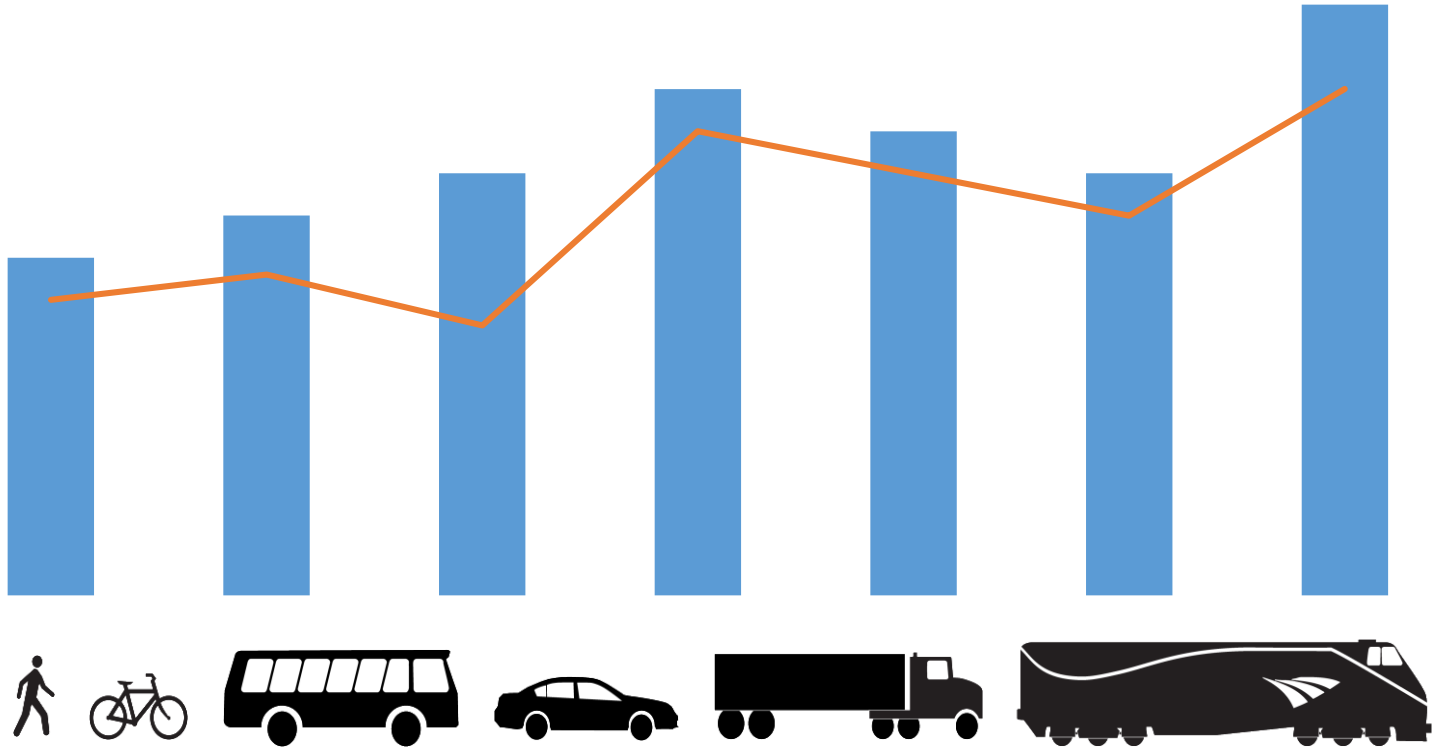
Regional Performance Measures

Annual Progress Report • 2015



RRTPO Board - 1/7/2016

Presentation by:
Chris Wichman, Senior Planner

Overview

- History and definition of performance-based planning & programming
- Review of *Regional Performance Measures – Annual Progress Report 2015*
- Next Steps

History

Where did 'performance-based planning and programming' approach come from?

