



**Wilson Boulevard over Arlington Boulevard (Route 50)  
Fairfax County  
Bridge Rehabilitation**

**Project No. 0613-029-380; UPC 111320**

**VICENTE VALEZA, PE – Project Manager, Structure & Bridge NOVA**

**SCOPING MEETING  
Wednesday, October 25, 2017**

## REMINDERS

### Charge Codes for VDOT Employees:

- UPC/CSC ----- 111320
- ACTIVITY ----- 600 Series

### To All Attendees:

**Please make sure to sign the Sign-In Sheet before leaving.**

# PROJECT LOCATION



# PROJECT OVERVIEW



## EXISTING BRIDGE DESCRIPTION

- The bridge was built in 1958 with a composite concrete deck on steel rolled beams with cover plates. In 1999, the existing deck was milled 1/2" and placed 1 1/4" thick concrete overlay. (Deck 7", Concrete Overlay 1 1/4")
- The bridge is approximately 86' long (single simple span) and 36'-10" wide out-to-out (includes 5' wide sidewalk). Clear distance curb-to-curb is 28'-0".
- The existing minimum vertical clearance is 14'-11".
- The Bridge carries 2 lanes of EB Wilson Boulevard.

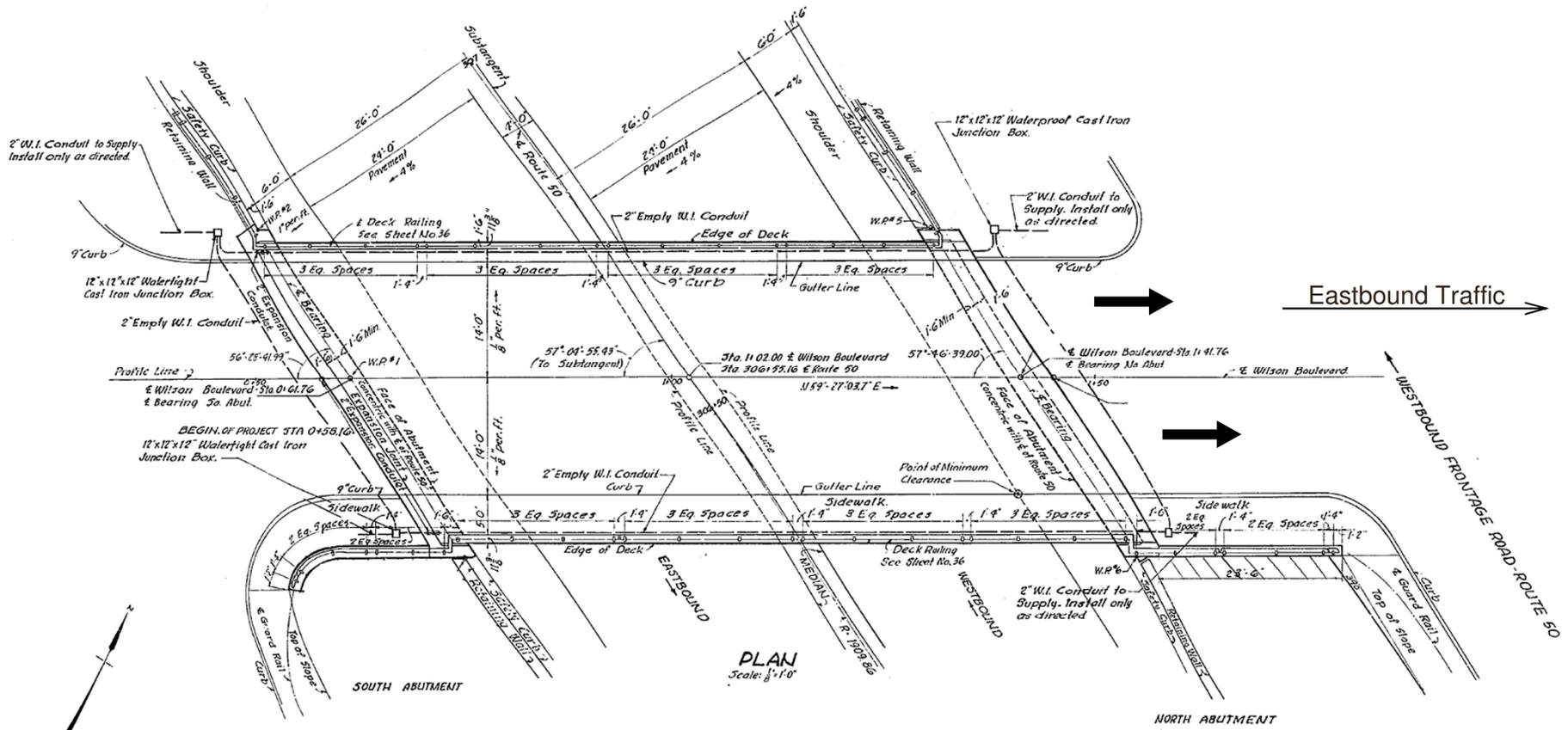
# PROJECT OVERVIEW



## EXISTING BRIDGE DESCRIPTION, CONT.

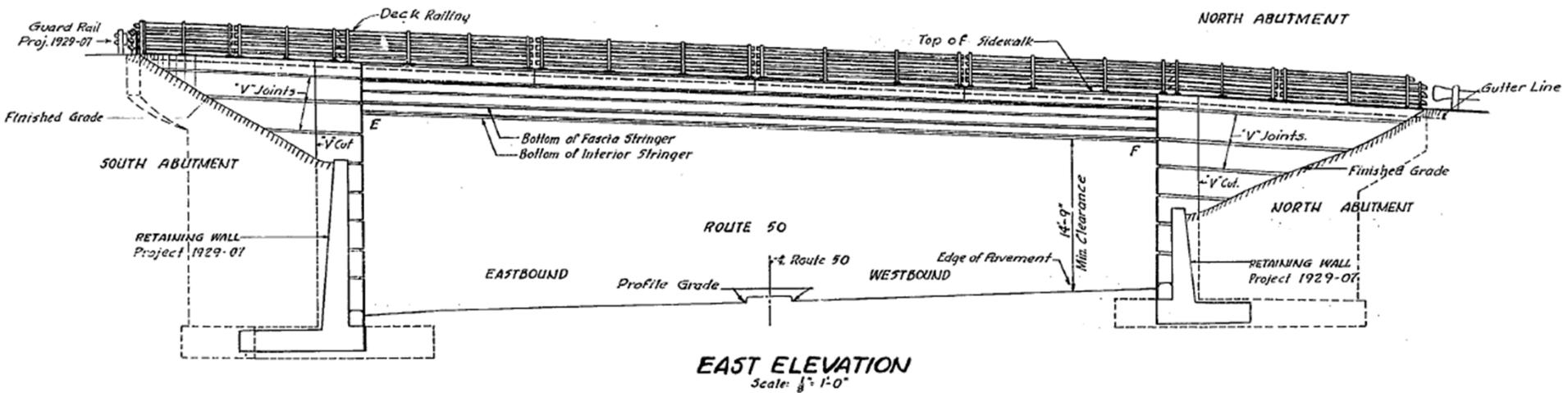
- **Roadway Classification: Secondary (Wilson Blvd); Primary (Arlington Blvd)**
- **Functional Classification: Urban Principal Arterial (Wilson Blvd); Major Arterial (Arlington Blvd)**
- **Posted Speed Limit: 30 mph (Wilson Blvd)  
45 mph (Arlington Blvd)**
- **2016 ADT Data: Wilson Blvd: 7,500; 1% Truck = 75**
