



# ITSVA Northern Virginia Transportation Roundtable

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# Transportation System **Users** in Arlington

- **Residents**
  - Lowest resident drive-alone commute rate in VA
  - 46% residents use non-SOV as commute mode
- **Employees Commuting to Arlington**
  - Over 40% take transit, walk or bike to work.
- **Visitors**
  - 4 million plus visitors to Arlington National Cemetery
  - Over 11,000 hotel rooms used as a base for visitors from outside the region
- **Through Travelers & Commuters**



# Transportation System Use

- > 4 million vehicle-miles of travel per day
- 220,000 Metrorail boardings/alightings
- > 64,000 bus trips
- > 3,000 commuter rail boardings/alightings
- > 8,000 car-share members
- > 200,000 transit-related walking trips



# Transportation Technology in Arlington

- Traffic Management Center
- Intelligent Transportation Systems (ITS)
  - Traffic Optimization & Messaging
  - Emergency Management
  - Transit Messaging
- Fiber Optics Network
- Automated Multi-modal Monitoring System
- Smart Streetlights (LED)



# Smart Transportation Management Center



# TMC Overview

- o Traffic management
- o Real time data collection
- o Transit management system
- o Smart streetlight system

# Traffic Management Components

- Adaptive control system
- Real time traffic detection systems
- Emergency vehicle support system
- Transit management system
- Real time traffic monitoring
- Queue detection system
- 180+ CCTV Cameras





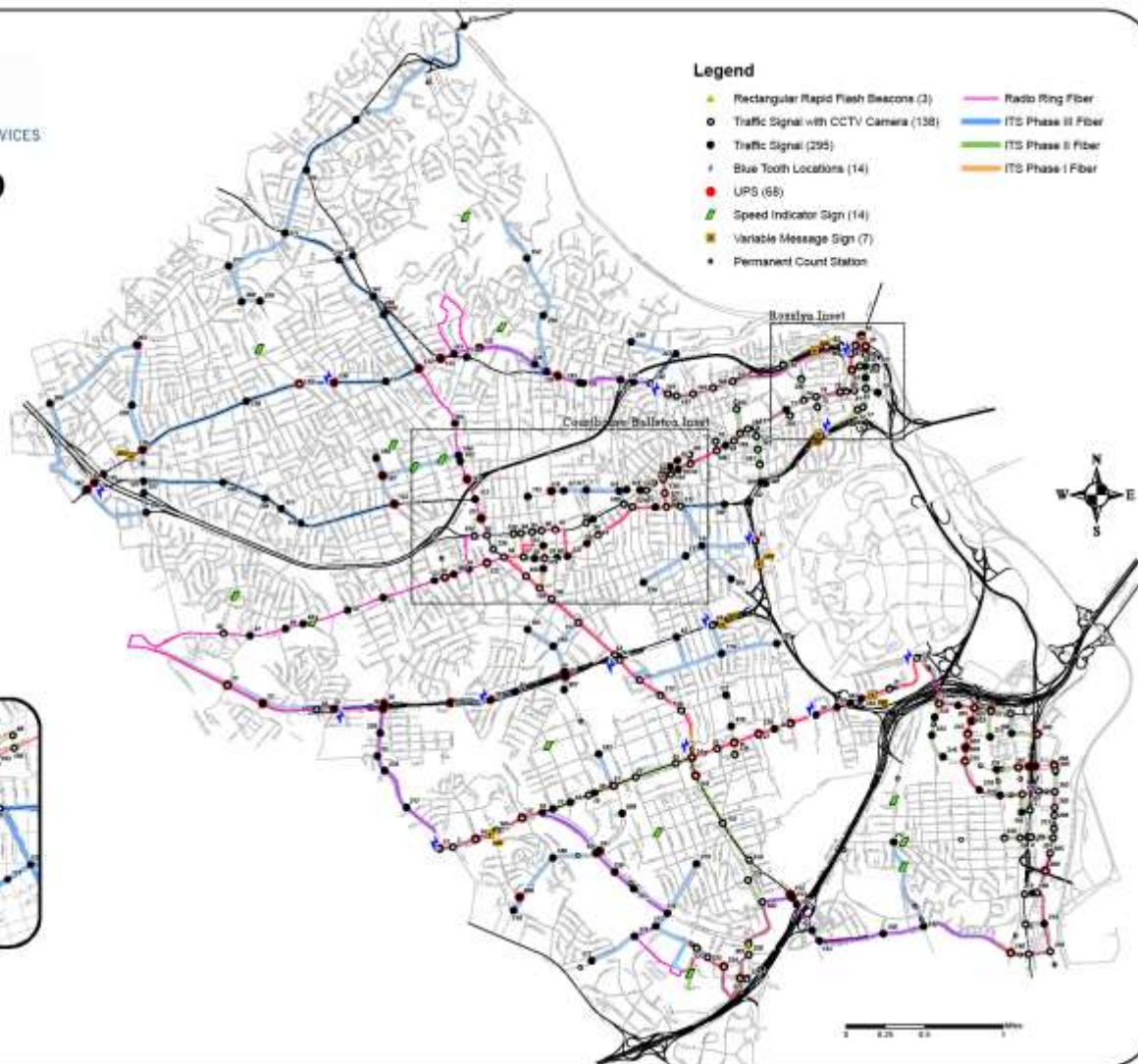
# Signal ITS Map

Date: 3/14/2015

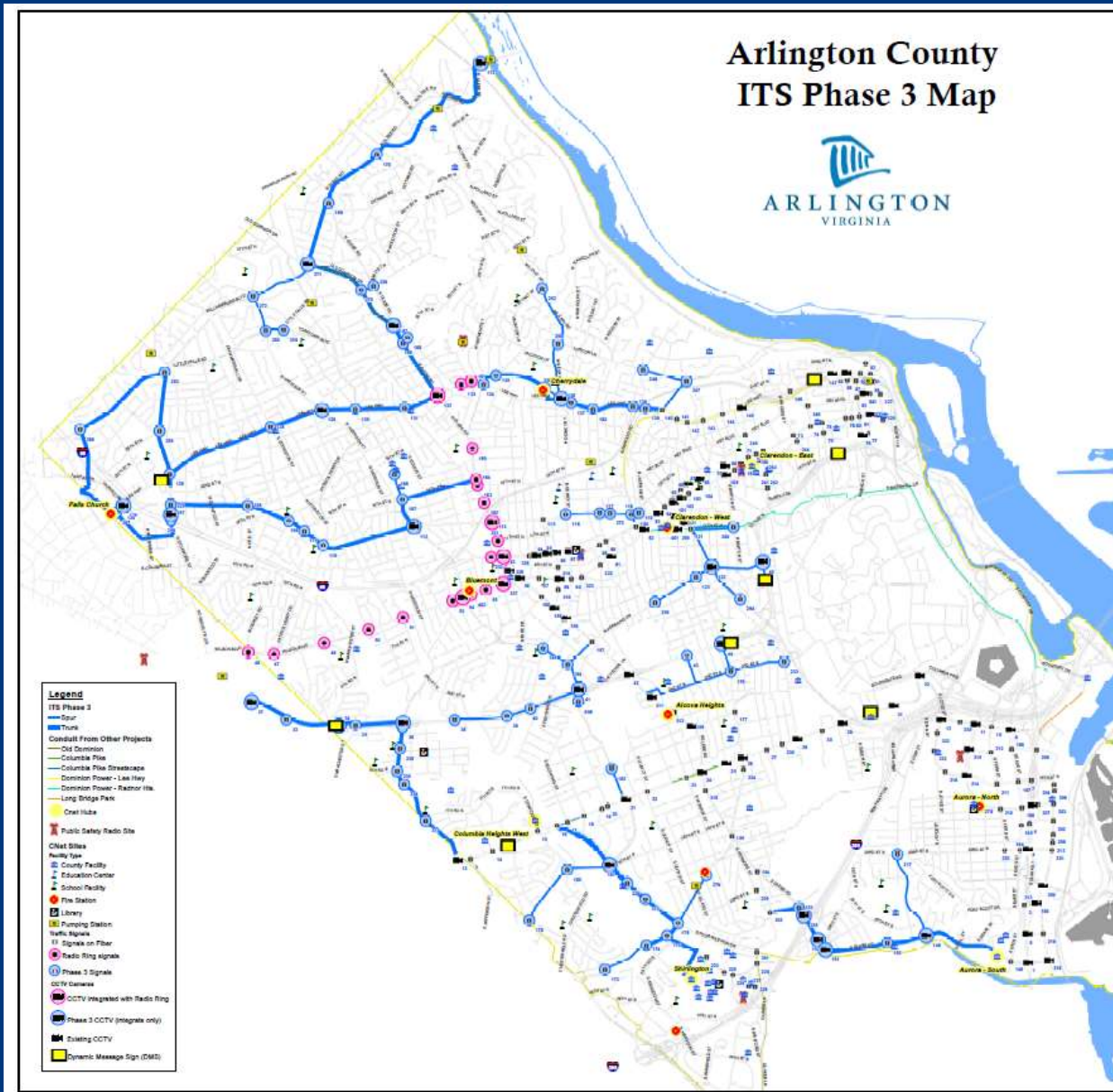
Rosslyn Inset



Courthouse-Ballston Inset

