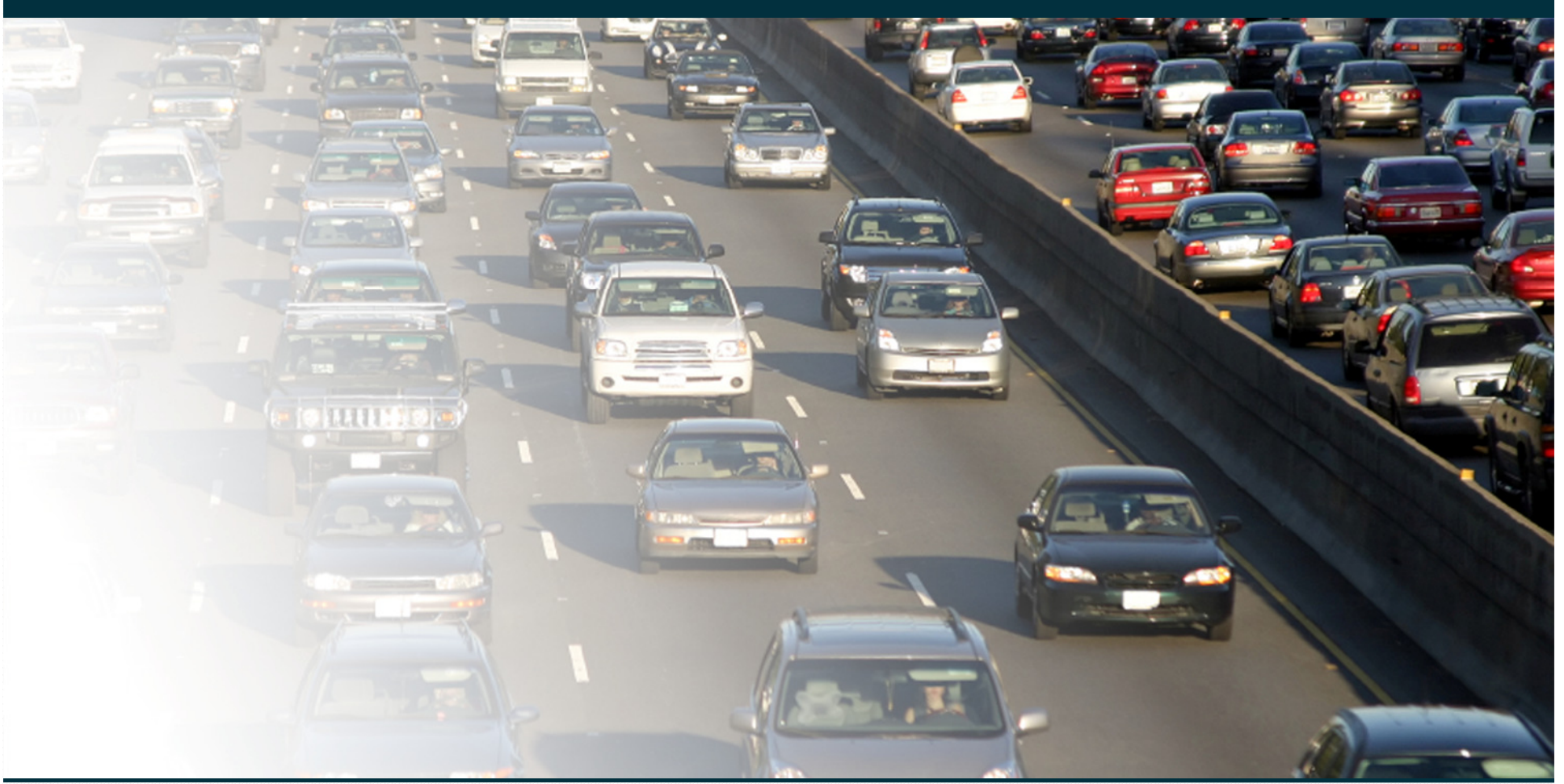


# SESSION 3

## Lane Pricing Examples



# Building on the success of others

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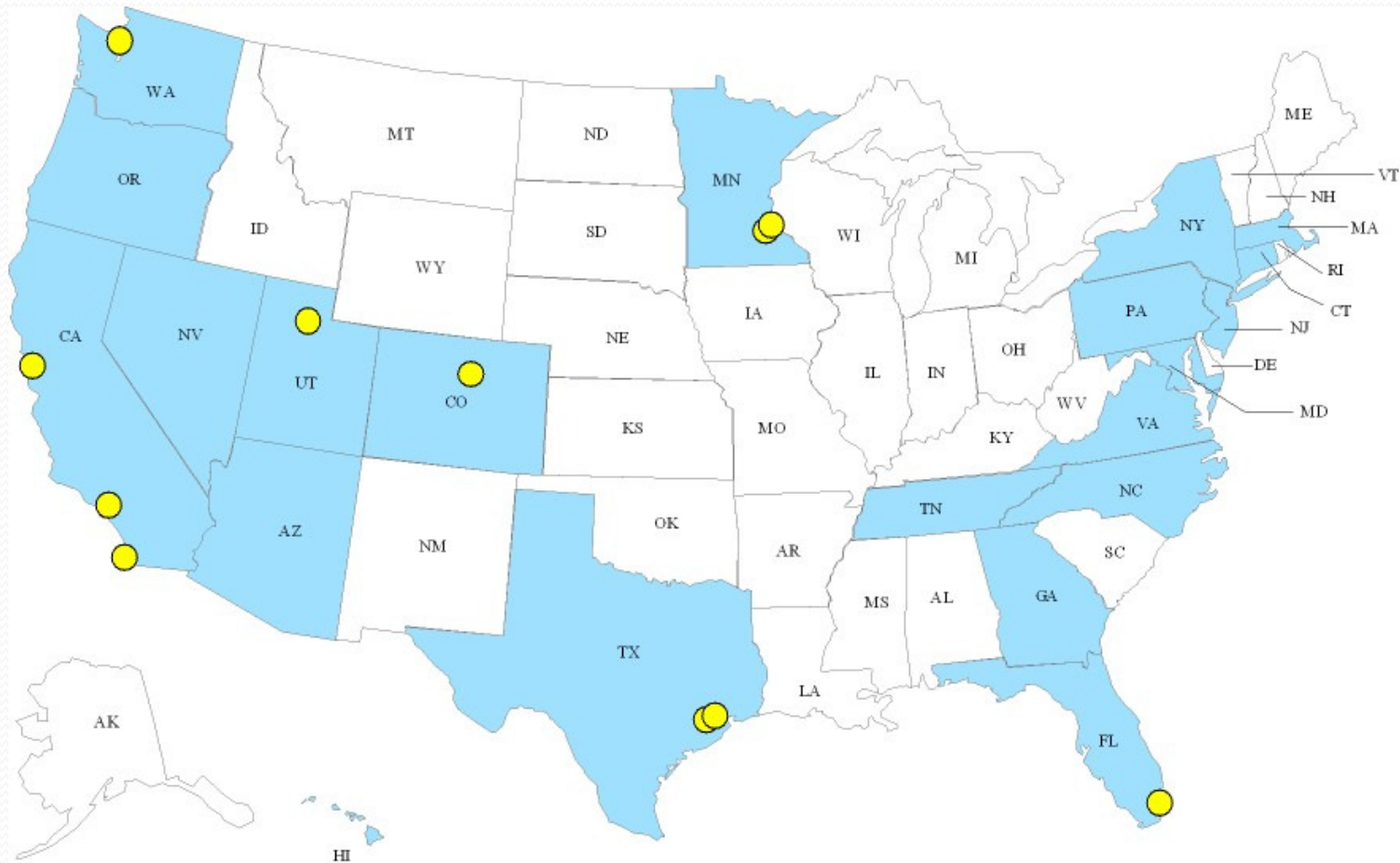


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Leroy Alloway, Director of Community Development  
Alamo Regional Mobility Authority

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# Priced Lane Projects



# Managed Lane Concept

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- Improve efficiency by balancing Supply and Demand
    - Supply: Improve efficiency by maintaining optimal flow
    - Demand: Dynamically adjust the price in relation to the current conditions
-

# Supply: What is the capacity for a Managed Lane?

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- The inherent nature of Managed Lanes is to provide a level of flow that is reliable and consistently free flowing
  - Thus, these lanes are managed to a level of Free Flow Capacity, not the same as the HCM Maximum Capacity
  - Free Flow Capacity of a single lane Managed Lane is typically in the 1500 – 1700 VPH range.
-

# Managing the Demand Side with Pricing

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- HOT Lanes are designed to serve their primary customer first – the baseline of Transit and Carpool vehicles
  - Then Dynamic or Variable Pricing is used to “meter” the number of toll payers, consistent with the capacity that is available
-

# First Generation Lane Pricing

## Characteristics

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- Most are HOV-to-HOT conversions
  - Primarily HOV facilities with excess capacity
  - Improve efficiency and respond to public opinion
  - Relatively little infrastructure investment
  - Most are revenue neutral (support operations and maintenance)
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# Projects

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- I-15 San Diego
- I-10 and US-290 Houston
- I-394 and I-35W Minneapolis
- I-25 Denver
- I-15 Salt Lake City
- SR 167 Seattle
- I-680 San Francisco Bay Area
- *SR 91 Los Angeles*





# FasTrak I-15 , Phase 1

## San Diego, CA - HOT Lanes Project

### Project Description

- 8 miles - concrete barrier separation, HOV to HOT conversion
- Opened in 1998
- 2 lanes reversible-flow
- No midpoint access



# FasTrak I-15 Express Lanes

## San Diego, CA - HOT Lanes Project

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### Pricing Parameters

- Dynamic pricing for SOVs to maintain LOS-C
- Toll free for HOV 2+/transit buses/motorcycles/low-emission vehicles
- Assumed capacity ~ 1,520 vehicles/hour/lane
- Toll Rate – Minimum and Maximum rates established
- Must have FasTrak transponder



# FasTrak I-15 Express Lanes

## San Diego, CA - HOT Lanes Project

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### Project Costs and Revenue

- Capital cost ~ \$10 million
- Operating cost ~ \$750,000/year
- Enforcement cost ~ \$80,000/year
- Revenue ~
  - \$2.2 million in 2004
  - \$1.3 million in 2006 (New frwy. opened)



# FasTrak I-15 Express Lanes

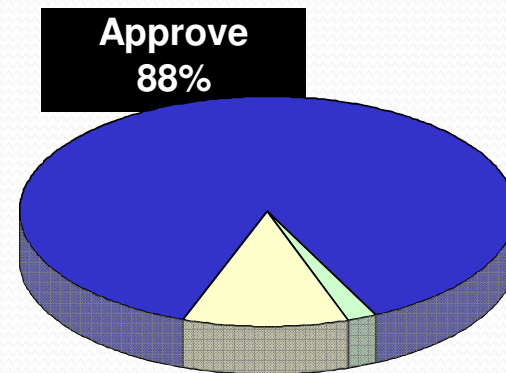
## San Diego, CA - HOT Lanes Project

### Project Features

- Revenues fund the Island Breeze Express Bus Service
- Overwhelming public support



### San Diego I-15



Disapprove 11%    Don't Know 1%



Source: [fastrak.sandag.org](http://fastrak.sandag.org)

<http://fastrak.511sd.com/index.aspx>

# Next Generation Lane Pricing

## Characteristics

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- More complex projects
  - Tend to have congested conditions, even in existing Managed Lanes
  - Multi-lane facilities = greater revenue opportunities
  - Direct access, grade-separated ramps
  - Emphasis on BRT/express bus services by incorporating transit stations and direct access
  - Designs that incorporate flexibility and expandability
  - Partnering approaches funding, development, operation
  - Funding plays role in decisions on operating policy and design
  - Regional networks of priced lanes
-

## 2<sup>nd</sup> Generation Projects

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- I-95 Express Lanes, Miami - Open
  - I-15 San Diego Managed Lanes - Open
  - I-10 Katy Managed Lanes - Open
  - SR 520 Seattle – opening June
  - I-495 Virginia – under construction
  - I-595 Miami
  - I-820 Ft. Worth
  - I-635 Dallas
  - Bay Area HOT Lanes Network
-



# Characteristics of 2<sup>nd</sup> Generation Projects

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- Build multi-lane managed facilities
  - Higher revenue projections
  - Utilize revenue stream to accelerate construction
  - Unique partnership arrangements
-



# I-10 Katy

## Houston, TX – Managed Lane

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### Project Features

- Opened April 2009; replaced single reversible HOV lane
- 2 lanes each direction
- Flexible plastic pole separation
- Multiple access with direct connects at transit centers



# I-10 Katy

## Houston, TX – Managed Lane

### Pricing Parameters

- Express Toll Lane base operation – all vehicles pay
- Variably-priced based on time of day, multiple zones
- Toll free for HOV 2+/transit/motorcycles during peak periods



# I-10 Katy

## Houston, TX – Managed Lane

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### Project Funding

- Public-public partnership:
  - TxDOT
  - Harris County Toll Road Authority (HCTRA)  
(in coordination with FHWA and METRO, the regional transit authority)



# SR 520 Bridge

## Seattle, WA – Bridge Replacement

### Project Description

- Project under development
- Pre-construction tolling applied to existing bridge lanes
- Generate funding to support bridge replacement
- Variable tolling by time of day
- Multiple methods for paying tolls
  - Transponders options
  - Pre-pay and late-pay video tolling



# SR 520 Bridge

## Seattle, WA – Bridge Replacement

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### Project Features

- New buses and park and ride facilities
- Active traffic management systems
- Expansion of existing TDM programs



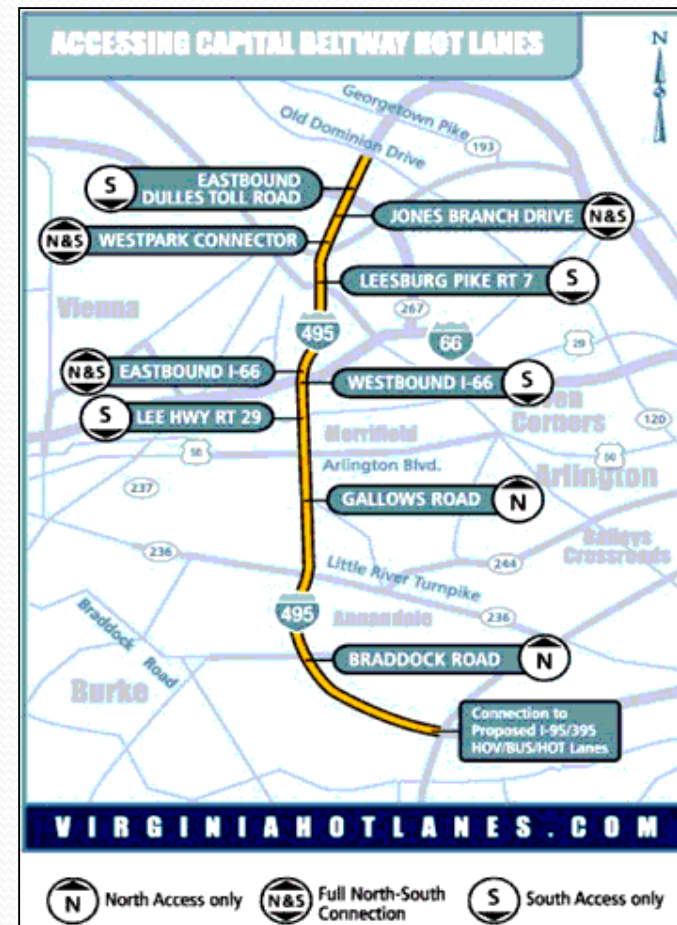


# Capital Beltway HOT Lanes

## I-495, Virginia

### Project Description

- 14 miles
- 2 new lanes each direction
- flexible plastic pole separation
- direct access at major interchanges with no at-grade access



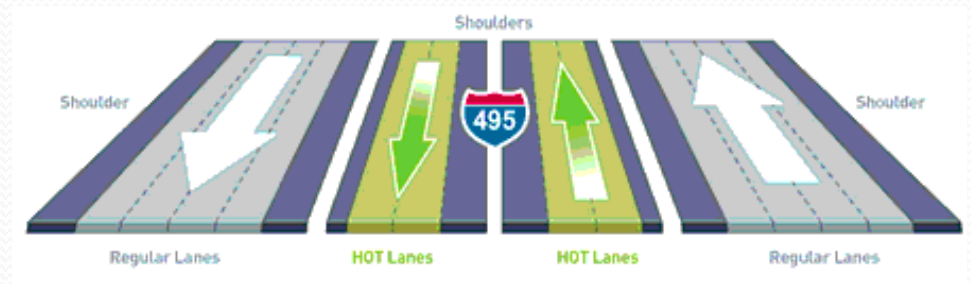
# Capital Beltway HOT Lanes

## I-495, Virginia

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### Pricing Parameters

- Dynamically priced - based on demand
- Toll free for HOV 3+/transit/motorcycles
- Toll rate – undecided
- Must have E-ZPass transponder



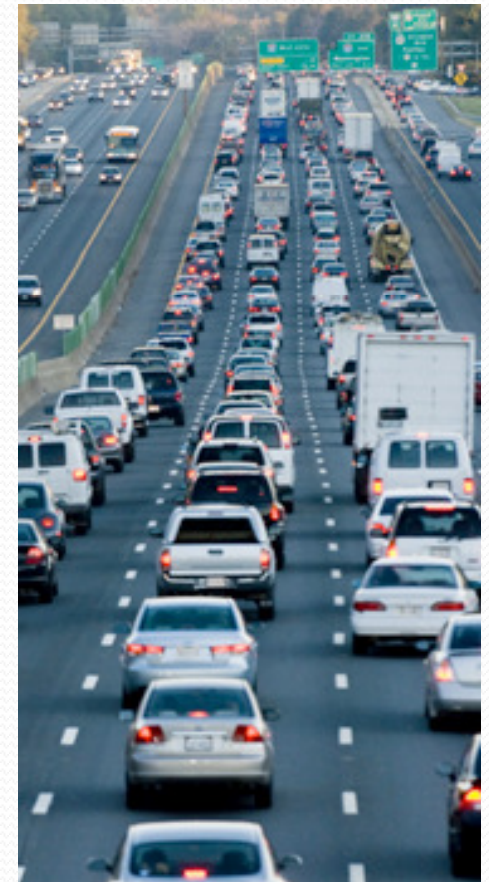


# Capital Beltway HOT Lanes

## I-495, Virginia

### Project Funding

- Public-private partnership
  - Virginia Department of Transportation (VDOT)
  - Fluor-Transurban
- Funding
  - Commonwealth of Virginia ~ \$409 million
  - Private equity ~ \$349 million
  - Private activity bonds - \$589 million
  - FHWA TIFIA loan - \$589 million



