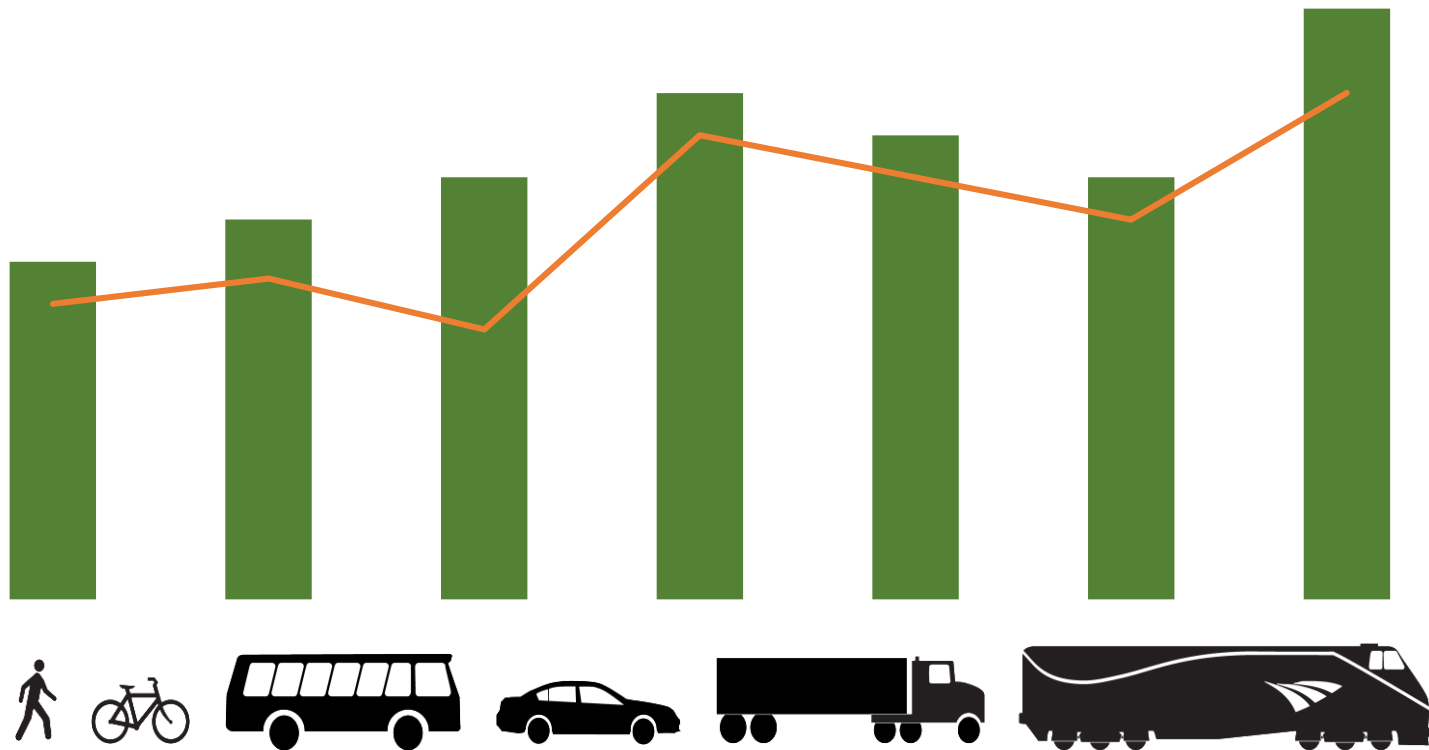


Transportation Performance Measures

Progress Report • 2016



RRTPO Board – 10/6/2016
Presentation by:
Chris Wichman, Senior Planner



Purpose

1. Meet state requirements tied to receiving state match for RSTP



State Requirements

Established in:

- 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)



Purpose

1. Meet state requirements tied to receiving state match for RSTP
2. Highlight RRTPO work program consistency with FHWA's "Performance-Based Planning and Programming" approach



The PBPP Approach

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)



