A Simple Guide to Transportation Needs and Planning in Hampton Roads

PAYING THE PRICE: A SIMPLE GUIDE TO TRANSPORTATION NEEDS AND PLANNING IN HAMPTON ROADS

Few things unite Hampton Roads citizens as much as our shared dislike of the region's traffic congestion.
– The conclusion of Christopher Newport University's Judy Ford Wason Center for Public Policy in a report to the Hampton Roads Transportation Planning Organization, based on a decade of public opinion surveys and focus groups.

Hampton Roads Residents' Perceptions of Traffic

- Almost 90 percent say traffic congestion is high or very high.
- About 75 percent believe traffic has gotten worse over the last five years.
- Almost 75 percent say traffic congestion negatively impacts their daily quality of life.
- About 75 percent consider traffic to be the region's No. 1 problem.

Source: Christopher Newport University Center for Public Policy report, "The Present and Future of Transportation in Hampton Roads," 2010

It's easy to see what many citizens think about traffic congestion in our region. Nevertheless, how bad actually is traffic congestion in Hampton Roads and how does it compare to other regions? Where are our major problems? What plans have been made to address these problems? Which projects are most vital to our future?

A sometimes-bewildering variety of organizations, nearly always with an acronym, has addressed these questions to some extent in recent years. We certainly do not denigrate these efforts, many of which have provided excellent detail on the region's transportation situation. Rather, we simply note that what many citizens need is a concise statement that identifies our current traffic congestion, compares it to other regions, translates that into specific proposed projects and then shows the priority ranking of those projects.

We provide that evidence and concise statement here. However, we could have added another very important question: How will we pay for the legitimate needs we have identified? This guide isn't going to venture into that territory, other than to offer several observations about who should pay if needed projects are moved forward.

Measuring Traffic Congestion In The Region

"The State of the Region: Hampton Roads 2009" concluded that given the size of Hampton Roads as the 34th most populous metropolitan area in the country, a national ranking of 32nd most congested region is understandable. **An update of those numbers by Inrix, the private corporation that monitors traffic conditions throughout the country, in its "2010 National Traffic Scorecard Annual Report," shows that Hampton Roads has moved down to 36th place as the most populous region in the country but up to 30th place among the regions with the most traffic congestion.** This change in position with Hampton Roads being more congested comes about at a time when many

regions of the country have seen some decline in traffic congestion because fewer cars are on the road due to increased unemployment and other effects of the economic recession.

Another measure of congestion in the Inrix Annual Report is the *"travel time tax"* or *t3*. The travel time tax is the percentage of extra travel time (versus "free flow") a random trip takes in a specific region during peak commuting hours. A 10 percent tax means 10 percent additional trip time because of traffic congestion. Table 1 compares Hampton Roads congestion with Northern Virginia and Richmond, as well as the average of comparable-size urban areas in the nation. One can see that a typical random trip in Hampton Roads during peak commuting times involves a 19 percent tax, or a 19 percent increase in time. While hardly desirable, this is considerably less than the 30 percent travel time tax residents of Northern Virginia must pay.

Table 1 also reveals that Hampton Roads is about average in terms of automobile congestion for urban areas with populations of 1 million to 3 million people. Fortunately, the area does not come close to the congestion of Northern Virginia, which is more than twice that of Hampton Roads in terms of hourly delays per year. However, Hampton Roads is more congested than the smaller urban area of Richmond. Graph 1 illustrates these relationships.

Inrix estimates that the congestion cost per auto commuter in Hampton Roads is $695 per year. Graph 2 illustrates this cost relative to Richmond, Washington, D.C., and urban areas of roughly similar size.

Note that the number of residents directly and daily affected by traffic congestion may be as few as 15 percent of the total population. Thus, the $695 annual average for Hampton Roads may well conceal the reality that only a minority of the population bears the majority of the costs of congestion. The congestion costs imposed on an individual who commutes from Virginia Beach to Newport News may be double or triple the $695 annual average. And, those who do not commute or have easy commutes may experience much lower congestion costs.