State

- HB 2019, Chapter 670 of the 2009 Acts of General Assembly
- HB 30, Chapter 874 of the 2010 Acts of General Assembly
  (see VA Code §2.2-229, §33.2-353)

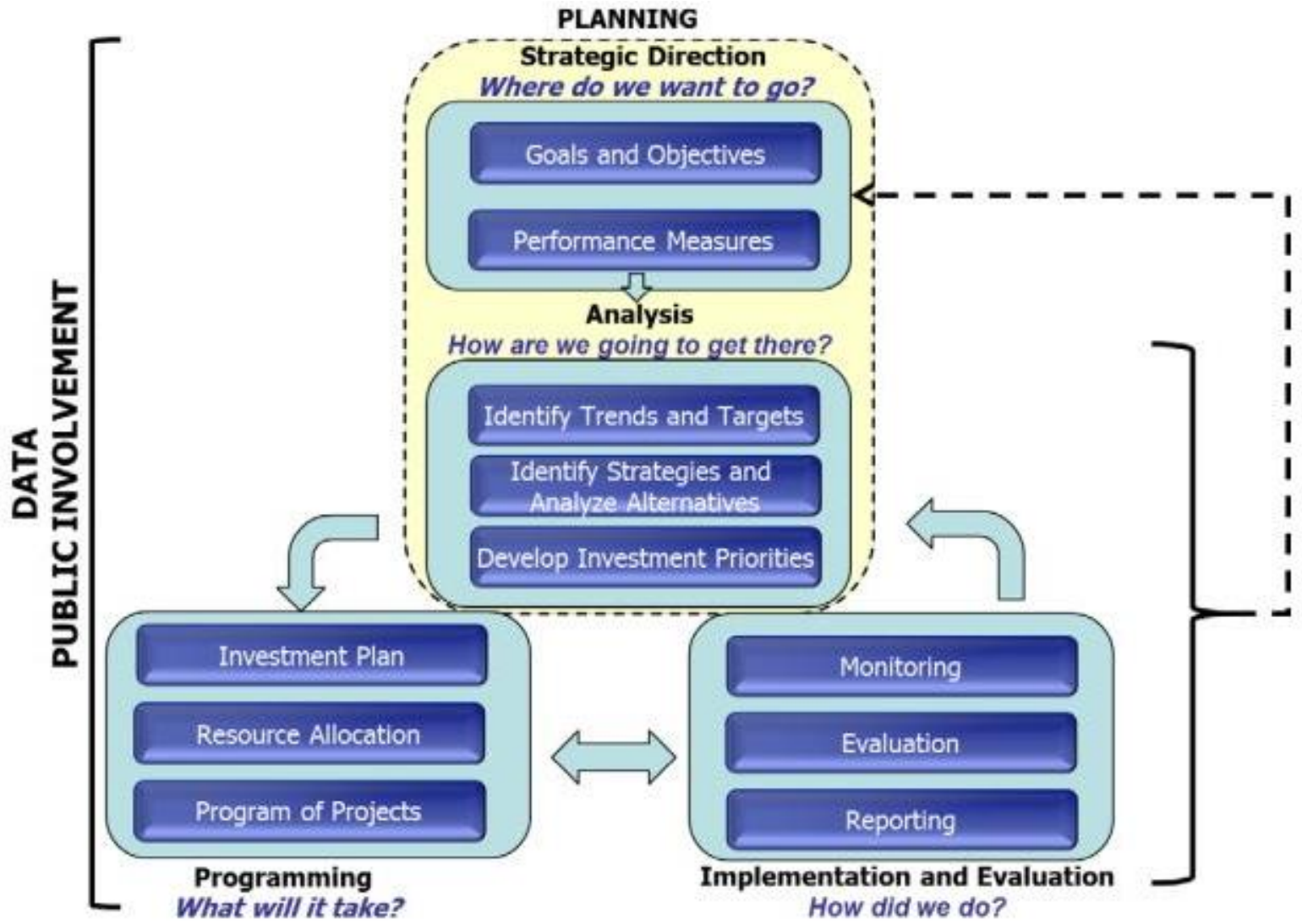
Federal

- MAP-21, Moving Ahead for Progress in the 21st Century Act of 2012

Definition

Performance-based planning and programming includes using transportation performance measures, setting targets, reporting performance, and programming transportation investments directed toward the achievement of transportation system performance outcomes. (FHWA)

Process



Source: FHWA, "Performance-Based Planning and Programming Guidebook"

Part 1 – Summary Table

Notes on the summary table:

- Measures are at ‘regional’ scale
- Geographic area defining ‘regional’ differs by measure
- Required no first-hand data collection, staff aggregated publicly available data sources
- Three types of measures: ‘Board Approved’; ‘Additional Measures’; ‘Future Measures’.

