Hampton Roads Congestion Management Process:

The State of Transportation in Hampton Roads

2010 Update

HAMPTON ROADS TPO
TRANSPORTATION PLANNING ORGANIZATION

January 2011

T10-10

HAMPTON ROADS TRANSPORTATION PLANNING ORGANIZATION

Dwight L. Farmer
Executive Director/Secretary

VOTING MEMBERS:

CHESAPEAKE
Alan P. Krasnoff

GLOUCESTER COUNTY
Christian D. Rilee

HAMPTON
Molly J. Ward

ISLE OF WIGHT COUNTY
Stan D. Clark

JAMES CITY COUNTY
Bruce C. Goodson

NEWPORT NEWS
McKinley Price

NORFOLK
Paul D. Fraim

POQUOSON
Gordon C. Helsel, Jr.

PORTSMOUTH
Kenneth I. Wright

SUFFOLK
Linda T. Johnson

VIRGINIA BEACH
William D. Sessoms, Jr.

WILLIAMSBURG
Clyde Haulman

YORK COUNTY
Thomas G. Shepperd, Jr.

MEMBERS OF THE VIRGINIA SENATE
The Honorable John C. Miller
The Honorable Yvonne B. Miller

MEMBERS OF THE VIRGINIA HOUSE OF DELEGATES
The Honorable G. Glenn Oder
The Honorable John A. Cosgrove

TRANSPORTATION DISTRICT COMMISSION OF HAMPTON ROADS
Philip A. Shucet, President/Chief Executive Officer

WILLIAMSBURG AREA TRANSIT AUTHORITY
Mark D. Rickards, Executive Director

VIRGINIA DEPARTMENT OF TRANSPORTATION
Dennis W. Heuer, District Administrator – Hampton Roads District

VIRGINIA DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION
Corey W. Hill, Chief of Public Transportation

VIRGINIA PORT AUTHORITY
Jerry A. Bridges, Executive Director

HAMPTON ROADS TRANSPORTATION PLANNING ORGANIZATION

NON-VOTING MEMBERS:

CHESAPEAKE
William E. Harrell

GLOUCESTER COUNTY
Brenda G. Garton

HAMPTON
Mary Bunting

ISLE OF WIGHT COUNTY
W. Douglas Caskey

JAMES CITY COUNTY
Robert C. Middaugh

NEWPORT NEWS
Neil A. Morgan

NORFOLK
Stanley Stein

POQUOSON
J. Randall Wheeler

PORTSMOUTH
Kenneth L. Chandler

SUFFOLK
Selena Cuffee-Glenn

VIRGINIA BEACH
James K. Spore

WILLIAMSBURG
Jackson C. Tuttle

YORK COUNTY
James O. McReynolds

FEDERAL HIGHWAY ADMINISTRATION
Irene Rico, Division Administrator – Virginia Division

FEDERAL TRANSIT ADMINISTRATION
Letitia A. Thompson, Regional Administrator, Region 3

FEDERAL AVIATION ADMINISTRATION
Jeffrey W. Breeden, Airport Planner
Washington Airports District Office

VIRGINIA DEPARTMENT OF AVIATION
Randall P. Burdette, Director

PENINSULA AIRPORT COMMISSION
Ken Spirito, Executive Director

NORFOLK AIRPORT AUTHORITY
Wayne E. Shank, Executive Director

CITIZEN TRANSPORTATION ADVISORY COMMITTEE
William W. Harrison, Jr., Chair

FREIGHT TRANSPORTATION ADVISORY COMMITTEE
William Bell, Co-Chair
Stan D. Clark, Co-Chair

MILITARY LIAISONS
Glenn K. Grothe, Colonel, U.S. Army
Mary Jackson, Captain, U.S. Navy
Mark S. Ogle, Captain, U.S. Coast Guard

PROJECT STAFF

Camelia Ravanbakht	Deputy Executive Director	Mike Long	Assistant General Services Manager
Rob Case	Principal Transportation Engineer	Christopher Vaigneur	Reprographics Coordinator
Keith Nichols	Senior Transportation Engineer		

HAMPTON ROADS CONGESTION MANAGEMENT PROCESS:

THE STATE OF TRANSPORTATION IN HAMPTON ROADS

This report was included in the Work Program for Fiscal Year 2010 - 2011, which was approved by the Metropolitan Planning Organization at their meeting of July 21, 2010.

PREPARED BY:

JANUARY 2011

T10-10

REPORT DOCUMENTATION

TITLE:
The State of Transportation in Hampton Roads

AUTHOR/PROJECT MANAGER:
Keith M. Nichols, PE

REPORT DATE:
January 2011

GRANT/SPONSORINGAGENCY:
FHWA/VDOT/LOCAL FUNDS

ORGANIZATION NAME, ADDRESS AND TELEPHONE:
Hampton Roads Transportation Planning Organization
723 Woodlake Drive
Chesapeake, Virginia 23320
(757) 420-8300
http://www.hrtpo.org

ABSTRACT:

This report details the current status of all facets of the transportation system in Hampton Roads, including air, rail, water, and highways. Many aspects of the highway system are highlighted, including roadway usage, bridge conditions, costs of congestion, commuting characteristics, roadway safety, truck data, transit usage, bicycle and pedestrian facilities, highway funding, and operations.

This report is produced as part of the region's Congestion Management Process (CMP). The Congestion Management Process is an on-going process that identifies, develops, evaluates, and implements transportation strategies to enhance mobility regionwide.

ACKNOWLEDGMENTS:

This report was prepared by the Hampton Roads Transportation Planning Organization (HRTPO) in cooperation with the U.S. Department of Transportation (USDOT), the Federal Highway Administration (FHWA), and the Virginia Department of Transportation (VDOT). The contents of this report reflect the views of the HRTPO. The HRTPO staff is responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the FHWA or VDOT. This report does not constitute a standard, specification, or regulation. FHWA or VDOT acceptance of this report as evidence of fulfillment of the objectives of this task does not constitute endorsement/approval of the need for any recommended improvements nor does it constitute approval of their location and design or a commitment to fund any such improvements. Additional project level environmental impact assessments and/or studies of alternatives may be necessary.

TABLE OF CONTENTS

INTRODUCTION

Maintaining a viable transportation system is crucial to the Hampton Roads economy. Pillars of the Hampton Roads economy - the military, the ports, and tourism - all depend on our transportation system. The military needs a working transportation system to get civilian and military personnel and goods to the bases, and deploy troops and equipment as is necessary for national defense. The ports require an effective transportation system to get freight to and from the ports to warehouses both inside and outside of Hampton Roads. And the tourism industry needs a working transportation system so that tourists have a favorable impression of our area and continue to visit in the future.

The recent downturn in the economy has had an effect on Hampton Roads transportation as well. The amount of travel on our roadways and our public transportation system has been impacted by fewer people going to work. In addition, funding levels for transportation improvements have been cut even further as state coffers have been drained.

Many changes are happening to the transportation infrastructure of Hampton Roads. The APM Terminal, which was recently leased by the Virginia Port Authority and is among the most technologically advanced container terminals in the country, opened in 2007 in Portsmouth. In 2011, The Tide light rail system will begin operations in Norfolk, providing a new mode of transportation in the region. On the other end of the spectrum the Jordan Bridge, which was the original fixed

Steel Bridge

crossing of the Elizabeth River, fell into disrepair and was closed in 2008. This, combined with the closure of the Kings Highway Bridge in 2005, eliminated two important water crossings from the regional roadway network, although construction has recently begun on a replacement for the Jordan Bridge.

This State of Transportation report details the current status of all facets of the transportation system in Hampton Roads, including air, rail, water, and highways. Many aspects of the highway system are highlighted, including roadway usage, pavement condition, bridge conditions, costs of congestion, commuting characteristics, roadway safety, truck data, transit usage, bicycle and pedestrian facilities, highway funding, and operations.

This report is produced as part of the region's Congestion Management Process (CMP), which is an ongoing program that identifies, develops, evaluates, and implements transportation strategies to enhance mobility regionwide. The updated Congestion Management Process report, which was released in summer 2010, includes a comprehensive congestion analysis of the region's highway system, congestion management strategies with an analysis of their impacts, and identification of the most congested corridors and areas of Hampton Roads.

Copies of this report and all other CMP documents are available at the Hampton Roads Transportation Planning Organization's website at **http://www.hrtpo.org**.

Light Rail Construction

AIR TRAVEL

Air travel on both a national and regional level continues to be impacted by the downturn in the economy. The number of passengers using commercial air service decreased not only in Hampton Roads but also throughout the United States in recent years.

Photo Source: NNWIA.

Newport News/Williamsburg International Airport

Nearly 2.2 million passengers boarded flights at Hampton Roads two passenger airports, Norfolk International Airport and Newport News/Williamsburg International Airport, in 2009. Although the number of passengers at Hampton Roads airports increased 26% from 2000 to 2009, the number of passengers has decreased from a high of 2.5 million passengers in 2005.

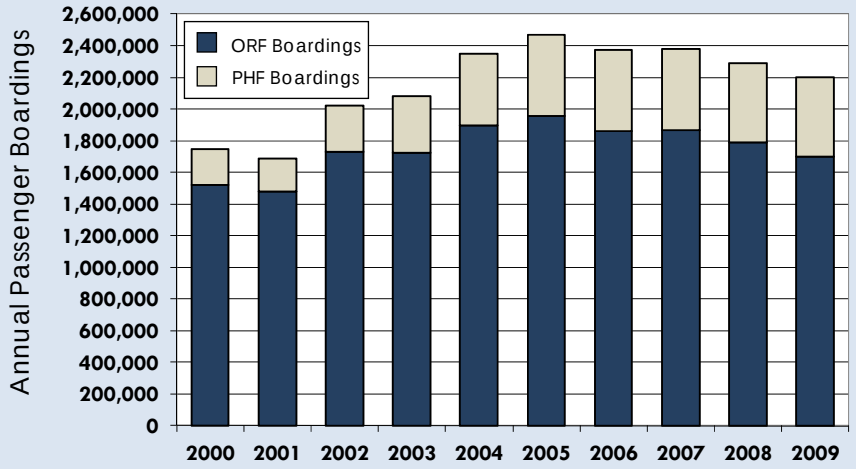
AIR TRAVEL TRENDS

26% Increase in the number of passengers using Hampton Roads airports between 2000 and 2009.

0 Net change in the number of markets that are served with nonstop flights from Hampton Roads between December 2008 and November 2010. Two markets gained service while two others lost service.

8% Decrease in average airfares at Hampton Roads airports from 2000 to 2009.

Annual Passenger Boardings at Hampton Roads Airports, 2000 - 2009



Data source: Federal Aviation Administration. Boardings represent only those passengers that board airplanes at each airport. ORF – Norfolk International Airport. PHF – Newport News/Williamsburg International Airport.

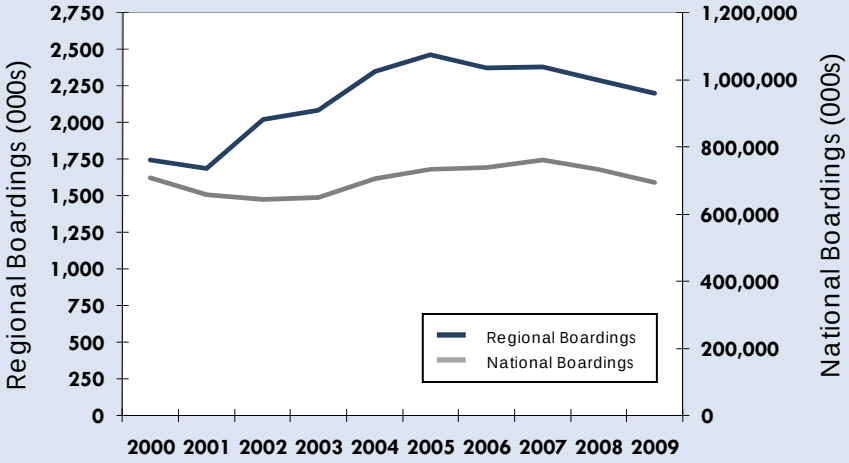
Hampton Roads TPO Transportation Planning Organization

This 26% growth in travelers at Hampton Roads airports throughout the 2000s far outpaced the growth experienced at airports nationwide. National passenger levels actually decreased 2% between 2000 and 2009. In recent years, however, the trend in Hampton Roads passenger levels has mirrored the national trend. The number of air travelers using Hampton Roads airports decreased 8% between 2007 and 2009, which is slightly better than the 9% decrease that was seen at national airports during that time period.

Much of the growth at Hampton Roads airports in the early 2000s was due to new and increased service from low-cost carriers such as Southwest Airlines and Airtran Airways. Early in 2001, the only nonstop destinations on low-cost carriers from Hampton Roads were Atlanta and Raleigh. As of November 2010, there are 22 daily flights to 11 markets that are served nonstop from Hampton Roads on low-cost carriers Southwest Airlines and Airtran Airways.

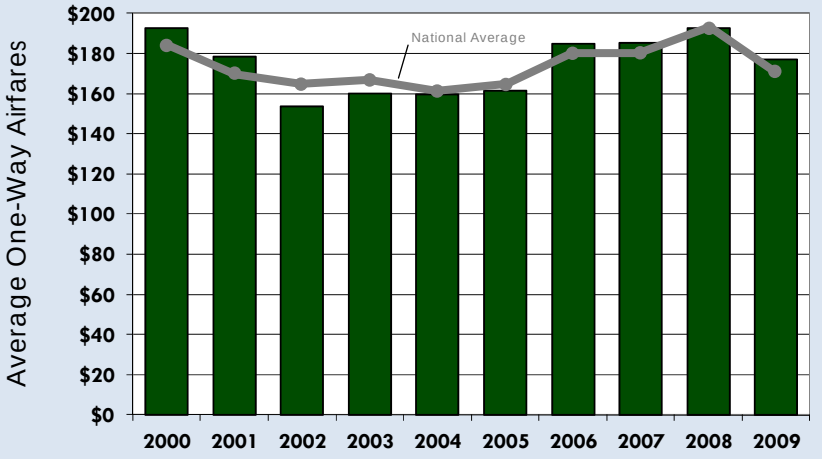
The growth in low-cost carrier service from Hampton Roads airports also contributed to a decrease in airfares early in the 2000s. Between 2000 and 2002 the average airfare in Hampton Roads dropped 20%. However, after remaining largely unchanged during the middle of the decade, airfares in Hampton Roads increased as fuel prices rose late in the 2000s. In 2009 the average one-way airfare from Hampton Roads airports was $177, which was $4 higher than the national average but was

Annual Passenger Boardings at Hampton Roads Airports versus National Boardings, 2000 - 2009



Data source: Federal Aviation Administration. Boardings represent only those passengers that board airplanes at each airport.

Average One-Way Airfares for Hampton Roads and National Airports, 2000 - 2009



Data source: Federal Aviation Administration. Average airfares reflect all routes that average at least 10 passengers per day, and all fare classes. Round trip fares are divided into two one-way fares.

$16 (or 8%) lower than the regional average from the previous year.

As of November 2010 approximately 110 commercial flights depart Hampton Roads airports each day. These flights serve a total of 25 airports and 21 markets nonstop from Hampton Roads. 23 airports are served by nonstop flights from Norfolk International Airport, and 7 airports are served by nonstop flights from Newport News/Williamsburg International Airport. Two markets (Denver and Cleveland) have gained nonstop service from Hampton Roads airports over the last two years while two other markets (Memphis and St. Louis)

Norfolk International Airport Photo Source: NIA.

BEHIND THE NUMBERS

The airline industry has been under pressure recently, first by higher fuel costs followed by the impacts of the economic downturn. This has led to a number of changes throughout the industry, including new and increased fees for checked baggage, ticket changes, meals, and premium seats.

This pressure has also contributed to the consolidation of the airline industry. Many mergers and acquisitions have occurred in recent years, including American Airlines with TWA, Delta Air Lines with Northwest Airlines, and US Airways with America West Airlines. This industry-wide consolidation has had a number of impacts, both nationally and regionally. One of these impacts is that two hubs served by these airlines, St. Louis and Memphis, are no longer served by nonstop service from the region.

Future consolidation will also affect air travel from Hampton Roads. Of most importance to the region is the pending acquisition of Airtran Airways, the largest carrier at Newport News-Williamsburg International Airport, by Southwest Airlines, the largest carrier at Norfolk International Airport. Decisions made by the new Southwest Airlines could greatly impact passenger levels and fares at both Newport News-Williamsburg and Norfolk International Airports. United Airlines and Continental Airlines are also planning to merge, which could affect the current levels of service between Hampton Roads and their hubs.

have lost nonstop service from Hampton Roads.

The number of flights departing from Hampton Roads airports has decreased in recent years. The 110 daily flights from Hampton Roads airports in November 2010 is down from 130 flights that departed Hampton Roads airports each day at the end of 2006 and 115 daily flights at the end of 2008.

With the number of flights that depart Hampton Roads airports decreasing, the number of available seats has also decreased. Just over 9,000 seats were available each day on flights departing from Hampton Roads in October 2010 according to research done by OAG for USA Today. About 6,700 of these seats are on flights departing from Norfolk International Airport, and 2,300 seats are at Newport News-Williamsburg International Airport. Although this is equal to the 9,000 seats that were available each day on departing flights at the end of 2008, it is down from a high of 9,800 available seats in July 2008.

The most popular final destination for passengers using Hampton Roads airports in 2009 was New York City, with 263,200 passengers traveling between Hampton Roads and the three major New York area airports. Atlanta, which had been the most popular

NEW DEVELOPMENTS

Addition of Frontier Airlines - Frontier Airlines began serving Newport News-Williamsburg International Airport in May 2010. Currently Frontier Airlines provides nonstop service between Hampton Roads and Denver four times a week. With the addition of Frontier, eight airlines provide commercial service from Hampton Roads airports.

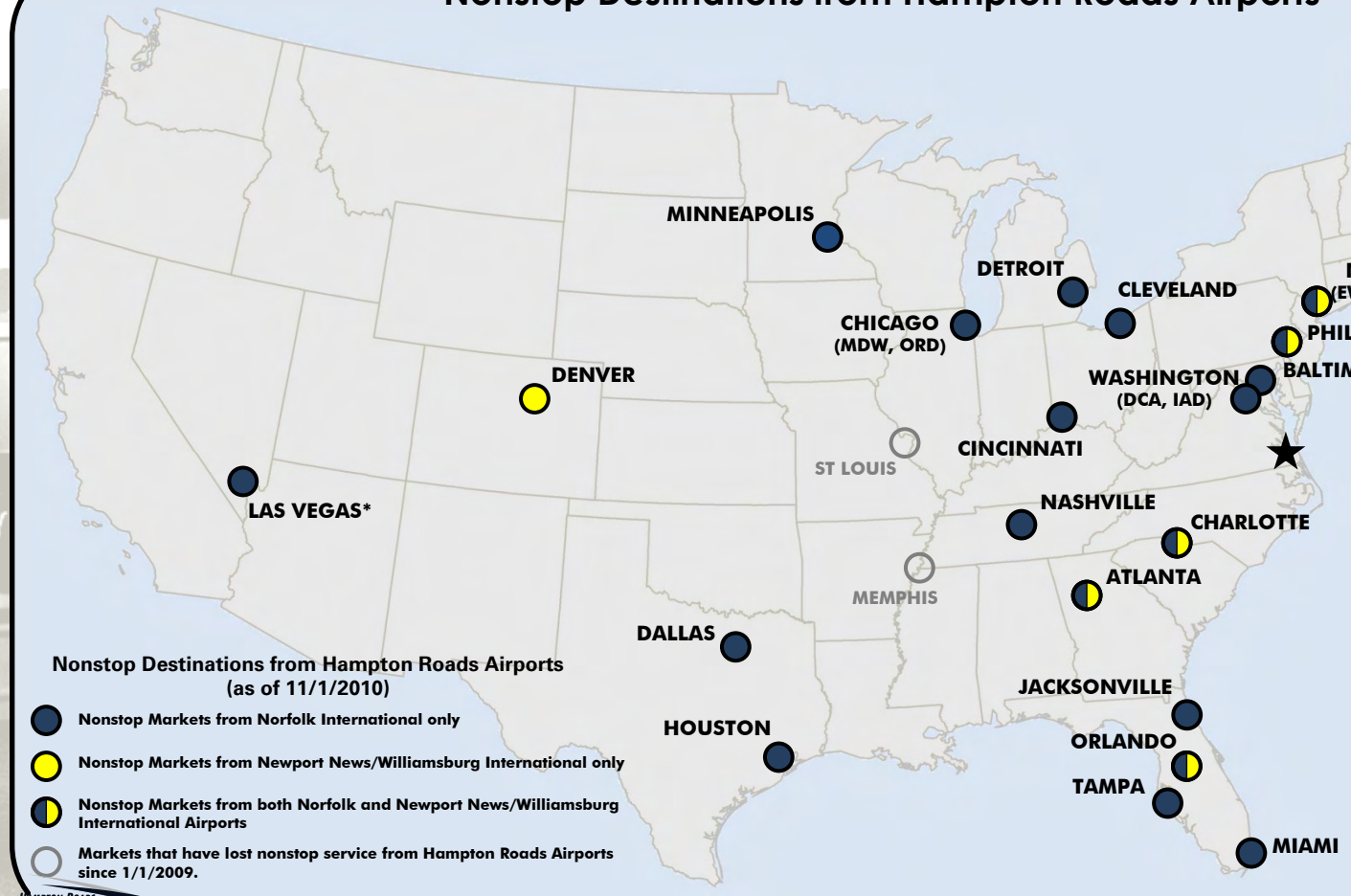
New Concourse - The new $14 million Concourse A was opened at Newport News-Williamsburg International Airport in May 2010. The airport now has two concourses, with the new concourse serving Frontier Airlines and Airtran Airways.

