



County of Fairfax, Virginia



# Fairfax County & Franconia-Springfield Parkways *Alternatives Analysis & Long-Term Planning Study*

## **Preliminary Recommendations**

### **Public Information Meeting**

July 29, 2020

July 30, 2020

August 4, 2020

**Thomas Burke, P.E., AICP**  
Senior Transportation Planner  
Department of Transportation



# Agenda

- Introductions
- Study Background
- Comprehensive Plan
- Study Process
- Public Outreach Summary – Spring 2019
- Concept Development
- Concept Evaluation
- Preliminary Recommendations
- Overall Project Schedule
- Public Input

FUTURE FAIRFAX COUNTY  
PARKWAY ALIGNMENT



# Study Background

- Final segment of Fairfax County Parkway completed in 2010, leading to an evaluation of Comprehensive Plan recommendations
- February 12, 2013 Board Item requested assessment of Parkways to identify and prioritize interim and long-term improvements
- Long-term multimodal improvements, including trails, widening, HOV, and interchanges
- Comprehensive Plan recommendations are generally on a 20+ year horizon, with some sooner, but many more 30+ years away



Study will result in an amendment to the Comprehensive Plan, where necessary



# Summary Recent/Ongoing Projects

## • Short-Term Study (VDOT/FCDOT)

- VDOT, in conjunction with Fairfax County, conducted Existing Conditions study (completed in 2017)
- Developed more than 350 interim recommendations for short-term improvements to address existing deficiencies
- VDOT has commenced and/or completed many of the 350+ projects related to bicycle/pedestrian enhancements, traffic operations and safety
- [http://www.virginiadot.org/projects/northernvirginia/fairfax\\_county\\_franconia-springfield\\_pkwy.asp](http://www.virginiadot.org/projects/northernvirginia/fairfax_county_franconia-springfield_pkwy.asp)



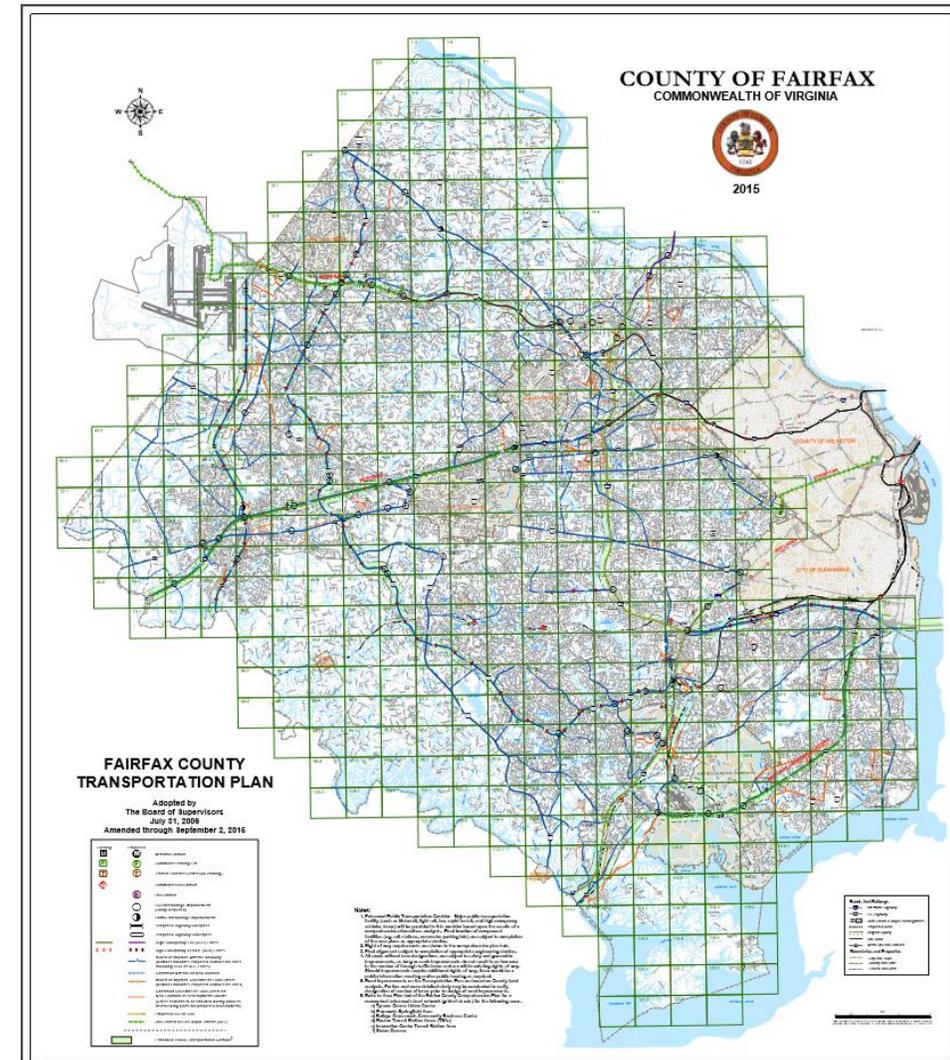
## • Fairfax County Parkway Widening (VDOT)

- VDOT designing widening of Fairfax County Parkway, from Route 29 to Route 123, including new interchange at Popes Head Road & future Shirley Gate Road Extension (Ongoing)
- Partial funding allocated for construction (interchange will be constructed first)
- Construction anticipated to begin on the interchange in early 2023
- [http://www.virginiadot.org/projects/northernvirginia/ffx\\_co\\_pkwy\\_widening.asp](http://www.virginiadot.org/projects/northernvirginia/ffx_co_pkwy_widening.asp)



