

Congestion Reducing Activities

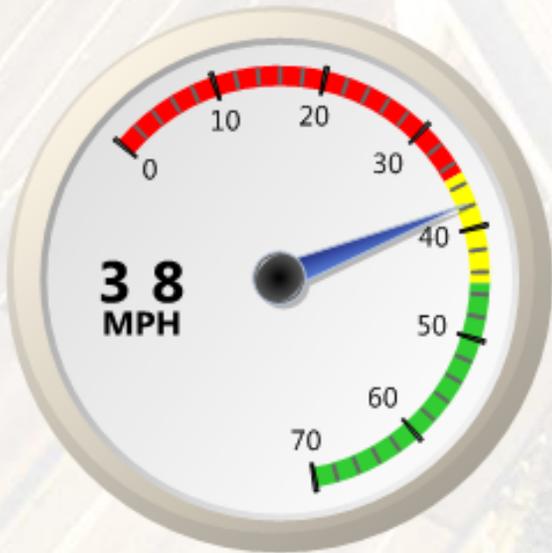
*State Transportation Board
Committee of the Whole*

November 19, 2014

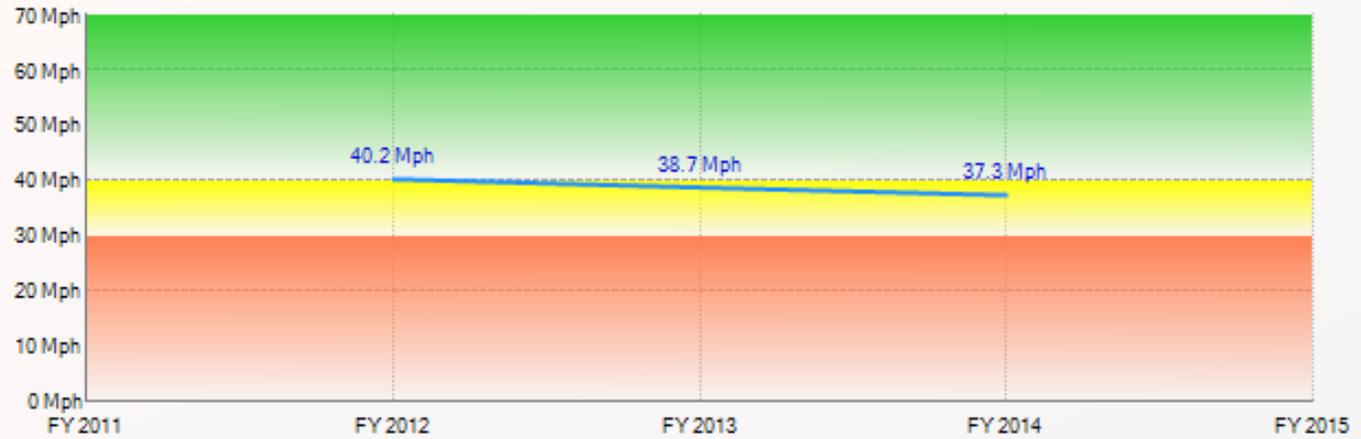
Toby Carr, GDOT Director of Planning



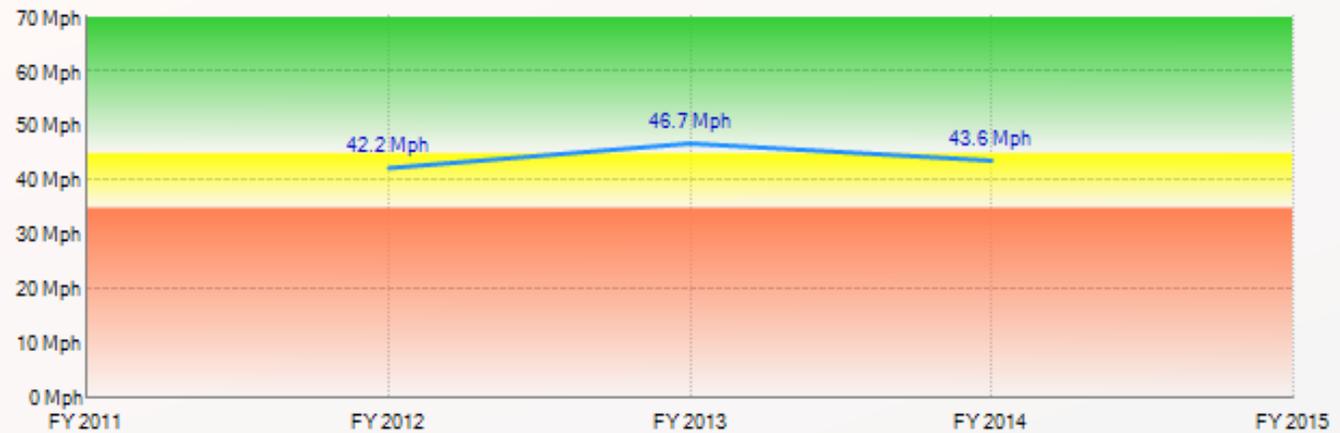
GDOT Performance Dashboard - Congestion



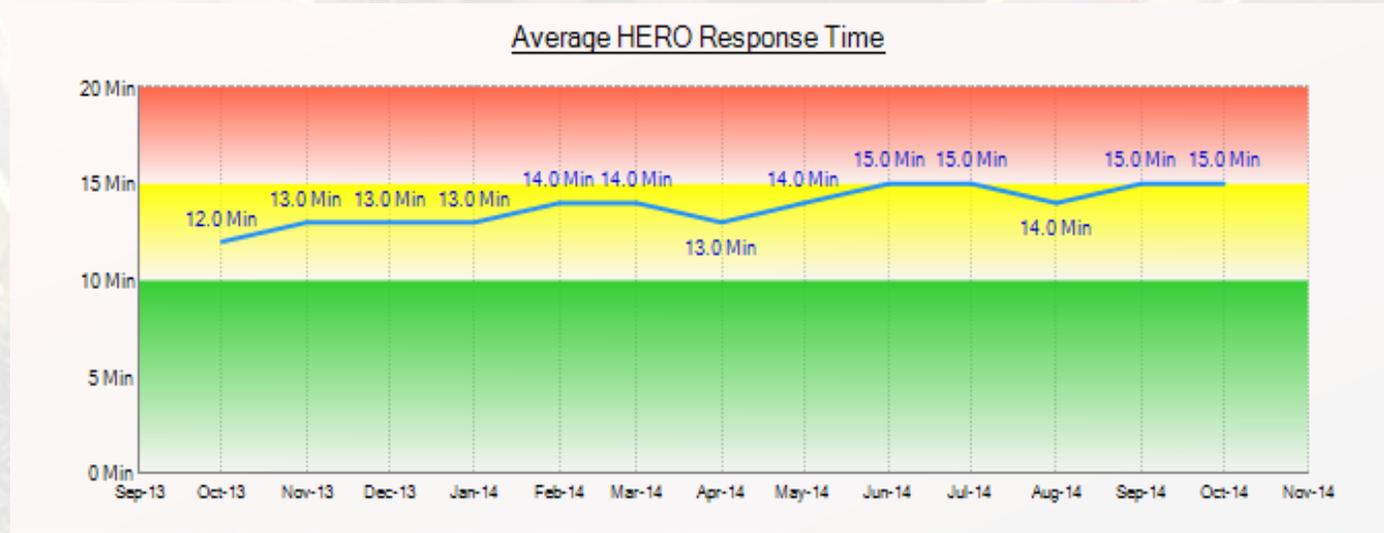
