

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(286)		Transportation Pooled Fund Program - Report Period: <input checked="" type="checkbox"/> Quarter 1 (January 1 – March 31, 2016) Quarter 2 (April 1 – June 30, 2016) Quarter 3 (July 1 – September 30, 2016) Quarter 4 (October 4 – December 31, 2016)	
Project Title: Next Generation Concrete Pavement Road Map			
Project Manager: Brian Worrel		Phone: 239-1471	E-mail: brian.worrel@dot.iowa.gov
Project Investigator: Peter Taylor		Phone: 294-9333	E-mail: ptaylor@iastate.edu
Lead Agency Project ID: RT	Other Project ID (i.e., contract #): Addendum 482	Project Start Date: 9/15/13	
Original Project End Date:	Project End Date: 9/14/18	Number of Extensions: Pooled fund project – yearly budgets	

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
\$635,000	\$324,260.18	N/A

Quarterly Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Completed This Quarter
\$95,977.06	N/A	N/A

Project Description:

This pooled fund project will carry on the work started by FHWA's initial Concrete Pavement Road Map Pooled Fund, TPF-5(185) and continue the effort to identify and prioritize needed research but will have a stronger focus on supporting the sponsoring states with technology deployment activities so that advancements in technologies can be implemented into practice.

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 with fewer resources. One of the strategies for achieving longer life pavements is to foster new technologies and practices. Experts from state DOTs, 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 concrete research, training and technology transfer needs through the CP Road Map.

Work under this task order relates to tasks 1 through 4.

1. Provide training workshops and/or webinars for each participating state on a topic of interest.
2. Develop specifications for new technologies
3. Maintain a database addressing research gaps
4. Conduct quarterly TAC

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

- Investigate recent concrete pavement related research for inclusion in the database.
- The March E-News newsletter summarized a NCC survey regarding the addition of withheld water after initial mixing. In addition, recent research on drying shrinkage, the influence of mixing time, and internally cured pavement applications was highlighted. The newsletter is available here:
http://www.cproadmap.org/publications/e-news_Mar2016.cfm
- The March 2016 MAP Brief was developed and distributed. The MAP Brief topic was Concrete Pavement Recycling and Use of Recycled Concrete Aggregate in Concrete Paving Mixtures. Link to it:
<http://www.cproadmap.org/publications/MAPbriefMarch2016.pdf>
- Work toward development of an internal curing specification.
- Development of changes to the geotextile specifications
- Planned and held TAC meetings on February 16, 2016 and February 29, 2016.
- Two Internal Curing webinars were held.

Anticipated work next quarter:

- Continue work on guide specifications for Internal Curing.
- Issue additional E-News newsletter and MAP Brief in May for NCC
- Hold a TAC meeting (Date TBD).
- Work on IMCP manual rewrite.

Significant Results:

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).

No budget issues.

February 29, 2016 TAC Meeting Minutes

Attendees:

- Tom Yu, FHWA
- Lydia Peddicord, Penn DOT
- Josh Freeman, Penn DOT
- Hallie Cole, Penn DOT
- Kevin Merryman, Iowa DOT
- Todd Hanson, Iowa DOT
- John Staton, Michigan DOT
- Brian Worrel, Iowa DOT

- Peter Taylor, CP Tech Center
- Tom Cackler, Representing the CP Tech Center
- Dale Harrington, Snyder & Associates, Inc.
- Steve Klocke, Snyder & Associates, Inc.

Status of State Training

Completed

State	Date	Topic
Oklahoma	1-27-15	3D Stringless Concrete Paving
Michigan	2-18&19-15	3D Stringless Concrete Paving
Iowa	3-21-15	Preservation

Planned

State	Date	Topic
Pennsylvania	May 3 or 5, 2016	Overlay Workshop
Georgia	TBD	Preservation

Modification to Geotextile Fabric of Overlay Specification

Dale stated some errors were found in the nonwoven geotextile fabric table of the Overlay Specification. There was some confusion in using item N.1. On page 10 because you can select a fiber weight under what is considered acceptable. The updated fabric specifications were sent to manufactures to get their input on the modification. The table has been modified and will be on the CP Tech Center website today. Dale stated stickers have been prepared with the correct information and it will go over the original information in the specification.

Dale asked each TAC member how many stickers they would need. Lydia Peddicord asked for a copy of the geotextile slide. We will send a copy of the email to the TAC.