# Comprehensive Plan

- Comp Plan is required by state law to be used as a guide to decision-making about the natural and built environment
- It's a guide for county staff and the public to use in the planning process
- The Transportation Plan, a component of the Comprehensive Plan
  - Provides the Countywide vision for transportation improvements
  - Is financially unconstrained
  - Identifies the number of future lanes, locations for interchanges, and other corridor features (HOV, enhanced transit, trails)
  - Includes high level information – does not provide detailed design drawing or specific intersection or interchange types





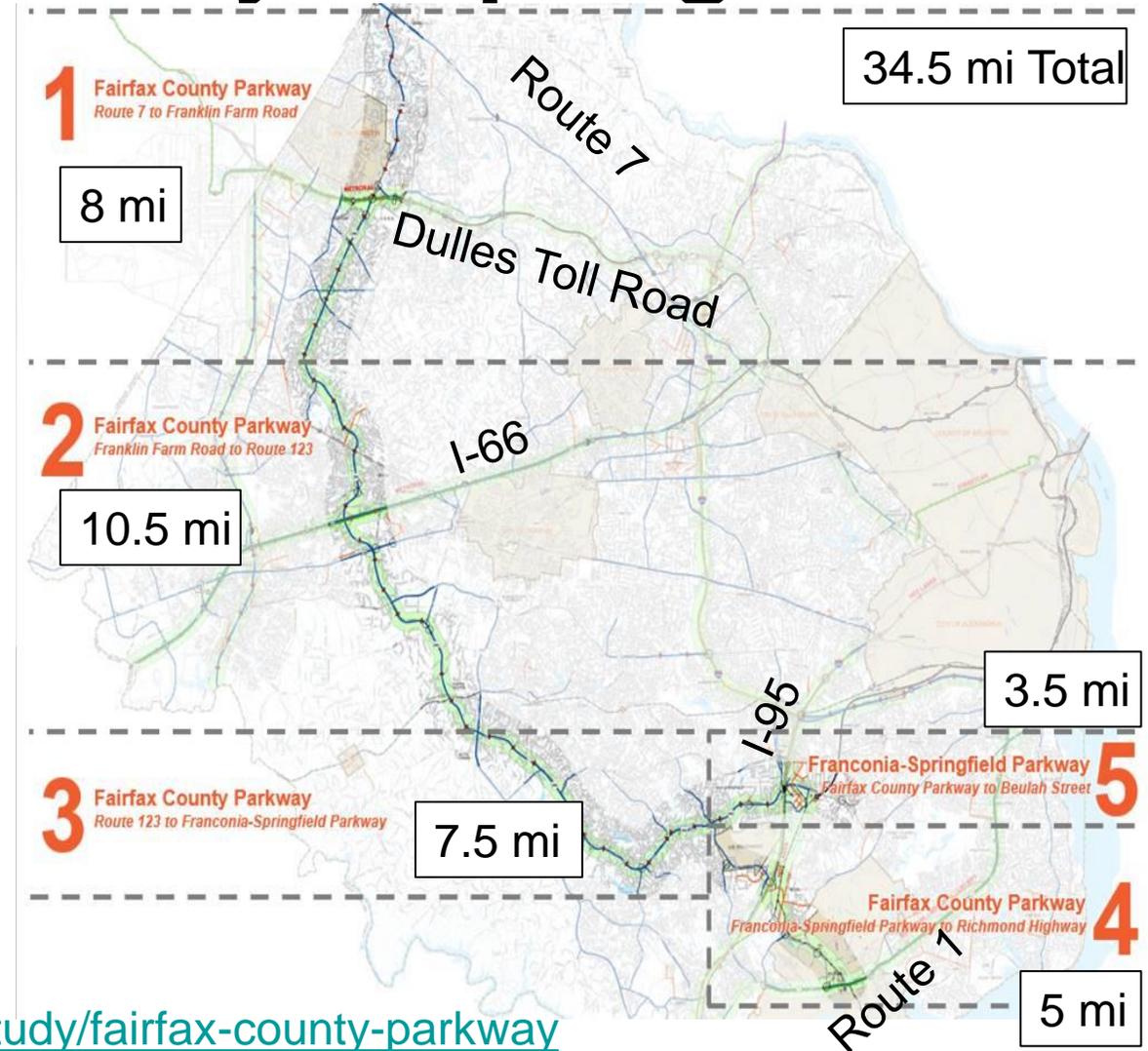
# Study Process

- Determine future network deficiencies, based on the current Comprehensive Plan, using current data and traffic forecasting & operations models
- Develop three alternative network concepts, based on analysis and public input, to remedy deficiencies
- Test alternatives and present results and findings while gathering additional public input
- Refine and prioritize recommendations for improvements to the corridor through 2040 and beyond
- Make recommendations for changes to the current Comprehensive Plan
- Formally amend the Comprehensive Plan, as necessary



