Connect RVA 2045

Project Prioritization Process

RRTPO

Technical Advisory Committee Meeting

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Presentation by:

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Background

- RRTPO Planning process to fully move towards Performance-Based Planning and Programming (PBPP).
- Need-based, Goal-based, Performance-based.
- Project performance measures which will access the degree to which any project implementation will advance the established Vision, Goals and Objectives.
- Data Driven, Transparent and Understandable process which leaves no room for personal judgement or subjective nature of scoring.
- Score in not based on better project description or the severity of the current condition but the actual merit/ performance of the project implementation.
- Score is based on the “Delta” difference in No-Build and Build Conditions.
- Fair for all regions (Urban, Sub-Urban, Rural) and modes of transportation.
- Scoring is relative and has a cost-benefit element.
- Variety of performance measures to minimize overlap.
- Data and tool availability, staff capacity and time-factor.
- Some of the measures relatively similar or simplified versions used in Smart Scale.

Goal & PM Weights

ConnectRVA 2045			
Goals	**Project Performance Measure**	**PM Weights**	**Goal Weights**
Safety	Crash Frequency	17.50%	25.00%
	Crash Rate	7.50%	
Mobility	Person Throughput	7.50%	15.00%
	Person Hours of Delay	7.50%	
Equity and Accessibility	Access to Jobs	7.50%	25.00%
	Access to Jobs (EJ)	5.00%	
	Access to Destinations	7.50%	
	Access to Destinations (EJ)	5.00%	
Economic Development	Job Growth	7.50%	15.00%
	Connection to Truck Intensive Areas	3.75%	
	Truck Throughput	3.75%	
Environment/ Land Use	Sensitive Features	5.00%	20%
	Air Pollution	5.00%	
	VMT per Capita	5.00%	
	Connection to Activity Center	5.00%	

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Performance Measures (1)

LRTP Goals	Safety		Mobility		Equity and Accessibility			
Project Performance Measure	**Crash Frequency**	**Crash Rate**	**Person Throughput**	**Person Hours of Delay**	**Access to Jobs**	**Access to Jobs (EJ)**	**Access to Destinations**	**Access to Destinations (EJ)**
Description	Reduction in Equivalent Property Damage Only (EPDO) of Fatal and Injury Crashes avoided (5 year sample)	Reduction in Equivalent Property Damage Only (EPDO) of Fatal and Injury Crashes per 1M VMT or 1 M Vehicles	Increase in Person Throughput (Peak Period)	Reduction in Person Hours of Delay (Peak Period)	Increase in average job accessibility per person	Increase in average job accessibility per person (Total EJ Population within EJ Area)	Increase in average access to destinations per 1000 persons	Increase in average access to destinations per 1000 persons (Total EJ Population within EJ Areas)
Unit of Measurement	EPDO	EPDO/1 M VMT	Persons	Person Hours	Jobs Per person	Jobs per Person	Weighted Destinations per 1000 Persons	Weighted Destinations per 1000 Persons

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Performance Measures (2)

LRTP Goals	Economic Development			Environment/Land Use			
Project Performance Measure	**Job Growth***	**Connection to Truck Intensive Areas***	**Truck Throughput**	**Sensitive Features***	**Air Pollution**	**VMT per Capita**	**Connection to Activity Center***
Description	Increase in the decay weighted quantity of job growth adjacent to the project	Increase in the Truck Intensive units adjacent to the project from 2017 to 2045.	Increase in Truck Throughput (All Day Period)	Pertcentage of Wetland, Resiliency Water Hazard Zones, Cons. Land, Habitat, and Cultural Resources within 1/4 mile of the project limit	Reduction of annual VOC and NOx in metric tons	Reduction in Daily VMT per capita	Increase in the Activity Units adjacent to the project from 2017 to 2045.
Unit of Measurement	Jobs	Truck Intensive Units	Trucks	Percentage of overlap	Metric tons/Year	VMT per Capita	Activity Units

Scoring

Project Scorecard

FHW-1 **Archie Cannon Dr New Overpass** **Ashland**

Facility

Archie Cannon Dr

Functional Classification

Major Collector

Project Type

New Overpass

Construction of a bridge over CSX RR

LRTP Goals	Safety		Mobility		Equity and Accessibility				Economic Development			Environment/Land Use			
Project Performance Measure (PM)	Crash Frequency	Crash Rate	Person Hours of Delay	Person Through-put	Access to Jobs	Access to Jobs (EJ)	Access to Destinations	Access to Destinations (EJ)	Job Growth	Connection to Truck Intensive Areas	Truck Through-put	Sensitive Features	Air Polution	VMT per Capita	Connections to Activity Centers
PM Value															
Normalized PM Value Relative to other Projects	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
PM Weight	70%	30%	50%	50%	30%	20%	30%	20%	50%	25%	25%	25%	25%	25%	25%
Goal Value	#DIV/0!		#DIV/0!		#DIV/0!				#DIV/0!			#DIV/0!			
Goal Weight	25%		15%		25%				15%			20%			
Weighted Goal Value	#DIV/0!		#DIV/0!		#DIV/0!				#DIV/0!			#DIV/0!			
Project Benefit	#DIV/0!														
Project Cost	$33,282,000														
ConnectRVA 2045 Project Score *	**#DIV/0!**														

