



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



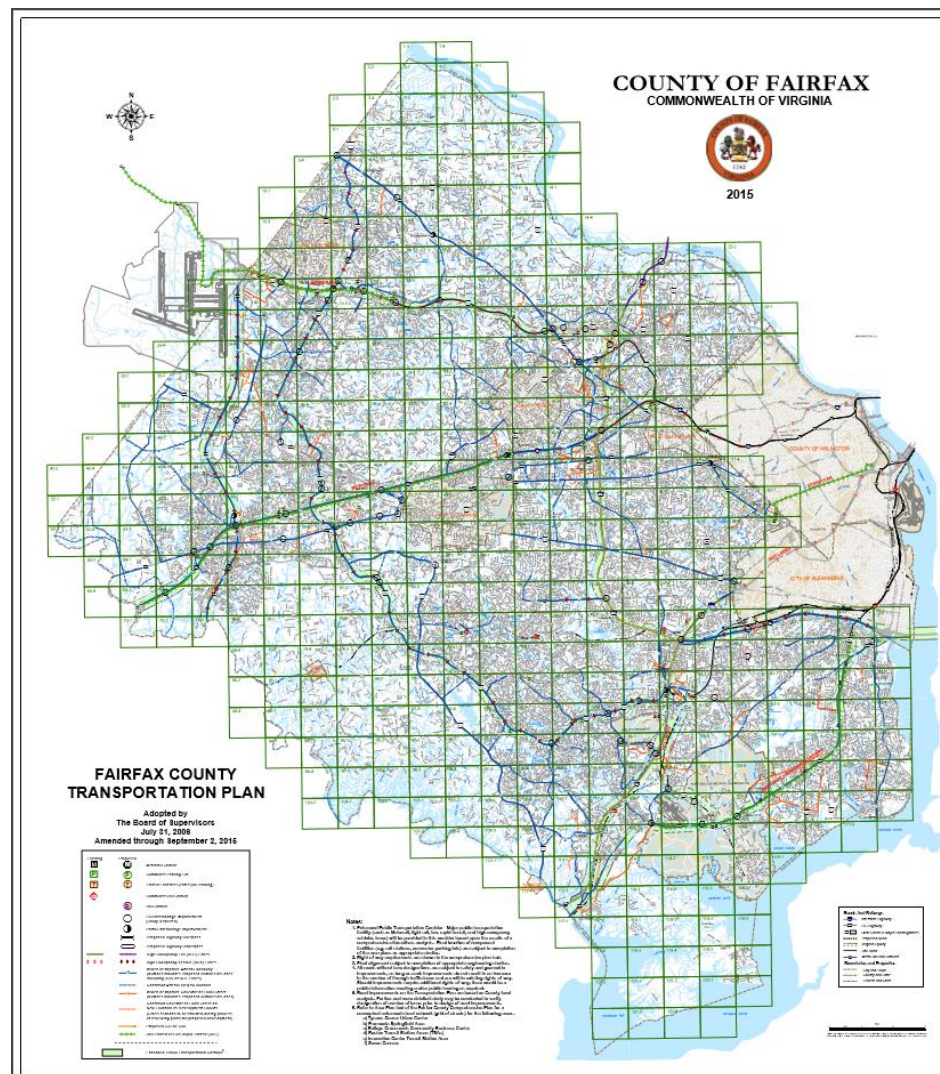
- **Fairfax County Parkway Widening (VDOT)**