# Public Outreach Summary – Spring 2019

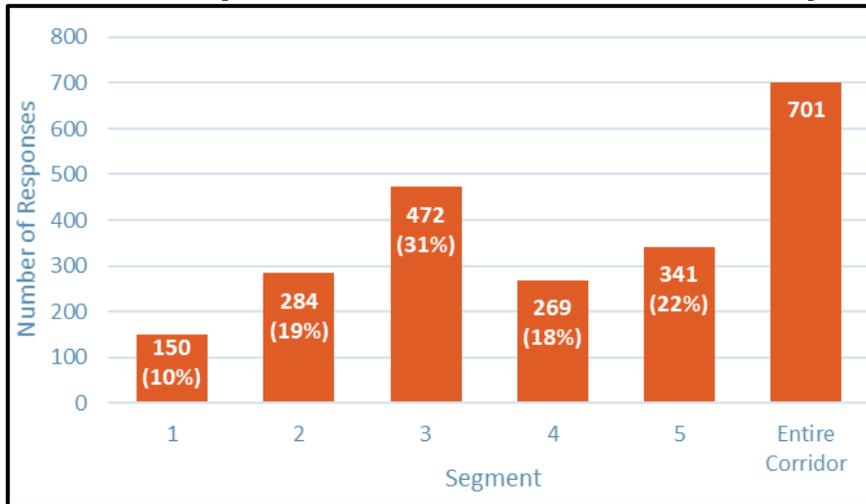
- 3 meetings – 109 attendees
- Online survey – 1,391 responses
- Survey questions helped to inform development of concepts, including:
  - Trails along the Parkway
  - Intersection/interchange improvements
  - Corridor widening
  - Enhanced HOV
  - Enhanced transit
- Survey responses collected for the entire corridor or by segment





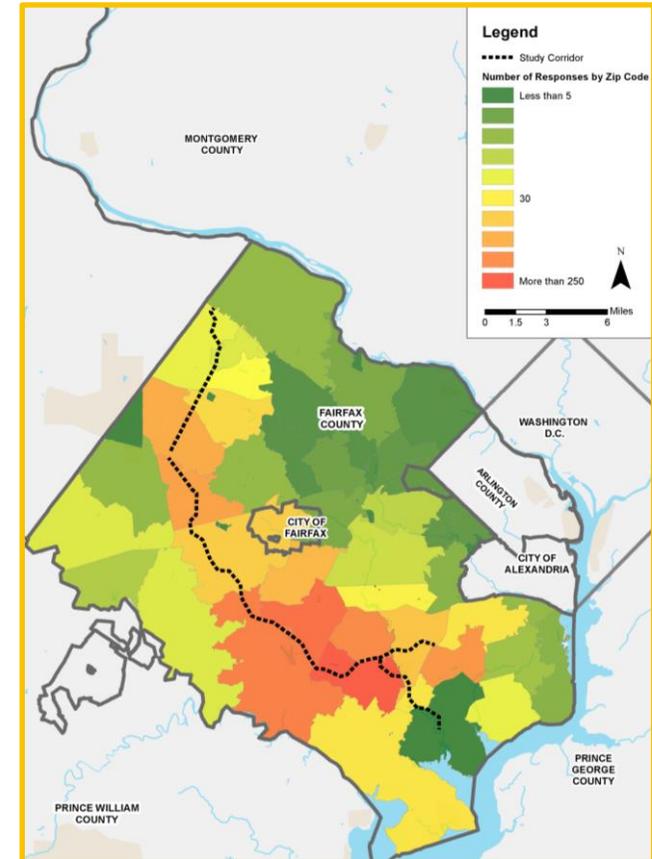
# Public Outreach Summary – Spring 2019

- Strong support for completing trails and incorporating trails on both sides of Parkways
- Strong support for widening, without HOV
- Limited response to HOV strategies (<10% of survey responses), but strong support among those who responded to the HOV questions



Segment 3 (Route 123 to Franconia-Springfield Parkway) received the most feedback by participants responding on individual segments

## Survey Feedback by Segment



Highest participation recorded from residents in Springfield, Burke, and Fairfax Station



# Concept Development

- Based upon feedback from the Spring 2019 public input and preliminary traffic operations assessment
- Address multimodal transportation and community issues, considering the current Comprehensive Plan and forecasted 2040 traffic volumes:
  - Congestion
  - Equity
  - Land Use Compatibility
  - Missing Trail Network
  - Safety
  - Cost Estimates
  - Transit Service
  - Right-of-Way Impacts
  - Context Sensitive
- Developed three concepts focused on overall themes:
  - Concept 1 – Increased vehicular capacity without HOV operations
  - Concept 2 – Right-of-way preservation with enhanced multimodal accommodations
  - Concept 3 – Enhanced corridor operations for HOV-2+ (previously evaluated HOV-3+)



# Concept Development

## *Key Concept Elements*

### Concept 1 – **Maximize Traffic Flow**

- Maintain Comprehensive Plan number of lanes except widening to 6 lanes on Fairfax County Parkway between Richmond Highway and I-95
- Significant capacity improvements at the Dulles Toll Road interchange
- Consideration of innovative intersections
- Modifications at the I-95/Fairfax County Parkway interchange
- Trail on both sides, when possible
- No HOV

### Concept 2 – **Minimize Impacts**

- No additional widening beyond current corridor configuration, except for ongoing VDOT project
- Transit queue jump lanes
- Additional network connectivity near Loisdale Road
- I-95/Fairfax County Parkway interchange modifications
- Trail on both sides, regardless of right-of-way impact
- No HOV

### Concept 3 – **Optimize HOV**

- Maintain Comprehensive Plan number of lanes
- Center-running HOV-2+ lane in each direction
- Grade separated HOV flyovers at bottleneck locations (Wiehle Ave, Franklin Farm Rd, Rugby Rd, Huntsman Blvd)
- Exclusive, grade separated HOV access at Dulles Toll Road, I-66, and Franconia-Springfield Metrorail station
- Trail on both sides, when possible

