TRANSPORTATION POOLED FUND PROGRAM
QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): ____FHWA_____

INSTRUCTIONS:
Lead Agency contacts 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-05(317)	**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)

TPF Study Number and Title: TPF-05(317) The Evaluations of Low-Cost Safety Improvements Pooled Fund Study (ELCSI-PFS)		
Lead Agency Contact: Woon Kim, FHWA	**Lead Agency Phone Number:** (202) 493-3383	**Lead Agency E-Mail** Woon.Kim@dot.gov
Lead Agency Project ID: TPF-05(317)	**Other Project ID (i.e., contract #):** N/A	**Project Start Date:** 08/2022
Original Project Start Date: 05/2005	**Original Project End Date:** 05/2010	**If Extension has been requested, updated project End Date:** N/A continuing effort

Project schedule status:

☐ On schedule ☐ On revised schedule ☐ Ahead of schedule ☐ Behind schedule

Overall Project Statistics:

Total Project Budget	Total Funds Expended This Quarter	Percentage of Work Completed to Date
Ongoing project (N/A)	Ongoing project (N/A)	Ongoing project (N/A)

Project Description:

The primary goal of the Evaluation of Low-Cost Safety Improvement Pool Fund Study (ELCSI-PFS) was to save lives and reduce traffic crash injuries by identifying effective safety strategies for national implementation. The ELCSI-PFS conducted research to quantify the safety effectiveness of selected strategies — so-called crash modification factors (CMFs) — that may address priority safety concerns but had not been proven. This study also provided benefit-cost (B/C) ratios to estimate the resulting relationship between the relative monetary value of benefits and costs of a selected strategy. Transportation agencies utilized estimated CMFs and B/C ratios to select, plan, fund, and install a specific safety strategy on a targeted site to improve its outstanding safety issue. The secondary goal of this study is to improve and advance the statistical tools to conduct more reliable, rigorous research. For this effort, this study collaborated with the American Statistical Association (ASA) and identified new statistical methodologies to advance the current practices

used in the development of CMFs. This study initiated in 2005 but continued adding years for additional studies. Currently this study is running Phase XIII (so-called 5 CMFs) to evaluate the safety effectiveness of the following countermeasures:

- Rectangular Rapid Flashing Beacons (RRFBs)
- Left-Turn Lanes Improvements (LTL)
- Curve Enhanced Delineation (CED)
- Alternative Rumble Strips (ARS)
- Fixed Object Delineation (FOD)

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

ELCSI-PFS PHASE XIII: 5 CMFS

RRFB

- Made refinements and corrections to the databases when needed.
- Completed the following deliverables and submitted:
    - Technical memo for data collection completion and identified issues and opportunities with recommendation.
    - Technical memo for selected statistical methodologies and requirements.
    - Final work plan and recommended strategies for evaluations.
- Started statistical analysis focusing on cross-sectional analysis.

LTL

- Completed review of several hundred candidate intersection legs; added to the database those intersection legs that were suitable for the study.
- Completed review of sites to identify any construction periods (e.g., major construction, LTL construction, other construction).
- Began joining ADT data to the study sites (Texas has been completed; California is still in progress).
- Joined the Texas Crash Records Information System (CRIS) and California Transportation Injury Mapping System (TIMS) crash data to the finalized study sites.
- Completed and submitted the following deliverables:
    - Technical memo for data collection completion and identified issues and opportunities with recommendation.
    - Technical memo for selected statistical methodologies and requirements.
    - Final work plan strategies and evaluation.

CED

- Collected data to describe treated and control sites (signing and curve radius).
- Completed merging of Texas crash data with site data.
- Began data analysis (preliminary assessment of all variables).
- Conducted data quality control checks.
- Completed and submitted the following deliverables:
    - Technical memo for data collection completion and identified issues and opportunities with recommendation.
    - Technical memo for selected statistical methodologies and requirements.
- Finalized final work plan and drafted the relevant technical memo.

ARS

- Modified the databases, as appropriate, in preparation for analyzing the datasets.
- Completed and submitted the following deliverables:
    - Technical memo for data collection completion and identified issues and opportunities with recommendation.
    - Technical memo for selected statistical methodologies and requirements.

FOD

- Continued development of the Pennsylvania database by adding additional sites and refining the companion data variables. This effort included verifying the location (latitude and longitude) and confirming FOD presence and location.
- Enhanced the data dictionary for the Pennsylvania elements.
- Continued development of the Texas database to use for comparison purposes.
- Developed the data dictionary and database format for the Texas sites.
- Continued development of technical memorandum about feasibility study and data collection plan.

TECHNICAL ADVISORY COMMITTEE (TAC) MEETING

- Continued developing the meeting agenda.
- Continued identifying potential speakers and confirming speakers in conjunction with that agenda.
- Continued making arrangements for the 2024 meeting logistics.
- Began preparing the event website to provide meeting information and registration.

PUBLICATIONS

The following items were published:

Technical Report for Developing Crash Modification Factors for Wrong-Way-Driving Countermeasures

TechBrief for Developing Crash Modification Factors for Wrong-Way-Driving Countermeasures

Compendium of Wrong-Way-Driving Treatments and Countermeasures

Anticipated work next quarter:

- Continue analysis of the RRFB databases.
- Continue reviewing crash data and joining ADT data to the California study sites for LTL study.
- Continue data analysis and submit the technical memo about final work plan and recommended evaluation strategies for CED study.
- Continue data analysis and prepare the technical memo about final work plan and recommended evaluation strategies for ARS study.
- Conclude identification of candidate Pennsylvania database sites and expand database development to candidate Texas sites for FOD study.
- Continue developing the meeting agenda, making arrangements for the logistics, and preparing the event website for the 2024 TAC meeting.

Significant Results:

- Made progress on data analysis for most studies.
- Published outstanding documents relevant to Phase XI.
- Made progress on planning the 2024 TAC meeting.

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).

FOD: Identifying sites for studying FODs continues to be an ongoing and challenging activity.

Potential Implementation:
N/A