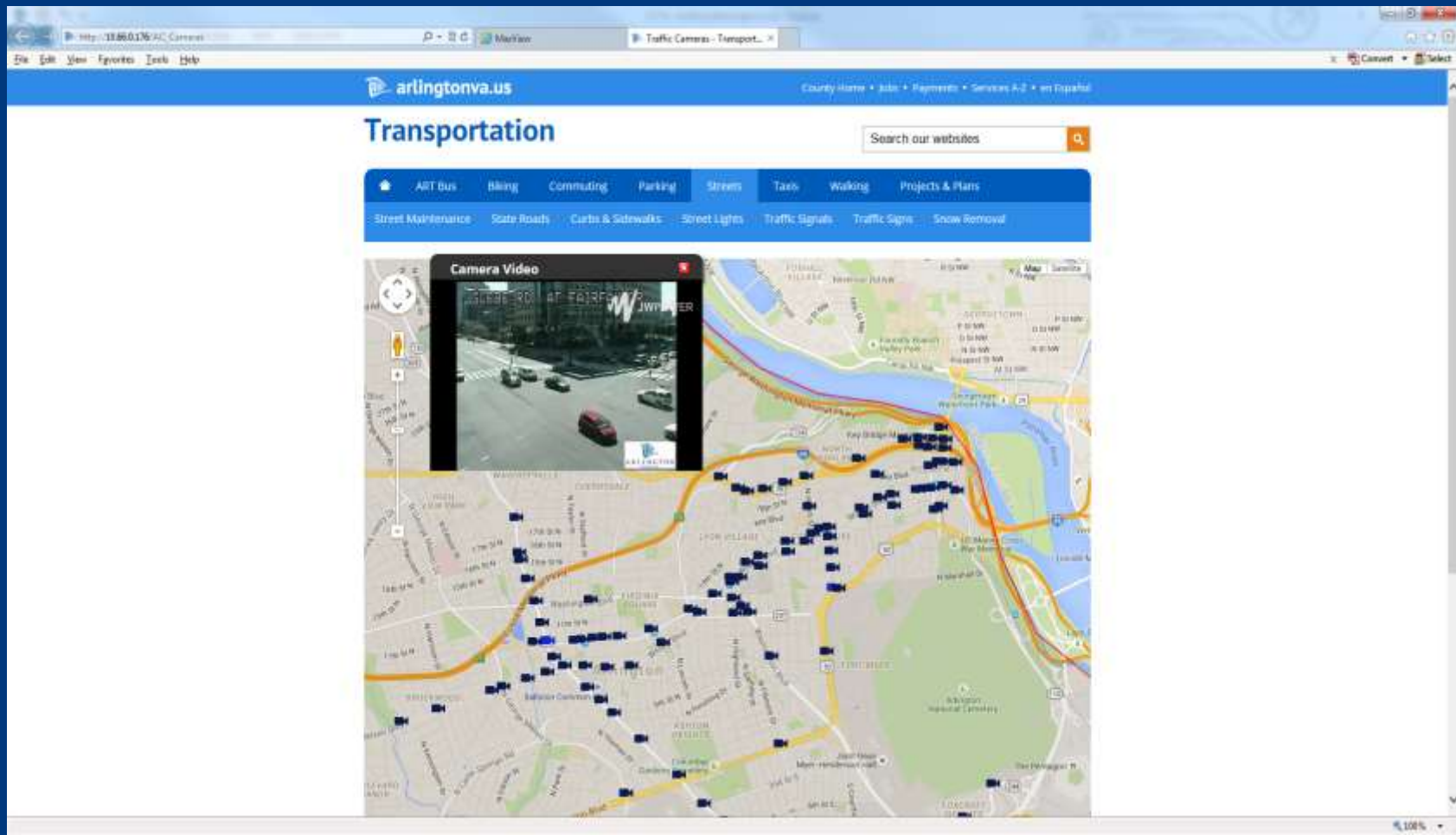


# ITS Fiber Optics Construction



# CCTV Web Integration

- Sharing of County CCTV camera feed (180+ CCTV) in real time on County webpage.



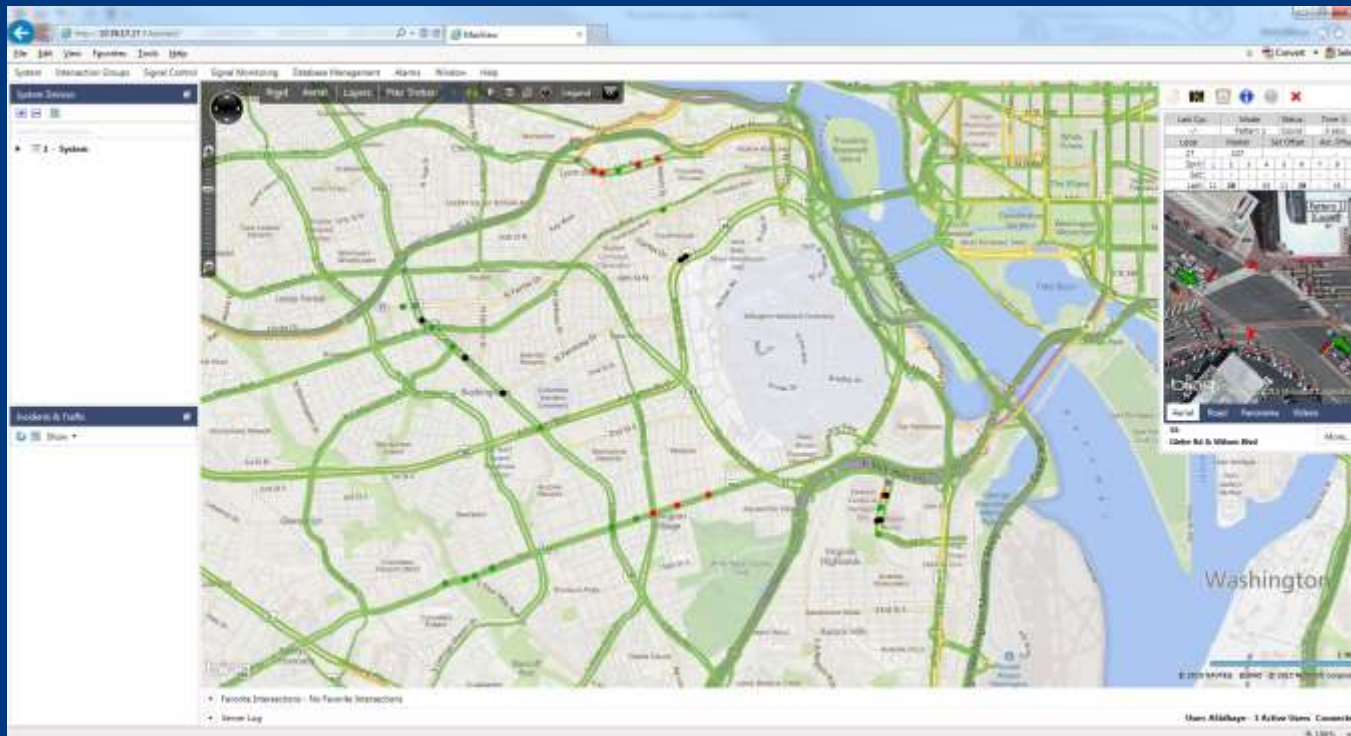


# Max View Signal System

- The project includes upgrading of signal system software and controllers for 200 intersections

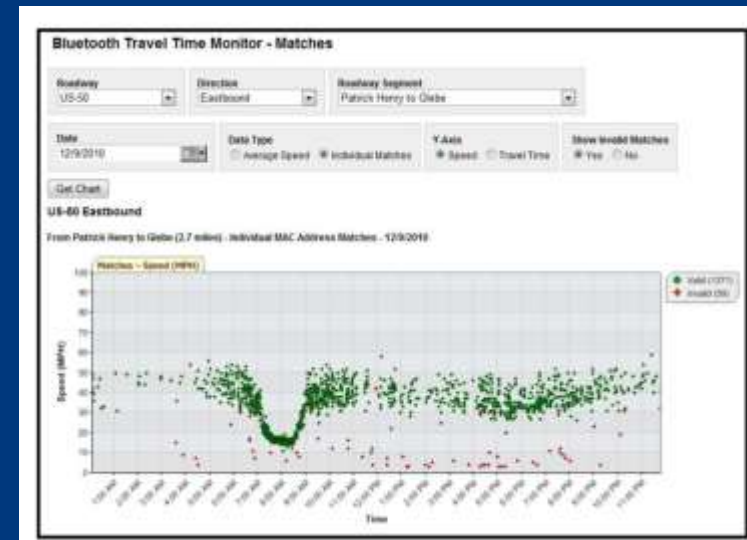


Signal System  
CCTV System  
Video Detection



# Smart Route Choices

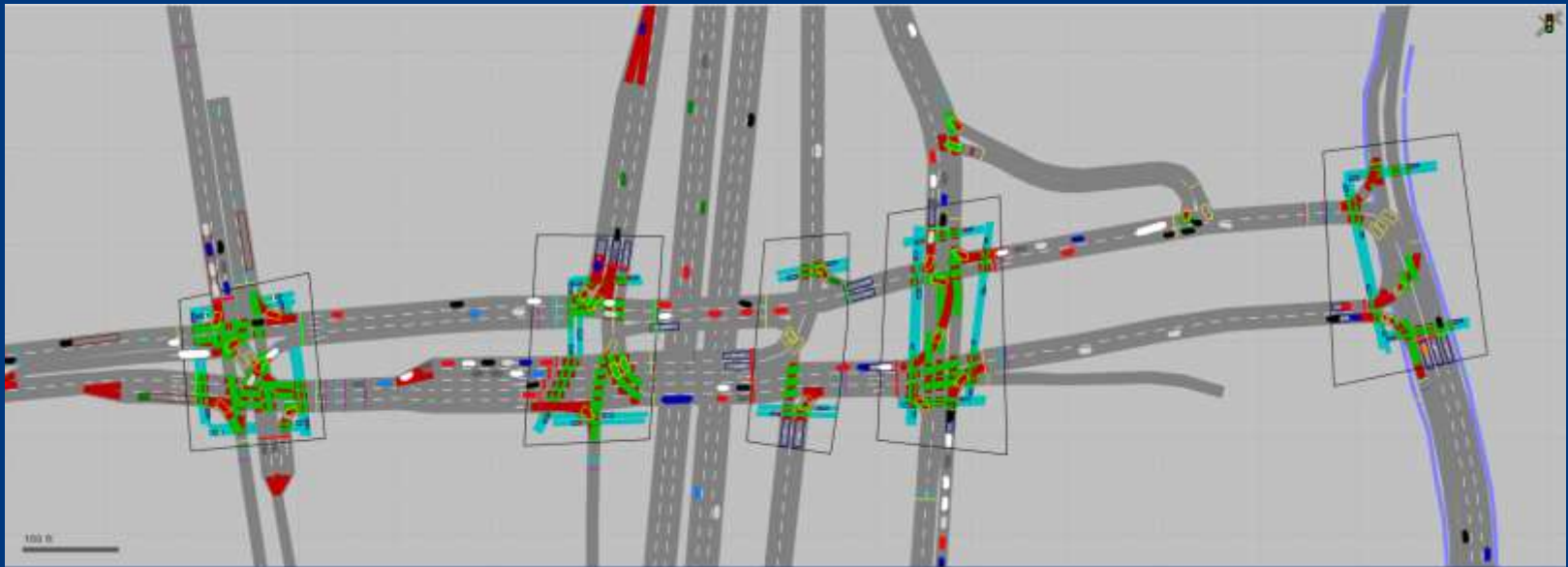
- o Three major arterials:
  - Arlington Blvd. (Rt. 50)
  - Lee Highway
  - Columbia Pike
- o Bluetooth technology tracks travel times in corridors
- o Travel times to key destinations displayed on DMSs
- o Messages Amber alerts and incident management
- o Balances capacity