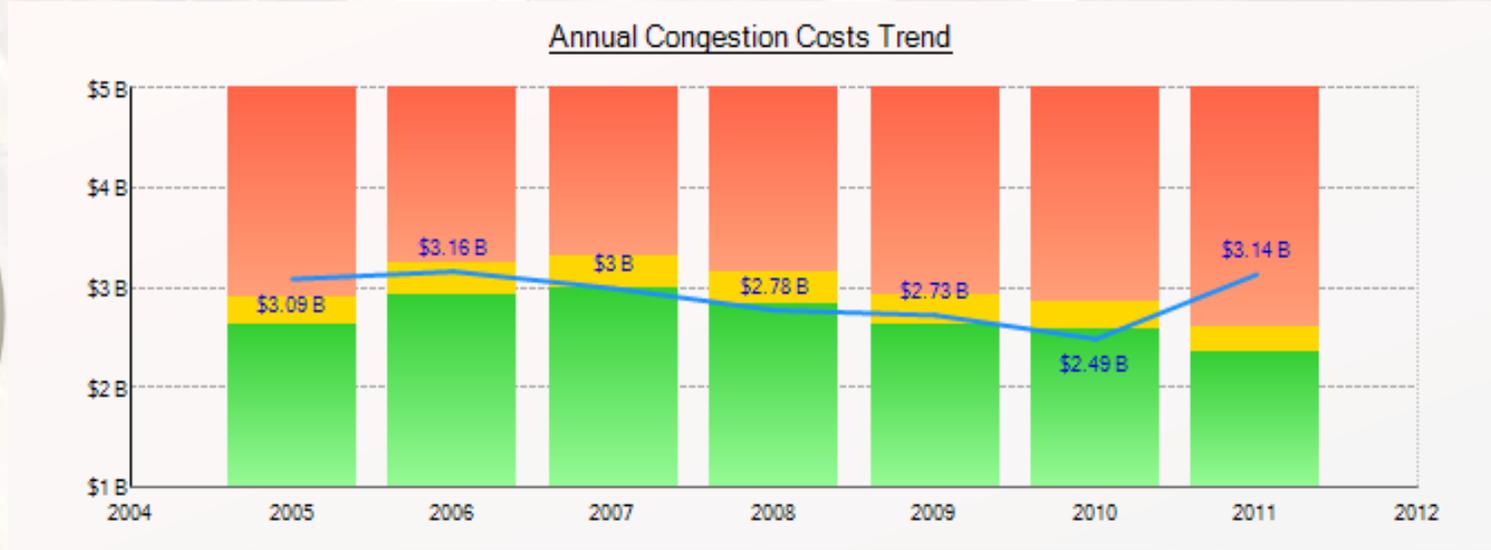
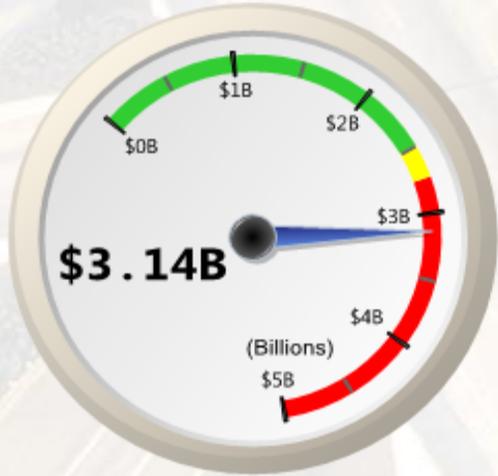
Metro Atlanta Highway Morning Peak Hour Speeds (General Purpose lanes)



Metro Atlanta Highway Morning Peak Hour Speeds (Managed Lanes)



GDOT Performance Dashboard - Congestion



Congestion Relief Strategies



Current Activities

Active Traffic Management (ATM)