- Lydia – Penn DOT – 5 stickers
- Todd or Kevin – Iowa DOT – 10 stickers
- Tom Yu – FHWA – 5 stickers
- John Staton – Michigan DOT – 15 stickers

Dale stated that every NCC state will get at least five stickers. The corrected pdf is on the home page of the CP Tech Center website. The CP Tech Center also has copies of the corrected Overlay Specification.

New Visions for CP Road Map

Tom Cackler explained that FHWA has moved their support to the TTCC pool fund. Need to know what the gaps are and where we should be headed. Tom stated they have a few ideas to go over with the group. This pool fund wraps up in the next year. Tom stated we need to know where we go in the future and how to provide a guidance document to direct research and technology.

Committee Discussion:

1. Administration to be designated for Road Map – suggest CP Tech Center.
2. Streamline the CP Road Map plan. Need to focus on products needed in next 10 years. The strategic plan needs to be condensed, streamlined and continually updated.
3. Increase the NCC's role. With more than 30 state DOT members and industry and FHWA participation, the NCC is a natural venue for the CP Tech Center to work with to prioritize and coordinate research needs and findings.
4. Develop process where researchers, DOTs, industry can reach out for assistance on their involvement.
5. Coordination – helping agencies pool their resources to make research funding as efficient as possible and to find the teams of researchers best able to conduct the work.
6. Implementation – helping agencies implement the research findings by means of accessible publications, tech transfer, training and specifications.
7. Improve database that is user friendly. Need to know what work is going on nationally, who is doing it and how is the progress and how to fill the gaps.
8. Enhance Communication:
 - Continue the E-News/MAP Briefs under NC². These documents provide a critical means of allowing agencies to share and be aware of work undertaken and reported around the country.
 - Create and maintain a “Dashboard”. An electronic dashboard can be developed that communicates in a simple, straightforward way what is happening and what has been accomplished through the CP Road Map.
9. Involve a new generation. We need to find ways to engage a younger generation using communications tools that are accessible to them. One strategy also might be to identify and formally engage knowledgeable people to contribute to CP Road Map priorities.

Tom asked the committee what they would like to see and what would be helpful to them for research and technology deployment.

- John Staton stated the E-News and MAP Briefs are good documents. He suggested we do a survey and get the state's opinion on the MAP Briefs and see what their ideas are going forward.
- John also suggested we should bring the CP Road Map to NCC to provide them with more information on the road map. There are a lot of new people who don't really know what the Road Map is all about.
- Dale stated the road map was updated in 2012 and probably needs another update. Dale stated we need to streamline the 250 problem statements. He mentioned people don't have time to go through all 250 and understand the total spectrum. Dale suggested we get it down to approximately 20 major elements that we need to concentrate on and get prioritized by NCC and get the document out for people to access.

- Todd Hanson stated they just focus on their priorities and don't really look at the CP Road Map.
- Peter Taylor suggested getting the problems from the states and seeing who else has similar issues.
- Lydia thought 20 sounded like a good number for streamline and involving NCC.
- John Staton agreed with this approach.
- Tom Yu asked about the process for updating. Dale stated it went through FHWA and was updated but not printed because it is so expensive in FHWA's opinion. However it is available electronically.
- Dale suggested discussing with NCC to see what the state's problems are and get a list of the 20 priorities. There may be some subtopics under the 20 main priorities.
- Tom Yu thought the CP Road Map is an important document. He suggested we have strategic and immediate need elements. Strategic needs to have some ideas where the research needs of important areas and have specific problem statements to go along with that for immediate needs.
- Dale stated when the road map was new we solved problems. Example was the road map surface characteristic problem statements led the way for excellent research and solutions for quieter pavements. Peter said that the TRB committees don't really use the road map that much and we aren't asked to talk about it at the meetings.
- John Staton stated we need to ask the DOTs what their needs are as they have changed over the years. Gage what the emphasis and level of importance is for research. He thought we could get some good information from the NCC states on where they stand on research.
- Tom Yu stated there is a lot of legwork to get the information. He stated we need to be prepared to ask the right questions so we are productive and get some guidance from NCC states.
- John Staton stated we should ask the states if they do research.
- Tom Cackler asked if the TAC would work with the CP Tech Center to develop the process on where we are headed with the road map (they agreed). We need to get a plan together to bring to NCC. We would ask the TAC to review and get their input on the process.
- Lydia Peddicord suggested that we disseminate some of the MAP Brief information through some other programs like FHWA.
- Tom Yu suggested we identify what needs to be done and measure our accomplishments.
- Peter Taylor stated we may have to make it more regional efforts. Concerns in some areas are not the same in all regions of the country.
- John Staton suggested we develop a summary of things that didn't work.
- Kevin Merryman felt we need to engage more of the NCC members. Include them in the paring down process. Tom Cackler stated we would like to get NCC and industry partners involved the development of the streamline plan. Include this as an agenda item at NCC.
- Dale said we need to move it forward and involve 30 states and not just 4 states in the pool fund.
- Tom Cackler stated we need to have a plan and establish what products you want. Dale agreed we need to involve the state DOTs and what their research needs are.
- Peter Taylor felt the CP Tech Center will continue with as much research coordination as they can if the road map doesn't continue. However it would be nice to have funds to help with the CP Road Map.
- John suggested broadening the plan and not just research but needs, short term and long term needs. The term research is sometimes not accepted as well as saying needs. Innovation may be a better word today since it represents progress and you're a fresh thinker.