* Benefit divided by cost in tens of millions dollars

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Project Prioritization: Connect RVA2045 Vs Smart Scale Round 4 (1)

ConnectRVA 2045			Smart Scale - Round 4			Comparison
Goals	Project Performance Measure	Weights	Factors	Measures	Weights	
Safety	Crash Frequency	17.50%	Safety	Crash Frequency	14.00%	Relatively same. More simplified in terms of project impact areas for ConnectRVA 2045, generalized as 250 foot buffer for all project types. More weight in ConnectRVA 2045
	Crash Rate	7.50%		Crash Rate	6.00%	Relatively same. More weight in ConnectRVA 2045
Mobility	Person Throughput	7.50%	Congestion Mitigation	Person throughput	7.50%	Analyzed for future year 2045 in ConnectRVA 2045 whereas analyzed based on current data for Smart Scale. More simplified and based only on RTC Travel Demand Model in ConnectRVA 2045
	Person Hours of Delay	7.50%		Person Hours of Delay	7.50%	Same as above
Equity and Accessibility	Access to Jobs	7.50%	Accessibility	Access to Jobs	15.00%	Relatively similar process with regionally developed data and RRTPO's own accessibility tool in ConnectRVA 2045
	Access to Jobs (EJ)	5.00%		Access to Jobs (EJ)	5.00%	EJ Areas designated by RRTPO. EJ Population as defined by RRTPO and includes Minority, Low Income, Limited English Proficiency, Elderly, Population with Disabilities and Zero-Car Household populations.
	Access to Destinations	7.50%		Access to Multimodal Choices	5.00%	New measure in ConnectRVA 2045 which looks at access to weighted destinations in the region. Grocery stores, pharmacies and health care considered as essential destinations. Schools and colleges, libraries, government centers and parks considered as non-essential destinations.
	Access to Destinations (EJ)	5.00%		N/A	N/A	New measure in ConnectRVA 2045. Overall equity component is 10% in ConnectRVA 2045 whereas it is 5% in Smart Scale.

Project Prioritization: Connect RVA2045 Vs Smart Scale Round 4 (2)

ConnectRVA 2045			Smart Scale - Round 4			Comparison
Goals	Project Performance Measure	Weights	Factors	Measures	Weights	
Economic Development	Job Growth	7.50%	Economic Development	Project Support for Economic Development	12.00%	Relatively simpler in ConnectRVA 2045. Smart Scale looks at specific site plans and square footages whereas ConnectRVA 2045 generalizes at the TAZ level
	Connection to Truck Intensive Areas	3.75%		Intermodal Access and Efficiency	4.00%	Relatively simpler and more data driven method in ConnectRVA 2045 which looks at the new increase in truck Intensive units in the region from 2017 to 2045
	Truck Throughput	3.75%		Travel Time Reliability	4.00%	Relatively simpler measure in ConnectRVA 2045 measuring the increase in truck throughout rather than travel time reliability
Environment / Land Use	Sensitive Features	5.00%	Environment	Impact to Natural and Cultural Resources	up to minus 5.00%	Similar to Smart Scale. ConnectRVA 2045 does not include battlefields but does include additional measures of resiliency including sea level rise, floodplains, and storm surge
	Air Pollution	5.00%		Air Quality and Energy Environmental Effect	10.00%	More data driven air quality modeling approach in ConnectRVA 2045 which uses speed bins for NOx and VOC emission factors.
	VMT per Capita	5.00%	Land Use	Future Transportation Efficient Land Use	5.00%	Smart Scale is focused on non-work destinations within walking distance. The ConnectRVA 2045 measure is more general and looks at the regionwide influence of a project on commuting patterns.
	Connection to Activity Center	5.00%		Increase in Transportation Efficient Land Use	5.00%	Smart Scale narrowly focuses on destinations within walking distance in centers. ConnectRVA 2045 also gives credit for nearby projects (up to 2 miles away) which serve activity centers.

Connect RVA 2045

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