

Spring 2004

# FAST LANE

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## Welcome to FastLane

This is the tenth issue of *FastLane*: a quarterly newsletter that highlights ongoing activities and research in managed lanes in Texas. Previous issues can be found in the *FastLane* archives 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.

## Incident Management Survey Going On-Line

Approximately half of urban freeway congestion has been attributed to incidents. This type of congestion is known as non-recurring congestion. Efficient



Incident Management can be extremely valuable in minimizing the negative effects of congestion. Clearly, the usefulness of incident management on freeways without managed lanes as well as incident management

on facilities with managed lanes share similarities, but there are also key differences. With managed lanes, incident management raises issues of diverting traffic from the managed lanes to the general purpose lanes, or vice versa, impacts on tolling policies, etc.

To gain a better understanding of the distinctions between incident management on facilities without managed lanes and those with managed lanes, an on-line survey is collecting input from agencies that operate managed lanes and from incident responders. These insights will assist efforts to identify best incident management practices associated with managed lanes and their adjacent general purpose lanes.

The Managed Lanes Incident Management survey is now available. Please respond to the survey by May 26, 2004. It can be accessed at <http://managed-lanes.tamu.edu/incident/survey>.

## Managed Lanes Interoperability

The TTI research team is currently looking at the interoperability aspects of managed lanes. As part of this research, we'd like to hear from the profession.



The scope of the question is fairly broad. We'd like to know:

- \* With respect to managed lanes, what does interoperability mean to you?
- \* What are the specific issues that the profession is (or should be) concerned about?
- \* Do these concerns exist at the equipment, facility, or agency levels?

As an example, some areas of interoperability are:

- \* **Geometric Design** - coordination with other local / regional facilities
- \* **Operations** - similar practices across facilities / agencies

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## Managed Lanes Interoperability

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- \* **Communications** - facilitating shared communications / data usage
- \* **Planning** - wide-scale coordination for facility needs
- \* **Traffic Control Devices** - smooth transition of traffic and control from one facility to another
- \* **Evaluation / Monitoring** - consistent application of evaluation guidelines, performance measures

We'd like to hear from you! Add your thoughts, concerns, or suggestions into this mix of topics. Please contact **Robert E. Brydia** at (979) 845-8140 or [r-brydia@tamu.edu](mailto:r-brydia@tamu.edu).

### Now Available On-Line

The following case studies, workshops, and reports are now available on-line.



#### *Houston Managed Lanes Case Study: Evolution of the Houston HOV System*

The report examining the development, operation, and evolution of the high-occupancy vehicle (HOV) system in Houston toward managed lanes is now available. The use of HOV and managed lane facilities represent two related operational strategies in use or being considered in many urban areas. Managed lanes involves the combined use of vehicle eligibility (e.g., occupancy), access control, and pricing strategies to proactively manage traffic demand and the operation of a lane or facility to safely and efficiently maintain free flow traffic conditions.

This report summarizes the current status of the Houston HOV system and the development of the first managed lane project. It also highlights some of the institutional and technical issues that agencies may need to address when they consider pursuing managed lanes. This report is intended for agency staff, consultants, and individuals interested in pursuing new or enhancing existing HOV or managed lane facilities.

A nine-mile reversible flow HOV lane on the I-45 North Freeway in Houston, Texas was implemented as a demonstration project in 1979. This demonstration borrowed an off-peak direction traffic lane for use by buses and vanpools in the peak direction. Although in use only during the morning and afternoon peak travel periods, the contraflow lane carried 15,000 persons in buses and vanpools on a daily basis. The success of this

facility resulted in the development and operation of an extensive system of HOV lanes, park-and-ride lots, transit services, support facilities, and other services.

Currently some 100 miles of HOV lanes are in operation in six freeway corridors that carry over 121,000 passengers in buses, vanpools, and carpools on a daily basis. Twenty-eight park-and-ride lots, four park-and-pool lots, transit centers, and express bus service support these lanes. By 2025 a 250-mile, two-way HOV system is proposed for the region that includes new park-and-ride facilities, new transit centers and expanded express bus service. The operation of this HOV system has evolved to include a value pricing program demonstration project in two corridors. Further, managed lanes are being developed as part of an improvement program within the I-10 West (Katy) freeway corridor and are being considered for a second corridor.