- 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



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





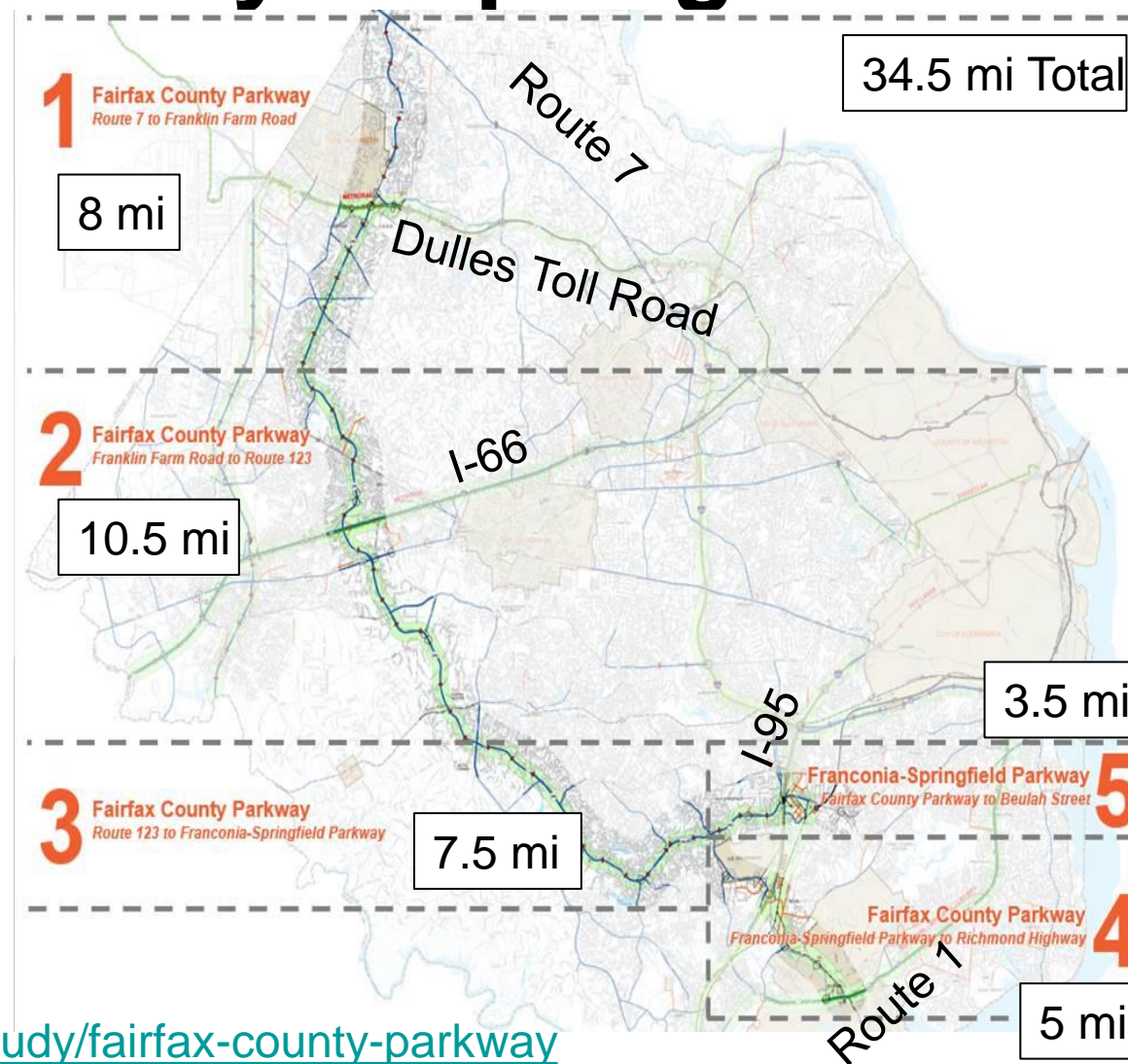
Study Process

- 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

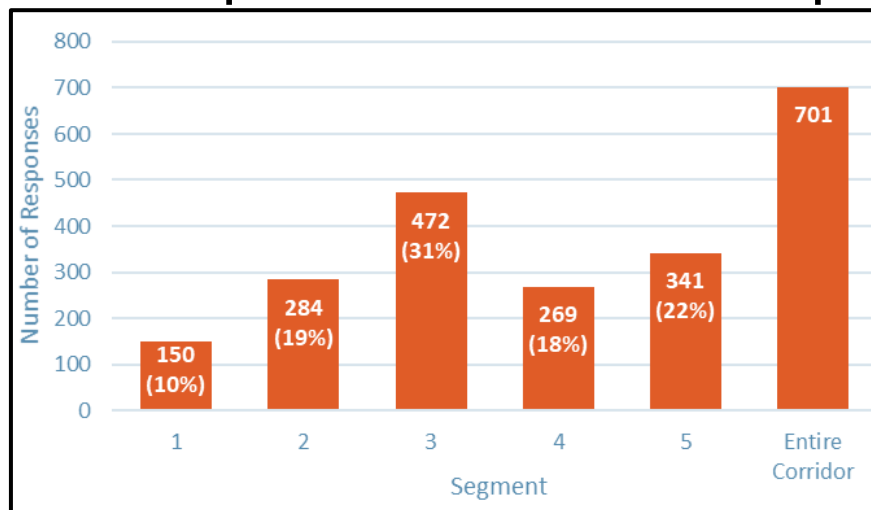
- 3 meetings – 109 attendees
- Online survey – 1,391 responses
- Survey questions helped to inform development of concepts, including:
 - Trails along the Parkway
 - Intersection/interchange improvements
 - Corridor widening
 - Enhanced HOV
 - Enhanced transit
- Survey responses collected for the entire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





