

Columbia Pike West End Construction Update

County Line to Four Mile Run

Columbia Pike Improvements

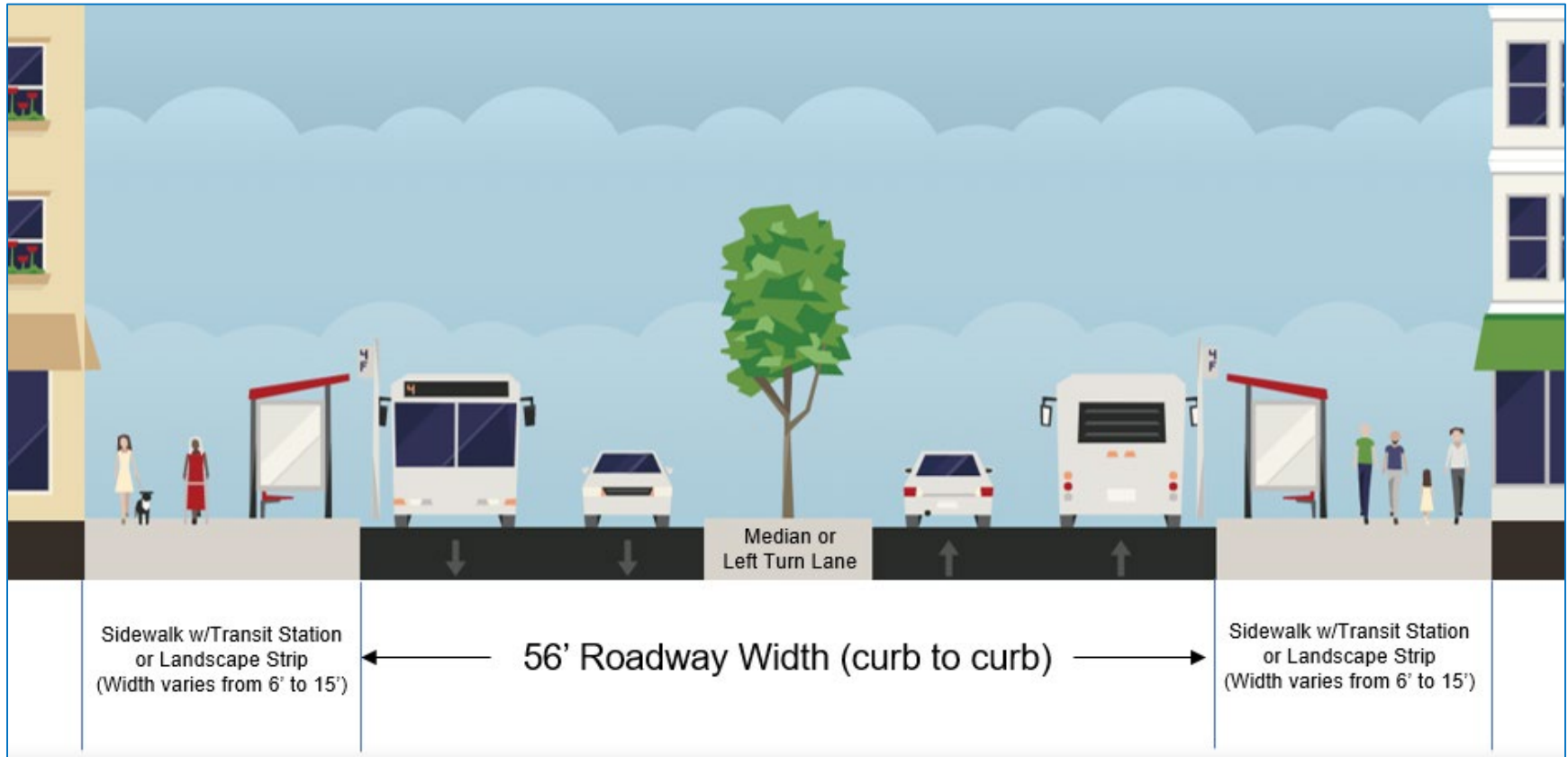
- **Vision:** Providing safe, attractive and comfortable access and travel for people who walk, bike, ride transit and drive
- **West end overview** (Segments H&I, County Line to Four Mile Run):
 - Approximately 3,000 feet long
 - Significant utility undergrounding and wet utility replacement
 - Full street reconstruction with new asphalt, wider sidewalks and landscaping
 - Realigning South Jefferson Street to shorten crossings and eliminate slip lanes



