

High Occupancy Vehicle (HOV) Systems Pooled Fund Study: FY 06 Overview

Purpose and Goal of HOV Systems Pooled Fund Study (PFS):

The HOV Systems PFS is intended to serve as a forum and provide an opportunity for the participants to identify, address and collectively take on the key issues and challenges that are common among public agencies that are responsible for managing and operating HOV facilities. The HOV PFS focuses on the critical program, policy, technical, and other issues that arise throughout the life cycle of an HOV facility. The HOV PFS also provides an opportunity to facilitate the interaction and sharing of information and successful practices with a broader audience to advance and improve upon the current state-of-the-practice related to the management, operation, and performance of HOV facilities.

The goal of the HOV PFS is to assemble regional, state, and local agencies, and the Federal Highway Administration (FHWA) to:

- 1) Identify issues common among HOV systems managers, operators, and service providers;
- 2) Suggest approaches to addressing identified issues;
- 3) Initiate and monitor projects intended to address identified issues;
- 4) Provide guidance and recommendations and disseminate results;
- 5) Provide leadership and coordinate with others with HOV interests; and
- 6) Promote and facilitate technology transfer related to HOV issues nationally.

Membership:

Membership in the HOV PFS consists of ten agencies including FHWA. Agencies may join at anytime during the year by committing funds at a level deemed appropriate by the members. The study has been approved for 100 percent SP&R funding. Any non-commercial agency or organization that is responsible for the management and operation of any portion of the surface transportation system is welcome to join the study. Such agencies and organizations may include cities, counties, transit agencies, toll authorities, turnpike authorities, port authorities, and corridor coalitions. Current members are the FHWA and the following agencies:

| Member | Technical Contact |
|---|-------------------|
| California Department of Transportation | Tim Buchanan |
| Georgia Department of Transportation | Daryl Cranford |
| Federal Highway Administration | Neil Spiller |
| Maryland State Highway Administration | Terrance Hancock |
| Massachusetts Highway Department | Ken Miller |
| Minnesota Department of Transportation | Nick Thompson |
| New Jersey Department of Transportation | Laine Rankin |
| New York Department of Transportation | Wayne Ugolik |
| Tennessee Department of Transportation | Steve Allen |
| Virginia Department of Transportation | Chris Detmer |
| Washington Department of Transportation | Mark Leth |

Process to Identify, Prioritize, and Select Projects:

The members meet annually to review progress on current projects, and to identify and select new projects. Projects are selected based on needs that are identified through an iterative process that involves the HOV PFS member input, state-of-practice reviews, and issues identified by professional organizations. Based on the prioritized list of needs, project proposals are developed for further consideration and reviewed by members in advance of the annual meeting. At the annual meeting these project proposals are reviewed, revised, prioritized, and selected through an iterative process. Consensus

building techniques are used to ensure that the needs identified by all members are accommodated to the extent possible.

The projects that are selected and advanced are based on priority ranking established by the members and resources that are available to the study for that year. Project groups that consist of representatives from the member agencies guide the development of the scope of the project, provide technical assistance, and direction after the annual meeting. This involvement includes any further revision of the project scope, clarification of project objectives, development of the statement of work, contractor selection, technical review and direction throughout project development and execution.

The number of new projects that will be selected in 2006 will be based on the funds that are available to the HOV PFS. As part of its contribution to this study, FHWA will provide the necessary staff and resources to manage, provide technical expertise, and administratively support for the HOV PFS. As a result, all of the funds that members contribute will go directly toward the projects that are selected. Contract solicitations will be issued through normal FHWA procurement procedures to perform the work that may be necessary based on the projects that are selected.

Current Projects:

The following six projects have been previously selected over the past three years:

- HOV Facility Performance Monitoring, Evaluation and Reporting Handbook
- HOV Lane Enforcement Handbook
- HOV Lane Safety Considerations Handbook
- Analysis of HOV Lane Hours of Operations and Eligibility Requirements
- Analysis of HOV Lane Hours of Operations and Eligibility Requirements – Primer, Tri-Fold Brochure, and Presentations
- HOV Facility Inventory and Clearinghouse

Brief descriptions of those projects are provided in the following paragraphs. Additional information on these projects can be found on the HOV PFS website at <http://hovpfs.ops.fhwa.dot.gov/>.

HOV Facility Performance Monitoring, Evaluation, and Reporting Handbook: The purpose of this project is to develop a handbook 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 handbook 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.

Milestones & Products:

- Draft Handbook – Incremental submittal of draft chapters began in August 2005.
- Final Handbook – December 2005.
- Primer – December 2005.
- Outreach Material (Fact Sheet, Brochure, Presentation) – December 2005.

Project website: http://hovpfs.ops.fhwa.dot.gov/cfprojects/new_detail.cfm?id=48&new=0.

HOV Lane Enforcement Handbook: The purpose of this project is to develop a handbook to serve as a technical reference that provides an updated 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 activity. 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.

Milestones & Products:

- Draft Handbook – Incremental submittal of draft chapters began in July 2005.
- Final Handbook – December 2005.
- Outreach Material (Fact Sheet, Brochure, Presentation, FAQ's) – December 2005.
- White Paper – November 2005.

Project website: http://hovpfs.ops.fhwa.dot.gov/cfprojects/new_detail.cfm?id=49&new=0.

HOV Lane Safety Considerations Handbook: The purpose of this project is to develop a handbook 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.