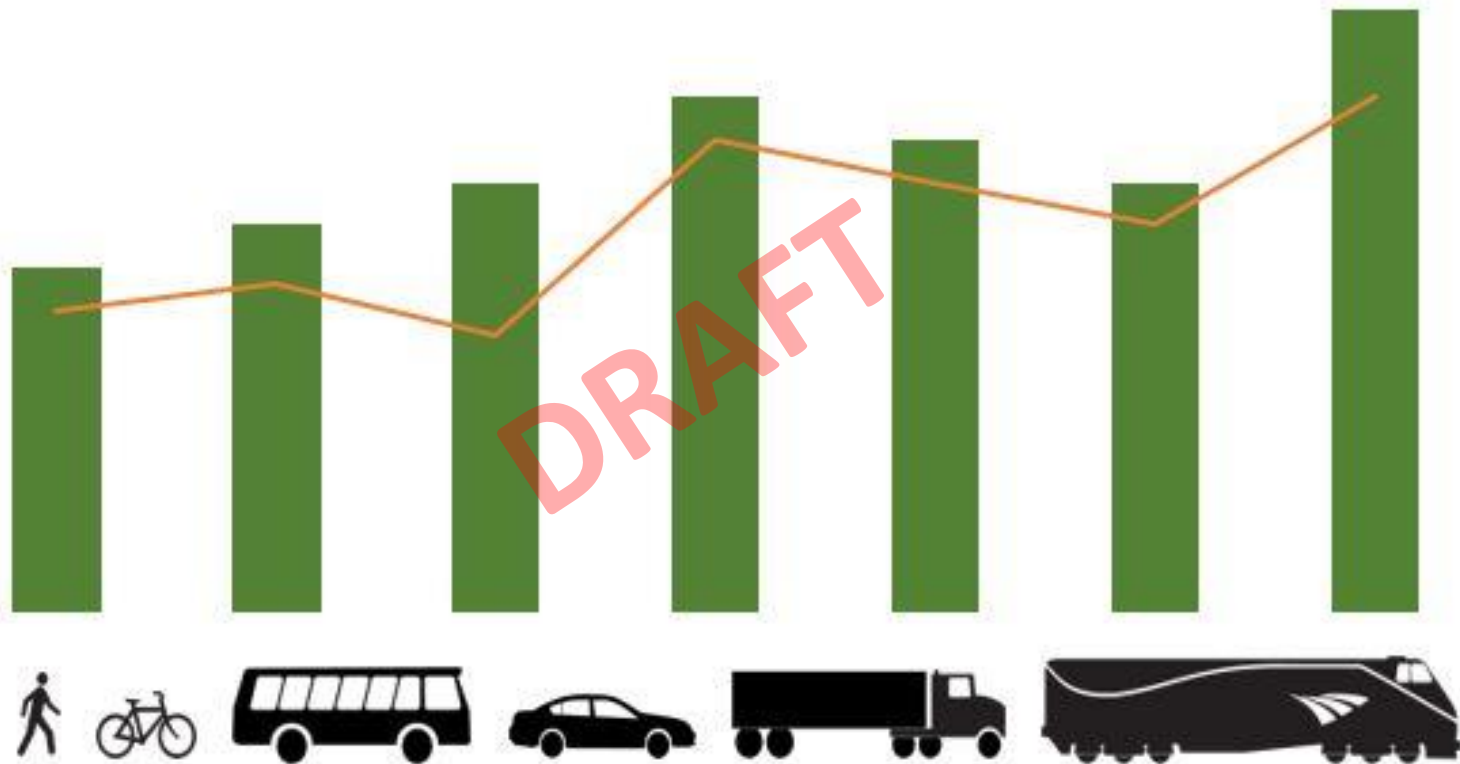
Purpose

1. Meet state requirements tied to receiving state match for RSTP
2. Highlight RRTPO work program consistency with FHWA's "Performance-Based Planning and Programming" approach
3. Set foundation for compliance with new federal performance targets and reporting requirements



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goals & objectives



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.



Freight Mobility

Enhance freight corridors and intermodal connections to facilitate goods movement into, within and out of the region.



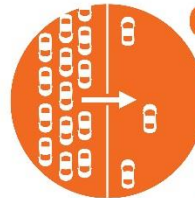
Safety & Security

Provide for transportation improvements that increase safety and security for system users.



System Reliability

Implement technologies and programs to improve travel times and support the ease of travel throughout the region.



Congestion Mitigation

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



Environment & Air Quality

Provide for project alternatives that protect and enhance the region's natural resources.



Multimodal Connectivity

Improve accessibility and interconnectivity of various transportation modes for all system users.



Preservation & Maintenance

Ensure that existing transportation infrastructure and facilities achieve a constant state of good repair.



Transportation & Land Use Integration

Support transportation investments that meet the needs of existing and future land use and development patterns.