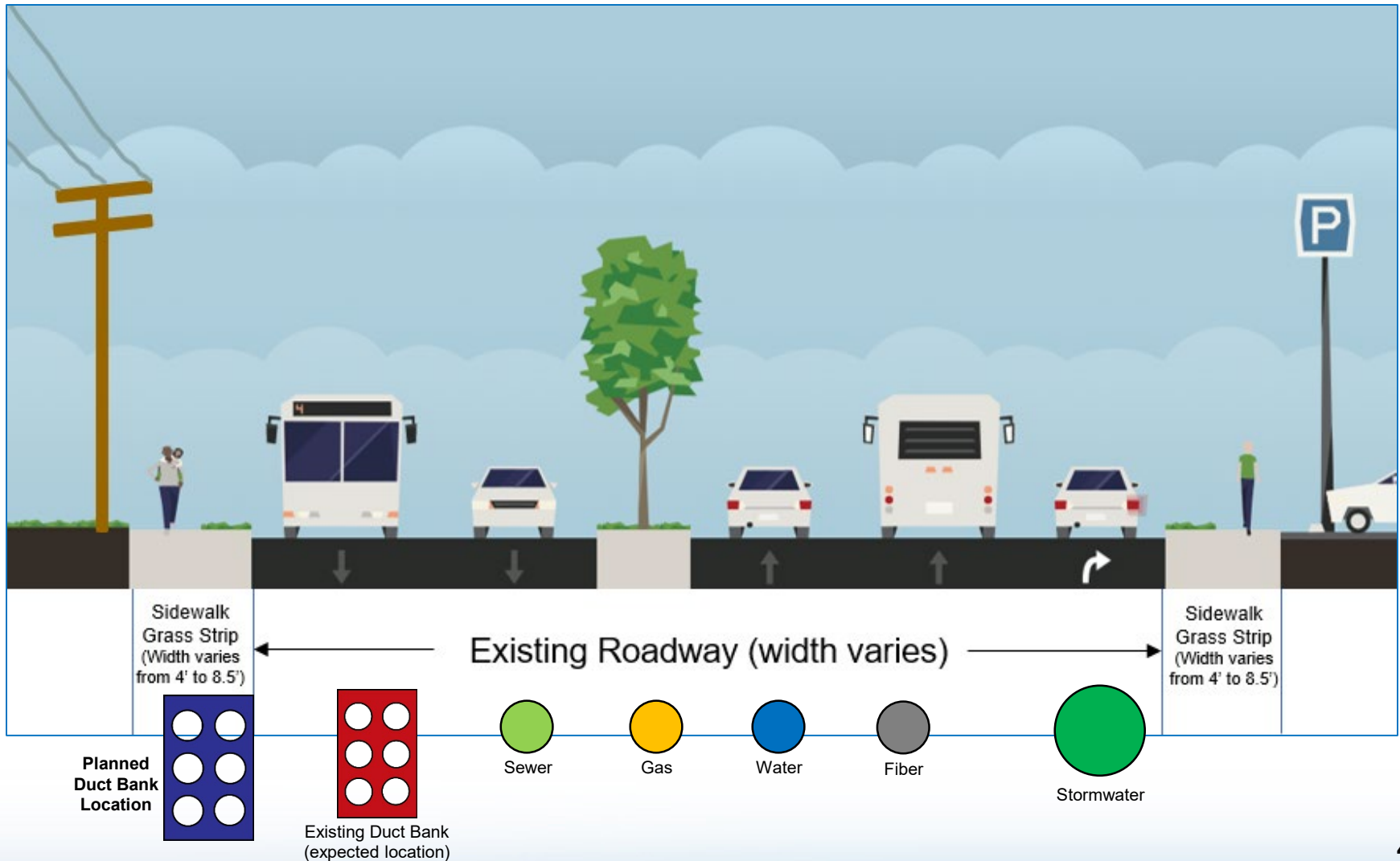
Construction timeline:

- Fort Myer started work in February 2018
- Expected to last approximately three years

