

TRANSPORTATION POOLED FUND PROGRAM

QUARTERLY PROGRESS REPORT – Q1/2024

Lead Agency: **Washington State Department of Transportation (WSDOT)**

Transportation Pooled Fund Program Project		Quarterly Report Period	
TPF-5(500) LTPP Forensic Investigations - Stage 2 https://www.pooledfund.org/Details/Study/729		<input checked="" type="checkbox"/> Quarter 1: Jan-Mar <input type="checkbox"/> Quarter 2: Apr-Jun <input type="checkbox"/> Quarter 3: Jul-Sep <input type="checkbox"/> Quarter 4: Oct-Dec	
Lead Agency PM	Lead Agency PM Phone	Lead Agency Email	
Mustafa Mohamedali PE, PMP	360-704-6307	MohameM@wsdot.wa.gov	
Lead Agency Technical Lead	Lead Agency Tech Lead Phone	Lead Agency Email	
Mohamed Nimeri PhD, PE	360- 338-5765	NimeriM@wsdot.wa.gov	
Principal Investigator (PI)	PI Phone	PI Email	
Gonzalo Rada PhD, PE (WSP) Kevin Senn (NCE)	301-210-5105 775-329-4955	gonzalo.rada@wsp.com ksenn@ncenet.com	
Lead Agency Project ID	Other Project ID (e.g. contract #)	Program Start Date	
Y12819	WSP 6420230016	Sep 2, 2022	
Contract Start Date (Original)	Contract End Date (Original)	Revised Contract End Date	
Aug 17, 2023	Mar 31, 2026	--	

Program Schedule Status

On original schedule
 On revised schedule
 Ahead of schedule
 Behind schedule

Overall Program Statistics

Commitments to date \$	Obligations to date \$	% Obligated to date	Contracted to date \$	Expended to date \$	Expended this quarter \$
420,000	220,830	52%	160,000	\$33,067	\$20,165

Project Description The objective of this pooled fund study is to create a mechanism to allow for rapidly completing forensic evaluations of LTPP sections before going out of service. Test sections that are no longer active, but which have remained unchanged (i.e., no maintenance or rehabilitation has been applied), may also be considered for forensic evaluation. Possible reasons for carrying out the forensic evaluations include: <ul style="list-style-type: none"> • Determining reasons for poor pavement performance/premature failures • Understanding exceptional pavement performance and/or longevity • Validating pavement performance prediction (predicted vs actual) • Collecting data to support development and/or
--

calibration of pavement performance prediction models • Closing-out or conducting final investigations of experimental test sections. Ultimately, the primary reason for carrying out the evaluations will be to determine if the data contained in the LTPP database adequately explains the performance of the test sections and why they performed as they did. If the existing information is insufficient, then identifying and collecting additional information to inform the performance will be strongly considered.

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

The work performed in each of the tasks specified by the project’s scope of work (SOW) is summarized below. The attached table (Table 1) provides further information on Task 2 and Task 3 activities.

Task 1. Project Management: • Began to pursue Technical Advisory Committee (TAC) meeting • Prepared and submitted January, February and March 2024 invoices • Prepared and submitted quarterly progress report for the October 1 to December 31, 2023, period • Continued to perform subcontractor management activities • Continued to coordinate project activities with FHWA LTPP Team and its Data Collection Services Contractor (DCSC) • Conducted other required project management activities.

Task 2. Test Section Nominations: • Continued to work on identifying LTPP test sections for possible forensic evaluation – to date, 19 LTPP test sections at 7 locations have been identified. • Continued to prepare and submit test section nomination forms for WSDOT approval for conduct of forensic evaluations – to date, 3 nominations covering 9 LTPP test sections have been approved. Continued to work with the FHWA LTPP Team and its DCSC to identify other candidate test sections.

Task 3a. Desktop Studies: • Completed forensic desktop evaluations for 9 LTPP test sections in AZ, PA and WA – draft technical memoranda were prepared and submitted to WSDOT for review and approval, including follow-up actions with respective agencies and FHWA LTPP Team. Commenced work on forensic desktop evaluations for 10 LTPP test sections in TX, KS, and WA – completion of these test sections is anticipated in the upcoming reporting period.