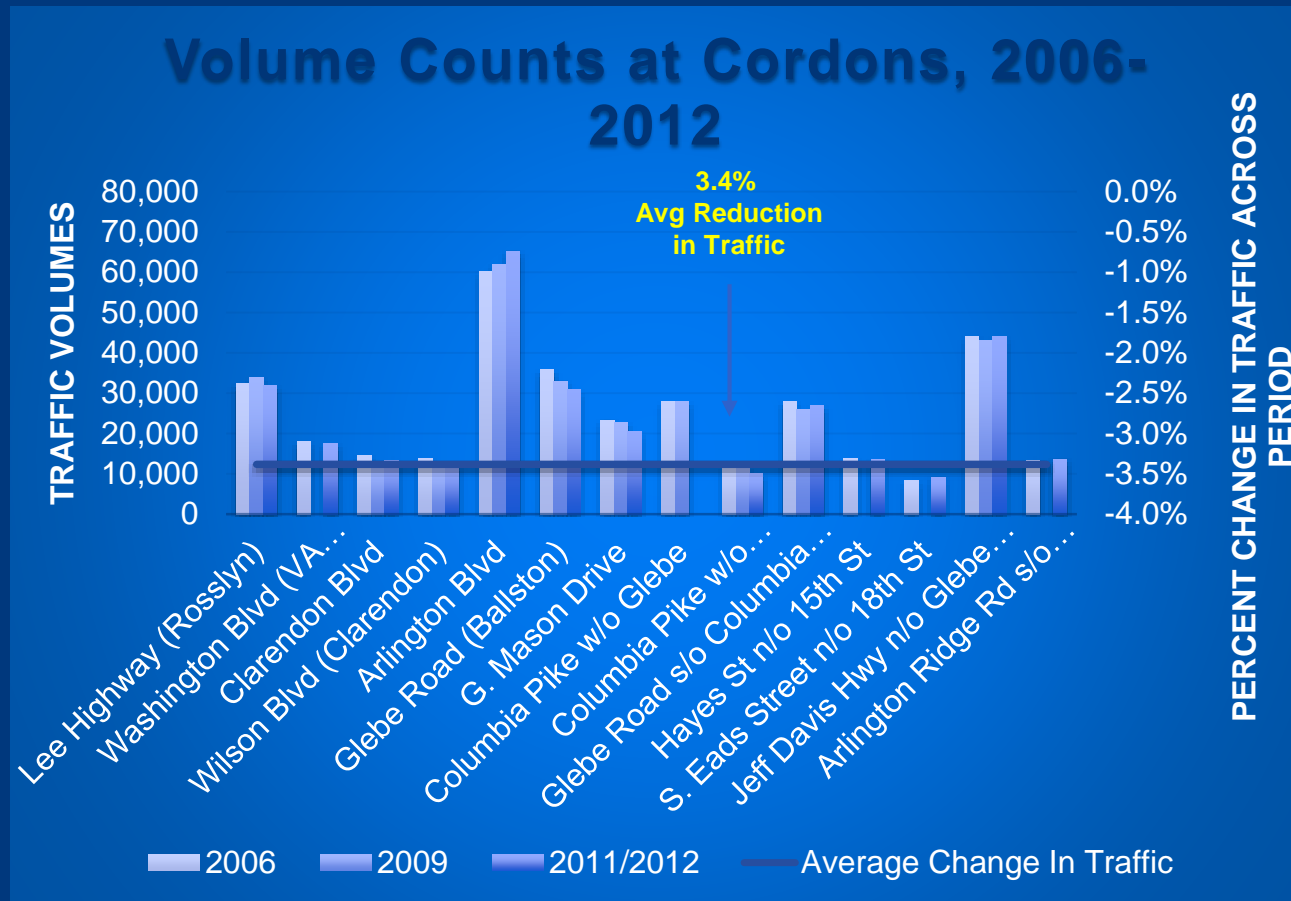


# Has Technology Reduced Congestion in Arlington?

Yes! But difficult to quantify



# Traffic Volumes Have Decreased on Many Arterials within Arlington



# Traffic Volumes at Key Locations

- Overall decrease of 3% between 2006 and 2012
- Population grew by 9,000 residents (or 8%) in the same period.