Planned Roadway Cross-Section

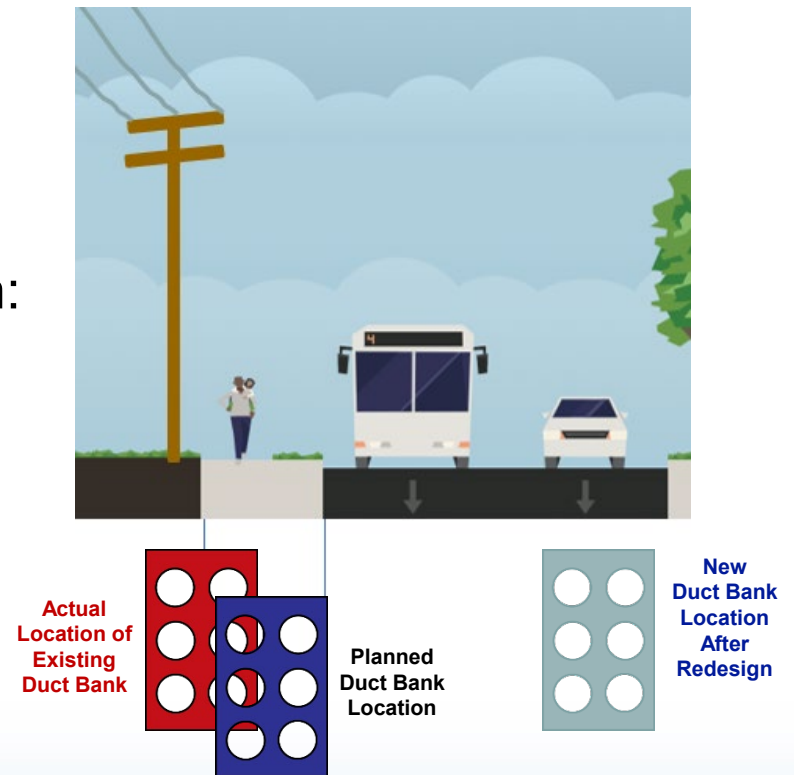


Existing Conditions

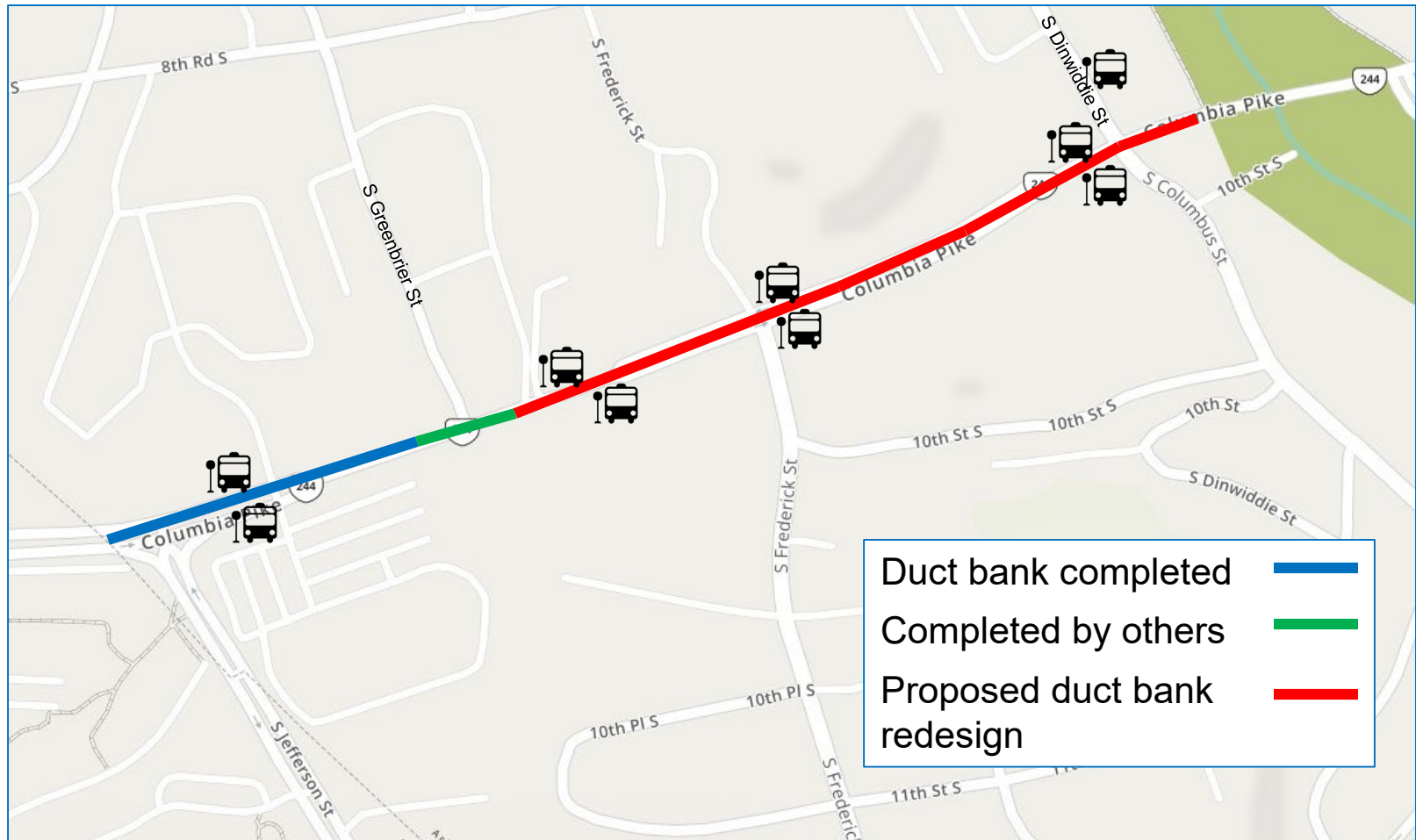


What We Found During Construction

- Expected an existing duct bank under the travel lanes, but its actual location is under the sidewalk where a new duct bank was planned
 - Efforts were made before construction to anticipate such issues, using:
 - Utility company records
 - Field location with metal detectors and other tools
 - Test holes
 - This required a redesign
- Impacts due to new duct bank design:
 - Schedule risk
 - Additional construction cost
 - Increased traffic disruption



Duct Bank Work



Response Plan

Goal: Maintain early 2021 project completion date

- Barring other unforeseen conditions or significant weather delays
- Move new duct bank under a travel lane, instead of under sidewalk
- Reduce travel lanes in work zone to one in each direction
