The American public is ready for a passenger rail renaissance. People want more than simply to remember with nostalgia passenger trains from the past; they want to have the kind of modern, comfortable, fast and reliable passenger rail system they read about or experience firsthand in other countries. They enthusiastically write letters, attend public hearings and send e-mails to support rail-friendly public policies and new rail projects. Many understand that, ethically, we cannot continue on the same path we have been on for half a century, but we must begin to make wiser transportation choices for our nation and ourselves.

Amtrak’s steady growth in national ridership and the rapid growth of state-supported regional trains demonstrate that people will ride the rails instead of driving or flying if given competitive choices. In 2009, 5.9 million car trips were eliminated in Virginia alone by use of intercity and commuter passenger rail. The instant success of Virginia’s new corridor train connecting Lynchburg and Charlottesville to Washington, DC and the Northeast provides an ideal model for the further expansion of state-supported intercity passenger rail in Virginia.

Within the next half century, and hopefully much sooner, Virginia can create a versatile and efficient passenger rail network that brings convenient intercity rail access to at least 70 percent of its citizens. The state can have high speed rail with connections to the Southeastern states and the Northeast Corridor (NEC), and it can have commuter rail operating in the state’s major metropolitan areas. But to do this will require enlightened public policies, sufficient public investment, and the satisfactory resolution of chronic, systemic problems which threaten to prevent passenger rail from reaching its full potential.

How Did We Get Where We Are?
Freight and passenger rail are intertwined both historically and operationally in Virginia and across America, and it is necessary to understand the complex and often uneasy relationship between the two before we can understand the future for passenger rail in Virginia. Both freight and passenger rail are necessary components of Virginia’s transportation network and are essential to its future. The following historical account, which begins with the devastating impact the emerging car culture had on the railroads, provides the framework for understanding both today’s realities and tomorrow’s potential.

The Interstates and the End of an Era for Passenger Rail
When songstress Dinah Shore beckoned her 1950’s TV audiences to “See the USA in your Chevrolet,” she wasn’t just selling cars, she was pitching a whole new way of life: Buy one of the new high-performance American cars, get behind the wheel, and get onto the nation’s brand new Interstate Highways. America was “asking you to call,” the jingle said. As Dinah sang, the TV screen showed sleek cars cruising down pristine and nearly empty highways,
demand was shifting dramatically from rail to road.\textsuperscript{3} It was a seductive image, and Americans heeded its message, buying GM, Ford, Chrysler and other American cars by the millions. While promoting automobile travel, the car manufacturers and fuel companies that profited from it also linked their products to prosperity and opportunity, showing idealized families in iconic suburban neighborhoods enjoying the good life with American cars in the driveway.\textsuperscript{3} Such ads reflected America’s post-war optimism for the future. Owning a car was no longer a matter of social status but of quality of life, and with gasoline prices at 25 cents a gallon and the economy booming, nearly everyone could afford to own a car.

America was becoming a nation of drivers and super highways, and the American landscape quickly changed to accommodate them, spreading urban life outward into the suburbs, creating a commuter population, locating shopping and services ever farther from home or office, building chain motels and restaurants catering to interstate travel, and hauling goods over highways from manufacturer to consumer. People were also taking to the airways in great numbers as the number of commercial airports increased and the airlines added flights, making air travel available and affordable for more Americans.

The Impact on the Railroads
At the same time the Interstates were being built, freight and passenger demand was shifting dramatically from rail to road. Americans deserted the trains so rapidly that even the introduction of new luxury Streamliners couldn’t bring them back. The public’s abandonment of passenger rail proceeded relentlessly through the next decade; by the mid-1960s, passenger volume was so low that the railroads were losing money on passenger routes, although federal regulation required them to continue to operate passenger service. The resulting deliberate neglect of passenger equipment and service contributed to even more erosion of the market, which led to more losses.

