

TRANSPORTATION POOLED FUND PROGRAM QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): Iowa Department of Transportation

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 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 (435)		Transportation Pooled Fund Program - Report Period: Quarter 1 (January 1 – March 31, 2022) Quarter 2 (April 1 – June 30, 2022) X Quarter 3 (July 1 – September 30, 2022) Quarter 4 (October 4 – December 31, 2022)	
Project Title: Aurora Program			
Project Manager: Tina Greenfield		Phone: 515-233-7746	E-mail: tina.greenfield@dot.iowa.gov
Project Investigator: Zach Hans		Phone: 515-294-8103	E-mail: zhans@iastate.edu
Lead Agency Project ID:	Other Project ID (i.e., contract #): Addendum 731	Project Start Date: January 1, 2020	
Original Project End Date: December 31, 2021	Current Project End Date: 12/31/2023	Number of Extensions:	

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
\$2,041,341	\$1,043,332	

Quarterly Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Completed This Quarter
\$174,896	N/A	

Project Description:

The Aurora Program is a consortium of public agencies focused on collaborative research, evaluation, and deployment of technologies for detailed road weather monitoring and forecasting. Members seek to implement advanced road weather information systems (RWIS) that fully integrate state-of-the-art roadway and weather forecasting technologies with coordinated, multi-agency weather monitoring infrastructures; ultimately lessening adverse impacts of inclement weather.

Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.). These efforts are identified below.

Program Administrative Activities:

- Managed Aurora website, including updating news, linking 4th National Winter Maintenance and Road Weather Briefing presentation, adding general research calendar, addressed question regarding knowledge base”, updated images.
- Managed Aurora email list. In some cases, states requested multiple individuals be included in Aurora-related correspondence.
- Upon request from NDDOT Maintenance Division Director, coordinated an Aurora project “Roadway Friction Modeling: Improving the Use of Friction Measurements in State DOTs” presentation at the AASHTO Committee on Maintenance 2023 Annual Meeting. John Hart, Iowa DOT Maintenance Bureau Director, agreed to make the presentation. This included requested the final project presentation from the research team, preparing draft presentations, and coordinating with John Hart regarding content.
- Distributed link to Caltrans material presented at the Spring 2023 meeting.
- Updated Alaska representative.
- Distributed list of project champions and team members.
- Distributed request for example RWIS contracts from member state to Board. Responses were shared among the Board.
- Provided Aurora contact list to Board member.
- At the request of a Board member, shared project team lists for recent image analysis projects.
- Distributed information about FHWA one-hour (virtual) conversation geared toward Cities and discussing Adaptive Route Optimization. Shared information regarding interested participants.
- Redistributed two uninstalled non-invasive sensors from a previous research project to two interested member states.
- Addressed commitment related questions from a member state, coordinating with the Iowa DOT.
- Addressed several questions regarding 2023 project ideas submissions and Board feedback.

Facilitate Meetings and Conference Calls:

- Planned and held Fall 2023 Meeting in Portland, Maine. This included the following.
 - Arranged travel and accommodations for Board members.
 - Contracted with venue.
 - Prepared agenda, including field trips, group meals, project presentations (final and kick off), FHWA presentations, business items, etc.
 - Provided transportation for field trips.
 - Arranged virtual participation option.
 - Prepared and distributed meeting minutes for review.
- Facilitated or participated in all project-related meetings.
- Hosted Board member 60-Minute monthly conference calls on the following dates and requested topics from Board.
 - July 13, 2023 – New project update, AASHTO award and presentations, fall meeting, spring meeting reimbursement and Caltrans materials, new Alaska representative

- August 10, 2023 – IDSS packets, RFP repository, fall meeting, new project update
- Addressed questions regarding Fall meeting attendance from member states.
- Begin investigating travel options/costs and possible venues for Spring 2024 meeting.

Processing Travel Requests, Travel Reimbursements, and Meeting Expenses:

- Processed travel reimbursement requests for Spring and Fall 2023 meetings.
- Arranged travel for Board members attending the Fall 2023 meeting.
- Processed venue-related contract expenses.
- Processed other meeting-related expenses, e.g. group meals, van rental, etc.