 - Additional lane open eastbound during weekday morning rush hours
- Fort Myer will use multiple crews during construction
- Extend construction hours:
 - Until 9 pm during weekdays
 - Additional weekend work (Saturday and Sunday)
 - Additional nighttime work is an option, but not planned at this time
- These changes are not ideal, but this plan is the safest way to move the project forward in the shortest amount of time

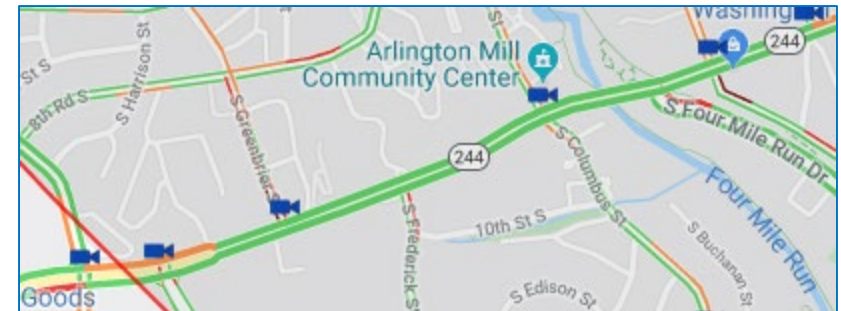
Traffic Alternatives Considered

- Continue 2 lanes in each direction for peak periods
 - Adds more than one year to schedule
- Reversible lane to provide 2 lanes for peak direction only
 - Impractical: Contractor would need room to install signs and move barrels for the lane reversal, further reducing lanes open on Columbia Pike
 - Safety risks due to unusual maintenance of traffic and possible driver confusion

Response Plan Impacts & Mitigations

Impacts:

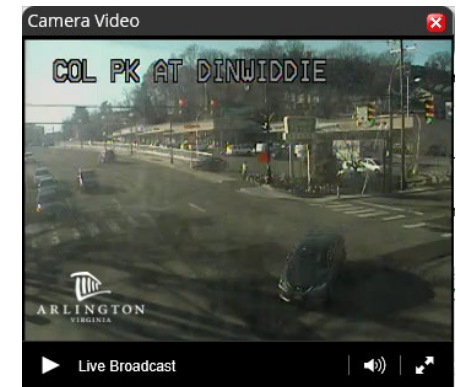
- Increased traffic disruption and delays
 - Additional lane closures
 - Intersection closures (on weekends)
 - Turn restrictions
 - Bus stop relocations
 - Pedestrian detours



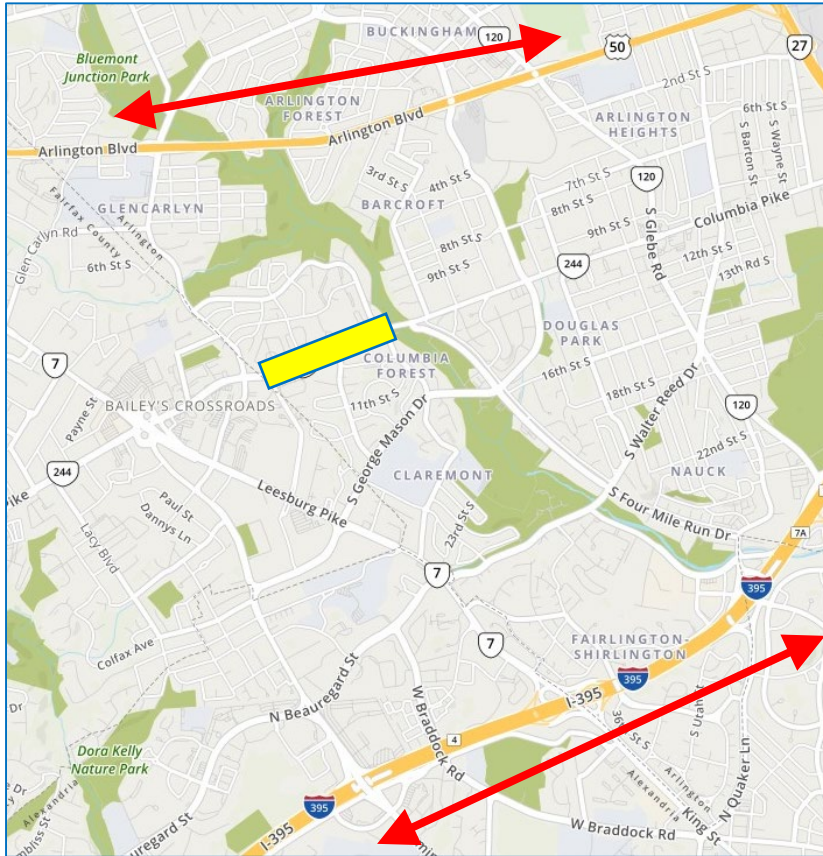
Traffic cameras in project area

Mitigations:

- Encouraging drivers to seek alternate routes
 - Parallel routes: Arlington Boulevard/Rt. 50 and I-395
 - Connecting routes: Carlin Springs Rd, George Mason Dr
- Traffic camera monitoring
 - Signal timing adjustments as needed
- Police assistance during certain periods



