**TRANSPORTATION POOLED FUND PROGRAM**

**QUARTERLY PROGRESS REPORT**

Date: \_December 31, 2017\_\_\_\_\_\_\_\_

Lead Agency (FHWA or State DOT): Texas Department of Transportation (TxDOT)\_\_\_\_\_\_\_\_\_\_\_

**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.*

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| **Transportation Pooled Fund Program Federal Project #** SPR TPF5 (198) \*Previously SPR-3(049) | **Transportation Pooled Fund Program - Report Period:**□Quarter 1 (January 1 – March 31, 2017)□Quarter 2 (April 1 – June 30, 2017)□Quarter 3 (July 1 – September 30, 2017)XQuarter 4 (October 1 – December 31, 2017) |
| **Project Title:**Mobility Measurement in Urban Transportation (MMUT) FYs 2018-2019 |
| **Name of Project Manager(s):**Casey Dusza | **Phone Number:**(512) 486-5149 | **E-Mail**Casey.Dusza@txdot.gov  |
| **Lead Agency Project ID:** | **Other Project ID (i.e., contract #):**TxDOT contract 50-0XXIA00120000007568 *(starting 9/1/15)* | **Project Start Date:**9/8/08 |
| **Original Project End Date:**8/31/13 | **Current Project End Date:**8/31/19 | **Number of Extensions:** |

Project schedule status:

x On schedule □ On revised schedule □ Ahead of schedule □ Behind schedule

Overall Project Statistics:

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|  **Total Project Budget** |  **Total Cost to Date for Project** |  **Percentage of Work**  **Completed to Date** |
| $ | $ | % |

***Quarterly*** Project Statistics:

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|  **Total Project Expenses**  **and Percentage This Quarter** |  **Total Amount of Funds**  **Expended This Quarter** |  **Total Percentage of**  **Time Used to Date** |
|  | $0 |  |

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| **Project Description**:

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| **Background:**This study will be a continuation of existing project SPR-3(049) – now SPR TPF5 (198) – with the same scope, objectives, and contractor (TTI).  |
| **Objectives:**1) Investigation of new and emerging datasets for mobility analyses; conduct evaluations of datasets for new and traditional uses. Continued analysis of the NPMRDS.2) Investigation of arterial route reliability estimation, estimating reference speed, and bottleneck identification in the arterial environment. Documentation of current and evolving practices related to arterial performance monitoring andreliability estimation.3) Demonstrations of the target setting practices; provide additional support for MAP‐21/NPRM performance measure estimation.4) Conduct syntheses on key topic areas of interest to the pooled fund sponsors.5) Assistance to sponsoring agencies in the application of products in their operations, planning and performance measurement activities within their agency. Respond to requests for mobility data. 6) Develop and demonstrate data integration framework by illustrating how data integration can inform investment decisions and project prioritization.7) Implementation of an annual mobility performance report that describes all the steps and processes necessary to develop a yearly performance report. |

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| **Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):** Work is underway on all tasks for FY 2018. MMUT FY 2018 scope includes topics from 2017 and new topics as listed in the “Objectives” above. Task 1: Continued downloading and processing travel time data for MMUT states and calculating MAP-21 measures with updated code/analytics for comparison with UMD CATT Lab RITIS for MAP-21 measure results. Processed a draft of the travel time data for MMUT states and calculated the MAP-21 measures with updated code/analytics. Provided responses and technical assistance on the draft calculated MAP-21 measures provided on Nov 30, 2017.Task 2: Continued review of NPMRDS federal measure requirements and calculation procedures for measure sensitivity analysis for a given reference speed calculation method. Began accessibility measure review and data source investigation.Task 3: Continued to geospatially identify MPO regions in an existing roadway network to break down performance measure calculations by MPO and non-MPO areas for sponsoring state DOTs. Using the datasets created in Task 1, continued work to compile guidance information on how to set targets. The TTI project team is using more detailed speed data being produced under a separate contract for the Texas DOT and MPOs to examine the sensitivity of the PM3 measures. This will be described in detail so that participating states can replicate the analysis. The trends for PM3 measures using NPMRDS Phase 1 and 2 will be combined with other congestion trend information (principally the FHWA Urban Congestion Reports) to illustrate how those target setting principles would be applied to create the 2020 and 2022 targets. Task 4: Completed and delivered synthesis on visualization tools. Continued work on the update to the Keys to Estimating Mobility Report. Began work on the monitoring redundancy and resiliency technical memorandum.Task 5: Sponsor communication and support via telephone calls and email correspondence. Task 6: N/A this quarter.Task 7: Continued investigation of database layers (pavement, bridge, AADT, % trucks) to compute additional layers, including truck volumes. Continued quality assurance/quality control steps in data manipulation. Began detailed analysis to demonstrate the data integration along a segment of the Baltimore Beltway (I-695).Task 8: Continued conflation process of Colorado volume and speed data. Continued work on framework for the Colorado Mobility Performance Report. Prepared network data for preliminary analysis. |
| **Anticipated work next quarter**: Work will continue on the tasks under the contract for FY 2018.Task 1: Began investigation of methods to evaluate GPS-based dataset usage for traffic flow volume estimation.Task 2: Continue to review NPMRDS federal measure requirements and calculation procedures for measure sensitivity analysis for a given reference speed calculation method.Task 3: The illustrative targets will be submitted to MMUT participants in updated sections to the previously-distributed technical memorandum on target-setting.Task 4: Submit the draft monitoring redundancy and resiliency technical memorandum to MMUT participants.Task 5: Continue to support sponsors via telephone and email. Task 6: Planning for annual meeting in Irving, CA in 2018. Task 7: Continue to investigate database layers to compute additional layers, including truck volumes.Task 8: Complete conflation process of Colorado volume and speed data. Complete and submit preliminary analysis and expect preliminary results based on network data. |

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| **Significant Results:**  See Progress; noted 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).**None during this quarter or expected during the next quarter. |

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| **Potential Implementation:** Work this quarter will have positive impacts (research and guidance) for all participating states with regard to evaluating datasets, arterial performance monitoring, performance measures and target setting under MAP-21 and FAST Act for system performance and freight.  |