TABLE 1

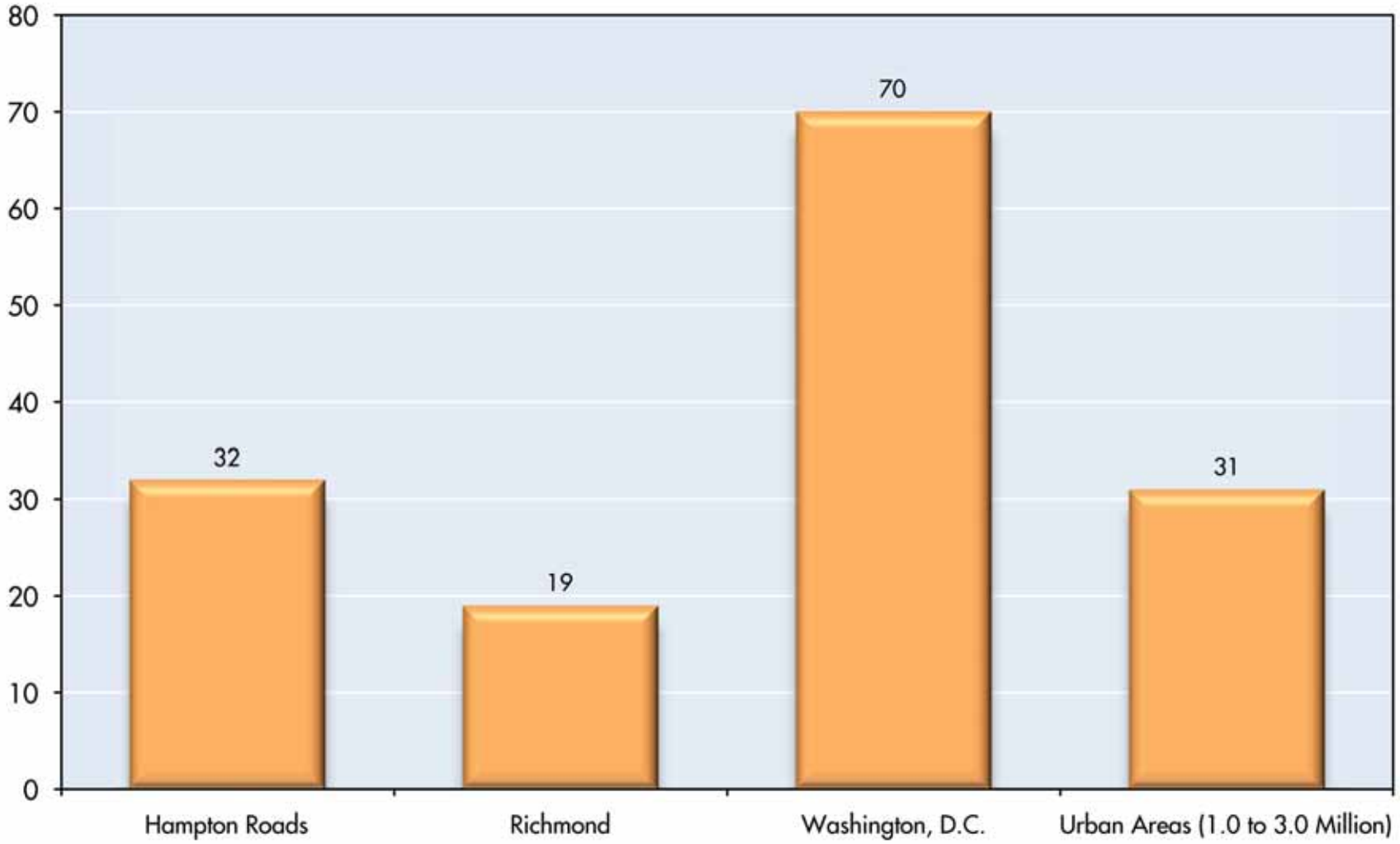
COMPARING AUTOMOBILE CONGESTION

	Yearly Delay Per Auto in Hours Commuter Nat'l.	Nat'l. Rank	Travel Time Index	Nat'l. Rank	Excess Fuel Per Auto Commuter (Gallons)	Nat'l. Rank	Congestion Costs Per Commuter (Annual)	Nat'l. Rank
Hampton Roads	32	29	1.19	23	25	33	$695	34
Richmond	19	66	1.06	88	16	68	$411	75
Wash DC Metro	70	1	1.30	2	57	1	$1,555	2
Urban Areas Over 3.0 Million Pop.	50		1.26		39		$1,166	
Urban Areas 1.0 to 3.0 Million Pop.	31		1.17		26		$726	
Urban Areas .5 to 1.0 Million Pop.	22		1.11		18		$508	

