DRISI

CALTRANS DIVISION OF RESEARCH, INNOVATION AND SYSTEM INFORMATION

TRANSFORMING IDEAS INTO SOLUTIONS

Research Notes

Traffic Operations

May 2025

Project Title: High Occupancy Vehicle (HOV) Pooled Fund Study TPF-5(029)-Now TPF-5(322)

Task Number: 0373

Start Date: July 1, 2015

Completion Date: June 30, 2025

Task Manager:

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TPF-5(322) - High Occupancy Vehicle (HOV) / Managed Use Lane (MUL)

Research study to identify HOV issues common to all participants of this pooled fund study and identify recommendations and potential solutions.

WHAT IS THE NEED?

Traffic congestion is a big problem which degrades the effectiveness of HOV lanes/MUL. Research is needed in order to identify key issues and challenges that are common among public agencies that are responsible for managing and operating HOV facilities and to have researchers identify recommendations and potential solutions to these issues in order to improve the effectiveness of the HOV lanes.

WHAT ARE WE DOING?

This pooled fund study serves as a forum so that all participants interact, share 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/MUL facilities. All participants of this pooled fund research, including the California Department of Transportation (Caltrans) have been identifying key issues that need to be addressed and analyzed in order to research potential solutions.

WHAT IS OUR GOAL?

The goal is to improve the performance/effectiveness of the HOV/MUL lanes by participating in this research study to identify issues common among HOV systems managers, operators, and service providers, suggest approaches to addressing identified issues, select and initiate projects intended to address identified issues, and identify recommendations and potential solutions.

Caltrans

DRISI provides solutions and knowledge that improves California's transportation system.

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WHAT IS THE BENEFIT?

The Department can potentially benefit from the outcome of this research by implementing the resulting recommendations and potential solution from this pooled fund study. The public may benefit from the implementation of the results of this research which have the potential to improve performance/effectiveness of the HOV/MUL lanes.

WHAT IS THE PROGRESS TO DATE?

- Quarterly Meeting

  ◦ The Quarterly meeting took place virtually on November 19th. The meeting featured a presentation on automated violation detection by Invision.AI.

- Ongoing Research

  ◦ Scoping for the Data Gaps and Considerations for MUL vs. General Purpose Lane project began

  ◦ The Managed Lane Compliance research project completed the draft synthesis report.

  ◦ Waiting on FHWA Office of Operations (HOP) editorial review.

  ◦ The Managed Lanes Facilities Attractiveness and Consumer Choice project work continued and Batelle has developed a draft final report. Waiting on the HOP editorial review.

  ◦ The Use of Data to Inform Managed Lane Operational Decisions project developed the final draft report. Waiting on the HOP editorial review.

- Significant Results:

  ◦ There have been thirty-one (31) research efforts funded by this group that have helped advance the use of HOV and MUL projects throughout this country.

  ◦ Additional projects will be initiated once project funds are replenished.

- https://www.pooledfund.org/Details/Study/571