

HOV/MUL Pooled Fund Study Quarterly Progress Report

April 1, 2010 – June 30, 2010

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

1. Completed and Current Projects

HOV Facility 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 HOV facilities. This document is intended to be a comprehensive technical reference providing guidance on how to develop, implement, improve, and sustain a continuous performance monitoring, data management, evaluation and reporting program or initiative for an HOV system.

Products & Milestones:

- This project has been completed.
- Available Products: Handbook, Primer, Project Fact Sheet, Tri-Fold Brochure, FAQ's, and Presentations.

Analysis of HOV Lane Hours of Operations and Eligibility Requirements: The overall objective of this project is to develop a handbook that will serve as a technical reference that provides guidance and recommended practices on how to assess specific policy-level choices and basic trade-offs related to setting and changing eligibility, operating periods and access restrictions between the HOV lane and general purpose lanes.

Products & Milestones:

- Handbook – Final draft version is available; handbook to be finalized by incorporating FHWA HOV Guidance.
- Outreach Material (fact sheet, FAQ's) – Final versions are available upon request.

Analysis of HOV Lane Hours of Operations and Eligibility Requirements – Primer, Tri-Fold Brochure, and Presentations: The focus of this project is to develop additional outreach materials that were not covered in the initial phase of the project to assist in facilitating the transfer and use of the concepts and practices included in the technical reference to non-technical audiences that are critical to implementing and support HOV operation. These outreach materials will identify for a non-technical audience the key aspects and issues for their agencies to consider, the benefits and/or value, recommended practices and lessons learned, and profile successful practices.

Products & Milestones:

- This project has been completed.
- Available Products: Primer, tri-fold brochure, and PowerPoint presentation.

HOV Lane Enforcement Handbook: The purpose of this project is to develop a technical document that provides an update of state-of-the practice, with an emphasis on expanding on previous reference material and providing better focus on the use of technology in enforcement activities. Specifically, the effort would review past reference material such as the FHWA Enforcement Requirements for HOV Facilities (1978) and Caltrans HOV Lane Violations Study (1990); obtain input and survey enforcement practice

from representatives of enforcement agencies involved in HOV projects, survey current technologies and their applicability to occupancy enforcement and update earlier prototype statutes from the FHWA Enforcement Requirements for HOV Facilities Guide that could be used to implement automated violation enforcement.

Products & Milestones:

- Handbook – Final draft version is available; handbook to be finalized by incorporating FHWA HOV Guidance.
- Outreach Material (fact sheet, brochure, presentation, and FAQ's) – Final versions are available upon request.
- White Paper – Available upon request.

HOV Lane Safety Considerations Handbook: The purpose of this project is to develop a technical document addressing the issues, experience, considerations and best practices for safety enhancements of HOV facilities. Specifically, this effort will review existing reference materials, HOV facilities, facility operators and design practitioners throughout the United States in order to inventory existing guidance, practice and performance results, and develop guidance for design and operational considerations and recommended practices for safe design and operations of HOV facilities.

Products & Milestones:

- Handbook – Final draft version is available; handbook to be finalized by incorporating FHWA HOV Guidance.
- Outreach Material (fact sheet, brochure, presentation, and FAQ's) – Final draft versions are available on project web page; to be finalized by incorporating FHWA HOV Guidance.
- White Paper – Available on project web page.

Automated Vehicle Occupancy Technologies Study: The objective of this project is to identify, compile, and systematically evaluate concepts, methods, and technologies for automated vehicle occupancy detection, verification and enforcement that are being researched, under development and on the horizon in the United States and abroad. Findings of this project will assist in identifying, developing, and implementing cost-effective, automated techniques for verifying and enforcing vehicle occupancy to continue offering high occupancy vehicle (HOV) preference in an effective way.

Products & Milestones:

- This project has been completed.
- Available Products: Synthesis Report, White Paper, Concept of Operations Document, Presentation, and Fact Sheet.