See project website for graphics showing Concepts 1-3

<https://www.fairfaxcounty.gov/transportation/study/fairfax-county-parkway>



# Concept 1 Results

- Additional roadway capacity improves operations
- Dulles Toll Road interchange sees significant improvement
- Mainline operations improve, although some side street approaches result in increased delays
- Increased capacity draws additional volume to the corridors, highlighting the limitations of interchange capacity at some locations (i.e. Route 123, I-95)
- At-grade configuration of the intersection at Beulah Street contributes significantly to congestion along Franconia-Springfield Parkway east of Frontier Drive





# Concept 2 Results

- Absence of widening results in increased congestion
- Some future traffic volume growth is anticipated to shift traffic away from study corridors to parallel roadways (West Ox Road, Centreville Road, Old Keene Mill Road, Lee Chapel Road, etc.)
- Travel times are higher for most segments of the corridor
- Fairfax County Parkway through the Orange Hunt area shows a decrease in travel times in both directions due to reduced demand
- At-grade configuration of the intersection at Sunrise Valley Drive and no improvements at Dulles Toll Road contributes significantly to congestion in the vicinity of the Dulles Toll Road area
- Alternate I-95 interchange configuration at Fairfax County Parkway combined with modified access at Loisdale Road, Terminal Road, and Backlick Road reduces congestion
- At-grade configuration of the intersection at John J. Kingman Road contributes significantly to congestion along Fairfax County Parkway between Richmond Highway and I-95





# Concept 3 Results

- Travel times improve for HOV-2+ vehicles, but at the detriment of non-HOV vehicles
- Transit travel times improve
- Higher volume of non-HOV vehicles per lane compared to HOV vehicles
- Dulles Toll Road interchange ramps are congested due to a reduced number of lanes for general purpose traffic along Fairfax County Parkway
- The I-95 interchange improvements identified by VDOT at Fairfax County Parkway cannot accommodate forecast traffic volumes, resulting in significant congestion south of I-95



# Concept Evaluation

## Comparison with the Comprehensive Plan

	Traffic Operations	Transit Operations	Bicycle/ Pedestrian Accommodations	Right-of-Way Impact	Cost
Concept 1 Max Flow	+++	+	+	--	-
Concept 2 Min Impacts	--	-	+++	+	+
Concept 3 Optimize HOV		+	+	-	--

Legend

- Significantly Better 
- Better 
- Neutral 
- Worse 
- Significantly Worse 



# Recommendations Development Process

- Compared results of Comprehensive Plan and 3 Alternative Concepts
- Considered traffic operations, multimodal mobility, public input, right-of-way impacts, cost estimates, and land use compatibility
- Screening process:
  - Safely and efficiently carry people and goods;
  - Connect Fairfax County's communities and neighborhoods;
  - Minimize impacts to natural and built environment;
  - Provide an equitable solution
- Preliminary Recommendations selection process
  - Start with segment-level improvements based on data, analysis results, and screening
  - Select intersection-level improvements



# Preliminary Recommendations

## HOV

- Current Comprehensive Plan includes future HOV on majority of the Parkways
- Concept 3 (*Optimize HOV*), with substantial infrastructure added, results in travel time benefits for buses and HOV vehicles, but is offset by impacts to single occupant vehicles & has high costs
- Recommended to remove HOV from the Parkways due to:
  - Minimal change in corridor travel times
  - Low demand
  - Addition of HOV lanes causes excessive delay for general purpose lanes
  - Unseparated HOV lanes compromise operations, safety, and ability for police enforcement
  - Separation at intersections/interchanges is costly
  - Existing HOV/Express Lane network in place (I-95, I-495, I-66, Dulles Toll Road)
  - FCP/FSP is circumferential and doesn't serve large DC core activity centers or Tysons
  - Low public interest or support
- HOV “feeders” may be considered at the Dulles Toll Road, I-66 and I-95





# Multimodal Considerations

## • Transit

- Additional capacity for general purpose lanes will benefit bus service and reliability
- Planned FC Route 496 from Herndon to Franconia-Springfield included in the Fairfax County Transit Development Plan (FY16-FY22)
- HOV feeder/connectors to regional facilities (DTR, I-66, I-95) will enhance transit service and reliability
- Queue jumps could serve as an interim improvement prior to a segment widening to the future planned cross-section