Milestones & Products:

- Draft Handbook – Available on the project web page.
- Final Handbook – November 2005.
- Outreach Material (Fact Sheet, Brochure, Presentation, FAQ's) – December 2005.
- White Paper – December 2005.

Project website: http://hovpfs.ops.fhwa.dot.gov/cfprojects/new_detail.cfm?id=52&new=0.

Analysis of HOV lane Hours of Operation and Eligibility Requirements: The purpose of this project is to develop a handbook 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. The project will address the types of analyses that are needed to make these decisions and to reassess these policies as demand and use grow through the life cycle of HOV facilities. The project will also examine how each of these policies influences one another and how changes can be made when technical thresholds associated with any one policy are exceeded.

Milestones & Products:

- Draft Technical Document – December 2005.
- Final Technical Document – February 2006.
- Outreach Material (Fact Sheet, Brochure, Presentation) – February 2006.

Project website: http://hovpfs.ops.fhwa.dot.gov/cfprojects/new_detail.cfm?id=51&new=0.

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 highlight the concepts, lessons learned, and

recommended best practices identified in the technical document. They 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:

- Project initiation – October 2005.
- Primer, tri-fold brochure, and presentations – May 2006.

Project website: http://hovpfs.ops.fhwa.dot.gov/cfprojects/new_detail.cfm?id=58&new=0.

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.

Milestones & Products:

- Project initiation – anticipated in January 2006.
- Work Plan – March 2006.
- Updated Facility Inventory Database – October 2006.
- HOV Facility Clearinghouse Web Site – January 2007.

Project website: http://hovpfs.ops.fhwa.dot.gov/cfprojects/new_detail.cfm?id=50&new=0.

Projects to Initiate in 2006:

The following four projects have been selected and will be initiated in 2006:

Implications of Lane Pricing on Existing HOV Lanes: The objective of this project is to identify issues to consider with implementing pricing techniques on existing HOV lanes. This project will identify design and operational requirements, applicable techniques, cost analysis and estimation to transform HOV lanes into HOT lanes, technologies for operations, and needs, techniques, costs, and other related issues for effective enforcement. This project will build off of the FHWA HOT Lane Development Guide and provide more detailed guidance, procedures, and processes to assist practitioners in implementing pricing techniques on existing HOV lanes.

Milestones & Products:

- Project initiation – anticipated in spring 2006.
- Anticipated project completion – summer 2007.
- Products to be produced: A technical document, a primer, and outreach material (fact sheet, tri-fold brochure and presentation).

HOV Marketing Handbook – Revision: This effort will perform a comprehensive revision on the existing HOV Marketing Manual. It will update current experience, fill these gaps and needs, and provide renewed marketing strategies to guide practitioners toward effective and successful outreach and marketing efforts. This effort will clearly define resources needed for ongoing marketing and public awareness activities, and provide example programs outlining how to reach out to key stakeholders (i.e., elected officials, local agencies, environmental advocacies and affected commuters) who have in the past had greatest impact on longevity of HOV lanes in operation.

Milestones & Products:

- Project initiation – anticipated in spring 2006.

- Anticipated project completion – fall 2007.
- Products to be produced: A revised HOV Marketing Manual, a primer, and outreach material (fact sheet, tri-fold brochure, questions and answers, and training materials).

Assessment of Automated Vehicle Occupancy Enforcement Technology: This research project involves a first step toward identifying and implementing improved methods for automating occupancy monitoring, verification and enforcement. The work scope entails a review and systematic evaluation of the vehicle occupancy verification methods and technologies under development or on the horizon, and/or employed at HOV facilities in the United States and abroad. The effectiveness of these techniques will be assessed on the basis of safety, physical feasibility, impact on occupancy violations and HOV facility operations, cost and ease of implementation, privacy, effectiveness, reliability, and other criteria. The research will also explore how these techniques can be integrated with automated toll violation operations.

Milestones & Products:

- Project initiation – anticipated in summer 2006.
- Anticipated project completion – summer 2007.
- Products to be produced: A research white paper and outreach material (fact sheet and presentation).

Evaluation of Markings and Delineation for Concurrent Flow HOV Lanes: This research will address the impact of different marking patterns on HOV facility operations, safety, and enforcement. Case studies will be reviewed, operational and accident data will be analyzed, and quantitative measures will be developed to evaluate the pros and cons of different types of markings for HOV lanes. Finally recommendations on markings for concurrent flow HOV facilities will be made.

Milestones & Products:

- Project initiation – anticipated in summer 2006.
- Anticipated project completion – winter 2007.
- Products to be produced: A research report, a white paper and outreach material (fact sheet and presentation).

Governance and Charter:

A charter, ratified by the members, governs the following aspects of the HOV PFS: membership; project selection; project management, coordination, and solicitation; policies and procedures; fiscal management; and overall HOV PFS management. Because the charter may require updates as new issues are identified, a provision for amendment of the charter by the members is provided. The complete HOV PFS charter is available at <http://hovpfs.ops.fhwa.dot.gov/>.

FHWA contacts:

For additional information on the HOV PFS contact Neil Spiller at (202) 366-2188, Neil.Spiller@fhwa.dot.gov. Information on the HOV PFS is also available on the web at <http://hovpfs.ops.fhwa.dot.gov>. To request documents or material that are not available on the HOV PFS website, contact Ming-Shiun Lee at (612) 373-6335, ming_shiun_lee@urscorp.com.