

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(437)	Transportation Pooled Fund Program - Report Period: Quarter 1 (January 1 – March 31, 2024) X Quarter 2 (April 1 – June 30, 2024) Quarter 3 (July 1 – September 30, 2023) Quarter 4 (October 1 – December 31, 2023)	
Project Title: Technology Transfer Concrete Consortium (TTCC) TPF-5(437)		
Project Manager: Khyle Clute	Phone: 239-1471	E-mail: khyle.Clute@iowadot.us
Project Investigator: John Adam	Phone: 294-3781	E-mail: jfadam@iastate.edu
Lead Agency Project ID:	Other Project ID (i.e., contract #): Addendum 732	Project Start Date: 2/5/20
Original Project End Date:	Contract End Date: 12/31/24	Number of Extensions: Incremental funding, PFS

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	Total Percentage of Work Completed
\$1,817,000	\$1,563,754	NA

Quarterly Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Completed This Quarter
\$621,015	N/A	N/A

Project Description:

Increasingly, state departments of transportation (DOTs) are challenged to design and build longer life concrete pavements that result in a higher level of user satisfaction for the public. One of the strategies for achieving longer life pavements is to use innovative materials and construction optimization technologies and practices. In order to foster new technologies and practices, experts from state DOTs, Federal Highway Administration (FHWA), academia and industry must collaborate to identify and examine new concrete pavement research initiatives. The purpose of this pooled fund project is to identify, support, facilitate and fund concrete research and technology transfer initiatives.

The goal of the TTCC is to:

- Identify needed research projects
- Develop pooled fund initiatives
- Provide a forum for technology exchange between participants
- Develop and fund technology transfer materials
- Provide on-going communication of research needs faced by state agencies to the FHWA, industry, and CP Tech Center

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

- Information and PowerPoints from the Spring 2024 meeting held April 9-11 are available: <https://cptechcenter.org/nc2-meetings/>
- The meeting had 183 attendees, with 64 TTCC reps
- A brief meeting summary is attached.
- Planning for the Fall 2024 meeting in Minneapolis, Mn., in conjunction with ISCP Conference, Aug. 26-29.
- One half day meeting time slot is being planned – states only based agenda. Agenda is under development.
- NC2 attendees are participating in ISCP through poster sessions, moderating sessions, or presenting.

Assignments are still being finalized.

- Venue and hotel arrangements have been finalized
- E-news and MAP Brief was published in Spring: <https://us10.campaign-archive.com/?u=4bf55bc365dca0e5c928442da&id=95f3783143>
- MAP Brief on Climate Change, Resilience, and Concrete Pavements: https://intrans.iastate.edu/app/uploads/2023/05/climate_change_resilience_and_concrete_pvmts_spring_2023_MB.pdf
- News from the field includes
 - Florida DOT Opens Concrete Test Road
 - Fiber Reinforced Concrete for Bridge Deck Overlays
 - Establishing Fresh Properties of Fiber Reinforced Concrete for PEM
 - Evaluation of Current WI Mixes Using Performance Engineered Mixture Testing Protocols

Anticipated work next quarter (July - September):

- Fall 2024 meeting in Minneapolis, Mn. Aug. 26-29.
- Fall planning meeting scheduled for July 15.
- E-news and MAP Brief will be published during the next quarter.

Significant Results:

See <http://www.cptechcenter.org/ncc/TTCC-NCCMeetings.cfm>

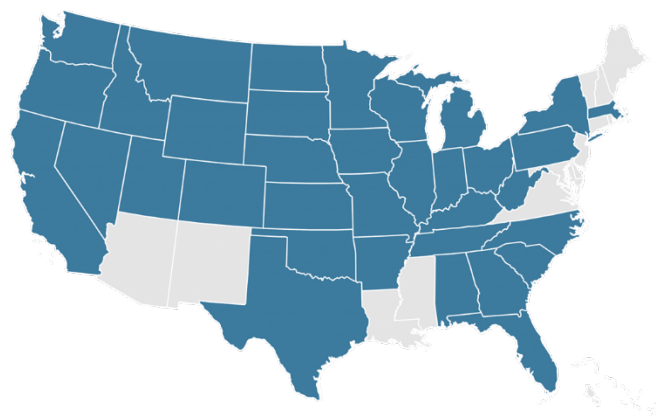
Circumstance affecting project or budget (Describe any challenges encountered or anticipated that might affect the completion of the project within the time, scope, and fiscal constraints set forth in the agreement, along with recommended solutions to those problems). N/A

There are 35 TTCC TPF 5(437) TAC member states. Representative attendance varies by meeting.

Alabama	2	Illinois	2	Minnesota	2	North Dakota	2	Tennessee	2
Alabama	1	Indiana	4	Missouri	2	Ohio	2	Texas	4
California	3	Iowa	2	Montana	2	Oklahoma	2	Utah	1
Colorado	1	Kansas	4	Nebraska	2	Oregon	1	Washington St	1
Florida	2	Kentucky	2	Nevada	2	Pennsylvania	1	West Virginia	2
Georgia	4	Massachusetts	2	New York	2	South Carolina	2	Wisconsin	1
Idaho	2	Michigan	2	North Carolina	2	South Dakota	2	Wyoming	1

Spring 2024 National Concrete Consortium Highlights

Birmingham, Alabama – April 9-11, 2024



TTCC TPF 5(437)

35 Member States + Illinois
Tollway

The 3-day spring meeting of the National Concrete Consortium (NC²), hosted by the Alabama DOT, brought together the expertise and experience of 173 attendees representing xx member states, FHWA, academia, and industry in an event focused on improving concrete performance and structural concrete applications. Dan Miller, Administrator of the Ohio DOT Office of Materials Management, is the current chairperson. The meeting agenda and technical presentation slides are available on the NC² website <https://cptechcenter.org/national-concrete-consortium/>.

The agenda listed 22 presenters: 4 from state agencies, 2 from FHWA, 5 from academia, 11 from industry.

Meeting presentation highlights include:

- **General Session:**
 - Welcome - Alabama DOT Director of Operations, George Conner
 - State Reports Summary – Dan Miller, Maria Masten – Pre-cast Concrete Topics, Agency Mix Design Trial Batch Requirements.
- **Executive Committee Election**

- **FHWA and Research Updates**
 - Inflation Reduction Act
 - FHWA Mobile Concrete Lab Update
 - NIST Low Carbon Cements and Concrete Consortium
 - AASHTO Update – Low Carbon Guide, Maturity, PEM Precision and Bias
- **Future Changes in Cement Chemistry**
 - Industry Perspective- Jim Mack, CEMEX
 - Working with Future Changes in Cement Chemistry
- **Opening to Traffic and Pavements**
 - I59 Alabama Mainline Paving Project
 - Success Stories of Field Projects
 - Mentimeter Activity: Opening Strength, Opening to and Maintenance of Traffic, Q & A
- **Digital Construction Technology**
 - Iowa DOT E-Ticketing
 - Utah DOT Use of ESRI and Survey123 for MDMS
 - AASHTO MDM-1-Materials Delivery Management System and MnDOT Implementation Plan
- **Curing and Sawing / Technical Tours**
 - Curing and Sawing
 - City Walk Tour – Birmingham
 - NUCOR Steel Plant Overview and Tour
- **TTCC TPF 5(437) TAC Meeting – for state agency members**
- **NC2 IMCP TTCC Training; ½ Day Workshop**

Future meetings:

- The spring 2025 NC² meeting will be co-hosted by Illinois DOT and the Illinois Tollway. Dates have not yet been determined. Location is being planned for Rosemont, Ill.
- MassDOT has volunteered to host the fall 2025 meeting.