

TMC Pooled Fund Study Quarterly Progress Report April 1, 2010 – June 30, 2010

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
12. TMC Business Planning and Plans Handbook
13. TMC Performance Monitoring, Evaluation and Reporting Handbook
14. Developing and Using Concept of Operations in Transportation Management Systems
15. Multi-State, Statewide and Regional TMC Concept of Operations and Requirements
16. Recovery and Mitigations for TMCs
17. Driver Use of Real-Time En-Route Travel Time Information
18. TMC Human Factors Design Guidelines: Requirements Analysis
19. Procuring, Managing, and Evaluating the Performance of Contracted TMC Services

2. On-Going Projects

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: Randy VanGorder

Milestones & Products:

- Anticipated project kickoff: Fall 2010.
- Phase 1 Products: A Synthesis Report and Phase 2 Work Plan.

Integration of TMCs and Law Enforcement: The purpose of this project is to develop a technical document that assesses the current practices and identifies and addresses institutional, operational and technical issues and challenges that all involving agencies are facing with integrating TMCs and law

enforcement. A white paper will also be prepared that identifies a series of next steps to develop a comprehensive guide, tools, outreach and technology transfer strategies, as well as to identify needs for further research.

Project Champion: John Domina, Nevada DOT
FHWA Work Order Manager: Kim Vásconez

Milestones & Products:

- Anticipated project initiation: Summer 2010.
- Product: A technical guidance document and a white paper.

3. New Projects Selected for 2010 and 2011

Open Source ATMS Software Licensing Development and Support, Phase 1: This phase 1 effort will review current ATMS software and their high level functionalities and modules. Based on the preliminary review, a list of open source software will be identified and further reviewed as to its legal and use limitations, support, and agreements.

Project Champion: Mike Jenkinson, Caltrans
FHWA Work Order Manager: TBD

Milestones & Products:

- Anticipated project initiation: TBD.
- Products: A synthesis report and recommendations for phase 2 study.

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 Champions: Lisa Schettler, Nevada DOT, and Suzette Peplinski, Michigan DOT
FHWA Work Order Manager: TBD

Milestones & Products:

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

Roles of TMCs in Emergency Operations: This project will assess the roles of TMCs in emergency operations (including winter operations). The project includes identifying the roles of TMCs during emergency situations, discussing how TMCs should prepare for emergency situations and implement actions, conducting a needs assessment to identify needs and gaps, and investigating organizational structures and models that have been used by various agencies.

Project Champion: Cathy McGhee, Virginia Transportation Research Council
FHWA Work Order Manager: TBD

Milestones & Products:

- Anticipated project initiation: TBD.
- Product: A study report.

All Encompassing Software State of the Art Research: All encompassing TMC software will include software functions to support managing freeway and arterial traffic operations as well as incident management, maintenance activities, service patrol operations, resource allocation and utilization, etc. This research will examine and synthesize the state of the art in the research and development of all encompassing software packages for TMCs and provide guidance on the development of next generation TMC software.

Project Champion: Ali Farhangi, Tennessee DOT
FHWA Work Order Manager: TBD

Milestones & Products:

- Anticipated project initiation: TBD.
- Product: A research report.

Design and Operations Elements of Dynamic Shoulder Use: This project will synthesize the state of practice in design and operations of dynamic shoulder lanes. It will investigate the design standards and operations elements of shoulders that can be used as priced and non-priced travel lanes. A guidance document will be produced to assist practitioners with design and operations of dynamic shoulder lanes.

Project Champion: Charlie Farnham, Texas DOT
FHWA Work Order Manager: TBD

Milestones & Products:

- Anticipated project initiation: TBD.
- Product: A synthesis report and a guidance document.

TMC White Paper Series: The project will develop a series of white papers that identify issues and challenges that TMCs are facing; suggest areas and topics for further research; and provide recommendations on additional initiatives that are needed to address issues and challenges and to advance the state of TMC practice.

Project Champion: Mike Jenkinson, Caltrans
FHWA Work Order Manager: TBD

Milestones & Products:

- Anticipated project initiation: TBD.
- Product: A series of white papers.

Synthesis of Current Travel Time Information Practice: The purpose of this project is to review and synthesize current practice, state of the practice, success stories, and lessons learned in providing travel time information around the country as well as to provide recommended practices on the concepts, methods, techniques, and procedures for transportation agencies to collect, calculate, and predict travel time information.

Project Champion: Jeff Galas, Illinois DOT
FHWA Work Order Manager: TBD

Milestones & Products:

- Anticipated project initiation: TBD.
- Products: A synthesis report and outreach material (fact sheet and presentation).

Effectiveness of Highway Advisory Radio: This project will review, evaluate and synthesize the state of the practice and effectiveness of highway advisory radio (HAR). This will include a compilation of successful stories and lessons learned around the country and assessment of the opportunity of using HAR in conjunction with (or to supplement) other information providing devices for information dissemination.

Project Champion: Ali Farhangi, Tennessee DOT
FHWA Work Order Manager: TBD

Milestones & Products:

- Anticipated project initiation: TBD.
- Product: A synthesis report.

Advance Travel Time Displays Prior to Freeway Entrances: This research will determine the effectiveness of travel time displays as used on the arterial approach to freeways. It will provide recommendations for the design and use of such displays, including information content, format, sign location, and warrants.

Project Champions: Jeff Galas, Illinois DOT
FHWA Work Order Manager: TBD

Milestones & Products:

- Anticipated project initiation: TBD.
- Products: A research report.

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 TMCs and other road weather information/management systems, roadway closure systems, and maintenance decision support systems.

Project Champion: Chris Quesnell, Wisconsin DOT
FHWA Work Order Manager: TBD

Milestones & Products:

- Anticipated project initiation: Summer 2010.
- Products: A synthesis report, a project fact sheet, and a presentation.

10-Year Technology Impacts on TMC Operations: This project will identify future development and revolutions in technology in the next 10 years as related to transportation management and will investigate the impacts of such technology on TMC operations.

Project Champion: Cathy McGhee, Virginia Transportation Research Council
FHWA Work Order Manager: TBD

Milestones & Products:

- Anticipated project initiation: TBD.
- Product: A study report.

Human Factors Guidelines for TMCs: This project will develop a handbook of TMC Human Factors (HF) Guidelines to provide TMC staff, supervisors, managers, and designers with a clear, relevant, and easy-to-use reference of human factors principles for TMC design and operation. This project will build upon the Requirements Analysis for Human Factors Guidelines for TMCs project.

Project Champion: Ed Sirgany, North Carolina DOT
FHWA Work Order Manager: TBD

Milestones & Products:

- Anticipated project initiation: TBD.
- Product: A guidelines document.