# Future Generation Lane Pricing

## Trends to Watch – Systems of Managed Lanes

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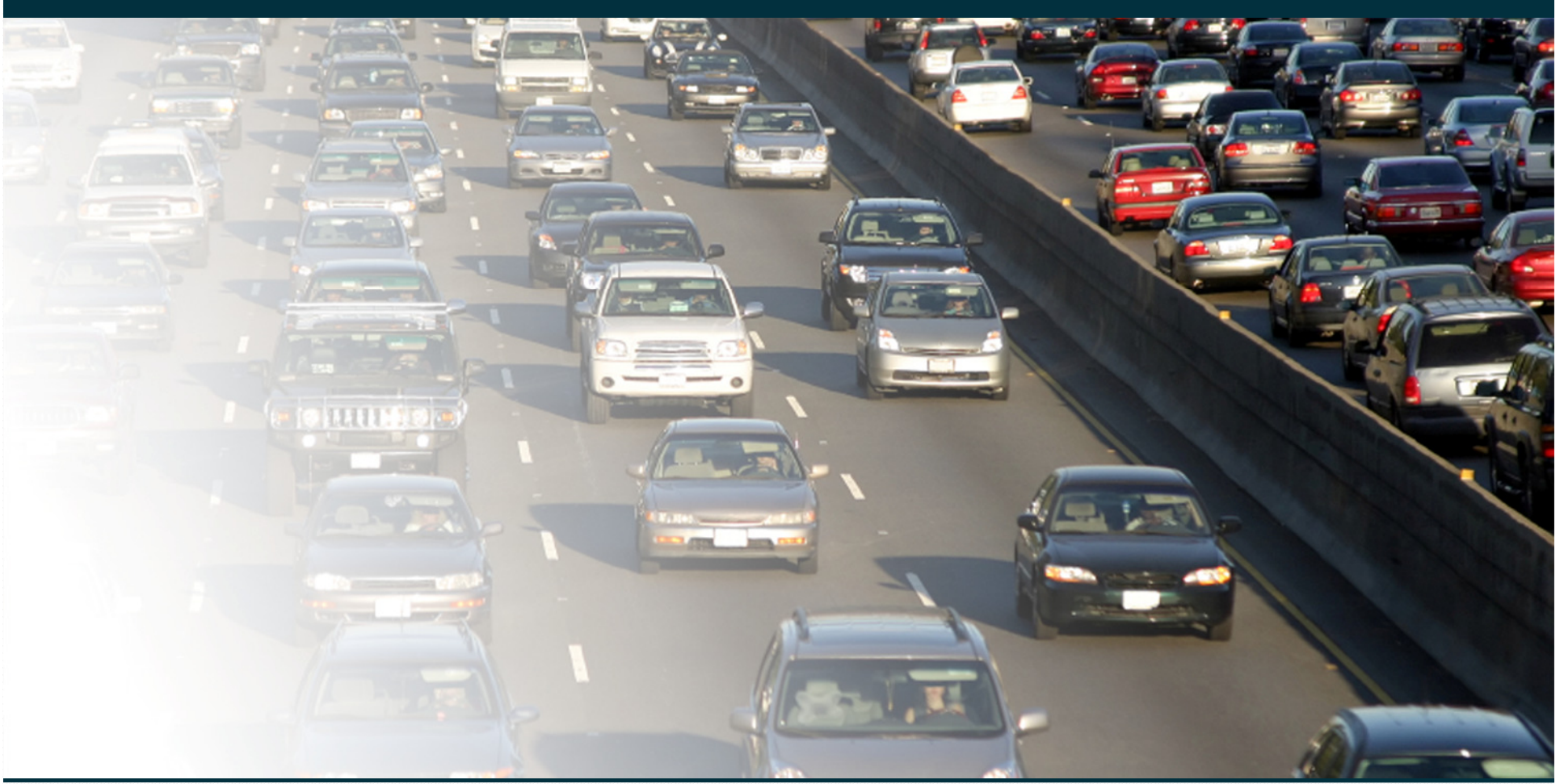
- Regional systems
  - Tolling technology
  - Institutional arrangements
  - Role of funding and financing in project development
  - Lane management/ active traffic management strategies
  - Enforcement/compliance
  - Design/Speed Differential/Signing
  - Transit Integration
-

# Public Acceptance



Tom Maziarz, Bureau Chief for Policy and Planning  
Connecticut Department of Transportation

# Federal Policies and Programs



# Setting

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- SAFETEA-LU provided more authority to toll and price motor vehicles:
    - To finance construction/reconstruction
    - To promote efficient use of highways
    - To reduce traffic congestion
    - To improve air quality
  - Six programs are now available
-

# Six Programs

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- Express Lanes Demonstration Program: [wayne.berman@dot.gov](mailto:wayne.berman@dot.gov)
  - High Occupancy Vehicle Facilities: [neil.spiller@dot.gov](mailto:neil.spiller@dot.gov)
  - Value Pricing Pilot Program: [angela.jacobs@dot.gov](mailto:angela.jacobs@dot.gov)
  - Interstate System Construction Toll Pilot Program: [greg.wolf@dot.gov](mailto:greg.wolf@dot.gov)
  - Interstate System Reconstruction & Rehabilitation Pilot Program: [greg.wolf@dot.gov](mailto:greg.wolf@dot.gov)
  - Section 129 Toll Agreements: [greg.wolf@dot.gov](mailto:greg.wolf@dot.gov)
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# Questions?