Goal	Measure	2009	2010	2011	2012	2013	2014	Desired Trend	Actual Trend	Measure Status
Congestion Mitigation	*Annual Delay per peak period commuter[1], hours	33	33	33	33	34	34	↘	→	Board Approved
	Fuel Loss per peak period commuter[2], gallons	13	13	13	14	14	14	↘	→	Board Approved
	*INRIX peak period travel time index[3]	1.12	1.12	1.12	1.12	1.13	1.13	n.a	→	Additional Measure
	Annual congestion costs[4], per peak period commuter	$746	$754	$733	$727	$736	$729	n.a.	↘	Additional Measure
Transportation and Land Use Integration	*Daily VMT[5], per capita	n.a.	27.9	27.7	27.6	27.4	n.a.	n.a.	↘	Board Approved
	*Jobs/Housing Ratio[6]	n.a.	n.a.	n.a.	1.28	n.a.	n.a.	→	n.a.	Board Approved
	*Jobs/Housing Dissimilarity Index[7]	0.066	0.0596	0.061	0.0555	0.0485	n.a.	< .5	✓	Board Approved
	*% Workers working in jurisdiction in which they live[8]	48.5%	48.8%	49.1%	48.9%	48.6%	n.a.	↗	↘	Board Approved
	Travel Time to Work[9]	23.4	23.6	23.6	23.9	24	n.a.	n.a.	→	Additional Measure
	Population Density[10], persons per square mile	n.a.	n.a.	n.a	475	n.a.	n.a.	n.a.	n.a.	Additional Measure
Environmental and Air Quality	*Ozone Exceedances[11]	n.a.	n.a.	11	11	1	1	↘	→	Board Approved
	*Air Quality Index Exceedances[12]	1	10	12	11	1	1	n.a.	→	Additional Measure
	Wetlands Impact, acres	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	Future Measure
	Fuel Usage, gallons per capita	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	Future Measure
	Greenhouse Gas Emissions	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	Future Measure
	Mobile Source Emissions	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	Future Measure
Freight Mobility	*Commodity Flow, Freight Mode Share[13], by tons									Board Approved
	Truck	n.a.	n.a.	n.a.	67%	n.a.	n.a.	n.a.	n.a.	
	Rail	n.a.	n.a.	n.a.	30%	n.a.	n.a.	n.a.	n.a.	
	*Commodity Flow, Freight Mode Share[13], by dollar value									Board Approved
	Truck	n.a.	n.a.	n.a.	82%	n.a.	n.a.	n.a.	n.a.	
	Rail	n.a.	n.a.	n.a.	5%	n.a.	n.a.	n.a.	n.a.	
	*Port of Richmond Containers - Export[14]	n.a.	n.a.	n.a.	3,241	4,775	7,415	n.a.	↗	Additional Measure
	*Port of Richmond Containers - Import[14]	n.a.	n.a.	n.a.	3,205	4,821	6,699	n.a.	↗	Additional Measure
	Transportation/Warehousing Sector Employment[15]	19,406	19,172	19,263	19,438	19,743	21,074	n.a.	↗	Additional Measure
	Daily Truck Travel	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	Future Measure
Multimodal Connectivity	Park and Ride Lots / Spaces[16], number	n.a.	11 / 1,760	11 / 1,760	11 / 1,760	12 / 1,987	12 / 1,987	↗	→	Board Approved
	RideFinders Vanpools[17], number	n.a.	n.a.	117	120	137	138	↗	↗	Board Approved
	*Annual Passenger Rail Ridership[18], number	296,216	313,026	375,226	404,700	439,525	427,426	↗	↘	Board Approved
	Annual Transit Trips[19], per capita	30.7	31.6	28.5	22.3	19.5	n.a.	↗	↘	Board Approved
	Transit Passenger Miles[20], per capita	154.0	158.7	139.1	152.0	140.7	n.a.	↗	↘	Board Approved
	Transit Revenue Miles[21], number	10,894,167	11,310,381	11,319,872	11,486,456	11,418,456	n.a.	↗	↘	Board Approved
	Transit Revenue Miles[22], per capita	24.2	25.2	25.2	25.5	25.4	n.a.	↗	↘	Board Approved
	*Pedestrian to Work[23], percent	1.55%	1.57%	1.65%	1.47%	1.56%	n.a.	↗	↗	Board Approved
	*Regional Households served by Transit[24], percent	n.a.	n.a.	n.a.	42.83%	n.a.	n.a.	↗	n.a.	Board Approved

Part 2 – Analysis Report

Notes on the analysis report:

- Sections organized by MTP Goals
- Description of RRTPO requirements (federal and state) and UWP tasks related to MTP goal
- Overview of ‘Related Studies, Programs and Projects’
- ‘Inside the Numbers’ for selected measures

