Springfield to Quantico Enhanced Public Transportation Feasibility Study

Comprehensive Survey Report





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Introduction



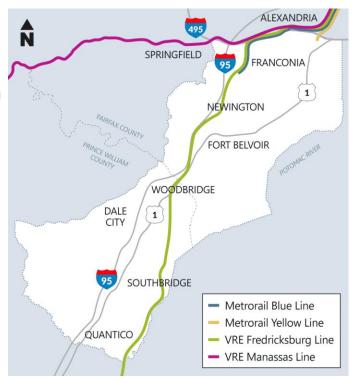
Purpose and approach

The Virginia Department of Rail and Public Transportation (DRPT) is conducting a feasibility study of enhanced public transportation services between the Franconia-Springfield Metro station and the Quantico Marine Base.

Purpose

The Virginia Department of Rail and Public Transportation (DRPT) is conducting a feasibility study of enhanced public transportation services between the Franconia-Springfield Metro station (see study area map on the right). Enhanced transit could include options such as additional express bus services, increased VRE commuter rail expansion, Bus Rapid Transit (BRT), or an extension of Metrorail.

This survey aims to gain an understanding of 1) regional and local corridor use both pre- and post-pandemic, 2) travel behavior, and 3) how different transit alternatives could best serve the needs of corridor users.



Approach

DRPT hired consulting firm PRR (as part of the CS/KFH team leading the study) to conduct an online public opinion survey to:

- Gather input on transportation needs in the corridor.
- Compare pre- and post-pandemic use of the corridor.
- Collect thoughts on possible enhanced transit alternatives to address those needs.



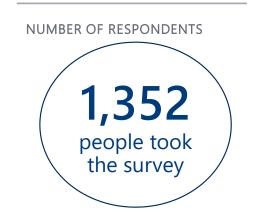
Methods

Recruitment and Fielding

- Survey topics included trip origin and destination, trip frequency, trip purpose, mode choice, impact of COVID-19 on travel behavior, issues that would influence travel mode after COVID-19, ideas on ways to improve travel along the study corridor, and standard respondent demographics.
- DRPT promoted the survey to study corridor users through the following channels* (See Appendix B for recruitment materials examples):
 - DRPT website, email blast, Twitter and Facebook pages
 - Email to the study's Technical Advisory Committee (TAC) members asking them to share the information on their websites, through social media posts, and email blasts. TAC members who shared the information included: U.S. Marine Corps Base Quantico, Prince William County, VRE, NVTC, WMATA
 - DRPT virtual public meeting on May 4, 2021
 - Email to 40 community-based organizations and 45 elected officials
 - Email to 164 individuals on a separate DRPT listserv
- Survey was available in English and Spanish.
- Survey respondents represented a range of genders, ages, incomes, races, ethnicities, and locations in the corridor area. See slides 10-11 for a demographic profile of survey respondents.

* The survey did not apply a random sample recruitment method. Therefore, the sample does not scientifically represent the population of all corridor users.







Statistical analyses

- Correlation analysis was used to see if there were associations between demographic characteristics of respondents (i.e., race, age, gender, income, etc.), their travel behavior (i.e., work from home frequency, travel purpose, mode, and frequency), and their post-COVID transportation perceptions (i.e., top motivators to use transit and preferred transportation improvements).
- To achieve the cut-off for statistical significance, estimates must have a 0.05 significance level (a 95 percent confidence level) and a correlation coefficient above 0.15 or below -0.15. This indicates a relatively strong relationship between two variables.
- Only statistically significant relationships are discussed throughout the report. When something is statistically significant, it means it is highly unlikely to be the result of random chance.



This report summarizes survey results using charts. The totals in some charts may add up to somewhat more or less than 100% due to rounding or where respondents could select multiple responses. In addition, the total number of respondents varies from chart to chart based on how many people answered the question.



Key Findings: Comparison pre-, post-, and during the pandemic

- Respondents traveled more regularly through and within the study corridor before the stay-at-home order.
- More than half of respondents (58%) said they traveled through the study corridor 4-7 days a week <u>before</u> the pandemic, whereas less than half of respondents (44%) expected to do that <u>after</u> the pandemic.
- <u>After</u> the pandemic, many respondents (68%) expected to travel through the study corridor at least 1 day a week.

Working from home increased during COVID, but respondents expect to somewhat return to their pre-COVID travel routines after the pandemic.

- Before the pandemic, few respondents (18%) worked from home at least 2 days a week.
- During the pandemic, most respondents (74%) worked from home at least 2 days a week, with more than half of respondents (51%) work from home 5 days a week.
- After the pandemic, some respondents (43%) still expected to work from home at least 2 days a week.

Note: the post-pandemic results are based on people's expectation after COVID.



Key Findings: Comparison pre- and post- the pandemic

Travel purpose through study corridor

Top selected travel purpose (Pre-/Post-

	Pre- COVID	Post- COVID	Changes
Work	70%	62%	-8%
Errands/shopping	58%	64%	6%
Recreational activities	52%	59%	7%
Visit family/friends	41%	48%	7%

Travel mode through study corridor

Top 6 selected travel modes (Pre-/Post-COVID):

	Pre- COVID (for work commute)	Post- COVID (general)	Changes	
Drive alone	79%	86%	7%	
Metrorail	31%	34%	3%	
VRE Commuter Rail	25%	27%	2%	
Bus	25%	20%	-5%	
Carpool	13%	14%	1%	
Slug	16%	10%	-6%	

Note: the post-pandemic results are based on people's expectation after COVID.



COVID):

Key Findings: Attitudes toward transit and transit improvement

Motivators to use public transit

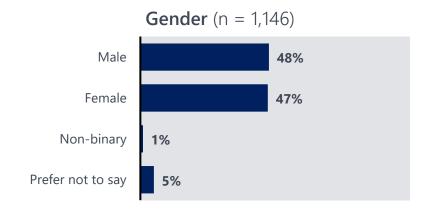
- Top motivators to use public transit:
 - 1. Easier access (51%)
 - 2. Shorter trip time (45%)
 - 3. Extended service time (41%)
 - 4. On-time arrivals and departures (29%)
 - 5. One card to pay fares across all modes (21%)
 - 6. More affordable (19%)

Transportation improvements

- Top priorities for transportation improvements
 - 1. Extension of the Metrorail system (61%)
 - 2. More frequent VRE commuter rail service in both directions (20%)

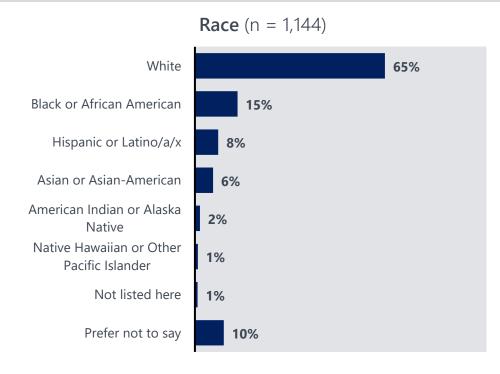


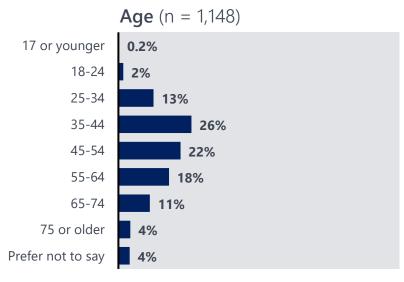
Demographic Profile – Part 1





Due to rounding, or options where participants could select multiple answers, percentages may not sum to 100%. Rounding occurs on all demographic slides.

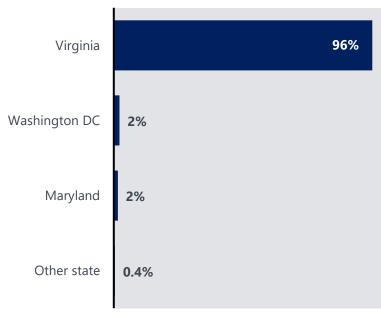






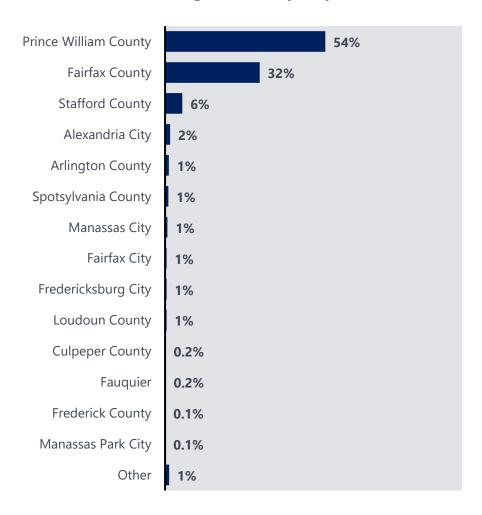
Demographic Profile – Part 2





Due to rounding, or options where participants could select multiple answers, percentages may not sum to 100%. Rounding occurs on all demographic slides.

Virginia county/city (n = 1,297)





Detailed Findings: Comparison before and after the pandemic

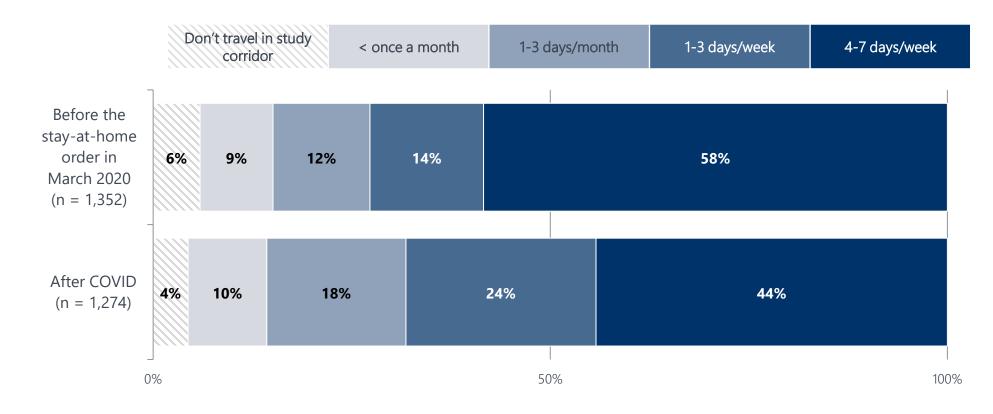


Respondents traveled more regularly through the study corridor before the stay-at-home order.

Correlations

Respondents who traveled more frequently through the study corridor <u>before</u> the pandemic plan to travel more often <u>after</u> the pandemic.

How often did/will you usually travel along the study corridor, including trips traveling through/into/out of the study corridor?





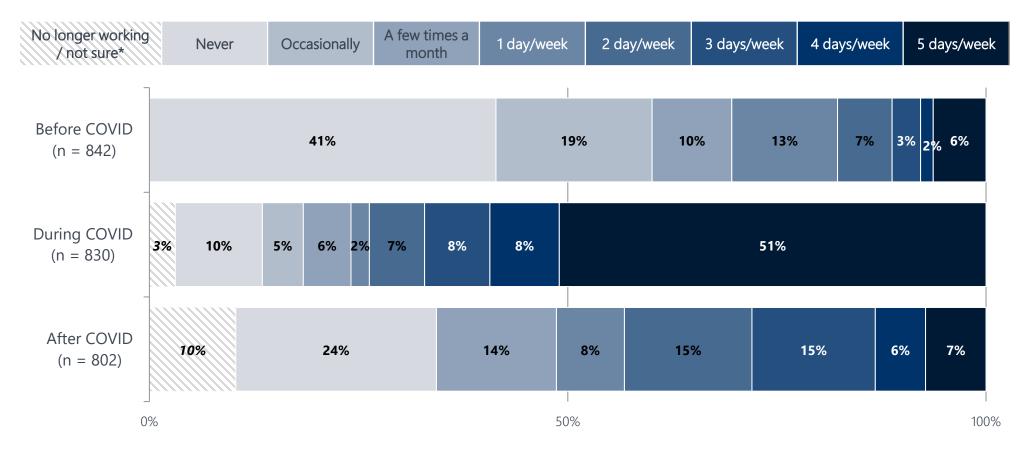
Working from home increased during COVID, but respondents expect to somewhat return to their pre-COVID travel routines after the pandemic.

Correlations

Respondents who worked from home more often <u>during</u> COVID-19 tend to have higher income.

How often did you usually work from home...

Base: all respondents who travelled for work before COVID.





Respondents travel in the corridor for work, errands, and recreational activities, both before and after COVID.

Correlations

Respondents who plan to travel for work after COVID-19 tend to:

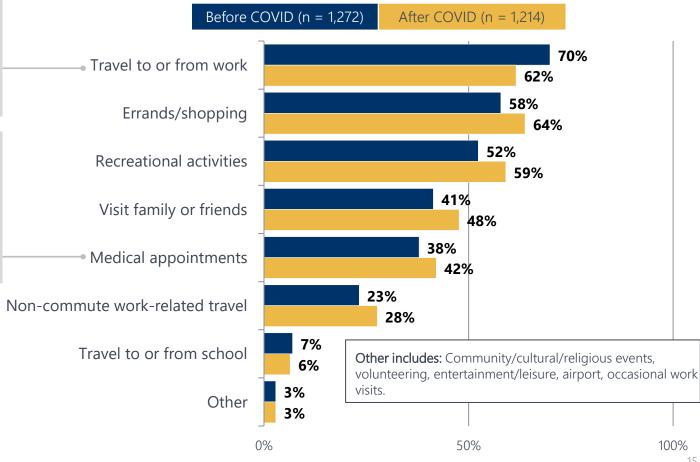
- Be people of color
- Be younger
- Have traveled more frequently through the study corridor before the pandemic

Correlations

Respondents who plan to travel for medical appointments after COVID-19 tended to travel more frequently through the study corridor before the pandemic

What was the purpose of your trips along the study corridor during weekdays?

Base: all respondents. Percentages sum to more than 100%.

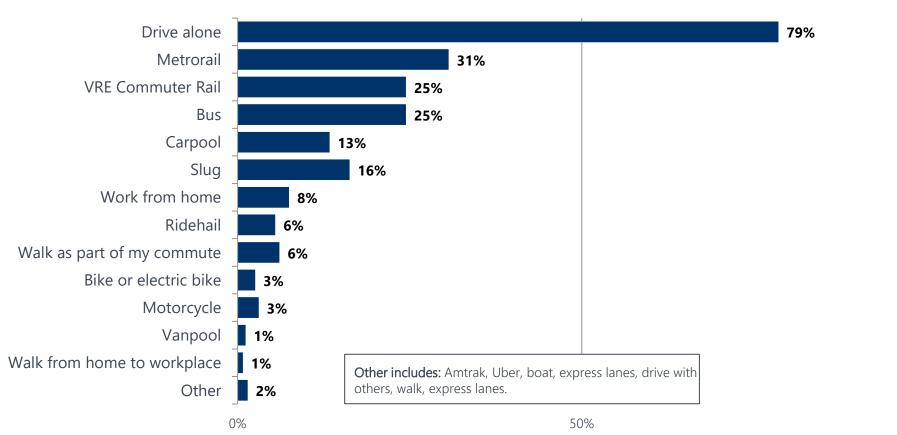




Drive alone, Metrorail, **VRE Commuter Rail**, and **bus** are the most common travel modes for work commutes before the pandemic.

Please tell us how you typically traveled anywhere along the study corridor for your work commute before COVID

Base: Respondents travel to or from work (n = 889). Percentages sum to more than 100%.



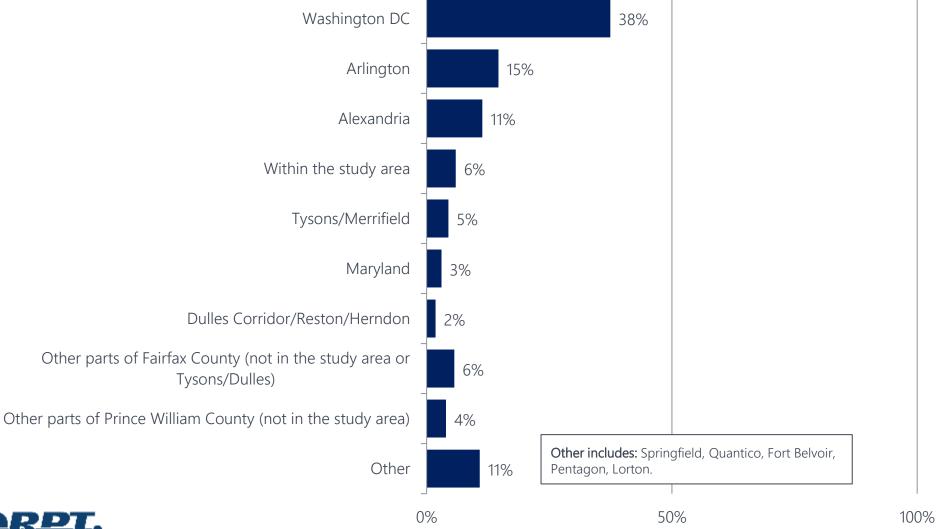


100%

Over a third (38%) commuted to Washington D.C. for work before COVID.

Where did you work before COVID?

Base: Respondents travel to or from work (n = 845).

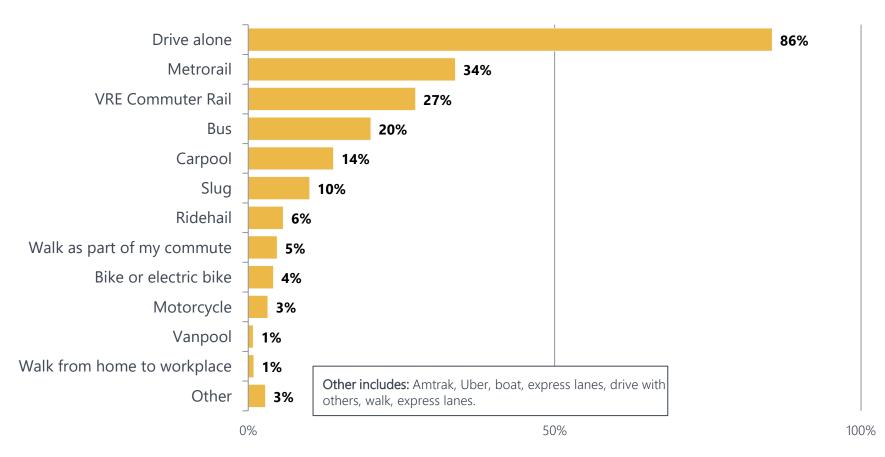




Drive alone, Metrorail, VRE Commuter Rail, and bus are the most common travel modes after the pandemic.

Please tell us how you plan to travel along the study corridor after COVID.

Base: All respondents (n = 1,206). Percentages sum to more than 100%.





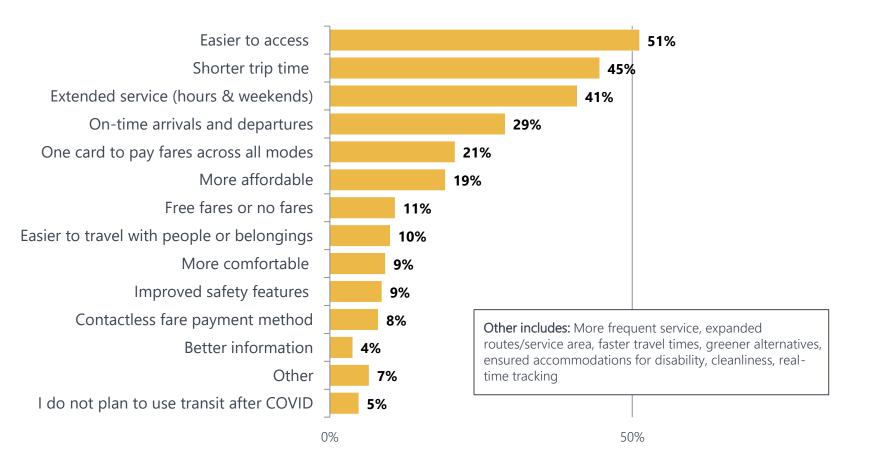
Detailed Findings: Motivators to use public transit



Easier access, shorter trip time, and extended service time are the top motivators for using public transit.

What are the top three features that would motivate you to use (or use more often) public transit for your trips along the study corridor when things return to normal after COVID?

Base: all respondents (n = 1,184). Percentages sum to more than 100%.





100%

Respondents want to see arrival times or real-time parking availability.

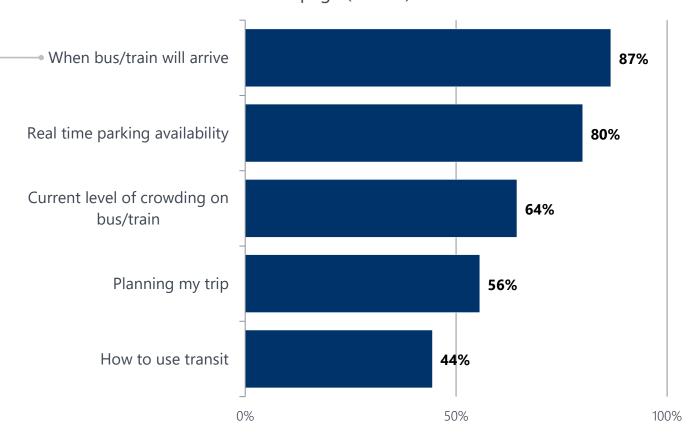
Correlations

Respondents who select this option tend to:

- Be non-Hispanic White
- Traveled along the study corridor to run errands before the pandemic.

What type of information would you like to see?

Base: Respondents who chose "better information" on the previous page (n = 45).





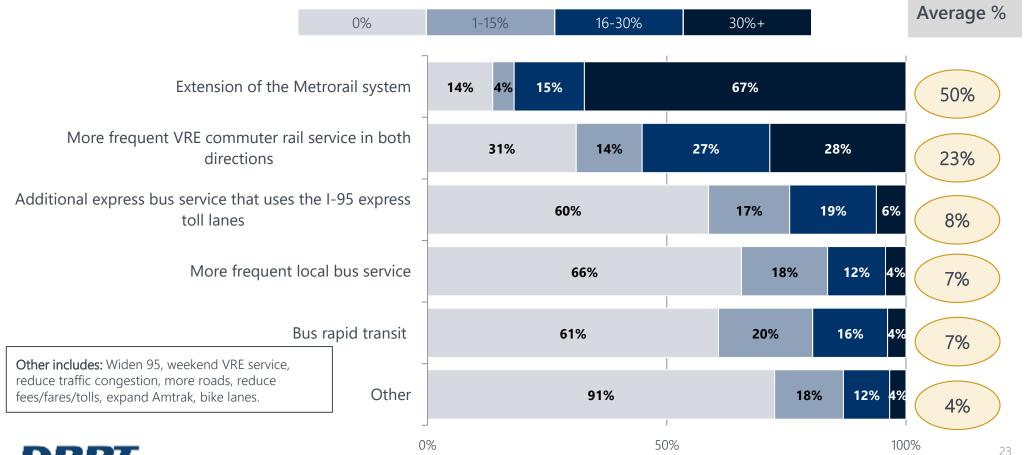
Detailed Findings: Transportation improvement options



When balancing trade-offs in funding, respondents favor **extending the Metrorail system** more than any other transportation improvement.

Let's imagine you could allocate the budget for transportation improvements in the study corridor. What percent should be spent on the following enhanced transit options?

Base: all respondents (n = 1,117).





A majority (61%-81%) expect to use the corridor for commuting to work, regardless of preferred type of transit improvement.

For your preferred type of enhanced transit _____, what do you expect would be the purpose of your trips along the study corridor during weekdays?

			Additional			
		More frequent	express bus			
		VRE commuter	service that uses			
	Extension of the	rail service in	the I-95 express	More frequent		
	Metrorail system	both directions	toll lanes	local bus service	Bus rapid transit	Other
	(n = 680)	(n = 225)	(n=58)	(n=48)	(n=38)	(n = 62)
Travel to or from work	66%	61%	81%	65%	66%	66%
Recreational activities	56%	53%	12%	46%	29%	42%
Errands/shopping	44%	37%	12%	52%	32%	40%
Visit family or friends	33%	35%	9%	27%	13%	35%
Medical appointments	27%	17%	16%	40%	26%	24%
Non-commute work-related travel	25%	26%	9%	27%	18%	18%
Travel to or from school	8%	6%	7%	4%	5%	3%
Other	4%	3%	10%	10%	5%	13%



Franconia/Springfield/Newington, Woodbridge, and Potomac Mills are the most expected destinations within the study area.

For your preferred type of enhanced transit _____, what do you expect would be your most likely destinations within the study area?

	Extension of the Metrorail system	More frequent VRE commuter rail service in both directions	Additional express bus service that uses the I-95 express toll lanes	More frequent local bus service	Bus rapid transit	Other
	(n = 680)	(n = 225)	(n=58)	(n = 48)	(n = 38)	(n = 62)
Franconia/Springfield/Newington	48%	46%	53%	52%	41%	41%
Woodbridge	45%	33%	41%	54%	35%	41%
Potomac Mills	48%	33%	22%	60%	24%	26%
Fort Belvoir	29%	21%	33%	29%	24%	25%
Dumfries	32%	26%	22%	27%	21%	23%
Quantico Marine Base	32%	22%	19%	25%	15%	28%
Lorton	28%	19%	16%	27%	18%	21%
Lake Ridge	19%	9%	22%	27%	18%	13%
Dale City	18%	10%	14%	23%	21%	13%
Mount Vernon/Hybla Valley	20%	11%	5%	21%	15%	20%
Triangle	11%	7%	10%	21%	9%	10%
Other	4%	7%	14%	4%	15%	21%



Washington D.C. is the most expected destination outside the study area.

For your preferred type of enhanced transit _____, what do you expect would be your most likely destinations <u>outside of the study area?</u>

	Extension of the Metrorail system (n = 680)	More frequent VRE commuter rail service in both directions (n = 225)	Additional express bus service that uses the I-95 express toll lanes (n = 58)	More frequent local bus service (n = 48)	Bus rapid transit (n = 38)	Other (n = 62)
Washington DC	78%	77%	66%	58%	56%	59%
Alexandria	49%	48%	19%	54%	35%	34%
Arlington	39%	39%	24%	44%	21%	26%
Pentagon	26%	16%	40%	23%	32%	11%
Tysons/Merrifield	34%	22%	17%	29%	24%	21%
Dulles Corridor/Reston/Herndon	28%	22%	17%	13%	12%	18%
Other parts of Prince William County	18%	9%	9%	31%	24%	16%
Other parts of Fairfax County	18%	12%	9%	23%	18%	16%
Maryland	15%	9%	5%	8%	6%	11%
Mark Center	9%	4%	16%	8%	9%	7%
Other	2%	10%	3%	6%	9%	11%



Appendices



Appendix ASurvey instrument



Springfield to Quantico Enhanced Public Transportation Feasibility Study

The Virginia Department of Rail and Public Transportation (DRPT) is conducting a study for enhanced public transportation services between the Franconia-Springfield Metro station in Fairfax County and the Quantico Marine Base in Prince William County (see map below). Enhanced transit could include options such as additional express bus services, VRE commuter rail expansion, bus rapid transit (BRT), or an extension of Metrorail.

By completing this brief 10-minute survey you can have your voice heard about the potential future transit enhancements. Your responses are anonymous.

The last day to complete the survey is May 17th.

Tips for taking the survey:

- Use the "Back" icon
 at the bottom of each page to return to a previous page.
- Do NOT use the "Back" arrow in your browser because that will close the survey.
- If you are using a smartphone or tablet, please scroll all the way to the bottom to complete the full survey.
- . Do not exit the survey until you are done.

If you have any technical difficulties with the survey, please contact research@prrbiz.com

Thank you for participating!

Study Area Map





First, some questions about where you live and your travel before COVID-19	In which Virginia county or city do you live?
What is your home zip code?	COVID-19 has changed so much about how we move around. For the next few questions, please think about how you got around before the pandemic .
Where do you live? Maryland	Before the stay-at-home order in March 2020, how often did you usually travel along the study corridor, including trips traveling through/into/out of the study corridor?
○ Virginia	C Less than once per month
○ Washington DC	1-3 days per month
Other state (please tell us more):	1-3 days per week
	☐ 4-7 days per week
	I did not usually travel anywhere in the study corridor

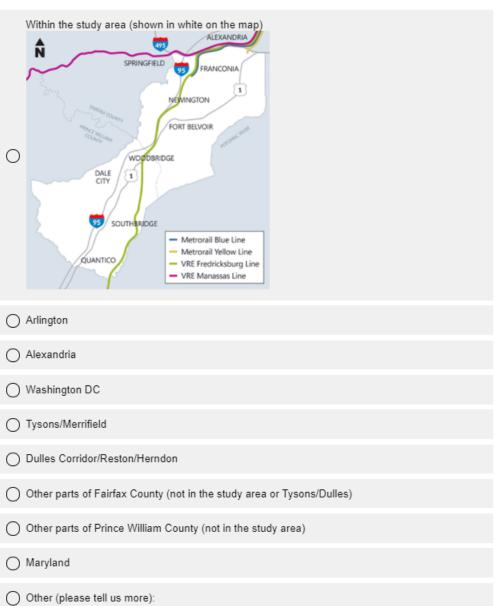


Before COVID , what was the purpose of your trips along the study corridor during weekdays? Please select all that apply.	work commute before COVID . You can check more than one method. For example, you might drive to a Park and Ride lot and then take the bus. In this		
Travel to or from work	example, you would select "Drive Alone" and "Bus".		
Travel to or from school	Drive alone		
Errands/shopping	Carpool		
Non-commute work-related travel	Slug (pickup other passengers to qualify to use the HOV lanes)		
Recreational activities	Bus		
Visit family or friends	VRE Commuter Rail		
Medical appointments	Metrorail		
Other (please tell us more):	Motorcycle		
	Vanpool		
	Ridehail (Uber, Lyft, Taxi, etc.)		
	Bike or electric bike		
	Walk from home to workplace		
What was the zip code of your main work location before COVID?	Walk as part of my commute		
	Work from home		
	Other (please tell us more):		

Please tell us how you typically traveled anywhere along the study corridor for your



Where did you work before COVID?



How often did you usually work from home before COVID?

5 or more days per week
○ 4 days per week
3 days per week
2 days per week
1 day per week
A few times per month
Occasionally (1 day per month or less)
Never



Now, we would like to learn more about **how COVID** has changed your work commute travel behavior. For these questions, please think about your work commute trips anywhere along the study corridor during COVID (since March 2020 and the stay-at-home order).

How often have you been working from home since March 2020 and the statewide stay-at-home order?

5 or more days per week
☐ 4 days per week
3 days per week
2 days per week
1 day per week
A few times per month
Occasionally (1 day per month or less)
○ Never
No longer working

How often do you expect to work at home when things return to normal after COVID?

5 or more days per week
○ 4 days per week
3 days per week
2 days per week
1 day per week
A few times per month
○ Never
○ Not sure



Appendix A

Survey instrument, continued

Now, we would like to learn your thoughts on different ways to improve travel in the study corridor between Springfield and Quantico after COVID.

After COVID , how often do you usually expect to travel along the study corriding trips traveling through/into/out of the study corridor?	Drive alone		
moduling trips traveling through interest of the study confident	Carpool		
C Less than once per month	Slug (pickup other passengers to qualify to use the HOV lanes)		
1-3 days per month	Bus		
1-3 days per week			
4-7 days per week	VRE commuter rail		
	Metrorail		
I do not expect to travel anywhere in the study corridor	Motorcycle		
After COVID, what will be the purposes of your trips along the study corridor during	Vanpool		
weekdays? Please select all that apply.	Ridehail (Uber, Lyft, Taxi, etc.)		
Travel to or from work	Bike or electric bike		
Travel to or from school			
☐ Errands/shopping	Walk from home to workplace		
Non-commute work-related travel	Walk as part of my commute		
Recreational activities	Other (please tell us more)		
☐ Visit family or friends			
Medical appointments			
Other (please tell us more):			

Please tell us how you plan to travel along the study corridor after COVID. You can

check more than one method. For example, you might drive to a Park and Ride lot

and then take the bus. In this example, you would select "Drive Alone" and "Bus".



What are the top three features that would motivate you to use (or use more often) public transit for your trips along the study corridor **when things return to normal after COVID?** (Please only select up to 3)

Extended service (longer hours throughout the week, more weekend service, etc.)
Better information
Easier to access (closer to my home or places I go, more parking at transit centers or park & rides, accommodations for people with disabilities, etc.)
Improved safety features (on board, at stops or stations, trip to/from stops/stations, etc.)
One card to pay fares across all modes
Shorter trip time (more direct service, shorter wait times, less time on board, etc.)
More affordable
Free fares or no fares
On-time arrivals and departure
Easier to travel with people or belongings (children, bikes, groceries, etc.)
Contactless fare payment method
More comfortable (on board, at stops or stations, trip to/from stops/stations, etc.)
Other (please tell us more):
I do not plan to use transit after COVID

You selected "Better Information" as a feature that would motivate you to use (or use more often) public transit for your trips along the study corridor when things return to normal after COVID. What type of information would you like to see? Select all that apply.

Real time parking availability	
When bus/train will arrive	
Current level of crowding on bus/train	
☐ How to use transit	
Planning my trip	



Let's imagine you could allocate the budget for transportation improvements in the study corridor. What percent should be spent on the following enhanced transit options?

Enter the selected amount in the text box to the right of each option. Your answer must add up to 100%.

More frequent VRE commuter rail service in both directions		
More frequent local bus service		
Bus rapid transit	0 %	
Additional express bus service that uses the I-95 express toll lanes		
Extension of the Metrorail system		
Other (please tell us more):	0 %	
Total	0 %	

Which of the following did you assign the highest percentage to in the previous question? If you assigned the highest percentage to more than one choice, please choose the one that is most important to you.

More frequent local bus service
Additional express bus service that uses the I-95 express toll lanes
More frequent VRE commuter rail service in both directions
O Bus rapid transit
Extension of the Metrorail system
Other

For your preferred type of enhanced transit "", what do you expect would be the purpose of your trips along the study corridor during **weekdays**? Please select all that apply.

Travel to or from work
Travel to or from school
☐ Errands/shopping
Non-commute work-related travel
Recreational activities
Visit family or friends
Medical appointments
Other (please tell us more):



For your preferred type of enhanced transit "", what do you expect would be your most likely destinations **within** the study area (shown in white on the map)? Please select all that apply.

Fort Belvoir
Franconia/Springfield/Newington
Lorton
Mount Vernon/Hybla Valley
Woodbridge
Lake Ridge
Potomac Mills
Dale City
☐ Dumfries
Triangle
Quantico Marine Base
Other (please tell us more):

For your preferred type of enhanced transit "", what do you expect would be your most likely destinations **outside** of the study area? Please select all that apply.

Arlington
Alexandria
Washington DC
Tysons/Merrifield
Dulles Corridor/Reston/Herndon
Pentagon
Mark Center
Other parts of Fairfax County (not in the study area or listed above)
Other parts of Prince William County (not in the study area)
Maryland
Other (please tell us more):



We'd like to ask you a few demographic questions. These questions help us ensure we're hearing from a representative group of people. Your answers to all of the survey questions, including the following demographic questions, are anonymous and will be grouped with the answers of other respondents to identify trends and patterns.

	patterns.				
	How do you identify?				
	Female				
	Male				
	○ Non-binary				
	Prefer not to say				
How old are you?					
	17 or younger				
	18-24				
	25-34				
	35-44				
	45-54				
	55-64				
	65-74				
	75 or older				
	Prefer not to say				

How do you identify? Please select all that apply.

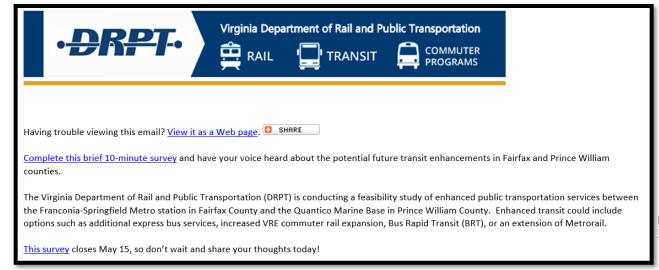
American Indian or Alaska Native
Asian or Asian-American
Black or African American
Hispanic or Latino/a/x
Native Hawaiian or Other Pacific Islander
White
Not listed here (please tell us more):
Prefer not to say
What was your total household income (before taxes) for 2020?
O Less than \$25,000
\$25,000 to \$49,999
○ \$50,000 to \$74,999
\$75,000 to \$99,999
○ \$100,000 to \$149,99
○ \$150,000 to \$199,999
\$200,000 or more

On't know or prefer not to say



Appendix BRecruitment materials







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Appendix BRecruitment materials