Source: Inrix, 2010

GRAPH 1

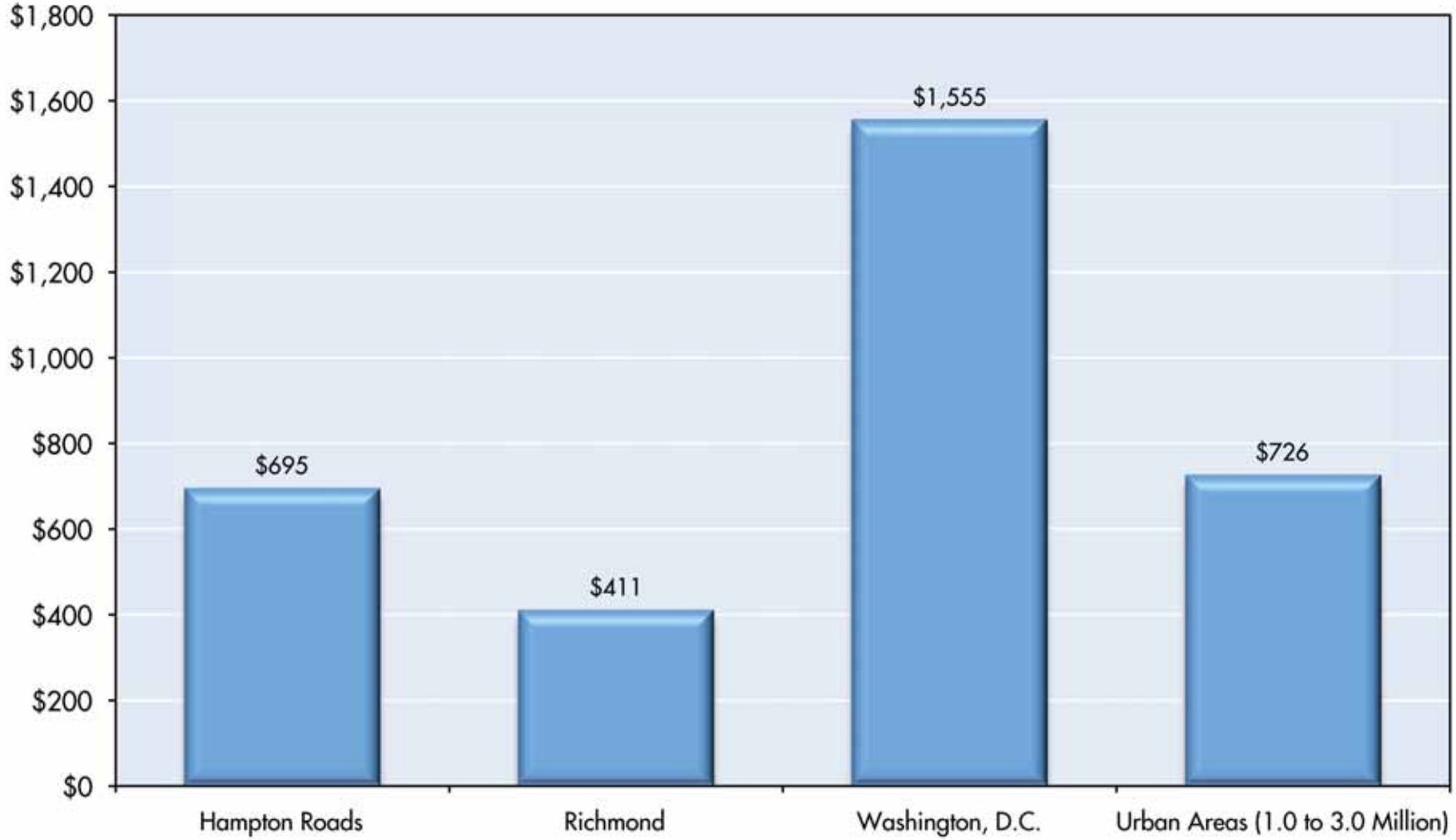
AVERAGE ANNUAL HOURS OF DELAY PER AUTO COMMUTER



Source: Inrix, 2010

GRAPH 2

ANNUAL CONGESTION COSTS RELATED TO COMMUTING



Source: Inrix, 2010

This does not mean that those citizens who do not commute, or who have easy commutes, escape these costs completely. They still pay some of these costs because congestion drives up the cost of the goods and services they consume and because there are environmental and health costs associated with traffic jams.

Nevertheless, the reality is that automobile congestion costs are distributed in a very uneven pattern across the region's citizens. The $695 average annual automobile congestion cost potentially conceals this. This disparity, however, raises difficult questions concerning who should pay to relieve congestion. **Should people who do not substantially contribute to peak-time automobile congestion, except via their demand for goods and services that must be transported on streets and highways, be required to pay for the solutions to traffic congestion?** Clearly, all citizens benefit from efficient, noncongested roadways, but some (those peak-time commuters who travel through the most congested locations) benefit much more.

The usual solution to such a situation is to finance the construction and maintenance of roadways by means of general taxes that all citizens pay and targeted user taxes (such as the gasoline tax) that affect those who actually drive. It's easy to state this principle, but not so easy to apportion actual taxpaying responsibility. What share of total transportation revenues should be supplied by the general citizenry, as opposed to active commuters? Economic analysis can estimate an answer to this question, but at the end of the day, it is obvious that both the question and the answer involve highly volatile political issues. Who ends up paying what share of the costs of constructing and maintaining roadways ultimately appears to depend upon relative political clout.

IDENTIFYING TRAFFIC BOTTLENECKS

Inrix defines the most congested corridors as being multiple contiguous bottlenecks of at least three miles in length. Hampton Roads has two congested corridors: I-64 westbound from Exit 277 (Route 168/Tidewater Drive) to the Hampton Roads Bridge-Tunnel (Norfolk side) with a travel time tax of 151 percent and I-64 eastbound from Exit 258 (Route 17/J. Clyde Morris Blvd.) to the Hampton Roads Bridge-Tunnel in Hampton with a travel time tax of 113 percent. In addition, Inrix found a total of 16 major bottlenecks in the region that are no doubt well known to local residents; the top 10 are listed in Table 2.

