

Spring 2003

# FAST LANE

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## Welcome to FastLane

This is the seventh edition of *FastLane*: a quarterly newsletter that highlights ongoing activities and research in managed lanes in Texas. This issue features an update on the IH- 635 LBJ Freeway project in Dallas and updates to our web site, as well as highlights of news items and web sites 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.

## Research Team Out in Front

The project team presented a number of papers at the 82nd Annual Meeting of the Transportation Research Board held in Washington, DC, January 12-16, 2003. The following presentations have been posted to the web site, all available in Adobe Acrobat format.

Carlos Lopez, Director of the Traffic Operations Division for TxDOT, made a presentation on *Managed Lanes in Texas: What Are the Challenges and Opportunities*

<http://managed-lanes.tamu.edu/products/presentations/0-4160-Challenges-TRB2003-Lopez.pdf>



Carlos Lopez

Beverly Kuhn, the Systems Management Division Head for TTI spoke on *Managed Lanes in Freeway Operations* <http://managed-lanes.tamu.edu/products/presentations/0-4>



Beverly Kuhn

[160-Freeway\\_Ops-TRB2003-Kuhn.pdf](#)  
Beverly also made a presentation on the *State Legislative Issues for Managed Lanes in Texas*. Which can be found at <http://managed-lanes.tamu.edu/products/presentations/0-4160-Legislation-TRB2003-Kuhn.pdf>.

Steven Venglar of TTI made a presentation on *Weaving Recommendations for Managed Lanes*. Which can be found at <http://managed-lanes.tamu.edu/products/presentations/0-4160-Weaving-TRB2003-Venglar.pdf>.



Steven Venglar



Tina Collier

Tina Collier of TTI made a presentation on *Involving the Public in a New Concept: Managed Lanes* Which can be found at <http://managed-lanes.tamu.edu/products/presentations/0-4160-Marketing-TRB2003-Collier.pdf>.

You can also visit the Presentations Section of “Our Products” on the web site to browse all of our presentations related to this project to date.

## Managed Lanes in the News Car-pooling in Dallas

According to a recent article in *The Chamber Report*, published by the Greater Dallas Chamber of Commerce, car-pooling is more popular than ever. Almost one in five-Dallas area residents travel with others to or from work, the highest percentage of any metro area in the nation, according to 2000 census data.

Reasons for this record setting popularity for car-pooling include: growing traffic congestion during rush hours; DART HOV lanes offer faster travel times; and the growing Hispanic population. An estimated 25 percent of the Hispanic work force car-pools.

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## Managed Lanes in the News

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### TRB 11th International HOV Conference

The Transportation Research Board (TRB) HOV System's Committee held its 11th International HOV Conference in Seattle in October 2002. The conference, entitled *Evolution . . . Or Revolution* was hosted by Sound Transit and the Washington State Department of Transportation. Four plenary sessions looked at changes in HOV in the past 12 years, challenges to the HOV concept, and solutions and strategies for HOV. The conference also featured 18 technical sessions focusing on: HOV, Bus Rapid Transit, and Managed Lanes. Seventeen poster presentations centered around the same themes. All of these sessions were designed to help attendees share, compare, and contemplate the role and promise of these operational strategies for current and future travelers. Tours offered to attendees included arterial, ferry, and freeway HOV lanes in the Seattle region along with transit centers and transit oriented development and direct access. The conference was an overwhelming success and the proceedings will be available soon. For more information on future activities of this TRB committee, visit <http://www.hovworld.com>.

### HOT Networks Policy Summary Released by Reason Public Policy Institute

The Reason Public Policy Institute recently released a report by Poole and Orski titled *HOT Networks: A New Plan for Congestion Relief and Better Transit*. The report investigates the use of high occupancy lanes as a resource which is growing in demand and must be managed more efficiently. The report also addresses revenue sources for financing transportation infrastructure. One revenue source examined is revenue from HOT lanes. The study recommended that Congress consider a multi-year program to develop a HOT Network. This program would encourage cities, metropolitan area, and states to create networks of premium toll lanes, implement bus rapid transit, and develop innovative public-private financing arrangements involving tax-exempt toll revenue bonds. A full report and summary report are available in pdf format through the Reason web site. The full report may be found at: <http://www.rppi.org/ps305.pdf>. The summary report is at <http://www.rppi.org/ps305polsum.pdf>

### Toll Lanes in Texas

Separate articles in *The Dallas Morning News* and *Star Telegram* discuss the issues of toll roads in Texas and a proposal by Hillwood Development Corporation to add toll lanes near the Alliance Airport. Developer Ross Perot, Jr. and Hillwood Corporation made a presentation on April 16<sup>th</sup> to the North Texas Tollway Authority, which called for building express toll lanes on Interstate 35 West from Fort

Worth to Denton, converting Texas 170 into a toll road and extending it west of IH- 35 West; and creating toll lanes on Loop 820 and Texas 183. The intent of the proposal is to accelerate the expansion of the highways connecting Dallas, Fort Worth, and Northeast Tarrant County.