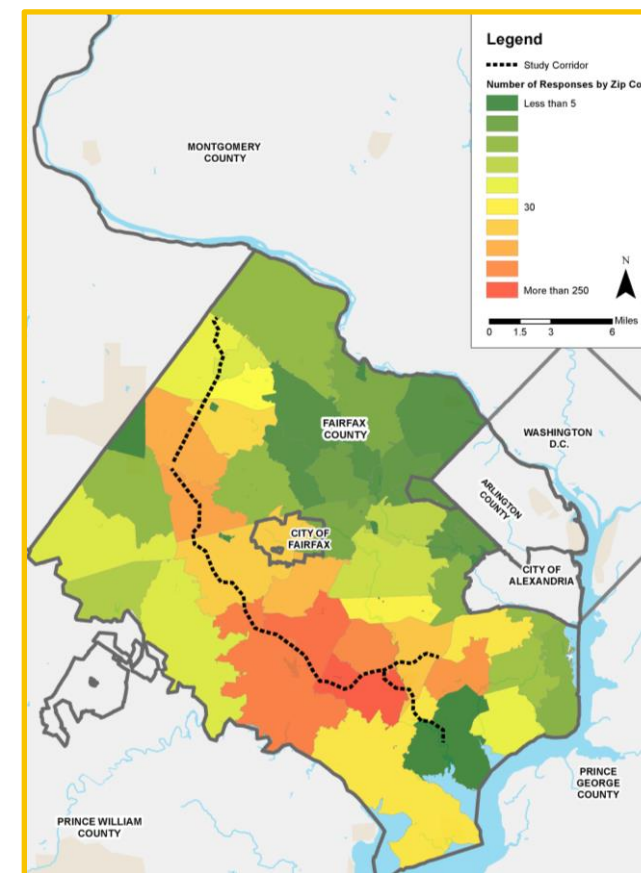
Public Outreach Summary – Spring 2019

- 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
 - Missing Trail Network
 - Transit Service
 - Equity
 - Safety
 - Right-of-Way Impacts
 - Land Use Compatibility
 - Cost Estimates
 - 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	<u>Legend</u>	
Concept 1 Max Flow	++	+	+	--	-	Significantly Better	+++
						Better	+
Concept 2 Min Impacts	--	-	++	+	+	Neutral	
						Worse	-
Concept 3 Optimize HOV		+	+	-	--	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