| Goals | Measure | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Desired Trend | 1-year Trend | 5-year Trend |
|--|--|------------|------------|------------|------------|------------|------------|------------|---------------|--------------|--------------|
| Congestion | *Delay per peak period commuter ¹ , annual hours | 33 | 33 | 33 | 33 | 34 | 34 | n.a. | 👇 | ➡ | ↔ |
| Mitigation & System | Fuel Loss per peak period commuter ² , gallons | 13 | 13 | 13 | 14 | 14 | 14 | n.a. | 👇 | ➡ | ↔ |
| Reliability | *Peak period travel time index ³ | 1.12 | 1.12 | 1.12 | 1.12 | 1.13 | 1.13 | n.a. | 👇 | ➡ | ↔ |
| | Congestion costs ⁴ , annual per peak period commuter | \$746 | \$754 | \$733 | \$727 | \$736 | \$729 | n.a. | 👇 | ↔ | ↔ |
| Transportation and Land Use Integration | *Daily VMT ⁵ , per capita | n.a. | 27.9 | 27.7 | 27.6 | 27.4 | 28 | n.a. | n.a. | ↔ | ↔ |
| | *Jobs/Housing Ratio ⁶ | n.a. | n.a. | n.a. | 1.28 | n.a. | n.a. | n.a. | ➡ | n.a. | n.a. |
| | *Jobs/Housing Dissimilarity Index ⁷ | 0.066 | 0.0596 | 0.061 | 0.0555 | 0.0485 | 0.0472 | n.a. | < .5 | ✅ | ✅ |
| | % Workers working in jurisdiction in which they live ⁸ | 48.5% | 48.8% | 49.1% | 48.9% | 48.6% | 48.2% | n.a. | ↔ | 👇 | 👇 |
| | Travel Time to Work ⁹ | 23.4 | 23.6 | 23.6 | 23.9 | 24.0 | 24.1 | n.a. | 👇 | ↔ | ↔ |
| | Population Density ¹⁰ , persons per square mile | n.a. | n.a. | n.a. | 475 | n.a. | n.a. | n.a. | ↔ | n.a. | n.a. |
| Environmental and Air Quality | *Ozone Exceedances, ¹¹ | | | | | | | | | | |
| | with 2008 EPA Ozone Standard (.075ppm) | 0 | 10 | 11 | 11 | 1 | 1 | 1 | 👇 | ➡ | ↔ |
| | with 2015 EPA Ozone Standard (.070ppm) | 2 | 25 | 22 | 15 | 1 | 2 | 3 | 👇 | ↔ | 👇 |
| | Multi-Pollutant Air Quality Index Exceedances ¹² | | | | | | | | | | |
| | with 2008 EPA Ozone Standard (.075ppm) with 2015 EPA Ozone Standard (.070ppm) | 1 3 | 10 25 | 12 40 | 11 15 | 1 1 | 1 2 | 1 3 | 👇 👇 | ➡ ↔ | ↔ 👇 |
| Freight Mobility | Commodity Flow, Freight Mode Share ¹³ , by tons | | | | | | | | | | |
| | Truck | n.a. | n.a. | n.a. | 67% | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| | Rail | n.a. | n.a. | n.a. | 30% | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| | Commodity Flow, Freight Mode Share ¹³ , by dollar value | | | | | | | | | | |
| | Truck | n.a. | n.a. | n.a. | 82% | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| | Rail | n.a. | n.a. | n.a. | 5% | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| | *Port of Richmond Containers, Outbound ¹⁴ | n.a. | n.a. | n.a. | 3,241 | 4,775 | 7,415 | 8,021 | ↔ | ↔ | n.a. |
| | *Port of Richmond Containers, Inbound ¹⁴ | n.a. | n.a. | n.a. | 3,205 | 4,821 | 6,699 | 8,326 | ↔ | ↔ | n.a. |
| | RIC Total Cargo, Outbound/Enplaned, tons ¹⁵ | n.a. | n.a. | 18,545 | 21,857 | 27,108 | 29,915 | 30,167 | ↔ | ↔ | ↔ |
| | RIC Total Cargo, Inbound/Deplaned, tons ¹⁵ | n.a. | n.a. | 28,062 | 30,863 | 31,756 | 28,369 | 29,281 | ↔ | ↔ | ↔ |
| Transportation/Warehousing Employment ¹⁶ , number | 19,406 | 19,172 | 19,263 | 19,438 | 19,743 | 21,074 | 27,419 | ↔ | ↔ | ↔ | |
| Multimodal Connectivity & Access to Employment | Park and Ride Lots / Spaces ¹⁷ , number | n.a. | 11 / 1,760 | 11 / 1,760 | 11 / 1,760 | 12 / 1,987 | 12 / 1,987 | 12 / 1,987 | ↔ | ➡ | ↔ |
| | RideFinders Vanpools ¹⁸ , number | n.a. | n.a. | 117 | 120 | 137 | 138 | 145 | ↔ | ↔ | ↔ |
| | Transit Trips ¹⁹ , per capita | 30.7 | 31.6 | 28.5 | 22.3 | 19.5 | 20.6 | n.a. | ↔ | ↔ | 👇 |
| | Transit Operating Expense per passenger trip ²⁰ | \$3.40 | \$3.45 | \$3.62 | \$4.82 | \$5.42 | \$5.06 | n.a. | 👇 | 👇 | ↔ |
| | Transit Passenger Miles ²¹ , per capita | 154.0 | 158.7 | 139.1 | 152.0 | 140.7 | 145.2 | n.a. | ↔ | ↔ | 👇 |
| | Transit Operating Expense per passenger mile ²² | \$0.68 | \$0.69 | \$0.74 | \$0.71 | \$0.75 | \$0.72 | n.a. | 👇 | 👇 | ↔ |
| | Transit Revenue Miles ²³ , number | 10,894,167 | 11,310,381 | 11,319,872 | 11,486,456 | 11,418,456 | 11,712,133 | n.a. | ↔ | ↔ | ↔ |
| | Transit Revenue Miles ²⁴ , per capita | 24.2 | 25.2 | 25.2 | 25.5 | 25.4 | 26.1 | n.a. | ↔ | ↔ | ↔ |
| | Transit Operating Expense, per revenue mile ²⁵ | \$4.30 | \$4.32 | \$4.10 | \$4.20 | \$4.17 | \$4.01 | n.a. | 👇 | 👇 | 👇 |
| | *Regional Households served by Transit ²⁶ , percent | n.a. | n.a. | n.a. | 42.83% | n.a. | n.a. | n.a. | ↔ | n.a. | n.a. |
| *Regional Employment served by Transit ²⁶ , percent | n.a. | n.a. | n.a. | 53.47% | n.a. | n.a. | n.a. | ↔ | n.a. | n.a. | |