### Web Sites of Interest

The Federal Highway Administration has launched a reformatted and much improved Internet version of the *FHWA Guide to High Occupancy Toll (HOT) Lane Development*. The guide is available on the FHWA web site at the following address:

[http://www.itsdocs.fhwa.dot.gov/JPODOCS/REPTS\\_TE/hot/index.htm](http://www.itsdocs.fhwa.dot.gov/JPODOCS/REPTS_TE/hot/index.htm). A link is also available from the FHWA Office of Operations Web site, which may be found at <http://ops.fhwa.dot.gov/Travel/>.

A hard copy of the report has been sent to the Government Printing Office, with about 500 copies being printed. A pdf file containing an electronic copy of the printed version is available from the Web version of the document.



### The Managed Lanes List

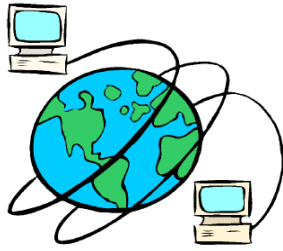
A managed lanes listserv is available to interested readers. This list, unlike many other listservs, is not a discussion list. It is merely a means for the research team to disseminate information to members of the list in an efficient manner. This listserv is open to anyone interested in managed lanes 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).

### Upcoming Meetings of Note

Managed lanes will be on the program agendas for two upcoming national meetings. The ITS America (ITSA) 2003 Annual Meeting to be held in Minneapolis, Minnesota 19-22 May 2003 will feature a session entitled "Some Like it HOT: ITS Technology and Value Pricing." On the program for this panel session (Session #28) will be a discussion of the I-15 managed lanes and IH-10 Katy Freeway toll lanes projects, managed lanes in freeway operations, and mileage-based user fees. Also, managed lanes will be on the program of the Institute of Transportation Engineers (ITE) Annual Meeting to be held in Seattle, Washington from 24-27 August 2003. Session 11, "Buying into HOV/HOT Lanes," will feature presentations on lessons learned, master plans, direct access, and managed lanes research. Also, the TRB HOV Systems Committee (A3A06) will host its 2003 Mid-Year meeting in conjunction with the ITE meeting.

## Managed Lanes On the Web

The project team has updated the web site and published a considerable number of products on a variety of research tasks and topics. The research report and project bulletin on traffic modeling are available, along with two user-friendly brochures addressing the marketing of managed lanes projects to both policy makers and the general public. The related research report on concept marketing is posted as well as the research report on legislation, the summary of the 2002 meeting held with the TxDOT Project Monitoring Committee, and the report on enforcement. All of the products are available online at the following links:



< Report 4160-7: *Managed Lanes - Traffic Modeling*  
<http://managed-lanes.tamu.edu/products/reports/4160-4.pdf>

< Project Bulletin 4160-4B: *Managed Lanes - Traffic Modeling*  
<http://managed-lanes.tamu.edu/products/bulletins/4160-4B.pdf>

< Product 4160-5-P1: *Managed Lanes: More Efficient Use of the Freeway System*  
[http://managed-lanes.tamu.edu/products/brochures/4160-5-P1-Policy\\_Brochure.pdf](http://managed-lanes.tamu.edu/products/brochures/4160-5-P1-Policy_Brochure.pdf)

< Product 4160-6-P2: *Managed Lanes: A New Concept for Freeway Travel*  
[http://managed-lanes.tamu.edu/products/brochures/4160-6-P2-Media\\_Brochure.pdf](http://managed-lanes.tamu.edu/products/brochures/4160-6-P2-Media_Brochure.pdf)

< Report 4160-7: *Marketing the Managed Lanes Concept*  
<http://managed-lanes.tamu.edu/products/reports/4160-7.pdf>

< Report 4160-8: *State and Federal Legislative Issues for Managed Lanes*  
<http://managed-lanes.tamu.edu/products/reports/4160-8.pdf>

< Report 4160-3: *Meeting Summary: 2002 Annual Project Monitoring Committee Workshop*  
[http://managed-lanes.tamu.edu/products/reports/4160-3-2002\\_PMC\\_Workshop.pdf](http://managed-lanes.tamu.edu/products/reports/4160-3-2002_PMC_Workshop.pdf)

< Report 4160-11: *Enforcement Issues on Managed Lanes*  
<http://managed-lanes.tamu.edu/products/reports/4160-11.pdf>.