## • Bicycle/Pedestrians

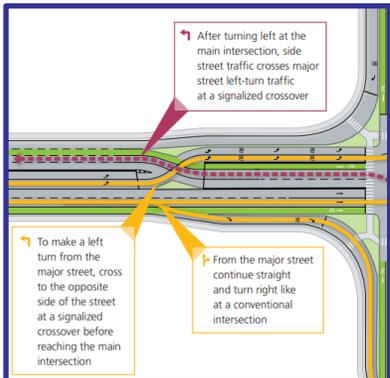
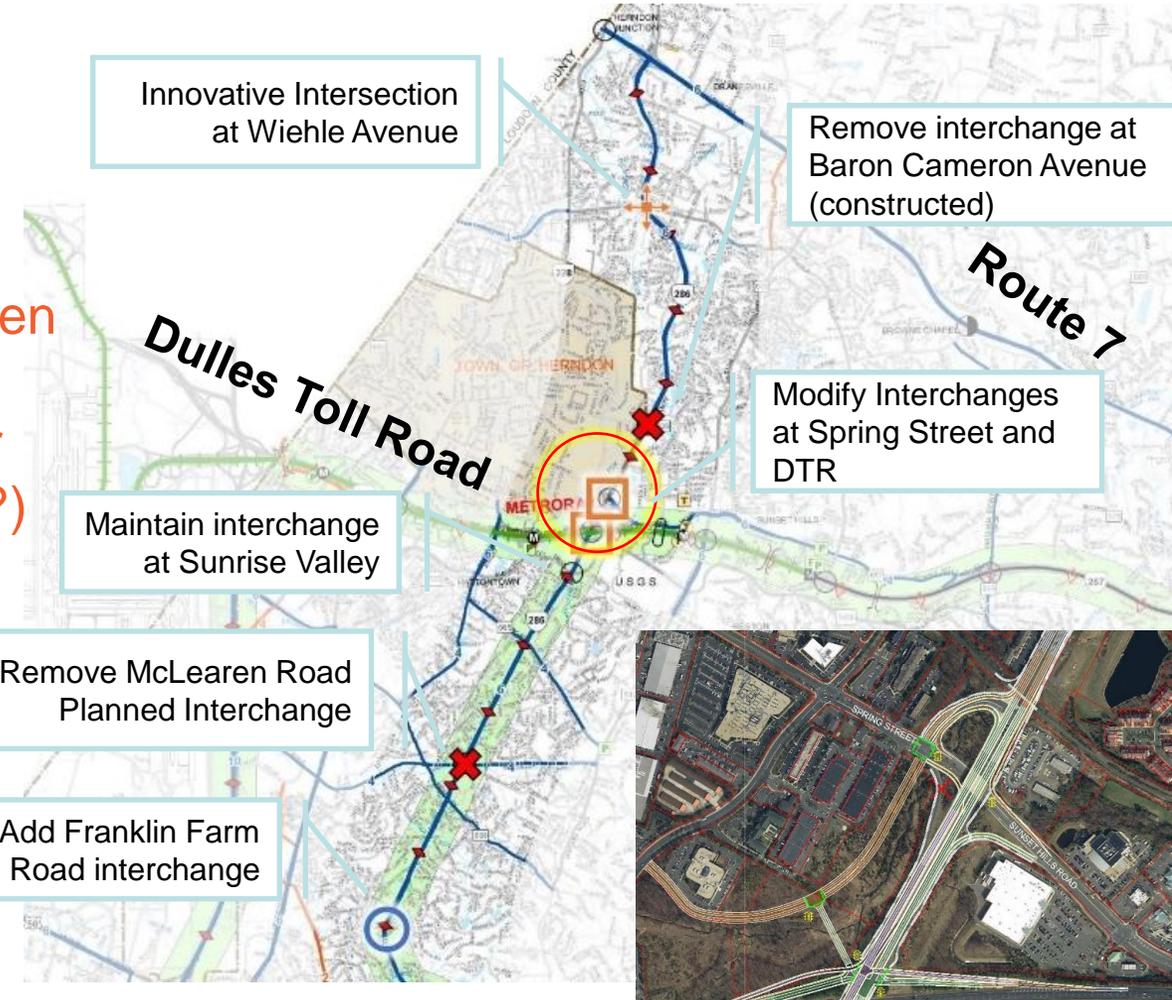
- Path/trail facilities planned on both sides of the Parkways
- Maintain path/trail along the mainline at interchanges with under/overpasses across free-flow ramps
- Enhanced facilities at intersections (e.g. crosswalks on all legs) and connections to regional parallel and crossing facilities



# Preliminary Recommendations – Segment 1

## Fairfax County Parkway Route 7 to Franklin Farm Road

- Maintain 6 travel lanes
- Innovative intersection at Wiehle Avenue
- Remove interchanges at Baron Cameron, McLearen
- Modify interchanges at Spring Street and DTR
- Maintain planned interchange at Sunrise Valley Dr
- Add interchange at Franklin Farm Road (Echelon?)
- Remove HOV, Add HOV feeder at DTR



