

## 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.*

<b>Transportation Pooled Fund Program Project #</b> TPF-5(313)	<b>Transportation Pooled Fund Program - Report Period:</b> Quarter 1 (January 1 – March 31, 2018) X Quarter 2 (April 1 – June 30, 2018) Quarter 3 (July 1 – September 30, 2018) Quarter 4 (October 1 – December 31, 2018)	
<b>Project Title:</b> Technology Transfer Concrete Consortium (TTCC) TPF-5(313)		
<b>Project Manager:</b> Brian Worrel	<b>Phone:</b> 239-1471	<b>E-mail:</b> brian.worrel@dot.iowa.gov
<b>Project Investigator:</b> Steve Tritsch	<b>Phone:</b> 294-8103	<b>E-mail:</b> ptaylor@iastate.edu
<b>Lead Agency Project ID:</b> RT 0273	<b>Other Project ID (i.e., contract #):</b> Addendum 532	<b>Project Start Date:</b> 2/5/15
<b>Original Project End Date:</b>	<b>Contract End Date:</b> 12/31/2019	<b>Number of Extensions:</b> Incremental funding, PFS

Project schedule status:

On schedule       On revised schedule       Ahead of schedule       Behind schedule

Overall Project Statistics:

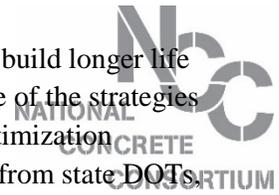
Total Project Budget	Total Cost to Date for Project	Total Percentage of Work Completed
\$1,520,000	\$944,264.03	NA

Quarterly Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Completed This Quarter
\$150,166.03	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
- Provide guidance as part of the Track Team for the CP Road Map Mix Design/Analysis Track
- Provide assistance as requested by the CP Road Map Executive Committee on other select tracks

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

- Spring meeting was held in Coeur d'Alene, Idaho, April 24-26 with a total attendance of 155; 60 state reps
- The meeting summary is attached. PowerPoint information and other details from the spring meeting can be found at: <http://www.cptechcenter.org/ncc/TTCC-NCC-2018/>
- Reimbursements and expenses for the spring meeting have been paid
- Planning for the 2018 Fall meeting, scheduled for September 18-20 in Saratoga Springs, New York
- Hotel contracts for the Holiday Inn in Saratoga Springs have been signed and speakers are being contacted.

### Anticipated work next quarter:

- Continued planning for the Saratoga Springs meeting.
- Writing a draft Problem Statement for continuation of the pooled fund project.

### 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).**

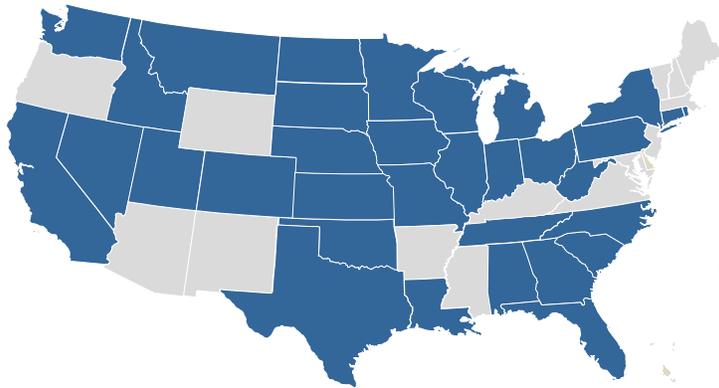
N/A

There are 33 TTCC TPF 5(313) TAC member states. Representative attendance varies by meeting.

State & # of Reps									
Alabama	2	California	1	Colorado	2	Florida	2	Georgia	4
Idaho	2	Illinois	2	Indiana	2	Iowa	2	Kansas	3
Louisiana	2	Massachusetts	2	Michigan	2	Minnesota	2	Missouri	1
Montana	2	Nebraska	1	Nevada	1	New York	1	North Carolina	2
North Dakota	2	Ohio	2	Oklahoma	2	Pennsylvania	1	Rhode Island	1
South Carolina	2	South Dakota	2	Tennessee	2	Texas	2	Utah	1
Washington	1	West Virginia	1	Wisconsin	1				

## Spring 2018 National Concrete Consortium Highlights

Coeur d'Alene, Idaho – April 24–26, 2018



TTCC TPF 5(313)

33 Member States + Illinois  
Tollway

2017 additions: Massachusetts  
and West Virginia

Guests: Arizona and Hawaii

The 2½-day spring meeting of the National Concrete Consortium (NC<sup>2</sup>) hosted by the Idaho DOT brought together the expertise and experience of 160 attendees from FHWA, 33 DOTs (66 individuals), the Illinois Tollway, academia, and industry in an excellent event focused on improving concrete performance and structural concrete applications. Maria Masten, Concrete Materials Engineer from the Minnesota Department of Transportation, is the current chairperson.