REPORT FORMAT EXAMPLE - CONGESTION MITIGATION

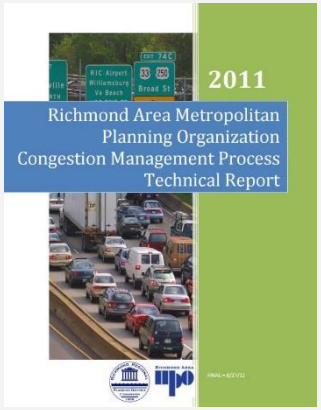
RRTPO 2040 MTP Goal:

"Support transportation system improvements that address existing and expected future traffic congestion"

The RRTPO Congestion Management Process (CMP) is a core component of the agencies work program, and a federally mandated function of metropolitan planning organizations. The CMP, as defined by the Federal Highway Administration, is a systematic and regionally-accepted approach for managing congestion that provides accurate, up-to-date information on transportation system performance to assess alternative strategies for congestion management that meet state and local needs. For a thorough analysis of the region's congestion issues and strategies see the Congestion Management Process Technical Report which is updated by the RRTPO every five years, in conjunction with the Metropolitan Transportation Plan (MTP).

The following performance measures provide a regional scale look at congestion, including trends over time and comparisons to peer and comparably sized metropolitan areas. This analysis relies on data from studies released by INRIX and the Texas Transportation Institute (TTI). At present, the annual TTI Urban Mobility Report is the industry standard for congestion data. The TTI report includes information on the amount of time travelers in 100 urbanized areas spend in congestion, fuel loss and other costs borne by auto commuters due to congestion.

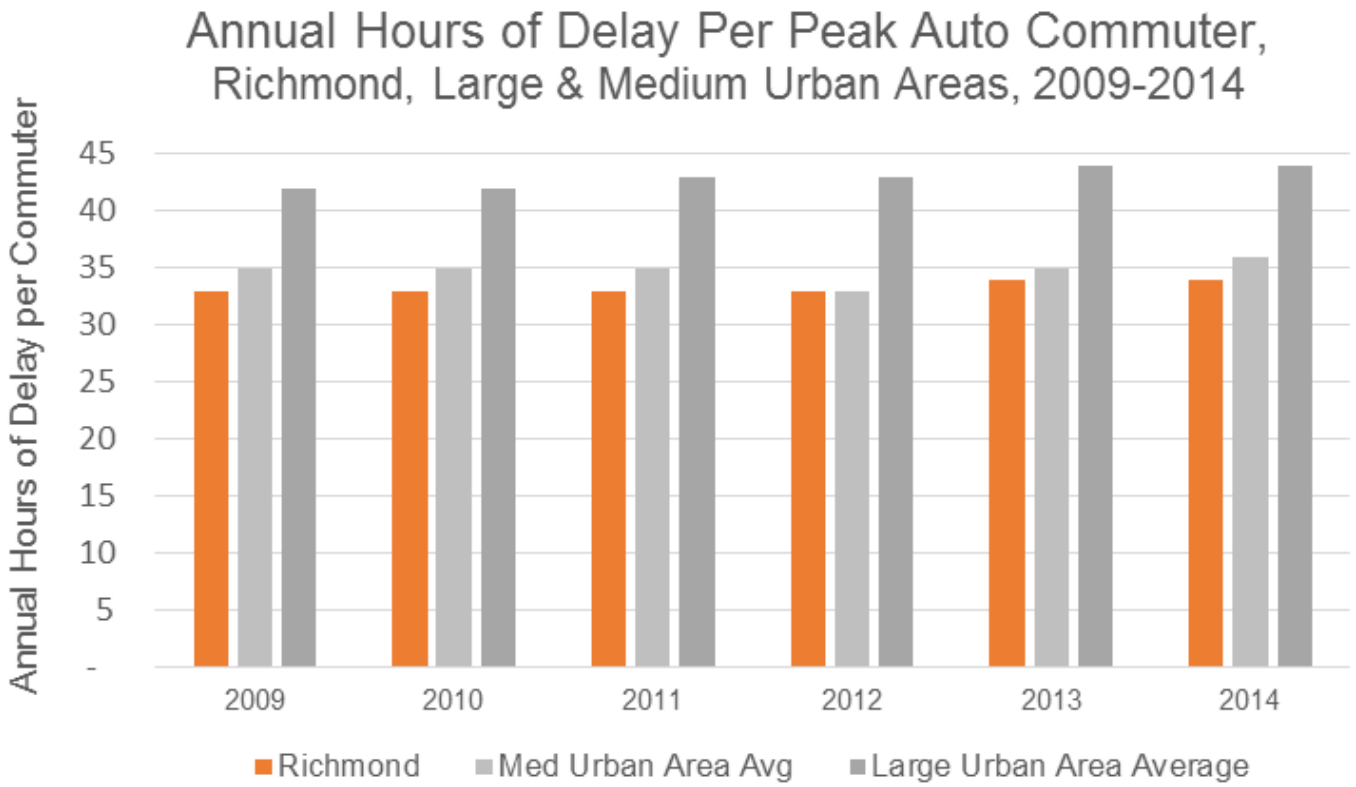
Related Studies, Programs & Projects



The **Congestion Management Process (CMP) Technical Report** is an evaluation of the current conditions of the Richmond region's transportation network in terms of operations and safety. This thorough analysis of the regional roadway network is used to identify congested corridors and safety needs, and includes strategies to alleviate the identified issues.

The **Intelligent Transportation Systems Work Group** provides planning and programming support and assistance to the RRTPO Technical Advisory Committee (TAC) related to ITS projects in the Richmond region. ITS refers to the integration of advanced communications technologies into transportation infrastructure and/or in vehicles to improve transportation safety and mobility.

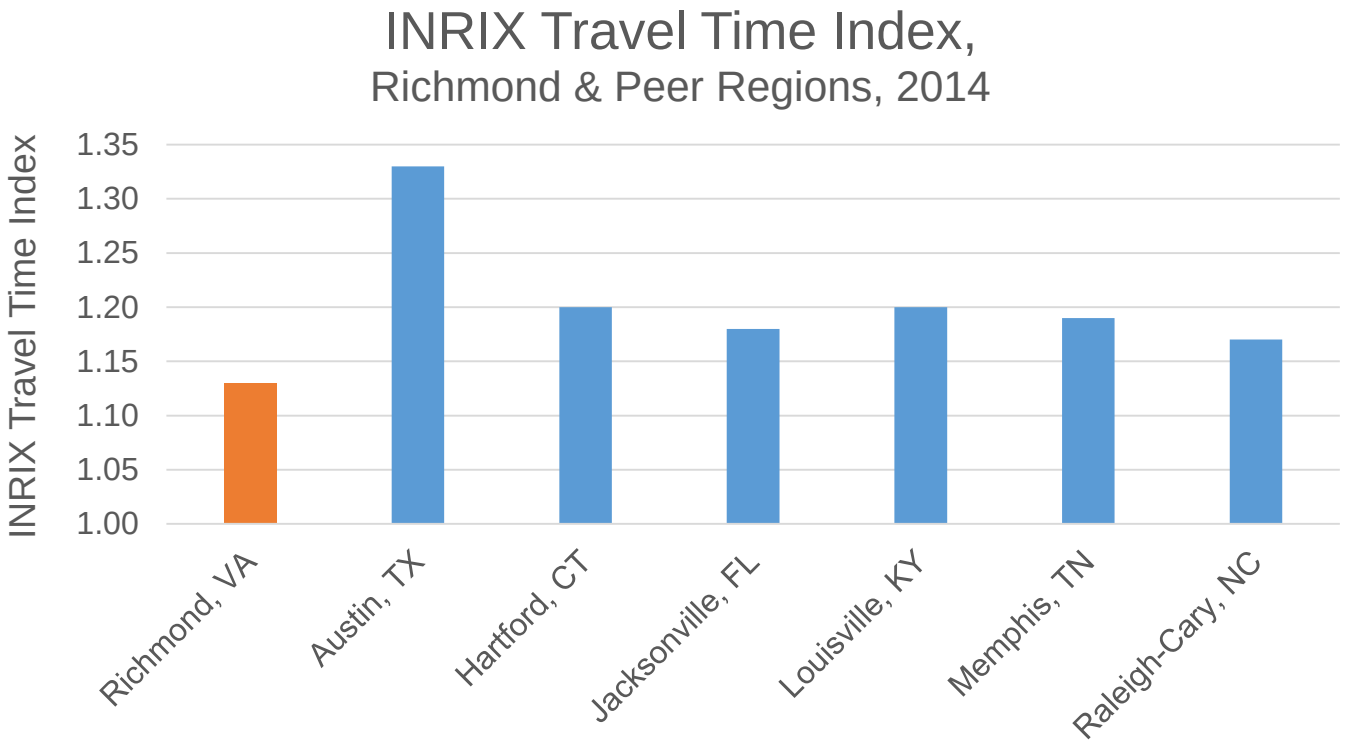
Congestion Mitigation



Annual hours of delay per peak auto commuter is a measure of the extra travel time incurred annually by a person driving at congested peak hour speeds than what would be experienced by the same person driving at free-flow condition.

Figure 1: Annual Hours of Delay by Urban Area, TTI 2015 Urban Mobility Report

Congestion Mitigation



Travel Time Index is a ratio measure of travel time in the peak period to travel time at free-flow conditions. As an example, a Travel Time Index of 1.13 in the Richmond region indicates that a 20-minute free-flow trip would be expected to take about 22 minutes and 36 seconds during the peak commuting period.

Figure 2: INRIX Travel Time Index by CEDS Peer Region , TTI 2015 Urban Mobility Report

Freight Mobility

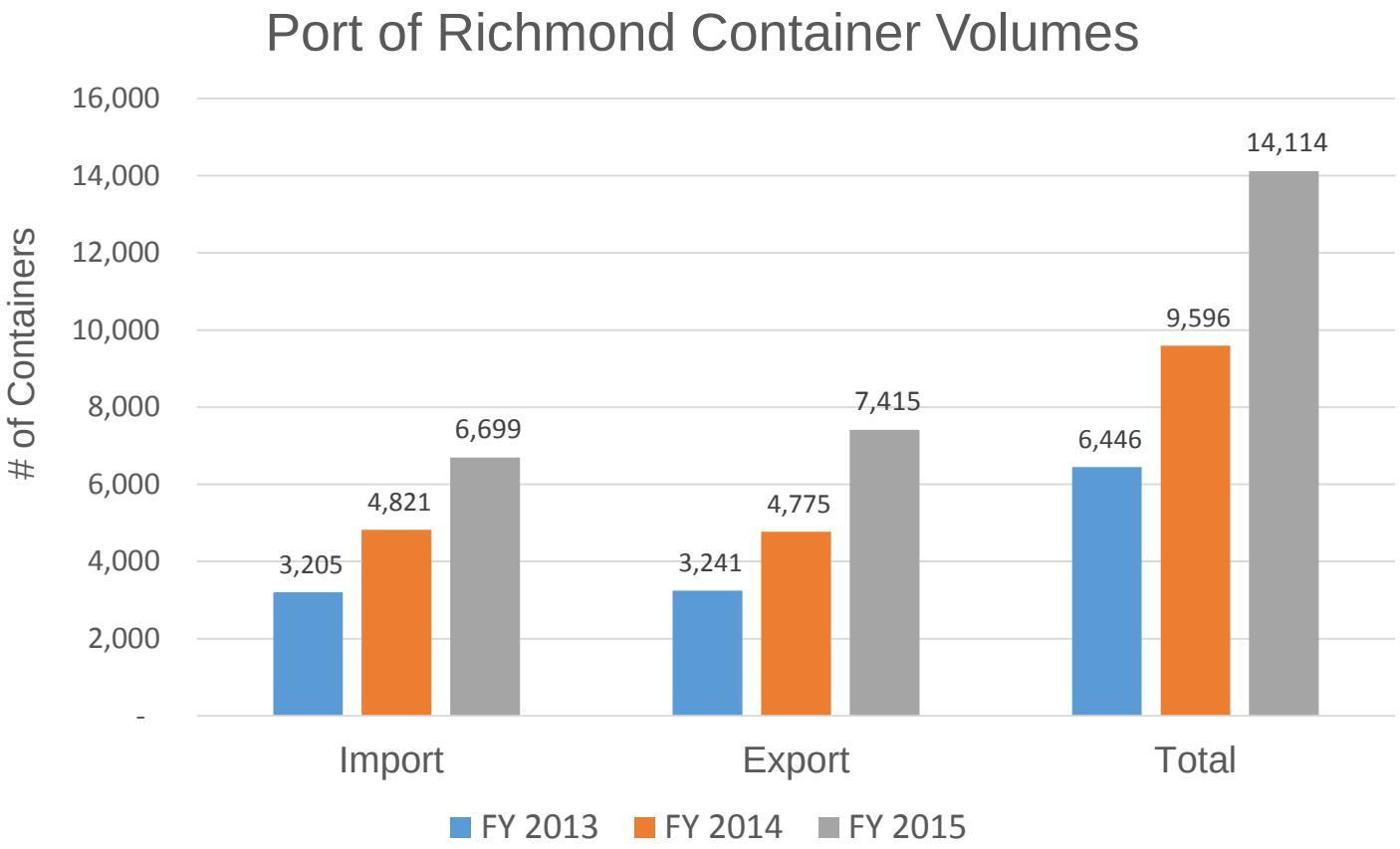


Figure 3: Container volumes at POR by Fiscal Year, data provided by the Port of Virginia

Multimodal Connectivity

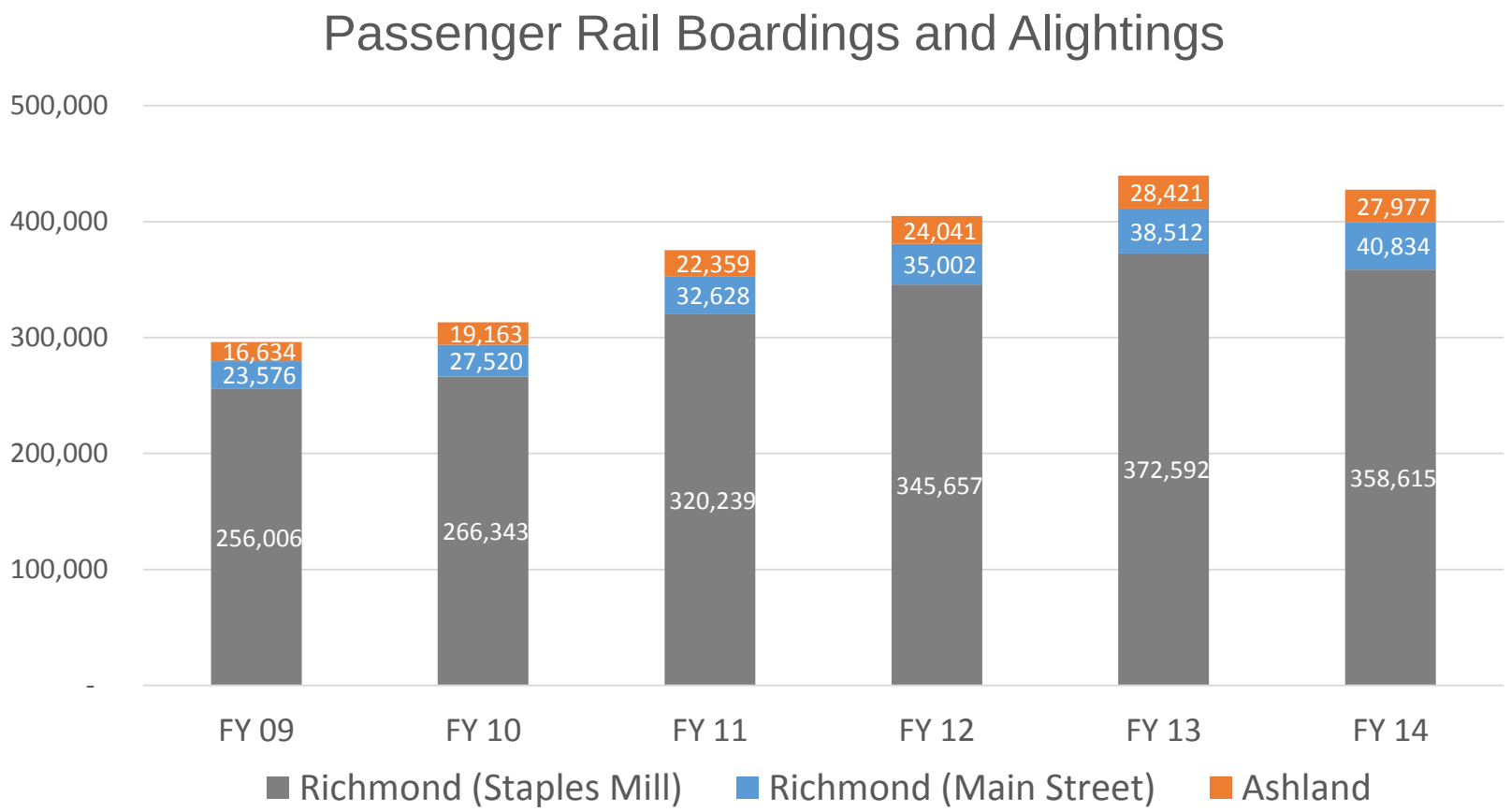


Figure 4: Total Passengers Boarding and Alighting at TPO area Amtrak Stations, Amtrak Fact Sheet 2010-2013