Internal Curing Specification

The TAC selected Internal Curing for the next specification.

Author – Jason Weiss, PhD

A schedule has been developed with Jason and the tasks to be completed. Need to have a TAC to help with the development and get feedback for the specification.

Suggest Technical Advisory Committee for Specifications

- John Staton, Michigan DOT
- Josh Freeman, Pennsylvania DOT
- David Meggers, Kansas DOT
- Don Streeter, New York DOT
- Steve Gillen, Illinois Tollway Authority
- Oregon DOT – have not heard back from them
- Tom Nantung or Tony Zander, Indiana DOT
- ESCSI – have not heard back from them
- Mike Byers, Indiana ACPA
- Brian Killingsworth, NRMCA
- Dan DeGraaf, Michigan Concrete Association

The first TAC meeting to introduce the process will be March 4, 2016. This is not just for roads, it is also for bridge decks. The TAC agreed with this approach.

IMCP Status

- Peter Taylor stated we had a conference call with the four authors. Delegated who is writing what chapter. By the end of February will have a detailed TOC from each author. Each author is writing two chapters and the first chapters are due by the end of May 2016.
- Second chapter is due by August 2016. By the end of the year should have it into good shape.
- Peter stated it is not a total rewrite. We are keeping the good stuff, refreshing some things and taking out things that have changed.
- Dale is setting up the TAC.
- Peter stated we are having team meetings once a month to have status updates.

E-News

Steve Klocke stated we are doing quarterly E-News and MAP Briefs.

Previous E-News and MAP Brief Subjects

- Guide Specifications for Concrete Overlays
- Early Detection of Joint Distress in Portland Cement Concrete Pavements
- Evaluation of Concrete Grinding Residue Application on Vegetation
- MAP Brief December 2015: Internal Curing

We are working on evaluating and summarize the survey information from the states.

E-News and MAP Brief Schedule & Subjects

Every Quarter

- March 2016
- May 2016
- August 2016
- November 2016

The March MAP Brief will be on concrete recycling and the May MAP Brief will cover accelerated loading of RCC pavements.

August or November we will have one on real time smoothness. Dale stated we take the summary of the answers state DOTs provide to a particular question and summarize the information into the E-News.

Regional Webinars and Subject Matters – NCC

Dale stated the regions for the webinar training will be done through the NCC group. Jason Weiss will present the Internal Curing webinar. Tom Cackler stated Mark Snyder, Tara Cavalline and Gary Fick are putting together the recycling webinars. Peter Taylor stated the material related distress webinar will be presented at the same time but will be done in other regions so they don't conflict with internal curing or recycled webinars. Information will be going out soon for the material related distress webinar.

Subject	Regions 1 & 2 Webinars	Region 3 Webinar	Region 4 Webinar
Internal Curing	March 9, 2016	March 23, 2016	April 6, 2016
Recycling	April 20, 2016	May 4, 2016	May 18, 2016

Database Status

- Peter Taylor stated the database was updated in October 2015
- Still collecting data
- Every 6 months its updated
- On the websites: NCC and CP Tech Center websites

Tom Cackler asked the TAC if they want to continue the once a quarter TAC meeting. Would they rather have a written report or hold the web-conference each quarter. The committee felt it depends on the subject matter. Routine could be a report, and special items for discussion will be conference calls. Dale asked if they want to have a web conference prior to NCC to go over what we are taking to NCC. The TAC would like to have a web conference prior to NCC meeting. Therefore the next TAC meeting will be early or mid April 2016 prior to NCC.

Peter thanked the group and stated we appreciate their input and time.