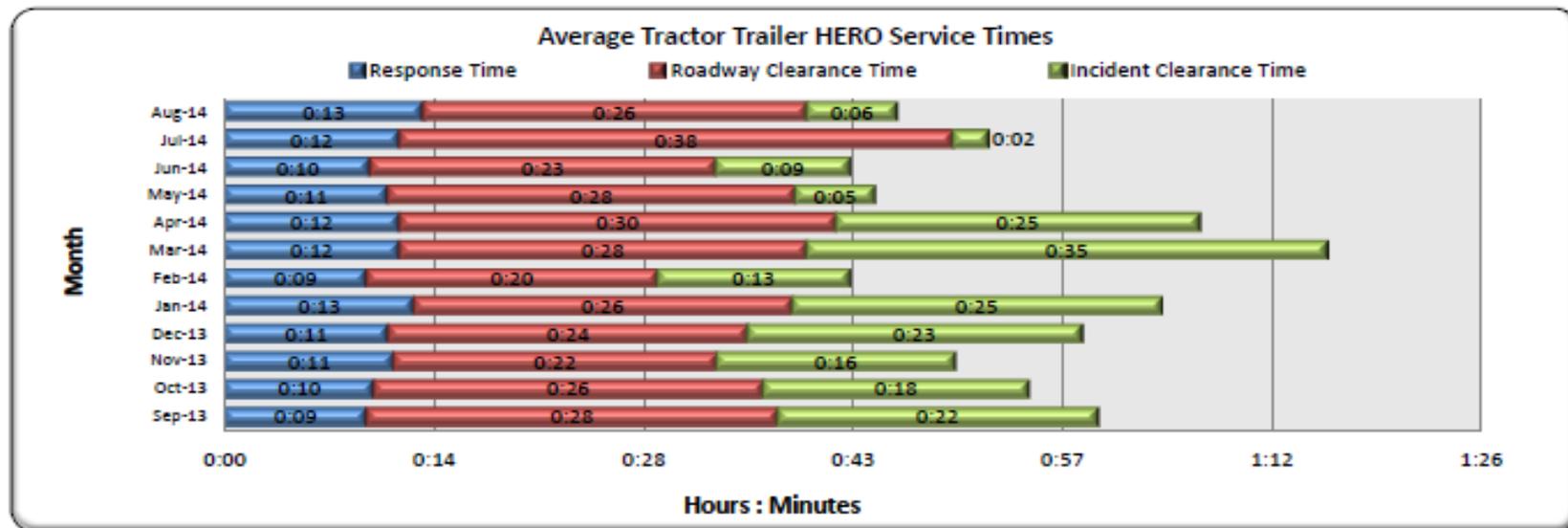
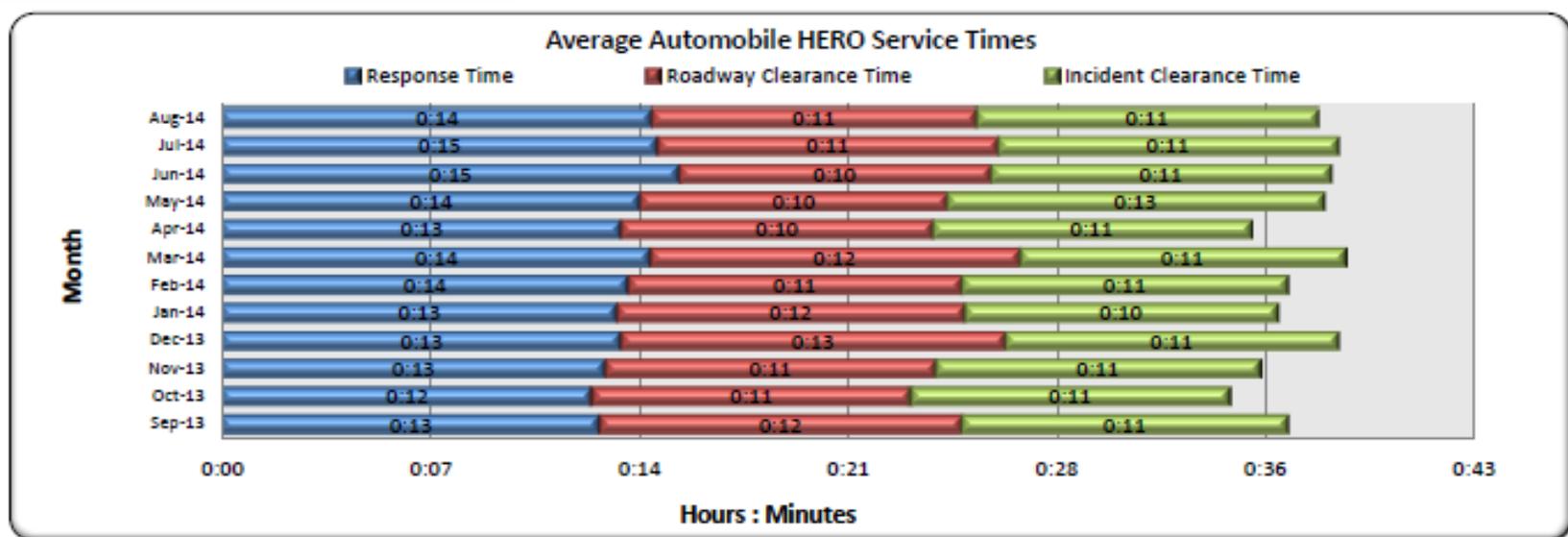


Highway Emergency Response Operators (H.E.R.O.)

