

Parcel Boundary

New Buildings (BRAC 133)

Internal Roadways

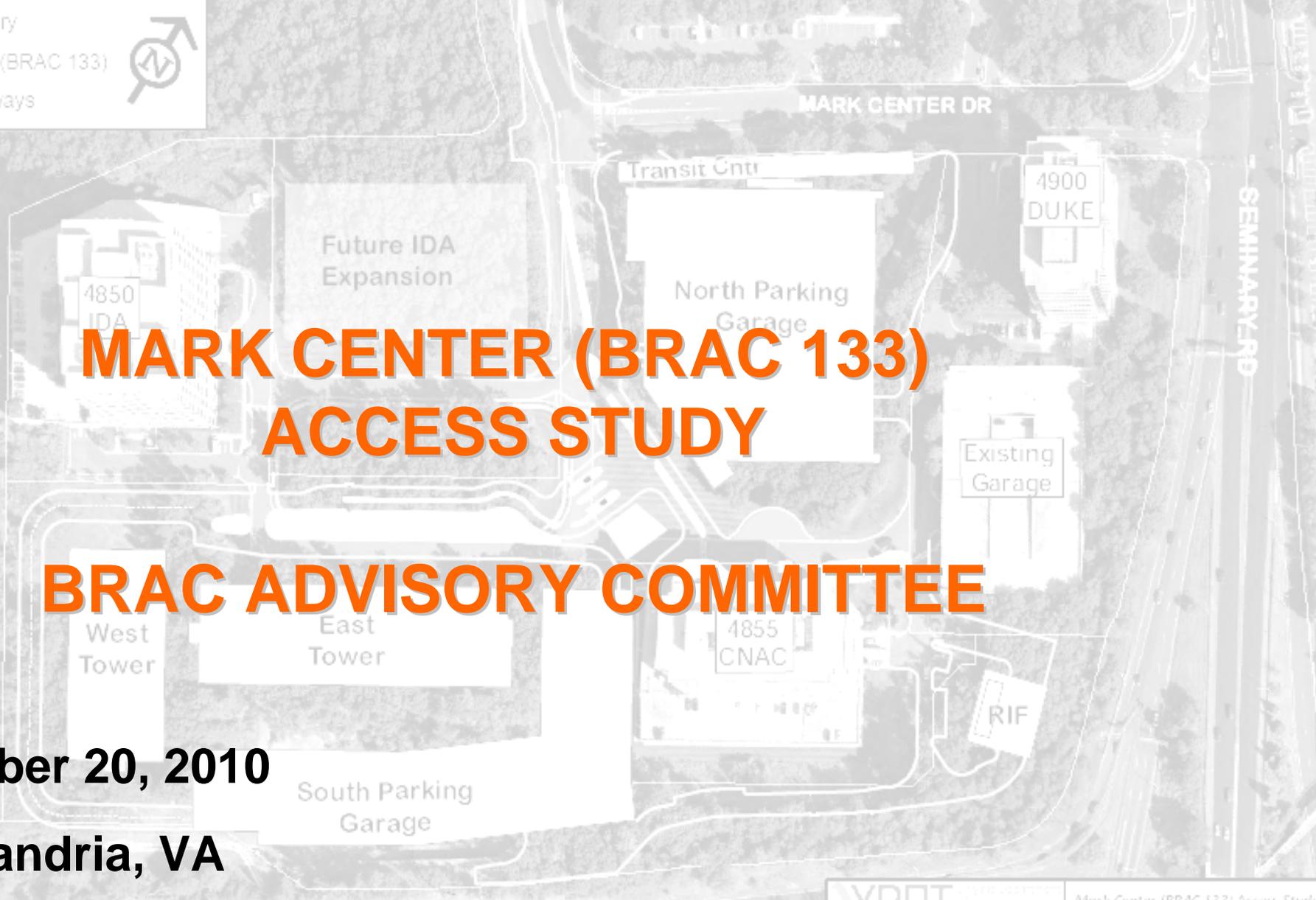


MARK CENTER (BRAC 133) ACCESS STUDY

BRAC ADVISORY COMMITTEE

October 20, 2010

Alexandria, VA

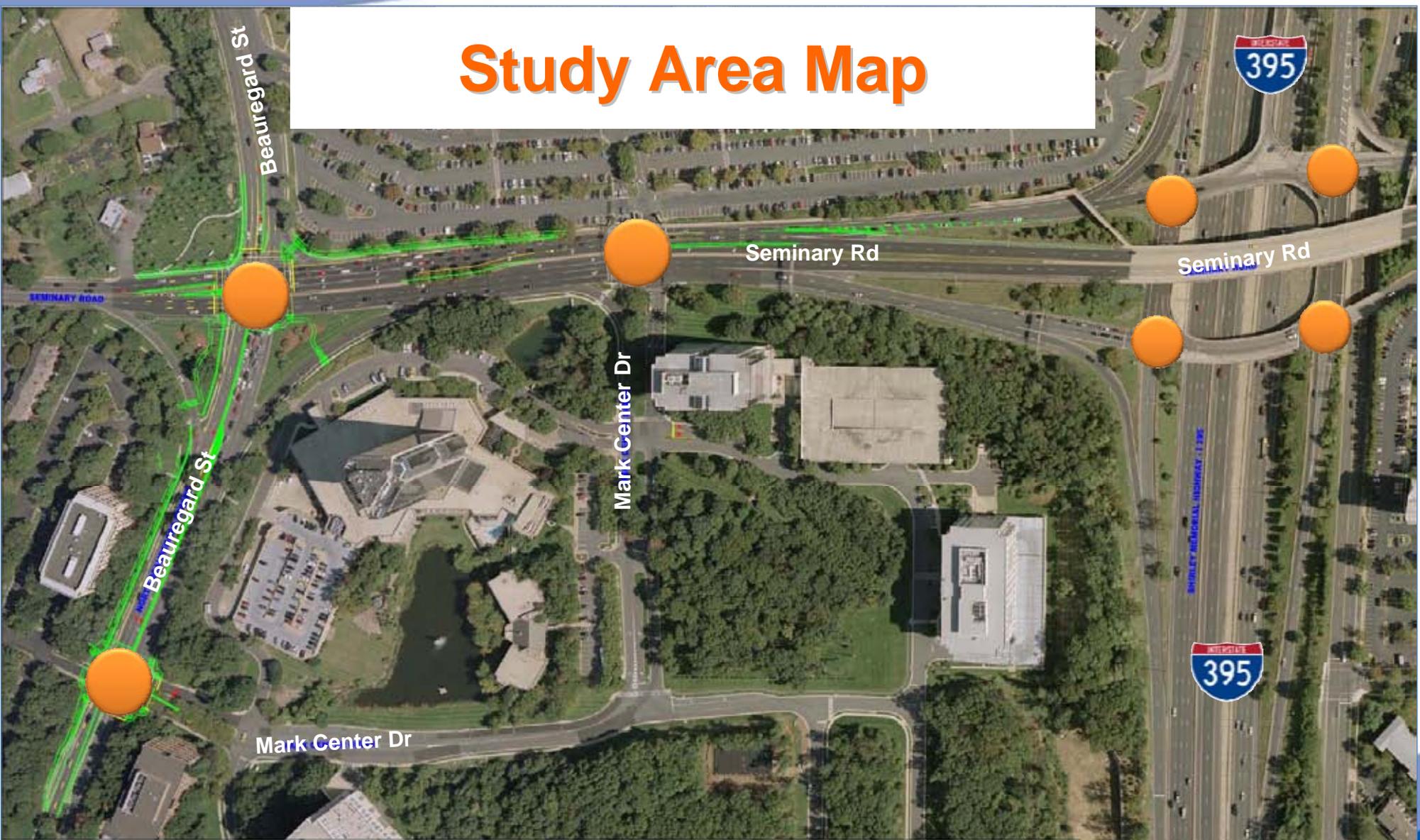


		Mark Center (BRAC 133) Access Study	
		SITE MAP	
FIGURE 20	SHEET 1 OF 1	SCALE	DATE: December 2009

Study Context

- Short / Mid-term Improvements
 - Lower cost
 - Can be implemented relatively quickly
 - Require little (mid-term) or no (short-term) right-of-way
- Study funded jointly between the City & Department of Defense
- Preliminary results being shown tonight, not recommendations
- Seeking feedback from the BRAC Advisory Committee

Study Area Map



- LEGEND**
- ASPHALT PAVEMENT WIDENING
 - CONCRETE PAVEMENT (MEDIAN/SIDEWALK)
 - AREAS CURRENTLY UNDER CONSTRUCTION

- PROP. R/W
- EX. R/W
- EX. MEDIAN REMOVAL

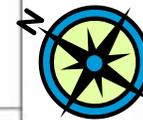


SCALE: N.T.S.

SHEET:

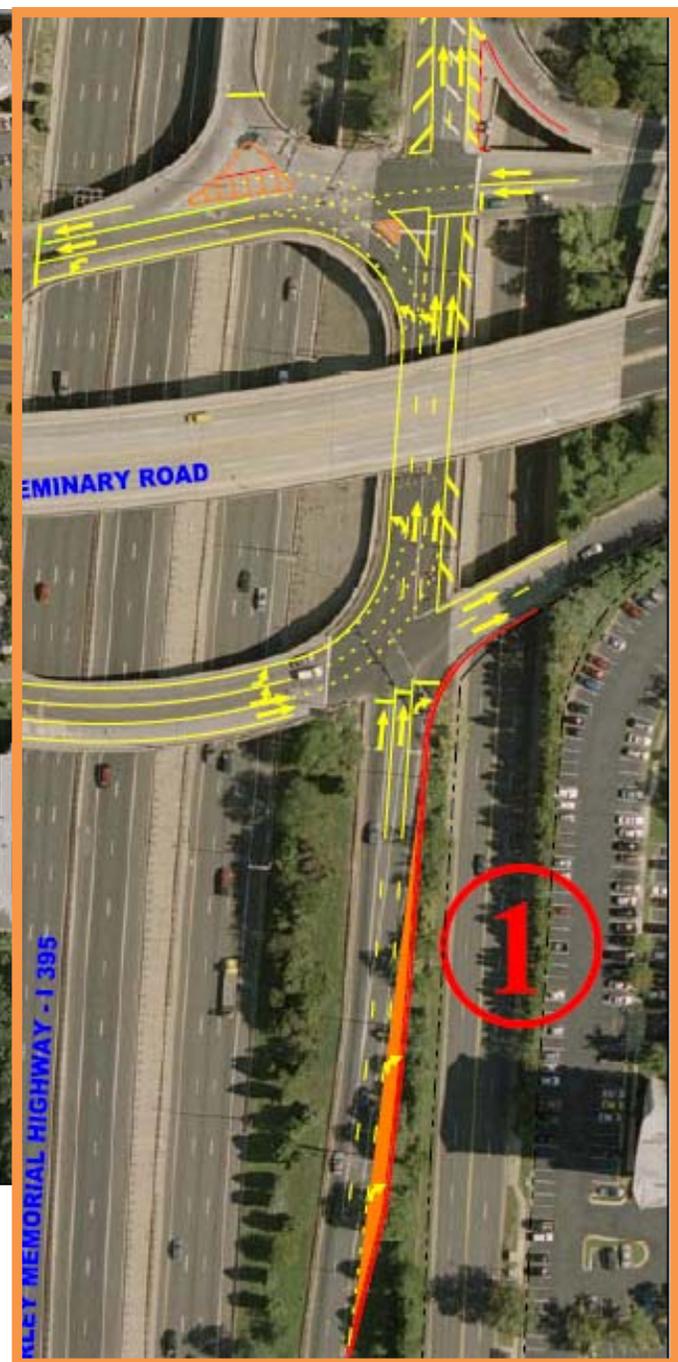
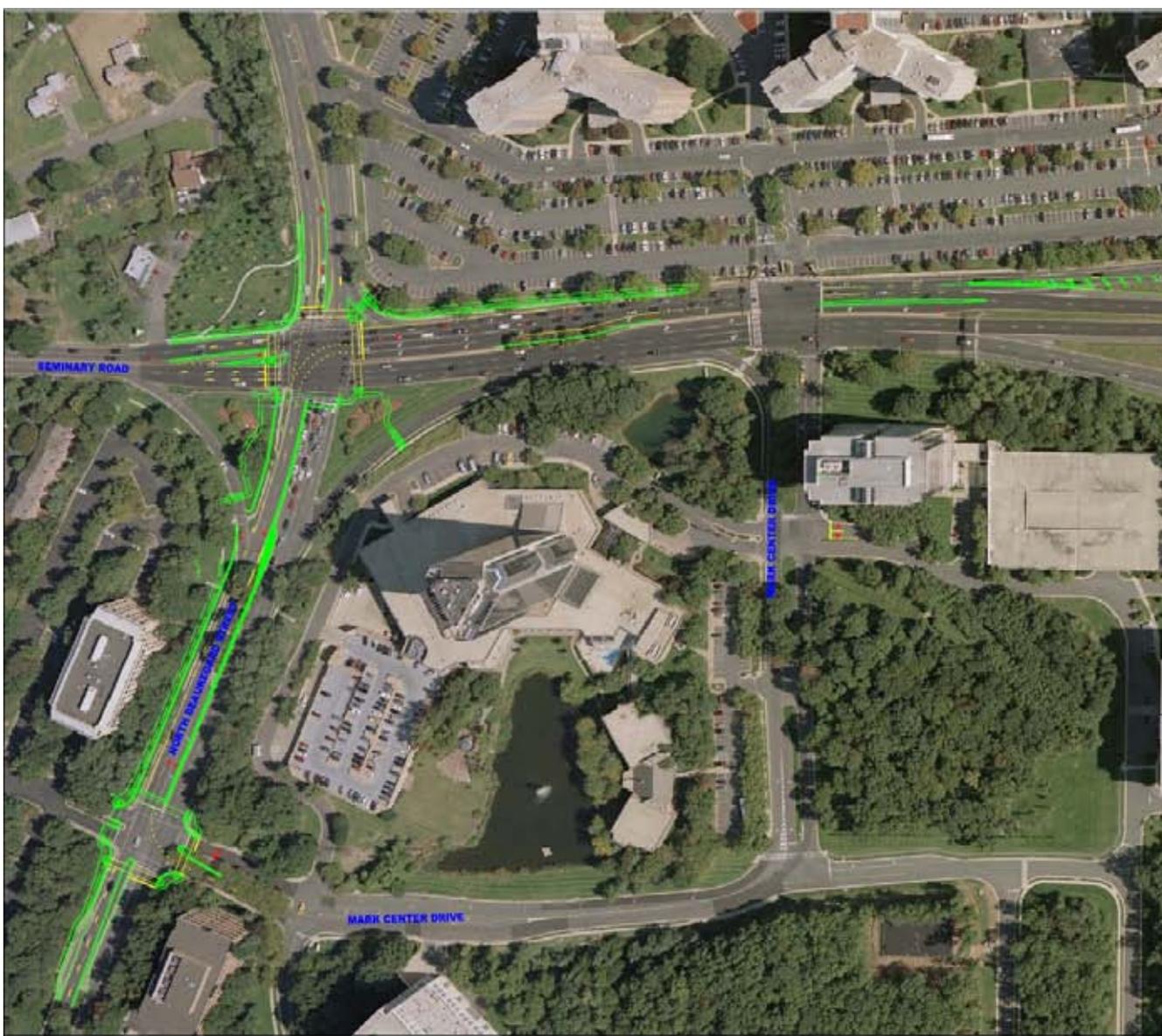
VDOT NORTHERN VIRGINIA DISTRICT
**MARK CENTER
 AREAS CURRENTLY
 UNDER CONSTRUCTION**