**PARTIAL DISPLACED LEFTS**

Source: <http://www.virginiadot.org/innovativeintersections/>



**EXAMPLE OF AN ECHELON INTERCHANGE**

Source: VDOT



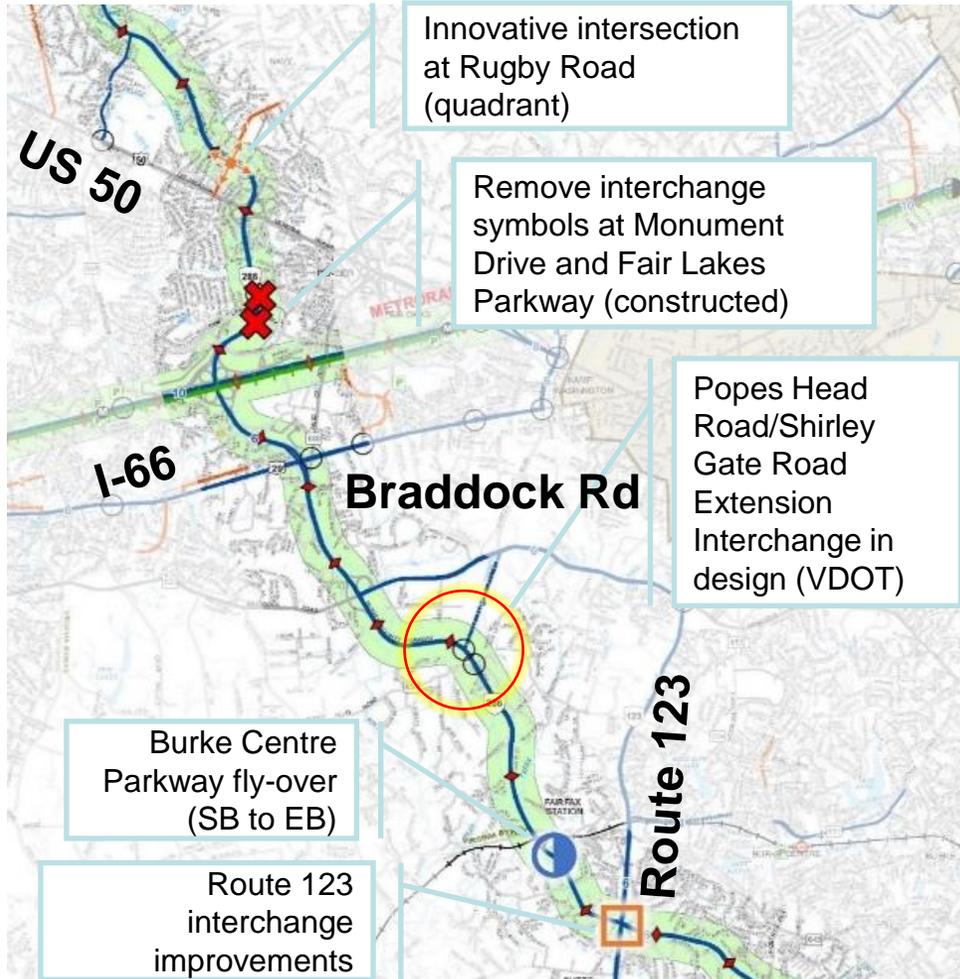
**SPRING STREET/FAIRBROOK DR CONNECTOR**



# Preliminary Recommendations – Segment 2

## Fairfax County Parkway Franklin Farm Road to Route 123

- Maintain 6 travel lanes
- Innovative intersection at Rugby Road
- Remove interchanges at Monument Dr, Fair Lakes Pkwy
- Maintain interchange at Shirley Gate Rd/Popes Head Rd
- Add partial interchange/flyover at Burke Centre Pkwy
- Add interchange modifications at Route 123
- Remove HOV, Add HOV feeder at I-66