- **2016 ADT Data: Arlington Blvd: 50,000 (Total); 1% Truck = 500**

# PROJECT OVERVIEW



**Existing Bridge Plan  
(As Built)**

# PROJECT OVERVIEW



Existing Bridge Elevation  
(As Built)

# EXISTING CONDITIONS

## Bridge Deck:

- Condition Rating 4 (Poor Condition)
- Bottom of the deck in poor condition due to numerous cracks, spalls and delaminated areas.
- Concrete overlay in fair condition due to numerous cracks, scaling and delamination.

## Bridge Superstructure:

- Condition Rating 7 (Good Condition)
- The steel beams showing light surface rust and areas of peeling paint.

## Bridge Substructure:

- Condition Rating 6 (Fair Condition)
- The abutment walls are in fair condition with spalls, cracks and delaminated concrete areas.

**Overall Sufficiency Rating: 72.5**

# EXISTING CONDITIONS



No proper transition from approach roadway to bridge sidewalk



Deck joints in poor condition with broken concrete edges



Original Non-crash tested bridge railings

# EXISTING CONDITIONS BRIDGE SUPERSTRUCTURE

Steel rolled beams with cover plates are in good condition.



Existing utility conduits. Owner to be determined.

Timber planks placed by VDOT to protect traffic from falling concrete from underside of deteriorating deck.

## EXISTING CONDITIONS SUBSTRUCTURE



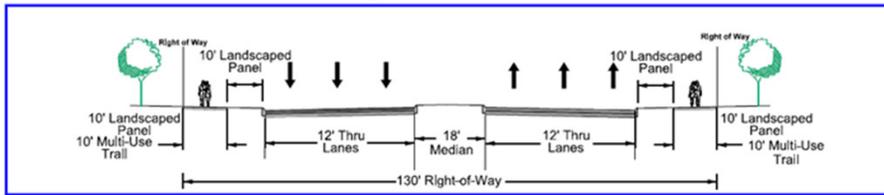
Spalled and delaminated concrete,  
hairline cracks and exposed rebar  
at Abutment Breastwall.