DATE: OCTOBER 16, 2010

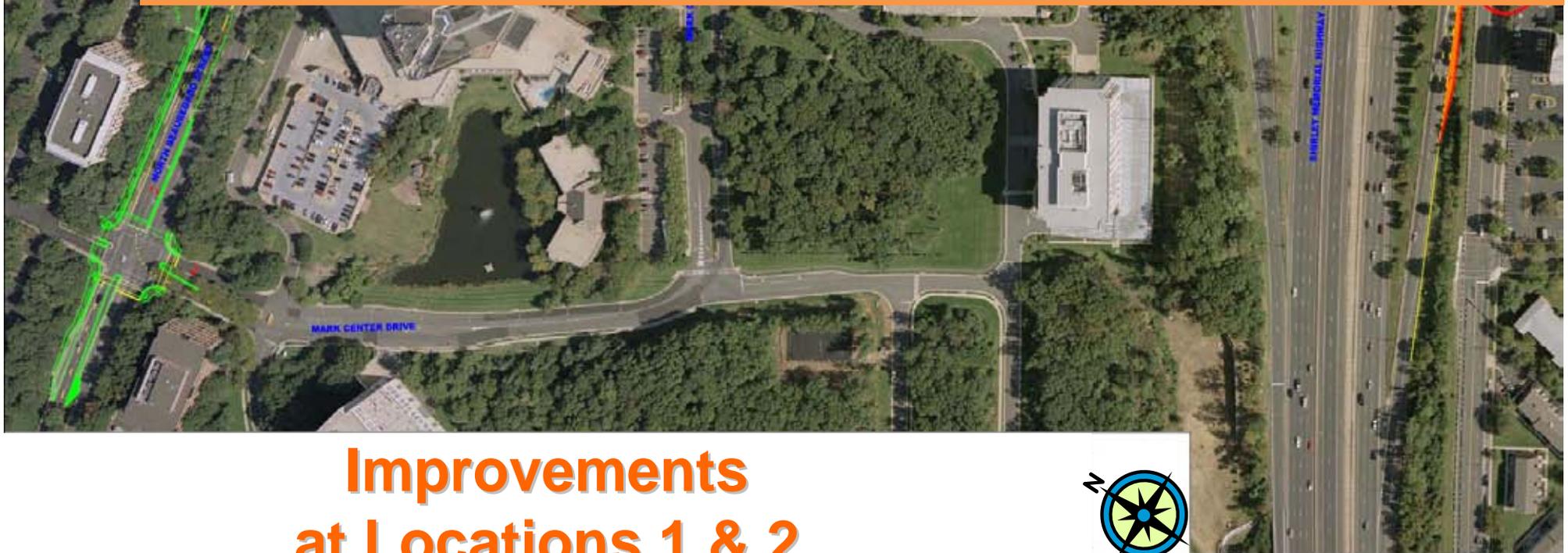


IMPROVEMENT OPTIONS

VDOT



**Improvement
at Location 1**



Improvements at Locations 1 & 2



