

Hampton Roads Regional Performance Measures

January 2011



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A. Transportation System Performance Measures¹³

Data Source

1. congestion reduction

Annual Hours of Delay, per peak period traveler

Texas Transportation Inst. (TTI)⁴

Annual Gallons of Fuel Lost Due to Congestion, per peak period traveler

Texas Transportation Inst. (TTI)⁴

Peak Period Travel Time Tax

Inrix

2. safety

Annual Roadway Fatalities, number and per 100 million VMT

Va. Dept. of Transportation (VDOT)

Annual Roadway Injuries, number and per million VMT

Va. Dept. of Transportation (VDOT)

Annual Roadway Crashes, number and per million VMT

Va. Dept. of Transportation (VDOT)

Annual Transit Fatalities, number and per 100 million PMT

Federal Transit Administration (FTA)⁶

Annual Transit Injuries, number and per 100 million PMT

Federal Transit Administration (FTA)⁶

Annual Transit Collisions¹⁹, number and per 100 million PMT

Federal Transit Administration (FTA)⁶

Annual Aviation Fatalities, number²³

Federal Aviation Administration (FAA)

Annual Aviation Accidents²², number²³

Federal Aviation Administration (FAA)

Annual Highway-Rail Crossing Accidents²⁰, per million population

Federal Aviation Administration (FAA)

3. transit usage

Annual Unlinked Passenger Trips (UPT), number and per capita (UZA²¹ population)

Federal Transit Administration (FTA)⁶

Annual Vehicle Revenue Miles (VRM), number and per capita (UZA²¹ population)

Federal Transit Administration (FTA)⁶

Annual Passenger Miles Traveled (PMT), number and per capita (UZA²¹ population)

Federal Transit Administration (FTA)⁶

Passengers Boarding or Departing Amtrak Trains

Amtrak

4. HOV usage

Number of Persons per Hour per HOV Lane During Peak Period, average of count stations

Va. Dept. of Transportation (VDOT)

of Park and Ride Lots and Spaces

Va. Dept. of Transportation (VDOT)

of Occupied Park and Ride Spaces, per 100,000 population

Va. Dept. of Transportation (VDOT)

% of Commuters with Journey-to-Work via Carpool¹⁰

American Community Survey (ACS)

Hampton Roads Regional Performance Measures (continued)

	<u>Data Source</u>
<u>5. job-to-housing ratios</u>	
Ratio of Jobs to Labor Force, at the regional and county levels	Bur. of Econ. Anal. & Va. Workf. Conn.
Jobs - Labor Force Regional Linear Dissimilarity Index, 0.0 to 1.0 ²	Bur. of Econ. Anal. & Va. Workf. Conn.
% of Workers Working in Locality (City/County) in Which They Live	American Community Survey (ACS)
Mean Travel Time to Work	American Community Survey (ACS)
<u>6. job and housing access to transit</u>	
% of Employment in Transportation Analysis Zones (TAZs) Served by Transit ¹⁸	HR Transp. Planning Org. (HRTPO) ¹
% of Households in Transportation Analysis Zones (TAZs) Served by Transit ¹⁸	HR Transp. Planning Org. (HRTPO) ¹
<u>7. job and housing access to pedestrian facilities</u>	
% of Housing Units ⁹ in Transportation Analysis Zone (TAZ)s ¹⁷ with 1%+ Walk-To-Work Mode Share	Census Transp. Planning Pkg. (CTPP)
<u>8. air quality</u>	
Annual # of Days when Ozone Levels were Above 8-Hour Standard	Dept. of Environmental Quality (DEQ)
NOx ⁷ (from motor vehicles), tons per day and grams per capita per day (near future) ¹⁵	Va. Dept. of Transportation (VDOT)
VOC ⁷ (from motor vehicles), tons per day and grams per capita per day (near future) ¹⁵	Va. Dept. of Transportation (VDOT)
CO ₂ (greenhouse gas, from motor vehicles), tons per day and grams per capita per day (near future) ¹⁵	Va. Dept. of Transportation (VDOT) ¹⁶
<u>9. movement of freight</u>	
Barge, Rail, and Truck Shares (%) of General Cargo Handled by Port of Virginia	Virginia Port Authority (VPA)
Rail Mode Share (%), freight with Hampton Roads origins, by value and tonnage	Freight Analysis Framework (FAF3)
Rail Mode Share (%), freight with Hampton Roads destinations, by value and tonnage	Freight Analysis Framework (FAF3)
<u>10. per capita vehicle miles traveled</u>	
Daily Vehicle Miles Traveled (VMT) per capita	Va. Dept. of Transportation (VDOT)
% of Commuters with Journey-to-Work by Alternate Modes ⁸	American Community Survey (ACS)
<u>11. maintenance</u>	
% of Pavement in Fair/Good Condition ⁵	TRIP (non-profit transp. industry org.)
% of Bridges Not Structurally Deficient	Va. Dept. of Transportation (VDOT)
Total Transit Revenue Service Interruptions (mechanical) per million PMT	Federal Transit Administration (FTA) ⁶