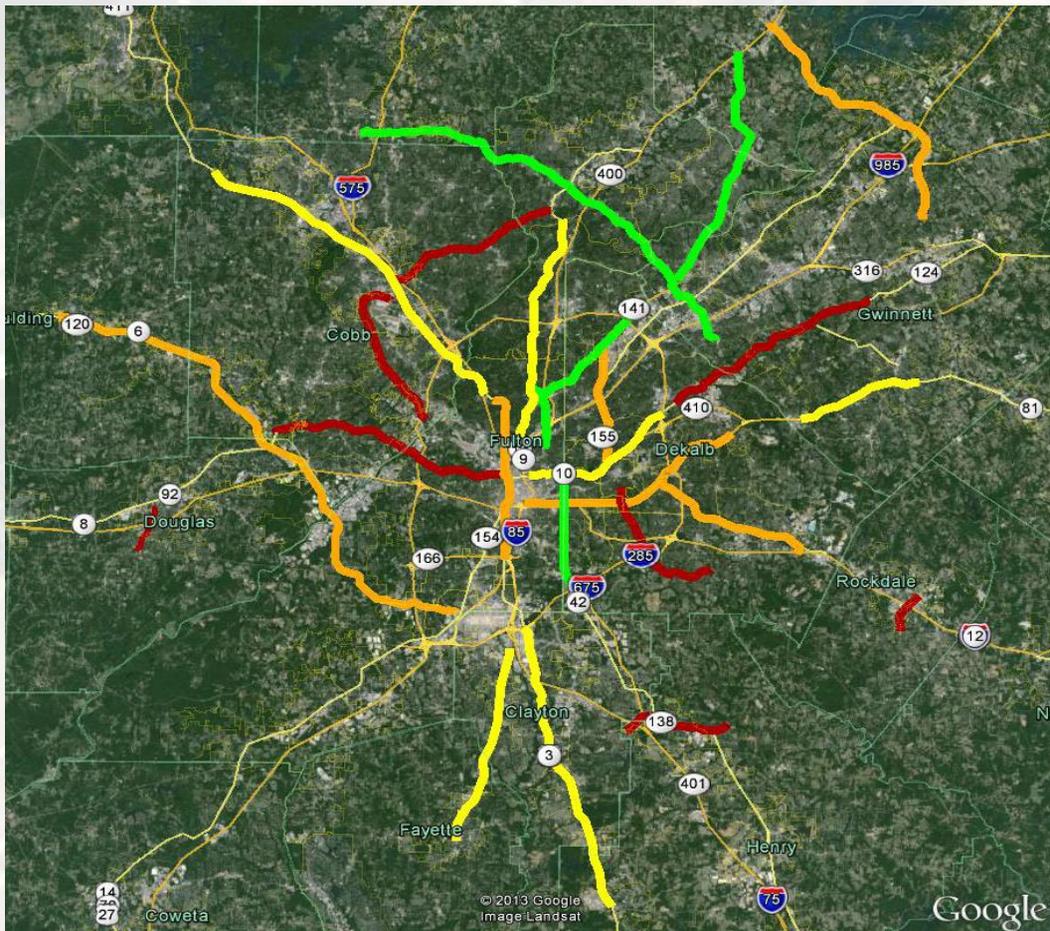
Total HERO Assist



Highway Emergency Response Operators (H.E.R.O.)



Regional Traffic Operations Program



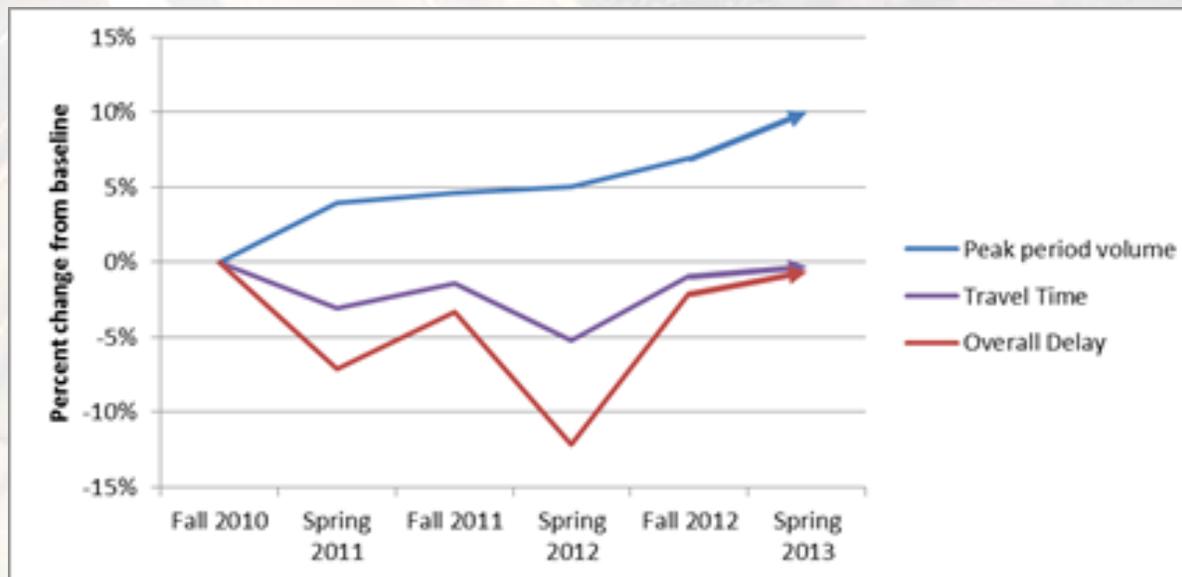
- Traffic Signal Maintenance and Repair Issues
- Regional Focus
 - ✓ Mainline Priority
 - ✓ Cross-Jurisdictional
- Actively Manage Traffic Flow

	Phase 1 – June 9, 2010	1100 Signals \$16 million per year total 25 Corridors
	Phase 2 – October 27, 2010	
	Phase 3 – January 4, 2013	
	Phase 4 – October 15, 2013	



RTOP Benefits

- Spring 2013 comparison to baseline
 - Reduced number of stops by 4%
 - Reduced stopped time delay by .1%
 - Traffic volumes increased by 10.8%



Traffic Signal Optimization

- Metro Signal Timing (2008-2013)
 - 1,364 intersections retimed (Metro Atlanta)
 - Total savings of \$101,160,000
 - Cost/benefit of 24.30 over entire project
- Statewide Traffic Signal Optimization (2014)
 - Signal systems on State Routes across Georgia
 - Partnerships with local maintaining agencies
 - Continuation of existing optimization through STIP years