TABLE 2

THE TOP 10 TRAFFIC BOTTLENECKS IN HAMPTON ROADS ACCORDING TO INRIX

Road	Segment or Interchange	Length (Miles)	Weekly Hours of Congestion	Average Speed When Congested (MPH)
I-264 WB	I-464/Berkley Ave./Exit 8	0.28	53	12.6
I-264 WB	Waterside Drive/Exit 9	0.40	26	8.9
I-264 WB	Berkley Bridge	0.70	38	10.7
I-264 WB	Court Street	0.38	48	4.8
I-64 EB	Mallory St./Exit 268	0,55	41	17.0
I-64 WB	4th View/Exit 273	.24	35	18.3
I-264 EB	VA 141/Effingham/Exit 7	0.53	31	16.8
I-264 WB	Claiborne Ave./Exit 11	0.10	16	11.1
I-64 WB	Patrol Road	0.58	20	15.0
I-64 EB	VA 190/Exit 292	0.17	22	18.6
A road segment is considered congested if the average speed of an automobile is less than one-half the uncongested speed.				
Source: Inrix National Traffic Scorecard, 2010				

Plans To Reduce Congestion And Improve Mobility

The February 2011 "Hampton Roads Regional Transit Vision Plan" provides a look at what the future of the region could be like:

> *"An integrated public transit network will provide Hampton Roads with transportation choices, thereby ensuring greater mobility, economic development, environmental protection, energy independence, and quality of life."*

The goals of the Regional Transit Vision Plan are ambitious even with the long-term timeline envisioned – 2025. Specifics concerning the goals are not enumerated in the plan, for example, how the projects would be paid for, and when they would commence. The purpose of the plan is not to list a definitive set of approved projects, but instead to provide a long-term framework for regional transit development. The perhaps naive notion is that, as the region selects projects for further study, planners, elected officials and the public will collaborate to define the specific requirements, alignments and transit modes in accordance with local land use planning, alternative analysis, environmental considerations and (not to be forgotten) available funding.

Goals of the Hampton Roads Regional Transit Vision Plan, February 2011

- Maximize limited infrastructure budgets through parity between transit and highway investments.
- Provide greater mobility options through an integrated high-capacity transit system.
- Improve land use and transportation coordination by encouraging transit-supported development within mixed-use activity centers and corridors.
- Reduce energy consumption, improve air quality, and mitigate climate change impacts with a robust transit system based on renewable energy sources.
- Promote economic growth and regional competitiveness through a transit system that connects major activity and employment centers.

Source: Hampton Roads Regional Transit Vision Plan, Final Report, February 2011

Hampton Roads Regional Transit Vision Plan Transit Modes Considered

Light Rail Transit (LRT)—an electric railway powered by overhead wires, such as The Tide in Norfolk.

Commuter Rail—heavy rail equipment such as Virginia Railway Express in Northern Virginia.

Enhanced Bus—higher-frequency service with station amenities such as real-time service information.

Express Bus—coach bus vehicles such as HRT MAX service that use high-occupancy lanes when available.

Bus Rapid Transit (BRT)—special buses that operate in dedicated lanes with enhanced stations.

High-Speed Ferry—carries passengers and not vehicles among employment centers.

Source: Hampton Roads Regional Transit Vision Plan, February 2011

The Hampton Roads Regional Transit Vision Plan is a product of the Hampton Roads Transportation Planning Organization (HRTPO), which is the Metropolitan Planning Organization (MPO) for the Hampton Roads Metropolitan Planning Area (MPA). It appears that a typical citizen in the region finds this profusion of agencies and organizations difficult to comprehend in a world that also includes a variety of other regional bodies, such as the Hampton Roads Planning District Commission (HRPDC), Hampton Roads Partnership, Hampton Roads Sanitation District, Hampton Roads Transit, etc. We won't attempt to straighten out this bowl of agency spaghetti. It will suffice for us to note that it would be nigh impossible for a region to qualify for state and federal funding of consequence without having organizations similar to the HRPDC and HRTPO.

The Vision Plan recommends the following **fixed guideway transit, ferry and commuter rail projects:**

SHORT TERM (BY 2025)	
• Downtown Newport News to Naval Station North and Harbor Park	High-Speed Ferry
• Downtown Hampton to Naval Station North and Harbor Park	High-Speed Ferry
• Downtown Portsmouth to Downtown Norfolk	High-Speed Ferry
• Downtown Norfolk to Norfolk Naval Station	Light Rail
• The Tide (under construction)	Light Rail
• Tide Extension to Virginia Beach	Mode Under Study
LONG TERM (BY 2035)	
• Downtown Newport News to Williamsburg	Commuter Rail
• Christopher Newport University to Huntington Pointe	Light Rail
• Downtown Newport News to Christopher Newport University	Light Rail
• Harbor Park to Portsmouth Downtown/Midtown Loop	Streetcar
• Harbor Park to Greenbrier	Light Rail
EXTENDED TERM (AFTER 2035)	
• Extension from Williamsburg to Lightfoot and Toano	Commuter Rail
• Phoebus Waterfront to Coliseum Central	Streetcar
• Downtown Newport News to Downtown Hampton	Light Rail
• Downtown Hampton to Harbor Park (direct)	High-Speed Ferry
• Downtown Newport News to Harbor Park (direct)	High-Speed Ferry
• Harbour View to Downtown Newport News and Hampton	High-Speed Ferry
• Downtown Newport News to Norfolk Naval Station	LRT-Only Tunnel
• Harbor Park to Harbour View via Downtown Portsmouth	Bus Rapid Transit
• Extend The Tide from Military Highway Station to Naval Station	Light Rail
• Extend Portsmouth Streetcar to Harbor Park	Streetcar
• Extend from Greenbrier to The Tide's Military Station	Light Rail
• Harbor Park to Downtown Suffolk	Commuter Rail
• Harbor Park to Fentress to North Carolina in Future	Commuter Rail

