

TMC Pooled Fund Study Quarterly Progress Report July 2008

Project Status

Brief descriptions and status of the current and future projects are provided in the following paragraphs. Additional information can be found at the TMC Pooled Fund Study web page at <http://tmcdfs.ops.fhwa.dot.gov/>.

1. List of Completed Projects

1. Configuration Management for Transportation Management Systems
2. Transportation Management Systems Maintenance Concept and Plans
3. Changeable Message Sign Operation and Messaging
4. TMC Operator Requirements and Position Descriptions, Phase 1
5. TMC Operator Requirements and Position Descriptions, Phase 2: Interactive Software
6. Managing Travel for Planned Special Events
7. Impacts of Dynamically Displaying Messages on Changeable Message Signs
8. TMC Operations Manual
9. Coordinated Freeway and Surface Street Operational Plans and Procedures
10. TMC Staffing and Scheduling for Day-to-Day Operations
11. TMC Clearinghouse Development and Initiation

2. On-Going Projects

TMC Performance Monitoring, Evaluation and Reporting Handbook: The purpose of this project is to develop a handbook that will serve as a technical reference that provides guidance and recommended practices on the need for, how to initiate, sustain, and use information generated from monitoring, evaluating, and reporting on the performance of a Transportation Management Center (TMC) and its roles, responsibilities, functions, and support services as related to traffic management.

Project Champion: Mark Newland, Indiana DOT
FHWA Work Order Manager: Raj Ghaman
Contractor Lead: Brian Park, UVA
Project Cost: \$224,948

Milestones & Products:

- Final Handbook – Currently undergoing 508 compliance review.
- Outreach Material (Primer, Fact Sheet, Brochure, Presentation) – Currently undergoing 508 compliance review.

Transportation Management Center Business Planning and Plans Handbook: The purpose of this project is to develop a handbook that provides guidance and best practices on how to develop a TMC business plan. The handbook will also outline the various business planning models that have been successfully employed by transportation agencies to ensure the long-term sustainability of transportation management centers and associate ITS applications.

Project Champion: Monica Kress, Caltrans
FHWA Work Order Manager: Raj Ghaman
Contractor Lead: Pierre Pretorius, Kimley-Horn
Project Cost: \$200,000

Milestones & Products:

- Final Handbook – Currently developing the 508 compliance version.
- Outreach Material (Primer, Fact Sheet, Brochure, Presentation) – Currently developing the 508 compliance versions.

Developing and Using Concept of Operations in Transportation Management Systems: The objective of this project is to develop a document that provides technical guidance and recommended practices on the need for and how to develop and use a concept of operations throughout the life cycle of a transportation management system.

Project Champion: Manny Agah, Arizona DOT
FHWA Work Order Manager: Emiliano Lopez
Contractor Lead: Brian Smith, UVA
Project Cost: \$207,926

Milestones & Products:

- Final Technical Document – Undergoing 508 compliance review.
- Outreach Material (Primer, Fact Sheet, Brochure, Presentation) – Undergoing 508 compliance review.

Multi-State, Statewide, and Regional TMC Concept of Operations and Requirements: The purpose of this project is to develop a document that provides technical guidance and recommended practices on what are regional/statewide/multi-state TMCs; pros and cons of the concept; how to develop and use a concept of operations and requirements for regional, statewide, and multi-state TMCs; policy, institutional and technical issues to consider; resources required; stakeholders to involve; process to develop and implement a statewide/multi-state TMC; and operations and maintenance considerations.

Project Champion: Jim McGee, Nebraska DOR
FHWA Work Order Manager: Raj Ghaman
Contractor Lead: Brian Smith, UVA
Project Cost: \$153,791

Milestones & Products:

- Final handbook – Submitted in March 2007; currently working on the 508 version.
- Outreach material (fact sheet, and technical presentation) – Submitted in March 2007; currently working on the 508 version.

Recovery and Mitigation for TMCs: This project will develop a technical document that synthesizes current practice and state of practice as related to TMC redundancy, mitigation, and recovery; and highlight technical issues to considered, lessons learned, and recommended practices on the concepts, methods, and procedures for planning, designing, developing and implementing recovery plans and redundancy of TMCs.

Project Champion: Monica Kress, Caltrans
FHWA Work Order Manager: Raj Ghaman
Contractor Lead: Jeffrey Arch, Telvent Farradyne
Project Cost: \$250,000

Milestones & Products:

- Technical document – Currently developing the 508 compliance version.

- Outreach material (fact sheet and technical presentation) Final Draft submitted in March 2007; currently developing the 508 compliance version.

Procuring, Managing, and Evaluating the Performance of Contracted TMC Services: The major focus of this project is a scan of current TMC owners to determine outsourcing activities and the methodologies being utilized. A technical document will be developed to provide guidance and recommended practice to TMC owners and managers to determine their outsourcing needs, activities and the methodologies being utilized to operate and maintain the transportation management systems.

