

Transportation Pooled Fund Program

Project Title: Pavement Subgrade Performance Study		
Project Manager and Phone Number: Nadarajah Sivaneswaran 202-493-3147	Project No: SPR-2(208)	Project is: _____ PLANNING _____ X _____ R&D
Reporting Period: April 2011 – June 2011	Multi Year Project Yes	
Description of Work Performed and Progress:		
<p>Heavy Vehicle Simulator (HVS) testing phase of the subject study has been completed and a products CD containing all HVS testing project reports, papers, and processed data is available. The next phase of the study to document and obtain/assemble/input additional laboratory test results and missing data has been completed. Based on this evaluation, an additional task to “Conduct Laboratory Resilient Modulus Tests on Subgrade Soils and Unbound Granular Base” to complement existing material data was also completed. A final report documenting the experiment and the data collected and a database containing the data collected have been posted to the TPF SPR-2(208) website. The final report also developed a detailed work plan for future data analysis and modeling efforts utilizing the experimental data. The Technical Advisory Committee members reviewed the final report and recommended that an analysis effort be initiated to:</p> <ol style="list-style-type: none"> 1. Develop empirical models for permanent deformation in subgrade soils consistent and for use with the NCHRP 1-37A Mechanistic-Empirical Pavement Design Guide (MEPDG) and the associated model parameters for the subgrade soils tested in SPR-2(208) and validate them using the performance data collected. 2. Develop fundamentally based mechanistic models for the determination of permanent deformation in subgrade soils under repeated traffic loading and validate them through finite element modeling and the performance data collected for advancing the science of pavement design. <p>Efforts are underway to pursue research activities to accomplish the above objectives.</p>		
STATUS AND COMPLETION DATE		
Percentage of work completed to date for total project Project is: <u>97%</u>		
_____ on schedule <u>X</u> _____ behind schedule, explain:		
A new task to develop empirical models for permanent deformation in subgrade soils consistent and for use with the NCHRP 1-37A Mechanistic-Empirical Pavement Design Guide (MEPDG) and more fundamentally based mechanistic models for advancing the science of pavement design has been added to this study. Completion date for this task is September 30, 2014.		
Expected Completion Date: <u>September 30, 2014</u>		