

Winter 2003

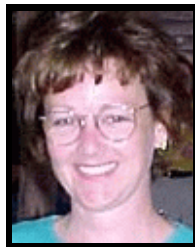
# FAST LANE

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## Research Team Out in Front

Once again our project team has had a very busy quarter wrapping up a number of tasks and informing others about the work going on in Texas. Several team members made presentations at the 11<sup>th</sup> International HOV Conference. The Conference was held October 28-30, 2002, in Seattle, Washington. Tina Collier made a presentation on the *Concept Marketing of Managed Lanes*. Bill Eisele spoke about *Managed Lane Design Issues*. Beverly Kuhn spoke on *A Legislative Framework for Operating Managed Lanes*. In the poster portion of the conference, David Fenno presented a poster on *Weaving Lengths for Managed Lanes Access and Egress*.



**Tina Collier**



**Bill Eisele**



**David Fenno**

All of these presentations and many others are available on our website, <http://managed-lanes.tamu.edu>, under "Our Products."

Beverly Kuhn also gave a progress report at the November meeting of the TxDOT Research Management Committee 4 in San Antonio.

## Welcome to FastLane

This is the sixth edition of *FastLane*: a quarterly newsletter that highlights ongoing activities and research in managed lanes in Texas. This issue features an article on managed lane enforcement issues and updates to our website, as well as highlights of news items on managed lanes. *FastLane* archives can be found on our web site, <http://managed-lanes.tamu.edu>. Please feel free to forward this newsletter to anyone who might be interested in its contents, and as always, we welcome your comments and suggestions.

## Managed Lanes in the News

### Eastside Car-pool Lanes Might Open to All at Night

Eastside freeway car-pool (HOV) lanes may soon be open to all drivers every night of the week, according to a report published in the *Seattle Times*. The report also states that solo drivers who want to use the HOV lanes during daylight hours may be able to do so by paying a fee. Transportation planners from the state Department of Transportation recommended the plan to the Washington Transportation Commission. The move, which affects nearly 100 miles of freeway, would impact Interstate 405 (I-45), I-90 east of I-405, Highway 167, and Highway 520 east of 405. The proposal excludes I-5 in the Puget Sound area. Studies show that the HOV lanes on I-5 are heavily traveled throughout the day. The estimated cost of opening the HOV lanes to general use from 7:00 p.m. to 5:00 a.m. seven days of week is \$3.5 million. This cost pays for the new signs, lane striping, rumble strips, education, enforcement, and evaluation of the program.

### Orange County Transportation Authority Wins Approval to Purchase 91 Toll Lanes

A report by the *Los Angeles Times* announced that after more than a year of study the Orange County Transportation Authority (OCTA) approved a final agreement to buy the 91 Express Lanes. The 91 Express Lanes is a privately funded toll road which operates on 10 miles of Riverside Freeway.

The sale of the toll lanes will signal the end of a  
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## Managed Lanes in the News

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noncompete agreement, that clears the way for \$1.6 billion in improvements for the Riverside Freeway. OCTA intends to maintain the toll road operation until the lanes' \$135 million debt is retired. Cofiroute, a French toll road company which joined Level 3 Communications and Granite Construction Company to build the 91 Express Lanes toll road, will continue to manage the day-to-day operations of the system.

### **HOV Lane Enforcement Can Be A Daunting Task**

An article in the December 23, 2002, *Rocky Mountain News* details the difficulties related to enforcing HOV lanes. A number of strategies are being employed to increase compliance including higher fines for violators, hot lines to report violators, saturation ticketing, and video enforcement. In California fines for first offense violations are \$271 and can go as high as \$671 for the third offense. Phoenix levies fines as high as \$354, while fines in Dallas range as high as \$251. However, hefty fines do not guarantee compliance. Last year the California State Patrol issued 52,423 tickets for HOV violations.

The Seattle area has implemented a hot line to report violators. In 2002 about 44,000 calls were received reporting HOV violations. In Texas saturation ticketing at random times is an effective technique. Officers target an area for a week or so and then return months later when monitoring shows violations are increasing. California and Texas have also experimented with video camera enforcement. However, cameras often missed infants and people in reclining seats. Cameras also had problems penetrating tinted windows. Future technologies may offer solutions to these problems.

### **Studies Consider Congestion Pricing for Texas**

A recent *Austin American Statesman* article reports that studies underway at the Texas Transportation Institute and the Center for Transportation Research are considering various congestion pricing and value pricing methods as a means of managing lanes in Texas.

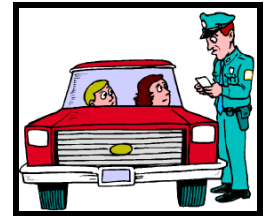
## Managed Lanes – Enforcement

A managed lane facility requires effective enforcement policies and programs to operate successfully. This requires cooperation between the enforcing agency, the courts and legal system, the state department of transportation, and transit agencies. However, the key components continue to be enforcement personnel in the field and the frequency of their presence. Managed lane designers are realizing this more and more as seen from their inclusion of dedicated enforcement areas along a facility. In the future, this will likely give way to the use of

automated enforcement technology, where the facility design will focus more on proper placement of electronic equipment to handle enforcement tasks.

