

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.

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| Transportation Pooled Fund Program Project # TPF-5(295) | | Transportation Pooled Fund Program - Report Period: Quarter 1 (January 1 – March 31, 2021) X Quarter 2 (April 1 – June 30) Quarter 3 (July 1 – September 30) Quarter 4 (October 1 – December 31) | |
| Project Title: Midwest Smart Work Zone Deployment Initiative | | | |
| Name of Project Manager(s): Dan Sprengeler | Phone Number: 515-239-1823 | E-Mail Dan.Sprengeler@dot.iowa.gov | |
| Lead Agency Project ID: Keith Knapp | Other Project ID (i.e., contract #): Addendum 535 | Project Start Date: July 1, 2014 | |
| Original Project End Date: June 30, 2020 | Current Project End Date: December 31, 2021 | Number of Extensions: None | |

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 |
|-----------------------|--------------------------------|--------------------------------------|
| \$1,425,000 committed | \$1,286,497.60 | 50% (of extension) |
| | | |

Quarterly Project Statistics:

| Total Project Expenses and Percentage This Quarter | Total Amount of Funds Expended This Quarter | Total Percentage of Time Used to Date |
|--|---|---------------------------------------|
| \$29,564.25 | | 100 |

Project Description:

The Midwest Smart Work Zone Deployment Initiative (MwSWZDI) was initiated in 1999 as a Federal Highway Administration (FHWA) Pooled Fund Study intended to coordinate and promote research among the participating states related to safety and mobility in highway work zones.

The program is an ongoing cooperative effort between State Departments of Transportation, universities, and industry. The studies completed have consisted of evaluations of various work zone related products, various innovative topics, and several synthesis studies. Completed reports and descriptions of ongoing projects can be obtained at the Iowa State University's Institute for Transportation (InTrans) website (www.intrans.iastate.edu/smartwz/) link to the Smart Work Zone Deployment Initiative. InTrans currently operates as the program manager of the pooled fund efforts and completes administrative tasks related to request for ideas and proposals, meetings, project files, quarterly reports, and recommending reimbursement.

Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):**Quarter Ending June 30, 2021 (Overall)**

During this quarter we communicated with principal investigators as needed and resolved typical progress issues if they occurred. Concerns have been raised about the progress of two projects. One of these projects is currently being funded on this account. It was ultimately determined that no new work should be completed on the "Field Testing of Non-Motorized Road User Accommodations for Work Zones" project and a report should be created that includes a summary of the literature and a detailed documentation of the efforts completed for the test track task. The objective is have a report available to the SWZDI pooled fund for any potential follow up project that may include the implementation of the test track. The principal investigator of this project was asked to hold a TAC meeting (held June 22, 2021), provide monthly progress reports to the SWZDI program coordinator and his TAC project monitor, and complete a final approved project report (ready for posting) no later than October 31, 2021.

Two projects from Program Year 2019 contracts progressed (see below) and are the remaining focus of this project number. The 2020 to 2022 PY projects of the SWZDI pooled fund are discussed in another quarterly report.

The following is a summary of accomplishments provided by the project principal investigators for the April to June 2021 time period for their individual research projects underway with fund account TPF-5(295).

2019 Program Projects

The following projects were selected for 2019 program year funding.

- Field Testing of Non-Motorized Road User Accommodations for Work Zones, Iowa State University, John Shaw as PI.

TAC meeting held June 22, 2021. Tasks 4 and 5 canceled and remaining funds released. Working on project wrap-up.

This work was contracted for 1/1/2019 to 3/31/2020 and was extended to December 31, 2020. It has was extended to March 31, 2021 and was extended again to December 31, 2021. Additional informational about the current status of this project is described in the "Quarter Ending June 30, 2021 (Overall) paragraph above. The principal investigator has indicated that this project is 75% complete.

- Investigation of Autonomous/Connected Vehicles in Works Zones, University of Missouri-Columbia, Carlos Sun as PI.

The human subject trials were successfully completed. Despite COVID, people are comfortable with participating in the simulator study. Data analysis and reduction has begun.

Please note that internal funds are now being used to complete the project. This was due to the COVID shutdown and the need for no-cost extending the project.

This project was contracted to start on 4/15/2019 and end on 7/31/2020. It was extended to March 31, 2021 and extended again to December 31, 2021. The project is 80 percent.

Anticipated work next quarter:

Work will continue to finalize the two 2019 projects listed above. These two projects were extended to the end of 2021 due to impacts of COVID. The principal investigator for the Iowa state University project has been told to finish by October 2021 and the University of Missouri-Columbia principal investigator has indicated he expects to have a report completed by August 2021.

Significant Results:

Work continued on the two projects above.

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

Currently there are no problems to report with the administrative contract. The COVID 19 situation has impacted the progress of the two 2019 projects and the status of each project has been described above.

Potential Implementation:

The website for the SWZDI pooled fund is updated on a regular and as needed basis for finished reports.