New Parking Garage - Construction began on a new nine-story parking structure (Garage D) at Norfolk International Airport in 2010. The 2,400 space garage is expected to be completed in 2011.

destination for Hampton Roads travelers throughout the 2000s, dropped to #2 in 2009 with 236,300 passengers. The next most popular destinations for passengers traveling to/from Hampton Roads were Orlando, Chicago, and Boston.

Of the top twelve markets for Hampton Roads air travelers, only San Diego (#7), Los Angeles (#11), and Fort Lauderdale (#12) were not served by nonstop service from Hampton Roads airports as of November 2010.

Nonstop Destinations from Hampton Roads Airports



Top Final Destinations to/from Hampton Roads Airports (2009)

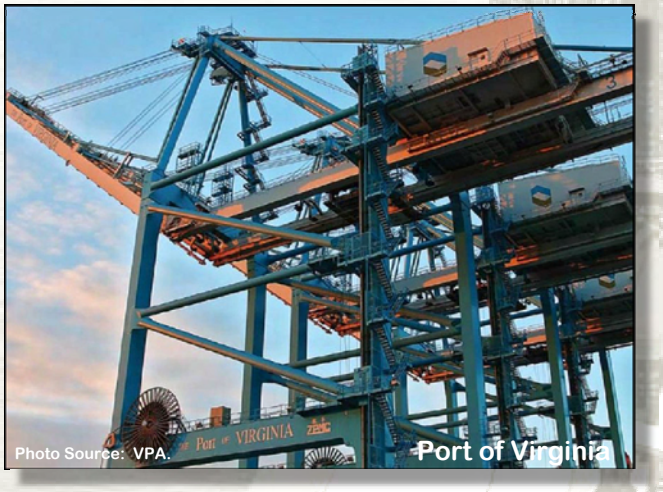
Destination	2009 Passengers
1) New York	263,200
2) Atlanta	236,300
3) Orlando	209,200
4) Chicago	152,200
5) Boston	141,200
6) Jacksonville	123,500
7) San Diego	113,600
8) Tampa	103,100
9) Las Vegas	99,900
10) Dallas/Ft. Worth	92,600
11) Los Angeles	90,300
12) Fort Lauderdale	90,200

Data Source: Federal Aviation Administration.

* - Nonstop service to Las Vegas was eliminated on 11/7/2010, but is expected to resume 3/12/2011.

PORT DATA

One of the foundations of the Hampton Roads and Virginia economies is the Port of Virginia. A study conducted by William & Mary determined that 343,000 jobs and $41 billion in economic activity across the Commonwealth can be attributed to The Port of Virginia through both the ports and port-related industries such as warehousing, manufacturing, and transportation.



The Port of Virginia handled over 49 million tons of total cargo in 2009. Of that total, 33 million tons were coal, and the Port of Virginia remains the largest exporter of coal in the world. Most of the growth that occurred at the Port of Virginia in the 2000s, however, was due to additional general cargo passing through the port. Nearly 15 million tons of general cargo, which is primarily cargo transported in containers, was handled by the Port of

PORT TRENDS

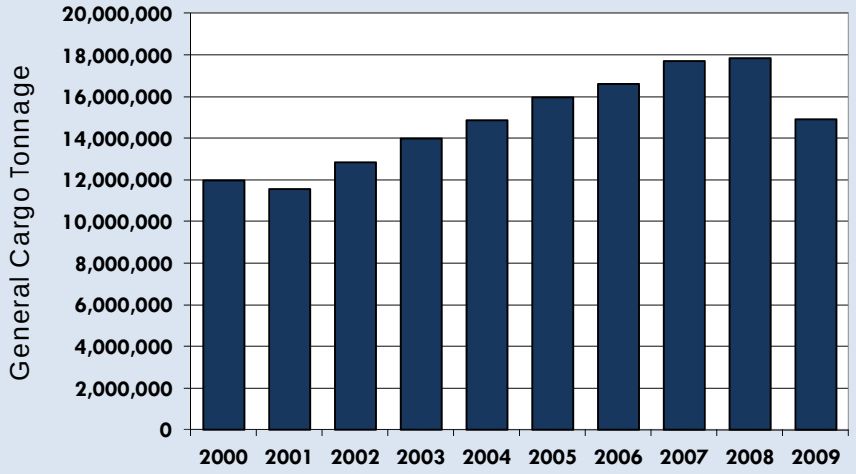
25%

The increase in general cargo handled by the Port of Virginia between 2000 and 2009. This is in spite of a 16% decrease between 2008 and 2009.

0

The change in the rank (3rd) of The Port of Virginia in terms of general cargo handled among East Coast ports between 2000 and 2009.

General Cargo Tonnage Handled by the Port of Virginia, 2000 - 2009

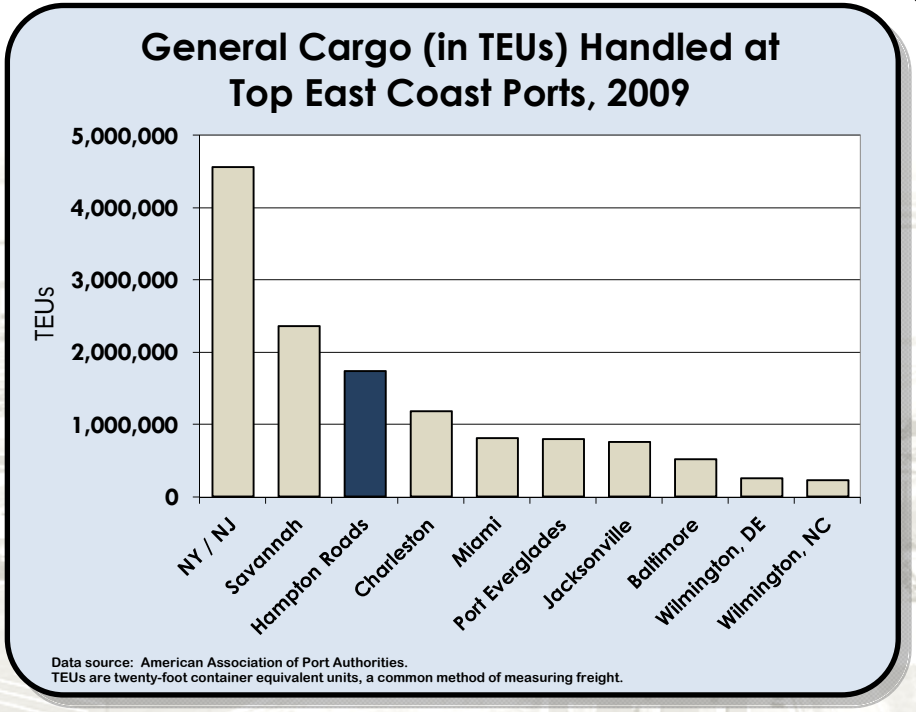


Data source: Virginia Port Authority. Data does not include Virginia Inland Port tonnage.

Virginia in 2009. Although this level is 25% higher than in 2000, the amount of general cargo handled by the Port of Virginia decreased 16% from 2008 to 2009, due to fewer imports and exports during the global recession.

Another means of measuring containerized cargo used by the maritime industry is 20-foot container equivalent units, or TEUs. The Port of Virginia handled 1.7 million TEUs in 2009, up from 1.3 million TEUs in 2000 but down from 2.1 million TEUs in 2008. This volume of containerized cargo ranked the Port of Virginia third highest among East Coast ports and seventh highest among all ports in the United States in 2009.

The freight handled by the Port of Virginia arrives or departs by one of three modes: truck, rail or barge. In 2009, 66%



NEW DEVELOPMENTS

Consolidation of APM Terminal with the Port of Virginia - The Port of Virginia recently completed an $800 million deal to lease and manage the APM Terminal facility, which opened in Portsmouth in 2007, for the next 20 years. At its current 230 acres, the APM Terminal is capable of handling one million TEUs annually.

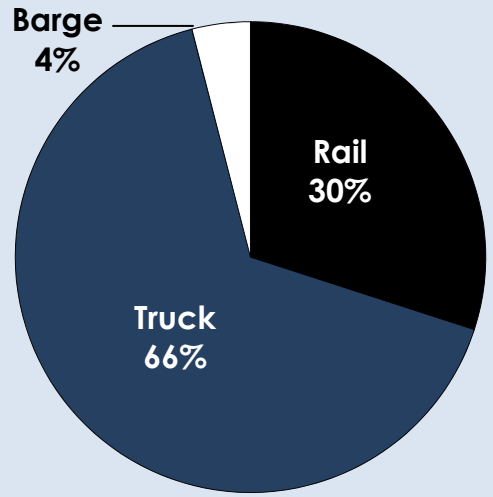
James River Barge Service - Regularly scheduled barge service between Hampton Roads and Richmond began in December 2008, with the hopes of reducing truck traffic on I-64.

Improvements at Norfolk International Terminals - Norfolk International Terminals (NIT) is currently implementing a $400 million renovation and expansion of their facility. This project includes adding and improving cranes, wharfs, roadways, container storage areas, and a central rail yard.

of the general cargo handled by the Port of Virginia arrived or departed by truck, 30% by rail, and the remaining 4% arrived or departed by barge.

Over the last decade the cruise industry has expanded in Hampton Roads, with 60,000 passengers sailing through Norfolk in 2010. Although this is down from the passenger levels experienced in recent years, it is almost double the 28,000 passengers that cruised from Norfolk in 2001. The Half Moone Cruise and Celebration Center opened in Norfolk in 2007, providing a new facility devoted to handling cruise traffic.

Mode Split of General Cargo Handled by the Port of Virginia, 2009



Data source: Port of Virginia.

BEHIND THE NUMBERS

It's no surprise that traffic levels at The Port of Virginia are affected by the global economy. Although general cargo volumes were down 16% at the Port of Virginia between 2008 and 2009, this decrease was equal to the average decrease in container traffic at ports throughout the United States. But even in good economic times, port business is extremely competitive on the East Coast. The amount of cargo passing through the Port of Savannah has more than doubled since 2000, and Savannah is now the second busiest port on the East Coast. Ports in New York and Charleston also compete for much of the same business as the Port of Virginia, and the state of North Carolina is considering constructing a new state port facility near Wilmington as well.

In spite of the recent economic downturn and competition, The Port appears to be well-positioned for the future. The Heartland Corridor rail project, which provides a shorter route for double-stacked trains between Hampton Roads and the Midwest, was recently completed. Plans are also in place for the National Gateway project, which would improve rail connections between the Mid-Atlantic ports and the Midwest. Expansion of the Panama Canal also continues, and when complete in 2014 the Port of Virginia is expected to be among the few ports on the east coast that can serve the largest ships that will pass through the canal.

The Port's lease of the APM Terminals facility will also provide additional capacity for the Port of Virginia while removing a competitor that was contending for similar business. This will provide the Port of Virginia room to grow until the development of the Craney Island Marine Terminal becomes a reality.

RAIL TRAVEL

As fuel costs have fluctuated and highway congestion has become more prevalent throughout the Eastern Seaboard, passenger rail has become a more attractive transportation option. Passenger rail service is currently provided to Hampton Roads by Amtrak stations on the Peninsula in Newport News and Williamsburg. 159,000 passengers boarded or departed Amtrak trains in Hampton Roads in 2009, with 110,000 passengers at the Newport News station and 49,000 passengers at the Williamsburg station. This number of Amtrak passengers has increased 6% since 2002 but is up 23% from 2006.


The Tide Light Rail Line

Image source: HRT

The number of people using rail as a transportation mode is expected to increase in future years as The Tide light rail system begins and potentially expands service, Amtrak provides direct service to the Southside of Hampton Roads, and high speed intercity passenger rail expands throughout the United States.

RAIL TRAVEL TRENDS

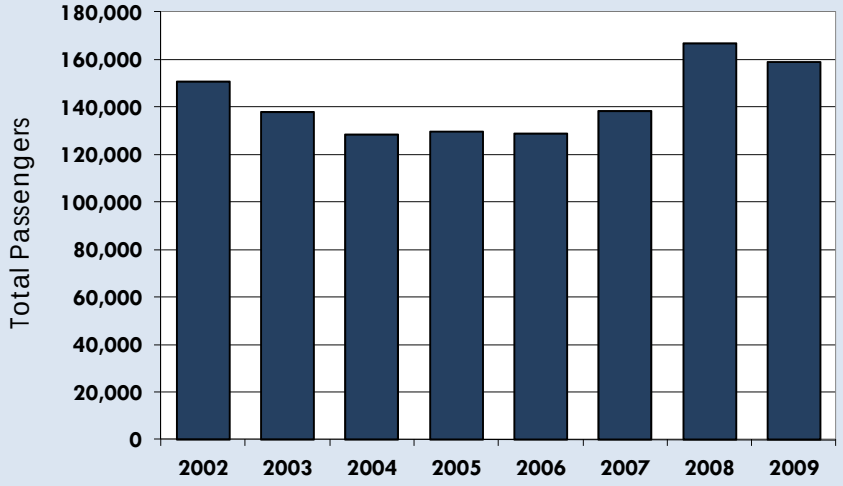
23%

The increase in passengers that boarded or departed Amtrak trains in Hampton Roads between 2006 and 2009.

45%

The decrease in train-vehicle crashes at crossings in Hampton Roads between the 1990s and the 2000s. Fatalities decreased 67% and injuries decreased 80% during this time period.

Total Passengers Boarding or Departing Amtrak Trains in Hampton Roads, FY 2002 - 2009



Data source: Amtrak. Federal Fiscal Years run from October to September.

Rail is also one of the primary methods of transporting goods to and from the Port of Virginia. According to the Port of Virginia, 30% of all general cargo handled by the Port in 2009 was transported by rail. This percentage does not include coal, which is entirely brought into Hampton Roads by rail and exported to other countries.

With the number of freight and passenger trains crossing the region each day, safety at highway-rail crossings is a concern. There were 8 crashes between trains and vehicles at highway-rail crossings in Hampton Roads in 2009, resulting in 3 injuries and no fatalities. Between 2000 and 2009 there were a total of 102 crashes at highway–rail crossings in Hampton Roads, or an average of just over 10 crashes each year. These 102 crashes resulted in 3 fatalities and 21 injuries. The number of crashes at highway-rail crossings in Hampton Roads decreased significantly from the 1990s, when there was a total of 184 crashes that resulted in 9 fatalities and 106 injuries.

NEW DEVELOPMENTS

Light Rail – Construction continues on The Tide light rail system in Norfolk. When complete, the $338 million starter line will run 7.4 miles between the Medical Center Complex through Downtown Norfolk to Newtown Road at the Virginia Beach city line. Service is expected to begin in May 2011, and The Tide is projected to serve 6,000 to 12,000 riders per day.

Virginia Beach transit study - Hampton Roads Transit is currently studying the feasibility of extending transit service from The Tide light rail system in Norfolk to the Virginia Beach Oceanfront. The study, known as the Virginia Beach Transit Extension Study, is expected to be completed in Fall 2011.

Southeast high speed rail corridor - Planning is ongoing for high speed passenger rail service between Washington D.C. and the Southeastern United States. The Tier II Draft Environmental Impact Statement (DEIS) was released in 2010 for the segment between Richmond and Raleigh, NC. Leaders in Hampton Roads are pushing for a link between the region and the Richmond/Petersburg area, and the Tier I DEIS for this link was completed in 2009 by the Virginia Department of Rail and Public Transportation.

Amtrak service to Southside Hampton Roads - The Commonwealth Transportation Board has approved $93 million in funding for new Amtrak service between Norfolk and Richmond. The service, with a maximum speed of 79 mph, is expected to start in 2013.

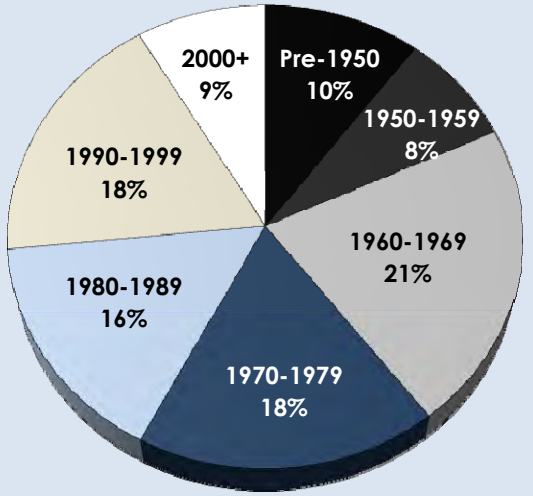
BRIDGES

Hampton Roads unique topography makes bridges and tunnels a critical part of the regional transportation system. There are over 1,200 roadway bridges* in Hampton Roads. The median age of bridges in Hampton Roads is 35 years, and nearly 20% of the bridges in the region are at least 50 years old. Two high profile bridges in the region, the Kings Highway Bridge and Jordan Bridge, have been closed in recent years due to their deteriorating condition.

All bridges in Hampton Roads are inspected regularly by qualified inspectors, usually every one or two years based on the condition of the bridge. Based on these inspections, deficient bridges may be classified as "structurally deficient" or "functionally obsolete". These terms are defined as follows:

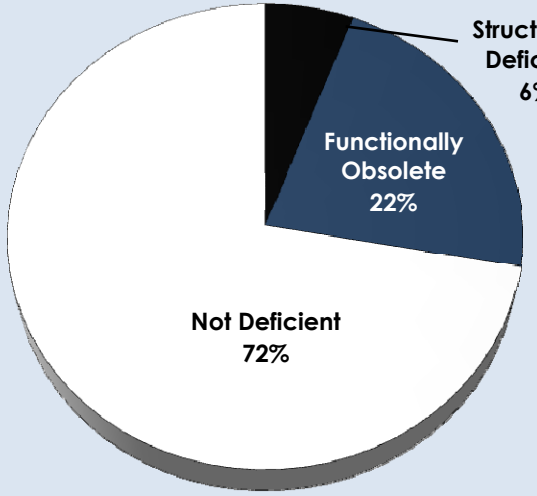
Structurally deficient bridges are structures with elements that need to be monitored and/or repaired. Structurally deficient bridges typically require maintenance and repair and eventually need to be rehabilitated or replaced to address deficiencies. Structurally deficient bridges, however, are not necessarily unsafe, and bridge inspectors will close or impose limits on any bridge that is unsafe.

Bridges in Hampton Roads by Year Built



Data sources: VDOT, FHWA. Data as of October 2010.

Structurally Deficient and Functionally Obsolete Bridges in Hampton Roads



Data sources: VDOT, FHWA. Data as of October 2010.

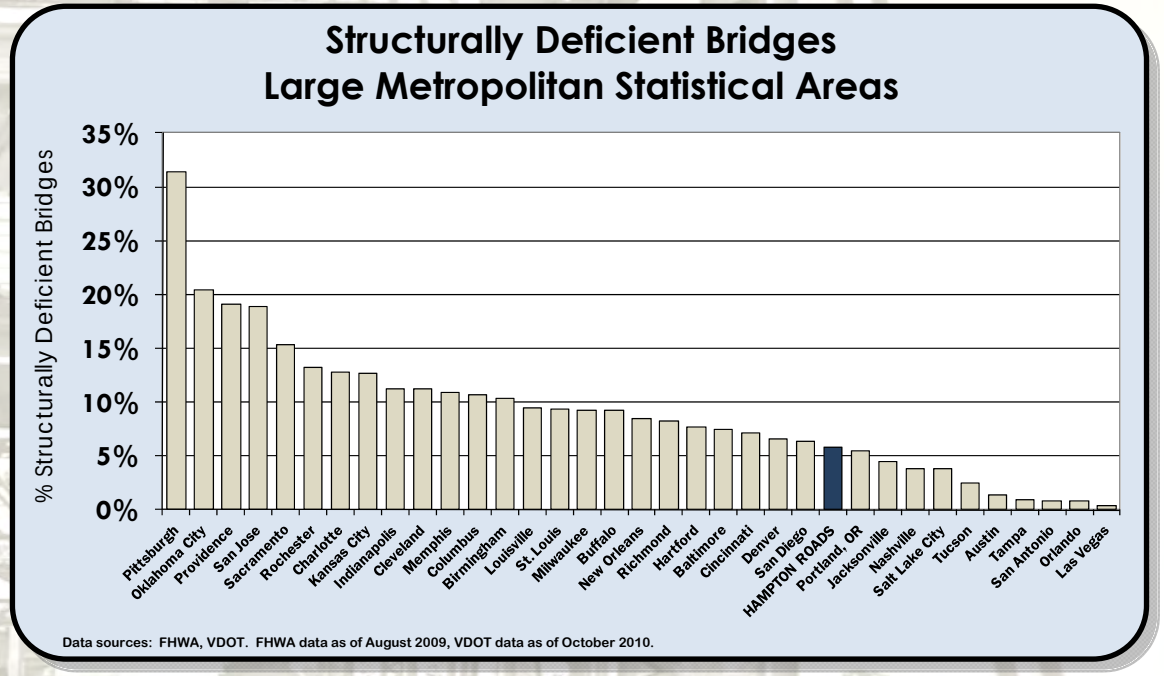
* - Bridges are defined by the National Bridge Inventory as any structure that carries or spans vehicular traffic on a public roadway and has a length of more than 20 feet. Bridges less than or equal to 20 feet in length are not included in these statistics, nor are bridges on military bases and private property.

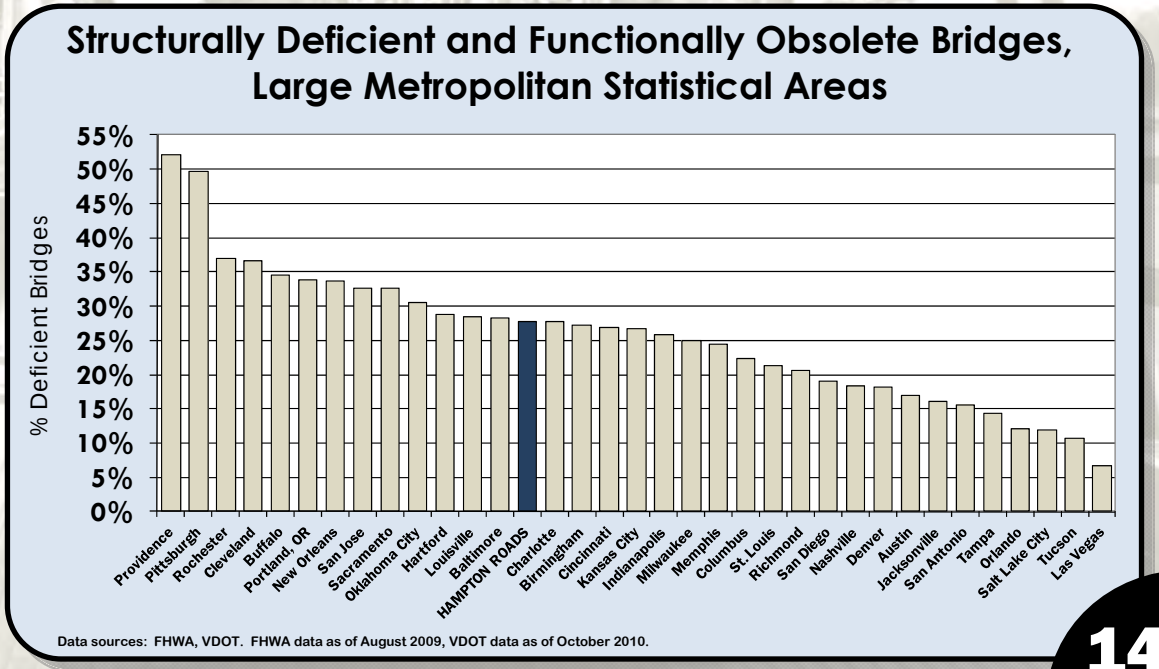
Functionally obsolete bridges are structures that were built to standards that are no longer used today. These bridges have narrow lanes, no shoulders, low vertical clearances, difficult approaches, or may occasionally be flooded.

It should be noted that bridges cannot be classified as both structurally deficient and functionally obsolete. Structures that could be classified as both structurally deficient and functionally obsolete are defined to be structurally deficient.

Of the 1,211 bridges in Hampton Roads, 71 bridges (6%) are classified as structurally deficient as of October 2010. Another 266 bridges (22%) in Hampton Roads are classified as functionally obsolete. Combining structurally deficient and functionally obsolete bridges, 337 bridges (28%) in Hampton Roads are deficient.

Compared to other metropolitan areas, the percentage of structurally deficient bridges in Hampton Roads is not particularly high. Hampton Roads ranks 25th among 35 large metropolitan areas with populations between one and three million people in terms of the percentage of structurally deficient bridges in each region.





When structurally deficient and functionally obsolete bridges are combined, however, Hampton Roads ranks much higher. At 28%, Hampton Roads ranks 14th highest among the 35 large metropolitan areas in terms of the combined percentage of structurally deficient and functionally obsolete bridges.

NEW DEVELOPMENTS

Gilmerton Bridge – A replacement for the Gilmerton Bridge, which opened in 1938 and carries Military Highway across the Southern Branch of the Elizabeth River in Chesapeake, is currently being constructed. Construction on the new Gilmerton Bridge began in 2009 and the new facility is expected to open to traffic in 2013.

Jordan Bridge - The Jordan Bridge, which crosses the Southern Branch of the Elizabeth River between Chesapeake and Portsmouth, was closed on November 8, 2008, after falling into disrepair. About 7,000 vehicles used the facility each weekday before the closure. There are currently plans from the private sector to construct a new toll bridge at the same location in the near future.

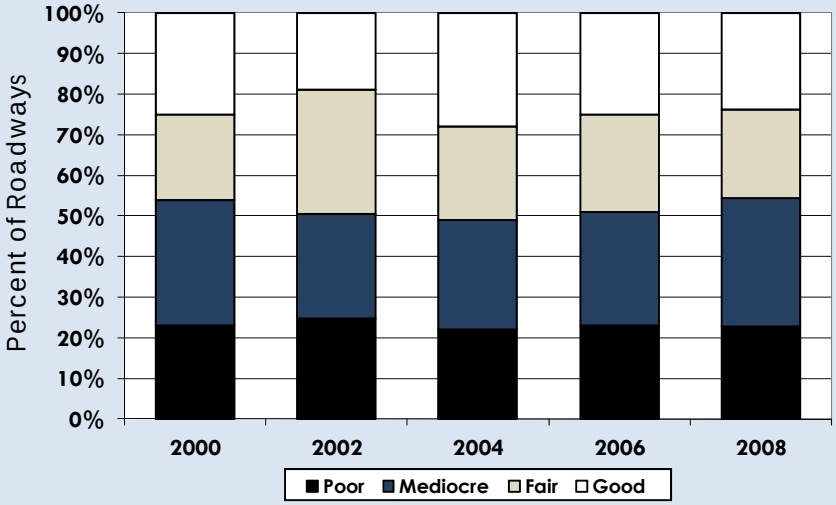
PAVEMENT CONDITION

Nearly a quarter of all major roadways in Hampton Roads have pavement that is in poor condition. This information comes from TRIP, an organization that researches, evaluates and distributes economic and technical data on surface transportation issues. TRIP regularly releases the Urban Roads Report, which details the condition of major roadways in metropolitan areas, and the costs that deteriorating roadways have on the public.

23% of major roadways in Hampton Roads had pavement that was in poor condition in 2008 according to TRIP. 32% of Hampton Roads roadways in 2008 were rated as mediocre, 22% were rated as fair, and only 24% were rated as good. Between the years 2000 and 2008, the percentage of poor pavement in Hampton Roads was stable, remaining between 22% and 25% of all major roadways.

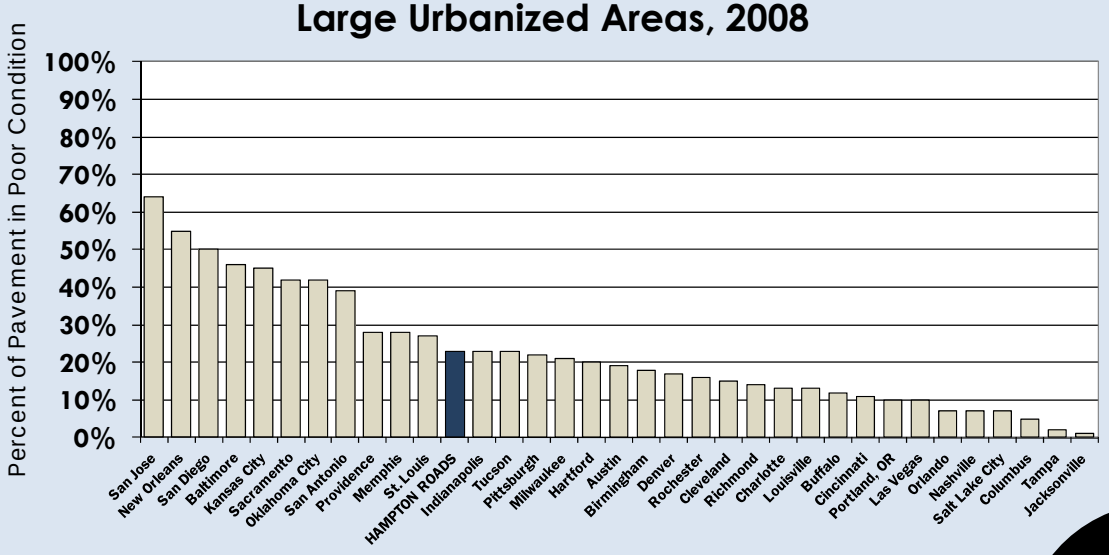
Among 35 large metropolitan areas with populations between one and three million people, Hampton Roads ranked 12th highest in terms of the percentage of roadways with pavement in poor condition in 2008. Some metropolitan areas such as San Jose, New Orleans, and San Diego had more than twice the percentage of poor roadways than Hampton Roads did.

Pavement Condition in Hampton Roads, 2000 - 2008



Data source: TRIP. Data only includes Interstates, freeways, and other principal arterials.

Percent of Roadways with Pavement in Poor Condition Large Urbanized Areas, 2008



Data source: TRIP. Data only includes Interstates, freeways, and other principal arterials.

ROADWAY USAGE

After growing at about 2% each year historically, the growth in roadway travel in Hampton Roads has leveled off in recent years. The amount of roadway travel is measured in terms of vehicle-miles of travel (VMT), which is the total number of miles every vehicle in the region travels over a period of time. There were just over 40 million vehicle-miles of travel on the average day in Hampton Roads in 2009. Over the entire year, this adds up to 15 billion vehicle-miles of travel throughout Hampton Roads.

Hampton Roads Bridge-Tunnel Congestion

Between 2000 and 2009 the amount of daily vehicular travel in Hampton Roads increased by 4 million miles, or a total of 11%. However, after growing at an average of about 2% each year prior to 2003, there was little growth in VMT in Hampton Roads between 2003 and 2009.

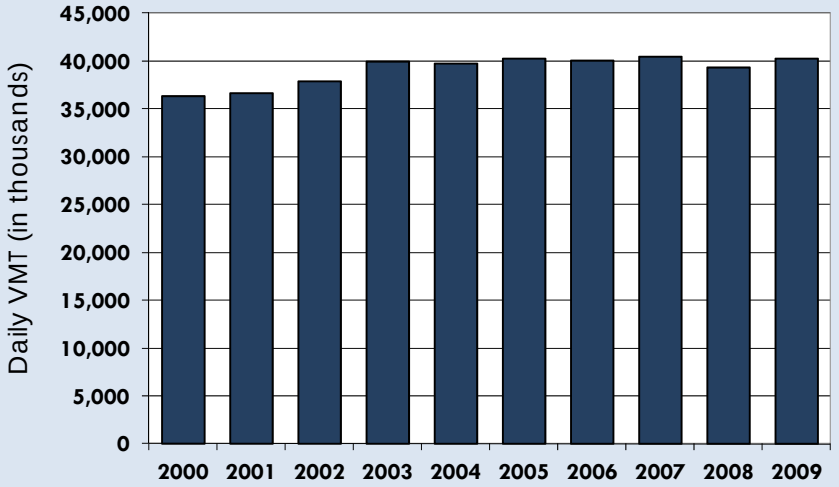
ROADWAY USAGE TRENDS

11% — The growth in daily vehicular travel in Hampton Roads from 2000 to 2009.

6% — The growth in the regional roadway capacity, in terms of lane-miles, in Hampton Roads between 2000 and 2009. This is about half the growth seen in vehicular travel.

19% — The growth in the number of registered vehicles in Hampton Roads from 2000 to 2009.

Daily Vehicle-Miles of Travel in Hampton Roads, 2000 - 2009



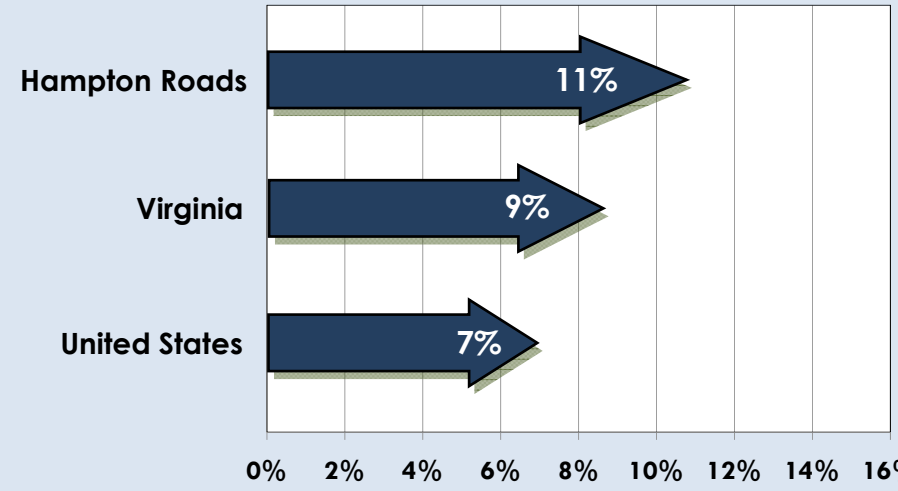
Data source: VDOT.

At 11%, the growth in vehicular travel in Hampton Roads between 2000 and 2009 was higher than the growth seen in both Virginia (9%) and the United States (7%). However, since 2003 the growth in vehicular travel has been higher in both Virginia (5%) and the United States (2%) than in Hampton Roads (under 1%).

In the last decade, the amount of vehicular travel per person in the region also increased. In 2008, the amount of vehicular travel per capita in Hampton Roads was 24.0 vehicle-miles per person per day. This is up slightly from 23.0 daily vehicle-miles per capita in the region in 2000.

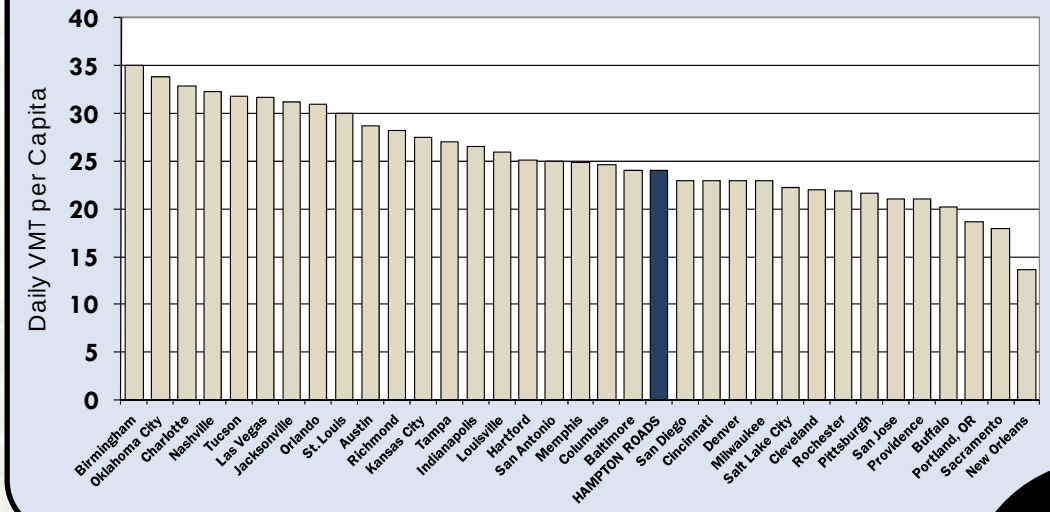
Among 35 large areas in the United States with populations between one and three million people, Hampton Roads ranked 21st highest in terms of vehicular travel per capita in 2008. The average among these 35 areas was 25.5 vehicle-miles of travel per capita per day, 1.5 miles more than the average in Hampton Roads. Areas such as Birmingham and Oklahoma City had more than 10 extra miles per person per day than Hampton Roads experienced in 2008.

Growth in Vehicle-Miles of Travel in Hampton Roads, Virginia, and the United States, 2000 to 2009



Data sources: VDOT, FHWA Highway Statistics.

Daily Vehicle-Miles of Travel Per Capita in Large Metropolitan Areas, 2008



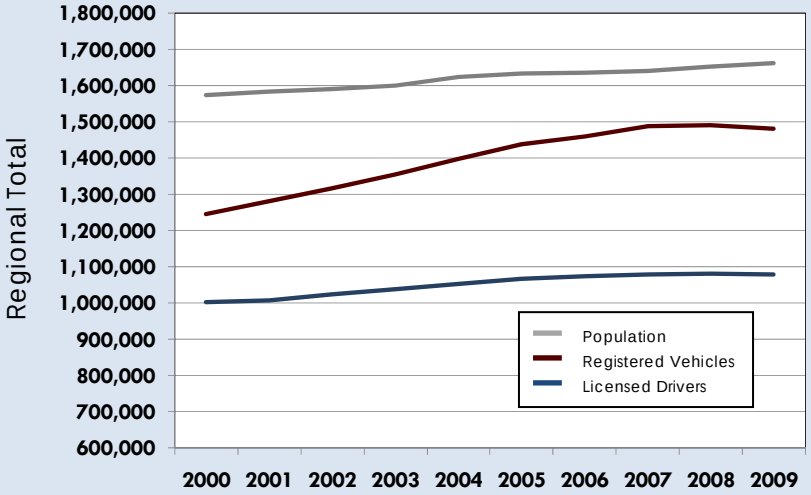
Data source: FHWA Highway Statistics.