As always, feel free to visit the Reports section of our web site under Our Products to browse all of our products from this project to date. Several presentations

from recent conferences and meetings that you might find of interest have also been added. Visit Presentations under Our Products as well to browse the list and access them in Adobe Acrobat format.

## 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 under "Our Products."

★ **Commuter Trips** - trips that are taken on a daily or regular basis to work.

★ **Deadheading** - a segment of a trip made by a transit vehicle not in revenue service. This term is also used by trucks, other commercial vehicles and railroads, when referring to a nonrevenue trip segment.

★ **Bus Rapid Transit (BRT)** - a term describing a bus operation that is generally characterized by operation on a separate right-of-way that permits high speeds.

★ **Express Bus Service** - bus service with a limited number of stops, usually at high speed.

★ **Fees for Entering** - tolls charged to vehicles entering a particular facility or an area, but which do not depend on the distance traveled on the facility or in the area.

Note: these definitions are not necessarily all-inclusive nor exclusive to managed lanes.



## Update on the I-635 LBJ Project

Work continues on the managed lanes study being conducted by the Dallas District as part of the LBJ Corridor Study. The project is broken into four sections as highlighted in Figure 1.

Since this project was highlighted in the August 2001 edition of *FastLane*, many tasks have been accomplished. Work is continuing on the High Five Interchange with expected substantial completion in 2007. In January 2003 construction began in the Mesquite section. The demolition of Towne Centre Blvd. is underway. The Towne Centre bridge work is expected to be substantially complete in November 2003 and incentives have been added to the contract for early completion. The East section of the

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## Update on the I-635 LBJ Project

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project recently received a Finding of No Significant Impact (FONSI) from the Federal Highway Administration (FHWA). This completes the environmental clearance for this project and the project can now move into the design stage as funding becomes available. The planning phase of the West section continues and a public meeting is expected this spring.

The Managed Lanes concept is being examined as part of the LBJ Project. It is also an important element of a more comprehensive study being conducted by the North Central Texas Council of Governments (NCTCOG). Sponsored by FHWA as part of the Value Pricing Pilot Program, the study, entitled "Regional Value Pricing and Corridor Evaluation and Feasibility Study," will be led by URS Corporation in cooperation with local agencies. A kick-off meeting was held on January 13, 2003 to refine and finalize the scope of work. The LBJ project would incorporate several combinations of additional general

purpose lanes, managed lanes and light rail components or features, in addition to intersection improvements, bridge replacements, and auxiliary roads. These configurations are depicted in Figure 2.

Recently, a traffic and revenue study was completed to assess the viability of each of these alternatives. The study considered the revenue potential for various scenarios as well as the impacts on the performance of the facility. The results indicate that the LBJ Managed Lanes have the potential to enhance regional mobility deliver a balanced, multi-modal corridor, provide improved performance in the corridor, and generate revenue. The report also indicates that these objectives will be achieved through the use of variable tolling on the managed lanes and by providing a platform for the implementation of Bus Rapid Transit (BRT) in the corridor. This latest traffic and revenue study was completed without the benefit of the Year 2000 census data and the report suggests further study before any final determinations of design or operating scenarios are made.