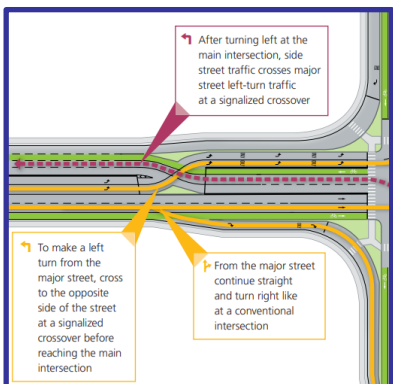
County of Fairfax, Virginia



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



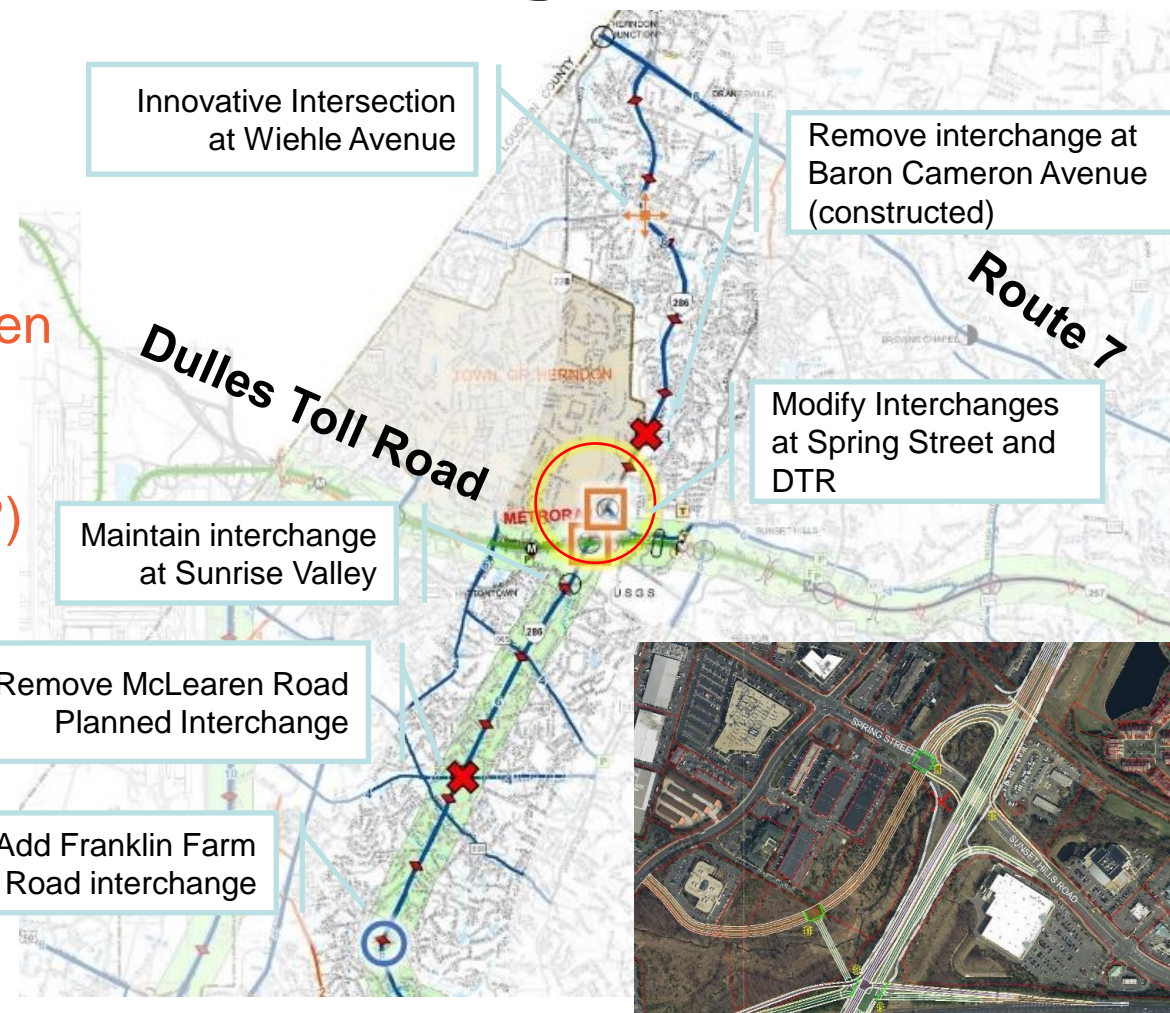
PARTIAL DISPLACED LEFTS