The growth in vehicle-miles traveled outpaced the growth in population in Hampton Roads in the 2000s. Hampton Roads had an estimated population of 1,660,000 residents in 2009, up 6% from 2000. With roadway travel increasing 11% during this time, the growth of vehicle-miles of travel was nearly twice the growth seen in the population of Hampton Roads during the 2000s.

There were 1,481,000 registered vehicles in Hampton Roads in 2009, or one vehicle for every 1.12 residents. Although the number of registered vehicles in Hampton Roads has not grown since 2007, the number of registered vehicles increased 19% between 2000 and 2009. This rate far outpaced the 6% growth in the regional population and 11% growth in vehicle-miles of travel during this time.

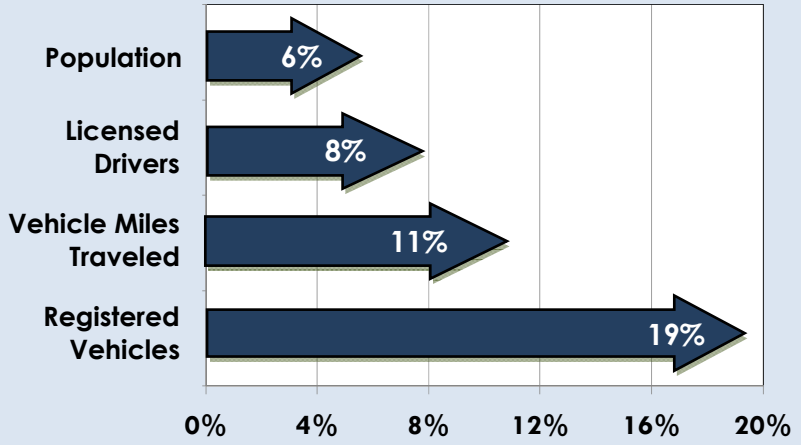
The growth in the number of licensed drivers in Hampton Roads also outpaced the growth in population but is well below the growth rate in registered vehicles. There were 1,080,000 licensed drivers in Hampton Roads in 2009, up 8% from 2000. There were 1.37 registered vehicles for every licensed driver in Hampton Roads in 2009, up from 1.24 registered vehicles per licensed driver in 2000.

Population, Registered Vehicles, and Licensed Drivers in Hampton Roads, 2000 - 2009



Data sources: HRPDC Hampton Roads Databook, Virginia DMV.

Growth in Population, Licensed Drivers, VMT, and Registered Vehicles in Hampton Roads, 2000 to 2009

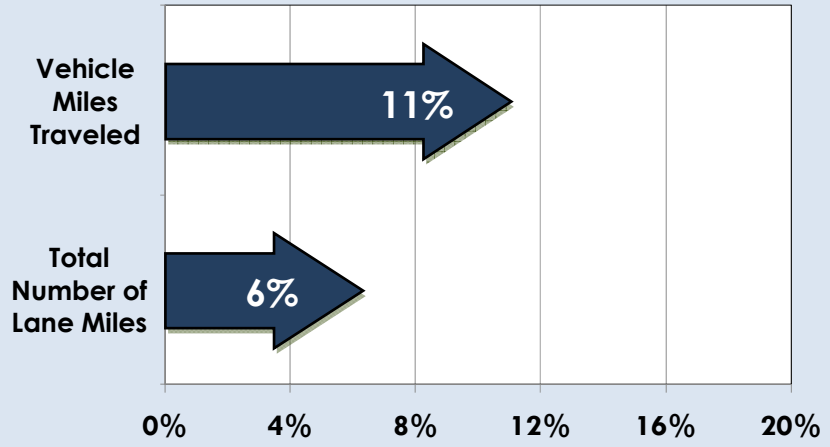


Data sources: HRPDC Hampton Roads Databook, Virginia DMV, VDOT, FHWA Highway Statistics Series.

Over the last decade roadway capacity improvements have not kept pace with the growth in vehicular travel in Hampton Roads. The total growth in roadway capacity in Hampton Roads in terms of lane mileage* was only 6% between 2000 and 2009, meaning the number of vehicle-miles traveled increased nearly twice as much as the amount of roadway capacity during this time.

Of this total growth in lane-miles, however, over half was in local roadways, which usually serve neighborhoods and carry very low traffic volumes. If local roadways are ignored, the number of vehicle-miles traveled increased at three to four times the rate as the amount of lane miles. With highway funding levels projected to decrease in future years, the growth rate in roadway capacity throughout the region will likely continue to decrease.

Growth in VMT and Lane Miles in Hampton Roads, 2000 to 2009



Data source: VDOT.

BEHIND THE NUMBERS

Regional and national vehicular travel is affected by a number of factors. Vehicular travel throughout the country has been impacted recently by the condition of the economy. The economic downturn has resulted in fewer commuters on the road, less leisure travel, and a decrease in the number of trucks hauling freight. Higher fuel prices, especially when they first crossed the $3 and $4 thresholds, have also been shown to decrease the amount of roadway travel as well.

In Hampton Roads, the amount of roadway travel is also affected by factors unique to the region. Vehicular travel increases in the summer in Hampton Roads for many reasons, including tourists coming to and passing through the region. Regional travel is also affected greatly by the military, with levels determined by factors such as the number of military personnel in the region and what ships are in port at any given time.

The amount of vehicular travel going forward will be impacted by all of these factors. Travel levels across the nation are not expected to surpass the levels seen in 2007 until the condition of the economy significantly improves. In addition, future military staffing levels will greatly impact travel levels in Hampton Roads.

* - A lane mile is defined as the length of a roadway times the number of lanes and is commonly used to describe the amount of roadway capacity. A one mile section of a roadway that is 6 lanes wide comprises 6 lane miles.

CONGESTION DATA

According to national studies, congestion in Hampton Roads is worse than in many comparable areas and costs local drivers 25 million hours of their time and $500 million in costs. Two popular studies examine congestion on the regional level and compare congestion among metropolitan areas. These studies are prepared by Inrix and the Texas Transportation Institute at Texas A&M University.

Inrix, Inc. has released the National Traffic Scorecard report each year since 2007. The National Traffic Scorecard series details the trends in congestion in the 100 largest metropolitan areas across the country. This data is collected using over a million GPS-enabled cell phones and probe vehicles, including taxis, shuttles, delivery vans, trucks and consumer vehicles, located across the country.

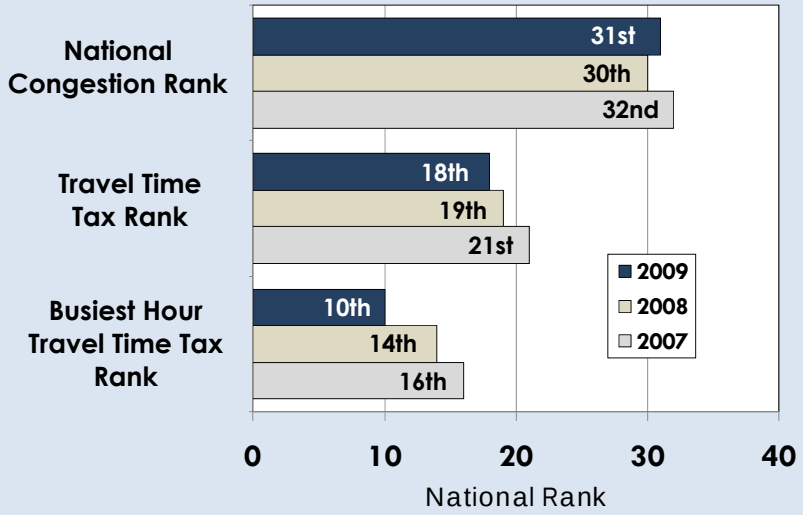
Inrix primarily uses two measures to compare congestion among metropolitan areas. The National Congestion Rank measures the extent and amount of average congestion on the analyzed road network, which includes the interstate system and some non-interstate freeways. According to Inrix, Hampton Roads National Congestion Rank was 31st among the 100 largest metropolitan areas in 2009, up from 32nd in 2007. Among only the 35 large metropolitan areas with populations between one and three million people, however, Hampton Roads ranked the 14th highest.

ROADWAY USAGE TRENDS

The change in the rank of Hampton Roads, from 21st to 18th, in terms of regional Travel Time Tax from 2007 to 2009 according to Inrix.

The increase in annual congestion costs for each peak period traveler in Hampton Roads from 1998 to 2007.

Hampton Roads Inrix Congestion Ranks, 2007 - 2009

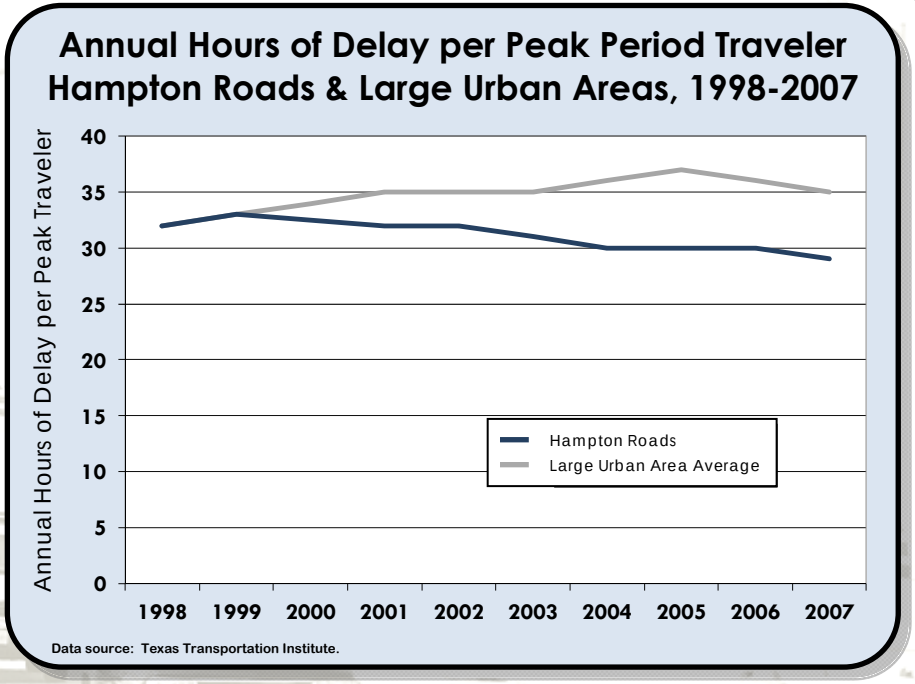


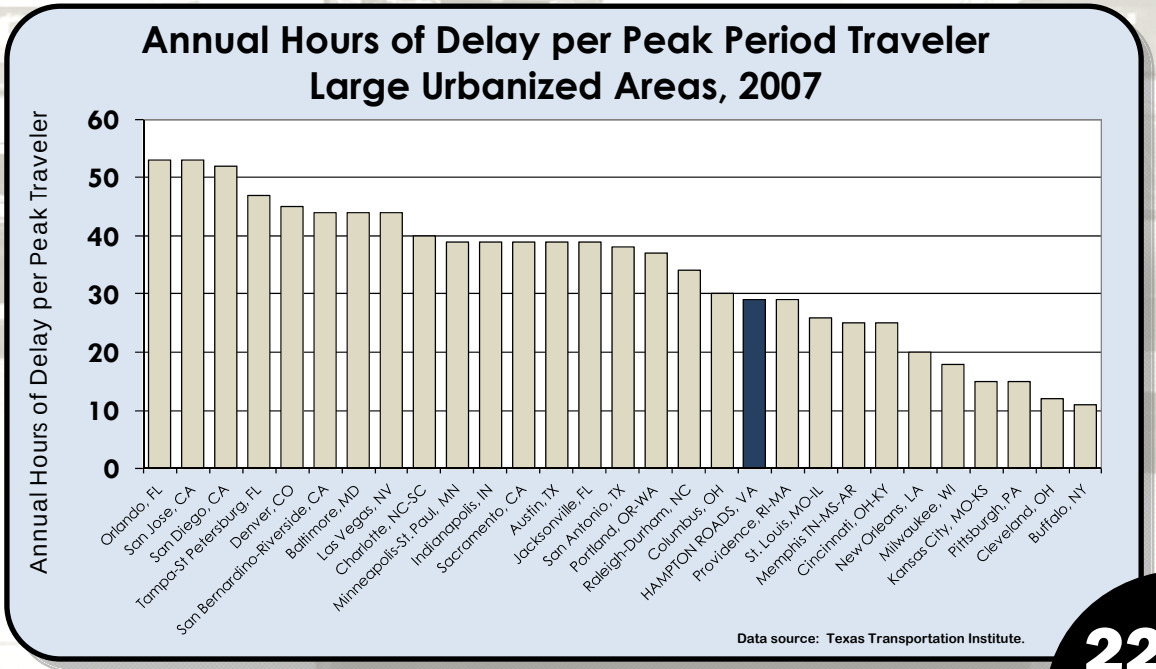
Data source: Inrix. Travel Time Tax is defined as the percentage of extra travel time a random trip takes during congested conditions.

Inrix also uses the Travel Time Tax to compare congestion in metropolitan areas during peak travel periods. The Travel Time Tax is defined by Inrix as the percentage of extra travel time a trip takes during the peak travel period as compared to uncongested conditions. The Travel Time Tax in Hampton Roads was 11% in 2009, which ranked the region 18th nationwide, up from 21st in 2007. Among the 35 large metropolitan areas, however, Hampton Roads ranked the fourth highest in 2009.

During the busiest hour of the week, congestion in Hampton Roads ranks among the worst in the country. According to Inrix, Hampton Roads Busiest Hour was from 4 - 5 pm on Fridays, and the Travel Time Tax during this busiest hour ranked 10th nationwide in 2009, up from 16th in 2007. Among the 35 large metropolitan areas, Hampton Roads had the second highest Busiest Hour Travel Time Tax in 2009.

In addition to the Inrix's National Traffic Scorecard, The Texas Transportation Institute (TTI) at Texas A&M University regularly publishes the Urban Mobility Report. In this study, TTI estimates the amount of time that travelers in 85 urbanized areas spend in congestion, and the costs related to this congestion. TTI divides urbanized areas into four population groups for comparison purposes: very large, large, medium, and small. Hampton





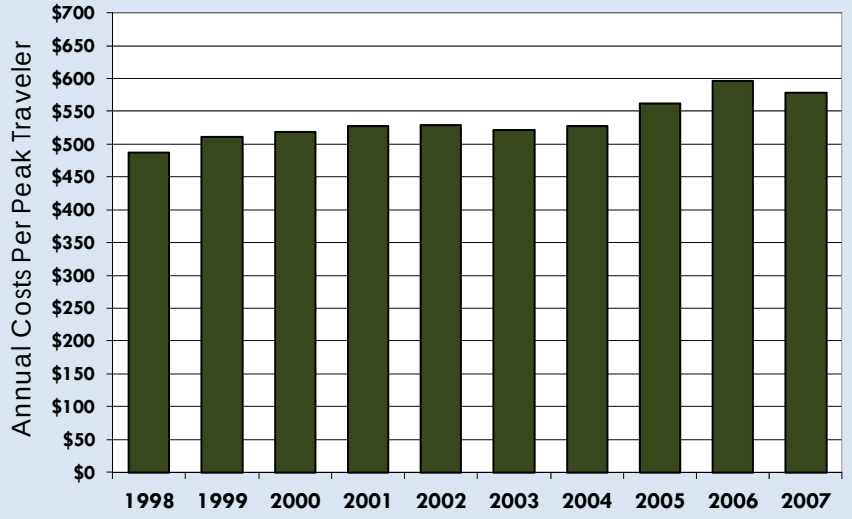
Roads was grouped with 28 other areas defined by TTI as large urbanized areas, which are those areas with between one and three million people.

According to TTI, peak period travelers in Hampton Roads lost an average of 29 hours stuck in traffic in 2007, the most recent data available. This ranked Hampton Roads 19th among the 29 large urbanized areas. In addition, the annual amount of delay per peak period traveler actually decreased between 1998 and 2007 in Hampton Roads according to TTI.

Although TTI estimates that Hampton Roads has less delay than other large urbanized areas, their delay estimates are believed to be low for Hampton Roads. This is because TTI's delay estimation techniques do not account for facilities such as tunnels and drawbridges that have lower capacities than other roadways with a similar number of lanes. With the amount of delay that occurs at tunnels and drawbridges in Hampton Roads, this difference could be quite significant.

TTI also estimates the direct and indirect costs of being stuck in congestion. TTI estimates that being stuck in traffic cost each Hampton Roads peak period traveler an average of $579 in 2007, which amounts to $501 million for the entire region. This is based on the costs associated with wasted fuel (of which TTI estimates there were 16 million gallons wasted in Hampton Roads in 2007), the value of a person's time, and the costs associated with operating commercial vehicles. These costs are up from $487 per peak period traveler in 1998, largely because of increases in fuel costs during that time.

Annual Congestion Costs per Peak Period Traveler in Hampton Roads, 1998-2007



Data source: Texas Transportation Institute.

COMMUTING

More than four in every five commuters in Hampton Roads drives to work by themselves in a single occupant vehicle, and nearly half of all Hampton Roads commuters work in a different community than they live in. These facts come from the American Community Survey (ACS), which is released annually by the United States Census Bureau. As part of the ACS, data is collected in each region regarding the commuting characteristics of residents, including commuting modes, travel time to work, and where commuters work and live.

The mean travel time to work in Hampton Roads was 23.2 minutes in 2009 according to the ACS. This number decreased slightly from 2000, when the mean travel time to work was 24.1 minutes. Throughout the 2000s the mean travel time to work was mostly between 23 and 24 minutes in Hampton Roads. Among the 35 large metropolitan areas throughout the United States with a population between one and three million people, Hampton Roads ranked 27th highest in mean travel time to work in 2009. The mean travel time to work in Hampton Roads was 1.3 minutes below the average in large metropolitan areas of 24.5 minutes.

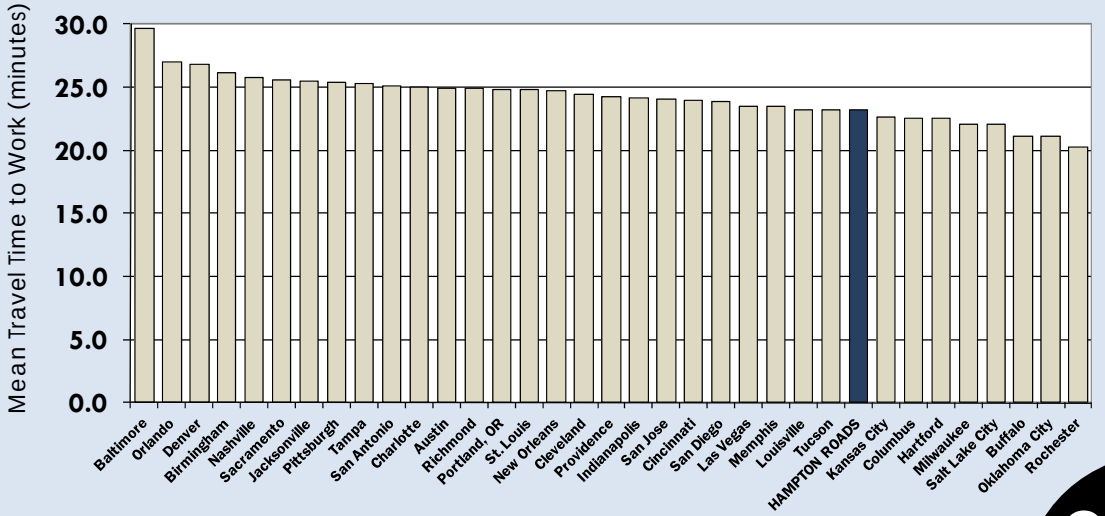
COMMUTING TRENDS

4% — The decrease in mean travel time to work in Hampton Roads from 2000 to 2009.

3% — The increase in the percentage of commuters that drove alone to work in Hampton Roads between 2000 (79%) and 2009 (82%).

1% — The change in the percentage of Hampton Roads residents that worked in a jurisdiction that is different from the one they lived in from 2000 to 2009.

Mean Travel Time to Work
Large Metropolitan Areas, 2009



Data source: US Census Bureau.

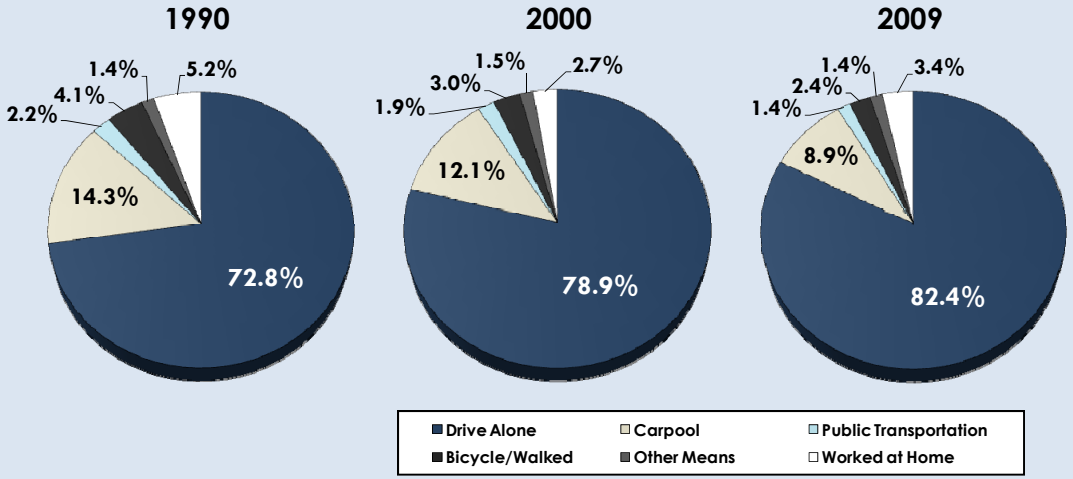
Hampton Roads TPO Transportation Planning Organization

Many Hampton Roads residents, however, have much longer commutes. In 2009, 32% of all Hampton Roads commuters traveled 30 minutes or longer to work, and approximately 5% had commutes of an hour or more.

Nearly half of all Hampton Roads residents work in a jurisdiction that is different from the one they reside in. In 2009, 49% of all workers in Hampton Roads worked in a jurisdiction that was different from the one they resided in. Although this is similar to the percentage seen in 2000, it's higher than the percentage seen in 1990 (44%).

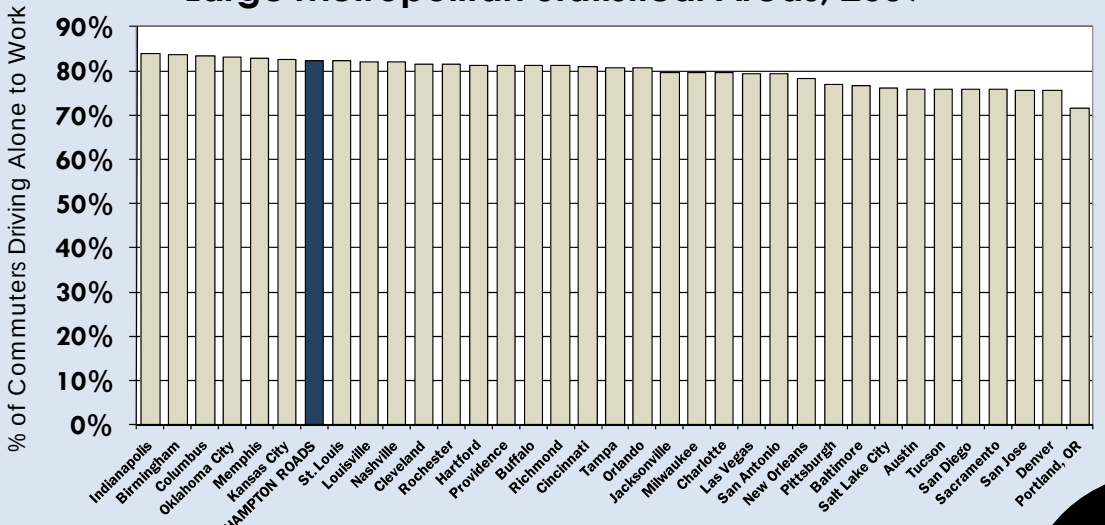
The number of commuters that drive alone to work has also increased in Hampton Roads through the years. In 2009, 82% of commuters in Hampton Roads drove alone to work, up from 79% in 2000 and 73% in 1990. All other commuting modes (such as carpooling, public transportation, and walking) experienced a decrease in their percentage of commuters between 2000 and 2009 except for working at home. Hampton Roads ranked 7th highest among the 35 large areas in terms of the percentage of commuters that drove alone to work in 2009, and was 3% higher than the average.

Commuting Methods in Hampton Roads 1990, 2000, and 2009



Data source: US Census Bureau.

Percentage of Commuters That Drove Alone to Work Large Metropolitan Statistical Areas, 2009



Data source: US Census Bureau.

ROADWAY SAFETY

There were 24,005 crashes in Hampton Roads in 2009, resulting in 14,004 injuries and 124 fatalities. Looking at these numbers another way, a crash occurred every 22 minutes throughout the region in 2009, with an injury occurring every 38 minutes, and a fatality occurring about every third day. Despite this frequency of crashes, the number of crashes in 2009 was actually the lowest in Hampton Roads in decades, and was down 27% from a high of 33,000 crashes in 2004.

This decrease in crashes contributed to a decrease in the number of injuries suffered in traffic crashes. The 14,004 injuries that occurred in traffic crashes in Hampton Roads in 2009 were the lowest experienced in the region during the last decade. The number of injuries resulting from traffic crashes decreased 22% between 2000 and 2009, a greater percentage than the decrease in crashes.

In spite of the recent decrease in crashes and injuries, the number of fatalities in Hampton Roads has fluctuated. There were 124 fatalities resulting from traffic crashes in Hampton Roads in 2009. However, there were 155 fatalities in Hampton Roads in 2007 and 153 fatalities in 2008, which were the highest number experienced in the region since 1998. The biggest factor in traffic crash fatalities in Hampton Roads is alcohol use, with 55 of the 124 fatalities (44%) in 2009 resulting from crashes involving alcohol.

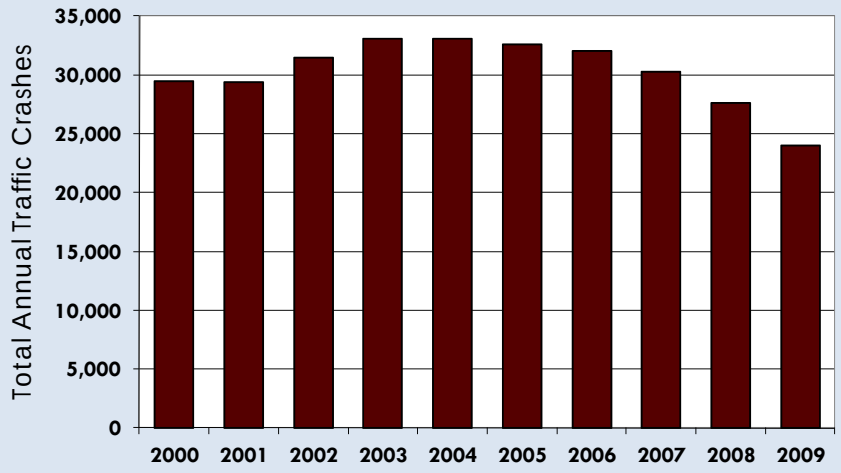
ROADWAY SAFETY TRENDS

18% — Decrease in the number of crashes in Hampton Roads between 2000 and 2009.

21% — Decrease in the rate of crashes (per amount of travel) in Hampton Roads between 2000 and 2009.

8% — Decrease in the rate of traffic crash fatalities (per amount of travel) in Hampton Roads between the 1998 to 2000 period and the 2007 to 2009 period.

Crashes in Hampton Roads, 2000 - 2009



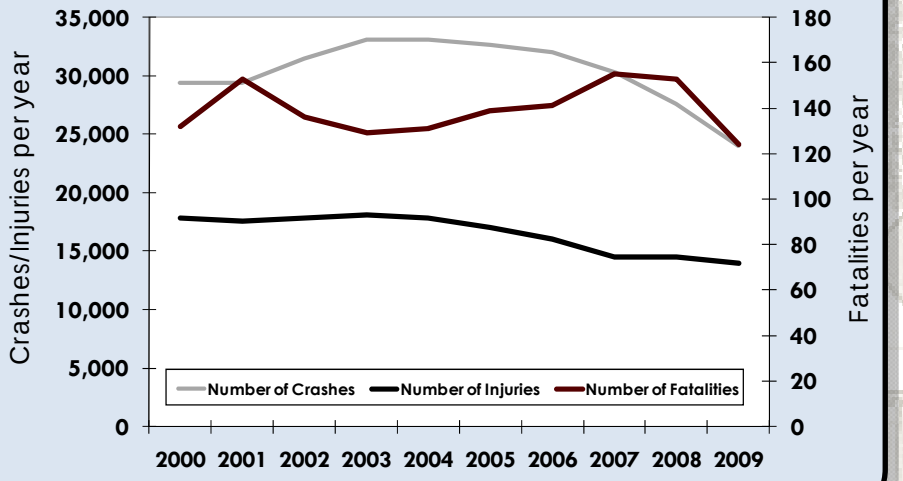
Data source: Virginia DMV.

The trends in crashes and injuries in Hampton Roads were similar to statewide trends. Statewide crashes decreased 18% and injuries decreased 21% between 2000 and 2009. The number of fatalities, however, decreased much more across the state of Virginia (19% decrease from 2000 to 2009) than in Hampton Roads (6% decrease).

With the number of crashes decreasing in Hampton Roads, the crash rate relative to the amount of travel is also decreasing. The crash rate in Hampton Roads decreased from 2.06 crashes per million vehicle-miles of travel (VMT) in 2000 down to 1.63 crashes per million VMT in 2009, a 21% decrease. This reduction in the crash rate is similar to the decreases experienced both in Virginia (24% decrease) and the United States (19% decrease). In spite of this decrease, the crash rate in Hampton Roads is higher than the crash rates in the Northern Virginia, Richmond, and Roanoke metropolitan areas, as shown on the next page.

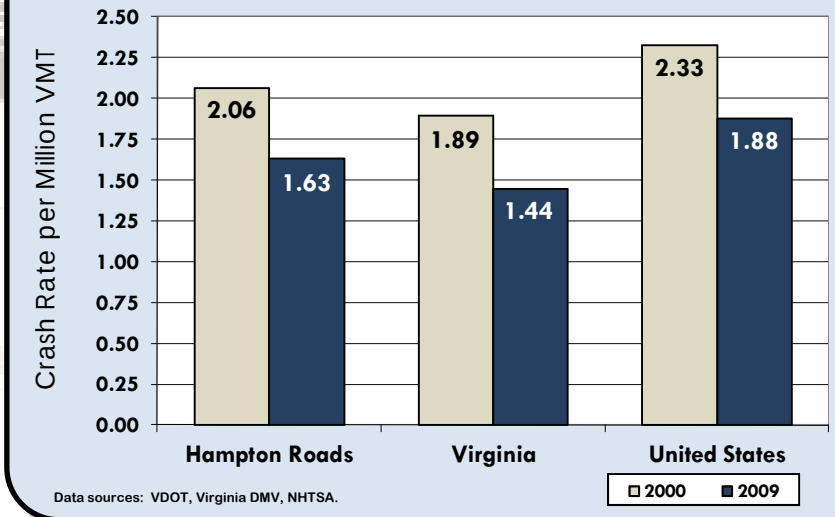
The fatality rate in Hampton Roads has also decreased over the last decade. The Hampton Roads fatality rate was 0.97 fatalities per 100 million VMT in the three-year period from 2007 to 2009, down from 1.05 fatalities per 100 million VMT in the 1998 to 2000 time period (fatalities are often analyzed using three year periods due to the small number that occur yearly.) In spite of this decrease, the fatality rate in Hampton Roads from 2007 to 2009 was over twice the fatality rate seen in Northern Virginia, as shown on the next page.

Crashes, Injuries, and Fatalities in Hampton Roads, 2000 - 2009



Data source: Virginia DMV.

Traffic Crash Rates in Hampton Roads, Virginia, and the United States, 2000 and 2009



Data sources: VDOT, Virginia DMV, NHTSA.

Additional roadway safety information is included in HRTPO's General Crash Data and Trends report. The most recent update of this report was released in 2009 and is available at **http://www.hrtpo.org/TPO_Reports.asp**.

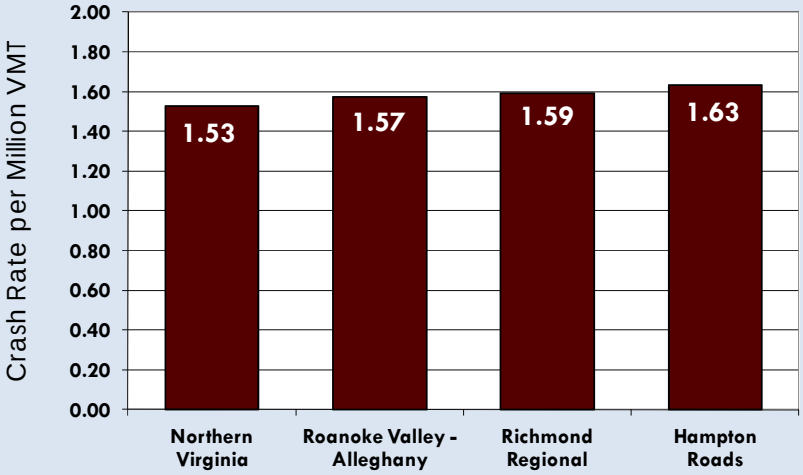
BEHIND THE NUMBERS

The recent decrease in traffic crashes in both Hampton Roads and across the country is unprecedented. There are many factors contributing to this decrease. Traffic volume levels have not increased in Hampton Roads since 2003, which restricts the opportunity for an increase in crashes based on additional travel. Improvements in roadways and vehicle technologies, such as rumble strips and sophisticated braking systems, have also made crashes more avoidable.

There has also been an emphasis on roadway safety on the national, state, and local levels. The Highway Safety Improvement Program (HSIP) was created to fund projects that improve safety at hazardous locations. In addition to the $1.2 billion annually devoted to the HSIP program, another $1.3 billion in funds has been added through the American Recovery and Reinvestment Act.

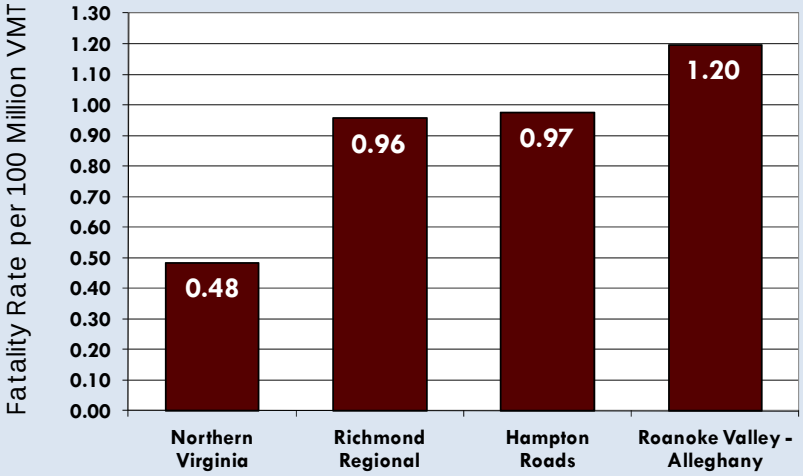
Many states (including Virginia) are also using Roadway Safety Audits (RSAs) to improve safety. RSAs are formal safety examinations of hazardous locations by independent teams. These teams, which often includes HRTPO staff, analyze and report on road safety issues and identify possible improvements.

Traffic Crash Rates in Virginia Metropolitan Areas, 2009



Data sources: VDOT, Virginia DMV.

Traffic Crash Fatality Rates in Virginia Metropolitan Areas, 2007-2009



Data sources: VDOT, Virginia DMV.

TRUCK DATA

With Hampton Roads being the home of the third busiest port on the East Coast along with many industrial and warehouse facilities, truck traffic is prevalent throughout the region. As mentioned previously in this report, 66% of the freight handled by the Port of Virginia arrived or departed by truck in 2009. Many of these trucks carry freight to large warehouses throughout Hampton Roads, including ones operated by Walmart, Target, World Market, and Dollar Tree.

These industries contribute to the 17,000 trucks that entered or exited Hampton Roads through major gateways each weekday in 2009. However, this number decreased 16% since 2007, when nearly 20,000 trucks passed in and out of the region each weekday.

The primary gateway for trucks entering and exiting Hampton Roads is I-64. An average of 6,500 trucks used I-64 to enter or exit the region each weekday in 2009, accounting for 39% of the trucks passing through the major gateways to Hampton Roads. The next most used gateways for trucks entering or exiting Hampton Roads are Route 58 and Route 460. An average of 3,400 trucks used Route 58 each weekday in 2009, accounting for 21% of the trucks passing though regional gateways. 1,900 trucks used Route 460, accounting for 11% of the trucks passing through regional gateways.

TRUCK DATA TRENDS

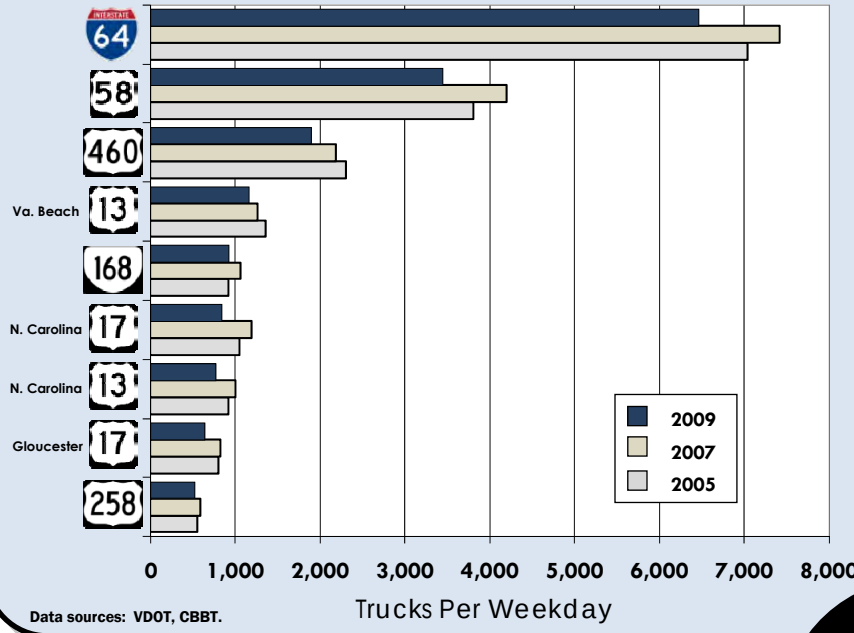
16%

The decrease in the number of trucks that entered or exited Hampton Roads each weekday at major gateways between 2007 and 2009.

39%

The decrease in the number of overheight trucks turned around at the entrance to the Hampton Roads Bridge-Tunnel between 2005 and 2009.

Number of Trucks Passing Through Regional Gateways, 2005, 2007 and 2009



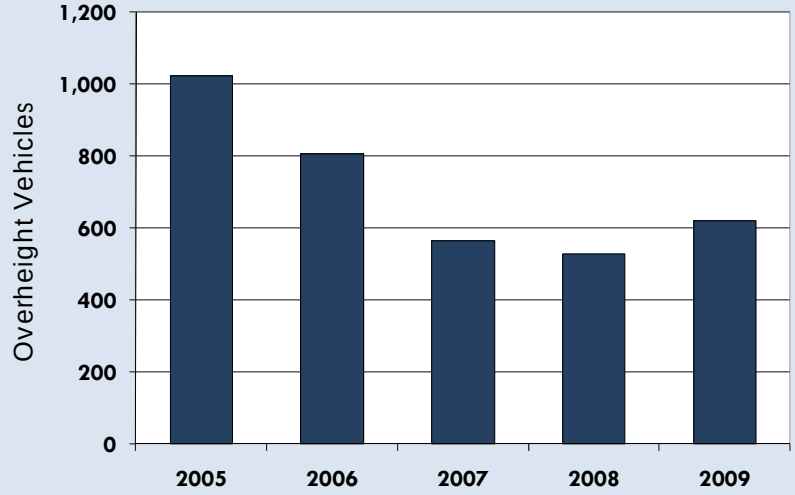
Data sources: VDOT, CBBT.

