

## TRANSPORTATION POOLED FUND PROGRAM QUARTERLY PROGRESS REPORT

Date: March 31, 2024

Lead Agency (FHWA or State DOT): Indiana 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.*

<b>Transportation Pooled Fund Program Project #</b> <i>(i.e., SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX))</i>  <u><b>TPF 5-387</b></u>	<b>Transportation Pooled Fund Program - Report Period:</b> <input checked="" type="checkbox"/> Quarter 1 (January 1 – March 31) <input type="checkbox"/> Quarter 2 (April 1 – June 30) <input type="checkbox"/> Quarter 3 (July 1 – September 30) <input type="checkbox"/> Quarter 4 (October 1 – December 31)	
<b>Project Title:</b> <b>Development of an Integrated Unmanned Aerial Systems (UAS) Validation Center</b>		
<b>Name of Project Manager(s):</b> Tommy E. Nantung	<b>Phone Number:</b> (765) 463-1521 ext. 248	<b>E-Mail</b> <a href="mailto:tnantung@indot.in.gov">tnantung@indot.in.gov</a>
<b>Lead Agency Project ID:</b>	<b>Other Project ID (i.e., contract #):</b>	<b>Project Start Date:</b> 9/1/2018
<b>Original Project End Date:</b> 8/31/2022	<b>Current Project End Date:</b> 2/28/2025	<b>Number of Extensions:</b> TWO

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**
<b>\$700,000</b>	<b>\$632,380</b>	<b>98%</b>

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date**
<b>\$7,947</b>	<b>1.1%</b>	<b>82%</b>

\*\*Since end date has been extended, project percentages have been updated (estimates)

**Project Description:**

This study proposes to develop the basic standards, protocols, and testing requirements that a given UAS must meet and demonstrate for a particular application.

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

- Prepared a proposal for the implementation phase of the pooled fund project. The proposal summarizes the pooled fund project deliverables, details a methodology to move research into practice, and the specific tasks to be performed during Phase II. The proposal was shared with all the partner states, and the research team is collecting responses and feedback.
- Requested and received approval for a no-cost time extension to keep the current pooled fund open by extending the original study. The objective of the no-cost time extension is to reduce paperwork derived from opening a new pooled-fund study and allow state partners and additional states to commit additional budgets towards the implementation phase.
- Per the Project partners' suggestion, the Research Team has continued disseminating the project's early results on national platforms and to other DOTs. The Research Team presented at the Transportation Research Board Annual Meeting to an audience of DOT representatives, industry, and academia. Representatives from DOT in non-partner states showed interest in the implementation part of the project.
- Presentation to Army Corps of Engineers representatives regarding project deliverables and implementation proposal. The representatives will share the deliverables with Federal Highway Administration representatives. In addition, the Army Corps expressed its willingness to contribute to the beta-testing phase and showed interest in the implementation phase.
- Revised and implemented feedback regarding the rubric methodology for the evaluation chamber and practical test procedure based on beta-testing from the Project partner and revision from assessment experts. The final version of the rubric methodology will be modified according to the feedback provided by partners and users.
- Implemented feedback and edits into the final report. The report will include additional feedback from future visitors and allow flexibility to revise further during the implementation phase.

**Anticipated work next quarter:**

- Reach out to partner and additional states to share the implementation phase proposal and ask about their interest in committing additional budgets towards implementing the project deliverables in their state. The proposal details the tasks, the additional budget, and the possibility of cost-sharing through regional implementations.
- The Research Team will continue disseminating the project's results and implementation proposal on national platforms and DOTs. In June, the team will present at The Committee on Bridges & Structures Annual Meeting to DOT representatives, industry, and academia. Additional opportunities will be arranged later in the quarter.
- Continue to bring various bridge inspectors to the S-BRITE center to get real-world feedback on the tests. The next visitors, the Army Corps of Engineers and Federal Highway Administration representatives are scheduled for the end of April. The feedback and data the visitors provide will be used to improve the current test procedures and scoring for evaluating the performance of UAS used in bridge inspection.
- Work with Project partners to coordinate future visits for beta-testing at the S-BRITE center and provide details regarding the implementation phase.
- Revise test methodology and procedures according to the feedback provided during beta testing.
- Continue working on the final report for the pooled fund project. The report will contain feedback and validation from partners and visitors.

**Significant Results:**

**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).**

**Potential Implementation:**

None to date