Passenger Service Goes on Life-Support
In an effort to revive passenger rail, President Lyndon Johnson signed legislation in 1965 giving federal support to develop 125 mph passenger service in the NEC, declaring famously that “An astronaut can orbit the earth faster than a man on the ground can get from New York to Washington.”\textsuperscript{4} In 1969, Penn Central Railroad began running the fast Metroliner trains, with great success, but the collapse of the already financially-stressed railroad a year later led Congress and the Nixon Administration to conclude that freight and passenger rail must be split off from each other, with government assuming responsibility for keeping passenger trains running, independently of the freight railroads.\textsuperscript{5} From that point on, passenger rail survived by being put on life support.

The Formation of Amtrak
The National Railroad Passenger Corporation (Amtrak) was created as a federal agency in 1971. Most of the railroads gladly surrendered their passenger routes and equipment to the agency. Of 400 trains given over to Amtrak at the time, half were immediately taken out of service.\textsuperscript{6} According to one rail historian, “On May 1, 1971, hundreds of passenger trains disappeared all over the country.”\textsuperscript{7} The NEC Metroliners and a skeletal system of long-distance trains was all that remained of America’s once-robust and extensive passenger rail network.

Impact in Virginia: The Piedmont Corridor
The impact these events had on passenger rail in the Old Dominion was dramatic and long lasting, as illustrated by the demise of passenger service on the Piedmont Line in Central Virginia. Until the mid-50’s, travelers on this corridor had their choice of 22 daily trains to and from Washington, DC (16 operated by Southern Railway and six by the Chesapeake & Ohio). Among those was Southern Railway’s Crescent, one of the “Grand Ladies” of the Southern system, which ran between New Orleans and New York. In 1979, Southern Railway became one of the last to relinquish its passenger trains to Amtrak. For 40 years thereafter until October 2009, the Crescent was the only remaining daily passenger train on the corridor. The only remnant of the Chesapeake and Ohio Railway passenger trains on the corridor was the Amtrak Cardinal between Chicago and New York, which runs three days a week. Among the state’s biggest losers were the Roanoke Valley and South Hampton Roads; neither Roanoke nor Norfolk has had passenger rail service since Amtrak was formed.

Amtrak and the Freight Railroads
The railroads participating in Amtrak signed an agreement requiring them to provide passenger trains access to their tracks for 25 years; they renewed the agreement in 1996. Amtrak leases time on the tracks to make scheduled passenger runs; the railroads pay the “below the rail” costs of owning, maintaining, dispatching, signaling, etc. In addition to the right of access, the railroads agreed to charge heavily discounted rates for that access and to give Amtrak priority over all...
Weldon Cooper Center for Public Service • August 2010

Other trains. Railroads choosing not to participate were required to continue their existing passenger service; eventually, however, all succumbed to financial realities and relinquished their passenger service to Amtrak.

Thus, since the 1970s, America’s passenger trains have operated on infrastructure owned and operated by private corporations—the only transportation modality in America to do so.

Of the more than 21,000 miles of track in the Amtrak system, over 90 percent is owned by other railroads. In Virginia, 85 percent of the 3,380 miles of track, some built during the Civil War, is owned by either Norfolk Southern or CSX, with the remainder operated by nine short-line railroads.

Our Investments Reflect Our Priorities

Prior to when Amtrak was formed and since then federal transportation budgets have heavily subsidized roads and airports while devoting only a small portion to rail. As shown in Figure 1 in fiscal year 2008 roughly $2 billion went to rail versus $41 billion for highways and $16 billion for air. In fact, annual federal spending for rail was nonexistent until the creation of Amtrak in 1971.

Amtrak has been habitually deprived of all but bare bones federal support; the myth that Amtrak could be a profit-making enterprise kept Washington from making the kinds of investments that would have allowed it to compete with other modalities. The annual dance wherein the White House made drastic cuts in Amtrak’s budget, only to have Congress bail it out, became a familiar routine. In Virginia, rail was not even included in the state’s distribution formula for the Transportation Trust Fund until 2005, when Governor Warner established the first dedicated fund for rail infrastructure. Prior to that, rail’s share of Virginia transportation funding was zero.