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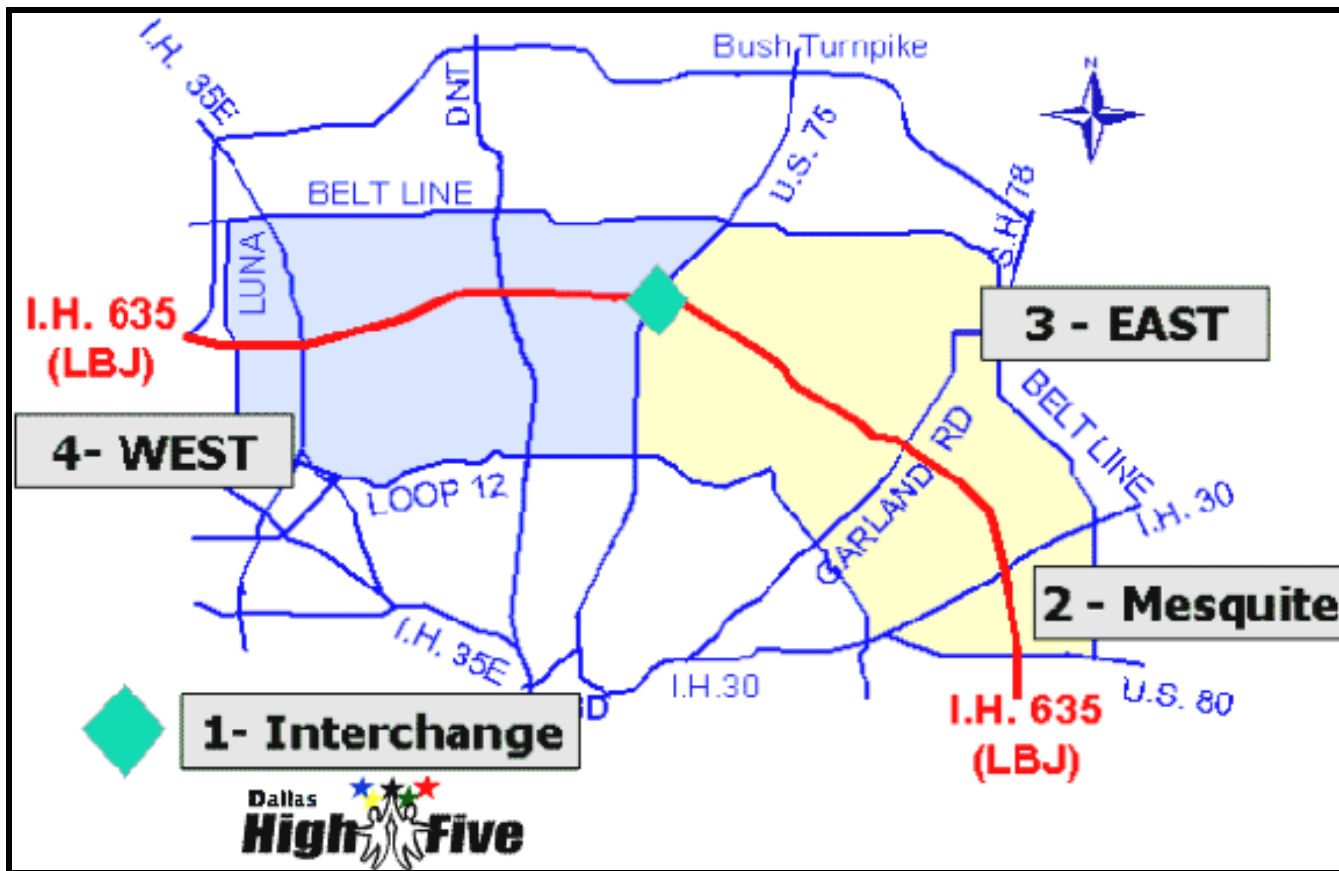