The *Houston Managed Lanes Case Study: Evolution of the Houston HOV System* can be accessed on the FHWA HOV Facility web page at <http://ops.fhwa.dot.gov/Travel/traffic/hov/index.htm> or through the ITS Electronic Document Library (EDL) at <http://www.its.dot.gov> as publication number FHWA-OP-04-002 or EDL Doc. # 13874.

#### *Managed and Priced Lanes Workshop - November 2003: Summary of Workshop Results*

The summary of results from the FHWA and TRB-sponsored Managed and Priced Lanes Workshop is now available. The objectives of the workshop were to (1) identify and prioritize potential research and technology transfer activities to advance the implementation of managed and priced lanes; and (2) identify opportunities to champion and advance managed and priced lane research-related initiatives, particularly within TRB. The workshop was held in November 2003 in conjunction with the International Pricing Symposium in Key Biscayne, Florida, and involved over 20 experts from throughout North America.

Managed lanes are typically considered a "freeway-within-a-freeway" facility, where a set of lanes within the freeway cross-section is separated from general-purpose lanes. This separate facility incorporates a high degree of operational flexibility so that over time operations can be proactively managed to maintain maximum efficiency while responding to growth and changing needs. The operation of the facility is managed using a combination of strategies in order to continuously achieve an optimal condition, such as free-flow speeds.

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## *Managed and Priced Lanes Workshop - November 2003: Summary of Workshop Results*

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These operating strategies are broadly categorized as (1) pricing, (2) vehicle eligibility, and (3) access control. For the purpose of the workshop, “priced lanes” were defined as facilities that charge tolls varying by the time of day or level of demand and/or occupancy on single or multiple lanes.

The two-day workshop was structured to address both managed lanes (in the broadly defined sense) and priced lanes (a specific type of managed lane). Small breakout groups each focused on a broad subject area and developed research problem statements and program initiatives to address knowledge gaps. The workshop summary report details more than 30 research needs that the participants believed are vital to advancing the implementation of managed and priced lanes. To advance the state-of-the-practice of managed lanes, which incorporate crosscutting elements of freeway operations, pricing, HOV and bus transit, a collective effort on behalf of a number of different agencies and professional organizations will be necessary. It is expected that the research needs and potential projects identified in the workshop will have to be addressed or advanced by different groups, organizations, or agencies.

Two attachments to this document include a participant contact list and detailed information regarding the individual research problems developed at the workshop.

The *Managed and Priced Lanes Workshop, November 2003: Summary of Workshop Results* can be accessed on the FHWA Freeway Management Program web page at

[http://ops.fhwa.dot.gov/Travel/traffic/managed\\_lanes/index.htm](http://ops.fhwa.dot.gov/Travel/traffic/managed_lanes/index.htm).

Please note that this document is only available electronically. For more information, contact **Mr. Jon Obenberger**, by telephone at 202-366-2221 or by e-mail at [jon.obenberger@fhwa.dot.gov](mailto:jon.obenberger@fhwa.dot.gov).

## *Meetings of Note*

In March 2004 the Technical Work Group for I-30, SH 183, and Loop 12 managed lanes corridors met to discuss the feasibility analysis for these corridors as managed lanes. Mr. Bob Brown, Deputy District Engineer for the TxDOT Dallas District, gave a project overview of the managed lanes corridor project. The Dallas TxDOT District is analyzing I-30 from SH 360 to the Dallas Central Business District, Loop 12 from



Spur 408 to I-35E, I-35E from President George Bush Turnpike to FM 407, and SH 183 from SH 360 to I-35E as managed lanes corridors.

Mr. Jerry Hiebert, Executive Director of the North Texas Tollway Authority (NTTA), then provided an overview of the current status of NTTA as well as a presentation on the need for multi-agency collaboration on the project. A feasibility analysis was then discussed for each corridor.

## *Managed Lanes On the Web*

The project team has updated the web site and added two reports. The Managed Lanes web site is located at <http://managed-lanes.tamu.edu>. The reports are available in Adobe Acrobat format. You can also visit the Presentations section to browse all of our presentations related to this project to date.

*Report 4160-14: Interim Manual for Managed Lanes*  
<http://managed-lanes.tamu.edu/products/reports/4160-14.pdf> \*\*\* Note that this document is in DRAFT format and is subject to change prior to the final publication of the complete manual in 2005.

