

## Transportation Pooled Fund Program

<b>Project Title: “Improving the Quality of Pavement Profiler Measurement”</b>		
<b>Project Manager and Phone Number:</b>  <b>Robert L. Orthmeyer, P.E.</b> <b>(708) 283-3533</b> <b>robert.orthmeyer@.dot.gov</b>	<b>Project No:</b>  <b>TPF 5(063)</b>	<b>Project is:</b>  <input type="checkbox"/> PLANNING <input checked="" type="checkbox"/> R&D
<b>Reporting Period:</b>  <b>July 1 through September 30, 2010</b>	<b>Multi Year Project</b>  <b>Through September 2014</b>	
<b>Description of Work Performed and Progress:</b>  <p style="color: blue; font-weight: bold;"><i>The group voted in December 2009 to extend the pooled fund study for five more years – through September 2014, seek additional participating agencies and seek additional funding of \$15,000 per year.</i></p> <p>The following list of priorities was reviewed and approved by the TAC:</p> <ol style="list-style-type: none"> <li>1. Reference Profile Device (development of)             <ol style="list-style-type: none"> <li>a. Benchmark Testing - underway</li> <li>b. Reference Device - underway</li> </ol> </li> <li>2. Critical Profile Accuracy Requirements (definition) - Completed</li> <li>3. Construction Acceptance and Correction Software (ProVAL: <a href="http://www.roadprofile.com">www.roadprofile.com</a>) - Ongoing</li> <li>4. Regional Validation Sites – On Hold for completion of Priority One.</li> <li>5. Evaluating Upper Limits of Single Accelerometer and Single Height Sensor – Contractor is on board and Phase II has begun. (to be completed by December 31, 2010)</li> <li>6. Emerging Technology That Enhances Profile Measurement             <ol style="list-style-type: none"> <li>a. Automated Faulting Measurement – (under contract as part of ProVAL module).</li> <li>b. Urban IRI Measurement</li> <li>c. Ride quality index at different speeds</li> </ol> </li> <li>7. Support for Road Profiler User’s Group</li> </ol> <p><b>Priority One – Reference Device(s):</b></p> <p style="color: brown; font-weight: bold;"><i>A retest and evaluation of potential reference devices was conducted during the week of September 13th beginning at MnROAD for five sections and included a longitudinal tined concrete section near Junction City, WI on an unopened section US 10 near the junction of WI 34. Report cards will be generated prior to the next TAC meeting October 28<sup>th</sup> at Roanoke, VA.</i></p> <p>The vendors selected to provide potential profiler reference devices are:</p> <ol style="list-style-type: none"> <li>1. APR Consultants</li> <li>2. International Cybernetics Corporation - ICC</li> <li>3. Surface Systems International, LLC -SSI</li> <li>4. Virginia Tech (FHWA – LTTP Funds)</li> </ol> <p><b>Priority Three:</b> A new ProVAL Support contract has been awarded!! The Transtec Group, Inc. will be providing technical support for the software and maintaining the <a href="http://www.roadprofile.com">www.roadprofile.com</a></p>		

website. The full new version of *ProVAL 3.0 is available!!*

The latest version of ProVAL is available for download free of charge at the website:  
[www.roadprofile.com](http://www.roadprofile.com).

**Transtec is in the process of developing an automated faulting module that will be incorporated into ProVAL version 3.1. Mississippi and Florida are actively supporting this endeavor by providing an extensive profile database that is being used to field verify the faulting algorithms. An updated version of the AASHTO R 36 standard is also a product of this effort.**

**Priority Five - Evaluating Upper Limits of Single Accelerometer and Single Height Sensor:** The project has begun with Dr.'s Nicolas Gagarine and James Mekemson of Starodub, Inc. providing the research and report. The phase I report has been provided to FHWA. The second phase will quantify the aspects identified in the first phase report, provide a recommended alternative for uniform data collection at all times and will be completed by December 31, 2010.

**Funding** - There is currently \$1,695,500.00 of received commitments from the participating SHA's in the pooled fund study account. A total of \$1.5 Million has been awarded through the project to various contractors since the project inception. When combined with FHWA funding, a total of \$2,558,000 has been committed to this pooled fund study.

**Participating Agencies:** California, Colorado, Connecticut, Florida, Georgia, Illinois, Kansas, Kentucky, Louisiana, Maryland, Mississippi, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Dakota, Texas and Wisconsin. FHWA offices include: Federal Lands, LTPP, the Office of Technical Services Resource Center and the Office of Pavement Technology (HIPT).

**Accomplishments to Date:**

Priority One: Benchmark testing tool to evaluate potential profiler reference devices;  
Priority Two: Critical Profile Accuracy Requirements study and report (see website for CPAR report);  
Priority Three: ProVAL software and support ([www.roadprofile.com](http://www.roadprofile.com)) that includes grinding simulation;  
Priority Five: First phase of understanding the limitations of a single accelerometer.  
Priority Six: Automated Faulting Module will be completed by November 30, 2010.

**Note:** A web site has been developed to manage all of the pooled fund study proposals, solicitations and projects. The TPF-5(063) Profile Quality study that includes all documents and reports can be found at: <http://www.pooledfund.org/projectdetails.asp?id=280&status=4>.

**NEXT MEETING: Our next face-to-face meeting will be held in Stateline, NV in conjunction with and include the 2011 RPUG meeting during the week of September 26th. The TAC voted to include the RPUG session and registration through 2014. Please check the RPUG site for meeting registration and additional hotel rate information.**

**STATUS AND COMPLETION DATE**

Percentage of work completed to date for total project

Project is: 70%

X on schedule \_\_\_\_ behind schedule, explain:

Expected Completion Date: September 30, 2014

Robert L. Orthmeyer, P.E.

**Project Manager**