Trucks accounted for 3.0% of all travel in Hampton Roads in 2009 according to VDOT, or about 1.2 million miles of travel each day. About two-thirds of this truck travel occurs outside of the morning and afternoon peak travel periods when congestion is most prevalent.

A concern regarding truck traffic in Hampton Roads is overheight trucks at the region's tunnels. Overheight trucks that need to be turned around at tunnel entrances lead to traffic stoppages, which cause additional congestion and safety problems. This issue is especially problematic at the westbound Hampton Roads Bridge-Tunnel, which has a lower vertical clearance than the other tunnels. Of the 13,200 trucks stopped, measured, and turned around at regional tunnels in 2009, 5,900 occurred at the westbound Hampton Roads Bridge-Tunnel. 611 of these turnarounds occurred on the south island at the tunnel entrance. This number has decreased from over 1,000 turnarounds in 2005 due to higher fines and additional advance signage and sensors.

HRTPO released the Regional Freight Study in 2007. Included in this report is a summary of regional freight movement, including where trucks enter and leave the region, high truck locations throughout Hampton Roads, and freight bottlenecks. The Regional Freight Study is available at **http://www.hrtpo.org/TPO_Reports.asp**.

Overheight Vehicles Turned Around at the Hampton Roads Bridge-Tunnel Entrances, 2005-2009



Data source: VDOT. Nearly all of these turnarounds occurred in the westbound direction.

BEHIND THE NUMBERS

Similar to the ports, truck travel throughout Hampton Roads is largely impacted by the national and global economy. Trucks not only carry the majority of goods to and from the ports in Hampton Roads, but also serve many sectors that are highly dependent on the health of the economy.

As volumes of cargo handled by the port have dropped over 15% since highs in 2008, it's not surprising that both the number of trucks travelling through Hampton Roads gateways (-16%) and the amount of truck vehicle-miles of travel throughout Hampton Roads (-16%) have decreased a similar amount. This dependent relationship should be expected to continue as freight volumes increase at the port in the future.

PUBLIC TRANSPORTATION

Hampton Roads has a variety of public transportation options available throughout the region. These public transportation options include:

Conventional Bus – Conventional bus service is provided throughout most of Hampton Roads by Hampton Roads Transit (HRT), with service in the Williamsburg area provided by Williamsburg Area Transport.

Express Bus – Regional express bus service, known as the MAX, is provided by Hampton Roads Transit between various locations on the Southside and Peninsula.

Ferries – Passenger ferry service is provided by HRT between Downtown Norfolk and Portsmouth. Vehicular ferry service is provided by VDOT across the James River between Surry County and Jamestown.

Commuting and Tourist Oriented Services – Special public transportation service is available in many business districts and tourist areas throughout Hampton Roads, include the VB WAVE service at the Virginia Beach Oceanfront, NET buses in Downtown Norfolk, The Loop buses in Downtown Portsmouth, and tourist oriented services in the Williamsburg area.

Commuting Alternatives – In Hampton Roads, commuting alternatives are provided by Traffix. These commuting alternatives include ridesharing, van leasing, telecommuting, and guaranteed ride programs.

PUBLIC TRANSPORTATION TRENDS

9%

The growth in public transportation use in Hampton Roads from 2000 to 2009. This is despite a 25% decrease in transit usage between 2008 and 2009.

2%

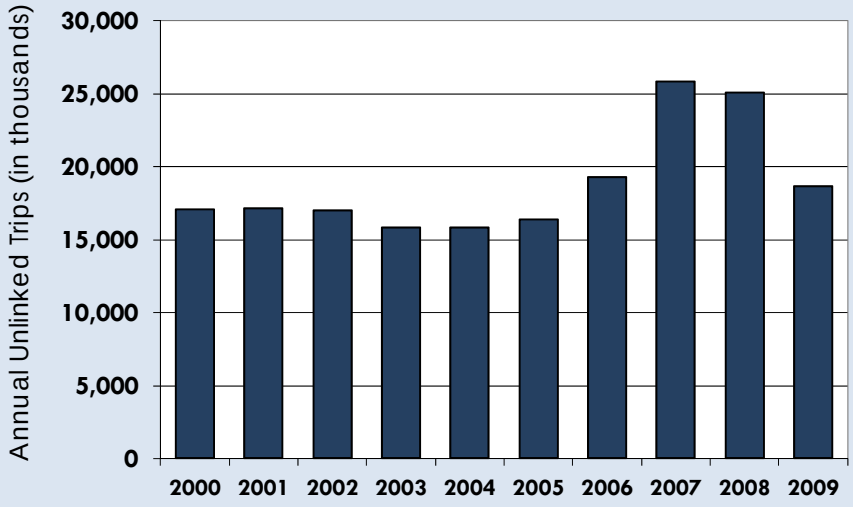
The growth in public transportation use, on a per capita basis, in Hampton Roads between 2000 and 2009.

NET Bus in Downtown Norfolk

There were over 18 million unlinked trips* taken on public transportation in Hampton Roads in 2009. This number includes ridership on regular and express buses, tourist and commuter oriented services, vanpools, and the passenger ferry. The number of trips on public transportation in Hampton Roads increased significantly from 2005 to 2007, before dropping slightly in 2008 and greatly in 2009 as the condition of the economy worsened. Preliminary figures indicate that transit ridership in Hampton Roads will be similar in 2010 to the lower levels seen in 2009.

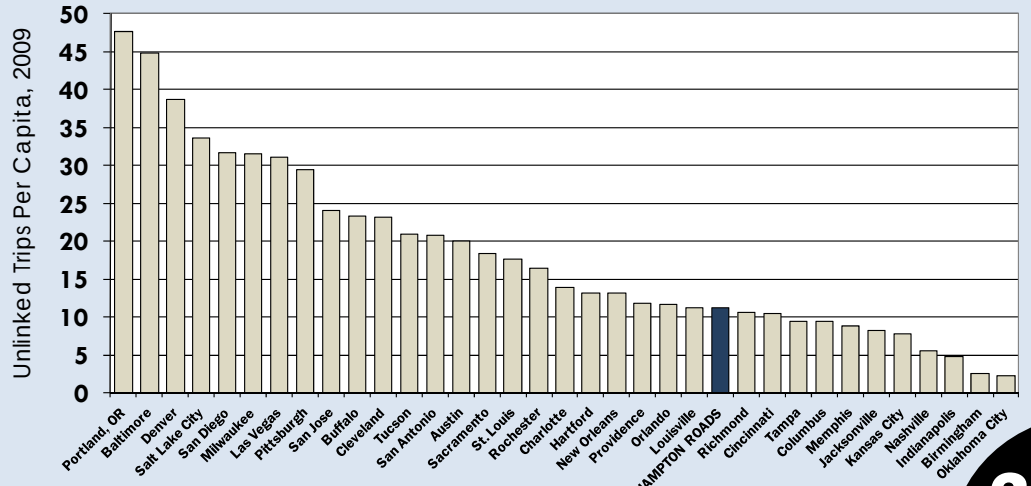
Public transportation usage per capita in Hampton Roads lags behind the levels in other large metropolitan areas. At about 11 trips on public transportation per capita in 2009, Hampton Roads ranked 24th highest among the 35 large metropolitan areas with populations between one and three million people. Of the 23 metropolitan areas with a higher number of trips per capita than Hampton Roads, 16 had a transit rail system in place in their region. Hampton Roads future light rail line, The Tide, is expected to begin service in Norfolk in 2011.

Trips Taken on Public Transportation in Hampton Roads, 2000 - 2009



Data source: APTA.

Trips Per Capita on Public Transportation in Large Metropolitan Areas, 2009



Data sources: National Transit Database, US Census Bureau.

* - An unlinked trip is a passenger trip made on one transit vehicle. If a passenger boards two buses to get from origin to destination, that is considered to be two unlinked trips.

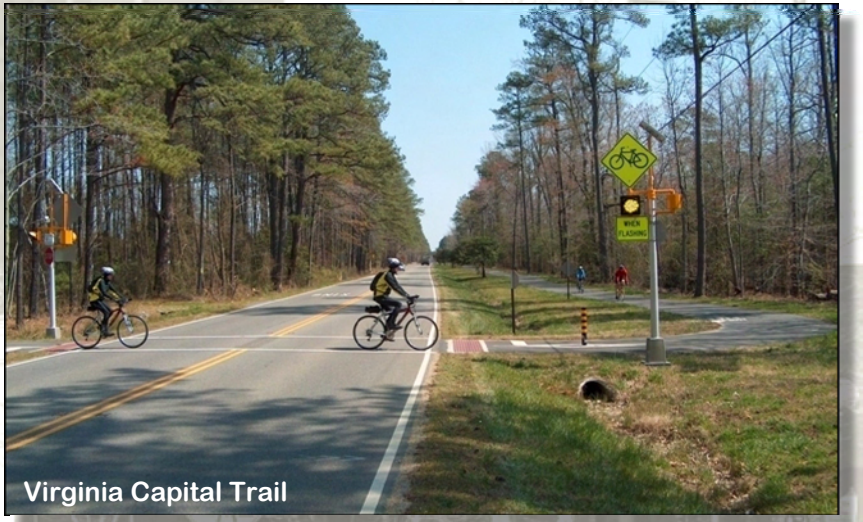
BICYCLING AND WALKING

Bicycle and pedestrian facilities not only provide for an alternate means of transportation but also provide additional recreation opportunities for both residents and visitors of Hampton Roads. There are currently 400 miles of signed bicycle facilities throughout Hampton Roads. These facilities vary from secluded paths in city and state parks to bicycle lanes along major thoroughfares. These 400 miles of bicycle facilities in the region can be split into three different types:

Shared Roadways (177 miles) – Shared roadways are roadways that are signed as a bicycle route but do not have a portion of the roadway that is reserved exclusively for cyclists. Cyclists and motorists share the same section of roadway.

Multi-Use Paths (175 miles) – Multi-use paths are facilities that are prohibited for use by motorized traffic. Multi-use paths include both facilities within parks and separated paths parallel to adjacent roadways.

Bicycle Lanes (48 miles) – Bicycle lanes are roadways that have a portion of the roadway pavement delineated for bicycle use only. Although bicycle lanes are not meant to be used by motorized vehicles, they are not physically separated from the roadway.


Virginia Capital Trail

Existing Centerline Miles of Bicycle Facilities by Type in Hampton Roads

Shared Roadway 177 miles 44%

Multi-Use Path 175 miles 44%

Bike Lane 48 miles 12%

Data source: HRTPO.

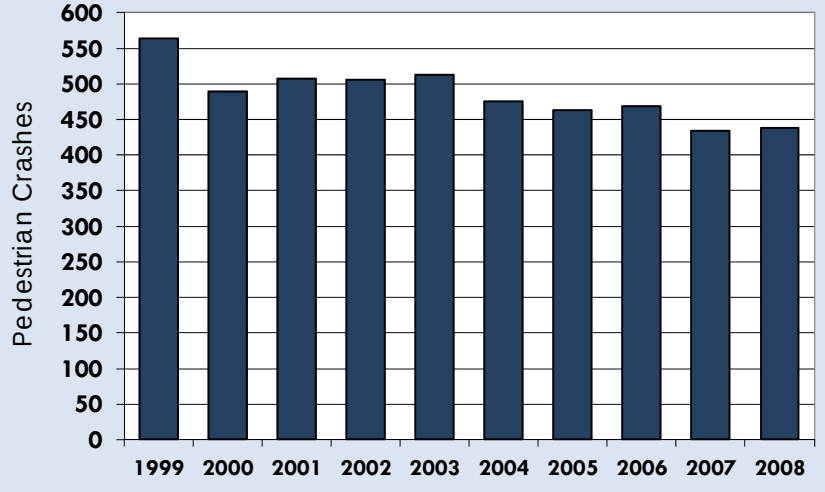
In recent years, several bicycle and pedestrian facilities have been constructed in Hampton Roads. High profile facilities include the conversion of the old section of Route 17 in Chesapeake into the Great Dismal Swamp Trail, and portions of the Virginia Capital Trail that will eventually connect Williamsburg with Downtown Richmond.

Safety is a major concern with bicycle and pedestrian transportation. There were 439 crashes involving pedestrians or bicyclists in Hampton Roads in 2008, down from over 500 such crashes annually earlier in the decade. Although this comprises less than 2% of all crashes in Hampton Roads, 12% of all roadway fatalities in Hampton Roads from 1999 to 2008 resulted from pedestrian or bicyclist crashes.

NEW DEVELOPMENTS

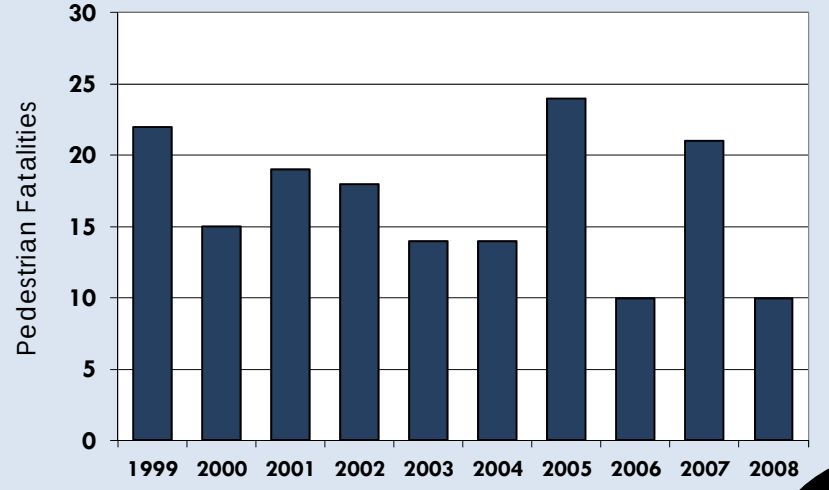
Virginia Capital Trail - Work continues on the Virginia Capital Trail, which will connect Williamsburg and Downtown Richmond upon completion in 2014. Four sections of the 54-mile trail have been completed as of November 2010: The original 2.8-mile section between Jamestown Settlement and Jamestown High School opened in 2006, the 4.5-mile section between Jamestown High School and the Chickahominy River opened in 2007 (and was expanded across the river with the opening of the new Route 5 Bridge in 2009), and sections in Charles City County and Richmond opened in 2009.

Pedestrian or Bicyclist Crashes in Hampton Roads, 1999 - 2008



Data source: VDOT.

Fatalities in Pedestrian or Bicyclist Crashes in Hampton Roads, 1999 - 2008



Data source: VDOT.

TRANSPORTATION FINANCING

Funding for transportation has decreased in Virginia in recent years, particularly for new roadway construction. The transportation budget for the State of Virginia is $3.7 billion in Fiscal Year 2011. This budget pays for many aspects of the statewide transportation system including the construction and maintenance of Virginia's highway system, transportation operations, debt payments, administration, and support for the ports, aviation, public transportation, and rail. This $3.7 billion for

Witchduck Road Construction

Image source: VDOT

FY 2011 is 22% lower than the $4.8 billion that was allocated statewide in FY 2008 and about 12% lower than the amount that was allocated both in FY 2007 and FY 2009. In future years it is projected that the statewide transportation budget will increase slightly, with the budget in FY 2016 being 7% higher than the FY 2011 budget. However, these levels are not expected to reach the funding levels seen last decade.

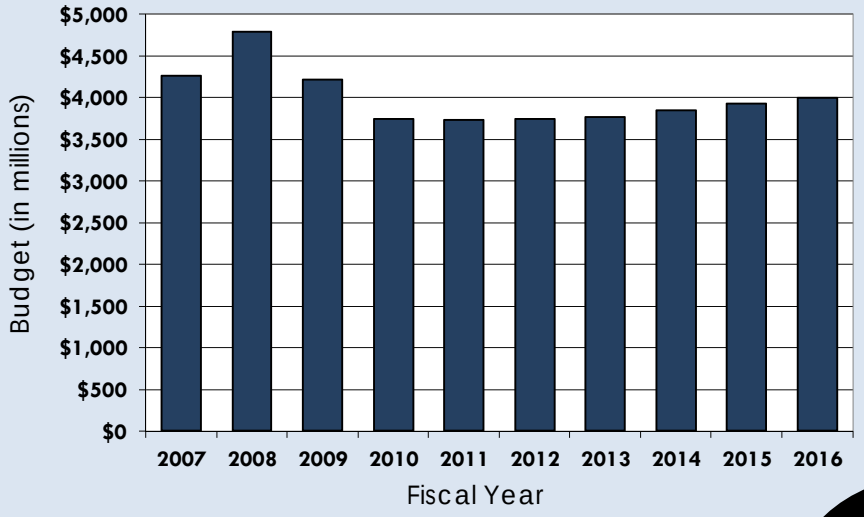
TRANSPORTATION FINANCING TRENDS

22% — The decrease in Virginia's transportation budget from Fiscal Year (FY) 2008 to FY 2011.

53% — The projected decrease in funds devoted to statewide highway construction between FY 2008 and FY 2016

0% — The change in the statewide excise tax collected on each gallon of gasoline in Virginia since 1986.

Historical and Projected Transportation Budget State of Virginia, Fiscal Years 2007 – 2016



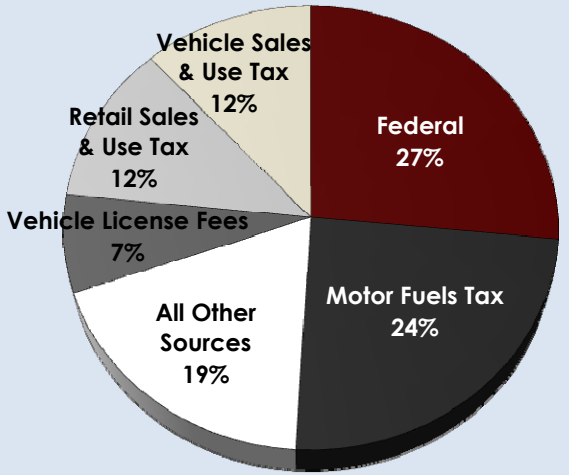
Data source: VDOT. Each fiscal year runs from July 1 of the previous year to June 30 of the listed year.

Revenues for the transportation budget come from a variety of sources. The largest source of funding in Virginia is from the federal government, which comprises more than a quarter of all transportation revenues. The second largest transportation revenue source is the state motor fuels excise tax, and other major sources of transportation revenues include the vehicle sales and use tax, retail sales and use tax, and vehicle license fees.

The largest component of Virginia's transportation budget is devoted to highway maintenance and operations. 45% of Virginia's transportation budget in Fiscal Year 2011 is allocated to maintaining and operating existing roadway infrastructure. Funding for new roadway construction is much lower, at 26% of all statewide transportation allocations in FY 2011.

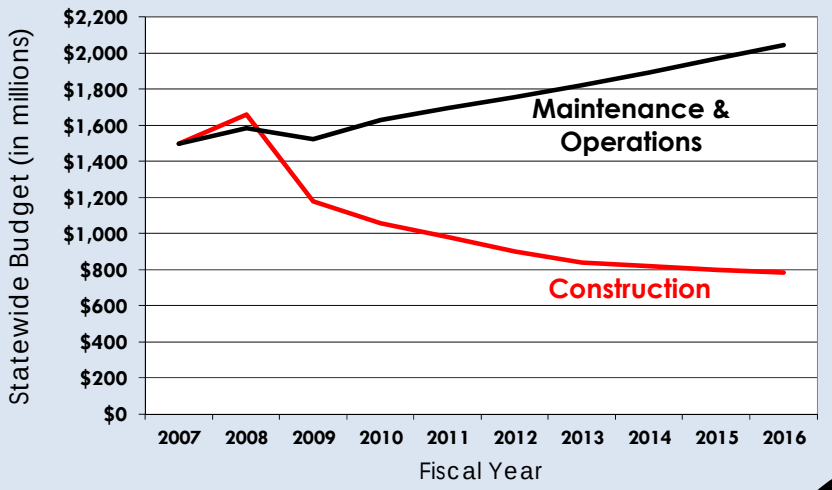
In future years, as the amount of funding that must be devoted to maintaining and operating existing roadway infrastructure increases, this difference between money for maintaining and operating existing roadways and new roadway construction will continue to widen. This is due to a variety of factors, including the aging of Virginia's roadways and bridges as well as the level of transportation funding. Between FY 2008 and FY 2016, the amount of money devoted to roadway maintenance and operations is projected to increase 29%, while at the same time funds devoted to new roadway construction are projected to decrease 59%.