Project-Specific Activities:

- Coordinated with Iowa DOT regarding new project contracting status.
- Addressed questions from idea and project proposers.
- Tracked project status and prepared a summary for recently completed and active projects.
- Distributed quarterly reports.
- Reviewed and approved invoices and submitted to the Iowa DOT for payment.
- 2020-02 Roadway Ice/snow Detection using a Novel Infrared Thermography Technology
 - Coordinated with Iowa DOT regarding project end date and deliverables.
 - Requested and received project update.
 - Shared project report template.
 - Shared draft project report to project team for review and feedback.
- 2021-05 Optimal RWIS Sensor Density and Location Ph IV
 - Distributed quarterly reports.
 - Reviewed and approved invoices.
 - Schedule project update for Spring 2023 meeting.
- 2022-07 Evaluation of Spring Load Restriction Removal Protocols
 - Distributed quarterly reports.
 - Approved invoices and shared with NDOT.
 - Requested availability of project team for final project meeting.
 - Distributed quarterly report.
 - Distribute draft final report to project team for review and feedback.
- 2022-08 Integration of Connected Vehicle and RWIS Technologies
 - Reviewed draft products.
 - Coordinated with the Iowa DOT and project team regarding a no cost extension.
 - Discussed scheduling a project update meeting.
- 2022-10 Automating Variable Speed Limits Using Weather, Traffic, and Friction Data
 - Reviewed and approved invoices.
 - Distributed quarterly report.
- 2011-02 RWIS Training Tool
 - Processed monthly invoices for AWS hosting.
- 2023-01 Real User Friction for Winter Maintenance Operation and Evaluation [Nira Dynamics]
 - Held project kick off meeting.
 - Shared contact information for login access to web tool.
 - Attempted to coordinate a follow up meeting regarding project tasks, which is still in progress.
- 2023-03 Road Weather Management using Connected Vehicle technology [WSP]

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- Held kick off meeting.
- 2023-02 An Intelligent Human-Centric Communication System for Adverse Weather and Road Conditions [University of Iowa]
 - Held kick off meeting.

Anticipated work next quarter:

Program Administrative Activities:

- Continue Aurora website updates.
- Manage budget.
- Update the Aurora Charter, Work Plan and Associate Members, as needed.
- Address requests, as needed.
- Coordinate with Clear Roads regarding possible 2025 Peer Exchange.
- Begin work on 2024 idea solicitations.

Facilitate Meetings and Conference Calls:

- Continue monthly Board meeting calls to generate research ideas, discuss important issues and have vendor presentations.
- Plan Spring 2024 meeting, including select venue and prepare draft agenda.
- Schedule and host project meetings for existing and new projects.
- Calculate Fall 2023 meeting costs.
- Invite Friends of Aurora presentations during monthly meetings.

Processing Travel Requests, Travel Reimbursements, and Meeting Expenses:

- Process any outstanding Fall 2023 expenses, including travel reimbursement requests.
- Estimate anticipated 2024 onsite meeting budget.

Project-Specific Activities:

- Schedule and host project meetings for existing and new projects.
- Track project status and timelines.
- Request quarterly reports from research teams.
- Distribute project materials/updates to project teams.
- Maintain list of project champions and team members.
- For all current projects:
 - Facilitate project activities as needed.
 - Continue to receive and distribute project updates.
 - Coordinate updates, if necessary.
 - Review invoices.
- 2020-02 “Roadway Ice/snow Detection using a Novel Infrared Thermography Technology”.
 - Have final report reviewed and edited by Publications and have Publications create a tech transfer document.
 - Publish final report and tech transfer.
 - Pay remaining invoice.
- 2021-05 Optimal RWIS Sensor Density and Location Ph IV
 - Track project progress.
- 2022-10 Automating Variable Speed Limits Using Weather, Traffic, and Friction Data

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- Track project progress.
- 2022-08 Integration of Connected Vehicle and RWIS Technologies
 - Track project progress.
 - Schedule a project update meeting.
- 2022-07 Evaluation of Spring Load Restriction Removal Protocols
 - Receive report feedback from project team.
 - Hold final project meeting.
 - Have final report and tech transfer reviewed and edited by Publications.
 - Publish final report and tech transfer.
- 2011-02 RWIS Training Tool
 - Consider discontinuing AWS.
- 2023-01 Real User Friction for Winter Maintenance Operation and Evaluation [Nira Dynamics]
 - Hold a follow up meeting regarding project tasks,
 - As members begin using the tool, have Nira involved in a monthly meeting to address questions.
- 2023-03 Road Weather Management using Connected Vehicle technology [WSP]
 - Track project progress.
- 2023-02 An Intelligent Human-Centric Communication System for Adverse Weather and Road Conditions [University of Iowa]
 - Track project progress.
 - Discuss involvement of other member states.
- 2023-04 Standardized Framework for Winter Weather Road Condition Indices [Iowa State University]
 - Hold kick off meeting.

Significant Results:

- Held Fall 2023 meeting, prepared meeting minutes and processed meeting-related expenses.
- Continued monthly Board meeting calls.
- Added to Friends of Aurora membership.
- Prepared presentations.
- Began several new projects.

Circumstance affecting project or budget:

- Recent meeting expenses will be assessed.