Operational Improvement Program Program Overview

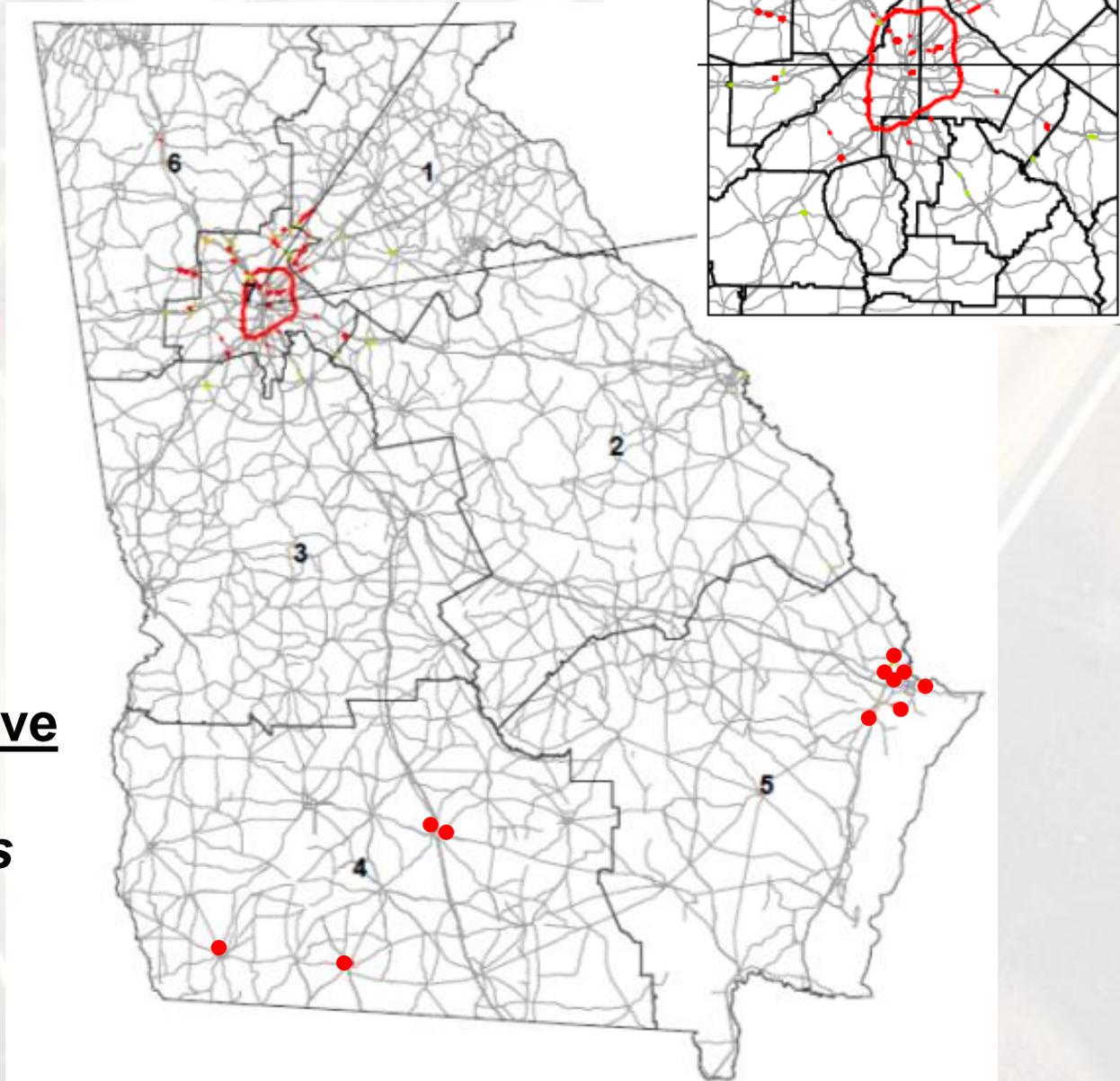
Total Projects: **80**

(2009-2014)

LET to Construction: **39**

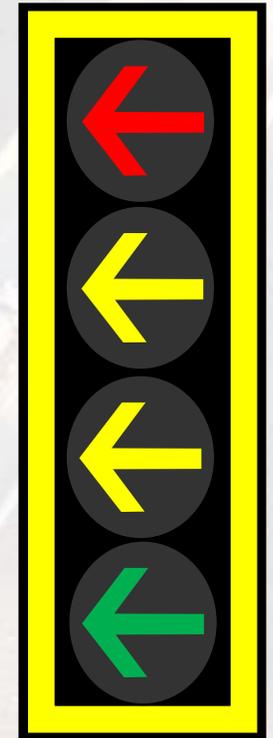
**Average Delay
Reduction: 49%**

- **Bottleneck Mitigation Projects**
- **“Quick Fix” federally funded projects to improve operations with *limited scope* and *reduced costs***
- ***Innovative Design Alternatives strongly encouraged***



Other Strategies Implemented

- Navigator/511
- Cameras, electronic message signs, vehicle detection
- Ramp Meters
 - Regulate Access onto the freeway
- Flex Shoulder Lanes – GA400
 - Allows traffic to use right shoulder during peak morning rush hour
- Flashing Yellow Arrow
 - Reduction in Left Turn Crashes