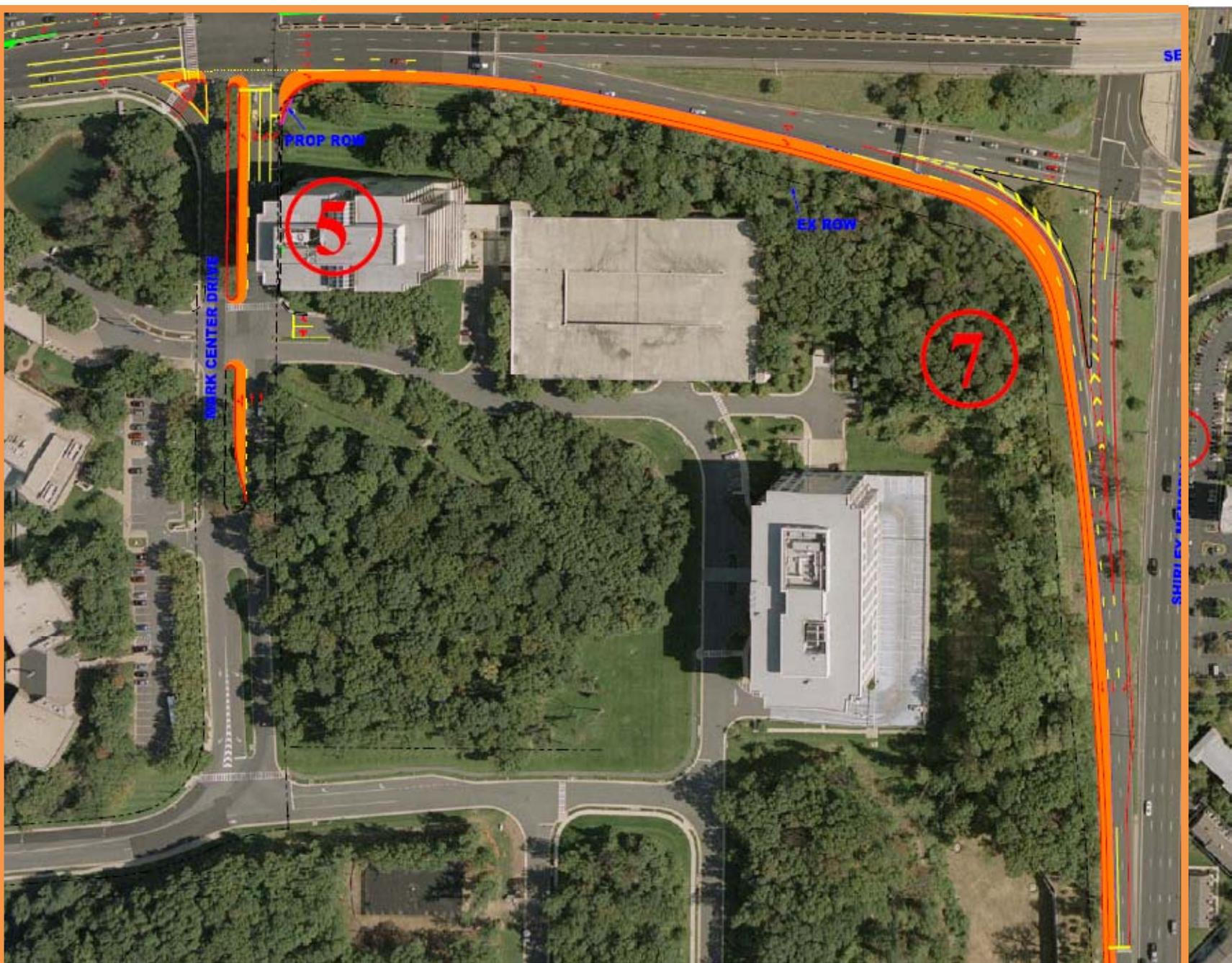
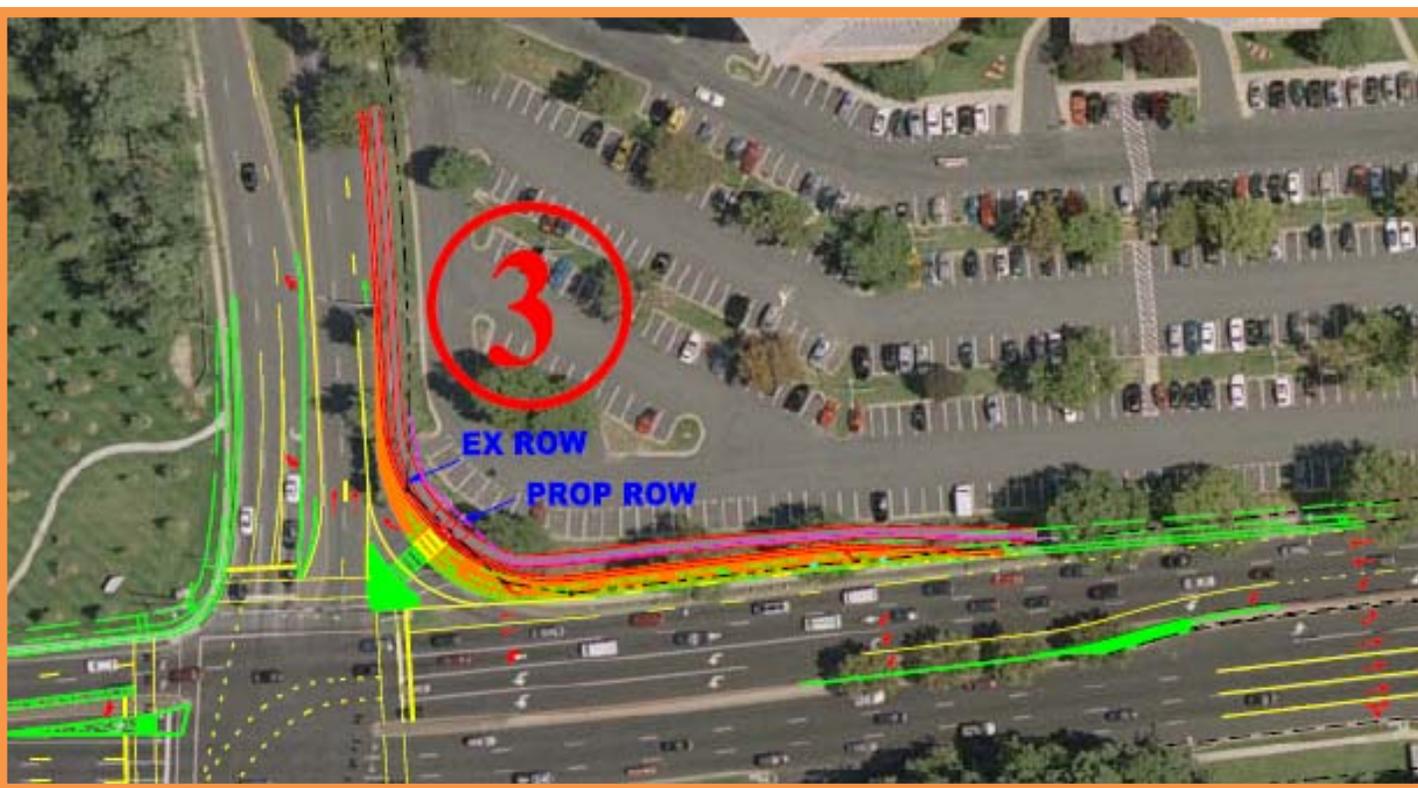
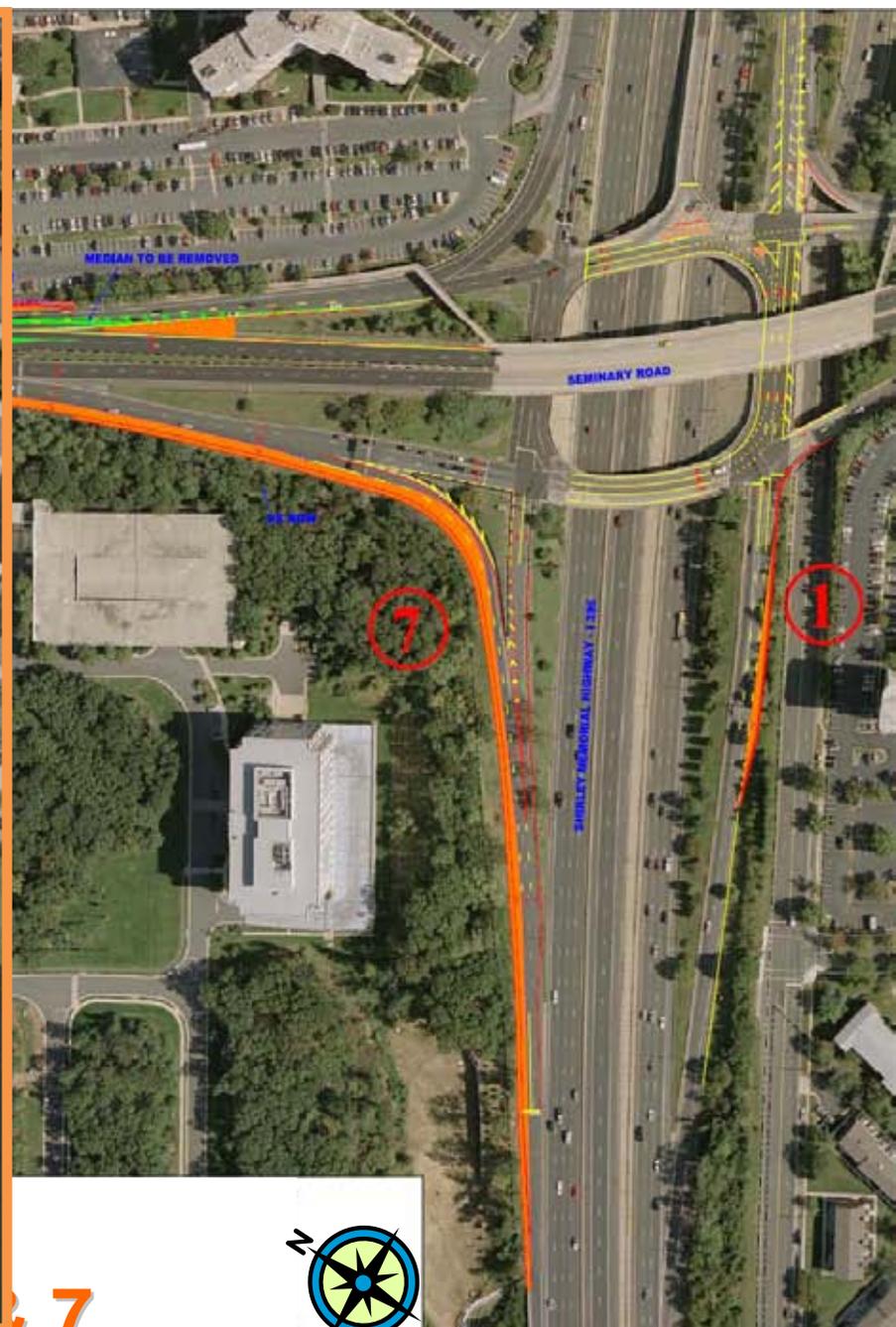
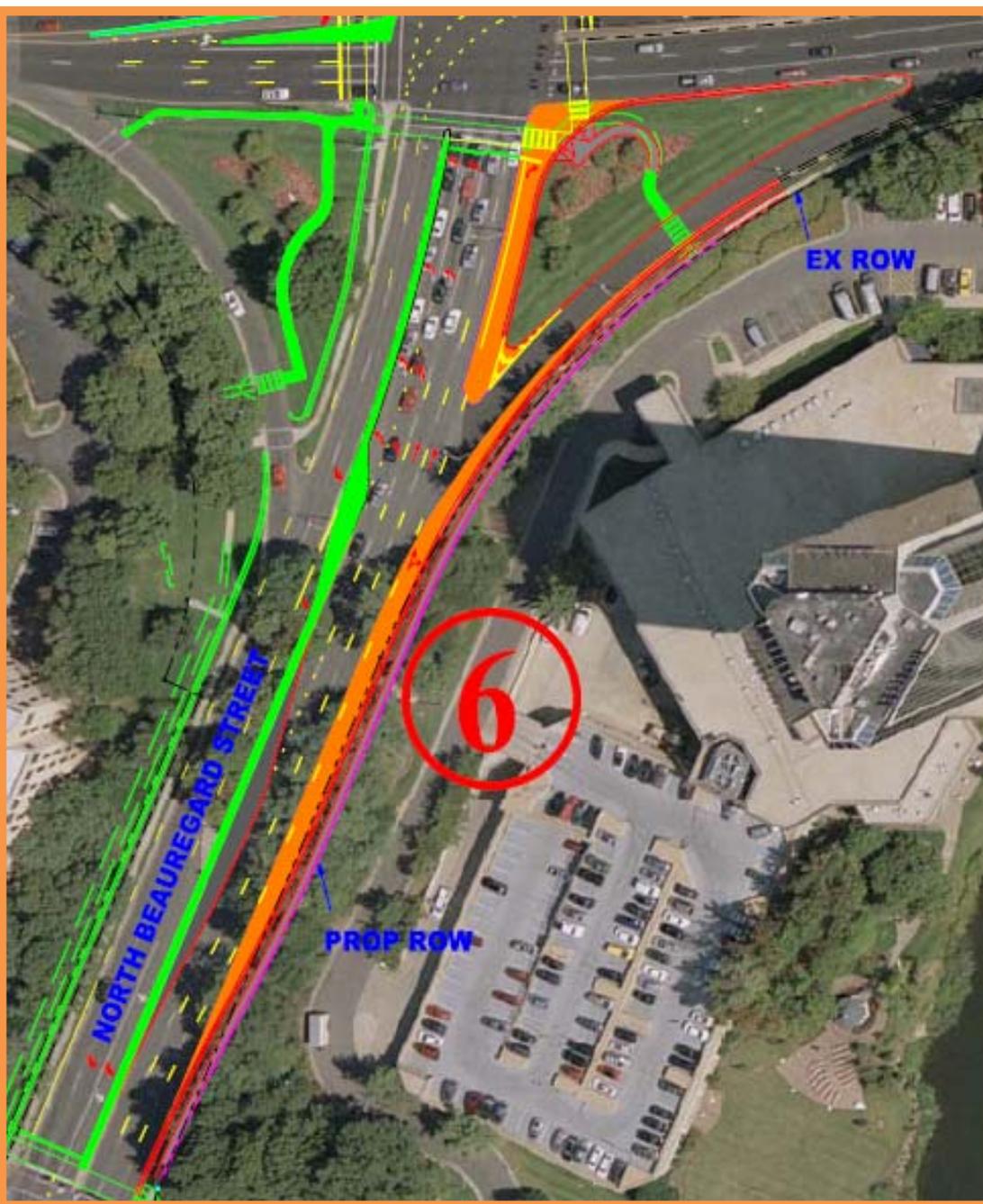


