

Regional Traffic Operations Program

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Topics

- The Atlanta Region
- Regional Traffic Operations Program (RTOP)
- Program Coverage
- Approach
- Progress to date

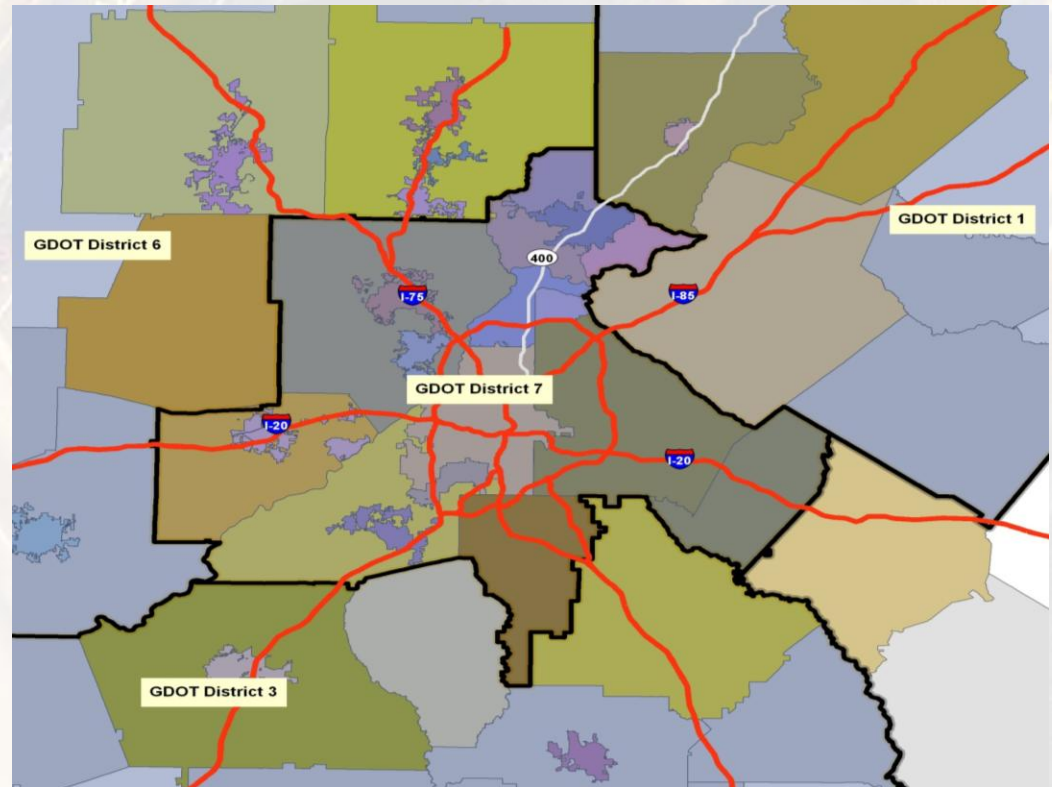




The Challenge of Operating Traffic Signals in the Atlanta Region

Who Operates the Traffic Signals?

- In most major metropolitan areas:
 - State DOT manages the freeway network
 - Local agencies manage arterials
- In Atlanta:
 - 4 GDOT Districts
 - 15 Counties
 - 22 Cities



Other Traffic Signal Programs

- Fast-Forward Major Intersection Upgrade Program
- ATC Minor Intersection Upgrade Contracts
- Metro Signal Timing Program
- Traffic Signal Software Development and Deployment

Motivation for RTOP

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



Mission: To increase travel throughput by minimizing congestion and reducing delays along regional commuter corridors through improved signal operations.



The Program

What is the RTOP?

- Regional Traffic Operations Program
 - Actively manage regionally significant corridors
 - Coordinate across jurisdictional boundaries
 - Monitor conditions during peak travel times
 - Track performance of arterial over time

What is Arterial Management?

Arterial Management means to actively improve the operation of traffic signal systems through the use of techniques and resources to reduce congestion and improve traffic flow.

- Preventative/Routine traffic signal maintenance
- Communications to traffic signals
- Surveillance at key locations
- Travel time analysis and system performance
- Active signal timing adjustments
- Rapid repair of equipment malfunctions
- Transit/Emergency vehicle preemption



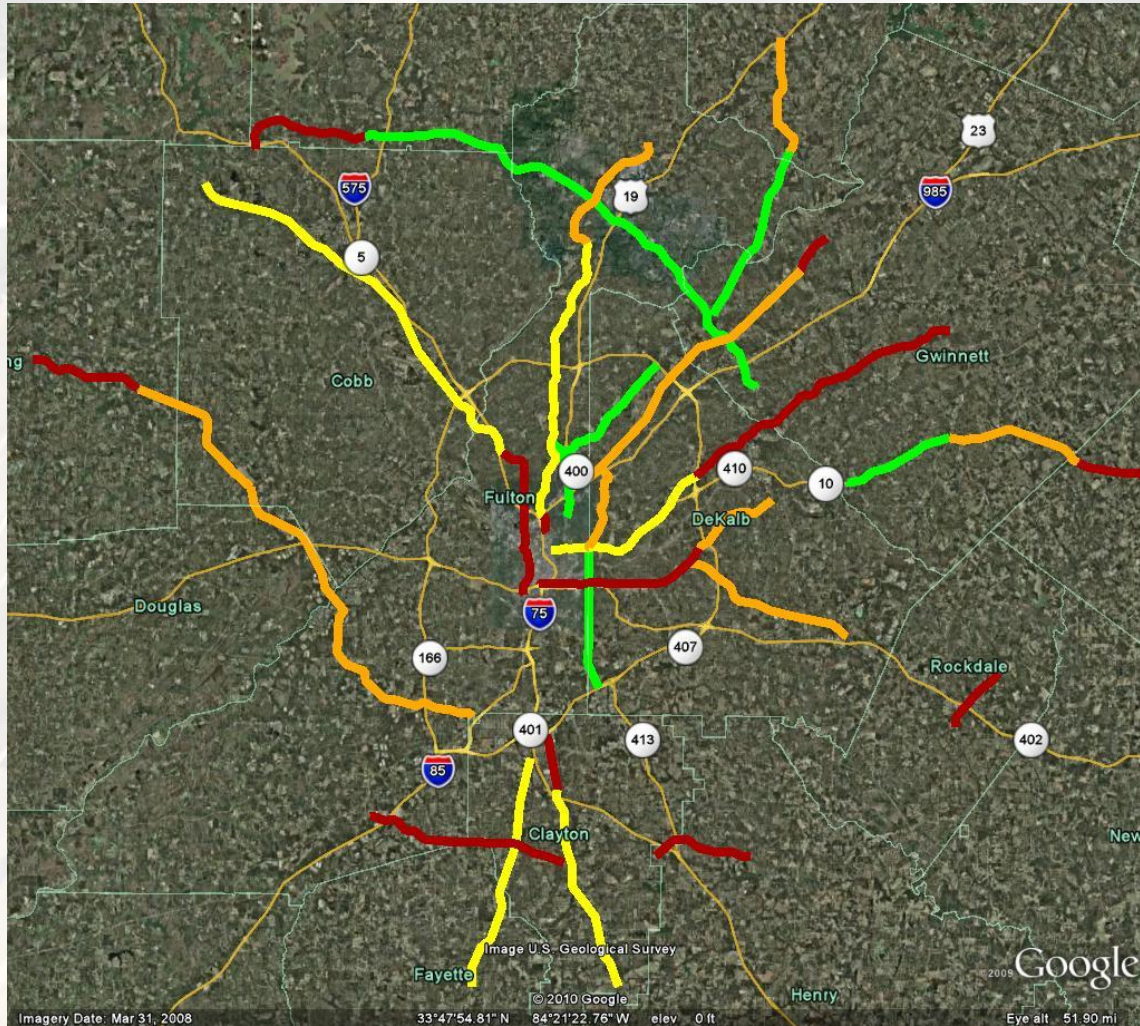
The Routes

Route Selection Process

Three step approach:

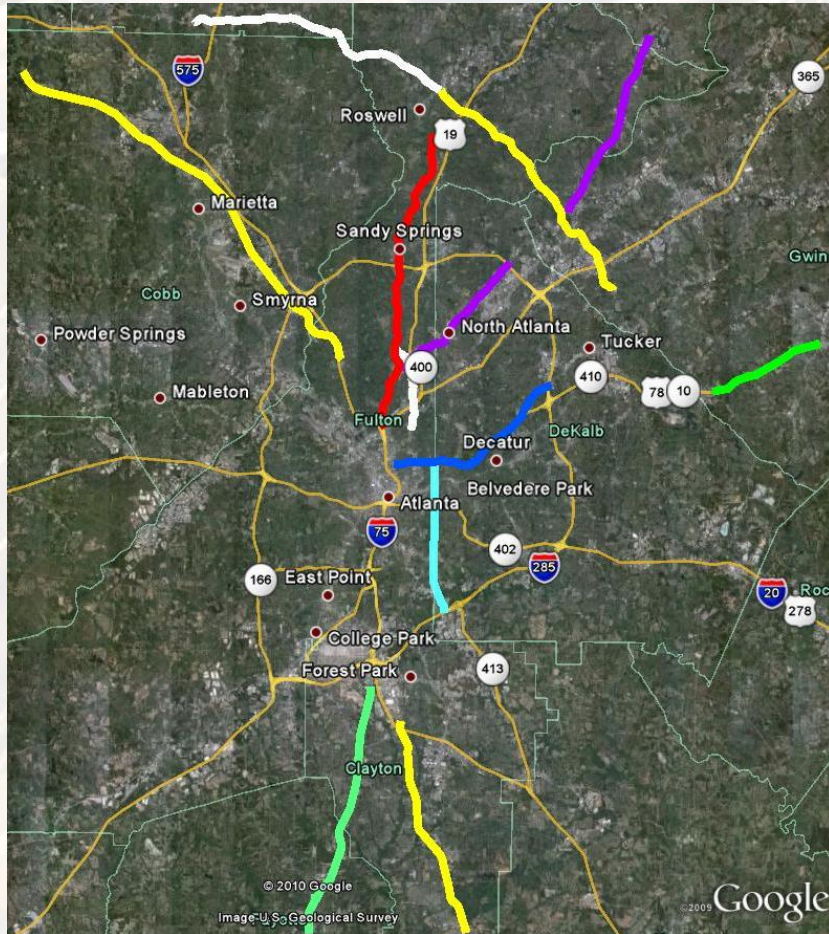
1. GDOT's Office of Planning identified corridors
2. Refined corridors base on operational considerations
3. Prioritized corridors into four groups

Prioritized Corridors



- 1st Priority
- 2nd Priority
- 3rd Priority
- 4th Priority

Regionally Significant Corridors



- US-41/Cobb Pkwy
- SR 92
- SR 140/Holcomb Bridge Rd/Jimmy Carter Blvd
- SR 9/Roswell Rd
- Piedmont Rd
- SR 141
- SR 8/Ponce De Leon/Scott Blvd
- US-78
- SR 42/Moreland Ave
- SR 85
- US 41/Tara Blvd

Actively Managed Corridors Signals By Maintaining Agency

Priority Group 1 & 2														
	Atlanta	Clayton	Cobb	DeKalb	D1	D3	D6	D7	Gwinnett	Johns Creek	Marietta	Roswell	Sandy Springs	Total
SR3/Tara Blvd		2						22						24
SR3/Cobb Pkwy	11		35								20			66
SR8/Ponce De Leon Ave/ Lawrenceville Hwy	20			19										39
SR9/Peachtree Rd/ Roswell Rd	34											1	24	59
SR10/Stone Mountain Hwy									15					15
SR42/Moreland Ave	23			4										27
State Route 85		22				13								35
State Route 92			3				23					9		35
SR140/Holcomb Bridge Rd								5	25			15		45
State Route 141	17			22	2			1	9	13				64
SR237/Piedmont Rd	19													19
	124	24	38	45	2	13	23	28	49	13	20	25	24	428