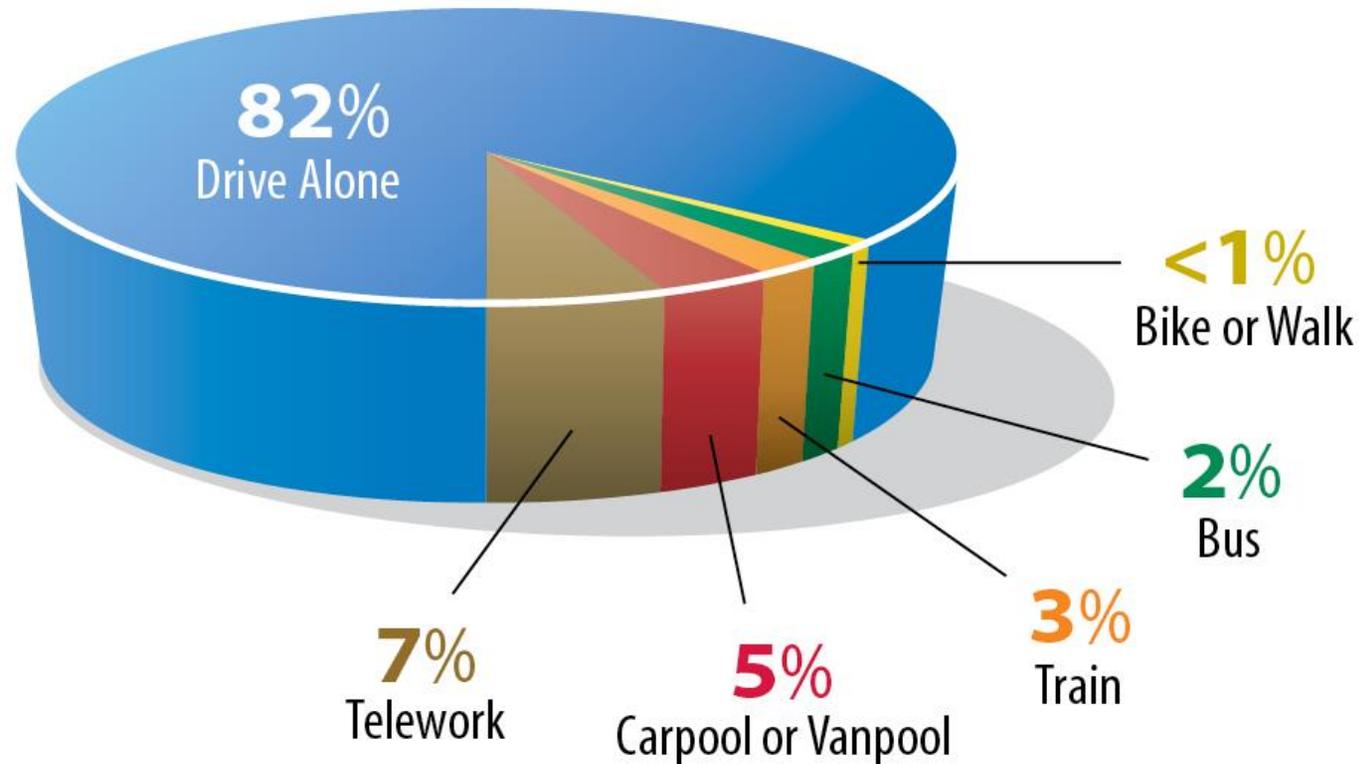


GA Commute Options: “Get More by Driving Less”



- Carpooling – Free service to match carpoolers
- Employer Services – Program Consultation, Ride-matching for employees, Tax Benefits, Teleworking
- Guaranteed Ride Home Service
- Vanpools – Find or start a vanpool
- Transit – Provide Traveler Information
- Commute Options provides incentives for switching from driving alone to another option

Metro Atlanta Commuter Patterns



Source: 2010 Center for Transportation and the Environment study conducted on behalf of the Georgia Department of Transportation

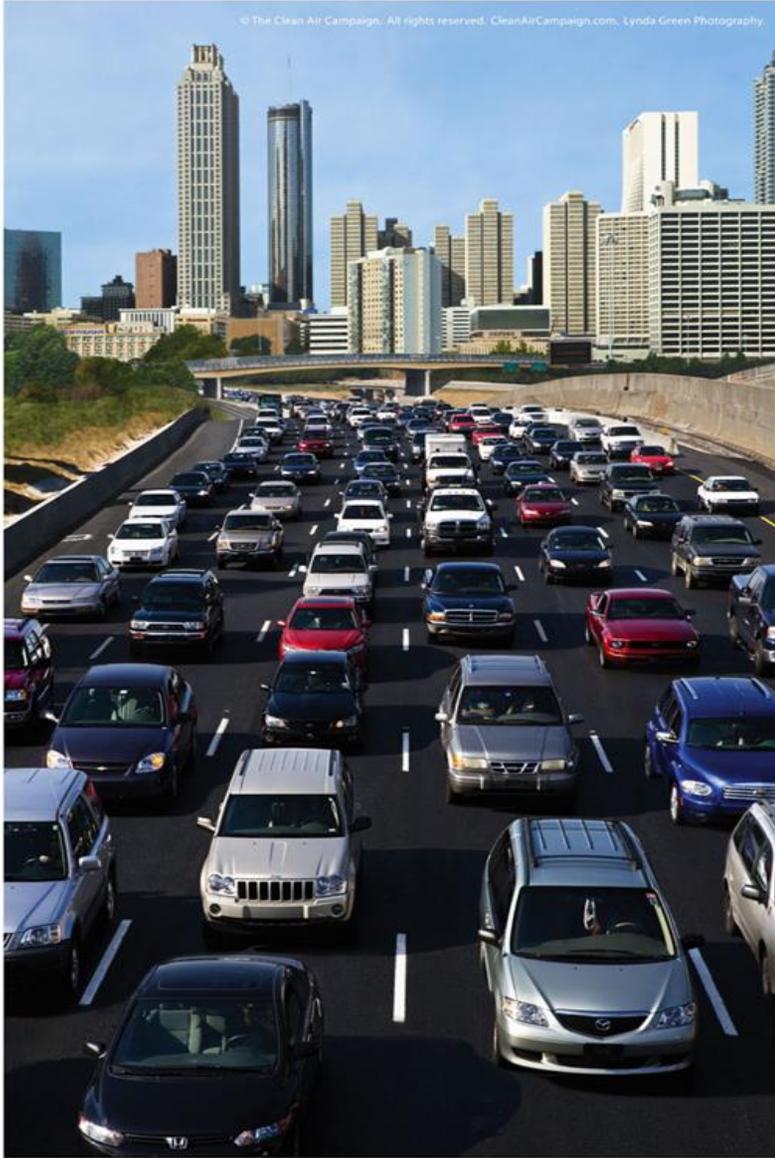
Georgia Commute Options Participant Commuter Patterns



20% increase since 2007 in the number of commuters using alt modes 3+ days per week.

Source: 2010 Center for Transportation and the Environment study conducted on behalf of the Georgia Department of Transportation

