

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, 2021) Quarter 2 (April 1 – June 30, 2021) Quarter 3 (July 1 – September 30, 2021) X Quarter 4 (October 4 – December 31, 2021)	
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: 12/31/2021	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
\$850,000	\$317,228.32	

Quarterly Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Completed This Quarter
\$119,636.37	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 email list. In some cases, states requested multiple individuals be included in Aurora-related correspondence.
- Updated the Washington DOT representative to Doug Gow.
- Continued tracking state commitments.
- Facilitated discussions via auroraboard@iastate.edu, including,
 - DMS weather messaging
 - Equipment parts list and compatibility chart
 - Boschung R-Condition sensor data access
 - RWIS maintenance and operations contracts
- Collected and assimilated member submissions of equipment parts list and compatibility chart, including Arizona DOT, North Dakota DOT, Michigan DOT, Utah DOT.
- Provided program management in terms of projects and program budgets.
- Updated Aurora website content.
- Coordinated regarding future eNews, including timing, content and mailing list.
- Coordinated with Iowa DOT regarding possible winter maintenance peer exchange use of funds.
- Upon request, provided an Aurora overview and project status updates to North Dakota DOT.
- Obtained list of possible, qualified researchers for pending “Integration of Connected Vehicle and RWIS Technologies” white paper.
- Discussed process for tracking/following up with state DOTs regarding commitments.
- Distributed Illinois Mobile RWIS survey questionnaire to Board in support of an Illinois DOT research project.
- Shared relevant, non-Aurora project report with Board, [Evaluation of Road Weather Messages on DMS Based on Roadside Pavement Sensors](#).
- Held Fall 2021 meeting.
- Prepared and submitted draft support scope of work and budget to Iowa DOT.
- Followed up with AASHTO SICOP regarding possible peer exchange or joint meeting with Clear Roads in Fall 2022.

Facilitate Meetings and Conference Calls:

- Facilitated or participated in all project-related meetings, including:
 - Automated Extraction of Weather Variables from Imagery – December 7, 2021.
 - Fall Meeting in Phoenix, Arizona, October 12 – 14, 2021
 - Prepared agenda and arranged field trips.
 - Eight Board members attended in person. A virtual option was provided for those who were unable to attend in person.
 - Arrange travel for Board members attending in-person, including utilizing flight credits from the spring 2020 meeting that went entirely virtual.

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- Hosted Board member 60-Minute monthly conference calls on the following dates. This included rescheduling the November meeting due to Veterans Day. No conference call was held in October due to the Fall meeting.
- November 16, 2021
 - Fall Meeting
 - New Projects
 - Non-Invasive Sensors
 - Draft Scope: Integration of Connected Vehicle and RWIS Technologies
 - Winter Weather Messaging (Iowa)
 - New Winter Initiatives
 - RWIS Equipment Parts List and Compatibility Chart
- December 9, 2021
 - Alaska Q & A
 - Spring Meeting Planning
 - Project Update
 - Other Action Items
 - New Winter Initiatives

Processing Travel Requests, Travel Reimbursements, and Meeting Expenses:

- Arranged travel for Board members attending Fall 2021 in-person, including utilizing flight credits from the spring 2020 meeting that went entirely virtual.
- Processed travel reimbursements for all Board members who attended the Fall meeting in person.
- Processed all meeting expenses, including group meals, group transportation and venue (meeting room rental, room setup fees, food expenses and Board rooms).

Project-Specific Activities:

- Tracked project status and prepared a summary for recently completed and active projects.
- Distributed quarterly reports and invoices for project team approval.
- Upon approval, submitted invoices to the Iowa DOT for payment.
- 2020-02 “Roadway Ice/snow Detection using a Novel Infrared Thermography Technology”.
 - Distributed quarterly report to project team and invoices, for approval, to project team.
 - Shared project update presentation with Paul Pisano (TRB Road Weather Committee chair).
- 2020-03 Roadway Friction Modeling
 - Coordinated with WTI and MnDOT on MnROAD field testing.
 - Coordinate among WTI and pertinent Board members regarding possible sensors available for testing at MnROAD.
 - Upon request, provided recent project update presentation to Ohio DOT.
 - Distributed quarterly report to project team and invoices, for approval, to project team.
- 2021-06 Automated Extraction of Weather Variables from Imagery
 - Coordinated with Iowa DOT regarding contract status.
 - Facilitated project kick-off meeting, which was held on December 7, 2021.
 - Shared recorded meeting with research team.
- 2021-05 Optimal RWIS Sensor Density and Location Ph IV
- Pending “Applications and Integration of Connected Vehicle Data and RWIS”
 - Distributed draft request for white paper for project team for feedback.

Anticipated work next quarter:

Program Administrative Activities:

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- Continue Aurora website updates.
- Manage budget.
- Track new solicitation contributions.
- Update the Aurora Charter, Work Plan and Associate Members, as needed.
- Finalize vendor list and distribute RFP for “Integration of Connected Vehicle and RWIS Technologies”.

Facilitate Meetings and Conference Calls:

- Continue monthly Board meeting calls to generate research ideas, discuss important issues and have vendor presentations.
- Plan for Spring 2022 meeting.

Processing Travel Requests, Travel Reimbursements, and Meeting Expenses:

- If appropriate, identify a Spring 2022 meeting venue and begin scheduling travel.

Project-Specific Activities:

- Track project status and timelines.
- Request quarterly reports from research teams.
- Distribute project materials/updates and invoices (for approval) to project teams.
- Schedule and host project meetings.
- Maintain list of project champions and team members.
- 2020-02 “Roadway Ice/snow Detection using a Novel Infrared Thermography Technology”.
 - Continue to receive and distribute project updates.
 - Coordinate updates, if necessary.
- 2020-03 Roadway Friction Modeling
 - Facilitate project activities as needed.
 - Coordinate updates, if necessary.
- 2021-06 Automated Extraction of Weather Variables from Imagery
 - Facilitate project activities as needed.
 - Coordinate updates, if necessary.
- 2021-05 Optimal RWIS Sensor Density and Location Ph IV
 - Hold kick-off meeting.
 - Facilitate project activities as needed.
 - Coordinate updates, if necessary.

Significant Results:

- Held Fall 2021 meeting.
- Continued monthly Board meeting calls.
- Communicated with new Aurora representatives.
- Held project-related meetings.

Circumstance affecting project or budget: