

## AGENDA

10:00-10:40 am	Plenary Workshop Introduction: Overview of needs assessment process, explanations of methodology, performance measures, and thresholds.
10:40-12:00 pm	Mid-Term Needs Discussion: Breakout groups meet with facilitators to identify mid-term needs and to provide feedback on performance measures and analysis thresholds appropriate for the region.
	<p style="text-align: center;"><b>Performance Measures</b></p> <ul style="list-style-type: none"> <li>1A. Congestion Measure for Interstates and Select Limited Access Facilities- 60% of the speed limit</li> <li>1B. Congestion Measure for Interstates and Select Limited Access Facilities- 75% of the speed limit</li> <li>1C. Congestion Measure for Interstates and Select Limited Access Facilities- 90% of the speed limit</li> <li>2. Congestion Measure for Non-Limited Access COSS and Regional Network</li> <li>3A. Unreliable Demand- Weekday</li> <li>3B. Unreliable Demand- Weekend</li> <li>4. Reliability Measure for Non-Limited Access COSS and Regional Network</li> <li>5A. Amtrak On Time Performance</li> <li>5B. VRE On Time Performance</li> <li>6. Accessibility to Activity Centers</li> <li>7A. Disadvantaged Population Beyond ¼ Mile Access to Fixed-Route Transit Service- 80% Threshold</li> <li>7B. Disadvantaged Population Beyond ¼ Mile Access to Fixed-Route Transit Service- 90% Threshold</li> <li>8. Safety: Crashes by Severity</li> </ul>
12:00-1:00 pm	Lunch/ Opportunity to provide comments at UDA “open house” station
1:00-1:20 pm	Breakout groups review & validate main points, prepare for report-out
1:20-1:45 pm	Report Out: Each breakout group provides a brief summary of its key takeaways, 3-5 minutes per group
1:45-2:00 pm	Wrap Up And Next Steps: Plenary presenter invites remaining questions/ comments from full group, offers closing thoughts/ observations, reiterates the process for finalizing mid-term needs.

### SUMMARY OF TRANSPORTATION RELATED PLANS/STUDIES

Name of Plan	Agency	Date Published	Vision	Goals	Objectives/Strategies	Performance Measures
Plan2040	RRTPO	10/6/2016	The 2040 Metropolitan Transportation Plan (plan2040) is a regional, multimodal transportation planning document that typically has a 20-year horizon and is updated on a five year cycle based on air quality conformity standards. plan2040 takes into account future needs for roads, bicycle and pedestrian facilities, transit, freight and passenger rail, ports and marine facilities, and air travel. This document was formerly known as the Long-Range Transportation Plan (LRTP) before federal legislation changed the name.	Provide for transportation system connections to areas of employment density and key activity centers, with an emphasis on connecting to areas of high poverty rates.	Access to employment and activity centers was given 10 points in the scoring framework; 5 points each to improving access to employment centers and increasing accessibility to key regional activity centers with an emphasis on areas with high poverty rates.	
				Prioritize project alternatives that protect and enhance the region’s natural resources.	10 points were given to the scoring framework for environmental issues.	
				Enhance freight corridors and intermodal connections to facilitate goods movement into, within, and out of the region.	Freight mobility projects were given 10 points in the weighting and scoring framework; 5 points each for improving the regional multimodal freight network and improving access to freight-intensive facilities.	
				Implement technologies to improve travel times and support the ease of travel throughout the region.	Multimodal connectivity goals were given 10 points in the weighted scoring of projects; 2.5 points each for introducing new connections, eliminating barriers, implementing complete streets, and improving public transportation.	
				Improve accessibility and interconnectivity of various transportation modes for all system users.		
				Support transportation investments that meet the needs of existing and future land use and development patterns.	Transportation and land use issues were given a weighted scoring of 15 points; 3.75 points each for promoting infill development or brownfield redevelopment, reducing per capita VMT, improving or supporting transportation infrastructure in existing or planned growth areas, and promoting walking or bike-friendly, mixed-use development.	
				Ensure that existing transportation infrastructure and facilities achieve a consistent state of good repair.	Congestion mitigation projects were given 15 points in the project scoring framework.	
				Provide for transportation improvements that increase safety and security for all system users	Preservation and maintenance of existing infrastructure was given 10 points during the scoring of projects; 3.33 points each for promoting the useful life of transportation systems and infrastructure, prolonging the useful life of bridges, and prolonging the useful life of transportation facilities and vehicles.	
				Support transportation investments that meet the needs of existing and future land use and development patterns.	10 points were given to issues of safety and security in the weighted scoring of projects. 3.33 points each for reducing injury and fatality rates, reducing non-motorized crashes, and improving transportation system security.	

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Richmond Regional Bicycle and Pedestrian Plan	RRTPO	9/1/2004	To develop a bicycle and pedestrian plan for the Richmond region that shall be available for use by local, regional, and state agencies as a guide in developing and promoting safe and convenient facilities and services oriented toward bicycling and walking.	increase the overall number of people who regularly bicycle and/or walk in the Richmond region	Establish a regional network of roadways, sidewalks, and shared use paths that will serve bicycling and walking needs in the Richmond region	
				increase public awareness of bicycling and walking as viable modes of transportation	Use the pedestrian nodes and corridors identified in this plan to guide and focus pedestrian improvements and planning in the region	
				promote rights and responsibilities of pedestrians, bicyclists, and motorists in a shared transportation network while improving safety and enforcement	Develop a regional sign system for select network routes that is easily and quickly understood by bicyclists and pedestrians, and serves both transportation and recreation oriented trips.	
				ensure bicycle and pedestrian accommodations are considered in a balanced approach to planning and funding transportation improvements	Establish connected routes within the regional network for development as bicycle touring routes.	
				create additional physical activity opportunities in our community, increasing physical and mental wellness, as well as improving air quality for all	Continue and complete development of the planned Virginia Capital Trail.	
				provide improved opportunity and access for walking and bicycling to all residents	Integrate Interstate Bicycle Routes 1 and 76 within the region.	
				encourage the design, finance, and construction of transportation facilities that provide safe, secure, and efficient linkages for bicyclists and pedestrians throughout the Richmond region	Develop plans to upgrade, extend, and study existing and proposed shared-use paths that are identified to be part of the regional network.	
				stimulate local economies by providing safe and efficient bicycle and pedestrian connectivity between businesses, tourism, and recreation destinations	Implement a series of demonstration projects in high impact areas within this network to feature a variety of bicycle and pedestrian facility types and emerging design treatments and to build support for plan implementation among elected officials, business leaders, and the public.	
				encourage safe riding and walking practices on roads, byways, and trails in the Richmond region	Provide bicycle and pedestrian access across major barriers by improving existing crossings and developing new crossings at key locations.	
Richmond and Petersburg Coordinated Human Services Mobility Plan	RRTPO	6/1/2014		Build relationships between vendors to institute a regional transit network; Improved coordination between transportation providers	Continue to support and maintain capital needs of existing coordinated human service/public transportation providers	
				Expand services: Fixed route service to employment areas, especially growing suburban locations, weekend service throughout region. Greater midday service. Shorter and more frequent trips.	Increase the availability, affordability, reliability and inclusiveness of demand response and specialized transportation services to provide additional trips for seniors, people with disabilities, and people with lower incomes.	

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				Increase accessibility at major destinations including hospitals and shopping centers, i.e. buses cannot go through the roundabout at Henrico Hospital, and the clearance is too low for accessible vehicles; fixed-route buses also stop at the parking lot at Stony Point Mall instead of driving to a major entrance.	Bring new funding partners to public transit/human service transportation	
Greater RVA Transit Vision Plan	RRTPO	1/1/2016	By 2040, transit will connect the Richmond region through an efficient, reliable, seamless and sustainably-funded system that benefits everyone by enabling economic growth, promoting livable and walkable transit-oriented development, expanding access to jobs and services, and strengthening multimodal access within and beyond our region.		Collaborate with neighboring jurisdictions to prioritize corridors for TOD investment, and create a shared corridor master plan vision	Ridership: boardings and linked trips
					Develop corridor-specific land use plans that direct future development into Multimodal Centers around future transit stations	Population near transit
					For recommended BRT routes that have no bus service today, consider short-term actions to begin fixed route service in these corridors. This will build ridership and, if ridership is strong, help make the case for BRT investments.	Jobs near transit
Richmond Regional TPO Congestion Management Process	RRTPO	12/1/2016		Develop regional objectives	Demand Management Strategies which focus on providing more transportation options by promoting the use of alternative modes, managing and pricing assets, altering work patterns, and influencing land use	Travel times to work
				Define the CMP network		
				Develop multimodal performance measures	Traffic Operations Strategies which focus on increasing the efficiencies of the roadway network through the use of intelligent transportation systems (ITS)	Distance to jobs
				Collect data/monitor system performance		
				Analyze congestion problems and needs	Public Transportation Strategies which focus on improving transit service and coverage and rely on transportation demand management (TDM) and ITS	Means of transportation to work
				Identify, assess, program, and implement strategies	Road Capacity Strategies which focus on adding a capacity to the roadway network through redesign and new construction	Annual hours of delay
Evaluate strategy effectiveness						
Richmond/Tri-Cities Regional Intermodal Strategies Study	RRTPO	5/13/2010		Alternative employment of roundabouts versus traditional signalized intersections	Roundabout design	
					Signage practices	
				Resolve capacity constraints and road surface issues on I-64 and I-95	Asset management practices	
					Truck route plan	
					General road design	
	Revenue capture strategies					
	Container-trailer on barge service					
	Future land use associated policies					

Virginia Central Region ITS Architecture Implementation Plan	VDOT	6/23/2009	The Virginia Central Region (CR) ITS Architecture is a blueprint for the deployment of ITS in the region			
Richmond Region Rural Long-Range Transportation Plan	RRPDC	6/14/2018	The Richmond Regional Planning District Commission's (RRPDC) 2040 Rural Long Range Plan (2040 RLRP) is a visioning document developed as a transportation planning resource for RRPDC's rural area jurisdictions of Charles City, Goochland, New Kent and Powhatan counties.	Access to Employment: Provide for transportation system connections to areas of employment density and key activity centers, with an emphasis on connecting to areas of high poverty rates.	Reconstruct road to address geometric deficiencies; improve safety by straightening curves and widening to the state and local standards for a rural major collector.	
				Safety & Security: Provide for transportation improvements that increase safety and security for system users.		
				Congestion Mitigation: Support transportation system improvements that address existing and expected future traffic congestion	Intersection improvements, road widening	
				Multimodal Connectivity: Improve accessibility and interconnectivity of various transportation modes for all system users.		
				System Reliability: Implement technologies and programs to improve travel times and support the ease of travel throughout the region.		
				Freight Mobility: Enhance freight corridors and intermodal connections to facilitate goods movement into, within and out of the region.		
				Preservation & Maintenance: Ensure that existing transportation infrastructure and facilities achieve a consistent state of good repair.	Install pedestrian facilities, improve roads to state and local standards	
				Environment & Air Quality: Provide for project alternatives that protect and enhance the region's natural resources.		
Transportation & Land Use Integration: Support transportation investments that meet the needs of existing and future land use and development patterns.						

## Urban Development Area Needs Assessment- 2019 Responses

Jurisdiction	UDAs or DGAs (#)	VDOT District	Area sq. mi.	Year Designated	Improvement Urgency	Highest Rated Overall Need	Internal UDA Specific Multimodal Transportation Needs (Highest Identified Need)	In Regional Network
Amelia County	Amelia Court House Village	Richmond	0.2	2011		Friendly pedestrian and bicycle environment	Sidewalks, pedestrian infrastructure, intersection design	No
Chesterfield County	Countywide	Richmond	23.3	2015	Within 5 years	Access to transportation networks beyond the UDA	Roadway capacity, roadway operations, transit frequency, transit operations, transit capacity, transit facilities, street grid, bicycle infrastructure, pedestrian infrastructure, complete streets improvements, safety features, on-street parking, off-street parking, intersection design, traffic calming features, improvements to the natural environment, sidewalks	Yes
Goochland County	Countywide (6)	Richmond	31.9	2015	Within 5 years	Safety for All Users	roadway capacity and infrastructure, street grid, pedestrian infrastructure, safety features, intersection design, sidewalks,	Yes
Henrico County	Innsbrook Area	Richmond	2.1	2010		<i>Access to transportation networks beyond the UDA; Circulation and access within the UDA; Safety for all users</i>	<i>Street grid</i>	Yes
	Richmond-Henrico Turnpike	Richmond		2016		<i>Access to transportation networks beyond the UDA; Circulation and access within the UDA; Safety for all users</i>	<i>Street grid</i>	Yes
	Magellan Parkway	Richmond		2016		<i>Access to transportation networks beyond the UDA; Circulation and access within the UDA; Safety for all users</i>	<i>Street grid</i>	Yes
Powhatan County	Countywide (3)	Richmond	19.0	2010	Within 5 years	Safety for All Users	Roadway capacity and infrastructure, on-street parking capacity, intersection design, improvements to the natural environment,	Yes
Mecklenburg County	Town of South Hill	Richmond	0.1	2012	Beyond 5 years	Safety for All Users	Transit frequency, transit capacity and access, sidewalks,	No
Blackstone	Town of Blackstone (3)	Richmond	1.3	2016	Within 5 years	Safety for All Users	roadway capacity and infrastructure, pedestrian infrastructure, safety features, intersection design, sidewalks,	No

*Previous responses Italicized*

### UDA VARIABLES

UDA Name	Governing Bodies	Area	Year Designated	Centerline Miles	Population and Density (Persons per Acre) <sup>1</sup>	Employment and Density (Persons per Acre) <sup>2</sup>	UDA Transit	Modal Information
Goochland County - Centerville Village	PDC: Richmond Regional MPO: Richmond Regional TPO District: Richmond Jurisdiction: Goochland County	Sq. miles: 4.98 Acres: 3,185.65	2015	39.22	UDA Population: 679 UDA Population Density: 0.21	UDA employment: 944 Total UDA employment in freight related industries: 130 Total UDA employment in local serving industries: 501 Total UDA employment in knowledge-based industries: 313 UDA Employment density: 0.30	Percent of UDA population served by transit (within 1/4 mile of transit stop): 1% Percent of UDA employment served by transit (within 1/4 mile of transit stop): 1%	Number of bus stops: 5 Miles of bus routes: 0 Number of ferry stops: 0 Miles of ferry routes: 0 Number of rail stops: 0 Miles of rail: 0
Goochland County- Goochland Courthouse Village	PDC: Richmond Regional MPO: Richmond Regional TPO District: Richmond Jurisdiction: Goochland County	Sq. miles: 6.11 Acres: 3,911.05	2015	24.42	UDA Population: 871 UDA Population Density: 0.22	UDA employment: 1,953 Total UDA employment in freight related industries: 21 Total UDA employment in local serving industries: 1,900 Total UDA employment in knowledge-based industries: 33 UDA Employment density: 0.50	Percent of UDA population served by transit (within 1/4 mile of transit stop): 0% Percent of UDA employment served by transit (within 1/4 mile of transit stop): 0%	Number of bus stops: 0 Miles of bus routes: 0 Number of ferry stops: 0 Miles of ferry routes: 0 Number of rail stops: 0 Miles of rail: 0
Goochland County- Manakin Village	PDC: Richmond Regional MPO: Richmond Regional TPO District: Richmond Jurisdiction: Goochland County	Sq. miles: 2.52 Acres: 1,613.26	2015	16.57	UDA Population: 479 UDA Population Density: 0.30	UDA employment: 428 Total UDA employment in freight related industries: 50 Total UDA employment in local serving industries: 95 Total UDA employment in knowledge-based industries: 283 UDA Employment density: 0.27	Percent of UDA population served by transit (within 1/4 mile of transit stop): 0% Percent of UDA employment served by transit (within 1/4 mile of transit stop): 0%	Number of bus stops: 0 Miles of bus routes: 0 Number of ferry stops: 0 Miles of ferry routes: 0 Number of rail stops: 0 Miles of rail: 0
Goochland County- Oilville Village	PDC: Richmond Regional MPO: Richmond Regional TPO District: Richmond Jurisdiction: Goochland County	Sq. miles: 3.57 Acres: 2,282.62	2015	26.49	UDA Population: 407 UDA Population Density: 0.18	UDA employment: 470 Total UDA employment in freight related industries: 367 Total UDA employment in local serving industries: 75 Total UDA employment in knowledge-based industries: 27 UDA Employment density: 0.21	Percent of UDA population served by transit (within 1/4 mile of transit stop): 0% Percent of UDA employment served by transit (within 1/4 mile of transit stop): 0%	Number of bus stops: 0 Miles of bus routes: 0 Number of ferry stops: 0 Miles of ferry routes: 0 Number of rail stops: 0 Miles of rail: 0
Goochland County- River Road Communities	PDC: Richmond Regional MPO: Richmond Regional TPO District: Richmond Jurisdiction: Goochland County	Sq. miles: 7.17 Acres: 4,590.67	2015	36.30	UDA Population: 1,660 UDA Population Density: 0.36	UDA employment: 198 Total UDA employment in freight related industries: 26 Total UDA employment in local serving industries: 100 Total UDA employment in knowledge-based industries: 73 UDA Employment density: 0.04	Percent of UDA population served by transit (within 1/4 mile of transit stop): 0% Percent of UDA employment served by transit (within 1/4 mile of transit stop): 0%	Number of bus stops: 0 Miles of bus routes: 0 Number of ferry stops: 0 Miles of ferry routes: 0 Number of rail stops: 0 Miles of rail: 0
Goochland County- West Creek Area	PDC: Richmond Regional MPO: Richmond Regional TPO District: Richmond Jurisdiction: Goochland County	Sq. miles: 7.52 Acres: 4,810.48	2015	49.06	UDA Population: 1,173 UDA Population Density: 0.24	UDA employment: 9,170 Total UDA employment in freight related industries: 163 Total UDA employment in local serving industries: 7,628 Total UDA employment in knowledge-based industries: 1,379 UDA Employment density: 1.91	Percent of UDA population served by transit (within 1/4 mile of transit stop): 0% Percent of UDA employment served by transit (within 1/4 mile of transit stop): 0%	Number of bus stops: 0 Miles of bus routes: 0 Number of ferry stops: 0 Miles of ferry routes: 0 Number of rail stops: 0 Miles of rail: 0

UDA Name	Governing Bodies	Area	Year Designated	Centerline Miles	Population and Density (Persons per Acre) <sup>1</sup>	Employment and Density (Persons per Acre) <sup>2</sup>	UDA Transit	Modal Information
Henrico County - Magellan Parkway	PDC: Richmond Regional MPO: Richmond Regional TPO District: Richmond Jurisdiction: Henrico County	Sq. miles: 1.43 Acres: 914.78	2016	6.09	UDA Population: 1,635 UDA Population Density: 1.79	UDA employment: 2,027 Total UDA employment in freight related industries: 1,000 Total UDA employment in local serving industries: 283 Total UDA employment in knowledge-based industries: 744 UDA Employment density: 2.22	Percent of UDA population served by transit (within 1/4 mile of transit stop): 0% Percent of UDA employment served by transit (within 1/4 mile of transit stop): 0%	Number of bus stops: 0 Miles of bus routes: 0 Number of ferry stops: 0 Miles of ferry routes: 0 Number of rail stops: 0 Miles of rail: 0
Henrico County - Richmond-Henrico Turnpike	PDC: Richmond Regional MPO: Richmond Regional TPO District: Richmond Jurisdiction: Henrico County	Sq. miles: 1.67 Acres: 1,067.10	2016	1.21	UDA Population: 1,996 UDA Population Density: 1.87	UDA employment: 183 Total UDA employment in freight related industries: 28 Total UDA employment in local serving industries: 148 Total UDA employment in knowledge-based industries: 7 UDA Employment density: 0.17	Percent of UDA population served by transit (within 1/4 mile of transit stop): 14% Percent of UDA employment served by transit (within 1/4 mile of transit stop): 14%	Number of bus stops: 23 Miles of bus routes: 0.22 Number of ferry stops: 0 Miles of ferry routes: 0 Number of rail stops: 0 Miles of rail: 0
Henrico County-Innsbrook Area	PDC: Richmond Regional MPO: Richmond Regional TPO District: Richmond Jurisdiction: Henrico County	Sq. miles: 2.06 Acres: 1,320.42	2010	23.41	UDA Population: 2,960 UDA Population Density: 2.24	UDA employment: 24,563 Total UDA employment in freight related industries: 1,415 Total UDA employment in local serving industries: 13,068 Total UDA employment in knowledge-based industries: 10,080 UDA Employment density: 18.60	Percent of UDA population served by transit (within 1/4 mile of transit stop): 27% Percent of UDA employment served by transit (within 1/4 mile of transit stop): 27%	Number of bus stops: 16 Miles of bus routes: 3.09 Number of ferry stops: 0 Miles of ferry routes: 0 Number of rail stops: 0 Miles of rail: 0
Powhatan County-Courthouse Village	PDC: Richmond Regional MPO: Richmond Regional TPO District: Richmond Jurisdiction: Powhatan County	Sq. miles: 5.16 Acres: 3,304.99	2010	33.39	UDA Population: 650 UDA Population Density: 0.20	UDA employment: 1,351 Total UDA employment in freight related industries: 93 Total UDA employment in local serving industries: 1,217 Total UDA employment in knowledge-based industries: 40 UDA Employment density: 0.41	Percent of UDA population served by transit (within 1/4 mile of transit stop): 0% Percent of UDA employment served by transit (within 1/4 mile of transit stop): 0%	Number of bus stops: 0 Miles of bus routes: 0 Number of ferry stops: 0 Miles of ferry routes: 0 Number of rail stops: 0 Miles of rail: 0
Powhatan County-Route 60 Corridor East	PDC: Richmond Regional MPO: Richmond Regional TPO District: Richmond Jurisdiction: Powhatan County	Sq. miles: 10.67 Acres: 6,828.88	2010	42.58	UDA Population: 1,859 UDA Population Density: 0.27	UDA employment: 1,886 Total UDA employment in freight related industries: 871 Total UDA employment in local serving industries: 747 Total UDA employment in knowledge-based industries: 268 UDA Employment density: 0.28	Percent of UDA population served by transit (within 1/4 mile of transit stop): 0% Percent of UDA employment served by transit (within 1/4 mile of transit stop): 0%	Number of bus stops: 0 Miles of bus routes: 0 Number of ferry stops: 0 Miles of ferry routes: 0 Number of rail stops: 0 Miles of rail: 0
Powhatan County-Route 711 Village	PDC: Richmond Regional MPO: Richmond Regional TPO District: Richmond Jurisdiction: Powhatan County	Sq. miles: 3.16 Acres: 2,019.56	2010	16.14	UDA Population: 220 UDA Population Density: 0.11	UDA employment: 159 Total UDA employment in freight related industries: 11 Total UDA employment in local serving industries: 109 Total UDA employment in knowledge-based industries: 38 UDA Employment density: 0.08	Percent of UDA population served by transit (within 1/4 mile of transit stop): 0% Percent of UDA employment served by transit (within 1/4 mile of transit stop): 0%	Number of bus stops: 0 Miles of bus routes: 0 Number of ferry stops: 0 Miles of ferry routes: 0 Number of rail stops: 0 Miles of rail: 0
Chesterfield County Designated Growth Areas	PDC: Richmond Regional MPO: Richmond Regional TPO District: Richmond Jurisdiction: Chesterfield County	Sq. miles: 23.31 Acres: 14,919.43	2015	313.85	UDA Population: 33,891 UDA Population Density: 2.27	UDA employment: 24,418 Total UDA employment in freight related industries: 2,124 Total UDA employment in local serving industries: 18,539 Total UDA employment in knowledge-based industries: 3755 UDA Employment density: 1.64	Percent of UDA population served by transit (within 1/4 mile of transit stop): 2% Percent of UDA employment served by transit (within 1/4 mile of transit stop): 2%	Number of bus stops: 44 Miles of bus routes: 10.51 Number of ferry stops: 0 Miles of ferry routes: 0 Number of rail stops: 0 Miles of rail: 0

<sup>1</sup> Source: United States Census Bureau, American Community Survey 2013-2017

<sup>2</sup> Source: United States Census Bureau, Longitudinal Employer-Household Dynamics 2015