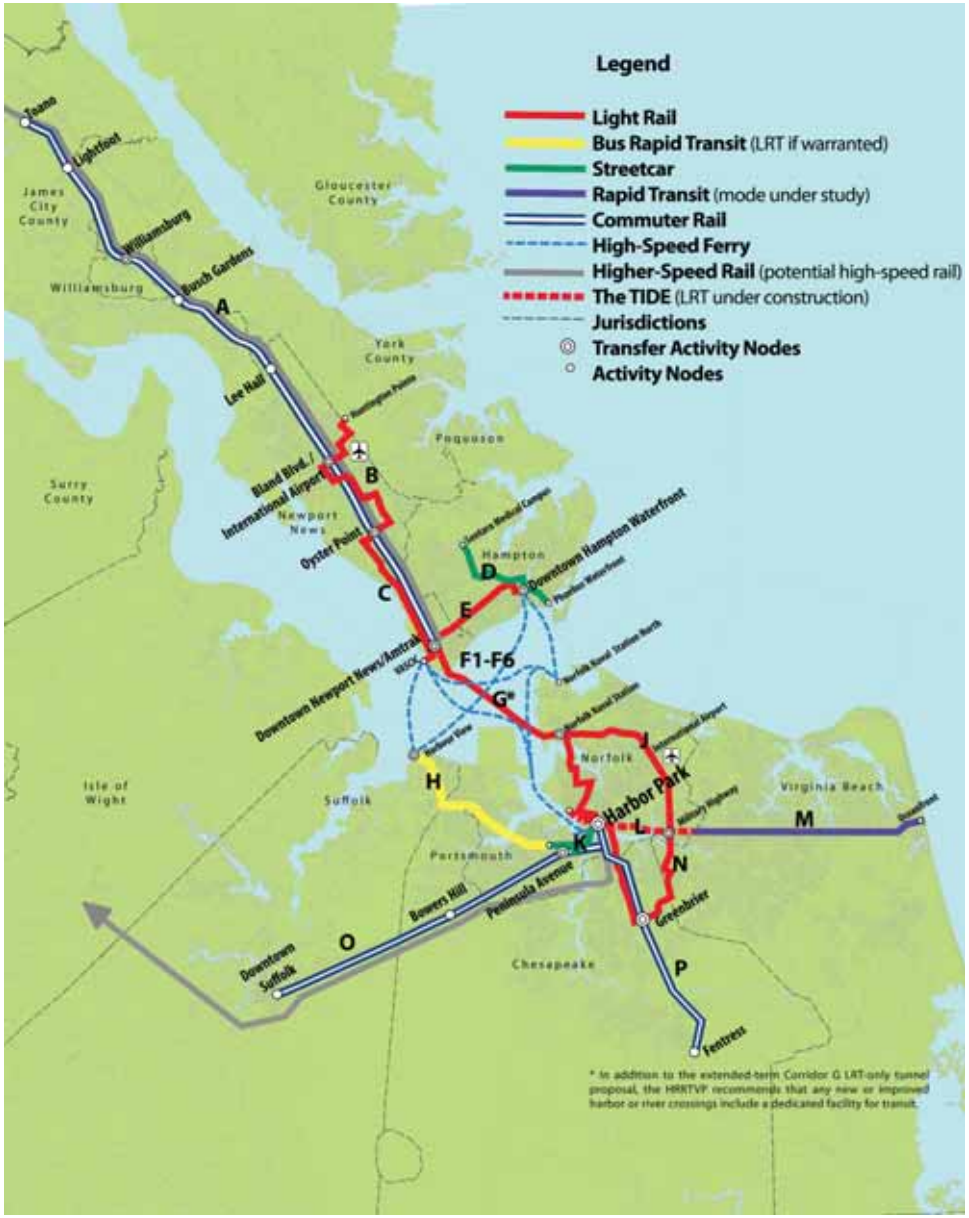
The Transit Vision Plan made the following recommendations for **express, enhanced and circulator bus services:**

SHORT TERM (BY 2025)
• Express bus service from Harbor Park to Great Bridge and downtown Newport News to Williamsburg
• Enhanced bus service from Sentara Norfolk General Hospital to Portsmouth via Midtown Tunnel, Harbor Park to Harbour View, Princess Anne Road and Lynnhaven Parkway, Oceana Transit Station to Oceana Naval Air Station and downtown Hampton to Oyster Point
LONG TERM (BY 2035)
• Express bus service I-464/Route 168, Norfolk to Chesapeake and North Carolina in future, downtown Portsmouth to Northgate Commerce Park, Harbor Park to downtown Suffolk, and Gloucester County to Oyster Point
• Enhanced bus service from Portsmouth to Victory Crossing to Harbor Park; Norfolk, Portsmouth, Chesapeake Square Mall; downtown Newport News to Hampton/Buckroe Beach; and Smithfield to Downtown Newport News
EXTENDED TERM (AFTER 2035)
• Express bus service from Harbour View to Smithfield, downtown Suffolk to Bowers Hill to Harbour View, and downtown Norfolk to Deep Creek with future extension to North Carolina
• Enhanced bus service from Oyster Point to Poquoson and Poquoson to Langley to Coliseum Central
• Circulator bus service, to be implemented with associated rail transit corridors, include Norview Avenue to Norfolk International Airport, International Drive into Norfolk Naval Station and Phoebus Waterfront to Fort Monroe

Figure 1 provides a visual representation of many of these identified needs.