Over a period of 40 years, the country’s rail network steadily shrank while its road network grew exponentially, and Virginia was no exception.

Figure 1. Federal Investment in Transportation by Modality, 1949 to 2008 (2009 Constant Dollars)


“Over a period of 40 years, the country’s rail network steadily shrank while its road network grew exponentially, and Virginia was no exception.”

The Downsizing of the Infrastructure

Beginning in the 1960s, large freight railroads known as Class I railroads, conducted a strategic campaign to lower their capital costs by systematically destroying their own infrastructure. By
removing underutilized sections of track, the railroads could reduce their maintenance costs and property taxes. While a few states passed “Rail Bank” legislation that allowed the railroads to keep dormant track in the ground without paying property taxes, most states, including Virginia, did not. Tens of thousands of miles of double track deemed to be “redundant” were reduced to single track, and single tracks were removed wherever possible. Eventually, the railroads removed so much steel that they reduced the nation’s track inventory by more than half, from 207,334 miles in 1960 to 94,112 miles in 2007. What the railroads did not anticipate was the resurgence that would occur in their industry, and the capacity issues that would result from their shortsighted practices.

The Condition of Rail Today
Freight has led the way with a heavy resurgence and passenger rail is showing promising signs of reviving. But finding ways to keep both freight and passenger rail running well without conflicts, and finding ways to pay for this, present major challenges.

The Revival of Freight and Passenger Rail
In 1980, Congress passed the Staggers Act deregulating the freight rail industry—as it had already done for the airlines and trucking industries—a move that many believe revolutionized the industry and set it back on a course of growth. The results were dramatic, if sometimes unexpected. Constant restructuring left the nation with only four railroads dominating the industry: Norfolk Southern, CSX, Union Pacific/Southern Pacific, and Burlington Northern Santa Fe. The industry’s share of the freight market rose as the railroads exercised their newly gained right to enter into secret contracts with their clients. Since then, freight rail density (tonnage per mile of track) has increased 379 percent over 1970’s levels. In Virginia, rail freight tonnage is expected to grow another 102 percent by 2035.

At the same time as freight rail has enjoyed a resurgence, passenger rail is experiencing its own revival. Thanks to rising fuel costs, congested highways and the inconveniences of traveling by air, Amtrak has been recording historic highs in annual ridership. In 2008, Amtrak’s best year ever, 28.7 million people rode the trains, an increase of 11 percent over the previous year.

The combination of a reinvigorated freight industry, reduced capacity of the infrastructure, and freight and passenger trains sharing the same network creates conflicts that were not anticipated when Amtrak was created. In contrast to every other developed country in the world, America’s rails are overwhelmingly used for freight rail (1,390 billion ton miles per year) as compared to passenger rail (6 billion passenger miles per year). The freight railroads are in the business of moving goods; in spite of federal mandates, they do not easily agree to host new passenger trains on their lines. Passenger rail requires higher track standards than freight, and passenger trains move at higher speeds and on more rigorous schedules than freight. In addition, based on a report by the Association of American Railroads (AAR), which represents the freight industry, the access fees paid by passenger operators do not cover the costs incurred by the railroads from hosting passenger trains. By filling scarce slots on their tracks at below-market rates, the freight railroads assert they provide a major subsidy to passenger rail.