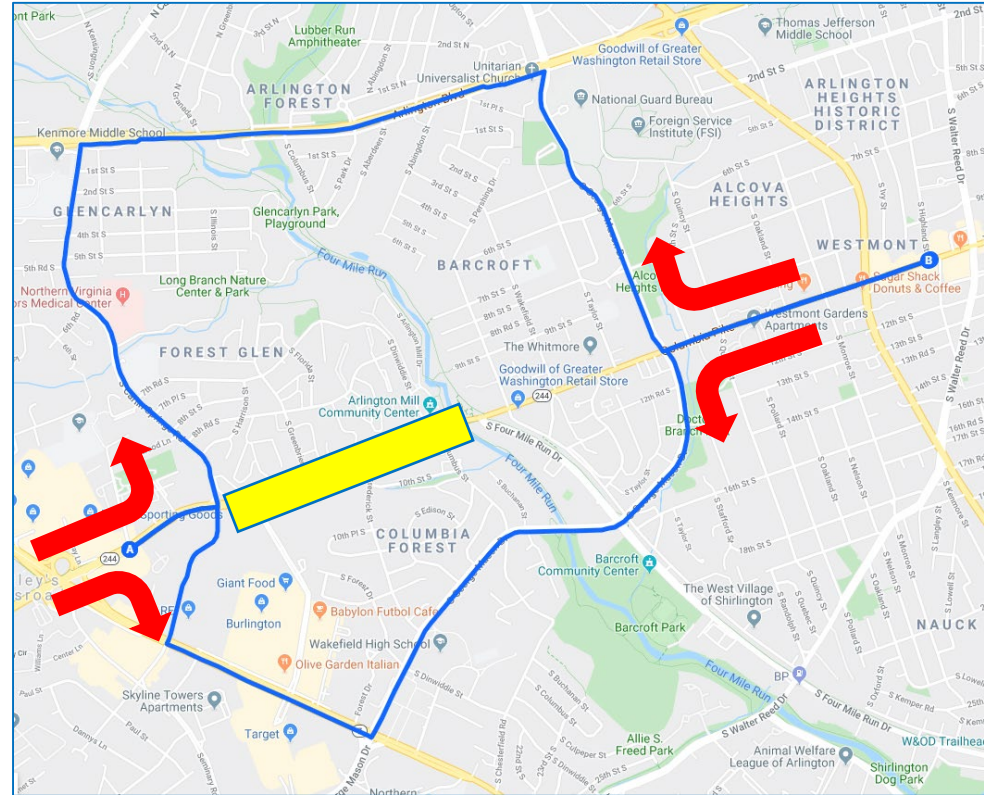
Alternate Routes



Parallel routes to Columbia Pike:

- Arlington Boulevard/Rt. 50
- I-395

= Project area



Routes to get around project area:

- Carlin Springs Road and Rt. 7
- George Mason Drive

Transit

Bus routes affected:

- ART 41, 45, 75
- Metrobus 16A,C,E,H,G,Y

Impacts:

- Bus service detours and bus stop relocations are anticipated during year-long construction period
- Bus stop terminal for ART and Metrobus on S. Dinwiddie Street will be impacted at various points during construction

Mitigations:

- Transit Bureau and Metrobus have developed plans, with goal of keeping passengers moving during construction
- Coordinating with DES and Metro's communication teams to provide detour information to passengers
- ART service will be monitored to ensure timely service can be provided

Outreach and Notifications

- Electronic message signs on site
- Traffic alert to media
- Messages to stakeholders - Civic Associations, CPRO
- Columbia Pike and Countywide email updates
- Social media - Twitter, Nextdoor
- Asking partners to share notice:
 - Arlington Transportation Partners (outreach to multifamily buildings, major employers)
 - Fairfax County DOT
 - VDOT NOVA
- Open house at Arlington Mill Community Center (January)

Construction Cost

- The Fort Myer contract will need to be increased by \$5.5M (from \$17.5M to \$23M) due to:
 - Additional volume and complexity of work resulting from duct bank redesign
 - Additional work crews and extended construction hours
 - More complex maintenance of traffic
- Much of this additional cost was unavoidable
 - If we had known of utility bank conflict at the beginning, construction bids would have been higher to account for increased volume and complexity of this work
- Funding source for contract increase:
 - \$1.3M = Balances remaining from completed Columbia Pike segments and other work on west end segment
 - \$4.2M = Funding from Columbia Pike segment D (part of South Garfield Street to South Quinn Street project)*

** Should not impact segment D's schedule, which is being updated based on design and right of way acquisition schedules as part of the current CIP process*

Columbia Pike Streets Program funding = \$114.5M (FY19-28 CIP)

Lessons Learned for Future Segments

- We have been following industry-standard procedures for identifying utilities
- Given what we now know, we will go above and beyond for future segments by:
 - Enhancing quality control procedures during design
 - Digging additional test holes
 - Applying new technologies (i.e. ground penetrating radar)
- These steps will help minimize construction risks on future Columbia Pike segments, but will not eliminate underground risks