HOV Facility Inventory and Clearinghouse: The overall objective of this project is to promote the exchange of HOV facility information between practitioners. By surveying HOV practitioners, consistent communication protocols can be established for the most commonly collected HOV data. Recipients would primarily be HOV practitioners at every level, and anybody with interest or knowledge in HOV related subjects with a need for information or desire to impart knowledge to others.

Products & Milestones:

- HOV Clearinghouse Web Site – Final draft web site can be accessed through the project web page; final website is undergoing revisions to meet FHWA 508 requirements.

Implications of Lane Pricing on Existing HOV Lanes: The purpose of this project is to develop a technical document that identifies technical, institutional, and organizational implications and provides

guidance and recommended practices on planning and implementing pricing techniques on converting existing High Occupancy Vehicles (HOV) lanes into High Occupancy Toll (HOT) lanes. This project builds off of the FHWA HOT Lane Development Guide and provides more detailed guidance, procedures, and processes to assist practitioners in implementing pricing techniques on existing HOV lanes.

Products & Milestones:

- This project has been completed.
- Available Products: Considerations for High Occupancy Vehicle (HOV) Lane to High Occupancy Toll (HOT) Lane Conversions Guidebook; Fact Sheet; Presentation; and Primer.

2. 2010/2011 Projects

Benefit/Cost Analysis of Value Pricing Projects: This research will provide transportation agencies and legislators a summary of the societal benefits and costs that are associated with value pricing projects around the nation. It will address the concern of legislators, transportation engineers, and the public on the cost-effectiveness of value pricing strategies in congestion mitigation. It will also establish a foundation for transportation planners and engineers to evaluate benefits and costs of the ongoing operation of value pricing facilities.

Project Champion: Mena Lockwood (Virginia DOT)

FHWA Work Order Manager: Greg Jones

Products & Milestones:

- Project initiation: expected in summer 2010.
- Products to be produced: A project report and a project fact sheet.

Active Traffic Management Lane Control Signs: This project will scan and synthesize the state of practice in design and operations of Active Traffic Management (ATM) lane control signs. An assessment of alternatives of design and operations of signs will be conducted. Guidance for the design and operations of the ATM lane control signs will be developed.

Project Champion: Mark Leth (Washington State DOT)

FHWA Work Order Manager: Greg Jones

Products & Milestones:

- Project initiation: TBD.
- Products to be produced: A synthesis report and a guidance document.

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: Mark Leth (Washington State DOT)

FHWA Work Order Manager: Greg Jones

Products & Milestones:

- Project initiation: TBD.

- Products to be produced: A synthesis report and a guidance document.

Dynamic Speed Design Elements: This project will investigate the design and applications of dynamic speed control devices. Issues associated with operations of dynamic speed limits/control will be examined. Such issues include but are not limited to: variable speed limits by lane; impact and effectiveness on speed reduction and harmonization; recommended frequency of updating the speed displays; recommended distance for advisory speed reduction/warning displays; etc.

Project Champion: Jim Kranig (Minnesota DOT)
FHWA Work Order Manager: Greg Jones

Products & Milestones:

- Project initiation: TBD.
- Products to be produced: A research report.

Identification and Analysis of Current Dynamic Pricing Schemes: This project will identify, review, compare and synthesize the current dynamic pricing schemes for HOT and toll lane operations. This project will analyze and compare the goals, techniques, algorithms, models, and tools used of identified dynamic pricing schemes, identify best practices and recommended practices, and provide recommendations for further research to advance practices.

Project Champion: Joe Rouse (Caltrans)
FHWA Work Order Manager: Greg Jones

Products & Milestones:

- Project initiation: TBD.
- Products to be produced: A synthesis report and a project fact sheet.

Transitions from Managed Lanes to Other Lanes: This research will investigate the appropriate ways to communicate changing eligibility requirements to drivers as they travel on a managed lane facility and transition onto HOV/HOT or general purpose lanes that have a different set of eligibility requirements.

Project Champion: Joe Rouse (Caltrans)
FHWA Work Order Manager: Greg Jones

Products & Milestones:

- Project initiation: TBD.
- Products to be produced: A research report.