FIGURE 1

REGIONAL TRANSIT VISION PLAN IDENTIFIED PROJECT AREAS



Prioritizing Projects

At the same time a vision was being developed for mass transit in the region, a list of specific-priority highway projects also was being developed. The "Transportation Prioritization: Recommended List of Projects and Studies" report was released by the HRTPO staff in March 2011, as part of the development of the fiscally constrained 2034 Long-Range Transportation Plan (LRTP). The LRTP serves as "the blueprint for the region's transportation development and identifies needed programs and improvements to the transportation network as well as a long-term transportation investment strategy for the Hampton Roads metropolitan area." More than 150 projects were evaluated for inclusion in the 2034 LRTP using data on traffic, funding, project readiness and accessibility, and utilizing a project prioritization tool to give each project a score that could be used for establishing priorities among projects.

Components of Scores for Project Prioritization Long-Range Transportation Plan HRTPO, March 2011

- Project Utility: ability to solve a transportation issue
- Economic Vitality: ability to support economic growth
- Project Viability: readiness of project to be constructed

Figure 2 presents a "Projects and Studies of Regional Significance" map indicating projects for which funding is committed, and recommended projects for construction and additional study as of April 2011. "Committed projects" are those that are fully funded in the Virginia Department of Transportation's fiscal year 2011-2016 Six-Year Improvement Plan (SYIP). The estimated costs of committed projects approximate $250 million. In addition, studies currently under way concerning these and other future projects are estimated to cost approximately $40 million.

Through 2034, prioritized projects for construction for which funding has been identified cost approximately $3.5 billion. Another $2 billion in projects have been identified as priorities, but funding has not yet been identified and is unlikely ever to be identified unless additional commonwealth transportation revenue sources are developed.

RECOMMENDED PROJECTS FOR CONSTRUCTION FOR WHICH FUNDING HAS BEEN IDENTIFIED

Interstate Roadway System	**Prioritization Score**
• I-64 between Jefferson Avenue and Fort Eustis Boulevard	178
Primary Roadway System	
• Midtown Tunnel/MLK Extension/Downtown Tunnel	242
• Dominion Boulevard	221
• Route 17 (Hampton Highway to Dare Road)	202
• Route 17 (Dare Road to Denbigh Boulevard)	146
Urban Roadway System	
• Lesner Bridge	173
• Mills Godwin Bridge	150
• Churchland Bridge	132
• Washington Avenue Bridge	111
• Lynnhaven Parkway (Centerville Turnpike to Indian River Road)	191
• Route 58 (Suffolk Bypass to Manning Bridge Road)	180
• Nansemond Parkway (Helen Street to Chesapeake City Line)	159
• Military Highway at Northampton Boulevard Interchange	157
• Bridge Road (Godwin Bridge to Chesapeake City Line)	154
• Holland Road (Dam Neck Road to Nimmo Parkway)	141
• Witchduck Road (I-264 to Virginia Beach Boulevard)	141
• Laskin Road (Republic Road to Oriole Drive)	114
• Indian River Road (Lynnhaven Parkway to Elbow Road)	109
• Laskin Road (Oriole Drive to 30th/31st Streets)	100
• Elbow Road/Dam Neck (Indian River Road to Princess Anne Road)	98

RECOMMENDED PROJECTS FOR CONSTRUCTION FOR WHICH FUNDING HAS BEEN IDENTIFIED	
Intermodal Projects	**Prioritization Score**
• Craney Island Connector	189
Unfunded Projects Recommended for Future Consideration	
• I-64 (Fort Eustis Boulevard to Route 199)	178
• I-64 Southside Widening (I-64/I-464 to I-64/I-664)	160
• I-64/I-264 Interchange (including Witchduck Interchange)	179
• I-64 Fort Eustis Boulevard Interchange Improvements	149