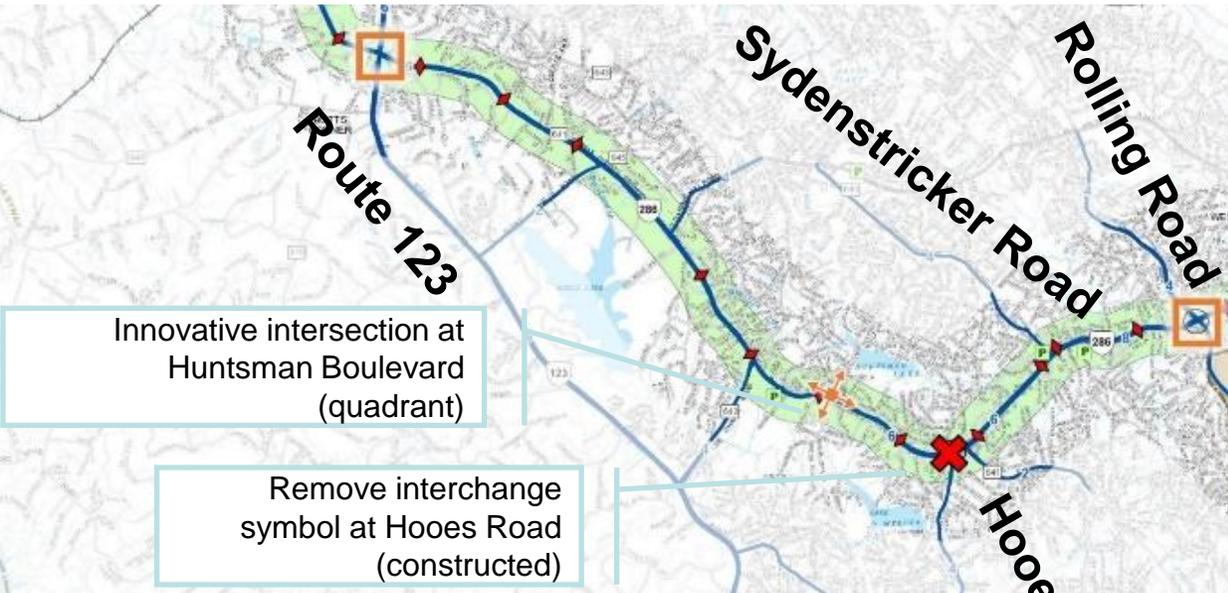
RUGBY ROAD QUADRANT INTERSECTION



BURKE CENTRE PARKWAY FLYOVER



# Preliminary Recommendations – Segment 3



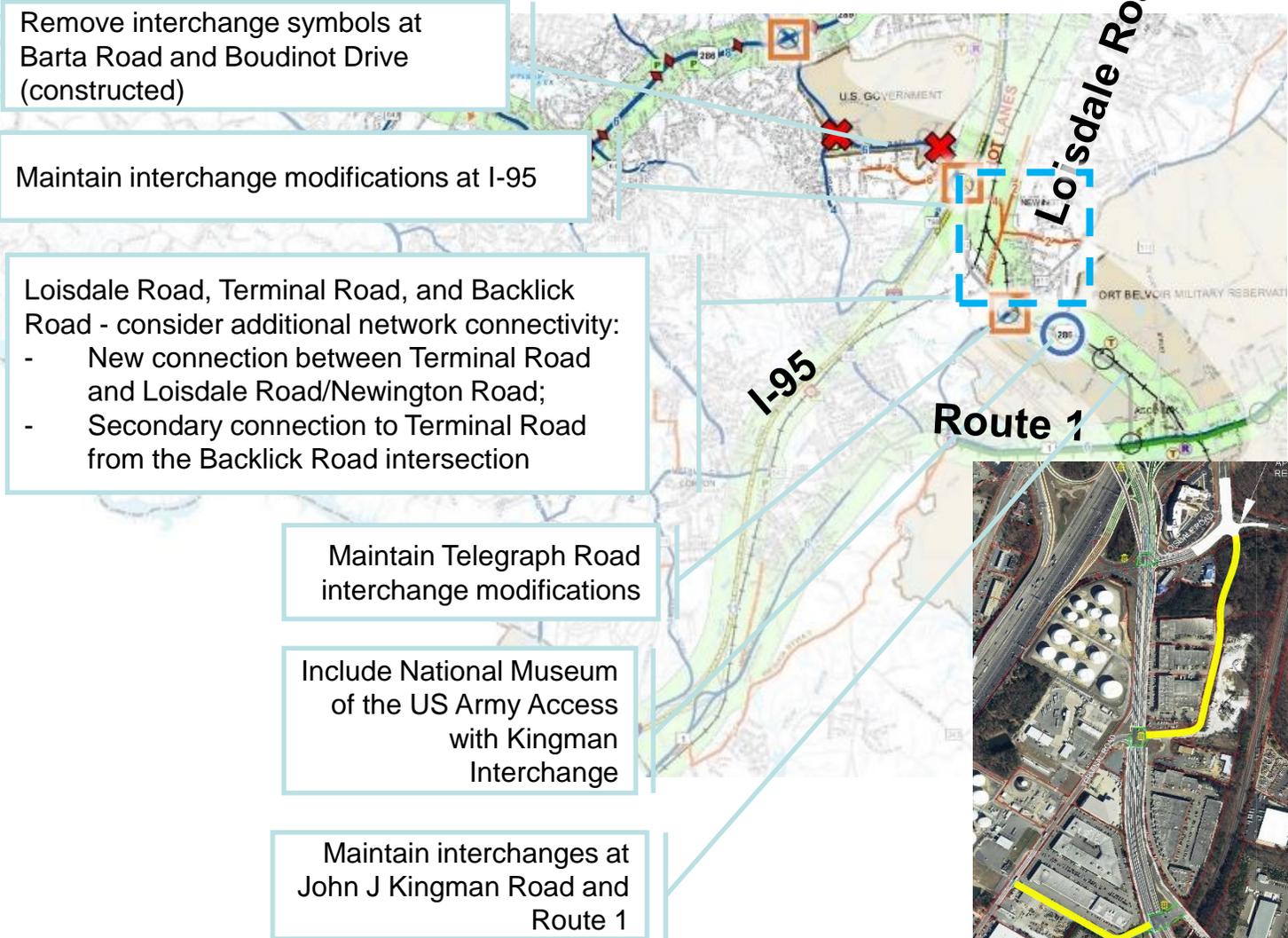
HUNTSMAN BOULEVARD  
QUADRANT  
INTERSECTION

## Fairfax County Parkway Route 123 to Franconia-Springfield Parkway

- Modify to “4 or 6 travel lanes,” west of Hooes Road (currently planned at 6 lanes) requires further study of potential impacts, will evaluate 4 lanes in final modeling
- Innovative intersection at Huntsman Boulevard
- Remove interchange symbol at Hooes Road
- Maintain 6 travel lanes, from Hooes Road to Sydenstricker Road
- Reduce to existing 6 travel lanes, east of Sydenstricker Road (currently planned at 8)
- Remove HOV