Preservation and Maintenance

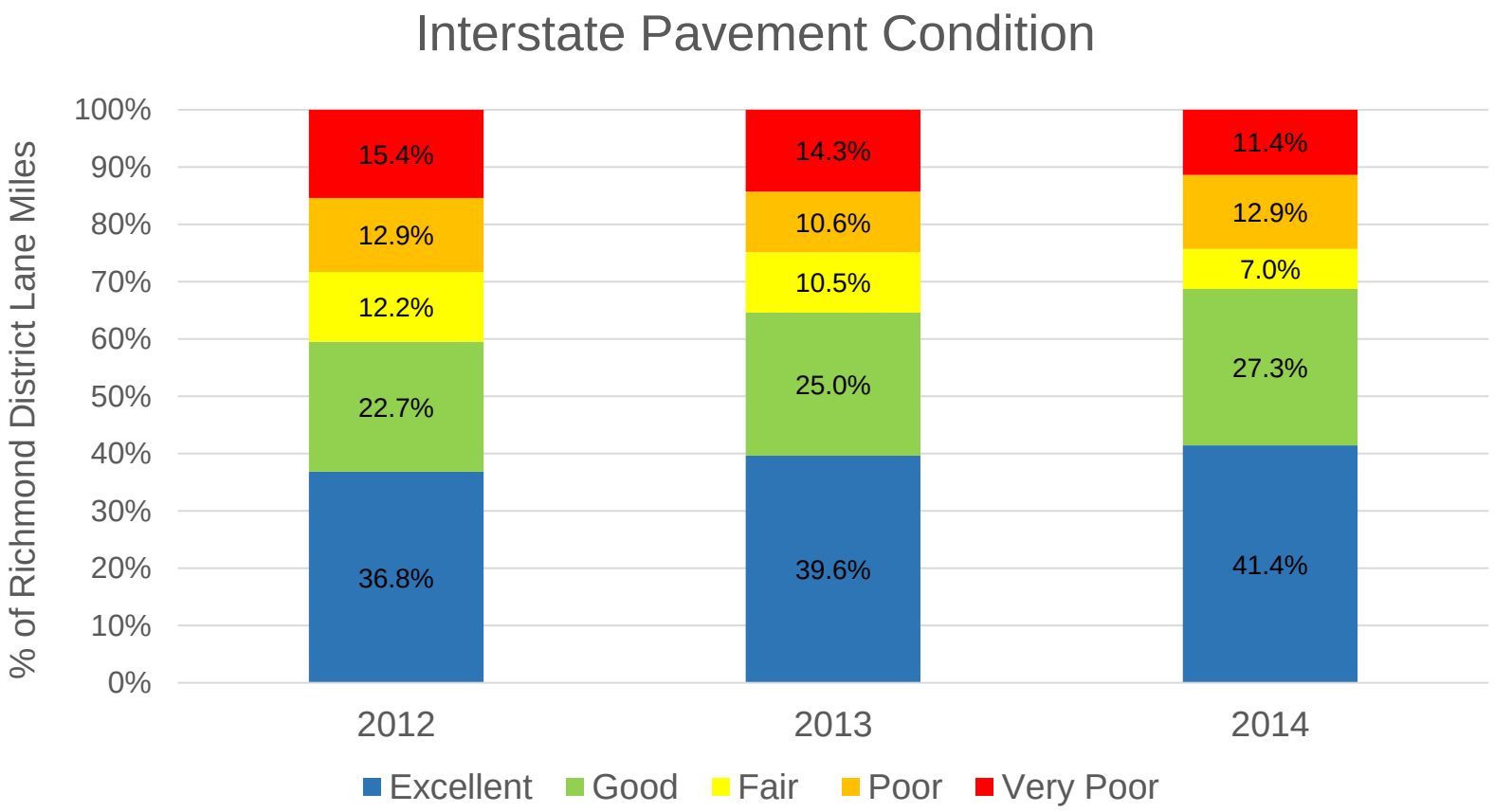


Figure 5: Interstate Pavement Condition in VDOT District, VDOT 'State of Pavement' reports (2012-2014)

Next Steps

January 19, 2016

TAC will consider:

- Status change for ‘Additional Measures’
- Recommendation on final report as work complete

February 4, 2016

TPO Board consideration of TAC recommended action.