Figure 1: Project Location and Right-of-Way (ROW) Boundaries

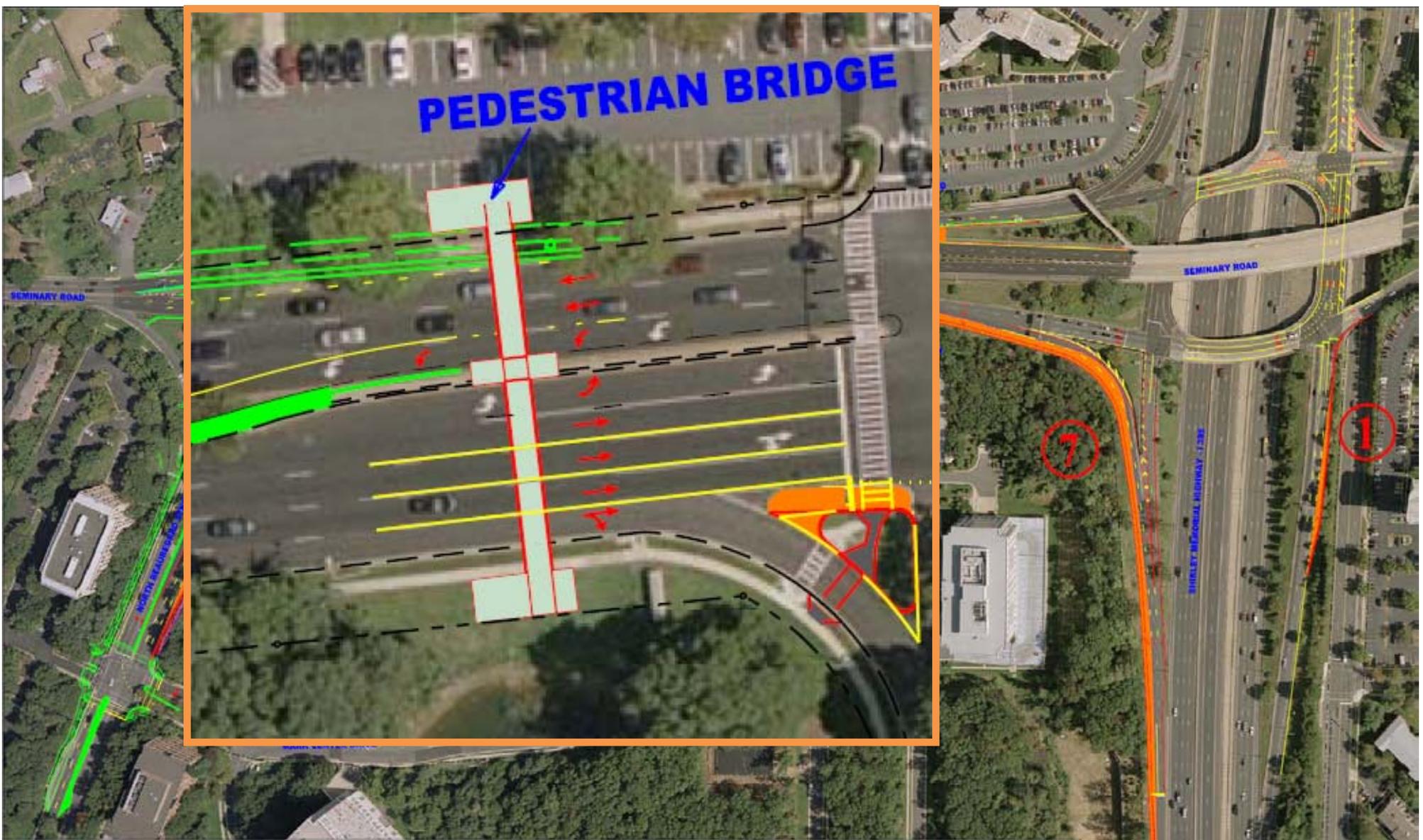


Improvements at Locations 1, 2, 3, 5 & 7





at LOCATIONS 1, 2, 3, 6, 7 & 7



**Improvements at Locations 1, 2, 3, 5, 6 & 7
with Pedestrian Bridge**



Short/Mid-Term Improvements

Short-Term Improvements

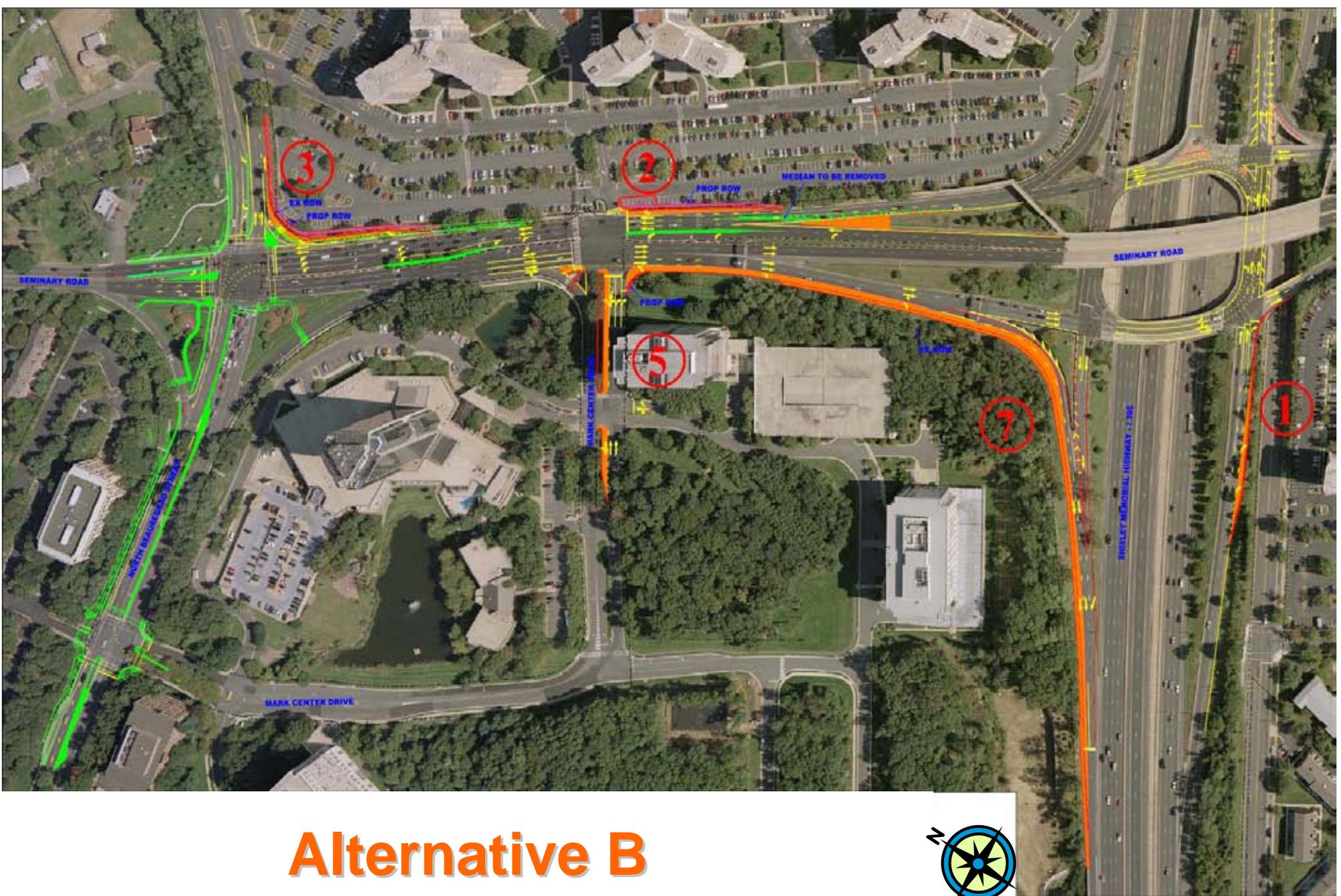
- No right-of-way acquisition anticipated
 - Option 1
 - Option 2 (partial)
 - Option 5 (partial)
 - Option 6

Mid-Term Improvements

- Require right-of-way acquisition
 - Option 2 (full)
 - Option 5 (full)
 - Option 7