Transportation Revenues in the State of Virginia by Source, Fiscal Year 2011



Data source: VDOT.

Projected Statewide Highway Funding by Fiscal Year, Maintenance vs. Construction, FY 2007 – 2016

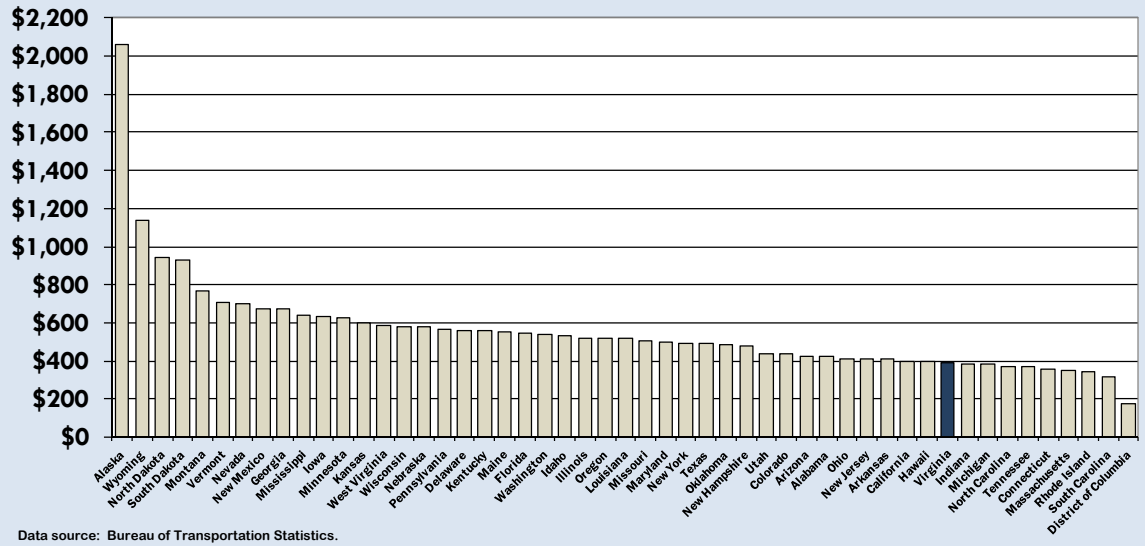


Data source: VDOT. Construction includes Systems, Earmarks, and Statewide Project Funding.

Even before the recent decrease in the statewide transportation budget, the amount of funding for roadways in Virginia lagged behind other states. Virginia ranked 42nd highest among the 50 states and the District of Columbia in highway expenditures per capita in 2007 at about $400 per person. In addition, Virginia ranked 48th highest among the 50 states and D.C. in the percentage of transportation funds used for new highway construction in 2008 according to the Federal Highway Administration.

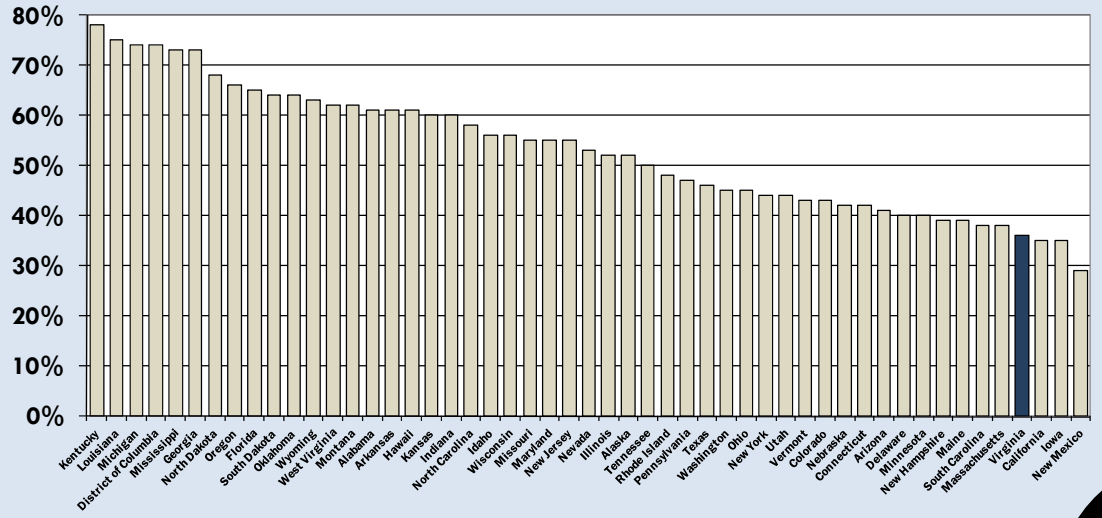
One of the reasons that Virginia ranks low relative to other states in terms of highway expenditures per capita is the level of gasoline taxes and fees collected throughout the state. A quarter of Virginia's transportation revenue comes from the statewide motor fuels tax. Currently the statewide excise tax on unleaded gasoline is 17.5 cents per gallon, a level that has not been increased since 1986. In addition to the excise tax, 0.6 cents per gallon is collected statewide for the petroleum

Highway Expenditures per Capita by State, 2007
(Includes State and Local Government Expenditures)



Data source: Bureau of Transportation Statistics.

Percentage of Transportation Funds Used for New Highway Construction, 2008



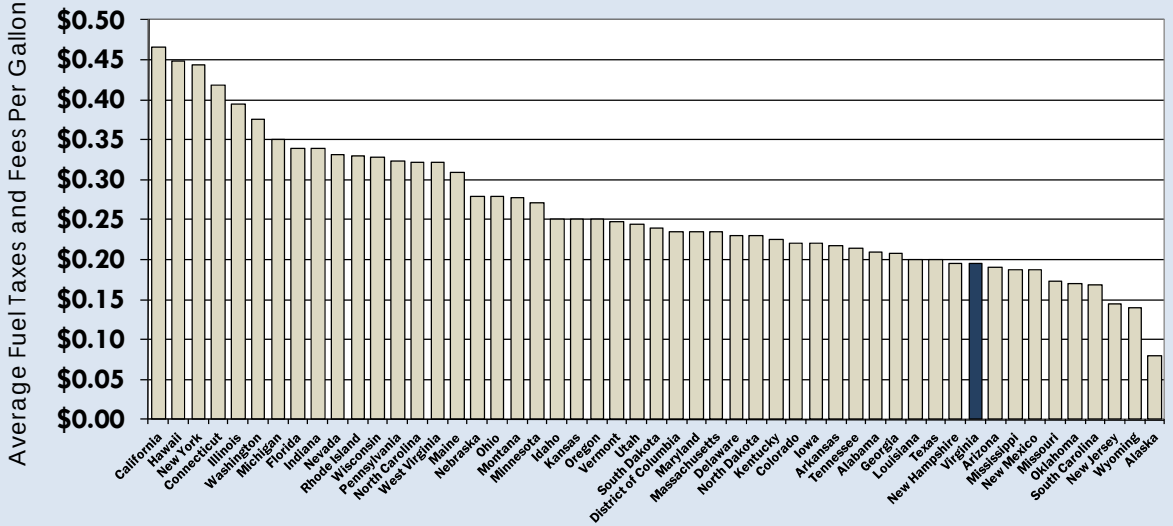
Data source: FHWA.

underground storage tank fund. An additional 2% sales tax is also collected in Northern Virginia for public transportation improvements; this tax is not collected in Hampton Roads.

Virginia ranked 42nd highest among the 50 states and the District of Columbia in statewide average taxes and fees collected on each gallon of unleaded gasoline as of October 1, 2010. All six states or districts that border Virginia have higher taxes and fees, with North Carolina's rate being 13 cents higher per gallon.

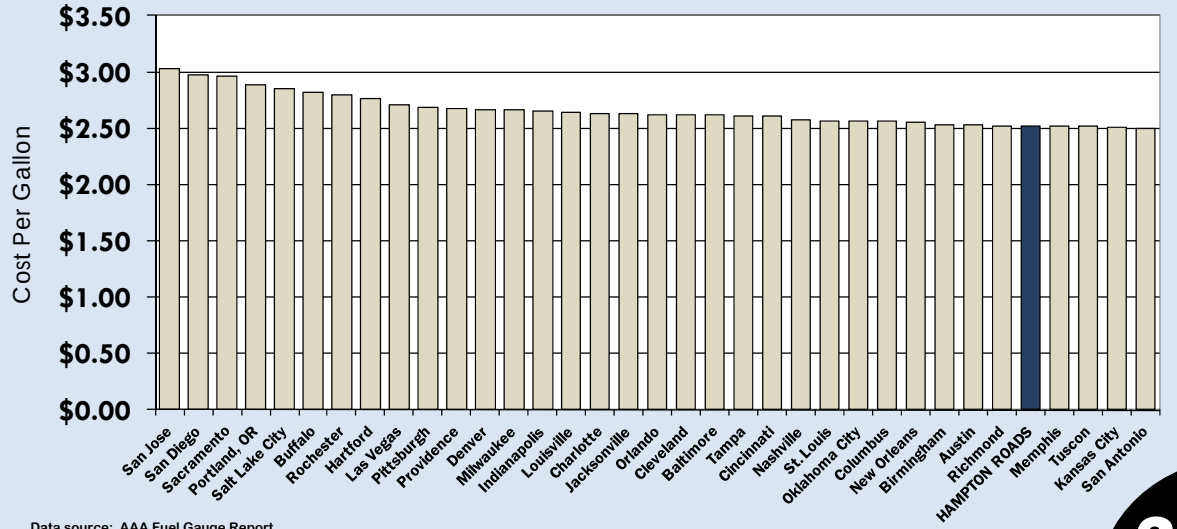
This lower tax rate contributes to lower gas prices in Virginia and Hampton Roads than in many other areas. Virginia had the sixth lowest average price for a gallon of unleaded gasoline among the 50 states and D.C. as of October 1, 2010. Among localities that border Virginia, only Tennessee had a lower average fuel price. The statewide average in North Carolina is only 8 cents higher than in Virginia, despite charging 13 cents more per gallon in taxes and fees.

Statewide Average Gasoline Taxes and Fees
(as of October 1, 2010)



Data source: American Petroleum Institute. Statewide average gasoline taxes include base tax rates as well as any additional statewide and local taxes and fees.

Fuel Prices in Large Metropolitan Areas
(as of October 1, 2010)



Data source: AAA Fuel Gauge Report.

Hampton Roads also has lower fuel prices than many other comparable metropolitan areas. As of October 1, 2010, the average cost of a gallon of unleaded fuel in Hampton Roads was $2.52. This ranked Hampton Roads 5th lowest among 35 metropolitan areas across the country with populations between one and three million people.

The cost of a gallon of unleaded fuel has fluctuated greatly both in Hampton Roads and across the country in recent years. Prices in Hampton Roads topped out at $4.00 per gallon in July 2008, but bottomed out at $1.46 per gallon only six months later in January 2009. In 2010, the price of unleaded fuel has been more stable than in recent years, with prices fluctuating between $2.45 and $2.80 per gallon.

BEHIND THE NUMBERS

As shown throughout this section, funding levels for transportation in Virginia have lagged behind the funding levels in most other states. There has been much discussion through the years about the level of transportation funding in Virginia, especially in congested areas such as Hampton Roads and Northern Virginia. Some of these discussions include:

- The total level of funding for transportation.
- How the money that is currently available is used, particularly at the state level.
- How funding is divvied up between Hampton Roads and other metropolitan areas such as Northern Virginia, as well as the rural parts of the Commonwealth.
- Using unique funding sources for transportation, such as the sale of Alcoholic Beverage Control licenses and the possible lease of Atlantic oil drilling rights.
- The use of public-private partnerships to fund new roadway construction. Discussions are ongoing to use such partnerships to fund improvements at the Midtown Tunnel and Hampton Roads Bridge-Tunnel, and construction of a new limited-access Route 460 between Suffolk and Petersburg.

The current mechanisms for funding transportation will be impacted in upcoming years. As higher fuel economy standards are put into place, taxes collected on fuel purchases will likely decrease. In addition, vehicles that are fully or partially powered by electric plug-in technology have started going into mass production. As this technology becomes more prevalent in automobiles, taxes collected from fuel purchases will be impacted further.

ROADWAY PROJECTS

In spite of the decrease in transportation funding, a number of major roadway projects have been completed throughout Hampton Roads in recent years. These projects include new roadways, widening existing roadways, replacing bridges, and smaller projects such as improving intersections with turn lanes and traffic signals. Some of the major road widening projects that have been completed in Hampton Roads over the last five years include sections of I-64 on the Peninsula and Southside, Birdneck Road, Jefferson Avenue, Lynnhaven Parkway, Virginia Beach Boulevard, and Warwick Boulevard.


Gilmerton Bridge Construction

In addition, a number of roadway projects are currently underway throughout the region. Among the largest projects are widening Fort Eustis Boulevard in Newport News and York County, constructing a railroad overpass over Hampton Boulevard into Norfolk International Terminals, replacing the Gilmerton Bridge, creating a new interchange on I-264 at Great Neck Road, and widening Witchduck Road.

Roadway Projects Completed in Hampton Roads
2006 - 2010

Facility	Location	Improvement Type	Completed
Birdneck Road	General Booth Blvd to Norfolk Ave	Widen to 4 lanes	2010
Constitution Drive	Bonney Rd to Columbus St	New 4 lane facility	2010
Convention Center Boulevard	Coliseum Dr to Armistead Ave	New 5 lane facility	2007
Dam Neck Road	Salem Rd to Landstown Rd	New 2 lane facility	2006
Fort Eustis Boulevard	George Washington Hwy to Old York-Hampton Hwy	New 4 lane facility	2006
Greenbrier Pkwy	Volvo Pkwy to Eden Way	Widen to 6 lanes	2009
I-64	Greenbrier Pkwy to I-464	Widen to 8 lanes	2009
I-64	Hampton Roads Center Pkwy to I-664	New HOV lanes	2006
Jefferson Avenue	Buchanan Dr to Green Grove Ln	Widen to 6 lanes	2010
Lynnhaven Pkwy	Holland Rd to South Lynnhaven Rd	Widen to 6 lanes	2010
Moses Grandy Trail	Shipyard Rd to Dominion Blvd	New 4 lane facility	2006
Route 5	Dresser Bridge	Replace Bridge	2009
Treyburn Drive	Monticello Ave to Ironbound Rd	New 2 lane facility	2007
Virginia Beach Boulevard	Jett St to Military Hwy	Widen to 6 lanes	2010
Volvo/Lynnhaven Parkway	Kempsville Rd to Centerville Tpke	New 4 lane facility	2007
Warwick Boulevard	J Clyde Morris Blvd to Nettles Dr	Widen to 6 lanes	2010

Data obtained from various sources.

There are also a number of roadway projects that will begin construction throughout Hampton Roads in upcoming years despite the decrease in highway construction funding. These projects are included in the current VDOT Six-Year Improvement Program and HRTPO's Transportation Improvement Program. Examples of roadway projects that are expected to begin construction over the next few years include the Intermodal Connector, new sections of Middle Ground Boulevard and Nimmo Parkway, and widening Ironbound Road, Military Highway, and Princess Anne Road. A number of smaller intersection and interchange improvements are included in the Six-Year Improvement Program and Transportation Improvement Program as well. VDOT's Six-Year Improvement Program can be accessed at **http://syip.virginiadot.org** and the Hampton Roads Transportation Improvement Program is available at **http://www.hrtpo.org/TPO_TIP.asp**.

Major Roadway Projects in Hampton Roads Included in the Six-Year Improvement Program

Facility	Location	Improvement Type	Projected Construction Begin
Commander Shepard Boulevard	Big Bethel Rd to North Campus Pkwy	New 4 lane facility	FY 2011
Commander Shepard Boulevard	North Campus Pkwy to Magruder Blvd	New 4 lane facility	Underway
Fort Eustis Boulevard	Jefferson Ave to Route 17	Widen to 4 lanes	Underway
Hampton Boulevard	Railroad into Norfolk International Terminals	New overpass	Underway
I-64	Norview Ave	Ramp improvement	FY 2012
I-264	London Bridge Rd	New interchange	Underway
Intermodal Connector	I-564 to Naval Station Norfolk/Norfolk Int'l Terminals	New 4 lane facility	FY 2015
Ironbound Road	Strawberry Plains Rd to Longhill Connector Rd	Widen to 4 lanes	FY 2011
Middle Ground Boulevard	Jefferson Ave to Warwick Blvd	New 4 lane facility	FY 2011
Military Highway	Gilmerton Bridge	Replace Bridge	Underway
Military Highway	Lowery Rd to Northampton Blvd	Widen to 8 lanes	FY 2013
Mount Pleasant Road	Chesapeake Expressway to Centerville Tpke	Widen to 4 lanes	FY 2014
Nansemond Parkway	Shoulders Hill Rd to Chesapeake CL	Widen to 4 lanes	FY 2016
Nimmo Parkway	Holland Rd to General Booth Blvd	New 4 lane facility	FY 2012
Nimmo Parkway	Princess Anne Rd to Holland Rd	New 4 lane facility	FY 2011
Princess Anne Road	Dam Neck Rd to Nimmo Pkwy	Widen to 4 lanes	FY 2011
Saunders Road	Newport News CL to Big Bethel Rd	Widen to 4 lanes	FY 2014
Turnpike Road	Portsmouth Blvd to Constitution Ave	Widen to 4 lanes	FY 2015
Wesleyan Drive	Northampton Blvd to Baker Rd	Widen to 4 lanes	FY 2013
Witchduck Road	Princess Anne Rd to I-264	Widen to 6 lanes	Underway

Data source: VDOT. includes major projects expected to begin construction by 2016 per the FY 2011-16 Six-Year Improvement Program published June 2010.

TRANSPORTATION OPERATIONS

Transportation system operations and Intelligent Transportation Systems (ITS) technologies are a cost-effective method of maximizing the capacity of the existing roadway network. Using operations and ITS technologies has become more important than ever as funding available for major transportation improvements continues to decrease. The purpose of transportation system operations is to maximize the safety, security, and mobility of roadway users by actively managing the regional transportation system. Managing the transportation system is done with both trained and coordinated manpower and technological improvements. Some examples include incident management, optimizing and coordinating traffic signals, and providing up-to-date traveler information.

VDOT Hampton Roads
Transportation Operations Center

Image source: VDOT

In Hampton Roads, regional transportation operations are led by the VDOT Hampton Roads Transportation Operations Center. The Hampton Roads Transportation Operations Center maintains and operates ITS infrastructure on the Interstate system, monitors traffic conditions throughout the region, operates the Safety Service Patrol that responds to crashes and other incidents, and distributes traveler information via changeable message signs, highway advisory radio, and the 511 Virginia service.

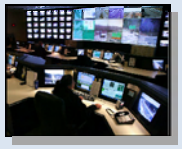
With the completion of the final construction phase in 2008, ITS technologies operated by the Hampton Roads Transportation Operations Center cover nearly the entire regional Interstate network (113 miles). The system now has 270 closed-circuit cameras, 74 vehicle detection devices, and 192 changeable message signs.

Many local jurisdictions in Hampton Roads also operate their own transportation operations centers. Norfolk opened their center in 2000 and since then Chesapeake, Hampton, Newport News and Virginia Beach have opened centers as well. These local transportation operations centers are, or will be, connected with the Hampton Roads Transportation Operations Center, allowing for data and video sharing, instant communication, and more regional cooperation.