Project Champion: John Bassett, New York State DOT
 FHWA Work Order Manager: Raj Ghaman
 Contractor Lead: Christopher Poe, Texas Transportation Institute
 Estimated Cost: \$200,000
 Period of Performance: 16 Months

Milestones & Products:

- Annotated Outline – Draft version submitted in January 2008.
- Preliminary results will be presented at the annual meeting in July.
- Products: technical document, fact sheet, tri-fold brochure, and technical presentation – October 2008.

Driver Use of Real-Time En-Route Travel Time Information: The objectives of this study are to: (1) assess impacts of en-route real-time travel time/delay/speed information on drivers; (2) define the most effective way to provide en-route real-time travel time information; and (3) develop preliminary guidance to practitioners for delivering en-route travel time information. The focus will be on en route travel time (or speed, delay) information presented by means of changeable message sign (CMS) displays.

Project Champion: Gene Donaldson, Delaware DOT
 FHWA Work Order Manager: Tom Granda
 Contractor Lead: Neil Lerner, Westat
 Project Cost: \$300,000
 Period of Performance: 24 Months

Milestones & Products:

- Literature review report – Submitted in June 2007.
- Research work plan – Final plan submitted in November 2007.
- Products: A research report and a white paper – December 2008.

3. Projects to Initiate

TMC Human Factors Design Guidelines: Requirements Analysis: This project will perform a requirements analysis to identify and prioritize needs for human factors guidance in the design and operation of TMCs. This project includes developing and conducting a workshop with 5 to 10 TMC subject matter experts to identify and prioritize the key areas where human factors guidance is most needed. An approach will be identified for the development of a guidelines document to best support the identified user requirements.

Project Champion: Jeff Galas, Illinois DOT
 FHWA Work Order Manager: Tom Granda
 Contractor Lead: John Campbell, Battelle
 Estimated Cost: \$50,000

Period of Performance: 8 Months

Milestones & Products:

- Anticipated project initiation – Summer/Fall 2008.
- Products: A project report, 3 sample guidelines, and a Statement of Work for guidelines development.

Integration of TMCs and Law Enforcement – Needs Assessment: The purpose of this project is to assess the current practices and identify institutional, operational and technical issues and challenges that all involving agencies are facing with integrating TMCs and law enforcement. The results of this effort will lead to identification of a list of topics and issues to be addressed and a series of next steps to be considered in a further study that is intended to develop a product that will provide necessary guidance to address agencies' needs.

Project Champion: John Domina, Nevada DOT
FHWA Work Order Manager: Tom Granda
Contractor Lead: TBD
Estimated Cost: \$50,000
Period of Performance: 8 Months

Milestones & Products:

- Anticipated project initiation – Summer/Fall 2008.
- Product: Findings Report.

Methodologies to Measure and Quantify TMC Benefits: The purpose of this project is to gain a better understanding of and to quantify benefits in traffic operations due to the implementation of transportation management centers (TMCs) and the systems, infrastructure, and functions associated with their operations. This project will be performed through two phases: (1) Phase 1 – Produce a synthesis report and evaluate the feasibility of developing a software tool for quantifying the benefits of TMCs and (2) Phase 2 – Develop a software tool.

Project Champion: Jim McGee, Nebraska DOR
FHWA Work Order Manager: Raj Ghaman
Contractor Lead: TBD
Estimated Cost: \$75,000 for Phase 1 and \$175,000 for Phase 2
Period of Performance: 8 Months for Phase 1 and 16 Months for Phase 2

Milestones & Products:

- Anticipated project initiation – Summer/Fall 2008.
- Phase 1 Products: A Synthesis Report and Phase 2 Work Plan.

Developing Travel Time Information: This project will review and synthesize the state of the practice, successful stories, and lessons learned around the country, as well as develop a technical document that provides guidance and recommended practices on the concepts, methods, techniques, and procedures for TMCs to collect, calculate, and predict travel time information.

Project Champion: Jeff Galas, Illinois DOT
FHWA Work Order Manager: Raj Ghaman
Contractor Lead: TBD
Estimated Cost: \$150,000
Period of Performance: 14 Months

Milestones & Products:

- Anticipated project initiation – Summer/Fall 2008.
- Products: A technical document and outreach material (fact sheet, brochure, and presentation).

TMC Clearinghouse Support Services, Phase 2: The purpose of this project is to provide continued and improved support services for the TMC Clearinghouse that will be created in the initial phase of the project. This phase 2 project will evaluate the feedback and recommend enhancement from the user and improve the functions of the clearinghouse as appropriate. In addition, this project will involve the support to facilitate outreach and awareness of TMC Clearinghouse to a broader audience base.

Project Champions: TMC PFS Co-Chairs
FHWA Work Order Manager: Raj Ghaman
Contractor Lead: TBD
Estimated Cost: \$80,000
Period of Performance: 12 Months

Milestones & Products:

- Anticipated project initiation – Summer/Fall 2008.
- Products: enhanced TMC Clearinghouse, evaluation report on user feedback, outreach and marketing material (fact sheet, brochure, and presentation).