The State DOT reps meeting the first day included:

- CP Tech Center updates:
  - 2017 financial report
  - List serve survey
    - Questions asked via the TTCC list serve are summarized and available on the CP Tech Center website
  - TTCC TPF-5(313) Pooled Fund update
    - Pooled fund projects need to be renewed every five years; proposal for the next TTCC pooled fund project will be presented at the fall meeting.
  - **Fiber Reinforcement for Concrete Overlays and Bridges update** – completion date of December 31, 2018
    - Project TAC conference calls are held to review progress
    - Software tool for calculating fiber performance for concrete overlays is in progress.
    - Tech Brief for FRC for concrete overlays is in progress
    - Overview of FRC for bridge decks is in progress.
  - New CP Tech project (FHWA funded): EDC-4 peer-to-peer meetings and checklist updates
  - Topics and schedule for training will be at the Fall meeting
- State reports:
  - MN - Possible topics for the Fall meeting
  - MI – Staffing and workforce
  - IN – Internally cured bridge decks
  - NC – Ride specifications for bridge deck overlays
  - MN – SAM update

The general session consisted of 23 topics presented by representatives from 5 state agencies, 3 from FHWA, 3 from academia, and 4 from the industry sector. The technical tour visited the I-90 project on the Montana border.

Meeting presentation highlights include

- Performance Engineered Mixtures:
  - Updates from the National Concrete Pavement Technology Center,
  - TPF-5(368) Pooled fund update
  - FHWA Mobile Concrete Lab
  - Turner Fairbanks Research Center program update
  - Michigan and Idaho implementation initiatives and experiences
- Latex Modified Bridge Deck Overlays:
  - North Carolina and Missouri experiences
- Alternatives to the Traditional Way:
  - Alternate cementitious materials
  - Reclaiming coal ash from legacy ponds by a burn-out process to increase quality and quantity
  - The evolution of new test methods for transport properties of concrete and resistance to freezing and thawing. Using the bucket test to determine the formation factor.
  - Research on a new method to measure water-cement ratio of concrete and on factors to consider for formwork removal.
- NCC States report on:
  - Types of reinforcement
  - Mass concrete
  - Self-Consolidating Concrete
- Reinforcement – which one to choose
- ACI – fiber reinforced polymer specification.
- Ongoing Research:
  - New method to measure w/c ratio in fresh concrete
  - ODOT/MnDOT formwork removal research
  - Concrete in an aggressive salt environment
- Election of new Executive Board members was held, and the following members now serve on the Executive Board:

Name	Organization	E-Mail	Representing	Term Expires
Neal Fannin	PA DOT	<a href="mailto:nfannin@pa.gov">nfannin@pa.gov</a>	AASHTO Region 1-2	2019
Drew Waldrop	AL DOT	<a href="mailto:waldropa@dot.state.al.us">waldropa@dot.state.al.us</a>	AASHTO Region 1-2	2020
James Krstulovich	IL DOT	<a href="mailto:james.krstulovich@illinois.gov">james.krstulovich@illinois.gov</a>	AASHTO Region 3	2019
Dan Miller	OH DOT	<a href="mailto:daniel.miller@dot.ohio.gov">daniel.miller@dot.ohio.gov</a>	AASHTO Region 3	2020
Lieska Halsey	NE DOT	<a href="mailto:lieska.halsey@nebraska.gov">lieska.halsey@nebraska.gov</a>	AASHTO Region 4	2019
Eric Prieve	CO DOT	<a href="mailto:eric.prieve@state.co.us">eric.prieve@state.co.us</a>	AASHTO Region 4	2020
Maria Masten	MN DOT	<a href="mailto:maria.masten@state.mn.us">maria.masten@state.mn.us</a>	Chair	2019
Mike Byers	IN ACPA	<a href="mailto:mbyers@pavement.com">mbyers@pavement.com</a>	Contractor	2019
Al Innis	LafargeHolcim	<a href="mailto:al.innis@lafargeholcim.com">al.innis@lafargeholcim.com</a>	Supplier	2019
Tyler Ley	OK State	<a href="mailto:tyler.ley@okstate.edu">tyler.ley@okstate.edu</a>	Academia	2020
Gary Fick	Trinity Con Mgt	<a href="mailto:gfick@trinity-cms.com">gfick@trinity-cms.com</a>	At-Large	2020
Mike Praul	FHWA	<a href="mailto:Michael.Praul@dot.gov">Michael.Praul@dot.gov</a>	FHWA ex-officio	
Steve Tritsch	CP Tech Center	<a href="mailto:stritch@iastate.edu">stritch@iastate.edu</a>	CP Tech Center ex-officio	

A special thanks to outgoing board members Bryan Lee and Jim Mack for their efforts in making the NC<sup>2</sup> programs of value to all the participants.