The general design of a managed lane facility can impact the success of enforcement practices greatly. The design feature of a barrier-separated managed lane acts as a deterrent to potential misuse, as violators are confined in the lanes once the decision is made to enter the facility. Managed lanes that operate without a barrier, also known as buffer-separated facilities, tend to experience higher violation rates. Vehicles can move into and out of the managed lane with relative ease by simply crossing over painted pavement markings.

California has considerable experience with the managed lanes concept and has developed innovative approaches for enforcement. The SR91 Express Lanes in Orange County and the I-15 Express Lanes in San Diego County have contracted the enforcement services of the California Highway Patrol (CHP). The CHP's responsibility includes the focused monitoring of vehicle occupancies. The SR91 contract covers the costs for all CHP services 24 hours a day on what is otherwise not a state-owned roadway. The I-15 Express Lanes' contract covers the costs associated with CHP providing increased levels of enforcement daily. Prior to these agreements, CHP enforcement of the I-15 Express Lanes was limited to four days per month.



The "HERO" program of self-enforcement was first developed in Seattle, Washington. It uses signs and other communication techniques to provide users and non-users with a telephone number they can call to report managed lane violators. Although the program has not had any impact on violation rates, it continues because of favorable public opinion. It is an early example of the potential use of technology in managed lanes enforcement. The success of the "HERO" program in Seattle led to the development of a similar program in Houston, Texas.

The role of technology for managed lane enforcement is growing at an ever-increasing rate. The technology includes such categories as Automated Vehicle Identification (AVI), electronic toll collection systems (ETC), License Plate Recognition (LPR) systems, and video occupancy enforcement. These technologies represent the future concerning the enforcement of managed lanes.

## Managed Lanes On the Web

The Managed Lanes project team has recently updated the website. We have added several presentations from the 11th International HOV Conference held in Seattle last month, which are available online in Adobe Acrobat format and include:



- *A Legislative Framework for Operating Managed Lanes* ([http://managed-lanes.tamu.edu/products/presentations/0-4160-Legislative\\_Framework-HOVConf2002-Kuhn.pdf](http://managed-lanes.tamu.edu/products/presentations/0-4160-Legislative_Framework-HOVConf2002-Kuhn.pdf)),
- *Marketing Managed Lanes* ([http://managed-lanes.tamu.edu/products/presentations/0-4160-Concept\\_Marketing-HOVConf2002-Collier.pdf](http://managed-lanes.tamu.edu/products/presentations/0-4160-Concept_Marketing-HOVConf2002-Collier.pdf)), and
- *Design Issues Related to Managed Lane Facilities* ([http://managed-lanes.tamu.edu/products/presentations/Eisele-Seattle\\_HOV-2002.pdf](http://managed-lanes.tamu.edu/products/presentations/Eisele-Seattle_HOV-2002.pdf))

The Managed Lanes project team has published a Project Bulletin and two reports covering various tasks we have completed to date. They are also available online in Adobe Acrobat format and include:

- *Project Bulletin 4160-7B: Marketing the Managed Lanes Concept* (<http://managed-lanes.tamu.edu/products/bulletins/4160-7B.pdf>),
- *Year 2 Annual Report of Progress* ([http://managed-lanes.tamu.edu/products/reports/4160-12-Year\\_2\\_Annual\\_Report-Final.pdf](http://managed-lanes.tamu.edu/products/reports/4160-12-Year_2_Annual_Report-Final.pdf)), and
- *The Funding and Financing of Managed Lanes Projects* (<http://managed-lanes.tamu.edu/products/reports/4160-9.pdf>).

We have also posted information about upcoming managed lane related activities at the annual meeting of the Transportation Research Board in January 2003. You can access that information under “Meetings and Events” folder on the Managed Lanes website, <http://managed-lanes.tamu.edu>.

## The Managed Lanes List

A managed lanes listserv is available to interested readers. This list, unlike many other listservs, is not a discussion list. It is merely a means for the research team to disseminate information to members of the list in an efficient manner. This listserv is open to anyone interested in managed lanes topics or research. If you have concerns or questions about the list or would like to be added to the list, please contact Beverly Kuhn at [b-kuhn@tamu.edu](mailto:b-kuhn@tamu.edu).

## Managed Lanes Terminology

This feature of *FastLane* highlights several commonly-used terms in managed lanes that serve as a framework upon which our researchers will base future efforts. The entire glossary of terms may be accessed on the managed lanes web site.

- ★ **Bidirectional HOV Facility** - a facility in which both directions of traffic flow are provided for.



Photo Courtesy of HOV Interactive 2.0  
**I-10 (EL Monte) Bidirectional HOV Facility**

- ★ **Demand -Side Policies** - policies aimed at congestion by reducing the demand for travel either overall or targeted modes.
- ★ **Enforcement** - function of maintaining the rules and regulations of a preferential treatment to maintain the integrity.
- ★ **Incentive Programs** - policies and techniques aimed at a specific behavior.
- ★ **Main-Lane Metering** - regulating the flow of vehicles on general-purpose lanes or on freeway-to-freeway connections through the use of traffic signals that allow vehicles to proceed at a predetermined rate.