GCO Reduces Congestion



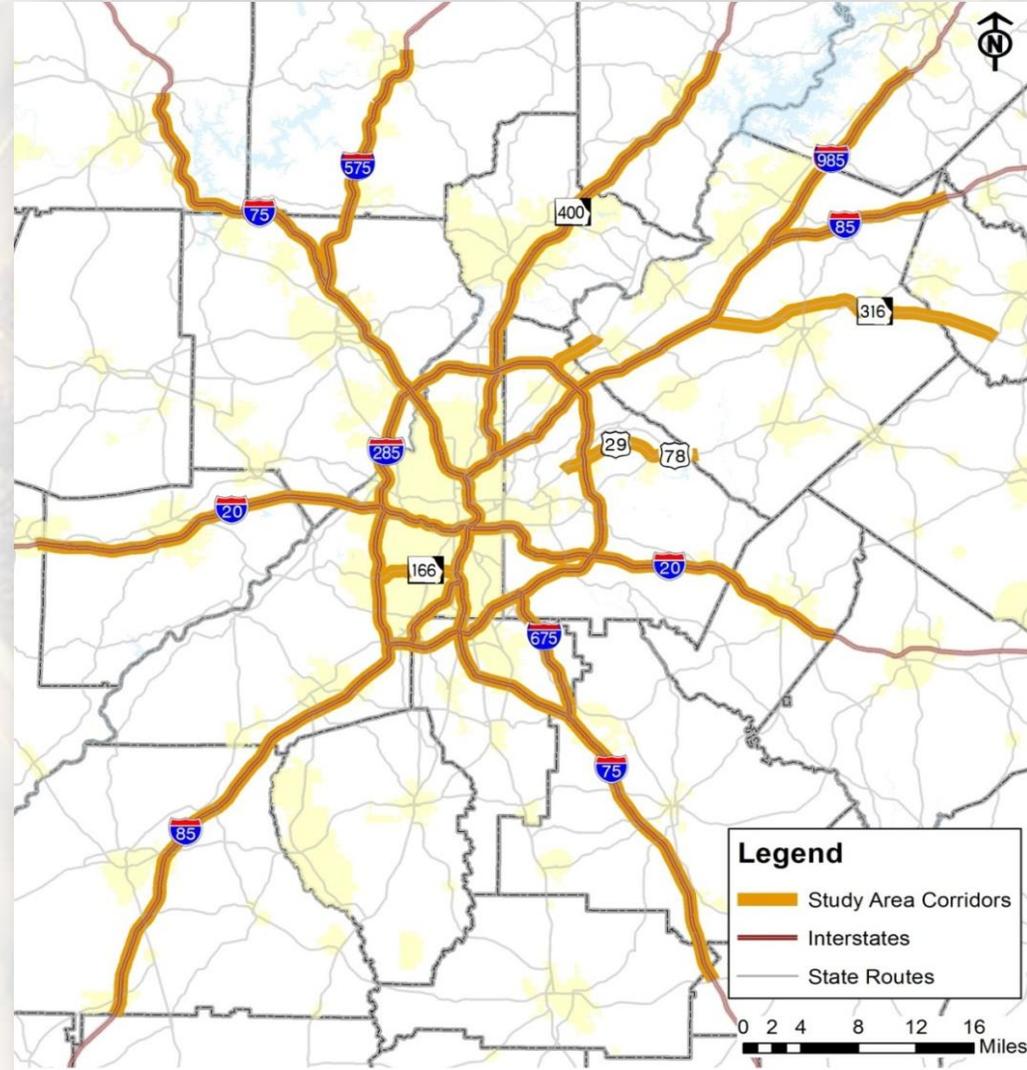
Georgia Commute Options

Daily Results

- Serves 1,600 Georgia employers and property managers
- Reduces 1.1 million miles of vehicle travel daily in metro Atlanta
- Eliminates 550 tons of air pollution daily in metro Atlanta
- Saves participants \$500,000 in direct savings on gas and vehicle expenses, daily in metro Atlanta

Overview

- Identify bottleneck areas on limited access highways
- Identify and evaluate potential low-cost improvements
- Quick implementation – 6 months to 5 years
- Document a prioritized list of operational projects



Identification of Bottleneck Locations

Data Inputs	User Inputs
 <p>Speeds & counts</p>	 <p>Bus drivers</p>
 <p>Aerial congestion survey</p>	 <p>Unit operators</p>
 <p>GPS speeds & duration of congestion</p>	 <p>GDOT TMC staff</p>
	 <p>Public & Private Stakeholders</p>

Causes of Bottlenecks

- High volumes
- Weaving
- Lane drops/additions
- Last minute decision making
- Lack of storage on ramps and/or high turn volumes
- Tight turning radii and/or steep grade on ramps
- Frontage road access
- Limited access facility terminates at signalized intersection

Possible Activities

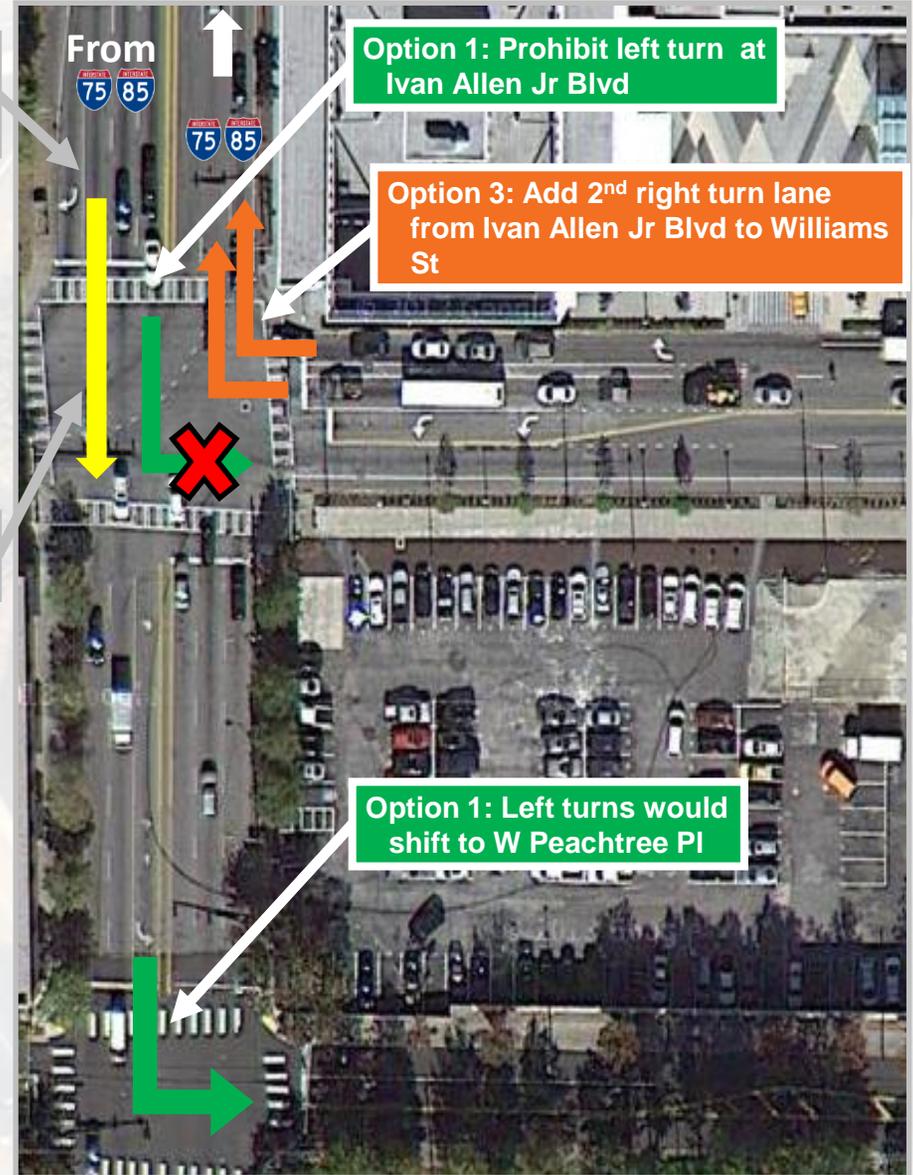
Intersection Improvements at Ramp Terminals