Another ITS technology in use throughout the state is the 511 Virginia traveler information service. This service disseminates traveler

ITS TECHNOLOGIES USED IN HAMPTON ROADS

Hampton Roads has been a national leader in the use of Intelligent Transportation Systems. Nearly every mile of Interstate in the region contains ITS technologies, and various cities throughout the region maintain ITS infrastructure as well. The following are examples of ITS technologies in use throughout Hampton Roads:

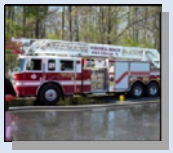


Transportation Operations Centers
Centers that incorporate various ITS technologies to assist staff with traffic monitoring, incident response, and information dissemination.

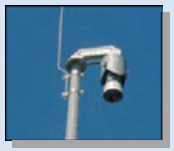
Vehicle Detection Devices
Records traffic volumes and speeds. Also notifies transportation operations center staff of congestion and incidents.

Reversible Roadway Gates
Allows traffic on limited access roadways to be reversed based on commuting patterns, maximizing the use of the existing roadway.

Emergency Vehicle Signal Preemption
Changes the traffic signal when emergency vehicles approach, improving safety and response time of emergency vehicles.

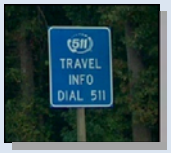


Advanced Signal Systems
Improves the coordination and timing of traffic signals in a corridor or throughout an entire city, reducing the number of stops and delays.



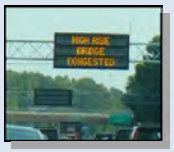
CCTV Cameras
Provides roadway images to transportation operations centers and the public.

Electronic Toll Collection
Allows travelers to pass quickly through special lanes, avoiding backups and delays due to paying tolls.



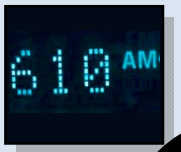
511 Virginia
Provides up-to-date traveler information via telephone, the internet, and other methods.

Transit Automatic Vehicle Location (AVL)
Provides the location of transit vehicles, aiding on-time performance.



Changeable Message Signs
Provides up-to-date information to the traveling public.

Highway Advisory Radio
Provides up-to-date traveler information through radio broadcasts on 610 AM.



information via cellular or landline phones, email, text message, and the website **http://www.511virginia.org**. The 511 Virginia service was launched statewide in February 2005 and allows users to receive real-time traffic and roadway condition information for specific locations.

Regional transportation operations planning and coordination is conducted through the Hampton Roads Transportation Operations (HRTO) Subcommittee. This committee meets bimonthly to facilitate peer-to-peer operations information sharing and to advise the HRTPO on operational issues. The committee is comprised of a variety of stakeholders including traffic engineers, transportation operations staff, transit operators, police, and first responders. More information on this committee and regional transportation operations is available at **http://hrtpo.org/TPO_OpPlanning.asp.**

NEW DEVELOPMENTS

Transportation Operations Centers - In recent years many jurisdictions have opened their own transportation operations centers including Chesapeake, Hampton, Newport News, Norfolk, and Virginia Beach. In addition, the Hampton Roads Transportation Operations Center infrastructure coverage expanded to 113 miles in 2008.

Reduction of service – Due to budget constraints, Safety Service Patrol coverage was reduced in 2009. The Safety Service Patrol now monitors and responds to incidents on 83 miles of Interstate in Hampton Roads, which is less than the 113 miles covered by TOC infrastructure. There was also a 50% reduction in the number of patrollers as well as a reduction in hours of service in some areas.

Regional Concept of Transportation Operations (RCTO) - Due to high profile incidents on freeways throughout the region, HRTPO made it a goal to improve incident management in Hampton Roads. This goal is being achieved through the RCTO, which plans and implements management and operations strategies in a collaborative and sustained manner. In Hampton Roads, the RCTO objectives include improving responder safety, decreasing incident clearance time, decreasing the number of secondary incidents (those incidents that occur as a result of backups from a previous incident), improving interagency communication, and reviewing incidents on a regular basis to determine where improvements could be made.

Various agencies throughout Hampton Roads have been collaborating on the RCTO effort, including VDOT, HRTPO, city and state police, first responders, local operations engineers and many others. More information is included in the RCTO Executive Summary report at **http://hrtpo.org/TPO_Reports.asp.**

AIR QUALITY

Vehicle emissions have an impact on air quality, and planners must account for the impacts that transportation projects have on regional air quality. The Environmental Protection Agency (EPA) regulates the amount of airborne pollutants allowed in each region. These airborne pollutants come from stationary sources such as factories and power plants, and mobile sources such as motorized vehicles, trains, and ships.

Since mobile sources contribute heavily to air quality, federal regulations require that the metropolitan transportation planning process meets mandates established by the Clean Air Act. This means that the Hampton Roads Transportation Improvement Program and Long Range Transportation Plan are tested to insure they meet conformity standards.

Ground-level ozone and other pollutants are measured in Hampton Roads at three ambient air quality stations maintained by the Virginia Department of Environmental Quality (DEQ). These stations are located in Downtown Hampton, the Holland section of Suffolk, and the Tidewater Community College campus in Northern Suffolk.

EPA designates each metropolitan area as being in attainment or non-attainment of federal ozone air quality standards based on the amount of ground-level ozone recorded at monitoring stations. EPA makes these designations using an eight-hour standard, under which

AIR QUALITY TRENDS

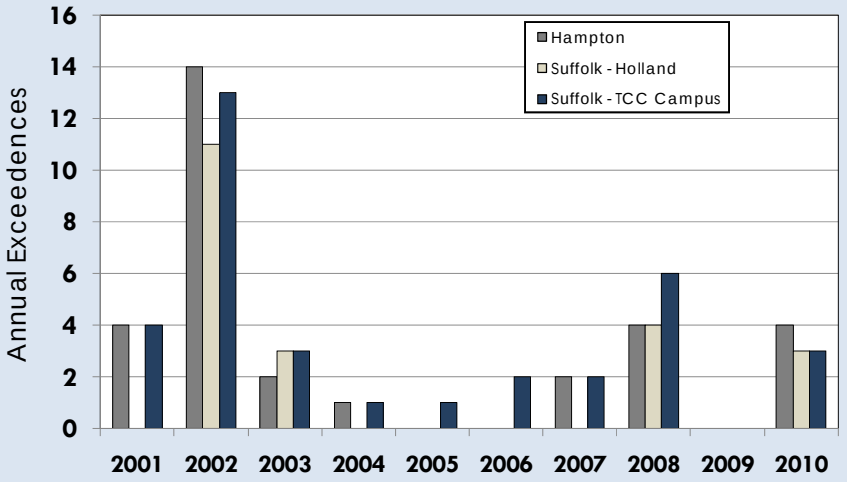
36%

The decrease in the number of days with Air Quality Index values above 100 in Hampton Roads between the start of the decade (2001-2003) and the most recent data from 2006-2008.

20%

The average decrease in the fourth highest daily maximum 8-hour ozone levels at Hampton Roads three ambient air quality monitoring stations between 2001 and 2009.

Eight Hour Ozone Exceedences at Regional Air Quality Monitoring Stations, 2001 - 2010



Data source: Virginia DEQ. 2010 data is unofficial. In 2008, the exceedence standard was reduced from greater than 84 parts per billion to greater than 75 parts per billion.

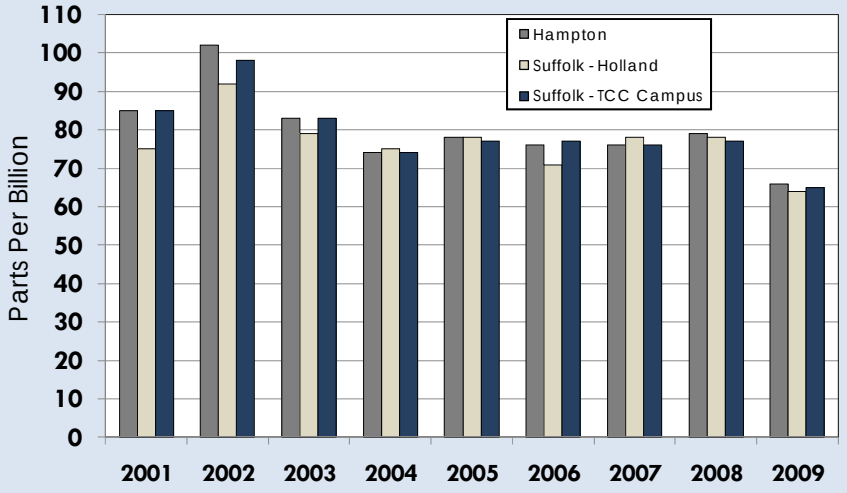
violations are determined using the fourth-highest daily maximum eight-hour average ozone concentration over the course of the year, averaged over a three-year period.

Hampton Roads was originally designated as a marginal ozone nonattainment area in 1991 based on the one-hour ambient air quality standard that existed at the time. Through the years the region has alternated between being designated in attainment and nonattainment. On July 1, 2007, the region was redesignated an ozone attainment area based on the eight-hour standard.

Through 2007, a region was in nonattainment if the fourth-highest eight-hour ozone averages were greater than 84 parts per billion (ppb) at any of the regional monitoring stations over a three-year period. In 2008 this standard was lowered to 75 ppb. In Hampton Roads, the 2007 - 2009 three-year ozone averages were between 72 and 74 ppb at the three monitoring stations, just below the new 75 ppb threshold.

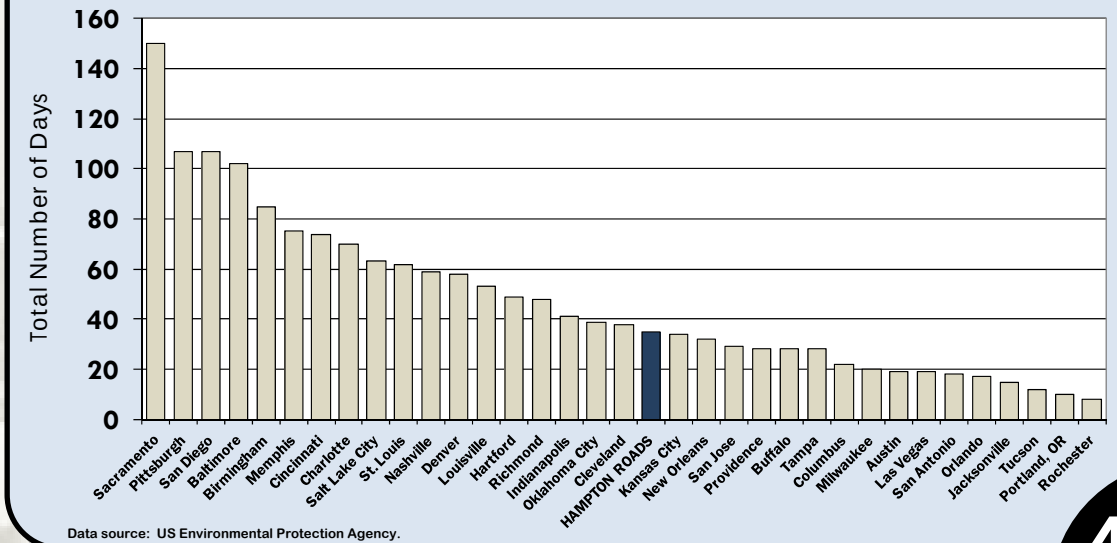
Air quality in Hampton Roads is better than the air quality in many other large metropolitan areas. According to EPA, Hampton Roads had a total of 35 days with Air Quality Index (AQI) values greater than 100 between 2006 and 2008, ranking 19th highest among 35 large areas. AQIs of above 100 are considered unhealthy for at least certain segments of the population.

Fourth Highest Daily Maximum 8-Hour Ozone Averages in Hampton Roads, 2001 - 2009



Data source: Virginia DEQ.

Number of Days in Large Metropolitan Areas with Air Quality Index Values Greater than 100, 2006 to 2008

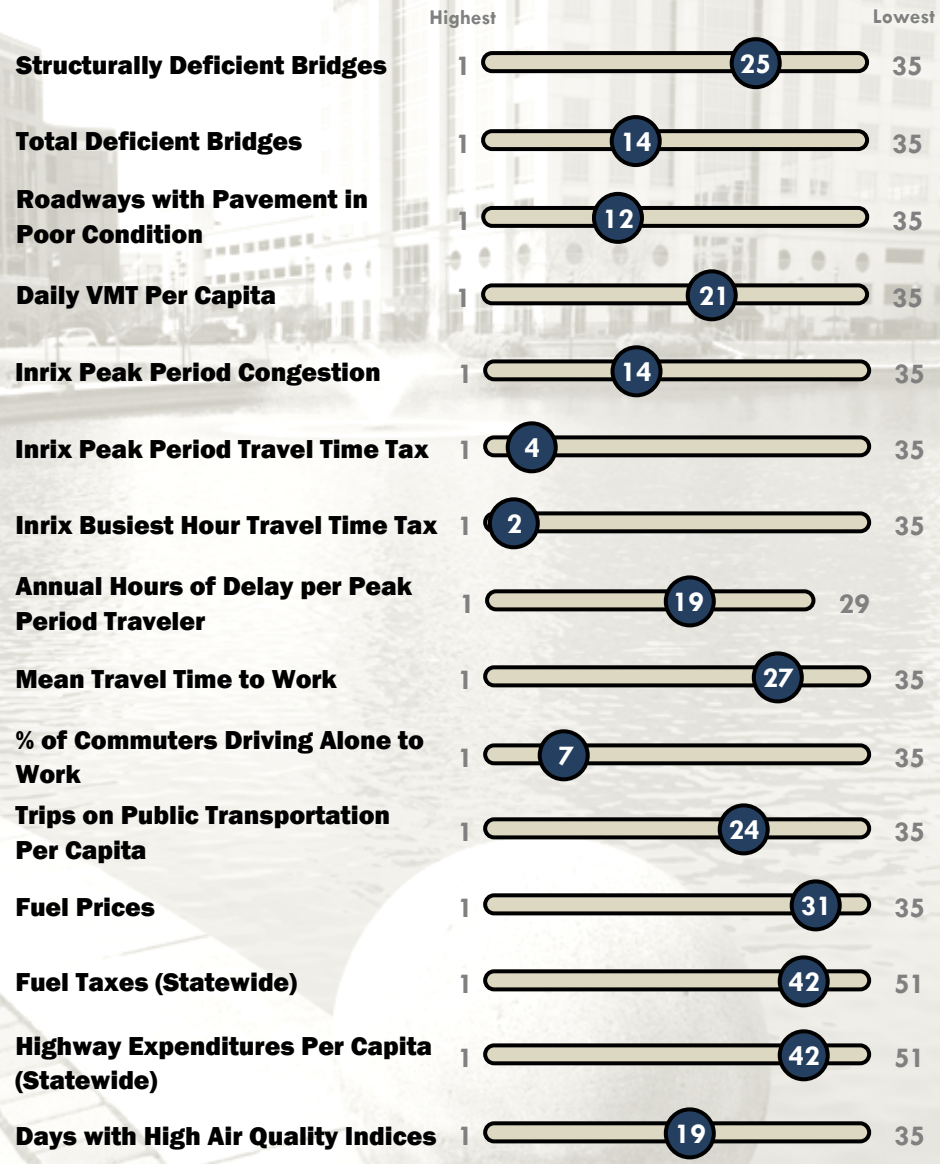


Data source: US Environmental Protection Agency.

NATIONAL RANKING SUMMARY

In many sections of this report, Hampton Roads is compared to other large metropolitan areas throughout the United States with populations between one and three million people. Many of these 34 other metropolitan areas have similar transportation issues to the Hampton Roads area, from congestion to funding inadequacies.

The figure to the right summarizes where Hampton Roads ranks in various transportation metrics compared to the other large metropolitan areas, or in some cases where Virginia ranks compared to other states.



ADDITIONAL INFORMATION

The information provided in this report was compiled from a variety of sources, most of which are easily accessible via the internet. Data from the following sources were included in this report and can be accessed for additional information:

Air Travel – The Federal Aviation Administration (FAA) updates air passenger data for both the nation and individual airports at http://www.faa.gov. Passenger data is also provided by each of the Hampton Roads airports at http://www.norfolkairport.com and http://www.nnwairport.com.

Port Data – The Virginia Port Authority maintains up-to-date statistics regarding the Port of Virginia on their website http://www.vaports.com. The Hampton Roads Maritime Association also releases the Port of Hampton Roads Annual Report, which contains extensive information regarding all aspects of the port. Their website is http://www.portofhamptonroads.com.

Rail Travel – Amtrak maintains a list of passenger volumes by station at their website http://www.amtrak.com. Information regarding high speed rail and other rail improvements throughout Virginia is available at http://www.drpt.virginia.gov.

Bridges – VDOT maintains information on their website regarding most bridges throughout Virginia. This information is available at http://www.virginiadot.org/info/Bridge.asp.

Pavement Condition – TRIP regularly releases the Urban Roads Report, which details the condition of major roadways in metropolitan areas. The Urban Roads Report is available at http://www.tripnet.org.

Roadway Usage – The Highway Statistics Series contains data on motor fuel, motor vehicles, driver licensing, highway finance, highway mileage, and federal aid for highways. The reports are released annually by the Federal Highway Administration and are located at http://www.fhwa.dot.gov/policyinformation/index.cfm.

VDOT also releases roadway usage data on an annual basis for every Virginia jurisdiction. This data is available at http://www.virginiadot.org/info/ct-TrafficCounts.asp.

Congestion – Inrix, Inc. releases the National Traffic Scorecard series, which details congestion trends in the 100 largest metropolitan areas across the country. The National Traffic Scorecard is available at http://scorecard.inrix.com.

The Texas Transportation Institute (TTI) at Texas A&M University releases the Urban Mobility Report, a nationally known study of mobility and traffic congestion on freeways and major streets in 85 urbanized areas. The report is located at http://mobility.tamu.edu.

Commuting – The Bureau of the Census annually collects and distributes socioeconomic data via the American Community Survey (ACS). The ACS includes commuting characteristics data for each city and region. Data from the American Community Survey is available at http://www.census.gov/acs.

Roadway Safety – The Virginia Department of Motor Vehicles annually releases the Virginia Traffic Crash Facts document, which is a comprehensive statistical overview of traffic crashes occurring throughout Virginia. The document is located at http://www.dmv.state.va.us/webdoc/safety/crash_data/crash_facts/index.asp.

Public Transportation – The Federal Transit Administration collects and disseminates data on public transportation via the National Transit Database (NTD) program. The National Transit Database is located at http://www.ntdprogram.gov. The American Public Transportation Association also includes data on their website at http://www.apta.com.

Bike and Pedestrian Facilities – A wide variety of information regarding bicycling and walking in Virginia is provided on VDOT's website at http://www.virginiadot.org/programs/bk-default.asp.

Transportation Financing – Information regarding transportation financing in Virginia is available at http://www.virginiadot.org. A list of fuel taxes and fees by state is available on the American Petroleum Institute website http://www.api.org. National, statewide, and regional fuel prices are available via the AAA's Fuel Gauge report website http://www.fuelgaugereport.com.

Roadway Projects – Information regarding transportation projects in Virginia's Six Year Improvement Program is available at http://syip.virginiadot.org. HRTPO maintains the regional Transportation Improvement Program, which can be accessed at http://www.hrtpo.org/TPO_TIP.asp.

Transportation Operations – VDOT maintains ITS infrastructure and manages traffic on the regional freeway system. More information is available at http://www.virginiadot.org. Information detailing HRTPO's Transportation Operations efforts, including the Hampton Roads ITS Strategic Plan and Hampton Roads Transportation Operations Committee, is located at http://www.hrtpo.org/TPO_OpPlanning.asp.

Air Quality – Virginia's Department of Environmental Quality maintains information regarding national air quality standards and regional air quality data. Their website is http://www.deq.state.va.us. Air Quality Index information is available from the Environmental Protection Agency's website at http://www.epa.gov/airtrends/aqi_info.html.

For additional information regarding this report, previous Congestion Management studies, or other transportation questions or concerns, please contact the Hampton Roads Transportation Planning Organization (TPO):

Hampton Roads Transportation Planning Organization
723 Woodlake Drive
Chesapeake, Virginia 23320
757.420.8300
http://www.hrtpo.org