TRANSPORTATION POOLED FUND PROGRAM
QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): MICHIGAN 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 (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 # *(i.e, SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX)* TPF-5(308)	**Transportation Pooled Fund Program - Report Period:** ☐ Quarter 1 (January 1 – March 31) ☐ Quarter 2 (April 1 – June 30) ☐ Quarter 3 (July 1 – September 30) ☑ Quarter 4 (October 1 – December 31)	
Project Title: The Use of Bridge Management Software in the Network Analysis of Big Bridges		
Name of Project Manager(s): Rebecca Curtis	**Phone Number:** 517-449-5243	**E-Mail** Curtisr4@michigan.gov
Lead Agency Project ID: OR14-022	**Other Project ID (i.e., contract #):** 2016-0022	**Project Start Date:** 12/10/2015
Original Project End Date: 9/30/2017	**Current Project End Date:** 12/31/2017	**Number of Extensions:** 1

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	Percentage of Work Completed to Date
$349,018.00	$330,378.14	95.0%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
$40,740.34/ 12.33%	$40,740.34	100.0%

Project Description:

Current financial outlay plans for a network of standard bridges are managed by scheduling preservation and replacement projects based upon whole bridge needs. This is viewing element condition as an entirety for the bridge when for complex, long span or large deck bridge (Big Bridges) it may make more sense fiscally to view contiguous element groups, structure components, or bridge spans as a series of interactive networks. The AASHTO National Bridge Elements, Bridge Management Elements, and Agency Defined Elements were developed for standard structures and should be reviewed to see if the elements and their units are appropriate for the management of Big Bridges. Big Bridges are those that because of their size, complexity, or importance have dedicated maintenance and management staff or programs. Big bridges may include slab on girder bridges of significant length as well as other structures including suspension bridges, cable stay, trusses, movable bridges, arches, or boxes. Using element level bridge inspection data, engineers and managers of Big Bridges need to develop short, medium, and long range preservation management plans, they must predict when partial or full replacement of elements or components are most cost effective, and they need to develop maintenance budgets, business plans, and capital outlay planning accordingly. Management of the decks of Big bridges is of particular interest.

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

Near completion of Task 5 deliverable. Preliminary guidelines for the inspection of big bridges using element level data.

Complete Task 6 recommendations for improvements to analytical and management software and methodologies for big bridges.

Anticipated work next quarter:

Draft ballot items for the Manual for Bridge Element Inspection that were requested by the TAC members. Complete the draft summary report.

Significant Results:

Project time duration extended to March 31, 2018. More work required on final report and deliverables.

Circumstance affecting project or budget. (Please 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).

Preliminary review of the Task 5 report have indicated a desire for more detailed examples to illustrate the suggestions made throughout the report; possibly even a case study. Depending on the level of detail/complexity, this effort may extend the completion date; however, this may not be necessary.

Potential Implementation: