



FEHR & PEERS  
TRANSPORTATION CONSULTANTS



# Congestion Pricing Institutional Issues



**FHWA Webinar Series:  
Overcoming the Challenges  
of Congestion Pricing**

**Donald Samdahl, Fehr & Peers**

April 2011

# Background

- **Successful Congestion Pricing Projects blend several features:**
  - Location
  - Modes
  - Technology
  - Funding
  - Partnerships
- **Institutional relationships are key to moving the projects into implementation**

# Institutional Topics

Topic	Examples
<b>Intra-agency</b>	<ul style="list-style-type: none"> <li>• Roles and responsibilities</li> <li>• Project champions</li> <li>• Resources</li> </ul>
<b>Inter-agency</b>	<ul style="list-style-type: none"> <li>• Project Management</li> <li>• Revenue sharing</li> <li>• Agreements</li> </ul>
<b>Legislative</b>	<ul style="list-style-type: none"> <li>• Enabling legislation</li> <li>• Political support</li> <li>• Public consensus</li> </ul>
<b>Implementation</b>	<ul style="list-style-type: none"> <li>• Project delivery</li> <li>• Daily operations</li> </ul>

# Webinar Purpose

- **Identify institutional lessons learned from Congestion Pricing Projects**
- **Presentations:**
  - Atlanta- I-85- Patrick Vu
  - Los Angeles- Stephanie Wiggins
  - Miami- I-95- Jeff Weidner and Jim Udvardy
  - Federal Perspective- Patrick DeCorla-Souza

# Partnership for Progress HOV TO HOT



## UPA/CRD Atlanta Institutional Lessons Learned to Date

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Presented by: Patrick Vu, P.E.  
Georgia State Road and Tollway Authority  
April 19, 2011



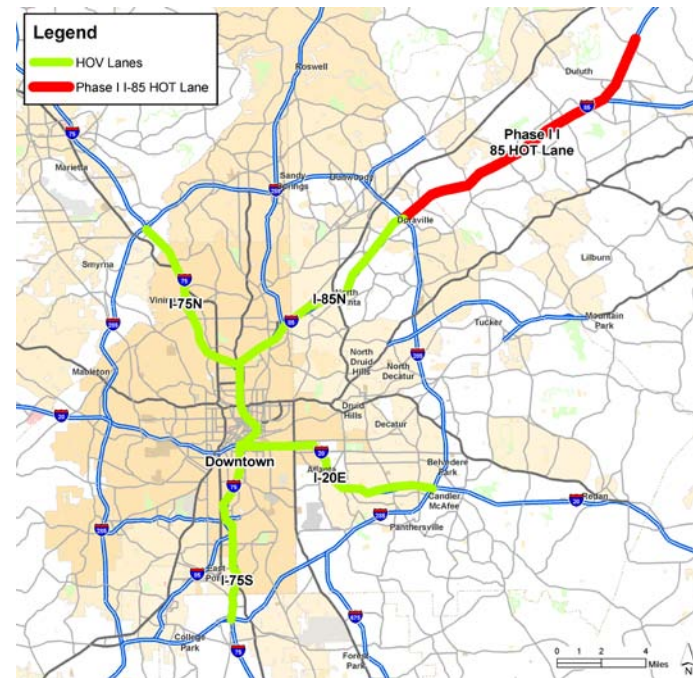
# Overview

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- Atlanta I-85 CRD Background
- Determining Needs and Solution
- Roles and Responsibility
- Interagency Relationship
- Project Delivery
- Financial Issues

# USDOT CRD Grant for I-85

- \$110 million USDOT Congestion Reduction Demonstration (CRD) grant awarded on November 21, 2008
- I-85 Express Lanes, \$60 million
  - ~16 miles long, from Chamblee Tucker near I-285 to Old Peachtree Road
  - Existing HOV2+ lane conversion to HOT3+
  - GDOT civil construction, SRTA tolling system implementation and operations
  - Open August 2011
- Regional transit improvements, \$122 million
  - New Xpress Park and Ride Lots including 3 along I-85
  - New Xpress commuter coaches
  - Georgia Regional Transportation Authority construction and operations of Xpress
  - Transit completion in 2012
- Total cost \$182 million



# Determining Needs and Solution

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- Finding the common ground, “Transportation Choice” to address regional congestion
  - “Can’t build your way out of it”
  - Holistic transportation solution approach
  - Tolling, transit, technology, not mode transportation biased
- UPA/CRD program galvanized local partners
  - “New” money, not taking away from existing transportation initiatives
  - Opportunity from the Federal level, demonstration with Federal funding
  - Ultimately had to make commitment to implement instead of doing another study
  - Tight time schedule – need to make decision quickly, visible results wanted quickly



# Roles and Responsibilities

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- “Who is in charge of the project?” is an important question to answer early on
  - Agency/authority lead roles
    - Operators/designers (DOT, Toll Authority, Transit Authority, Dept. of Public Safety)
    - Regulators (MPO, Dept. Natural Resources, EPA, FHWA, FTA)
  - Project champions at all levels, elected officials to staff levels
- Teams with were created based on essential disciplines
  - Policy
  - Finance
  - Public Outreach
  - Environmental
  - Civil design
  - Tolling design/Traffic Management Center
  - Enforcement
  - Transit

# Interagency Relationships

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- 3 lead agencies proposed on the grant together (DOT, Tolling, Transit), but engaged partners from the beginning during grant writing
- Strong support from elected officials, particularly the Governor
- Educating agency leaders, boards, elected officials, and staff on pricing
  - One-on-one briefings
  - Workshops, as part of transportation retreat
  - Expert panels/Peer-exchanges
  - Many listening sessions to hear concerns
- Coordination of project messaging, staying on message
  - Press releases, public outreach, environmental outreach, marketing
- Same people have been actively involved from grant writing, project development, procurements, through to implementation. Thus preserves institutional knowledge and provides project continuity.

# Project Delivery

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- With the accelerated time schedule, the agency partners needed to figure out how to do some things differently
- Procurements
  - Design-build, design-bid build, potential outsourcing of operations
  - Reducing technology procurement risks by partnering with vendors during RFP proposal submittal process
  - Open protocols/standards and multi award contracting for technology
- Permitting
  - Projects in the TIP and STIP
  - Air quality permitting (PM 2.5/NOx, Transportation Control Measures, Non-attainment area)
  - NEPA Environmental Assessment



# Financial Issues

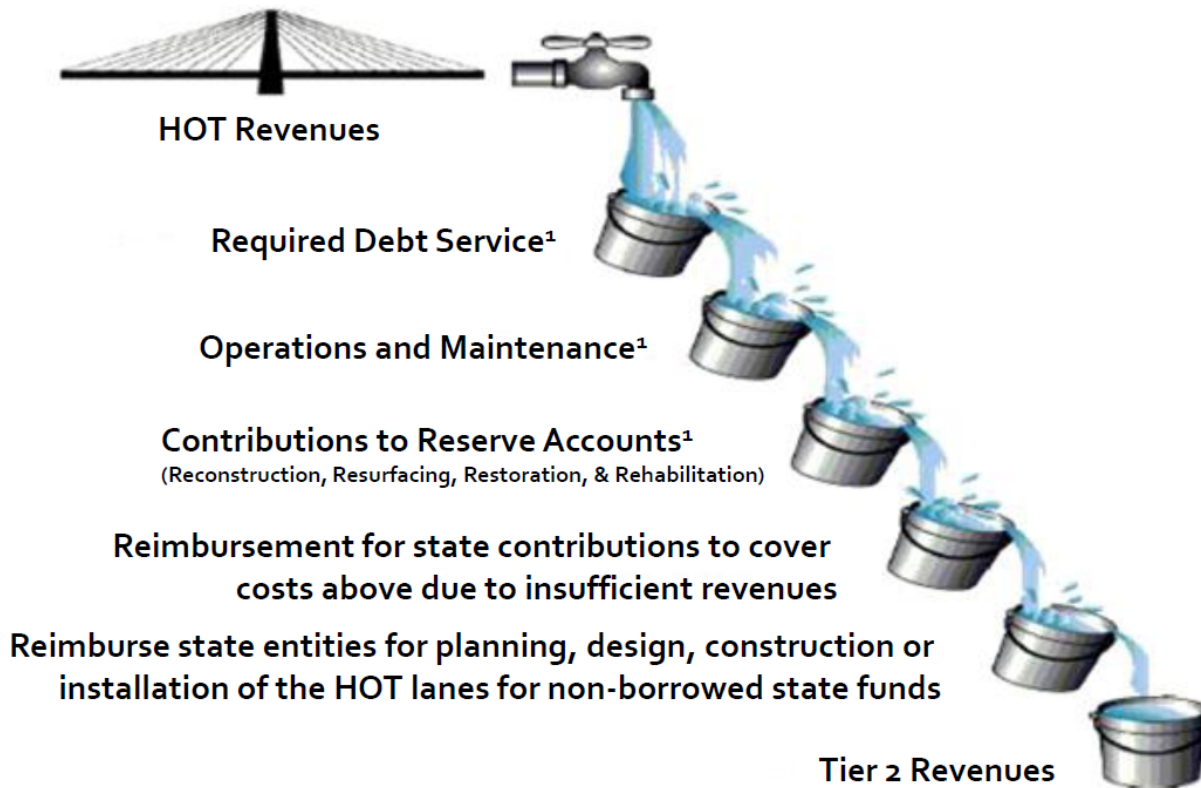
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- “Who is in charge of keeping track of fund?” Need official budget keeper
- Managing multi-agency financial committed and funding sources
  - Multiple funding sources: General Obligation Bonds, Motor Fuel Tax, RITA grant, FTA toll revenues, etc
  - Multiple MOUs and procurements
  - Complex flows of funds and expenses
- Toll revenue policy considerations
  - Anticipated revenue based on Traffic and Revenue study
  - Address potential revenue shortfalls during ramp up
  - Long term operational costs
  - Existing formula funding and original fund sources for the facility
  - Regional vs corridor policy
  - FHWA vs FTA vs regional policies and statues
  - Funding for system build out, transit, etc

# Financial Issues

➤ Flow of revenue funds considerations

## HOT Revenue Expenditure Diagram



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# QUESTIONS?

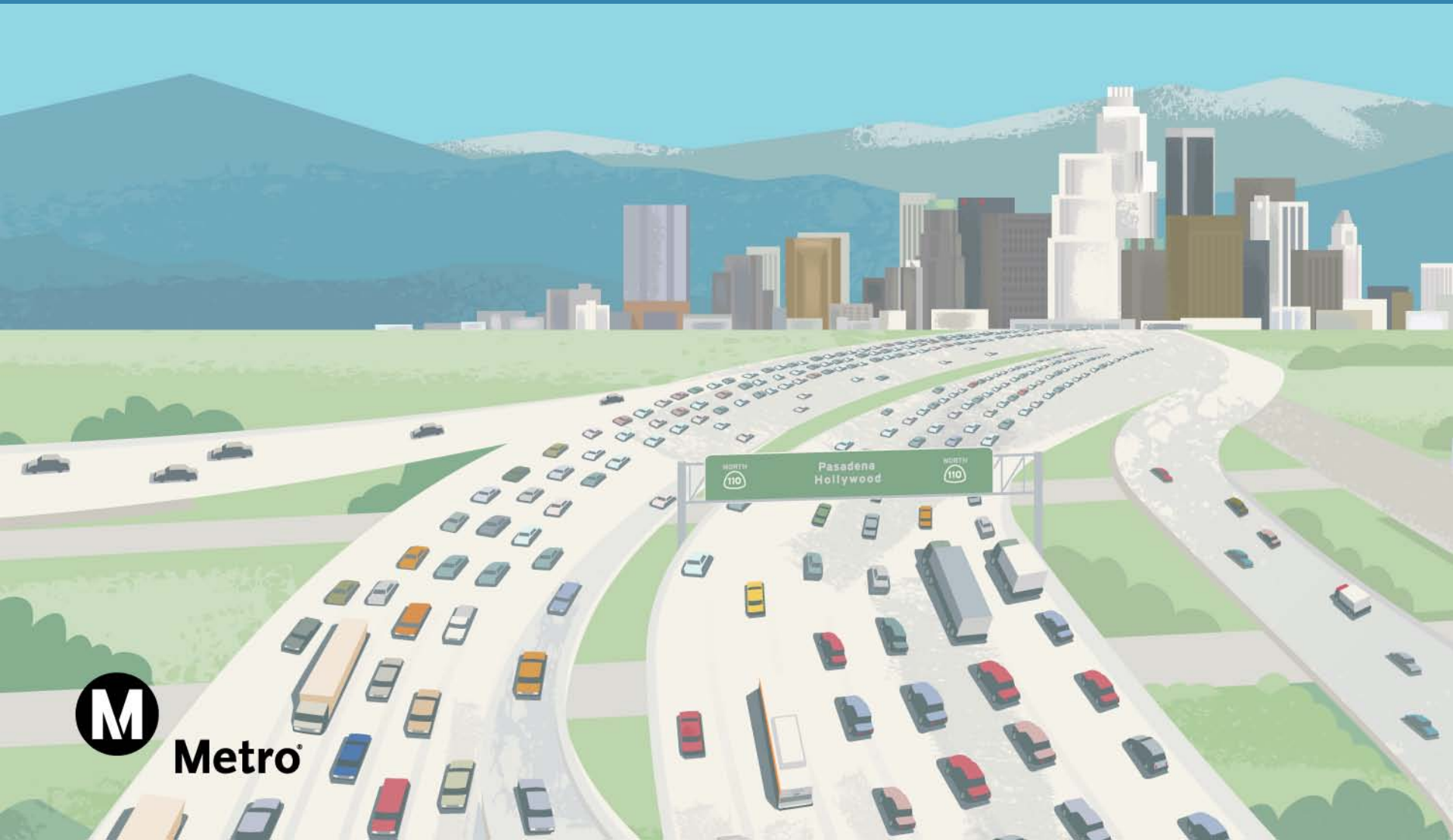
Contact Information:

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# Metro ExpressLanes

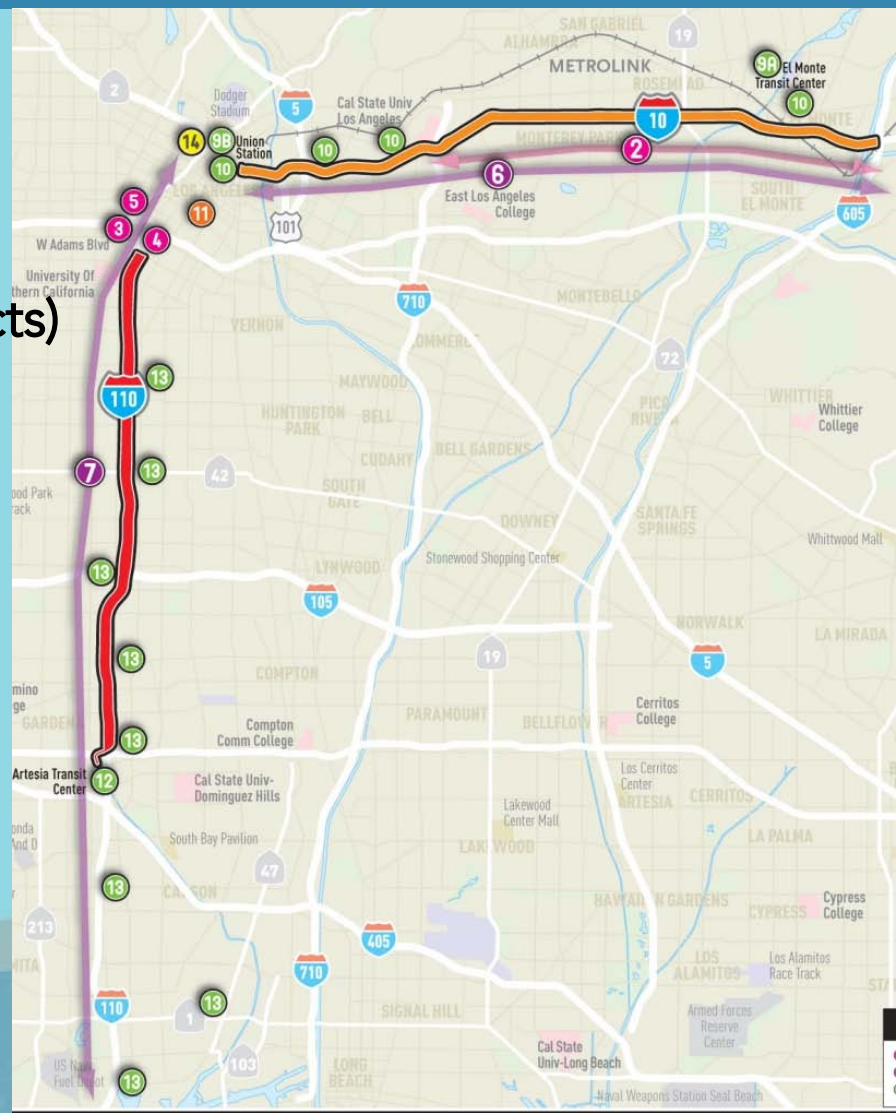
Institutional Lessons Learned, April 19, 2011



**Metro**

# Program Overview

- > Conversion of HOV lanes to HOT lanes on I-10 and I-110
- > Multi-modal Integrated Corridor Emphasis (15 individual projects)
- > 1 of 6 Nationwide Federal Demonstration Projects for Congestion Pricing
- > Tolling Begins Fall 2012



Metro®

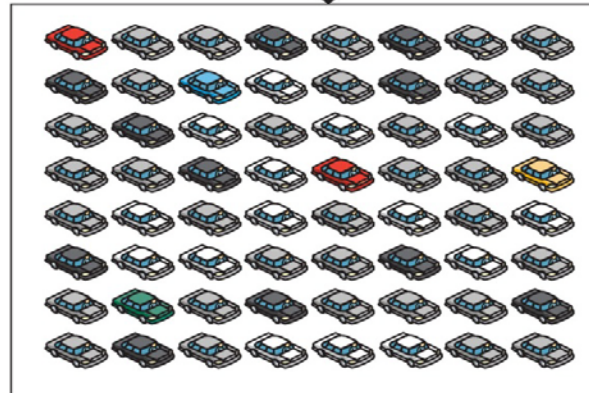


# Project Goals

- > Move More People, Not More Vehicles
- > Increase Throughput of HOT Lanes
- > Effectiveness (Mode Shift)
- > Efficiency (Cost of Project Relative to Benefits)
- > Equity (Address Impact on Low Income Commuters)
- > Educate Community (Extensive Community Outreach)
- > Execute as a 1-Year Demonstration Project

64 people who need to get to work, appointments do errands, etc...

Options



64 separate cars



1 carpool, 1 vanpool, 1 coach

# 20+ Intra-Agency Partners

## Funding & Program/Project Oversight

- FHWA & FTA

## Project Partners

- Metro & Caltrans

## Mobility Partners

- Foothill Transit, Gardena Transit, Los Angeles Department of Transportation, Metrolink, Torrance Transit

## Interoperability (California Toll Operators Committee)

- SBX, TCA, OCTA, BATA, SANDAG, RCTC, ACCMA

## Regulatory (Enforcement, Design-Build, RTP, Utilities)

- CHP, CTC, SCAG, SCE, DWP, County of Los Angeles, Caltrans



# Overcoming Intra-Agency Hurdles

Identify Subject Matter Experts (SME) within all partner agencies EARLY in the process and obtain buy-in to the project at both the Executive and SME level to avoid delays in the schedule.

Establish an Executive Committee of Project Partners to address time sensitive issues.

Hold Lessons Learned Workshops at key project milestones rather than waiting until the completion of the entire project.

Formal Partnering Sessions also help build team cohesiveness.



# Overcoming Project Management Hurdles

CEO as Internal Champion is a Must.

Integrated Project Status Reporting is Key.

Ensure Adequate Staffing Resources.



# Addressing Legislative Hurdles

A Political Champion is a Must

Net Revenues to Be Reinvested in the Corridor Where Generated for Transit & Carpool lane improvements

Address Equity Issues Early in the Planning Process

Identify Performance Measurements Early in the Planning Process

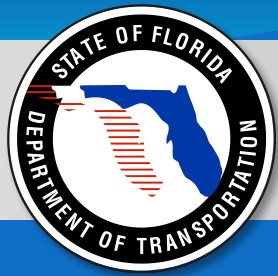
Substantial Federal Grant Funding



# Project Schedule

Description	2009	2010	2011	2012	2013
Toll Policy	●				
Low Income Commuter Assessment		●			
Environmental Documents Approved		●			
Preliminary Engineering		●			
Privacy Policy		●			
Award Design-Build-Operate-Maintain Contract		●			
<b>TO BE COMPLETED</b>					
Launch Marketing Campaign			●		
Begin Construction			●		
ExpressLanes Open to Traffic				●	





Florida Department of Transportation

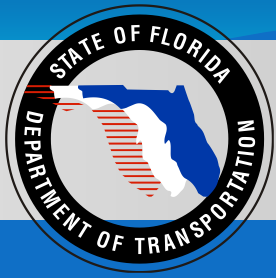
# Miami Urban Partnership Agreement

## FDOT Institutional Issues/Lessons Learned

### FHWA Webinar April 19, 2011



**95 Express**



# Presentation Outline

## Background

## Institutional Issues

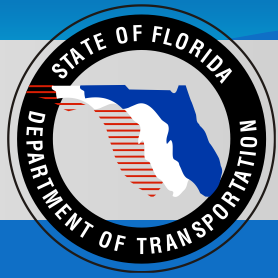
- Tolling Statute
- Multi-modal O&M

## Lessons Learned

- What we did right
- What we still need to improve







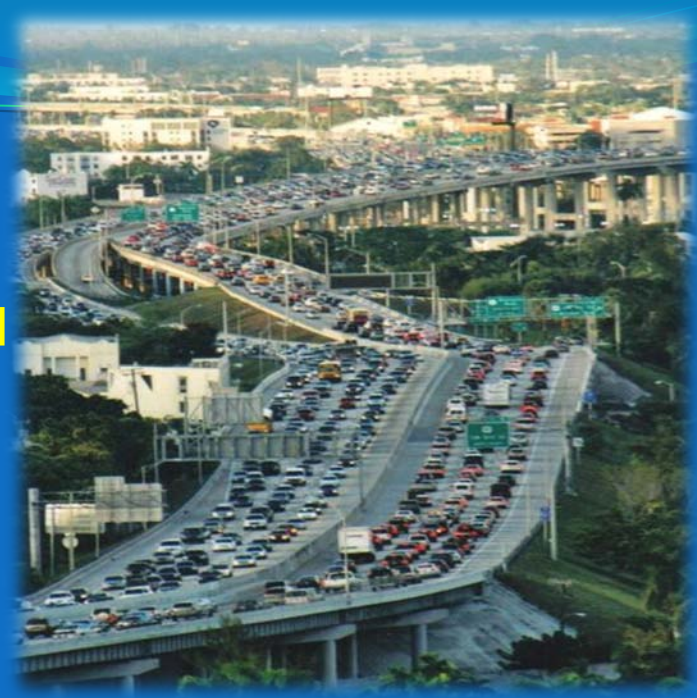
# 95 Express Project Scope

- 21 miles from Miami to Ft. Lauderdale
- HOT Conversion of 2 HOV Lanes plus 2 New Express Lanes
- Registered 3+ Carpools , Vanpools
- Dynamically Priced Tolls
- Express Bus/Bus Rapid Transit
- Increased Effective Capacity with Minimal Construction Disruption



# Institutional Issues - Opportunities

- Major Congestion, No benefit for HOV and Transit
- Cost Intensive Improvements Planned
- Aggressive Multi-Modal Element
  - Transit
  - Carpool ,Vanpool
  - Transit Signal Priority and Branding



## Florida Statutes: 338.166 High-occupancy toll lanes or express lanes.

- The department may continue to collect the toll on the high-occupancy toll lanes or express lanes after the discharge of any bond indebtedness related to such project. All tolls so collected shall first be used to pay the annual cost of the operation, maintenance, and improvement of the high-occupancy toll lanes or express lanes project or associated transportation system.

## Contract Budget

Operator	1 Full Time operator 24/7
Engineering Support	900 Hrs for engineering support
software	900 Hrs for software support
PM	900 Hrs for proj. mngmt/sr engr. support
Clerical	900 Hrs for clerical support
IT support	450 Hrs for IT support
Public Information	Lump Sum
Toll & Revenue Updates	Lump Sum
Survey/Reports UPA etc	Lump Sum
Commuter Services	2 Full time employees

### Road Ranger Support

Road Ranger Tow Truck	24/7 @ \$45 per hour (8760 hours)
Road Ranger Flatbed Towtruck	24/7 @ \$50 per hour (8760 hours)

### Incident Response, FHP

Incident Response Vehicle	@\$350k/each/year
FHP - Enforcement	@ \$16000/mile/year

### Equip Maint & Repair

Detector	@ \$300/year
Cameras	@ \$750/year
Variable Message Signs (VMS)	@ \$1800/year
Toll Buildings	@ \$9000/year

### Sunguide & Misc Software Development

Sunguide Software Support/enhance	@ 150k/district/year
Utility Locates	@ \$2500/mile/year

# Operating Budget

## Expense

Communication	absorbed
Staff supplies	absorbed

## TME

### Electricity

Tolling Gantries	@ \$2300/Yr
Variable Message Signs (VMS)	@ \$2300/Yr *.75 factor
Toll Buildings	@ \$4000/year
Communication hubs	@ \$2300/Yr
<b>Equipment Replacement/Upgrades/parts - (devices inventory)(device cost)(15%)/Yr</b>	
Detectors	@ (\$5000/device)(15%)/Yr
Cameras	@ (\$5000/device)(15%)/Yr
VMSs	@ (\$50000/device)(15%)/Yr

### Fiber Optics & Power Repairs

# Recurring Annual Budget

## Signs, Delineators, Maintenance

Cantilever signs (inspection and maintenance)

Delineators

Maintenance Of Traffic (MOT) for Toll Repairs

Sound wall maintenance

## Transit Budget

Miami-Dade Transit

15 buses, 13 hours service by 2013

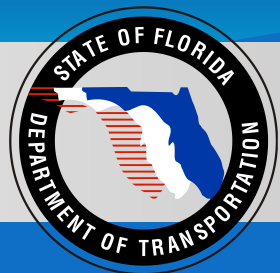
Broward County Transit

7 buses, 2, 3 hour peak periods service by 2013



# Operating and Maintenance by Budget Item

BUDGET ITEM	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014
<b>Contract Budget</b>	48%	42%	36%	41%	41%
<b>Operating Budget</b>	5%	6%	6%	7%	7%
<b>Recurring Annual Budget</b>	21%	15%	12%	13%	13%
<b>Transit Budget</b>	26%	37%	45%	39%	39%
<b>Total O&amp;M Budget</b>	100%	100%	100%	100%	100%



# Institutional Challenges: Multiple Jurisdictions

**2 Counties, 2 MPOs, 3 Transit Agencies, 2 FDOT Districts**

Different levels of congestion

Different Transit Fare Systems

Incident Management Protocols

Limited Vehicle Branding





# Lessons Learned, What we did right?: Development of the Toll Rule

- State of Florida Administrative Code 14-100-.004
- Toll Free Users:
  - 3+Carpools
  - Hybrid Vehicles
  - South Florida Vanpools
  - Over the Road Motor Coaches
  - 95 Express Transit Vehicles
  - Public School Buses



# Registered Users of 95 Express

- Register 3+ Carpool, Vanpool, and Hybrid Vehicles
- SFCS Web-based data transfer to SunPass
- Receive 95 Express Decal
- Place decal in windshield
- Utilize lanes as “toll-free users”

All SunPass devices must be shielded to avoid charges

- SunPass verifies registration against the photographed license plate
- User is not charged
- Renewal process



# Lessons Learned, What we still need to improve: Enforcement

- Florida Highway Patrol monitors both HOV and managed lanes

- Paid User Violations:

Using the lanes without a SunPass

- Toll Free User Violations:

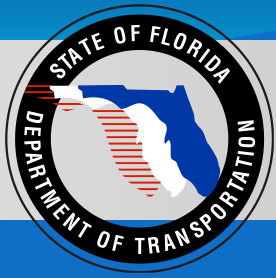
3+ Carpool with less than 3 people

Violation - \$149 + toll amount

- Challenge to enforcement:

Safety (Narrow shoulder, no monitoring space)





# Questions & Discussion

Florida Department of Transportation

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# Congestion Pricing Institutional Issues

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## FHWA's Webinar Series on Overcoming the Challenges of Congestion Pricing

**April 19, 2011**

Federal Highway Administration  
Office of Operations & Office of Innovative Program Delivery



# Federal Requirements to Address

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- Long Range Plan (LRP):
  - funded tolling and non-tolling projects
- Transportation Improvement Program (STIP and/or TIP)
- NEPA review:
  - may not apply to non-toll projects
- Tolling authority (for toll projects only)



# Integrating Transit into Tolling Proposals

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- UPA/CRD projects presented in this webinar:
  - Transit funding came from a one-time program
- Other pricing projects operating/planned:
  - Converting existing HOV lanes to HOT – I-394, MN.
  - New HOT lanes – Capital Beltway, Northern Virginia
  - New express lanes – Northwest Corridor, Atlanta
- Potential options for the future:
  - Full-facility pricing -- SR 520, Seattle
  - Converting existing regular lanes to HOT-3 lanes
- **Issue:** Ability and willingness to use toll revenue for transit



# Federal Tolling Authority

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- For construction or reconstruction:
  - Section 129 – non-Interstate facilities and Interstate bridges/tunnels only
  - Interstate toll pilots
- For demand management:
  - Section 166 (HOT lanes) -- unlimited projects
  - Express Lanes Demonstration – 15 projects
  - Value Pricing – 15 slots, each with unlimited projects
- For more information:
  - <http://www.fhwa.dot.gov/ipd/revenue/index.htm>





# Federal Role

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- Technical assistance:
  - Selecting the tolling program to use, tolling agreement
  - Other – analysis tools, etc.
- Outreach:
  - Congestion Pricing webinars and Workshops
  - Outreach products:

**FHWA Office of Operations:**

[http://ops.fhwa.dot.gov/tolling\\_pricing/index.htm](http://ops.fhwa.dot.gov/tolling_pricing/index.htm)

**FHWA Office of Innovative Program Delivery:**

[www.fhwa.dot.gov/ipd](http://www.fhwa.dot.gov/ipd)



# Institutional Issues - Next Steps

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- Peer Exchange on Institutional Issues
  - Bring together pricing experts to discuss strategies used to address challenges in implementing both tolling and non-tolling projects
  - Prepare a white paper
- Develop Primer
  - Based on material gathered from various outreach efforts such as outcomes from the webinar, face-to-face peer exchange and white paper.