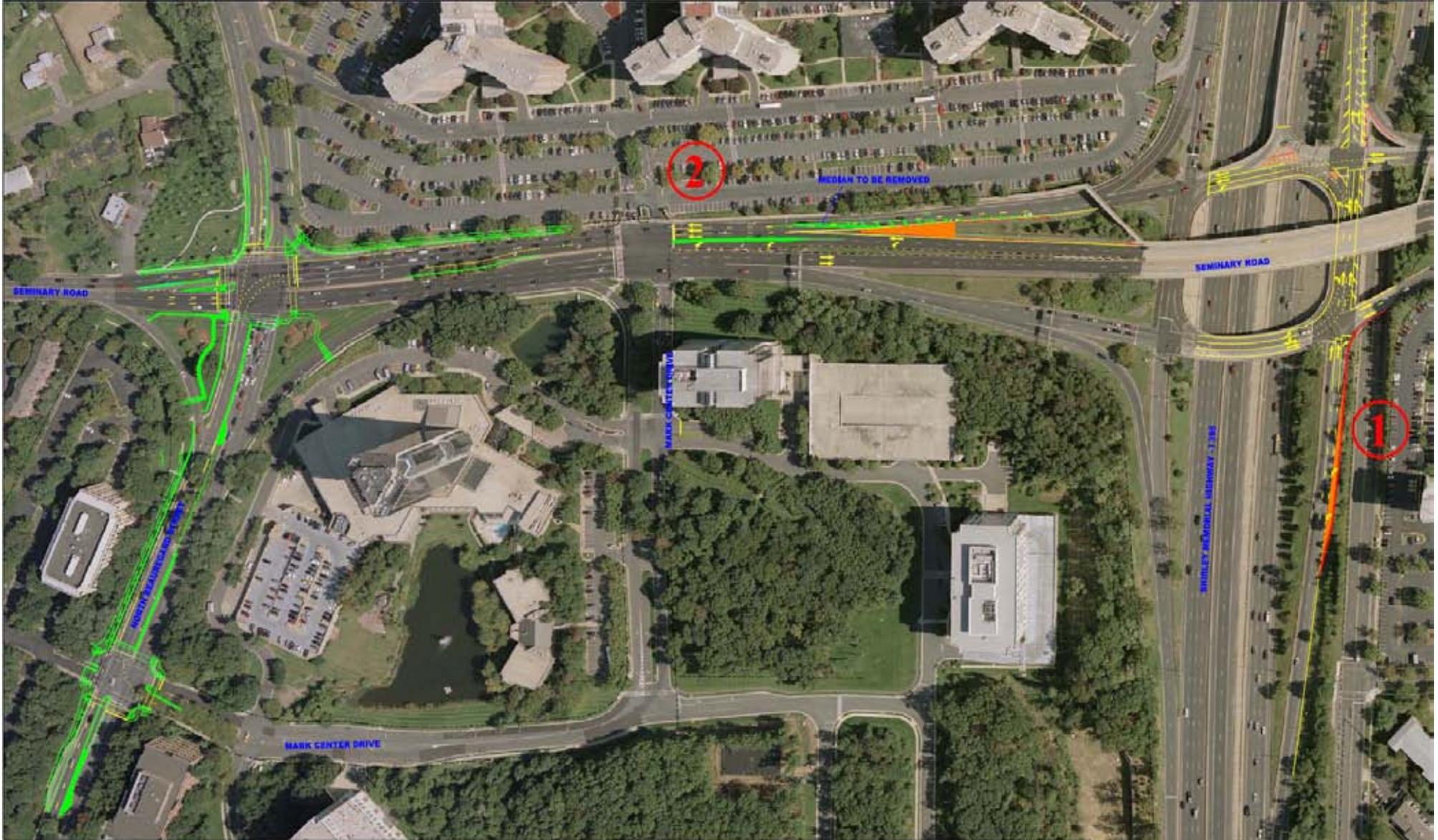
ALTERNATIVE DEVELOPMENT

VDOT



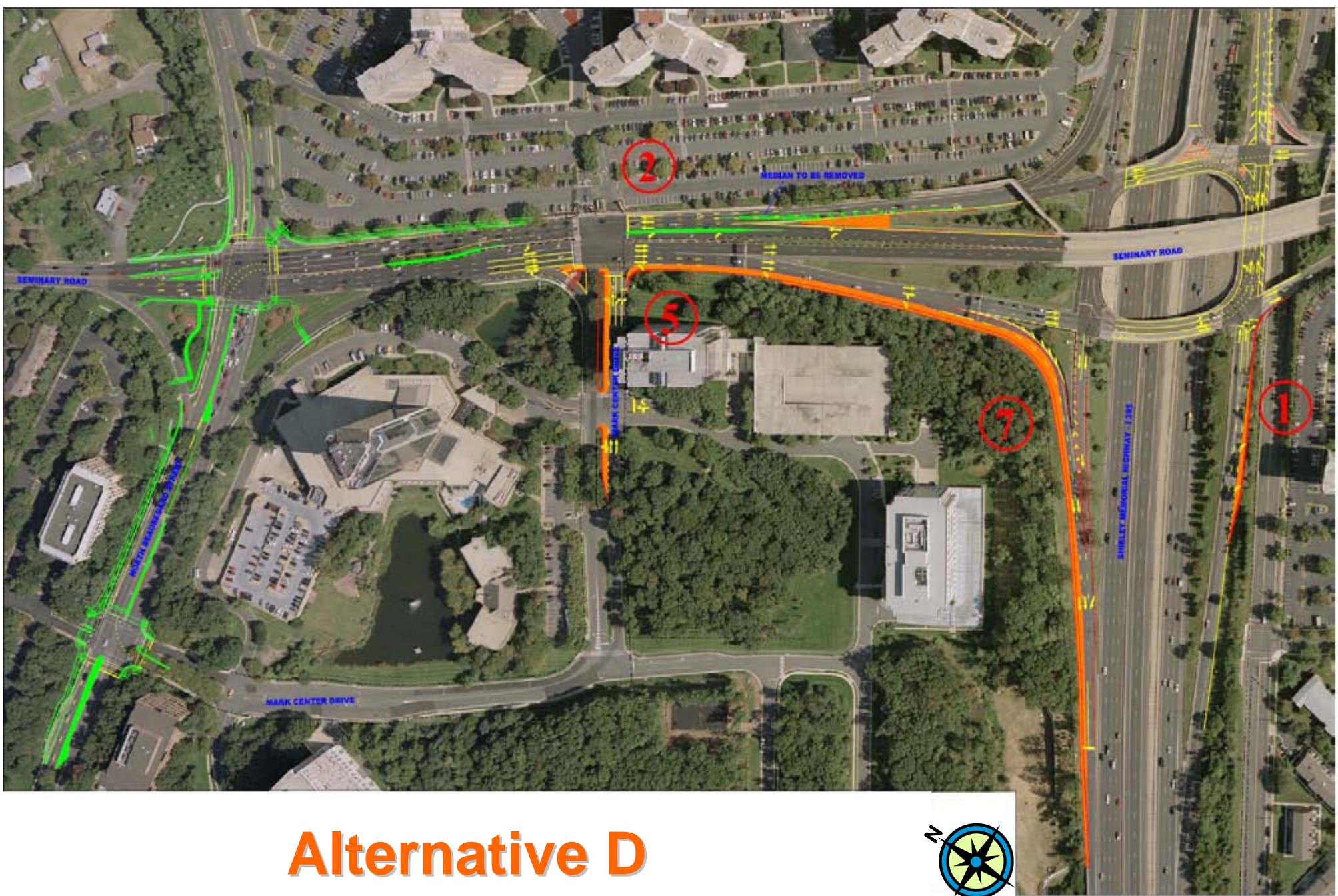
Alternative B





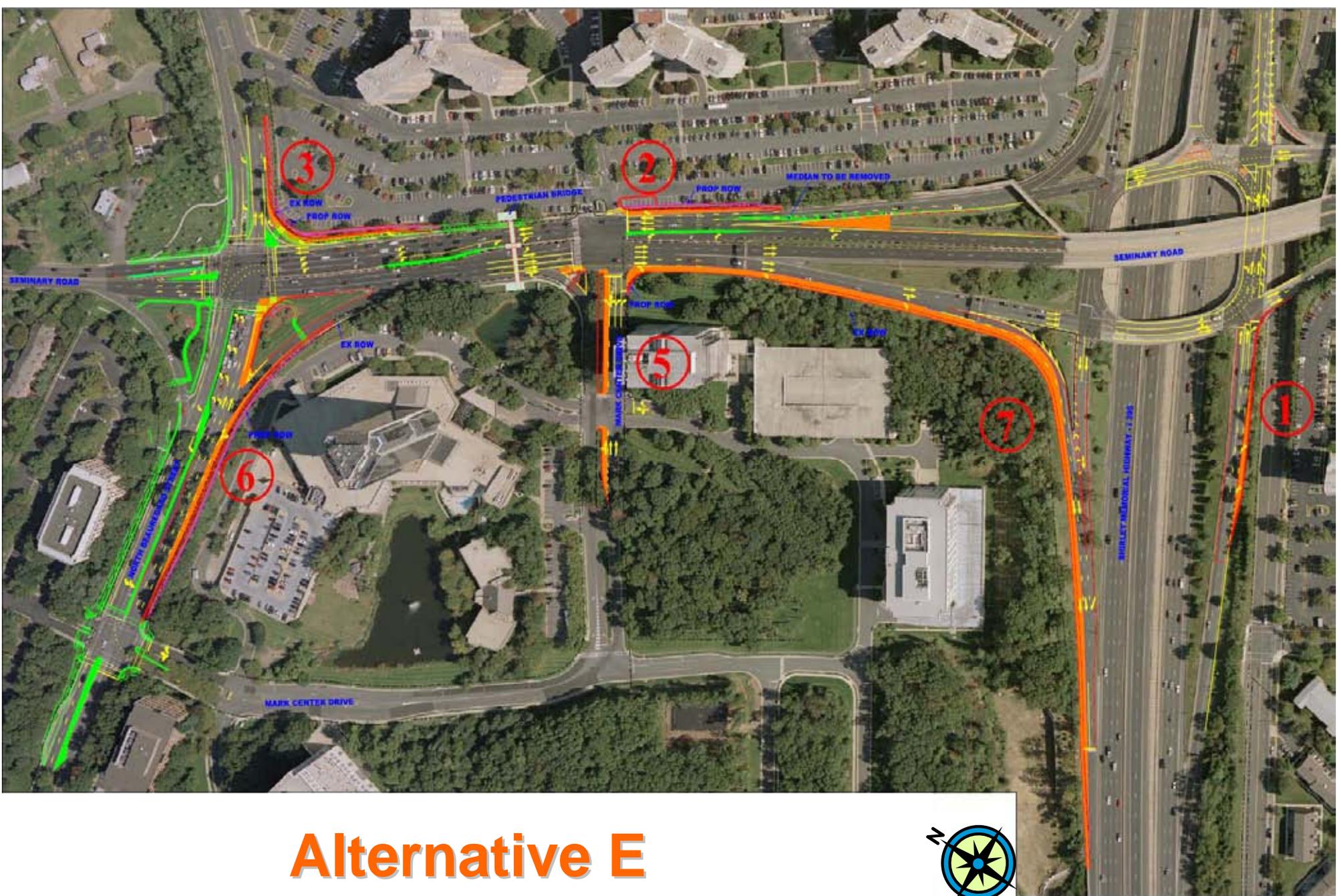
Alternative C





Alternative D





Alternative E



AM PEAK HOUR TRAFFIC OPERATIONAL CONDITIONS

VDOT



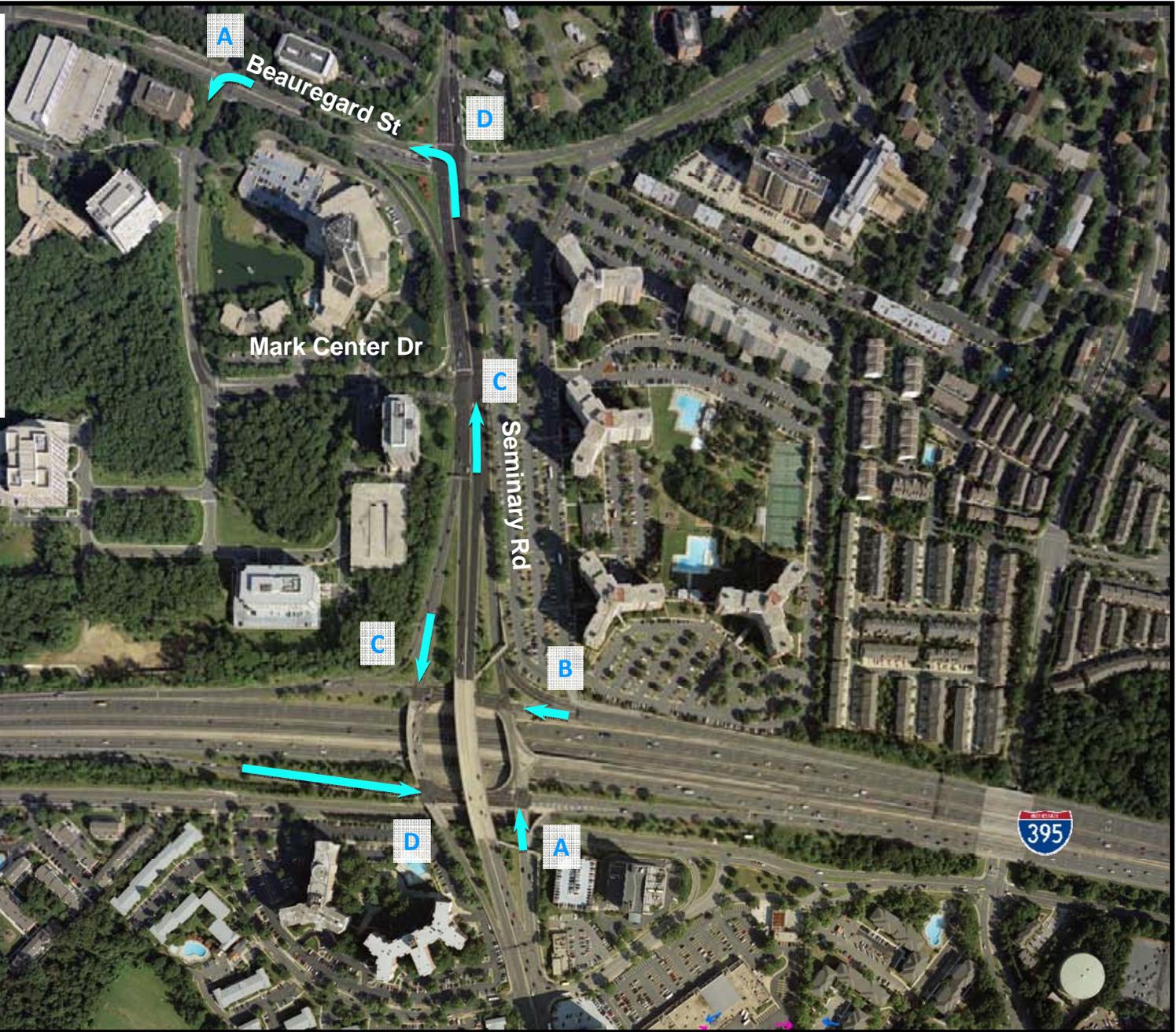
VIRGINIA
MEGAPROJECTS

Average Queues and Level of Service

AM Peak Hour



2009 Condition



2015 Baseline Conditions

- 6400 new employees
- Employee distribution from latest Army TMP (published in July 2010)
- Regional Constrained Long Range Plans (CLRP)
 - HOT w/o Bus-Only Ramp and Rotary Improvements
- Proffered improvements under construction
- Pedestrian signal phases included at all local intersections