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



EXAMPLE OF AN ECHELON INTERCHANGE

Source: VDOT



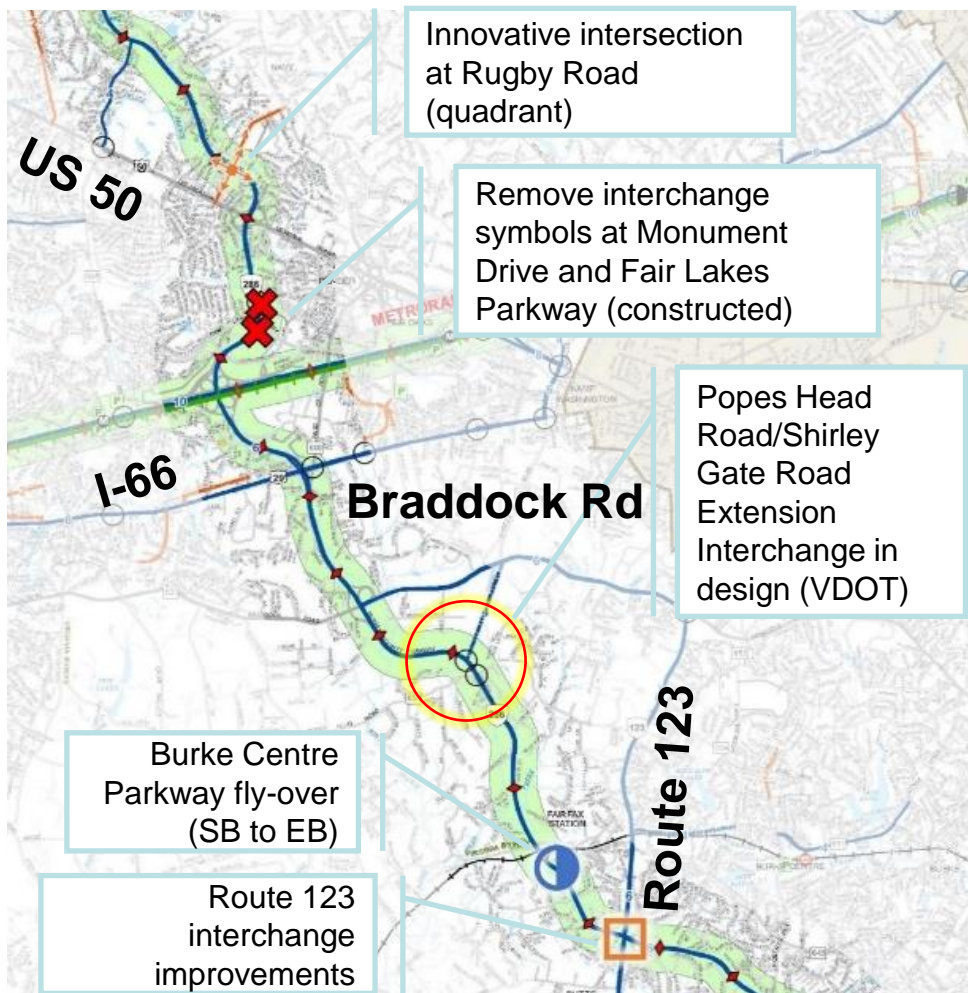
**SPRING STREET/FAIRBROOK DR
CONNECTOR**



County of Fairfax, Virginia

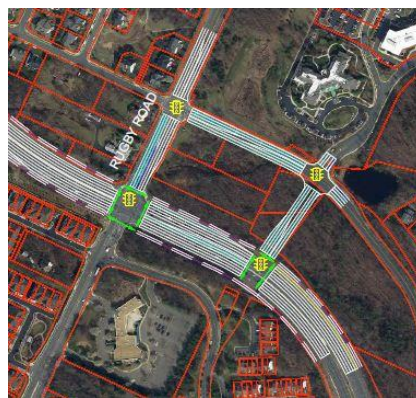


Preliminary Recommendations – Segment 2



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



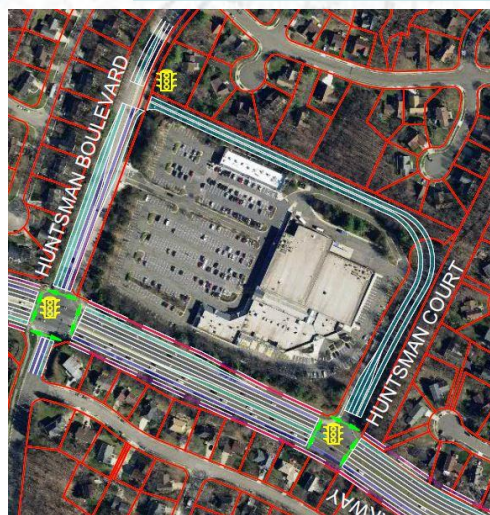
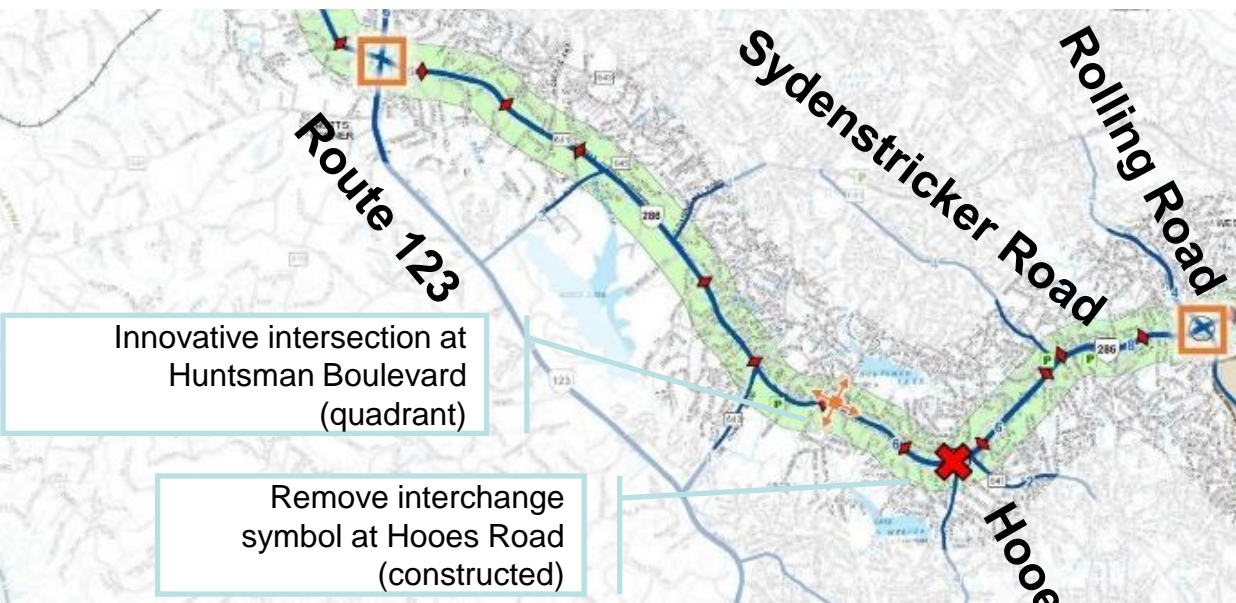
RUGBY ROAD QUADRANT INTERSECTION



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

Remove interchange symbols at Barta Road and Boudinot Drive (constructed)

Maintain interchange modifications at I-95

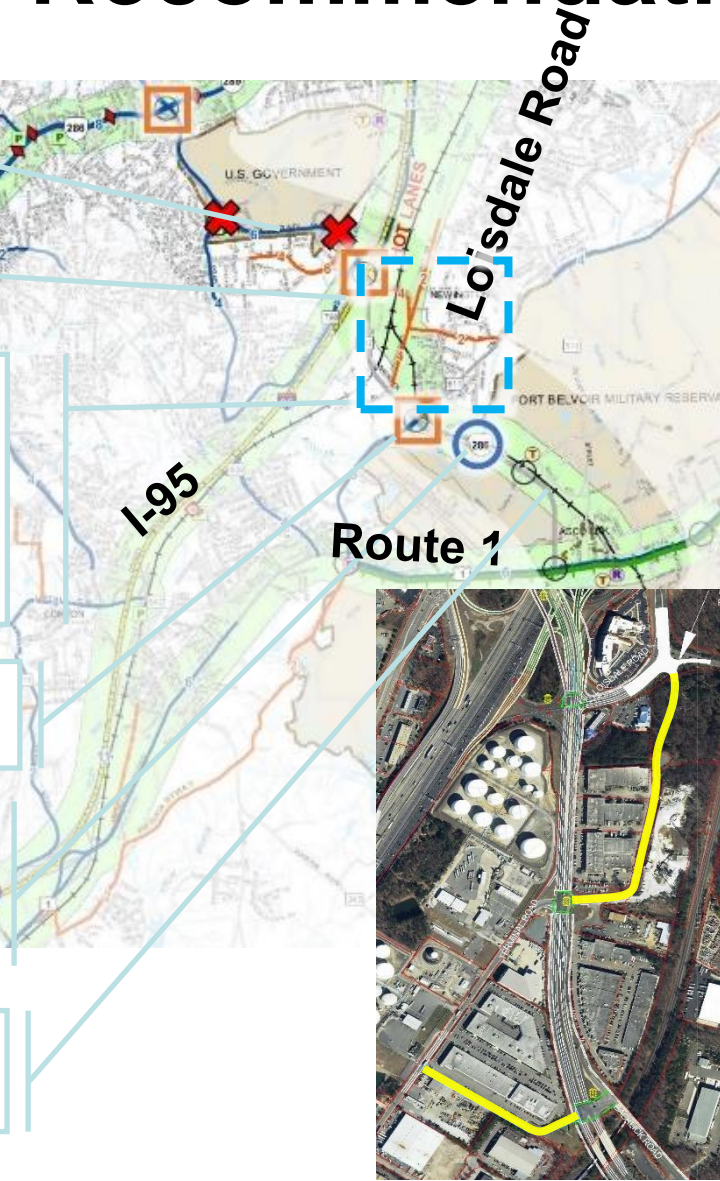
Loisdale Road, Terminal Road, and Backlick Road - consider additional network connectivity:

- New connection between Terminal Road and Loisdale Road/Newington Road;
- Secondary connection to Terminal Road from the Backlick Road intersection

Maintain Telegraph Road interchange modifications

Include National Museum of the US Army Access with Kingman Interchange

Maintain interchanges at John J Kingman Road and Route 1

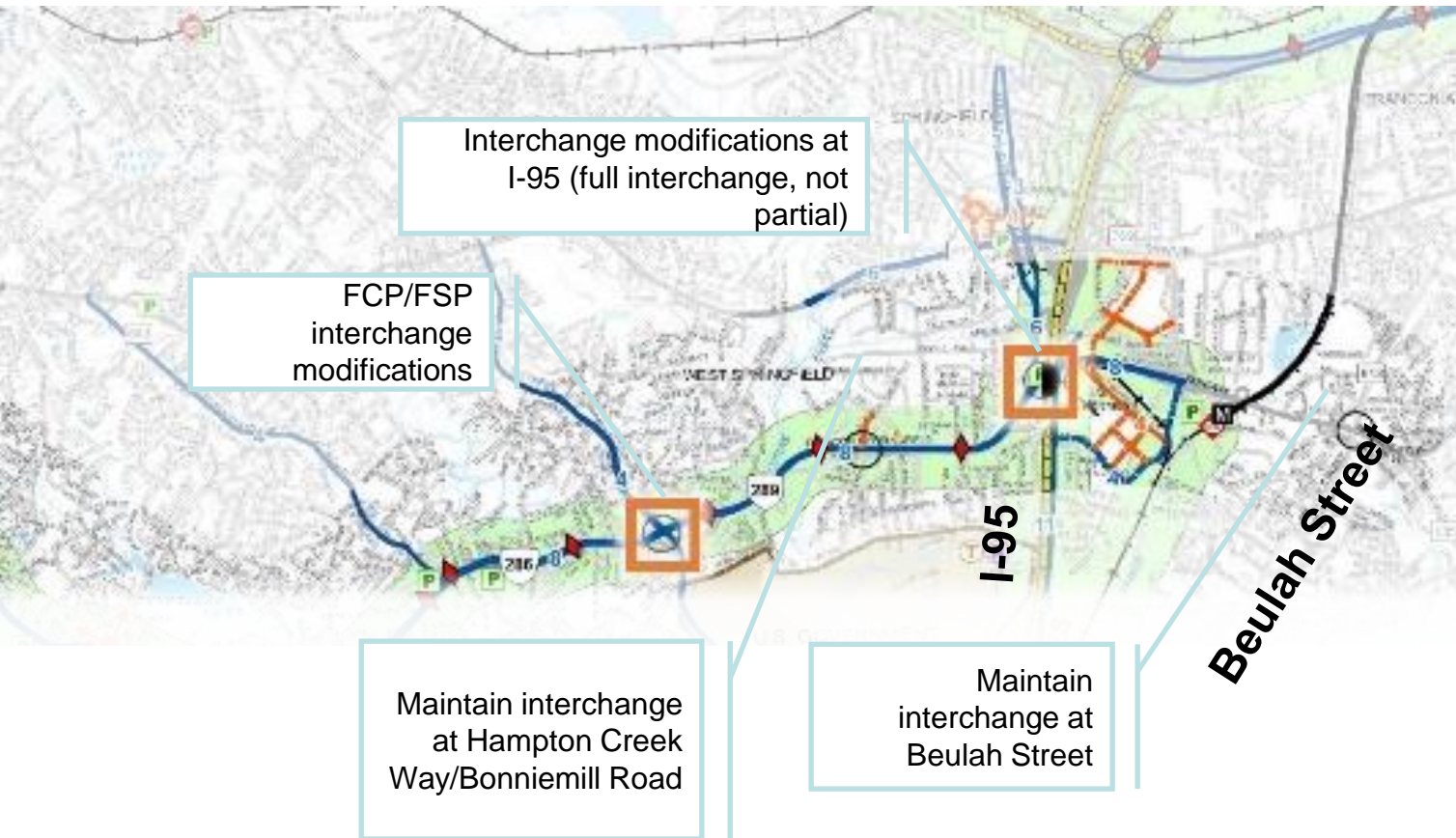


Fairfax County Parkway Franconia-Springfield Parkway to Richmond Highway

- 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
New Interchanges (each)	7	7	-
New Partial Interchanges (each)	0	1	+1
Interchange Modifications (each)	6	7	+1
Roadway Widening (miles)	22	16	-6
HOV Feeders (each)	0	3	+3
Trails (miles)	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
- 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



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

www.fairfaxcounty.gov/transportation/study/fairfax-county-parkway

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