-01</b>
<b>WisDOT Technical Contact: Leonard Makowski Approved by COR/Steering Committee:</b>	<b>Sponsor: Wisconsin Department of Transportation Approved Starting Date: Oct 20, 2005 Approved Ending Date: June 30, 2008</b>
<b>Project Investigator (agency &amp; contact): Marquette University, James A. Crovetti</b>	

**Percent Complete: 99% (Phase 1) – 5% (Phase 2) – 68% (Total)**

**Request a No Cost Time Extension (Please Select One):**  YES  NO

**Reason for No Cost Time Extension:**

**Project Description:**

This project is investigating the in-service performance of the HMA perpetual pavement being constructed within the North Leg of the Marquette Interchange project. A wide variety of pavement sensors will be procured and installed within the pavement structure during normal construction operations. The sensors are intended to provide real-time recordation of axle loads and resultant stress/strain at critical pavement locations.

**Progress This Quarter:**

(Includes project committee mtgs, work plan status, contract status, significant progress, etc.)

A demonstration of the wireless data collection system was provided to WisDOT personnel. The draft final Phase 1 report was submitted for review. This report documents all Phase 1 activities and includes a proposed work plan and budget for Phase 2 activities. The development of data access and analysis software was initiated which will allow for efficient retrieval of collected data by interested researchers/practitioners and automated analysis of collected pavement response data.

**Work Next Quarter:**

Phase 2 activities will begin, including continual monitoring of pavement/environmental response data and refinement of data access and analysis software.

**Circumstances Affecting Progress/Budget:**

None

**Gantt Chart – Phase I:**

Phase I Project Task	CY 2005			CY 2006												CY 2007								
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	
Task 1: Literature Review (7% of Total)	P A	P A	P A																					
Task 2: Installation Plan (9% of Total)		P A	P A	P A	R A	R																		
Task 3: Procurement and Installation (74% of Total)							P A	P A	P A	P A	P A	A	A	A										
Task 4: System Demonstration (4% of Total)													P											A
Task 5: Final Report (6% of Total)										P	P	P	R	P	A	A	A	A	A	A	R	R		

**Gantt Chart – Phase II:**

Phase II Project Task	CY 2007							CY 2008					
	J	J	A	S	O	N	D	J	F	M	A	M	J
Task 1: Maintain System Integrity (27% of Total)	P A	P	P	P	P	P	P	P	P	P	P		
Task 2: Develop Data Packages (24% of Total)	P A	P	P	P	P	P	P	P	P	P	P		
Task 3: Develop Automated Data Analysis Techniques (25% of Total)	P A	P	P	P	P	P	P						
Task 4: Report Preparation (24% of Total)				P	P	P	P	P	P	P	R	R	P

P – Proposed  
A – Actual  
R – WisDOT Review