Hampton Roads Regional Performance Measures (continued)

B. Financial System Performance Measures

Data Source

% of Planned Obligations (for TIP projects) Actually Obligated ¹¹	Va. Dept. of Transportation (VDOT)
Average Age of Federal \$ Spent on TIP Projects (basis: obligation date vs spending date) ¹⁴	Va. Dept. of Transportation (VDOT)
Mid-Fiscal-Year Total of Unspent Obligations for TIP Projects ¹²	Va. Dept. of Transportation (VDOT)
% of Total District Allocations in SYIP, by District, current year	Va. Dept. of Transportation (VDOT)

Footnotes

- ¹ Transportation Analysis Zone (TAZ) data from regional 4-step model
- ² Linear Dissimilarity Index: Calculated via equation 2 in "Feasibility of Using Jobs/Housing Balance in Virginia Statewide Planning", VTRC, Aug 2010, pg. 26, using jobs per locality as employment measure (w) and households per locality as population measure (h), rendering a value between 0 (perfectly balanced) and 1 (perfectly unbalanced) for the region.
- ⁴ TTI releases data approximately every two years.
- ⁵ Interstates, freeways, and other principal arterials.
- ⁶ FTA's National Transit Database
- ⁷ These two pollutants (NOx and VOC)--precursors of ground-level ozone--are measured in several Va. MPOs for AQ conformity.
Note: Current VDOT model is MOBILE 6.2; by Mar. 2012 VDOT will be using the MOVES model, making comparison to earlier numbers difficult.
- ⁸ Sum of all modes other than Drove Alone (i.e. including bike, ped, transit, work-at-home, carpool, etc.)
- ⁹ Given the necessary proximity of jobs to houses of persons who walk to work, this measure is intended to cover both job and housing access to pedestrian facilities.
- ¹⁰ The goal of HOV lanes--carpooling--is measured herein.
- ¹¹ "Planned": at beginning of subject fiscal year; "Obligated": by the end of subject fiscal year; source: Annual Obligation Report.
- ¹² For funds obligated in any year; unspent total calculated via financial "snapshot" taken near middle of fiscal year due to large amount of funds typically obligated near end of fiscal years.
- ¹³ The source of the first ten categories is Section 33.1-23.03 Code of Va. [amended via Chapter 670], except that "movement of freight" is used herein instead of original "movement of freight by rail"; category 11 and financial RPMs were added by HRTPO.
- ¹⁴ This calculation would cover all federal transportation dollars spent during the subject fiscal year.
- ¹⁵ For air quality conformity, VDOT estimates emissions for various future years including one near future year, e.g. "2011" estimated in 2010.
- ¹⁶ In addition to the pollutants required for AQ conformity, VDOT calculates CO₂ when it conducts analyses for conformity.
- ¹⁷ Transportation Analysis Zones (TAZs) are the smallest Census areas for which journey-to-work data is reported for Hampton Roads.
- ¹⁸ Due to the relatively large size of a typical TAZ, consider only those TAZs which are bordered or penetrated by transit as being served by transit.
- ¹⁹ FTA's "National Transit Database" uses the term "collisions" ("Collision_Total"), instead of "crashes".
- ²⁰ FRA uses the term "accidents".
- ²¹ "UZA": Urbanized Area (UZA population is reported by FTA in its Nation Transit Database)
- ²² FAA uses the term "accidents".
- ²³ No rate (e.g. "per PMT") is included here because the number of person-miles-of-travel (PMT) in the airspace above Hampton Roads is not known.