Period Covered: Through March 31, 2006 (Quarterly Report)

ALDOT Progress Report for the

State Planning and Research Program

PROJECT TITLE: Accelerated Loading Pavement Study, NCAT Pavement Test Track		
PROJECT MANAGER: Mr. Raymond Powell (334) 844-6857	**SPR Project No:** TPF-5(072) ALDOT Research Project No. 930-595P	**Project is:** ____ PLANNING __X__ RESEARCH & DEVELOPMENT
Annual Budget	**Multi Year Project** Total Budget for Project 4,048,738.00 Total Cost to Date for Project 4,048,738.00	

Trucking Operations

Trucking operations for the 2003 NCAT Pavement Test Track were completed on December 17, 2005. A total of 10,012,718 equivalent single axle loadings (ESALs) were safely applied to the 22 sections placed in 2003, which meant that 20,012,850 total ESALs were applied to the other 23 sections that were placed in 2000 (having been subjected to 2 cycles of traffic). Over 1.73 million miles were driven in the Track's second research cycle in order to compress a (mix) design lifetime of truck traffic into 2 years. Preventive and corrective maintenance is currently being performed on the fleet in order to prepare for the next cycle of traffic, which is scheduled to begin in September of 2006.

Field Performance

A final set of transverse profiles was measured at 3 stratified random test locations per section after the completion of truck traffic. Data from this effort were used to compute average rut depths for all 45-test sections. Rutting ranged from a low of 1 mm to a high of 7 mm, with an overall average of 3.3 mm. Roughness for all experimental sections (both old and new) averaged 71 inches per mile. Of the 8 sections built with thinner structures that were designed to fail before the completion of truck traffic, only the thin (5-inch) sections had to be replaced. One other (7-inch) section had extensive cracking, 3 (7-inch) sections had some cracking, and 2 (9-inch) sections had no cracking. Based on both surface performance and subsurface pavement response measurements, it was possible to successfully calibrate mechanistic-empirical analysis methods and performance models. A detailed forensic study to quantify the final condition of experimental sections will be completed before the Track is rebuilt in the summer of 2006. Multiple trenches have been cut in the structural experiment in order to investigate the nature and cause of distresses. Both of the 9-inch structural sections and 3 of the 7-inch structural sections will be subjected to more truck traffic in order to reach failure.

Communication

A report on section performance is being prepared for each individual research sponsor. Representatives from each entity will next be onsite for reconstruction in the summer of 2006.

Reconstruction

A proposal for a third cycle of testing has been advertised on the Transportation Pooled Fund Program web (http://www.pooledfund.org/projectdetails.asp?id=1032&status=1), and planning is underway to rebuild the facility in 2006. The experiment will again consist of traffic continuation, mix performance and structural performance options for pooled fund participants. The reconstruction contract will be administered by the Alabama Department of Transportation. It is anticipated that trucking for the third research cycle will begin in September of 2006.

STATUS AND COMPLETION DATE

Percentage of work completed to date for total project 100.00

Project is:

X on schedule _____ behind schedule, explain:

Expected Completion Date: 2/29/2006