Requirements and Position Descriptions for TMC Support Staff: This project will build off of the information already compiled for operators and fill the need for guidance to transportation operating agencies in developing KSA requirements and job classifications and descriptions for the TMC maintenance technicians, technology and engineering support, and system administrative personnel. This project will also include expanding the capability of the interactive software developed in previous TMC PFS efforts by incorporating additional information that will be developed in this project.

Project Champion: Mark Demidovich, Georgia DOT
FHWA Work Order Manager: Tom Granda
Contractor Lead: TBD
Estimated Cost: \$175,000
Period of Performance: 18 Months

Milestones & Products:

- Anticipated project initiation – TBD.
- Products: An enhanced interactive software tool, a project report, and outreach material (fact sheet, brochure, and presentation).

Techniques for Managing Service Patrol Operations: The purpose of this study is to identify and synthesize current best practices, state of the practices, models, and innovative techniques for managing service patrol operations. The synthesis study will address topics including, but not being limited to, service patrol operation models, service patrol vehicle and resource requirements, dispatching versus roving patrol, funding mechanisms including public versus private ownership, performance tracking, and portable and mobile technology applications.

Project Champion: TBD
FHWA Work Order Manager: Raj Ghaman
Contractor Lead: TBD
Estimated Cost: \$100,000

Period of Performance: 12 Months

Milestones & Products:

- Anticipated project initiation – TBD.
- Products: A synthesis report, a project fact sheet, and a presentation.

Best Practices for Road Condition Reporting Systems: The purpose of this project is to review and synthesize current best practices and state of the practices in planning, design, and operation of road condition reporting systems as well as in integrating such systems with other road weather information/management systems.

Project Champion: Jim McGee, Nebraska DOR
FHWA Work Order Manager: Raj Ghaman
Contractor Lead: TBD
Estimated Cost: \$100,000
Period of Performance: 12 Months

Milestones & Products:

- Anticipated project initiation – TBD.
- Products: A synthesis report, a project fact sheet, and a presentation.

TMC Infrastructure Maintenance Management System: This project will develop a software system to assist TMCs with managing infrastructure maintenance activities. Approach includes performing an assessment on available software/systems and agencies' experience. A requirements analysis will be followed to identify desired system functions and capabilities.

Project Champion: Doug Dembowski, Wisconsin DOT
FHWA Work Order Manager: Raj Ghaman
Contractor Lead: TBD
Estimated Cost: \$200,000
Period of Performance: 16 Months

Milestones & Products:

- Anticipated project initiation – TBD.
- Products: A maintenance management software system.

TMC Staffing & Scheduling for Day-to-Day Operations, Phase 2: Software Development: This project will build upon previous effort and develop an interactive software tool that TMC managers, supervisors and human resources personnel can use to quickly and easily assess available staffing resources and needs, perform the workload analysis, and make scheduling and shift operation decisions for immediate and future needs.

Project Champion: Mark Demidovich, Georgia DOT
FHWA Work Order Manager: Raj Ghaman
Contractor Lead: TBD
Estimated Cost: \$175,000
Period of Performance: 15 Months

Milestones & Products:

- Anticipated project initiation – TBD.
- Products: A web-based interactive software tool and outreach materials.

Developing TMC Operator Training Program Guidelines: The objective of this project is to develop training and capacity building guidelines for TMC operators. These guidelines will include outlines of training modules. Processes for certification and re-certification for different operator positions will be analyzed. The project will also develop recommendations for the National Highway Institute to develop a comprehensive training program.

Project Champion: TBD
FHWA Work Order Manager: Tom Granda
Contractor Lead: TBD
Estimated Cost: \$75,000
Period of Performance: 10 Months

Milestones & Products:

- Anticipated project initiation – TBD.
- Products: TMC operator training program development guidelines.

Knowledge Needs Assessment and Workshops for TMC Owners, Managers and Operators: This project will conduct a comprehensive assessment on knowledge needs for TMC owners, managers and operators to effectively and efficiently perform their day-to-day tasks. The project will also identify issues and needs and outline strategies and recommended initiatives to address the needs and issues.

Project Champion: Todd Kramasz, Minnesota DOT
FHWA Work Order Manager: Raj Ghaman
Contractor Lead: TBD
Estimated Cost: \$125,000
Period of Performance: 12 Months

Milestones & Products:

- Anticipated project initiation – TBD.
- Products: A needs assessment report, workshops/video conferences/webcasts, and a project report.

TMC Data Capture for Performance and Mobility Measures: This project will synthesize best practices and lessons learned related to collecting and archiving TMC operation data for monitoring, evaluating and reporting performance and mobility measures at system levels as well as for specific scenarios or locations.

Project Champion: John Bassett, New York State DOT
FHWA Work Order Manager: Raj Ghaman
Contractor Lead: TBD
Estimated Cost: \$100,000
Period of Performance: 12 Months

Milestones & Products:

- Anticipated project initiation – TBD.
- Products: A synthesis report, a project fact sheet, and a presentation.