**TRANSPORTATION POOLED FUND PROGRAM**

**QUARTERLY PROGRESS REPORT**

Lead Agency (FHWA or State DOT): \_\_\_\_\_IOWA DOT\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**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 #**  *TPF-5(081)* | | **Transportation Pooled Fund Program - Report Period:**  Quarter 1 (January 1 – March 31, 2013)  Quarter 2 (April 1 – June 30, 2013)  Quarter 3 (July 1 – September 30, 2013)  X Quarter 4 (October 4 – December 31, 2013) | |
| **Project Title:** Midwest Smart Work Zone Deployment Initiative | | | |
| **Project Manager: Phone: E-mail:**  Dan Sprengeler 515-239-1823 dan.sprengeler@dot.iowa.gov | | | |
| **Project Investigator: Phone: E-mail:**  Tom McDonald 515-294-6384 tmcdonal@iastate.edu | | | |
| **Lead Agency Project ID:**  RT 63 | **Other Project ID (i.e., contract #):**  Addendum 189 | | **Project Start Date:**  2001-On-going Pooled Fund |
| **Original Project End Date:**  On-going | **Current Project End Date:**  June 30, 2015 | | **Number of Extensions:**  None |

Project schedule status:

X On schedule □ On revised schedule □ Ahead of schedule □ Behind schedule

Overall Project Statistics:

|  |  |  |
| --- | --- | --- |
| **Total Project Budget** | **Total Cost to Date for Project** | **Total Percentage of Work**  **Completed** |
| $1,917,500 | $1,857,338.30 | On-going |

***Quarterly*** Project Statistics:

|  |  |  |
| --- | --- | --- |
| **Total Project Expenses**  **This Quarter** | **Total Amount of Funds**  **Expended This Quarter** | **Percentage of Work Completed**  **This Quarter** |
| $3,839.34 | N/A | On-going |

**Project Description:**

* Vendor Solicitation
* Distribute Group Reports
* Maintain website
* TAC meetings
* Maintain research report
* Recommend research reimbursement
* Solicit state participation
* Inquiry contact
* (On-going project)

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

Quarter Ending December 30, 2013:

Received and recorded final quarterly report information from all but one of the Principal Investigators (PIs) (who provided some summary information) for contracted projects. Communicated and met (by phone) with Board of Directors (BOD) to discuss 18 suggested problem statements for CY2014 request for proposal (RFP). Worked with BOD to select eight problem statements for RFP. Sent out RFP with some updated content to list of university contacts with December 23rd, 2013 deadline. Received seven proposals for six problem statements. Sent proposals out for ranking to funding members of BOD and suggestions by non-BOD members. Website maintained, two projects extended, and one draft report reviewed by BOD and posted. The following is a summary of accomplishments during the quarter for individual projects under contract.

2011 Program

* Influencing Work Zone Traffic Flow Through Variable Messaging Technologies, Missouri University of Science and Technology with Ming Leu as PI.

The project team has indicated all tasks were completed, except the final report. The final report is in completion and will be submitted soon. The PIs requested a no-cost extension to complete, have reviewed, and finalized the report for the project. Extension to March 15, 2014 was granted. This project is 98% complete.

2012 Program

* Development of a TL-3 Transition between Temporary Concrete Barrier and Guardrail, University of Nebraska with Ron Faller as PI.

During the 4th Quarter of 2013, researchers at MwRSF continued computer simulations of design concepts for the transition between portable concrete barriers and guardrail. The primary design concept that was explored involved the 31 in. MGS and F-shape PCB based on feedback from the sponsor as noted in the previous progress report.

A no-cost extension to 6/30/2014 was requested and granted for this project. It is approximately 75% complete.

* Effectiveness of Work Zone Intelligent Transportation Systems, University of Missouri with Praveen Edara as PI.

The draft final report was submitted for this project, reviewed by the BOD, and comments provided to the author. InTrans finalized the formatting and submitted to Iowa DOT as a final report. The report has been posted. The project is 100% complete.

* Effects of Road Construction Intensity and Operations on Rural Freeway Work Zone Capacity, Missouri University of Science and Technology with Ronaldo Luna as PI.

The team for this project had not submitted their final quarterly report by the deadline provided. Some draft summary information was provided. The project team worked on capacity evaluation with two methods, synthesized DOT survey results, quantified work zone intensity, and work on several sections of the project report. We have been told that the project is 57% complete. A no-cost extension to 12/30/14 was requested for this project in the 3rd quarter of 2013 and it was granted.

2013 Program

* Highway Work Zone Capacity Estimation using Field Data from Kansas State University, Kansas State University with Sunanda Dissanayake as PI.

Project is progressing well and the project team with the assistance of KDOT identified several locations for field data collection. Counters were utilized at each of the identified sites to collect the field data. Sorting out and analyzing the collected data have just been started. A TAC meeting was held on October 4, 2013. The project is 40% complete.

* Modeling Merging Behavior at Lane Drops, Iowa State University with Shauna Hallmark as PI.

For quarter ending December 31, 2013. Task 1 is complete. The team has summarized information on driver behavior and simulation modeling. Task 2 is complete. Task 3, none of the sites identified for the 2013 season were feasible. The team will work with the TAC to identify sites for the 2014 construction season. The team has one work zone site where driver behavior, speed, and volume were collected. This is being used as one scenario in the simulation. Task 4 has not yet been started, and for Task 5 the speed, volume, and driver merge behavior along with roadway geometry is available for one site. Task 6 has not yet been started. The project is 12% complete.

* Intelliroute: A Smart Phone – Base Real Time Work Zone Detour Information System Driven by Crowd Source Data, University of Wisconsin-Milwaukee with Yue Liu as PI.

Data feeds all parsed. Implement in Python the retrieval of 511LCS XML. Implement in Visual Studio to store the 511LCS XML information in SQL server. Application development is ongoing. The project is 40% complete.

* Calibration of Highway Safety Manual Work Zone Crash Modification Factors, University of Missouri-Columbia with Carlos Sun as PI.

For this quarter. Task 1 – the identification of work zone sites and crash data types is continuing. Task 2 – work zone crash models developed from California data were analyzed and a similar procedure will be followed in the development of Midwest models.

**Anticipated work next quarter:**

Work will continue on contracted projects. The last of the currently contracted projects expires in late 2014. We will continue to work to close out research projects and then then current TPF number in the spring of 2015. A new solicitation number has been granted and it is anticipated to be used to fund the 2014 projects that will be granted. The ranking and selection of these projects should occur in the coming months. Contracting efforts will begin soon after.

**Circumstance affecting project or budget (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).**

No problems to report.