Task 3b. Follow-Up Forensic Investigations: • Work on this activity will commence during the upcoming reporting period.

Task 4. Final Report: • No work is anticipated under this task until the final months of the project.

Anticipated work next quarter

The anticipated work to be performed in each of the tasks specified by the project’s SOW is summarized below:

Task 1. Project Management: • Continue planning for and potentially holding the next Technical Advisory Committee (TAC) meeting • Prepare and submit monthly invoices • Prepare and submit quarterly progress report for the January 1 to March 31, 2024, period • Continue to perform subcontractor management activities • Continue to coordinate project activities with FHWA LTPP Team and its DCSC • Conduct other required project management activities.

Task 2. Test Section Nominations: • Continue to work on identifying LTPP test sections for possible forensic evaluation • Continue to prepare and submit test section nomination forms for WSDOT approval for conduct of forensic evaluations.

Task 3a. Desktop Studies: • Complete desktop evaluations for 10 LTPP test sections in TX, KS and WA. • Begin working on LTPP forensic evaluation for LTPP test section in Montana. • Begin working on desktop evaluations for other test section nominations approved by WSDOT.

Task 3b. Follow-Up Forensic Investigations: • Begin working on planning and coordination activities with AZ, PA and WA as well as with FHWA LTPP Team agencies to schedule meetings to review draft desktop forensic evaluation memoranda. • As appropriate, begin formulating follow-up forensic investigation plans based on outcomes from referenced meetings with TX, KS, and WA as well as the FHWA LTPP Team.

Task 4. Final Report: • No work is anticipated under this task until the final months of the project.

Significant results

Although work on the project did not start in earnest until December 4, 2023, important results and findings are already being realized. Based on the forensic evaluation desktop study for the three WA test sections, an issue requiring correction of the LTPP InfoPave tool was identified. More specifically, the plots of rutting versus time for the three test sections in question were showing incorrect trends, even though data associated with these plots were determined to be correct. To follow-up on this issue, the project team will prepare and submit an LTPP Data Analysis and Operations Feedback Report (DAOFR) to the FHWA LTPP Team for corrective action.

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)

There are no technical challenges to report at present (and none are anticipated), which may affect completion of the project. However, as indicated in previous progress reports, enough funding is available for a robust start, but future progress of work will depend on committed funds being obligated to enable the work to continue without a break.

Potential Implementation

The primary outcome of the test section forensic evaluations will be memoranda documenting the major findings, conclusions, and recommendations, both for each investigation and for the overall project. As with the Stage 1 effort (TPF-5(332)), it is anticipated numerous important findings will be made as a direct result of the forensic evaluations, which will directly affect, and therefore improve, the LTPP database and will advance knowledge in the pavement community.

Table 1. Summary of Task 2 and Task 3 Activities to Date

Study #	# of Sites	# of Sections	State(s)	LTPP ID	Experiment Type	Pavement Type	Purpose of Investigation	Nomination Submittal	Nomination Approval	Study Start	Initial Memo Submittal	Memo Acceptance
1	1	1	PA	42-1597	GPS-6S	AC	Excellent Performance; Other	12/6/2023	12/11/2023	12/11/2023	Cancelled	Cancelled
2	1	6	AZ	04-0213	SPS-2	JPCP	Performance Comparison	12/6/2023	12/11/2023	12/11/2023	2/26/2024	
				04-0214								
				04-0215								
				04-0217								
				04-0262								
04-0268												
3	2	2	PA	42-1597	GPS-6S	AC	Performance Comparison	1/22/2024	2/1/2024	2/1/2024	2/13/2024	
			WA	53-1007								
4	1	1	MT	30-7075	GPS-6S	AC	Excellent Performance; Other	2/4/2024				
5	1	3	TX	48-AA01	SPS-10	AC	Performance Comparison	2/4/2024				
				48-AA02								
				48-AA03								
6	1	4	KS	20-0202	SPS-2	JPCP	Performance Comparison; Other	2/15/2024				
				20-0203								
				20-0206								
				20-0210								
7	1	3	WA	53-AA01	SPS-10	AC	Performance Comparison	3/5/2024				
				53-AA02								
				53-AA03								