| Goals | Measure | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Desired Trend | 1-year Trend | 5-year Trend |
|--------------------------------|---|-------|-------|-------|-------|-------|-------|------|---------------|--------------|--------------|
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| Mitigation & System | Fuel Loss per peak period commuter ² , gallons | 13 | 13 | 13 | 14 | 14 | 14 | n.a. | 👇 | ➡ | 👇 |
| | *Peak period travel time index ³ | 1.12 | 1.12 | 1.12 | 1.12 | 1.13 | 1.13 | n.a. | 👇 | ➡ | 👇 |
| Reliability | Congestion costs ⁴ , annual per peak period commuter | \$746 | \$754 | \$733 | \$727 | \$736 | \$729 | n.a. | 👇 | 👇 | 👇 |

| | | | | | | | | | | | |
|--|---|-------|--------|-------|--------|--------|--------|------|------|------|------|
| Transportation and Land Use Integration | *Daily VMT ⁵ , per capita | n.a. | 27.9 | 27.7 | 27.6 | 27.4 | 28 | n.a. | n.a. | 👇 | 👇 |
| | *Jobs/Housing Ratio ⁶ | n.a. | n.a. | n.a. | 1.28 | n.a. | n.a. | n.a. | ➡ | n.a. | n.a. |
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| | % Workers working in jurisdiction in which they live ⁸ | 48.5% | 48.8% | 49.1% | 48.9% | 48.6% | 48.2% | n.a. | 👇 | 👇 | 👇 |
| | Travel Time to Work ⁹ | 23.4 | 23.6 | 23.6 | 23.9 | 24.0 | 24.1 | n.a. | 👇 | 👇 | 👇 |
| | Population Density ¹⁰ , persons per square mile | n.a. | n.a. | n.a. | 475 | n.a. | n.a. | n.a. | 👇 | n.a. | n.a. |

| Goals | Measure | Desired Trend | 1-year Trend | 5-year Trend |
|--|---|---------------|--------------|--------------|
| Transportation and Land Use Integration | *Daily VMT ⁵ , per capita | n.a. | 👇 | 👇 |
| | *Jobs/Housing Ratio ⁶ | ➡ | n.a. | n.a. |
| | *Jobs/Housing Dissimilarity Index ⁷ | < .5 | ✅ | ✅ |
| | % Workers working in jurisdiction in which they live ⁸ | 👇 | 👇 | 👇 |
| | Travel Time to Work ⁹ | 👇 | 👇 | 👇 |
| | Population Density ¹⁰ , persons per square mile | 👇 | n.a. | n.a. |

| | | | | | | | | | | | |
|---|--|------------|------------|------------|------------|------------|------------|------------|---|------|------|
| Multimodal Connectivity & Access to Employment | RIC Total Cargo, inbound/Depanded, tons | n.a. | n.a. | 28,062 | 30,863 | 31,756 | 28,369 | 29,281 | 👇 | 👇 | 👇 |
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| | *Regional Households served by Transit ²⁶ , percent | n.a. | n.a. | n.a. | 42.83% | n.a. | n.a. | n.a. | 👇 | n.a. | n.a. |
| | *Regional Employment served by Transit ²⁶ , percent | n.a. | n.a. | n.a. | 53.47% | n.a. | n.a. | n.a. | 👇 | n.a. | n.a. |

Next Steps

October 11

- Final draft report presented for TAC review and recommended action

December 1

- RRTPO requested action on the final draft report



Transportation Performance Measures

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Chris Wichman

cwichman@richmondregional.org

(804) 323-2033