# Transportation System **Users** in Arlington

- **Residents**
  - Lowest resident drive-alone commute rate in all VA regions
  - 46% residents use non-SOV as primary commute mode
- **Employees Commuting to Arlington**
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- **Visitors**
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- > 200,000 transit-related walking trips
- < 50% of all resident and worker trips in the Metro Corridors by SOV





# What's Next?

## Integrated Corridor Management



2:20 PM

Wednesday, May 28, 2014

Capital Bikeshare

15th & Crystal Dr

5 6

Crystal City Metro / 18th &

1 18

20th & Crystal Dr

13 2

High: 85°  
Low: 60°

### Crystal City Bus Arrivals

	9S: POTOMAC YARD-CRYSTAL CITY STATI... BELL ST + 15TH ST	Next Arrival	2 min	10 min	21 min	46 min
	9S: POTOMAC YARD-CRYSTAL CITY STATI... S BELL ST + 18TH ST (BUS BAY D)	Next Arrival	3 min	9 min	11 min	22 min
	23A: CRYSTAL CITY EAST BELL ST + 15TH ST	Next Arrival	41 min	63 min		
	23A: TYSONS CORNER WEST S BELL ST + 18TH ST (BUS BAY B)	Scheduled	2:30 PM	2:55 PM	7:00 PM	7:20 PM
	F99: SHUTTLE WEST S BELL ST + 18TH ST (BUS BAY D)	Scheduled	2:39 PM	2:59 PM	3:19 PM	3:39 PM
	F99: SHUTTLE EAST S BELL ST + 18TH ST (BUS BAY D)	Scheduled	2:39 PM	2:59 PM	3:19 PM	3:39 PM

### Crystal City Metro

Large Town Center 2 min + 13 min	Huntington BRD + 11 min	
Fort Totten 9 min	Franconia-Spring... 2 min	

### Menu of Services

Local & Regional Services

- Bike Trails Information
- HOV, SLUG & SmarTag Information
- Commuter Bus & Train Schedules
- Metro & Local Bus Schedules & Route Maps
- Ozone Action Day Programs

### Commuter News

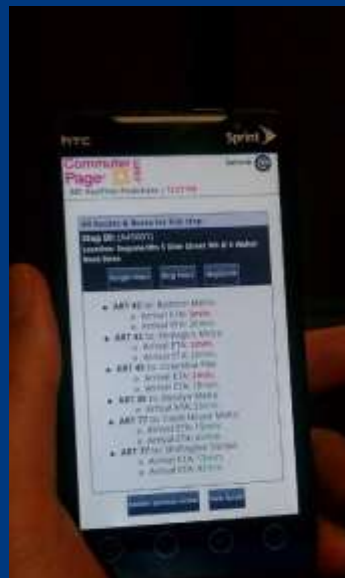
### Crystal City VRE Station

	Fredericksburg Line: Southbound
	Scheduled 3:50 PM 4:25 PM 4:55 PM
	Manassas Line: Southbound
	Scheduled 3:57 PM 4:37 PM 5:17 PM
	Fredericksburg Line: Northbound
	Scheduled No more trains today
	Manassas Line: Northbound
	Scheduled No more trains today

ARLINGTON VIRGINIA  
COMMITTEE OF GOVERNMENTS, ARLINGTON  
Metropolitan Council of Governments

ART Alerts

# Integrated Corridor Management Urban Applications





# Crystal City Potomac Yard Transitway

## Implementation Case Study



# Transitway Operational Challenges

1. Traffic signal operations
2. Transit signal priority
  - Coordination with WMATA
  - Coordination between two jurisdictions
  - Technology
3. Right turns vs. transit ops. on exclusive ROW



# Questions?