Average Queues and Level of Service

AM Peak Hour



2015 Baseline

BRAC 133
Mark Center



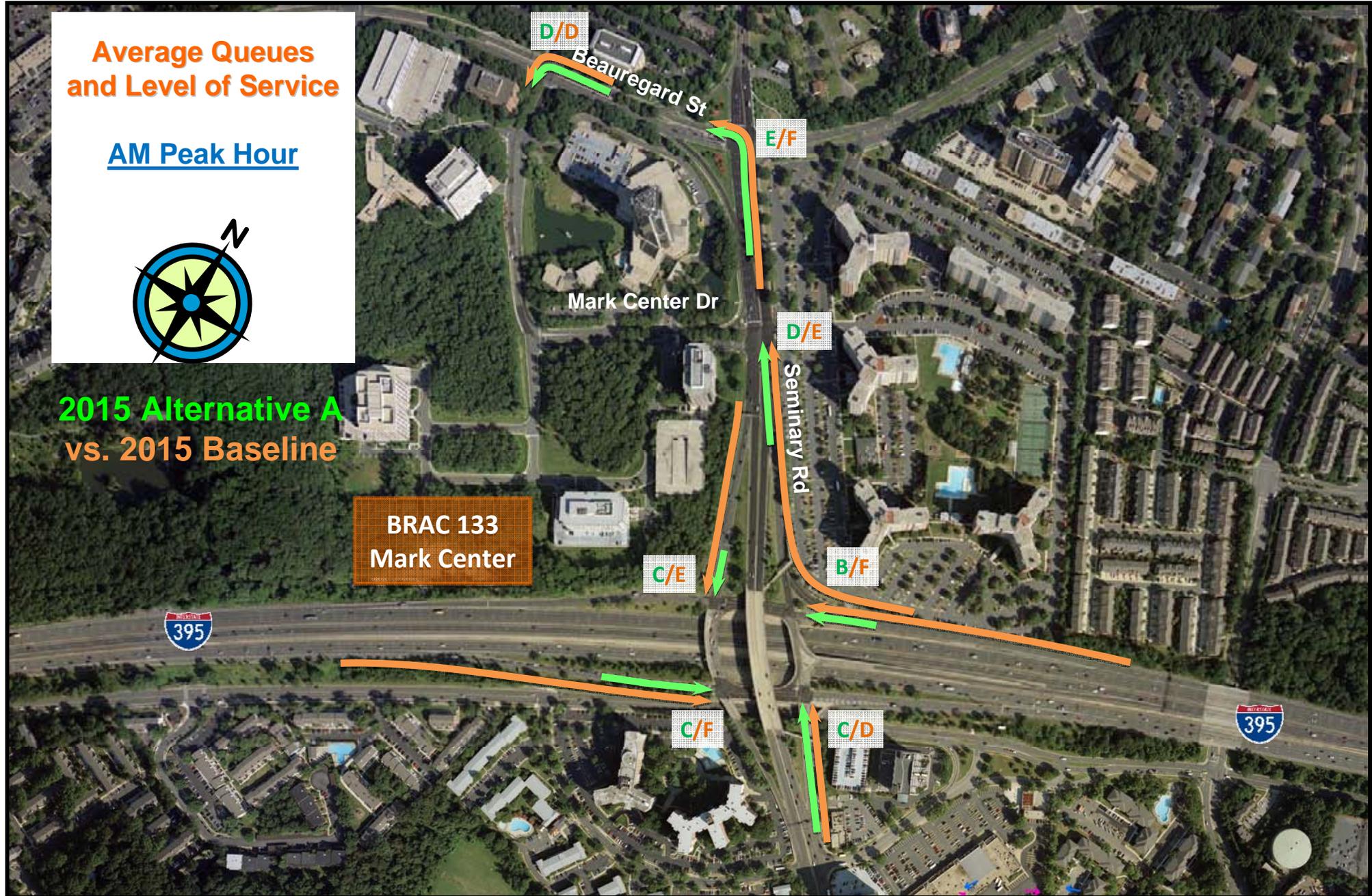
Average Queues and Level of Service

AM Peak Hour



2015 Alternative A
vs. 2015 Baseline

BRAC 133
Mark Center



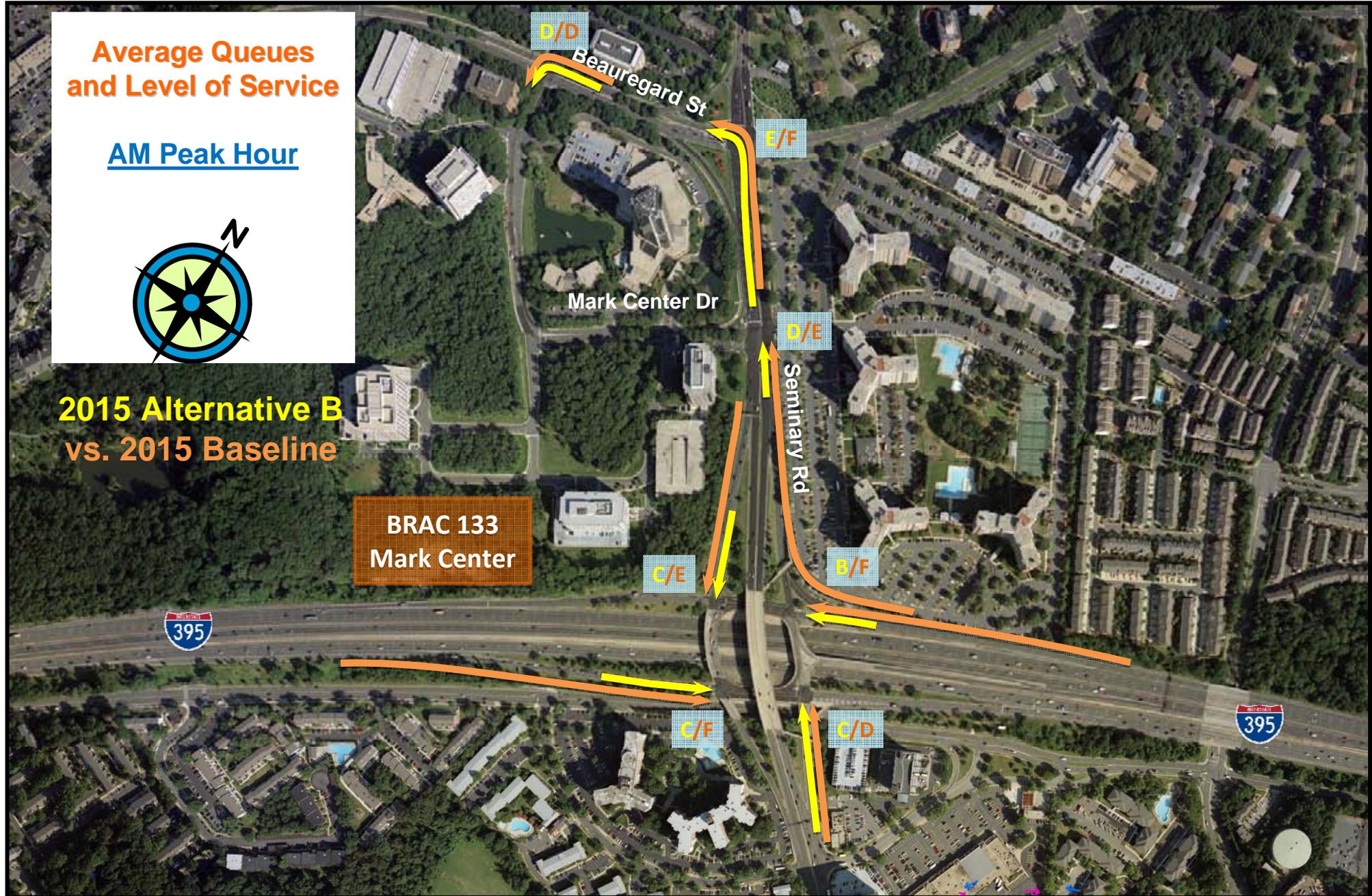
Average Queues and Level of Service

AM Peak Hour



2015 Alternative B
vs. 2015 Baseline

BRAC 133
Mark Center



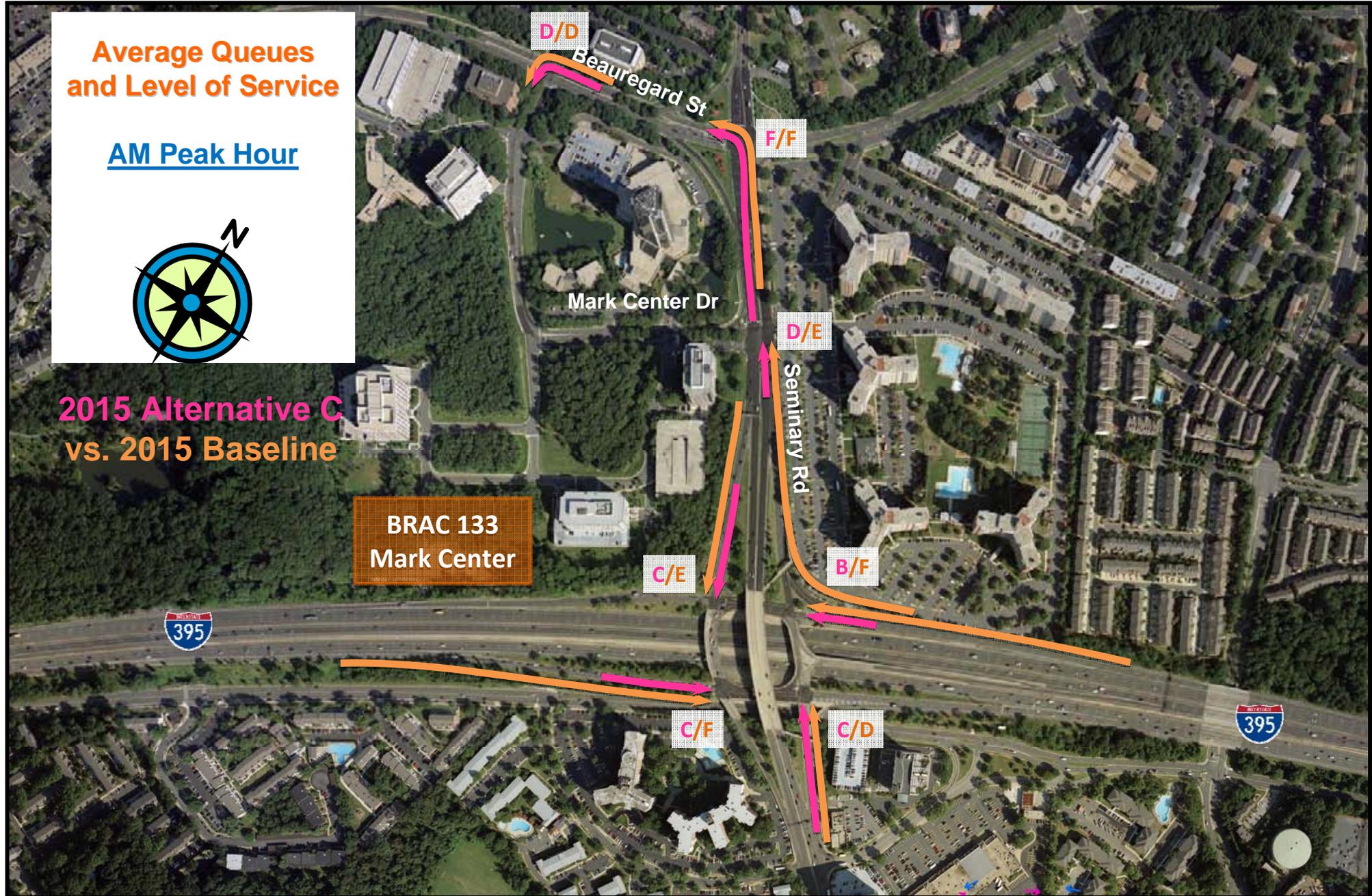
Average Queues and Level of Service

AM Peak Hour



2015 Alternative C
vs. 2015 Baseline

BRAC 133
Mark Center



Average Queues and Level of Service

AM Peak Hour



2015 Alternative D
vs. 2015 Baseline

BRAC 133
Mark Center



Average Queues and Level of Service

AM Peak Hour

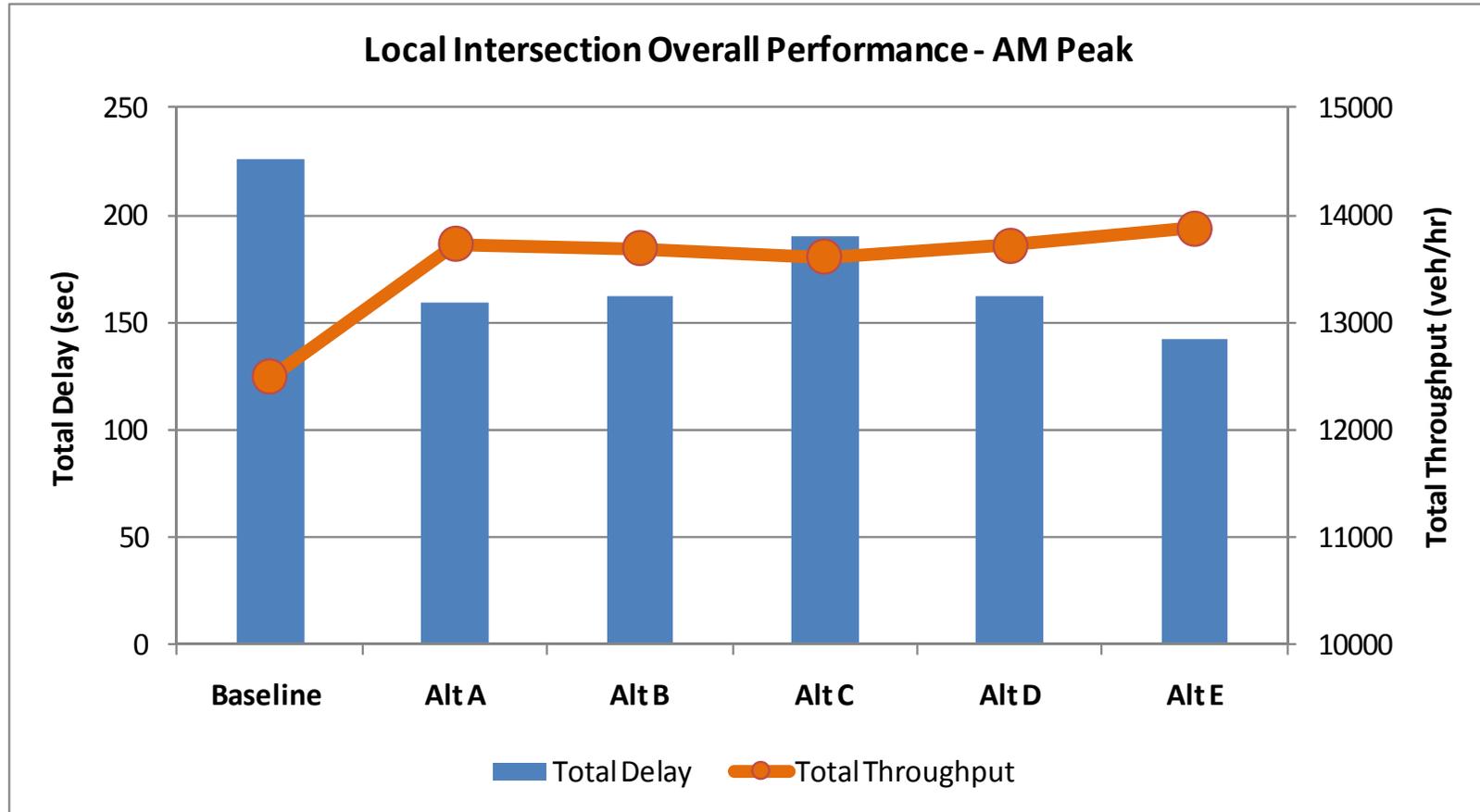


2015 Alternative E
vs. 2015 Baseline

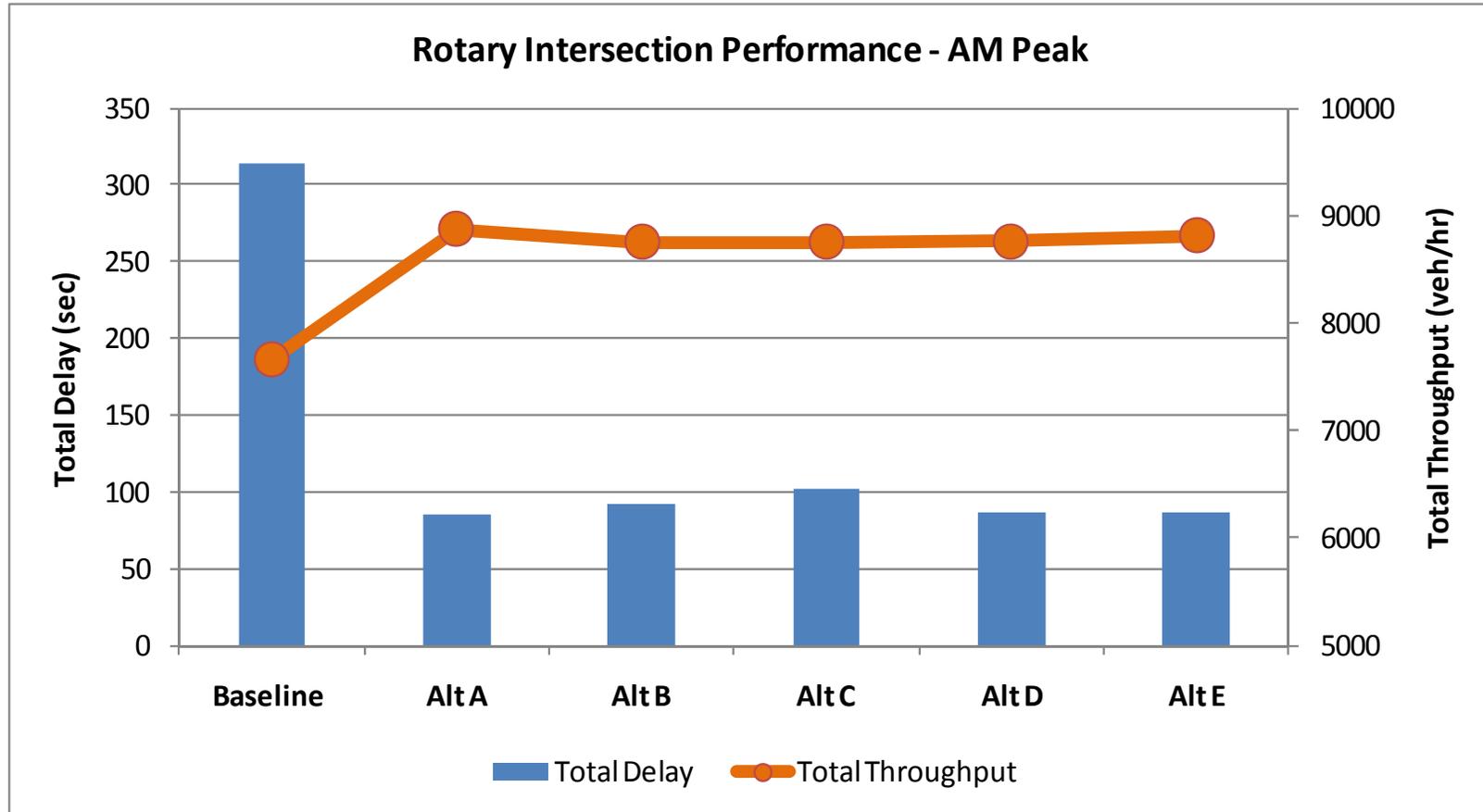
BRAC 133
Mark Center



Local Intersection Overall Performance – AM Peak



Rotary Intersection Overall Performance – AM Peak



PM PEAK HOUR TRAFFIC OPERATIONAL CONDITIONS

VDOT



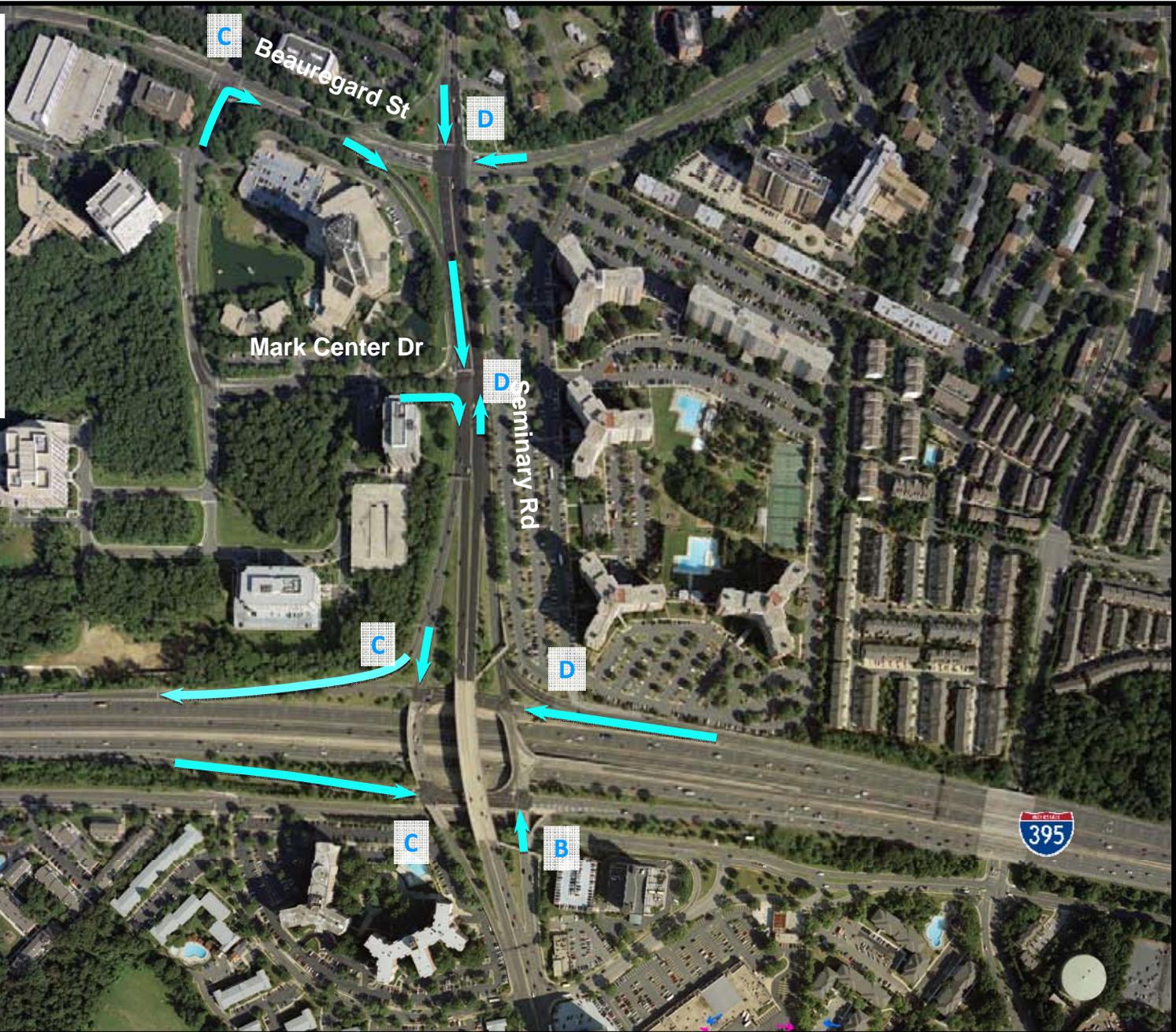
VIRGINIA
MEGAPROJECTS

Average Queues and Level of Service

PM Peak Hour



2009 Condition



Average Queues and Level of Service

PM Peak Hour



2015 Baseline

BRAC 133
Mark Center



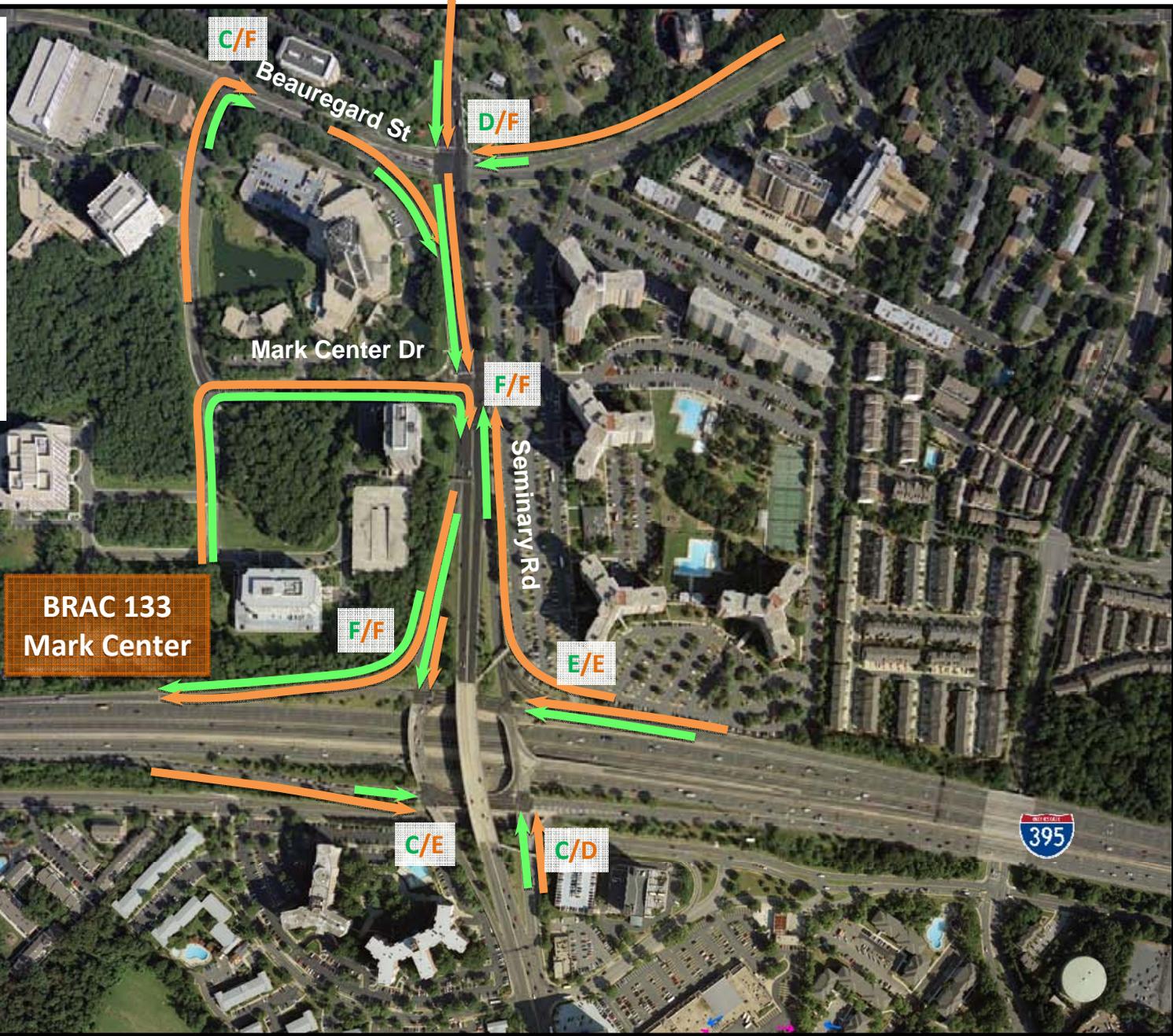
Average Queues and Level of Service

PM Peak Hour



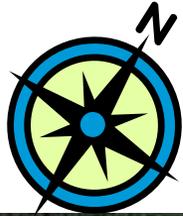
2015 Alternative A
vs. 2015 Baseline

BRAC 133
Mark Center



Average Queues and Level of Service

PM Peak Hour



2015 Alternative B vs. 2015 Baseline

BRAC 133
Mark Center



Average Queues and Level of Service

PM Peak Hour



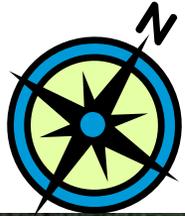