Program Implementation

- Identified Goals and Corridors
- Propose two options to Implement Program:
 - GDOT lead
 - Local lead
- Goals and objectives remain the same

Memorandum of Understanding

Responsibilities	GDOT Lead		Local Lead	
	GDOT	Local Agency	GDOT	Local Agency
Corridor Traffic Signal Timing	√		√	
Timing Adjustments	√			√*
Preventative/Routine Maintenance	√			√
After Hours/Emergency Response		√		√
Detector, Communication, and Surveillance Repair	√		√	
Actively Manage and Monitor (Peak Hours)	√			√
Major Repair		√		√

*Subject to GDOT approval

Program Approach

- RTOP is a large program that requires significant resources
- Specialized skill set required
- GDOT needed to supplement their resources to execute the program
- Turn-Key approach with a single consultant providing all aspects of the program

Consultant Selected

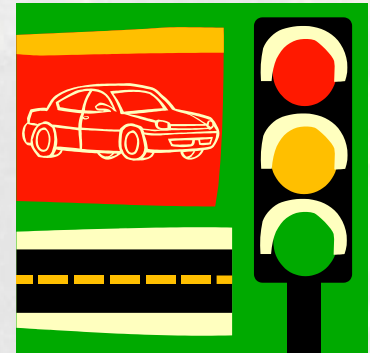
- GDOT selected a team of consultants
- Qualifications-based selection
- Team consists of:
 - Program Manager (ARCADIS)
 - 10 Corridor Managers (ARCADIS, URS, Wolverton)
 - 2 Field Technicians (ARCADIS, URS)
 - 2 Signal Contractors (RJ Haynie, World Fiber)



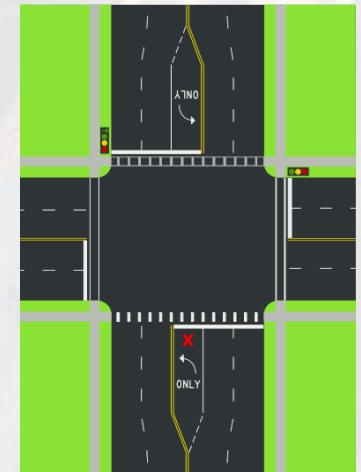
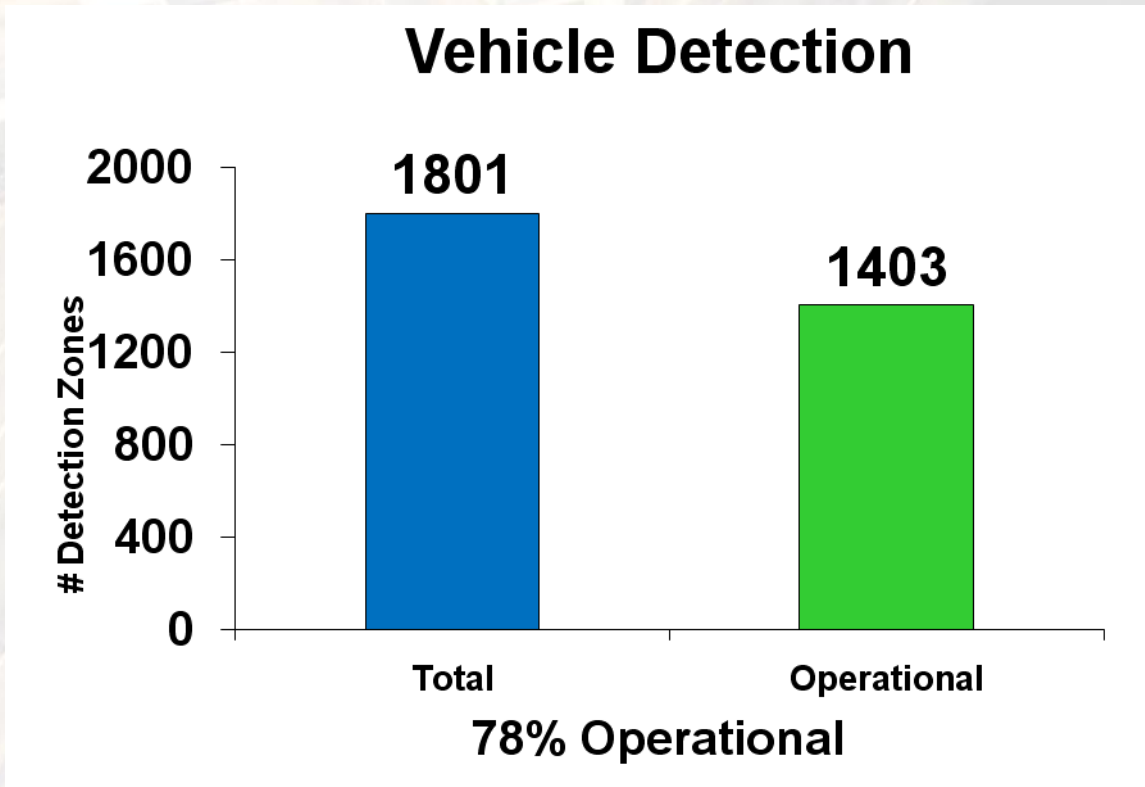
What has been done