Option 2: Provide SB right turn arrow & re-stripe taper

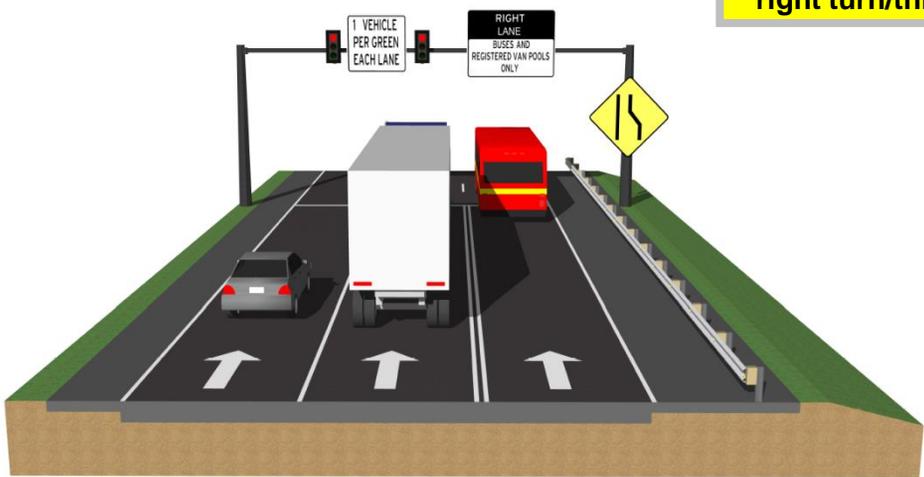
Option 1: Prohibit left turn at Ivan Allen Jr Blvd

Option 3: Add 2nd right turn lane from Ivan Allen Jr Blvd to Williams St

Option 4: Allow 2nd right turn/thru lane



Ramp Meter Bypass Lane For Transit



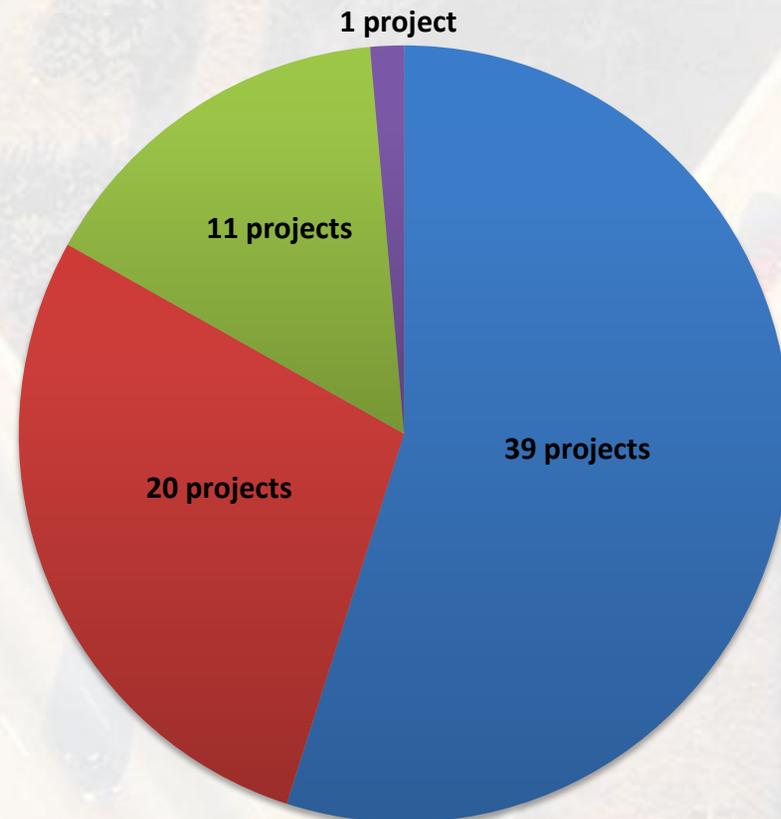
←VARIES→ 12' GENERAL PURPOSE LANE 12' GENERAL PURPOSE LANE 12' BYPASS LANE →VARIES→ SHOULDER

Strategies Under Evaluation by Cost Range

71 projects
totaling less than
\$160 million

Number of Projects
Being Considered by Cost Range

■ <\$1m ■ \$1m-\$5m ■ \$5-\$10m ■ >\$10m



MLIP Will Update 2009 Atlanta Regional Managed Lane System Plan (MLSP)

- First regional managed lanes plan in the country
- In 2009, there were no priced managed lanes in the Atlanta region (only HOV lanes)
- Identified \$16 billion in managed lane projects

Atlanta Regional

MANAGED LANES
Implementation Plan

New Assumptions

- All new limited access capacity in metro Atlanta will likely be tolled
- Remove HOV2+ to HOT3+ conversions from plans
- Eliminate assumptions of long-term concession agreements
- Evaluate lower-cost managed lane treatments, where possible

Questions?