# FAIRFAX COUNTY PROPOSED IMPROVEMENTS

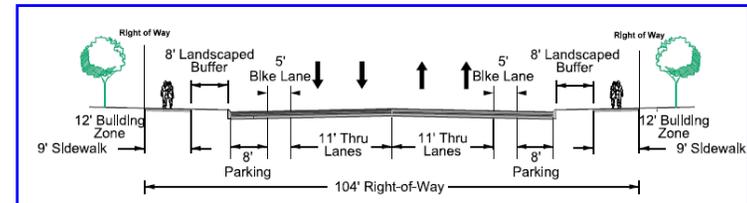


Arlington Boulevard



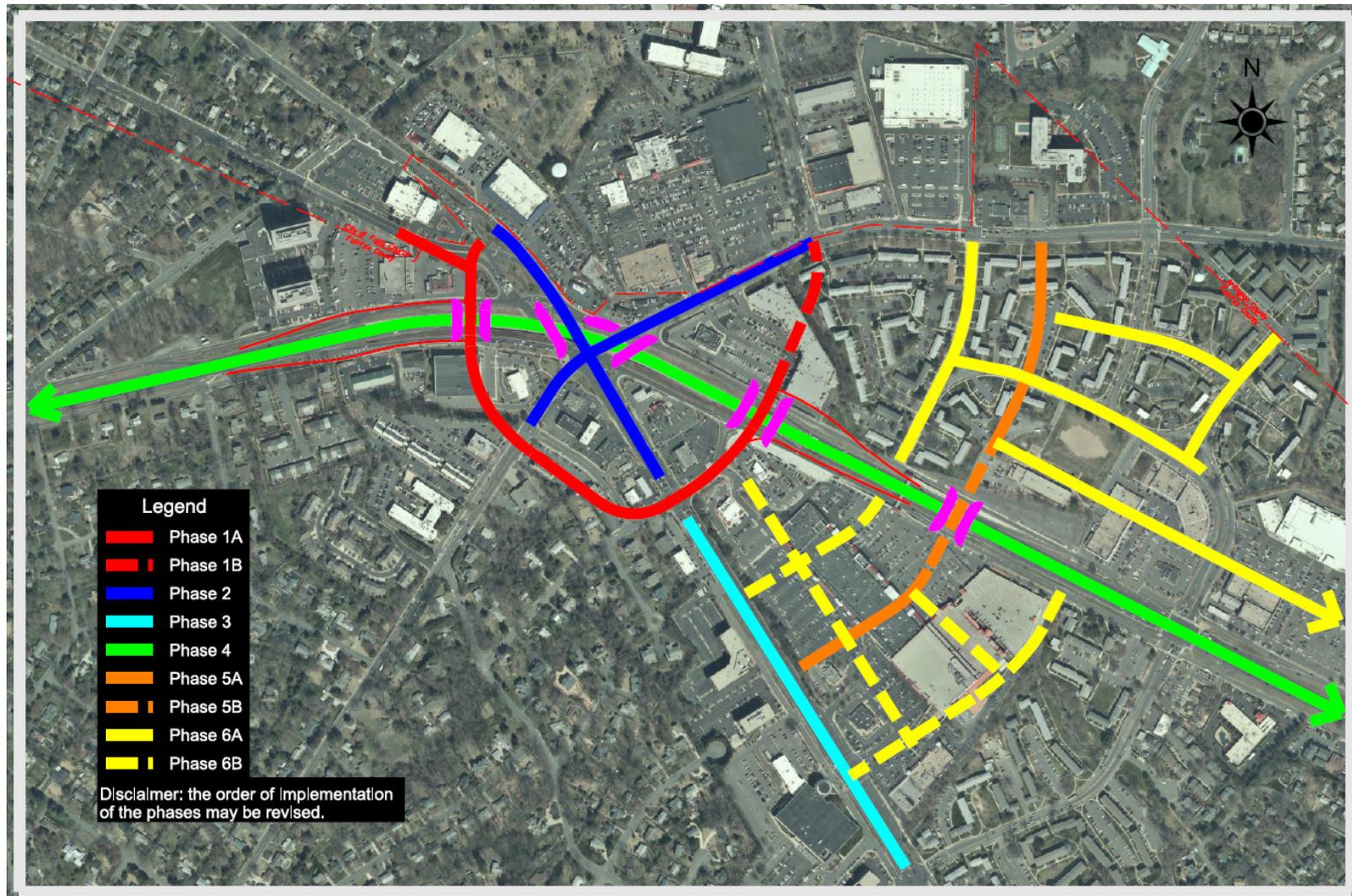
Multimodal Through Corridor

Wilson Boulevard



Major Avenue

# FAIRFAX COUNTY PROPOSED IMPROVEMENTS



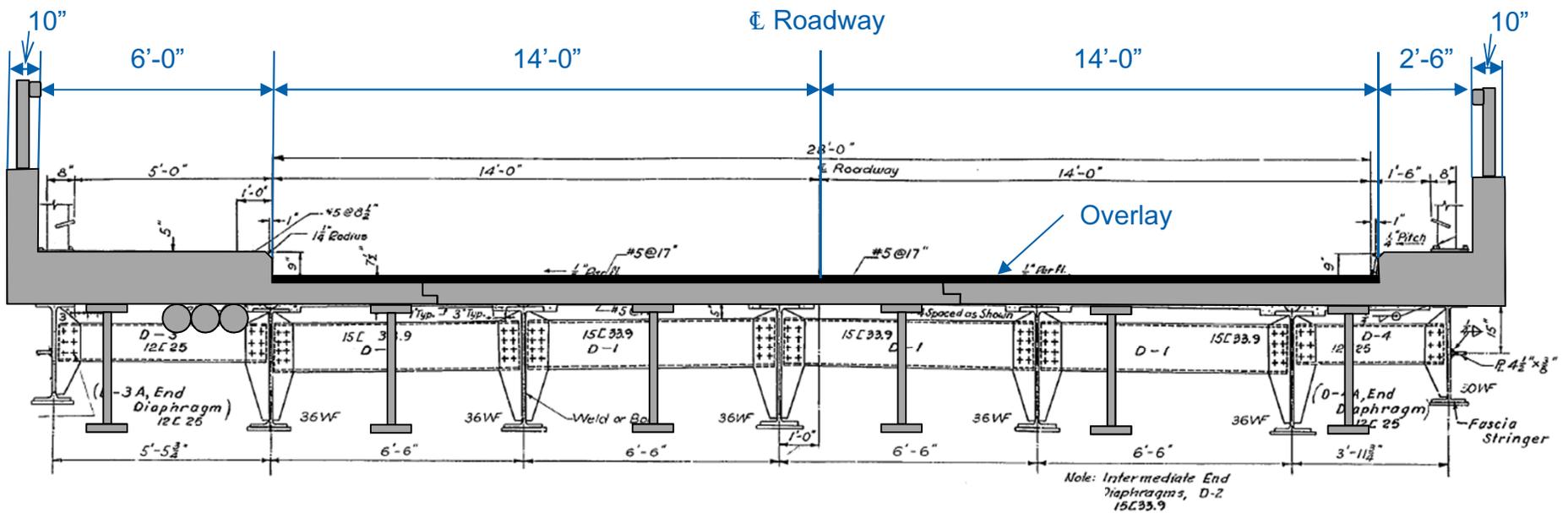
Construction Phases



## SCOPE OF WORK

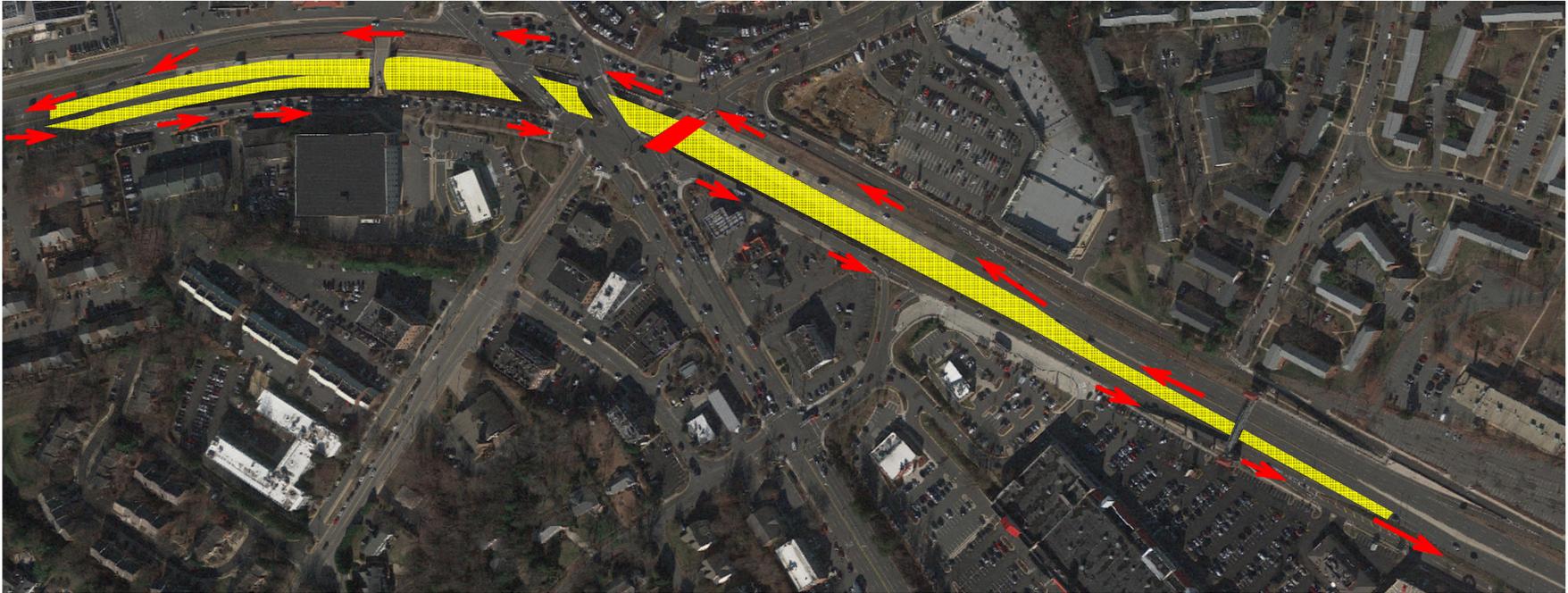
- Replace entire bridge superstructure in a single weekend utilizing accelerated bridge construction (ABC) methods to minimize traffic disruption.
- Utilize a full weekend closure and detour of Arlington Boulevard (Route 50) and Wilson Blvd. to provide construction access for bridge demolition and erection, delivery vehicles and crane access.
- Design modular (pre-fabricated) steel beam and concrete deck units for quick delivery and installation.
- Multiple nighttime single lane closures on Route 50 will be needed before the weekend closure to construct new bearing pedestals and repair concrete at abutments, and on Wilson Blvd. after the weekend closure to repair approach curbs, sidewalks, pavement and railings.
- Temporary Utility Relocation will be needed for three (3) 6" conduits supported under the bridge deck. Owner to be determined.
- ACM survey confirmed Asbestos in Transite Utility conduits, weep hole piping and joint caulking.
- All work will be performed within VDOT right of way.