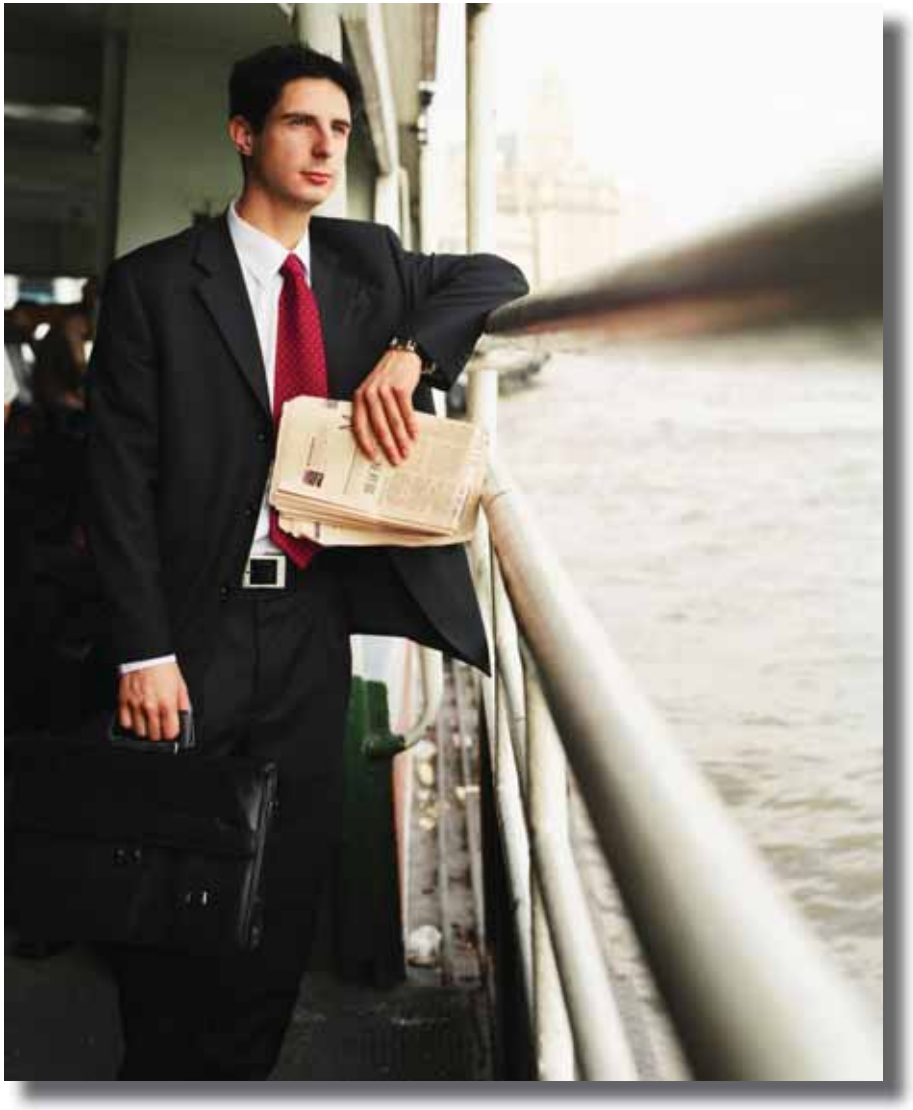
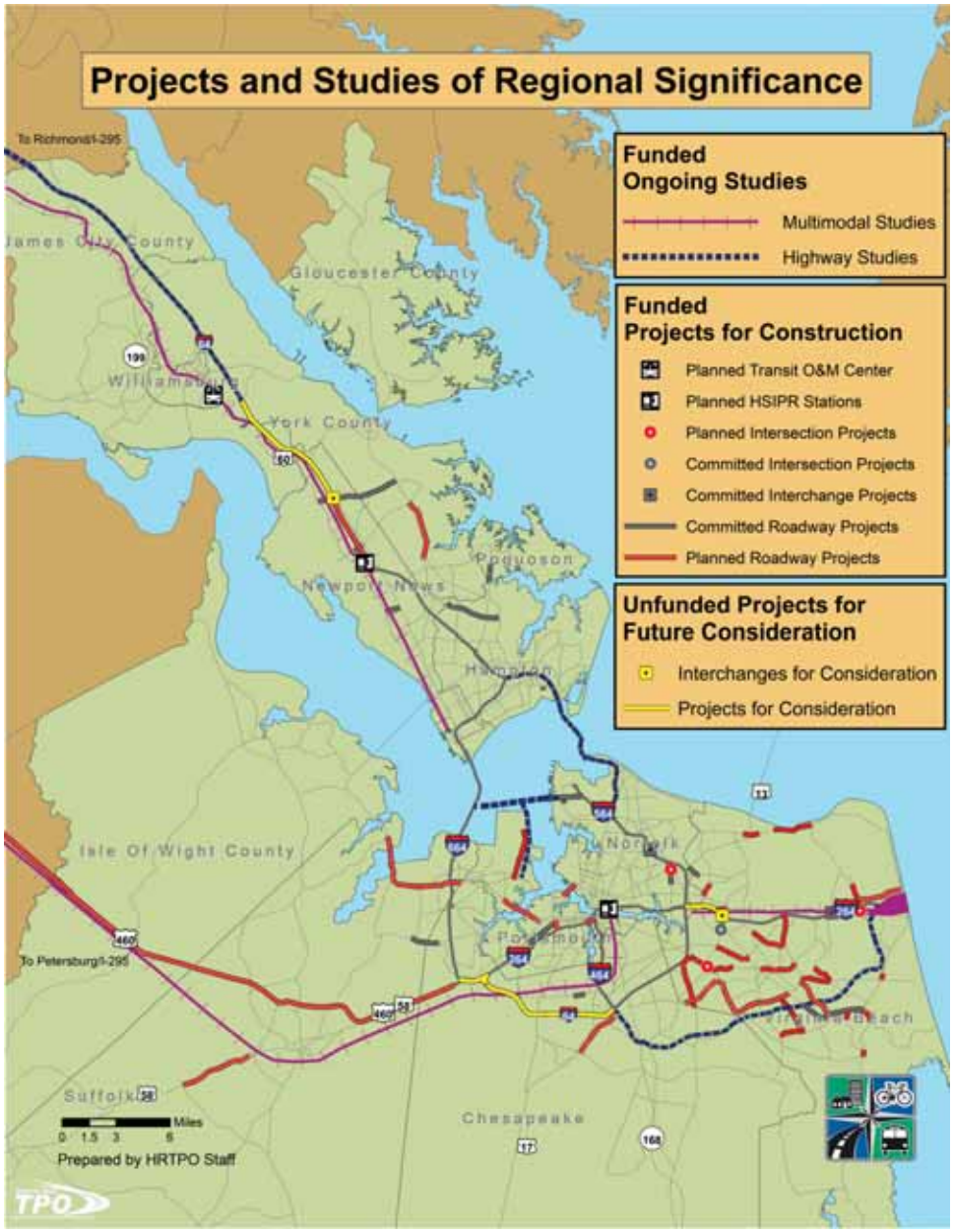


