TRANSPORTATION POOLED FUND PROGRAM
QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): Louisiana Transportation Research Center (LTRC)

INSTRUCTIONS:
Project Managers and/or research project investigators should complete a quarterly progress report for each calendar quarter during which the projects are active. Please provide a project schedule status of the research activities tied to each task that is defined in the proposal; a percentage completion of each task; a concise discussion (2 or 3 sentences) of the current status, including accomplishments and problems encountered, if any. List all tasks, even if no work was done during this period.

Transportation Pooled Fund Program Project # *(i.e, SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX)* TPF-5(242)		**Transportation Pooled Fund Program - Report Period:** ☐ Quarter 1 (January 1 – March 31) ☐ Quarter 2 (April 1 – June 30) ☐ Quarter 3 (July 1 – September 30) ☑ Quarter 4 (October 1 – December 31)
Project Title: Traffic and Data Preparation for AASHTO MEPDG Analysis and Design		
Name of Project Manager(s): Doc Zhang	**Phone Number:** 225-767-9162	**E-Mail** Doc.Zhang@LA.GOV
Lead Agency Project ID:	**Other Project ID (i.e., contract #):**	**Project Start Date:** Sept 1 2011
Original Project End Date: Aug 31 2014	**Current Project End Date:** Aug 31 2014	**Number of Extensions:** 0

Project schedule status:

☑ On schedule ☐ On revised schedule ☐ Ahead of schedule ☐ Behind schedule

Overall Project Statistics:

Total Project Budget	Total Cost to Date for Project	Percentage of Work Completed to Date
$683,334	About $550,000	78%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
$50,000 and 12%	$50,000	78%

Project Description:

Background:
The Mechanistic Empirical Pavement Design Guide (MEPDG) is a significant advancement in pavement design, but requires significantly more inputs from designers. Many data sets need to be pre-processed before their use in the MEPDG procedure, such as Weigh-In-Motion (WIM) traffic data.

Under contract with the Federal Highway Administration (FHWA) and the Office of Pavement Technology, and co-sponsored by the Arkansas Highway Department, the University of Arkansas recently developed a software program called Prep-ME with comprehensive database features to store and process climate, traffic and materials data and to: (1) identify all the required inputs and analysis parameters; (2) develop algorithms and procedures to locate the available data sets, pre-process raw data, check data quality, and import the traffic and other data sets to the designed database tables, including conducting quality checks on both weight and classification WIM data based on LTPP and FHWA methods; (3) implement database algorithms for uploading, data checking, and generating the required data files for the MEPDG software; and, (4) develop a user•]friendly software interface, Prep-ME, to generate the required input files for the MEPDG software.

Objectives:
The objective of the Prep-ME software is to assist state DOTs in the data preparation and improve the management and workflow of the MEPDG input data to make the MEPDG software more accessible. Additionally, it can be used as a critical tool for calibrating and implementing the MEPDG as well.

Scope of Work:
In order to make Prep-ME full production software assist states use the MEPDG, the software and services need to be

Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):

This quarter (October - December 2013) is the 10th quarter of the project. The third Prep-ME face-to-face meeting was held in Louisville Kentucky on November 5 and 6. The OSU team attended the meeting and utilized this meeting as a valuable opportunity to provide training of th new Prep-ME software. More importantly, the OSU team has acquired many feedback including questions and comments from the participating states. The comments were documented and prioritized according to their criticality for Prep-ME users. In order to get ready for the Prep-ME workshop in the 2014 TRB meeting in January 2014, several important improvements have been made in this quarter. Specifically, the detailed tasks that the OSU team had finished from October to December are:

(1) General Interface: Two functions have been added in Prep-ME. One new function is able to provide the detailed station information by direction, lane and year that have been imported into the database. This information is presented to the user in the form of a grid and the data can be changed and saved by the user. The other function enables users not only to review but also delete data for database management purposes. Users have option to delete data that are not needed or improperly processed.

(2) Import Module: The new release of Prep-ME is able to automatically identify whether the STA, CLA and WGT data are new or already imported into the database in the data importation module. New items are inserted to database, while exiting records in the database are updated. In addition, a new function is added to the Prep-ME software to remember the time of the most recent data import and file folder name and location of the last data export.

(3) QC Module: In the new software, users can customize the data check criteria for both classification and weight data to independently adjust tolerance of each QC criteria. The customized QC check criterion tolerance is propagated to QC

Anticipated work next quarter:

In the next quarter, the following tasks are planned:

(1) A Prep-ME workshop is planned at the 2014 TRB meeting on Thursday January 16, 2014. The OSU team will work and coordinate with participating states on the preparation of presentations, attend and present the development of Prep-ME, and gather feedback from national and internationally audiences in the workshop at TRB.

(2) The team will continue making improvements to Prep-ME based on feedback from participating states. This task will continue till the end of this project.

(3) The team will continue working on FWD module and other remaining tasks for the Prep-ME software.

The tasks for the next quarter will focus on fine-tuning of Prep-ME to address the comments from the participating states during the face-to-face meeting.

The next quarterly report will identify more progresses on these activities.

Significant Results:

As scheduled, a new version of Prep-ME with many important new functions as required by the participating agencies such as daily traffic data check and clustering analysis has been delivered to the participating agencies in July 2013. The team has gained valuable feedback and comments from several DOTs, and started addressing their issues.

The Prep-ME face-to-face meeting was held in Louisville Kentucky on November 5 and 6. The OSU team attended the meeting and provided training of th new Prep-ME software.

A Prep-ME workshop is planned at the 2014 TRB meeting on Thursday January 16, 2014. To prepare for the workshop, several important improvements have been made based on the comments from the face-to-face meeting. A new version of User's Manual has been drafted and distributed to the participating states along with the new Prep-ME software in December.

The OSU team will work and coordinate with participating states on the preparation of presentations, attend and present the development of Prep-ME in the workshop at TRB in January 2014.

Circumstance affecting project or budget. (Please describe any challenges encountered or anticipated that might affect the completion of the project within the time, scope and fiscal constraints set forth in the agreement, along with recommended solutions to those problems).

There is no circumstance affecting the project or budget at this time.

Potential Implementation:

No new information on implementation at this time