

The Profiler

A Production of the MDOT Research Division

Fall 2005

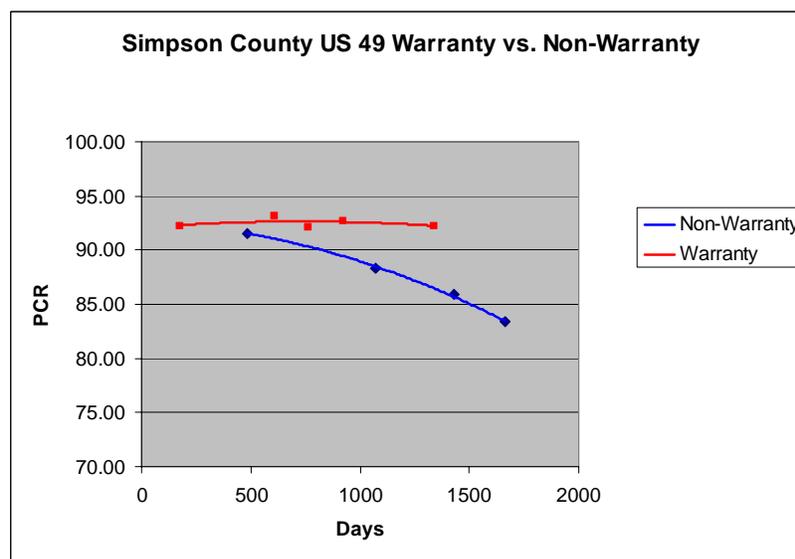
Welcome to the first edition of "The Profiler," a newsletter published semi-annually by the MDOT Research Division. Inside you will find happenings of the department including updates on research projects, upcoming conferences, and from time to time spotlights on equipment. If you have any questions, feel free to contact Katrina Parker @ 601.359.7639 or kaparker@mdot.state.ms.us

Condition Survey

The pavement condition survey began on August 23, 2005, but was interrupted by Hurricane Katrina. Pathway Services, Inc. from Tulsa, OK is the contractor. The survey will resume in Districts 1 and 2 starting October 17, 2005. Data collected is used to assess and report pavement condition and to prioritize projects. For more information about the condition survey, contact Cindy Drake at 601.359.7640 or cgdrake@mdot.state.ms.us

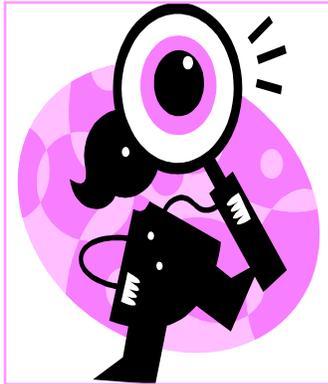
MDOT's Warranty Pavements

To date MDOT has let eleven (11) warranty (maintained pavement) projects statewide. On these projects the contractor is responsible for the condition of the pavement for five, seven or ten years. The early results appear to indicate that MDOT is getting tremendous value from these projects. The graph below compares MDOT's first maintained pavement project which was constructed in 2001 with a conventional (non-warranty) project that was constructed in 2000. Both projects are on the same route, have the same amount of traffic, had the same original construction date, and had the same overlay thickness. The y-axis shows the Pavement Condition Rating (PCR) for each project when compared to pavement age in days on the x-axis. PCR is a 0-100 rating, with 100 being the best, of the pavement condition. MDOT's goal is to maintain a condition rating of 72 or higher. For more information about the warranty pavements, contact Randy Battey @ 601.359.7650 or randyb@mdot.state.ms.us



WORK PROGRAM 2006

On September 30, 2005, the MDOT Research Division met with the MDOT Research Advisory Committee to discuss and approve the budget for FY 06. Eleven new projects were added to the 80%/20% program. These new projects are:

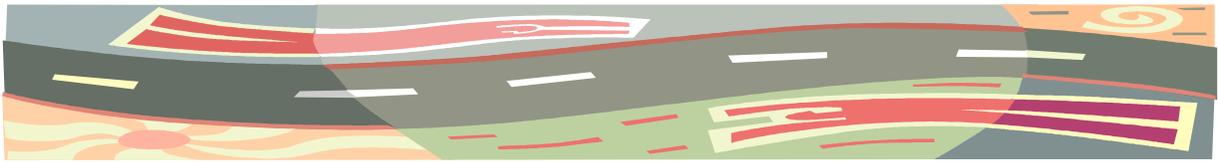


The new pooled fund studies for FY 06 include:

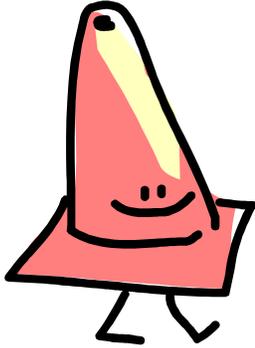
1. Auburn University Accelerated Pavement Loading Facility (Round 3)
2. Development of Performance Properties for Ternary Mixes
3. Evaluation of Low Cost Safety Improvements
4. Assetmanager and Transportation Maintenance/Asset Management System (M/AMS) AASHTOWARE Products
5. Accelerated Implementation of Intelligent Compaction Technology for Embankment Subgrade Soils, Aggregate Base and Asphalt Pavement Materials

State Study Number	Date Started	Completion Date	Study Title	Principal Investigator
180	10/01/05	09/30/08	Evaluation of Pavement Marking Materials	Randy L. Battey
181	10/01/05	09/30/07	Structural Characterization Of Asphalt Drainage Course Layers	L. Allen Cooley, Jr.
182	10/01/05	09/30/06	Ground Penetrating Radar Study-Phase (Technology Review & Evaluation)	Waheed Uddin
183	10/01/05	09/30/08	Enhancing Mobility to Improve the Quality of Life in the MS Capitol Region	Emmett Crockett
184	10/01/05	09/30/14	Long Term Monitoring and Performance of Paving Fabric Interlayer Systems to Reduce Reflective Cracking	Farshad Amini
185	10/01/05	09/30/14	In-House Support to State Study No. 184	William Barstis
186	10/01/05	09/30/14	Consultant Support to Study No. 184	Randy Ahlrich
187	10/01/05	09/30/06	Effect of Moisture Content on the Thermal Coefficient of Expansion of Concrete	Ahmed Al-Ostaz
188	10/01/05	09/30/07	Development of MDOT's Advanced Traffic Loading System (MS-ATLAS) to Support MEPDG Implementation	ERES Consultants Division of ARA, Inc.
189	10/01/05	09/30/07	Evaluation of the Effectiveness of Drainage Layers	Jordan Whittington
190	10/01/05	09/30/06	MDOT Research Program Peer Exchange	Randy L. Battey

The entire FY 2006 Work Program can be downloaded at www.gomdot.com/research/reports.htm



An Update on Study Number 144— Profilograph Specification Study



When a new highway is built or maintenance is performed on an existing route, it is the responsibility of the Mississippi Department of Transportation to ensure that taxpayers' expectations of ride quality are met. The profile index (PI) is the current measure of smoothness and has been for more than 10 years. The smoothness of the route is measured with a California profilograph. Critics point out that there is only a modest relationship between profilograph output and ride quality. Measurements of smoothness cannot accurately describe vehicle response.

With the advancement of technology another index, the International Roughness Index (IRI), has been developed for quantifying ride quality. The IRI is the first widely used profile index where the analysis method is intended to work with different types of profilers. Since IRI is directly linked to vehicle response, it serves as a sound basis for road evaluation.

In the future, MDOT will transition from using the California profilograph that measures the PI to using lightweight or high speed profilers that measure IRI. Superior ride quality for the traveling public and contractor fiscal accountability for the paying public should be the results of switching from PI to IRI.

For more information on the profilograph study, contact Milady Howard: mhoward@mdot.state.ms.us



RIDES – Coming to an Elementary Classroom Near You

After a successful debut in fifteen elementary schools during the 2004-2005 school year, MDOT's RIDES program will be an integral part of K5-6th grade curriculum in over 150 classrooms throughout Mississippi during the

2005-2006 school year. RIDES, which stands for "Roadways Into the Development of Elementary Students" was developed by education professors at the University of Mississippi utilizing funding provided by MDOT's Research Program. The RIDES focus is to educate elementary students about basic concepts related to transportation and civil engineering. MDOT provides up to two sets of manuals and supplies necessary to implement the program to each participating school. In addition to providing all of the necessary educational materials, MDOT hosted seven training sessions statewide for teachers wishing to implement the RIDES curriculum into their lesson plans. RIDES meets or exceeds all of the national math and science standards for elementary curriculum. For additional information on MDOT's RIDES program contact Randy Battey at 601-359-7650 or randybattey@mdot.state.ms.us

Calendar of Events

November 2005

13-17 MDOT Construction and Maintenance Joint Meeting
Tunica, MS

15-16 2005 National Center for Asphalt Technology (NCAT) Pavement Test Track Conference
Auburn, AL
<http://www.ncat.us/track.htm>

December 2005

12-15 Southeastern Asphalt Users and Producers Group (SEAUPG) 2005 Annual Meeting
Nashville, TN
http://www.seaupg.org/Pages/annual_meetings.html

January 2006

22-26 Transportation Research Board (TRB) 85th Annual Meeting
Washington, DC
<http://www.trb.org/meeting/>

March 2006

20-22 Southeastern Concrete Alliance Network (SCAN) 2006 Forum
Myrtle Beach, SC
<http://www.pavementse.com/scan2006.asp>

May 2006

7-10 SE States Pavement Management and Design Conference
Panama City Beach, FL



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