FIGURE 2


Projects and Studies of Regional Significance
Funded
Ongoing Studies
Multimodal Studies
Highway Studies
Funded
Projects for Construction
Planned Transit O&M Center
Planned HSIPR Stations
Planned Intersection Projects
Committed Intersection Projects
Committed Interchange Projects
Committed Roadway Projects
Planned Roadway Projects
Unfunded Projects for
Future Consideration
Interchanges for Consideration
Projects for Consideration
To Richmond/I-295
James City County
Gloucester County
Williamsburg
York County
Poquoson
Newport News
Hampton
Norfolk
Isle Of Wight County
To Petersburg/I-295
Suffolk
Chesapeake
Virginia Beach
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Looking Into The Future

"Maintaining a viable transportation system is crucial to the Hampton Roads economy," argued the Hampton Roads Transportation Planning Organization in its January 2011 report, The State of Transportation in Hampton Roads. **"Pillars of the Hampton Roads economy – military, the ports, and tourism – all depend on our transportation system."**

In brief, why does the region need to be concerned about its transportation system(s)?

- Businesses within the region and the Port of Virginia (about 10 percent of the region's economy) need to be able to move products in and out of Hampton Roads with efficiency and cost-effectiveness.
- Workers within the region need to be able to move to and from their jobs. If they cannot do so, then not only will regional opportunities and productivity suffer, but also the region will begin to break apart.
- The numerous Department of Defense installations in the region (which generate about 45 percent of Hampton Roads' gross regional product) require efficient transportation links in order to move personnel and equipment inside and outside of the region.
- The region's tourism industry (about 8 percent of the regional economy) is increasingly dependent upon road transportation and will suffer if customers cannot easily reach locations such as Virginia Beach and the Historic Triangle.
- Emergencies, especially those involving the weather, will require vastly improved evacuation paths within Hampton Roads. Currently, it is impossible to evacuate large numbers of people in response to an emergency.

These well-identified concerns do not translate to "transportation at any cost" and they certainly do not imply the necessity of all projects on priority lists. Nevertheless, they deserve intense consideration at a time when the region is losing net jobs and suffering from net out-migration. Hampton Roads can ill afford to provide the Department of Defense with additional reasons to scale down its commitments within the region and it would be ill advised to hobble the development of the Port of Virginia and regional tourism.

The truth is that regional citizens, when faced with decisions to pay for (or not pay for) additional major transportation projects, usually have declined to do so. In one sense, this is understandable in that only a minority of people directly and daily face the ravages of traffic congestion. The abundant presence of retirees in the region who do not commute probably contributes to the lack of support for transportation taxes, as might the somewhat transient nature of many of the region's residents. Put bluntly, it may be that such people, supplemented by many other residents who find themselves pressed economically, are much more interested in their ability to put bread on their table today than they are in others' lengthy commuting times, or the region's competitive position in the years ahead. Further, they probably do not make a connection between the quality of the region's transportation system and the prices of the goods and services they purchase, or the wages and salaries they earn.

Ultimately, however, we in Hampton Roads will get what we are willing to pay for in terms of regional transportation. It's true that the governor and General Assembly have decided to put several billion dollars of additional funding into transportation projects within the commonwealth over the next few years. However, candor requires us to note that most of these funds will be borrowed and, in essence, the state has punted this funding problem into the future.

The television muffler commercial of some years ago in which an old gent advised a car driver, "Pay me now, or pay me later," is apposite. We will pay for our transportation needs one way or another. Either we pay for projects with taxes and tolls now, or we will incur costs throughout the future associated with congestion and gradual regional economic deterioration. Nobel Prize-winning economist Milton Friedman was right. In the end, there is no free lunch.