# Preliminary Recommendations – Segment 4

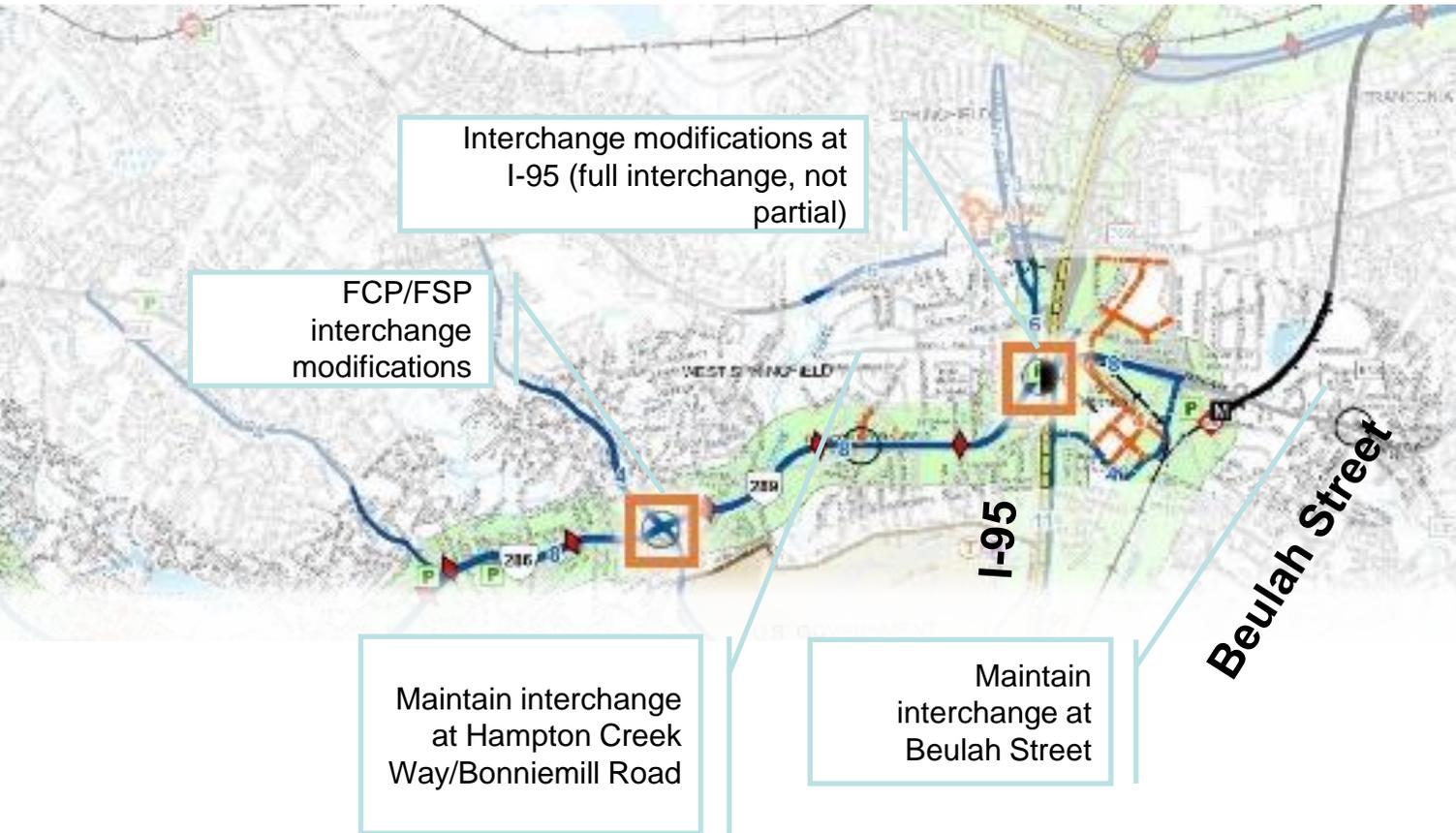


## Fairfax County Parkway Franconia-Springfield Parkway to Richmond Highway

- Increase to 6 travel lanes, north of John J Kingman Road (currently no plans to widen), evaluate need to south
- Remove interchanges at Barta Road and Boudinot Drive
- Maintain interchange modifications at I-95 and Telegraph Road
- Add network connectivity between I-95 and Backlick Road
- Include Army Museum access with Kingman Interchange
- Maintain interchanges at John J Kingman Road and Route 1
- Maintain no HOV



# Preliminary Recommendations – Segment 5



## Franconia-Springfield Parkway Fairfax County Parkway to Beulah Street

- Reduce to existing 6 travel lanes west of Frontier Drive (currently planned at 8 lanes), maintain existing to east
- Maintain interchange modifications at the FCP/FSP split
- Maintain interchanges at Hampton Creek Way/Bonniemill Lane and Beulah Street
- Change partial interchange at I-95 to interchange modification (potential access to general purpose lanes)
- Remove HOV, Add HOV feeder at I-95



# Preliminary Recommendations vs Current Plan

	Current Plan	Preliminary Recommendations	Change
<b>New Interchanges (each)</b>	7	7	-
<b>New Partial Interchanges (each)</b>	0	1	+1
<b>Interchange Modifications (each)</b>	6	7	+1
<b>Roadway Widening (miles)</b>	22	16	-6
<b>HOV Feeders (each)</b>	0	3	+3
<b>Trails (miles)</b>	5	40	+35

*Typical New, Full Interchange will cost \$50-\$80M*

*Roadway Widening will cost \$30-\$50M per mile*

*Current Plan & Preliminary Recommendations each cost roughly \$2B+/- in total*



# Overall Project Schedule

- Solicit feedback via Virtual public meetings and online survey (Summer 2020)
- Finalize and evaluate Preferred Alternative (Fall 2020)
- Final recommendations and reporting, Board Action (Winter 2021)
- Initiate Comprehensive Plan Amendment (if necessary), Board Action (Spring 2021)





# Online Survey

- Online survey to solicit public feedback on Preliminary Recommendations  
**This is your chance to influence the Comprehensive Plan!**
  - Provide feedback by segment
  - Indicate support (agree or disagree) to components of the Preliminary Recommendations
  - Provide feedback on the project
- Access the online survey on the project website:  
[www.fairfaxcounty.gov/transportation/study/fairfax-county-parkway](http://www.fairfaxcounty.gov/transportation/study/fairfax-county-parkway)
- Online survey available July 29, 2020 through August 31, 2020



# Questions? Comments?

**Thomas Burke, P.E., AICP**

Fairfax County Department of Transportation  
4050 Legato Road, Suite 400  
Fairfax, VA 22033

(703) 877-5600, TTY 711

[Thomas.Burke@FairfaxCounty.gov](mailto:Thomas.Burke@FairfaxCounty.gov)



Link to the online survey and send online feedback via project webpage:

[www.fairfaxcounty.gov/transportation/study/fairfax-county-parkway](http://www.fairfaxcounty.gov/transportation/study/fairfax-county-parkway)

Deadline for comments and survey responses: **Monday, Aug. 31, 2020**