TRANSPORTATION POOLED FUND PROGRAM

QUARTERLY PROGRESS REPORT – Q2/2025

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	☐ Quarter 1: Jan-Mar ☒ **Quarter 2: Apr-Jun** ☐ Quarter 3: Jul-Sep ☐ Quarter 4: Oct-Dec

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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 $
440,000	420,000	95.45%	340,000	180,353	39,441

Note: $13,000 of remaining contracted budget is set aside for travel.

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 Test sections that are no longer active, but which have remained unchanged (i.e., no maintenance or rehabilitation has been applied), may also be considered for forensic evaluation.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 forensic evaluations include: • 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 the Task 2 and Task 3 activities, while the attached figure (Figure 1) shows the location of the LTPP test sections selected to date for forensic investigation. *Progress on the project tasks has been significant over the current reporting period.*

Task 1. Project Management: • Worked with WSDOT to execute contract modification obligating additional project funds • Participated in virtual meeting with Texas DOT on June 18, 2025; provided update of TPF-5(500) activities to date and discussed forensic evaluation results for LTPP SPS-08 test section in Texas • Scheduled for August 18, 2025 and began preparations for virtual meeting with Kansas DOT; will provide update of TPF-5(500) activities to date and discussed forensic evaluation results for LTPP SPS-02 test section in Kansas • Began coordination of virtual meetings with the Arizona, California, Kansas, Mississippi, and North Carolina DOTs • Prepared and submitted April, May and June 2025 invoices • Prepared and submitted quarterly progress report for the January 1 to March 31, 2024 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, 54 LTPP test sections at 15 locations in 13 states have been identified • *New test sections identified during the reporting period in question include six Oklahoma SPS-10, four Florida SPS-10, two Colorado SPS-08 and two Colorado SPS-02 test sections* • Continued to work with the FHWA LTPP Team and its DCSC to identify additional candidate test sections.

Task 3a. Desktop Studies: • Completed forensic desktop evaluations for 5 LTPP test sections in Texas and North Carolina – draft technical memoranda were prepared and submitted to WSDOT for review and approval and they were revised based on WSDOT input, and pursued virtual meetings with the respective agencies and FHWA LTPP Team • Commenced or continued work on forensic desktop evaluations for 14 LTPP test sections in Oklahoma, Florida and Colorado with decent progress made on each – completion of these evaluations is anticipated in the third reporting period of 2025.

Task 3b. Follow-Up Forensic Investigations: • Completed planning and coordination for virtual meetings with Texas DOT on June 18, 2025 and Kansas DOT on August 18, 2025 -- follow-up actions to the forensic evaluation were discussed with TxDOT • *Continued working on planning and coordination of virtual meetings with the Arizona, California, Mississippi, Missouri, Montana and North Carolina DOTs, as well as with WSDOT and the FHWA LTPP Team to review draft desktop forensic evaluation memoranda* • As appropriate, follow-up forensic investigation plans are being formulated based on outcomes from the referenced meetings.

Task 4. Final Report: While no work was anticipated during the reporting period in question, the project team began to address key issues so that work on the report can commence earlier in the life of the project, thus allowing ample time for its completion.

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: • Prepare and submit monthly invoices • Prepare and submit quarterly progress report for the April 1 to June 30, 2025 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 SPS-10 test sections in Oklahoma and Florida and 4 LTPP SPS-02 and SPS-08 test sections • Begin working on desktop evaluations for other test section nominations approved by WSDOT.

Task 3b. Follow-Up Forensic Investigations: Continue preparations for and participate in meetings with Arizona, Kansas, Missouri, Montana, North Carolina and Texas, as well as with the FHWA LTPP Team to review draft desktop forensic evaluation memoranda • As appropriate, formulate follow-up forensic investigation plans based on outcomes from referenced meetings.

Task 4. Final Report: Make final decisions on report contents and begin working on draft of report with particular emphasis on desktop study write-ups completed to date.