*Report 4160-15: Year 3 Annual Report of Progress: Operating Freeways With Managed Lanes*  
<http://managed-lanes.tamu.edu/products/reports/4160-15.pdf>

## *Managed Lanes in the News*

### *Restricted Truck Lanes Implemented in San Antonio*

The San Antonio City Council voted in March to implement a truck lane restriction ordinance for U.S. 90 inside Loop 410 and I-10 between I-35 and Loop 410. The ordinance which was set to begin April 1, 2004, is in effect from 6:00 a.m. to 9:00 p.m. Monday through Friday. In an article in the *San Antonio Express News* entitled “Brakes Slammed on 18-Wheelers” the Jason Cosby, assistant director for public works in San Antonio, explained the 21 mile segment that has the lane restrictions will be monitored for 6 months for traffic and accidents to see if the restriction works. The complete story can be found at



[http://www.mysanantonio.com/news/metro/stories/MY\\_SA05.01A.truck\\_ban.34a0287a.html](http://www.mysanantonio.com/news/metro/stories/MY_SA05.01A.truck_ban.34a0287a.html).

*Note:* The lane restrictions and monitoring will begin when all necessary signage is in place.

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## Managed Lanes in the News

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### Bay Area Toll Authority Push FasTrak

According to a recent article in the *San Francisco Chronicle*, the Bay Area Toll Authority has embarked on a publicity and marketing campaign to encourage the use of the Bay Area's electronic toll collection system, FasTrak. The authority is offering a \$1 toll discount for users, adding additional dedicated lanes on the Bay Area's five busiest bridges, and employing a major marketing effort to promote FasTrak. At the time the article was written only 25 to 30 percent of motorists regularly use FasTrak. The goal of the Authority is to increase usage to 65 to 70 percent of motorists. To read the complete article go to <http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2004/04/15/BAGGR656VU1.DTL>.

### Katy Freeway will Proceed on Schedule

A U.S. District Judge denied the petition of a citizens group that asked for the expansion of the Katy Freeway in Houston be redesigned. An article in the *Houston Chronicle*, titled "Request to Halt Katy Freeway Expansion Denied," reported that Judge Kenneth Hoyt found that the Katy Corridor Coalition failed to prove that the FHWA and TxDOT did not properly disclose the health effects associated with doubling the freeways width. Construction on the expansion is underway and is scheduled to be completed by 2008.

## Toll Lanes Proposed Between Fort Worth and North Dallas

During their April meeting, the Transportation Commission approved a request for proposals and qualifications to create a 27-mile toll expressway linking I-35 west in Fort Worth and I-35 east in North Dallas. The proposed route would be along I-820 and SH183, as well as portions of I-35W, I-35E, and other facilities to the extent necessary for connectivity and financing.

## Upcoming Meeting Note

Please make note of the following proposed meeting. The TRB's Committee on High-Occupancy Vehicle Systems and Committee on Pricing are the proposed sponsors for a *TRB Specialty Conference on HOV Systems, Pricing, and Managed Lanes*. The conference theme will focus on HOV systems, managed lanes, and pricing: strategies for improving metropolitan mobility and accessibility. The conference will be held in



Houston in either March or April of 2005 and a call for papers/abstracts is expected by early summer.

## The Managed Lanes List

A managed lanes listserv is available to interested readers. This list is 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 [bkuhn@tamu.edu](mailto:bkuhn@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.

★ **Change of Mode** - transfer from one type of transportation vehicle to another.

★ **Concurrent Flow Lane** - an HOV lane that is operated in the same direction as the adjacent general-purpose lane.

★ **Contraflow Lane** - an HOV lane operating in the opposite direction of the normal flow of traffic, designed for peak direction travel.

★ **Freight Lane** - a facility or lane restricted to authorized truck types.

★ **HOV Lane** - an exclusive traffic lane or facility limited to carrying high occupancy vehicles (HOVs) and certain other qualified vehicles.

★ **Priority Lane** - lane providing preferential treatment to HOVs.

★ **Reversible HOV Lane** - facility in which the direction of traffic flow can be changed at different times of the day to match the peak direction of travel.

★ **Special Use Lane** - lane restricted for specific uses only.