2015 Alternative C
vs. 2015 Baseline

BRAC 133
Mark Center



Average Queues and Level of Service

PM Peak Hour



2015 Alternative D
vs. 2015 Baseline

BRAC 133
Mark Center



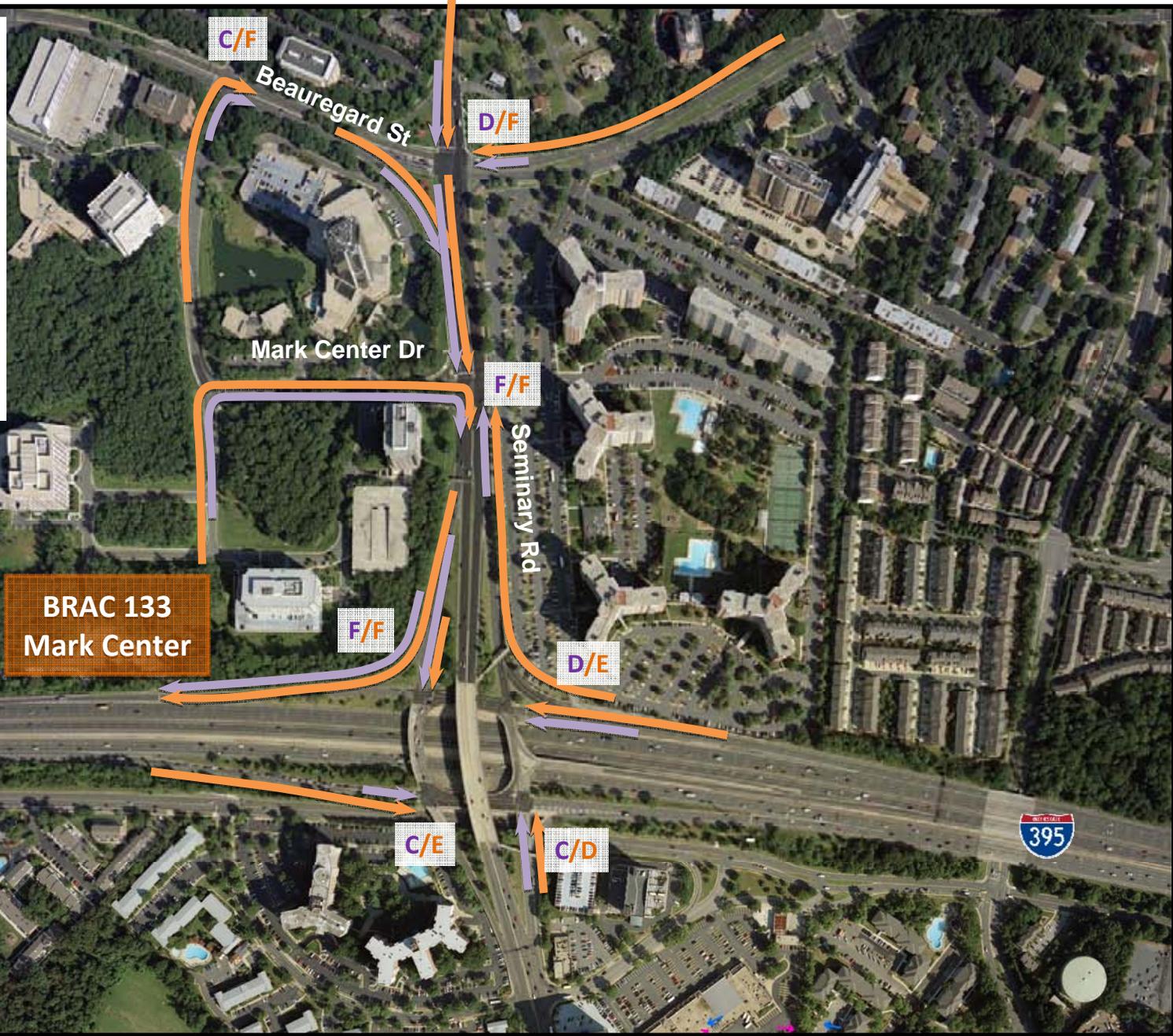
Average Queues and Level of Service

PM Peak Hour

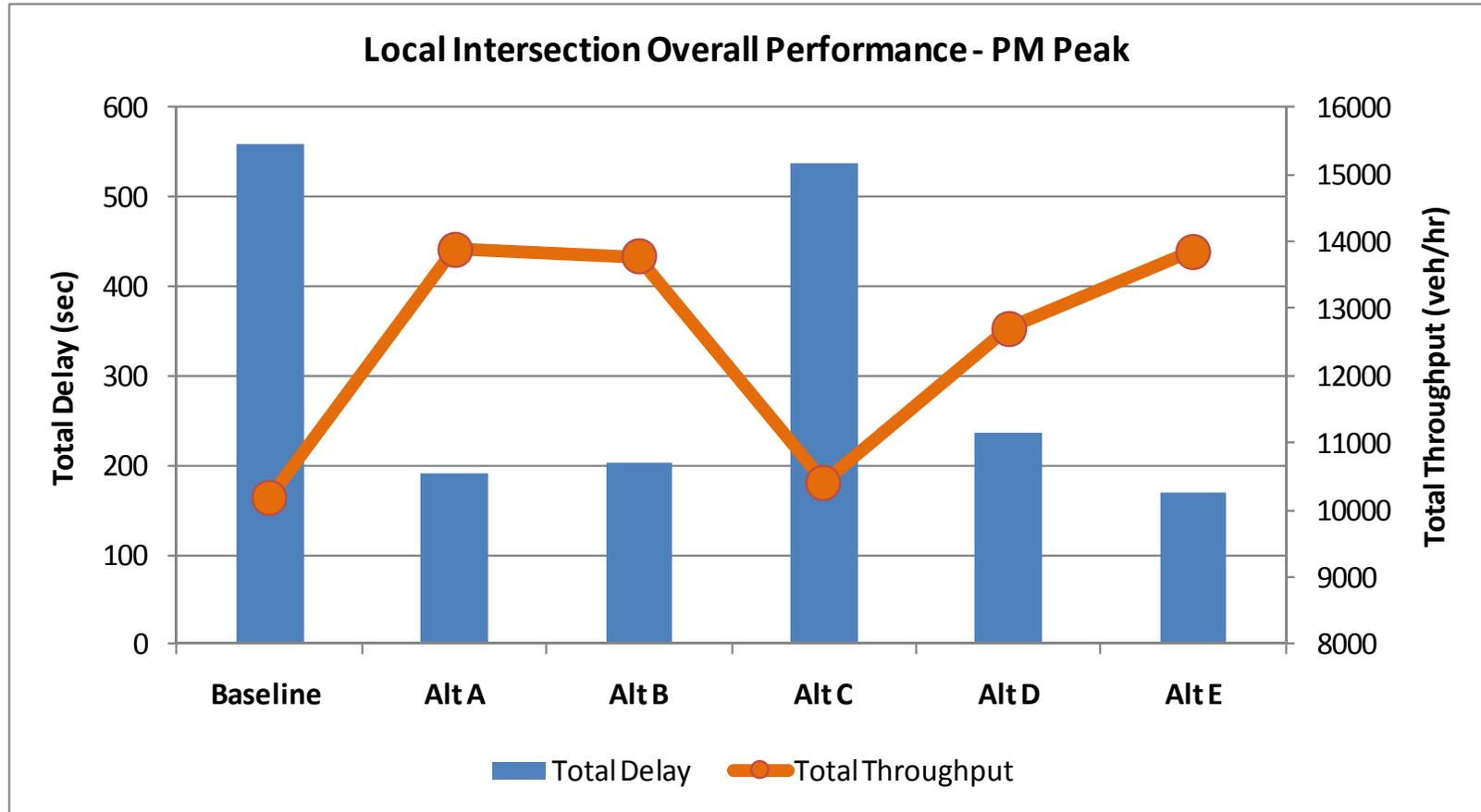


2015 Alternative E
vs. 2015 Baseline

BRAC 133
Mark Center

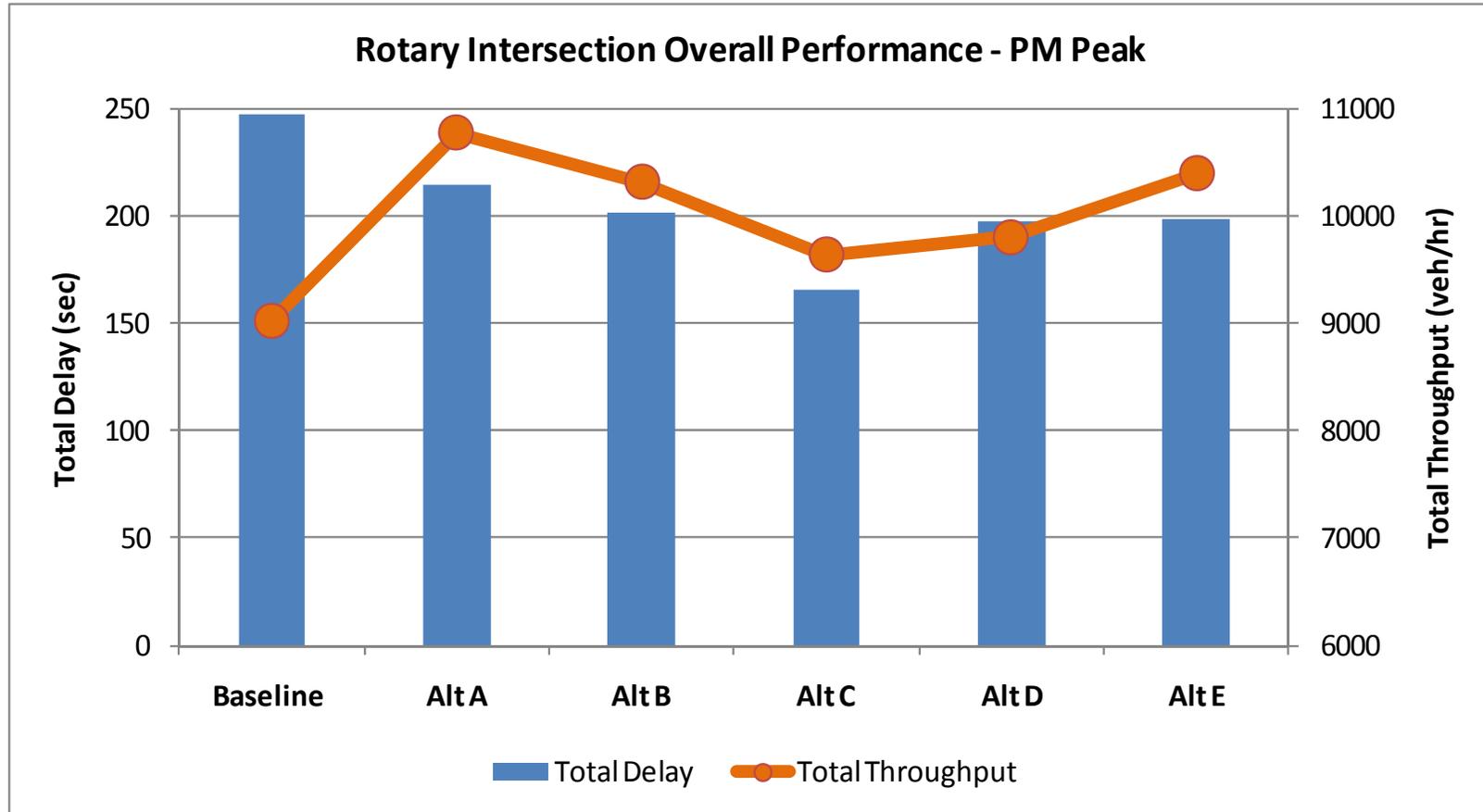


Local Intersection Overall Performance – PM Peak



VDOT

Rotary Intersection Overall Performance – PM Peak



SUMMARY OF ALTERNATIVES

Alternative A

Pros

- The second best overall improvements in traffic operations next to Alternative E
- Significantly reduces queue lengths and improves LOS at most intersections

Cons

- Requires right-of-way acquisition
- Intersection of Seminary Rd. / Mark Center Dr. still LOS F in PM
- Doesn't resolve the queuing issue out of the Mark Center in PM

Alternative B

Pros

- The third best overall improvements in traffic operations following E and A
- Significantly reduces queue lengths at most intersections

Cons

- Requires right-of-way acquisition
- In AM, improvements on Seminary Rd WB queues are limited
- Intersection of Seminary Rd. / Mark Center Dr. still LOS F in PM
- Doesn't resolve the queuing issue out of the Mark Center in PM

Alternative C

Pros

- Significantly reduces queue lengths and improves LOS in the study area in AM
- No right-of-way acquisition anticipated

Cons

- No significant improvements in the study area in PM
- Severe queue spilled back from I-395 SB on-ramp in PM
- Significant queues and delays on Seminary Rd EB in PM
- Doesn't resolve the queuing issue out of the Mark Center in PM

