

Transportation Pooled Fund Program

Project Title: “Improving the Quality of Pavement Profiler Measurement”		
Project Manager and Phone Number: Robert L. Orthmeyer, P.E. (708) 283-3533 Robert.orthmeyer@fhwa.dot.gov	Project No: TPF 5(063)	Project is: <input type="checkbox"/> PLANNING <input checked="" type="checkbox"/> R&D
Reporting Period: January 1 to March 31, 2004	Multi Year Project Four Year	
Description of Work Performed and Progress:		
<p>The following list of priorities has been established by the participating agencies:</p> <ol style="list-style-type: none"> 1. Reference Profile Device (development of) 2. Critical Profile Accuracy Requirements (definition) 3. Construction Acceptance and Correction Software (acquisition of existing) 4. Certification / Validation Sites 5. Evaluating Upper Limits of Single Accelerometer and Single Height Sensor 6. Emerging Technology That Enhances Profile Measurement 7. Portable Validation Device Feasibility 8. Lightweight Profilers Unique Problems 9. Portable Validation Device Implementation <p>A web site has been developed to manage all of the pooled fund study proposals, solicitations and projects. The TPF-5(063) Profiler Quality study can be found at: http://www.pooledfund.org/projectdetails.asp?id=280&status=4.</p> <p>The “Defining of Critical Profile Accuracy Requirements” (priority two) project was issued to the University of Michigan Transportation Research Institute (UMTRI) with the Principal Investigators to be Tom Gillespie and Chris Winkler with Steve Karamihas as the primary analyst. The agreement was signed and returned to Western Federal Lands Highway Division on February 3, 2004. Approximately seven percent of the contract amount has been invoiced. The contractor has initiated work on the following tasks:</p> <p>Task 1: Define the goal of the reference device. It is anticipated that the device must accurately measure a roadway profile and be able to study the distribution of roughness within a profile. From an accurate profile, the common profile-based indexes can be calculated. The IRI, RN, PI, truck dynamic loading, and ride quality over a range of speeds are of paramount interest.</p> <p>Task 2: Define the relevant waveband of interest. In this task, the Contractor will define the long and short wavelength boundaries that are needed to capture the performance qualities listed above.</p> <p>Task 3: Define the needed accuracy and precision of the device within the wavelengths of interest addressing phase shift and amplitude. Requirements will be set for the accuracy and precision of profile measurements. Note that this will not be done through direct evaluation of individual elevations. This is because the required accuracy for estimation of vehicle response is sensitive to wavelength.</p>		

A contract for bump finder software (DTFH61-04-C-00010) will be signed by the end of the first full week of April. The study used a sole source procurement to work with Steve M. Karamihas to supply the software that includes grinder simulation capabilities. The first task for this contract is to provide a demonstration of the software to the participating agencies. This will be accomplished through a web-casting process that the FHWA has available. A tentative date of Wednesday May 5 has been set. Details of the procedure will be sent as soon as the contract is signed. The completion date for this contract is 255 days from signing by the Contract Officer. It includes four training sessions for the participating State Transportation Departments.

A separate RFP was developed and is on the street for a sole source contract for incorporating the bumpfinder software into ProVAL software and provide technical support and training for ProVAL. The response is due April 5, 2004.

The FHWA Office of Pavement Technology (HIPT) through the direction of Tommy Beatty and assistance of Mark Swanlund has provided required funding to allow the contract and RFP's to proceed. The HIPT has agreed to provide \$100,000 to the pooled fund study endeavor. The FHWA Office of Budget and Finance has put a temporary hold on FHWA led pooled fund study contracting and payments. A remedy is anticipated in the near future.

There is currently \$638,200.00 of obligated funds from the participating STD's in the pooled fund study account. Of this \$98,000 has been awarded to UMTRI for Priority Two. Funding from the FHWA HIPT is being used to allow the acquisition of the Bumpfinder software and ProVAL support to proceed.

Our next scheduled meeting of the participating agencies is scheduled for Tuesday June 1 to begin at 1:00 PM and conclude on Wednesday June 2 by noon. This will be held in Chicago at a location near the O'Hare airport. There is a caveat that our funding issues have been corrected prior to our meeting, otherwise this may have to be a virtual meeting.

STATUS AND COMPLETION DATE

Percentage of work completed to date for total project
Project is: 10 %

X on schedule _____ behind schedule, explain:

Expected Completion Date: September 30, 2007

Robert L. Orthmeyer, P.E.
Project Manager