# PROPOSED SUPERSTRUCTURE REPLACEMENT



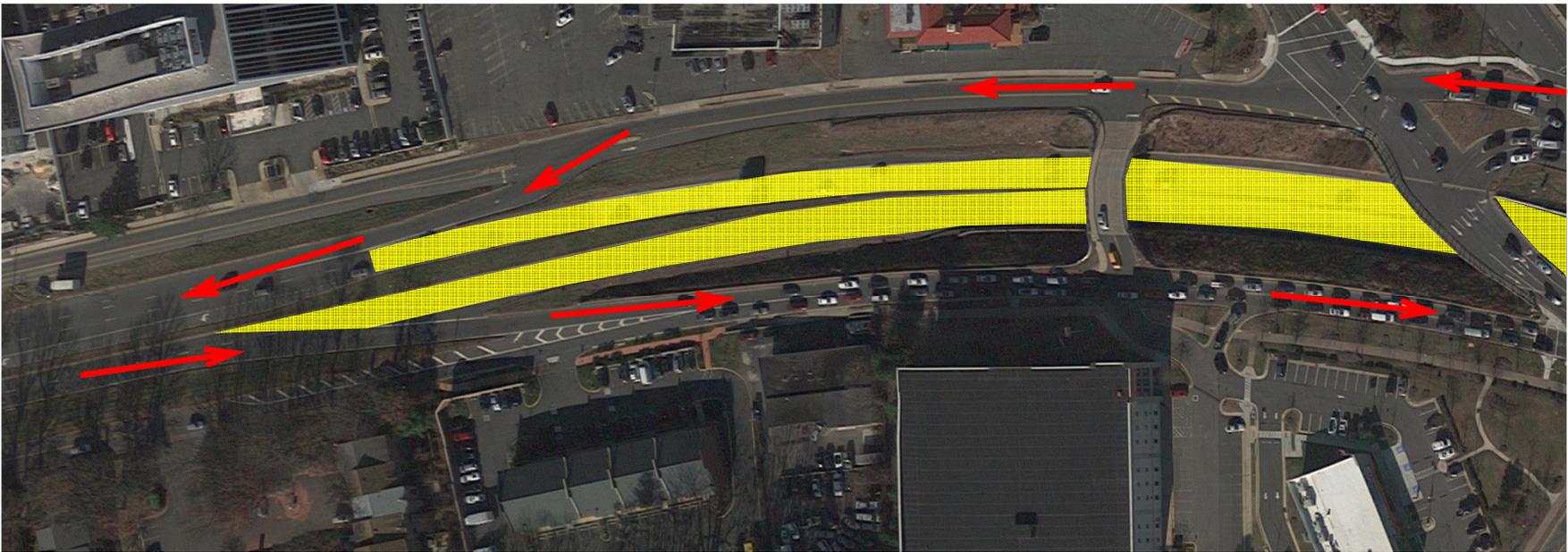
Proposed Transverse Section

# MAINTENANCE OF TRAFFIC (MOT) Weekend Closure of Route 50 Overview



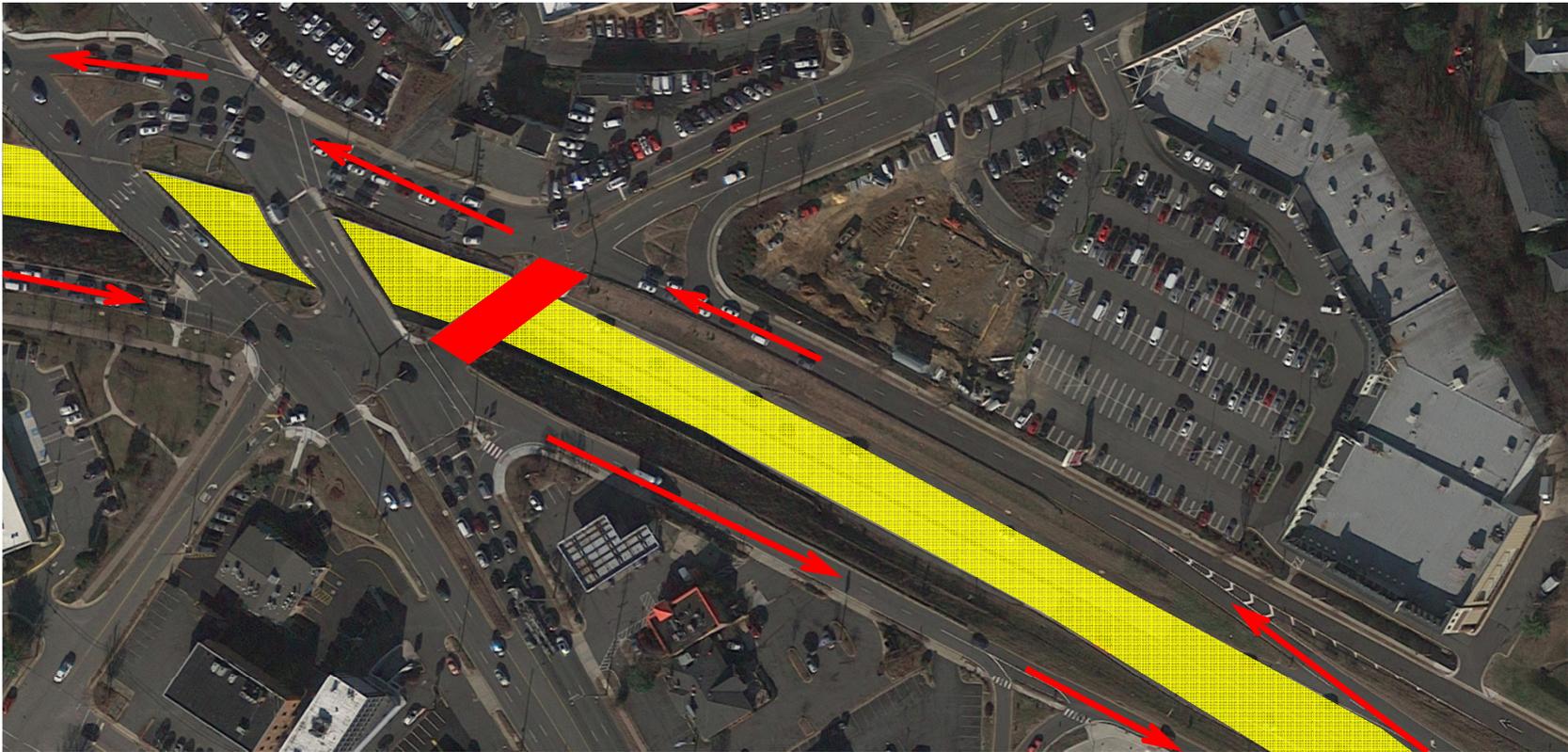
- Complete closure of Wilson Blvd bridge (shown in red).
- Complete closure of Route 50 (shown in yellow).
- Route 50 detour onto existing ramps (red arrows).