Alternative D

Pros

- Good overall improvements in traffic operations through the study area (similar to Alt B)
- Significantly reduces queue lengths at most intersections
- No right-of-way acquisition anticipated

Cons

- In AM, limited improvements on Seminary Rd WB at Beauregard St intersection
- In PM, intersection of Seminary Rd/Mark Center Dr still at LOS F
- The dual right turn lanes on Mark Center Dr. significantly reduce the throughput to I-395
- Doesn't resolve the queuing issue out of the Mark Center in PM

Alternative E

Pros

- Best overall traffic operational performance
- Significantly reduces queue lengths at most intersections
- Provides safer accommodation of pedestrians crossing Seminary Rd

Cons

- Requires right-of-way acquisition
- Would require the construction of pedestrian overpass
- Intersection of Seminary Rd/Mark Center Dr still LOS F in PM
- Doesn't resolve the queuing issue out of the Mark Center in PM

Evaluation Factors

- Travel Delay
- Traffic Levels of Service (LOS)
- Traffic throughputs
- Transit and pedestrian movements
- Right-of-way requirements
- Anticipated cost
- Utility impacts
- Implementation Schedule
- Input from the BRAC Advisory Committee and others
- VDOT and FHWA approvals

Next Steps

- Consider comments received tonight
- Evaluation of alternatives
- More detailed documentation of alternatives
- Further discussions with City of Alexandria, VDOT, FHWA, and DoD
- Final recommendation will be presented to the BRAC Advisory Committee
- Study results documented in report format
- Develop engineering design plans
- Implement recommendations



Q & A

VDOT