Progress to Date

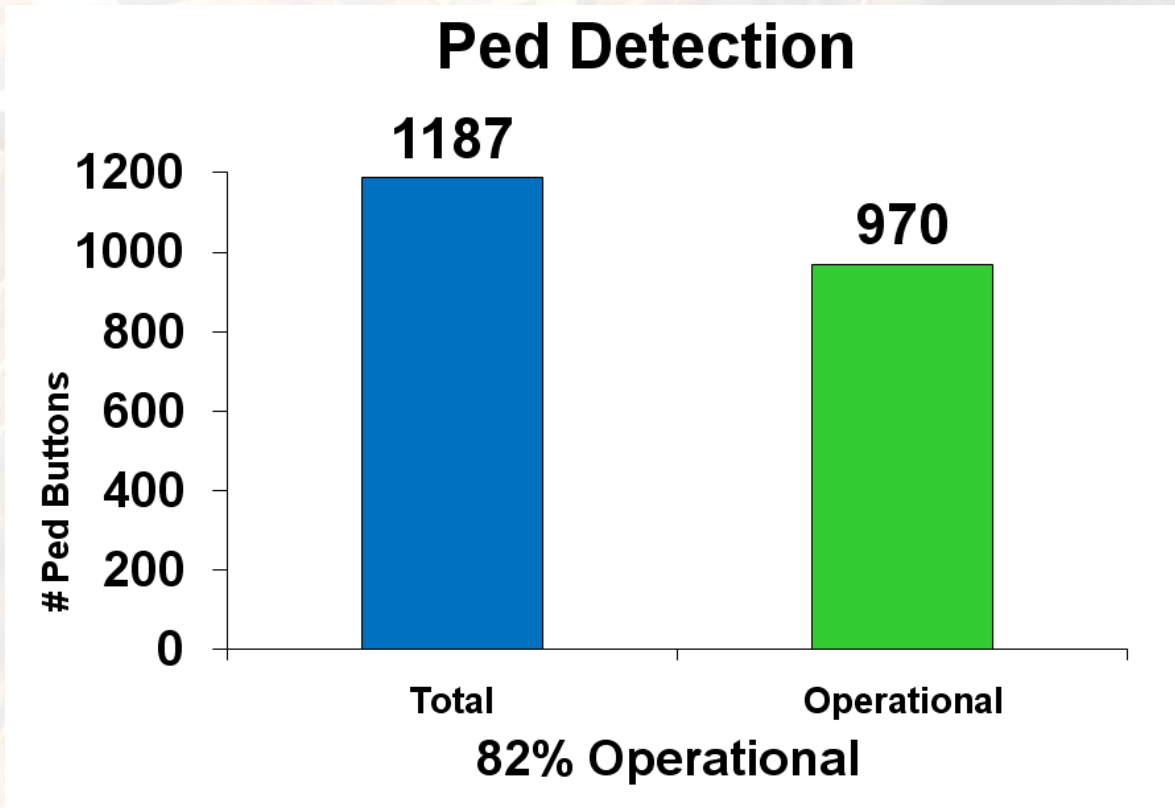
- NTP Issued: June 9, 2010
- Inventoried intersections
- Provided Quick Signal Timing Fixes
- Coordinating with local agencies
 - Adding to existing efforts by the maintaining agencies
 - Memorandum of Understanding