Significant results

Technical work on the project commenced in earnest in December 2023, and important results and findings are being realized. For example, based on the forensic evaluation desktop study for the 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 showed incorrect trends, even though data associated with these plots were determined to be correct. The project team prepared and submitted LTPP Data Analysis and Operations Feedback Report (DAOFR) to the FHWA LTPP Team for corrective action; correction has been incorporated in the August 2024 LTPP InfoPave release. Since then, other data (distress, traffic, etc.) issues have been identified during other forensic evaluations in the LTPP database and the project team is working with the FHWA LTPP team to address these issues. Another important outcome of the forensic investigations to date is the confirmation that all test sections investigated to date, without exception, have adequate data to explain their performance. Moreover, recommendations are being made to further collect data elements that would further enhance the available data – e.g., within test section thickness measurements, close-out performance testing, laboratory testing, etc. We also learned, based on meetings with WSDOT, planned rehabilitation on the Washington SPS-10 project has been postponed, providing additional time to assess test section performance. Likewise, there were several positive outcomes from the June 18, 2025 Texas DOT discussion regarding potential future work and a commitment to perform sampling, as needed.

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.

Potential Implementation
The primary outcome of the test section forensic evaluations is 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)), numerous important findings have been 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 – please see earlier Significant Results section. Many more findings are anticipated over the remainder of the project.

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

Study #	# of Sites	# of Sections	State(s)	LTPP ID	Experiment Type[1]	Pavement Type[2]	Purpose of Investigation	Nomination Submittal	Initial Memo Submittal	Revised Memo Submittal
1	1	1	PA	42-1597	GPS-6S	AC	Excellent Performance; Other	12/6/2023	Cancelled	Cancelled
2	1	6	AZ	04-0213 04-0214 04-0215 04-0217 04-0262 04-0268	SPS-2	JPCP	Performance Comparison	12/6/2023	2/26/2024	
3	2	2	PA WA	42-1597 53-1007	GPS-6S	AC	Performance Comparison	1/22/2024	2/13/2024	
4	1	1	MT	30-7075	GPS-6S	AC	Excellent Performance; Other	2/4/2024	7/23/2024	
5	1	3	TX	48-AA01 48-AA02 48-AA03	SPS-10	AC	Performance Comparison	2/4/2024	5/21/2024	
6	1	4	KS	20-0202 20-0203 20-0206 20-0210	SPS-2	JPCP	Performance Comparison; Other	2/15/2024	7/11/2024	
7	1	3	WA	53-AA01 53-AA02 53-AA03	SPS-10	AC	Performance Comparison; Other	3/5/2024	4/14/2024	
8	1	10	MO	29-AA01 29-AA02 29-AA03 29-AA61 29-AA62 29-AA63 29-AA64 29-AA65 29-AA66 29-AA67	SPS-10	AC	Performance Comparison; Other	4/24/2024	10/29/2024	
9	1	2	MS	28-0805 28-0806	SPS-08	AC	Performance Comparison; Other	7/23/2024	2/18/2025	
10	1	4	CA	06-0201 06-0203 06-0811 06-0812	SPS-02 SPS-08	JPCP	Performance Comparison; Other	7/24/2024		
11	1	2	TX	48-0801 48-0802	SPS-08	AC	Performance Comparison; Other	11/11/2024	5/15/2025	5/20/2025
12	1	3	NC	37-0801 37-0802	SPS-08	AC	Performance Comparison; Other	11/11/2024	5/23/2025	6/9/2025
13	1	6	OK	40-AA01 40-AA02 40-AA03 40-AA61 40-AA62 40-AA63	SPS-10	AC	Performance Comparison			
14	1	4	FL	12-AA01 12-AA02 12-AA03 12-AA61	SPS-10	AC	Performance Comparison			
15	1	4	CO	08-0213 08-0215 08-0811 08-0812	SPS-02 SPS-08	JPCP	Performance Comparison; Other			

[1] Experiment Type

GPS-6S = AC Overlay of Milled PCC Pavement Using Conventional or Modified Asphalt Experiment
SPS-2 = Strategic Study of Structural Factors for Rigid Pavements Experiment
SPS-08 = Study of Environmental Effects in the Absence of Heavy Loads
SPS-10 = Warm Mix Asphalt Overlay of Asphalt Pavement Study

