


**MANAGED LANES**

## *Recent Research on Managed Lanes: A Report from Texas*

12<sup>th</sup> International HOV Systems Conference  
 Improving Mobility and Accessibility with Managed Lanes, Pricing, and BRT

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## *Agenda*

- Research Project Background
- Research Highlights
- Future Efforts




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## *TxDOT Managed Lanes Research*



... to develop a better understanding of how managed lanes can improve mobility for people and freight.




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## *Texas Research Project Objectives*

- ... to investigate the complex and interrelated issues surrounding the safe and efficient operation of managed lanes.
- ... to develop a comprehensive manual to help TxDOT make informed decisions.


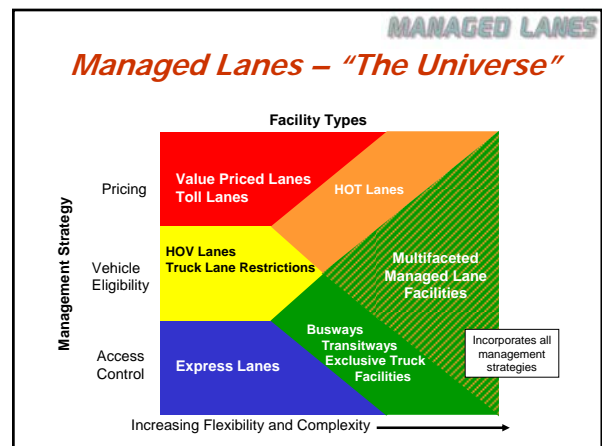



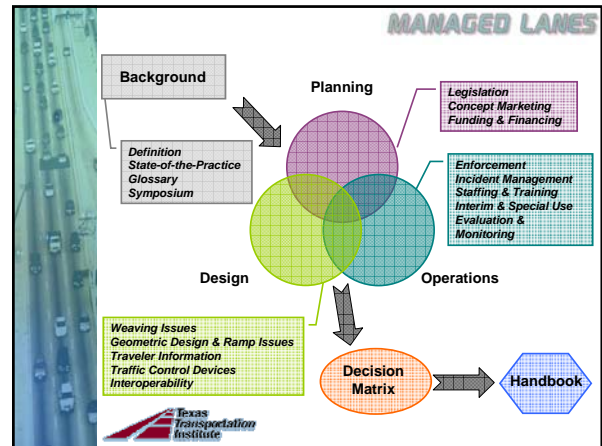
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## *TxDOT Definition of Managed Lanes*

**“A managed lane facility is one that increases freeway efficiency by packaging various operational and design actions. Lane management operations may be adjusted at any time to better match regional goals.”**

TxDOT Research Monitoring Committee, 2000



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**What guidance has been developed?**

- Weaving and ramp issues
- Concept marketing
- Legislative issues
- Financing options
- Enforcement
- Traveler information
- Traffic control devices
- Incident management
- Interoperability

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**How should access points be spaced?**

| Design Year Volume Level | Allow up to 10 mph Mainlane Speed Reduction for Managed Lane Weaving ? | Intermediate Ramp? | Recommended Minimum Weaving Distance Per Lane (feet) |
|--------------------------|--|--------------------|--|
| Medium (LOS C or D)      | Yes  | No                 | 500  |
|                          |  | Yes                | 600  |
|                          | No   | No                 | 700  |
|                          |  | Yes                | 750  |
| High (LOS E or F)        | Yes  | No                 | 600  |
|                          |  | Yes                | 650  |
|                          | No   | No                 | 900  |
|                          |  | Yes                | 950  |

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**When should a direct connect ramp be considered?**

| Freeway Volume        | Maximum Weaving Volume (before considering direct managed lane access ramps) |
|-----------------------|--|
| Moderate (LOS C or D) | 400  |
|                       | 275 vehicles/hour  |

Tuesday Breakout Session – 3:30 p.m.  
 Designing for Multiple User Groups

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**What's the most effective way to sell a project to the public?**

- Use messages common to successful projects
- Determine public perception at the project level
- Gain support through political champions
- Address equity concerns through mobility options

Managed Lanes: A New Concept for Freeway Travel

Most Efficient Use of the Planning System

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## What are the legal issues for managed lanes?



- All operational scenarios need to be legal for all entities
- Enforcement needs to be simplified
- Contracting needs to be easier
- HB 3588, SB 514, and HB 1208 influenced by research results
  - ✓ Exclusive lanes
  - ✓ Broader authority for use




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## How do you pay for managed lanes?

- Various financing methods available for managed lanes
- Critical to match financing method to project goals
  - ✓ What is being managed?
- Leverage monies
- HB 3588 benefits managed lanes

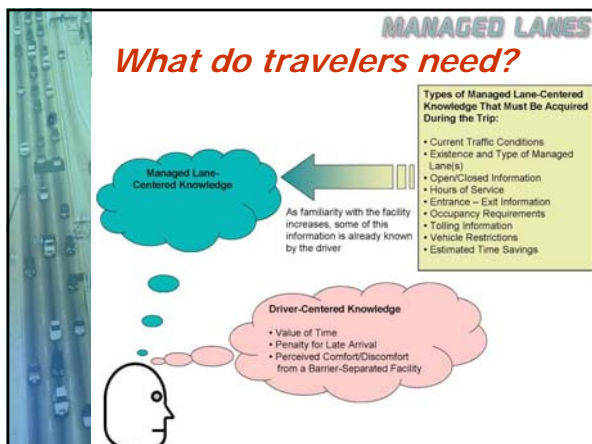
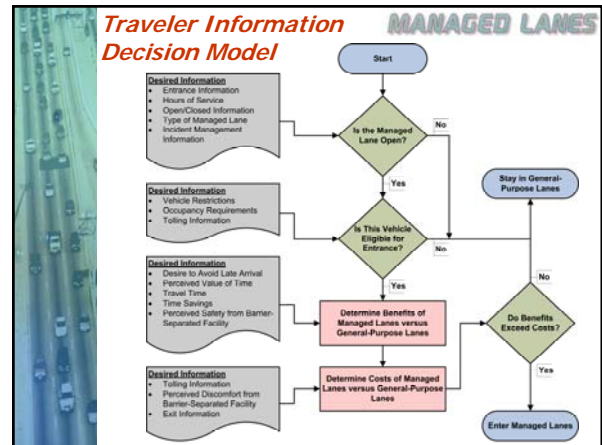
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## What about enforcement?

- Enforcement critical for long-term success
- Ease of enforcement related to design
- Enforcement technology

Tuesday Breakout Session – 1:30 p.m.  
 Enforcing for Multiple User Groups






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## Good Signing Practices: Banners

Houston METRO Banner



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### *How to you handle incidents?*

- Response vehicle access
- Diversion between managed lanes and general purpose lanes
- Safe work area
- Multi-agency cooperation
- Pre-positioned response vehicles
- Public notification



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### *What needs to be interoperable?*

- Planning
- Geometric design
- Traffic control devices
- Operations
- Incident management
- Surveillance and monitoring
- Communications



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### *Future Efforts*

- Staffing and Training
- Interim and Special Use
- Monitoring and Evaluation
- Managed Lanes Handbook



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### *Web Site*

- All reports, bulletins, and presentations are available from the research web site

<http://managed-lanes.tamu.edu>

- Click on "Our Products"



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### *Questions?*

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