Progress to Date Vehicle Detection

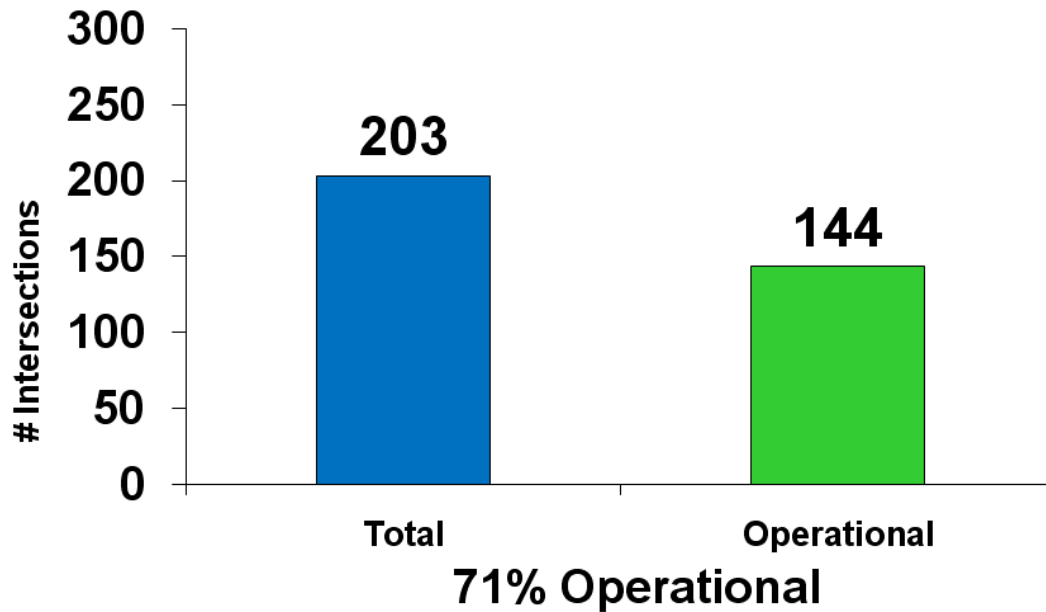


Progress to Date Pedestrian Detection



Progress to Date Signal Communication

Communications



Progress to Date

- Quick Fixes
 - ✓ 500+ Offset/Splits Changes
 - ✓ 50+ Time clock Adjustments
- Incident Response
 - Roswell Road at Peachtree Road Truck Accident
 - Piedmont Road Water Main Break
 - SR 141 North Master Failure



Progress to Date Measures of Effectiveness

Operational Vehicle Detection		
Program Goal	Total	Total Operational
>95 %	1782	1693
October Status		
77%	1782	1369

Corridors Device Failure		
Program Goal	Total Reported by Local Agency	Total Found by CM
70 %		
October Status		
87%	26	167



- Time to respond to failures
- Stops and delay along corridor
- Volume along corridor

Next Steps

- Complete baseline of Group 2 Corridors
- Develop communication plans for TACTICS deployment
- Develop deployment plans for ITS devices
- Travel time detection and reporting
- Work order and trouble tickets
- Weekly/Monthly reports
- Public info page



Questions?

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