# MAINTENANCE OF TRAFFIC (MOT) Weekend Closure of Route 50



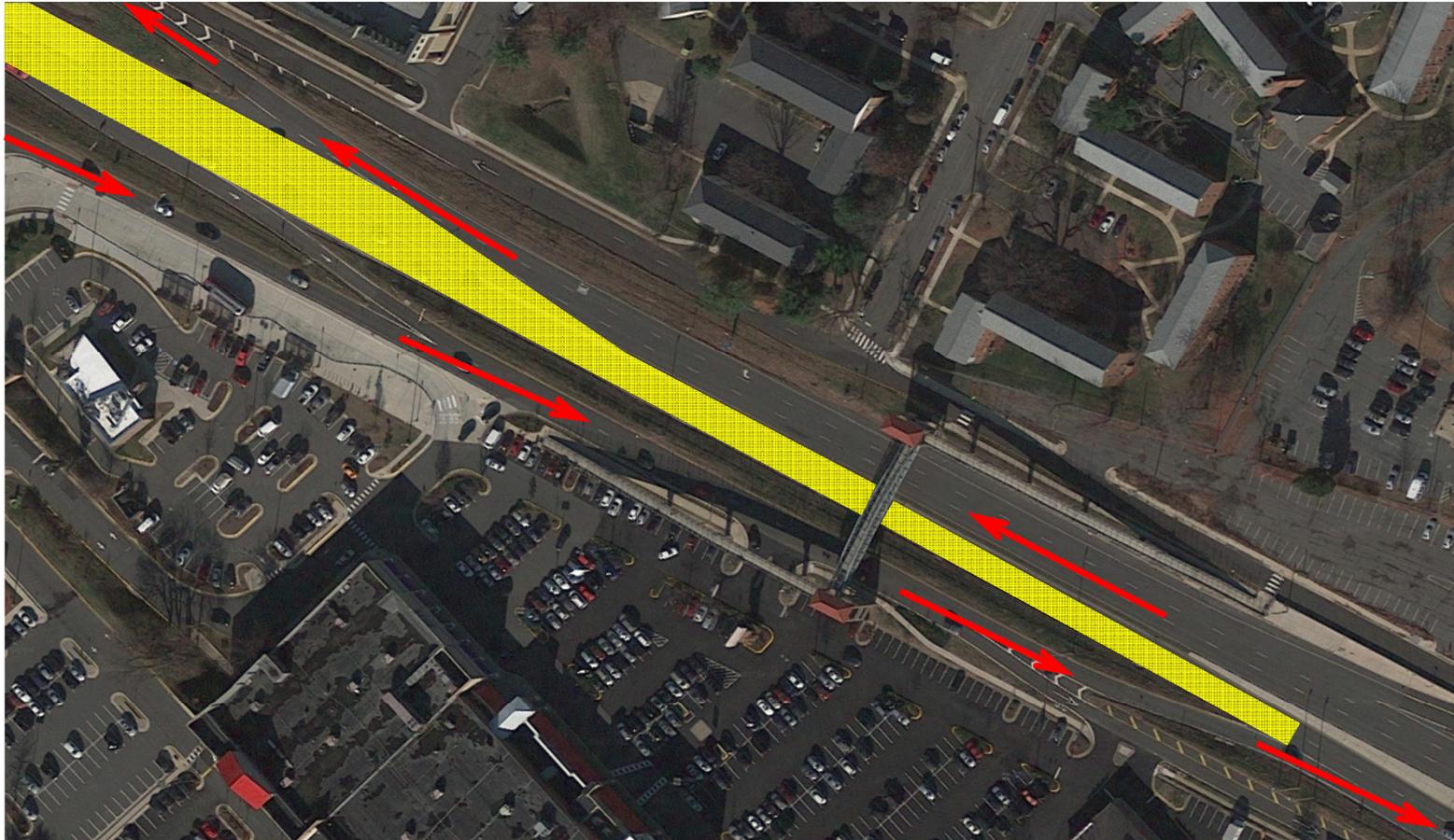
Western Segment

# MAINTENANCE OF TRAFFIC (MOT) Weekend Closure of Route 50



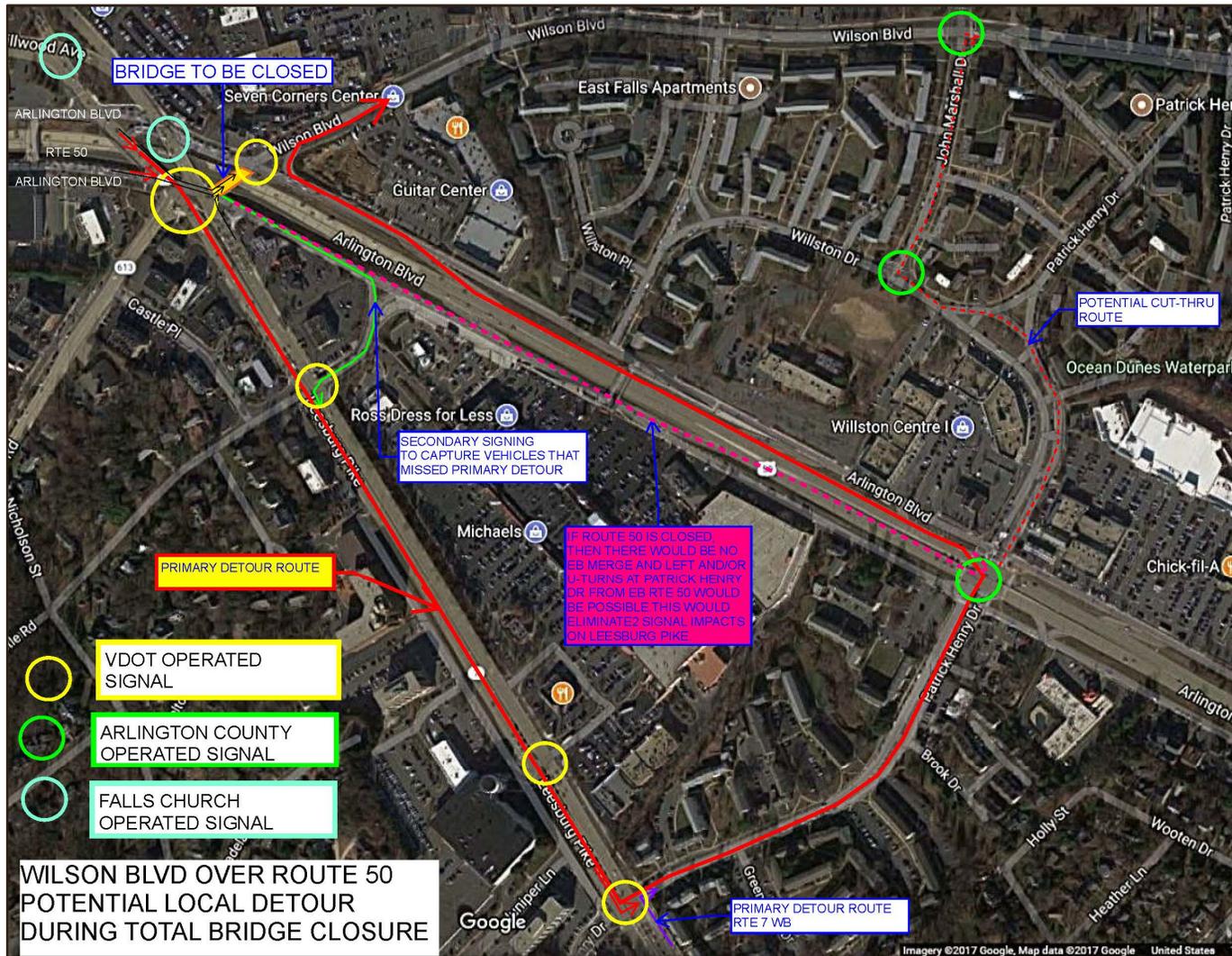
Central Segment

# MAINTENANCE OF TRAFFIC (MOT) Weekend Closure of Route 50



Eastern Segment

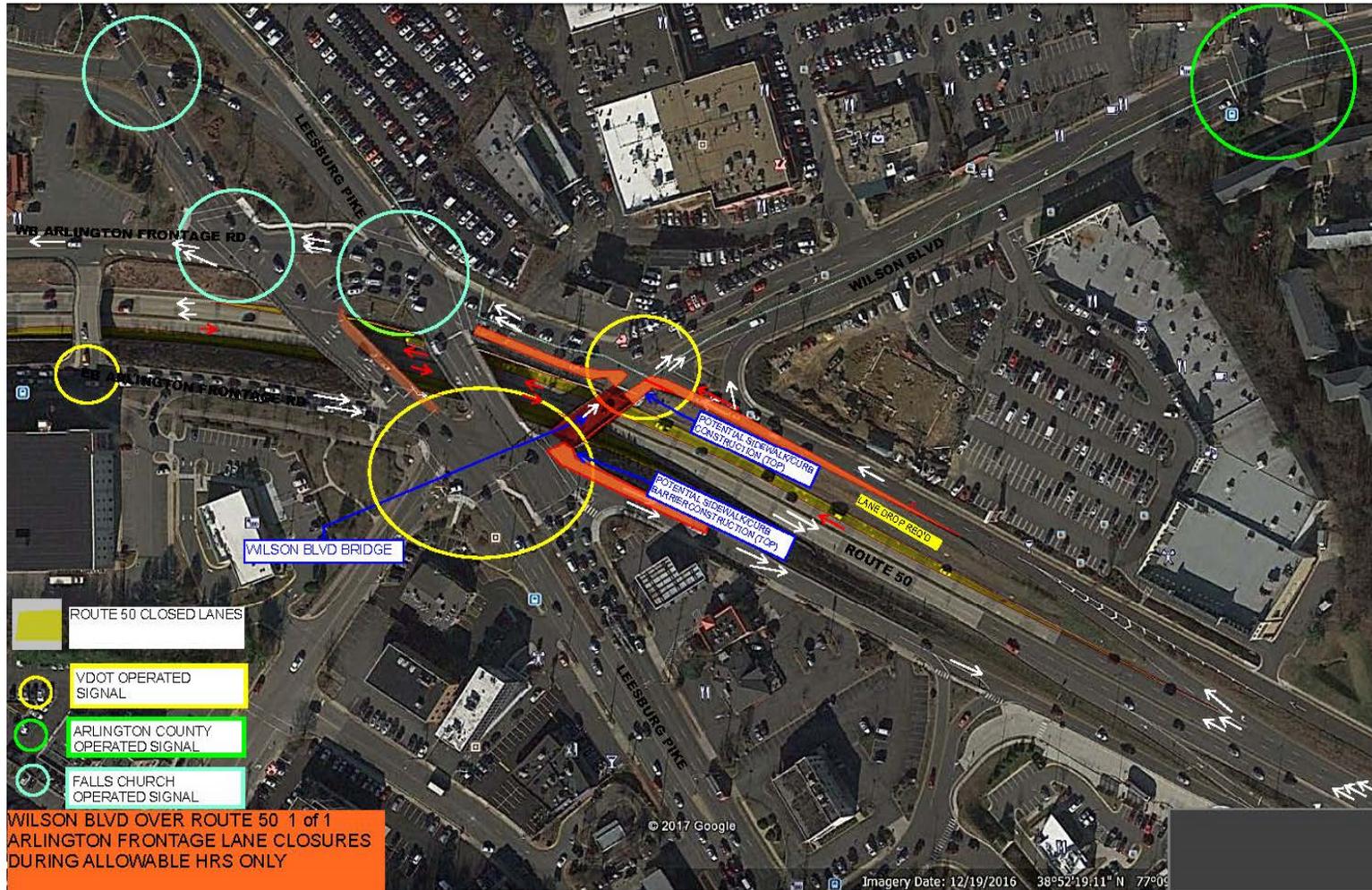
# MAINTENANCE OF TRAFFIC (MOT) Weekend Closure of Wilson Blvd Bridge



Potential Detour for EB Wilson Blvd

# MAINTENANCE OF TRAFFIC (MOT)

## Off Peak Lane Closures Before & After Weekend Closure



Off-Peak Single Lane Closures on Wilson Blvd and Route 50 before and after the weekend closure for construction of bridge bearings, curbs, sidewalk and guard rail

# ANTICIPATED SCHEDULE AND COST

## Anticipated Schedule:

### Construction – Bridge Repair

- Advertisement for Construction: November 13, 2018
- Begin Construction: March 2019
- Construction Completion: November 2019

## Estimated Project Cost: (SGR Funded)

Total Cost: \$3.6 million (PE and CN)

PE . . . . . \$ 600,000

CN . . . . . \$ 3.0 million

**THANK YOU**

**QUESTIONS & COMMENTS**