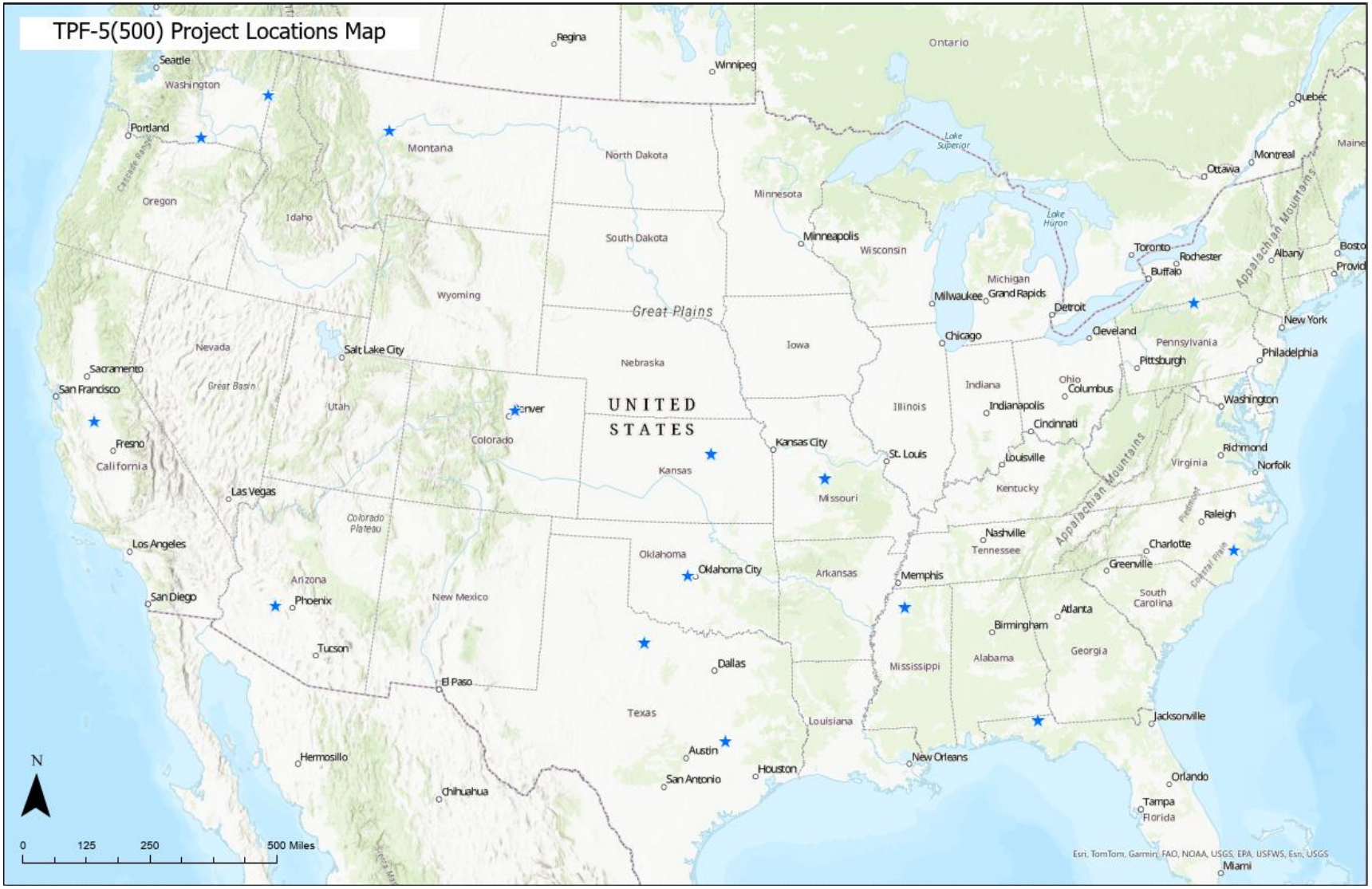

Figure 1. Geographical Location of TPF-5(500) LTPP Test Sections.