Figure 1. LBJ Project Area

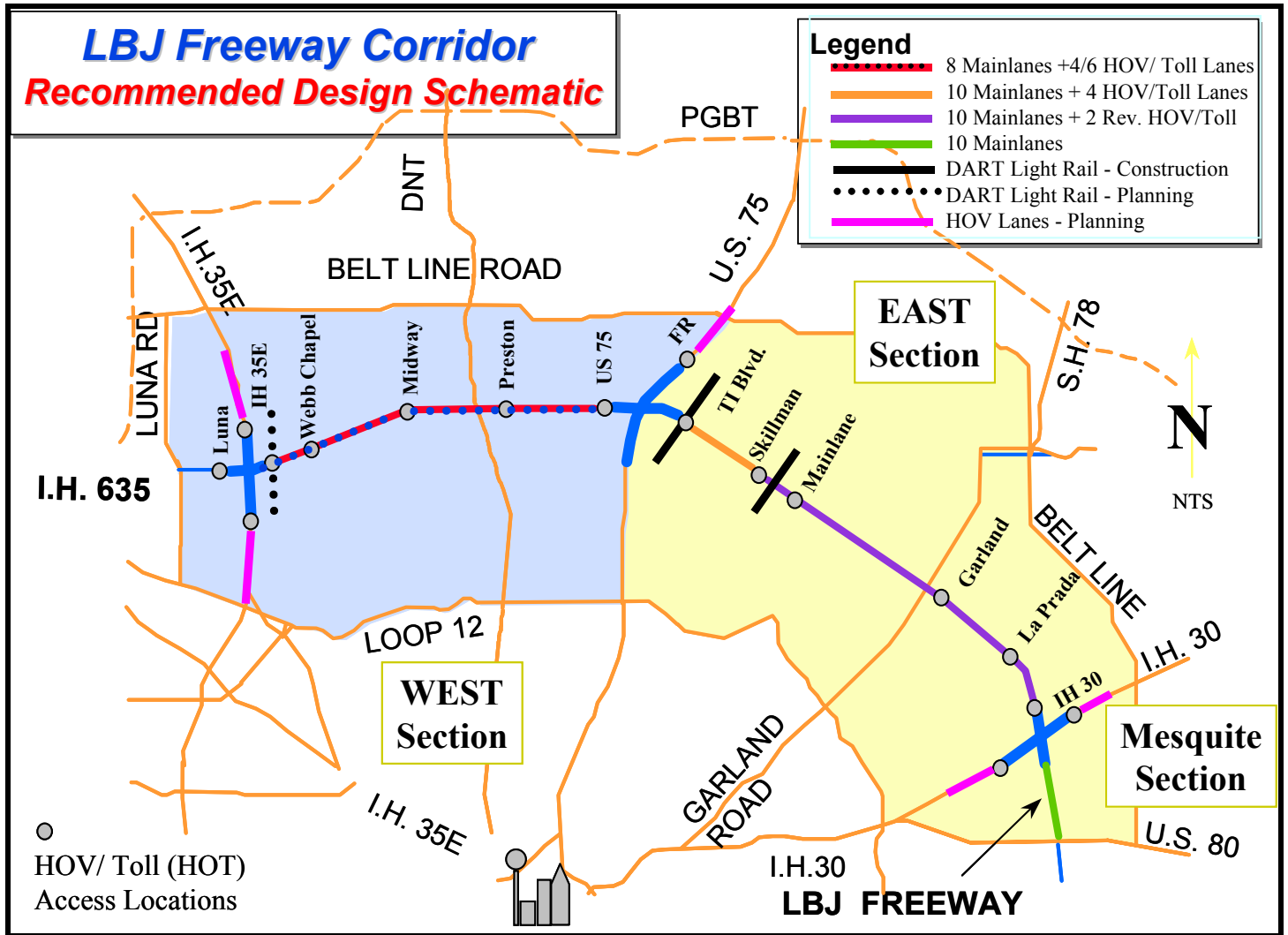


Figure 2. LBJ Preliminary Design

Table 1 provides a snapshot of expected outcomes in 2015 and 2025 for several of the different scenarios studied. The table shows a substantial reduction in free travel when the occupancy requirement is raised to 3+. The traffic and revenue study also suggests a unique opportunity available with this project. By implementing a fully automated electronic toll collection facility with no manual toll collection, the possibilities for integration with other multi-modal operations are greatly enhanced. For example, toll discounts could be offered for vehicles entering the managed lane facility from direct connect park-and-ride access lots. This encourages ride-sharing thus moving more people in the corridor. Other variable tolling scenarios, such as tolling by vehicle classification are also being explored. It is reasonable to

assume that great advances will be made in electronic toll collection technology before the facility becomes fully operational in 2015. Each advance provides another opportunity to refine the operational characteristics of the facility. Policy-makers will carefully consider the project goals when making final recommendations for operating scenarios. Ultimately this is a goal of any managed lane facility - to provide the flexibility needed to achieve the community's goals.

For more information on the LBJ Managed Lanes Project contact Matt MacGregor at 214/319-6570. Information may also be found on the project web site at <http://www.dot.state.tx.us/DAL/mis/ih635/LBJhome.htm>

*Update on the I-635 LBJ Project*

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**Table 1. Traffic and Revenue Study Scenarios**

<b>Study Year</b>	<b>Scenario</b>	<b>Annual Revenue</b>	<b>ML Toll VMT</b>	<b>ML Toll-Free VMT</b>	<b>ML Total Daily VMT</b>
2015	4 lanes; 2+ Free	\$16,208,000	303,000	278,000	481,000
2015	4 lanes; 3+ Free	\$27,156,000	438,300	25,900	464,200
2025	4 lanes; 2+ Free	\$28,213,000	402,300	300,000	702,300
2025	4 lanes; 3+ Free	\$47,561,000	507,000	30,300	537,300