



# ACCELERATED TESTING FOR STUDYING PAVEMENT DESIGN AND PERFORMANCE (FY 2002)

*Performance of Foamed Asphalt Stabilized Base in Full-Depth Reclaimed Asphalt Pavement*

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By:

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## **Introduction**

This report covers the Fiscal Year 2002 project conducted at the Accelerated Testing Laboratory at Kansas State University. The project was selected and funded by the Midwest States Accelerated Testing Pooled Fund Program, which includes Iowa, Kansas, Missouri and Nebraska.

## **Project Objective**

The objective was to determine the effectiveness of the use of foamed asphalt stabilized Recycled Asphalt Pavement from full-depth reclamation (FAS-FDR) as base material for flexible pavements.

## **Project Description**

The experiment consisted of constructing four pavements, one with a 9 inch conventional Kansas Department of Transportation (KDOT) AB-3 granular base and three with 6, 9 and 12 inches of FAS-FDR, and subjecting them to full-scale accelerated pavement testing. All four pavement sections were loaded with 500,000 ATL load repetitions, at room temperature and under moderate moisture levels in the subgrade soil.

## **Project Results**

The measured stresses and strains as well as the permanent deformation (rutting) observed on the pavement sections indicated that the FAS-FDR can be successfully used as base material. The measured rut depths and compressive vertical stresses at the top of the subgrade suggest that one inch of FAS-FDR base shows performance equivalent to that of one inch of conventional KDOT AB-3 granular base. The effective structural number computed from the Falling Weight Deflectometer (FWD) tests on the as-constructed pavements showed that the average structural coefficient for the FAS-FDR base material is 0.18.

## **Report Information**

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