Public Investments in Private Infrastructure
In order to create “win-win” situations with the freight railroads, state rail agencies such as the Virginia Department of Rail and Public Transportation (VDRPT) have developed strategies for using public funds to pay for track upgrades and other improvements that add overall capacity to the system. With these improvements additional

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**Figure 2. Virginia Highway and Rail Miles, 1930, 1970, and 2007**


“… finding ways to keep both freight and passenger rail running well without conflicts, and finding ways to pay for this, present major challenges.”
“slots” are available for passenger trains. “It’s the cost of admission to their infrastructure,” says Washington State rail official Ken Uzanski, in an interview about the highly successful Cascades line between Seattle, Portland and Vancouver, funded jointly by the states of Washington and Oregon. “In return,” says Uzanski, “the railroad allows us to run our trains with the frequency and on-time performance we want.”21

The policy of investing public funds in private infrastructure is not without controversy.22 Demonstrating the value of the investment to the public, especially during an economic downturn, can be difficult. Says Norfolk Senator Yvonne Miller, a long-time rail supporter, “you also have to make a strong case that it would pay for itself and be worth the investment.”23

As to the problems encountered when railroads resist hosting more passenger trains on their tracks, former Federal Railroad Administration (FRA) head Gil Carmichael has this to say: “My argument with the freight railroads is they have forgotten the covenant made when they talked the federal government into taking over the passenger trains. They promised the American people, ‘we will give you priority on our routes.’”24

Virginia’s Rail Enhancement Fund
In 2005, following a recommendation by the Governor’s Commission on Rail Enhancement for the 21st Century, the General Assembly established the Rail Enhancement Fund (REF), one of the nation’s only dedicated state funding resources for rail infrastructure. The fund receives 3 percentage points of the state’s 10 percent car rental tax, which provides the REF about $23 million annually, a miniscule amount compared to the billions Virginia spends on roads. The REF is projected to provide approximately $761 million in revenues between 2010 and 2035, supplemented by at least $129 million in capital project bonds for rail transportation provided through the Virginia Transportation Initiative of 2007.25 Disbursement of the REF is in the form of grants for capital projects, which require a 30 percent match from the grantee. An appointed citizens board, the Rail Advisory Board, has the responsibility of reviewing, advising on and approving REF grant applications.26 Between 2006 and 2009, the commonwealth granted a total of $163.4 million REF funds, 51.8 percent of which went to Norfolk Southern, 27.4 percent to CSX and 8.6 percent to Northern Virginia’s commuter railroad, Virginia Railway Express (VRE).

Virginia thus follows a national trend for states to invest public money in private rail infrastructure for the purpose of achieving the public benefits that come with improved capacity and efficiency of the rail network. Montgomery County, VA has filed suit against the state, challenging a REF grant to Norfolk Southern to build a large intermodal facility in the county. Its case rests in part on the argument that spending taxpayer dollars for “any work of internal improvement” for a private industry is against the Virginia Constitution.27 Notwithstanding the court case, the public benefits derived from these projects include diversion of freight from truck to rail, environmental payoffs, and access to the tracks for passenger trains. In 2008 VDRPT published a Statewide Rail Plan,28 accompanied by a Rail Resource Allocation Plan,29 which documents projects already underway as well as future projects and quantifies the public benefits expected to accrue from each project, including removal of cars and trucks from the highways, CO₂ emissions saved, and gallons of fuel saved.

State Partnerships Create Amtrak’s Booming Corridor Trains
Without a doubt, the most significant advance in US intercity passenger rail in recent history has been Amtrak’s strategic partnerships with individual states on corridors of 500 miles or less.

With 80 percent of trips being within this travel range,30 these short-distance “corridor routes” offer a competitive alternative to automobile and air travel. The major growth in Amtrak ridership is taking place on these routes. With 15 active state partnerships (and Amtrak vigorously courting more), Amtrak considers such partnerships to be its future.31 Among the most successful of the state-supported routes are:

California’s three routes, the Pacific Surfliner, the San Joaquin, and the Capitol Corridor, comprise the nation’s busiest intercity passenger rail system outside of the NEC.32 It generates almost a fifth of Amtrak’s national ridership, growing from 8 to 60 daily trains since 1974.

The Cascades in the Pacific Northwest, launched in 1994, carries over 700,000 passengers a year between Seattle, WA and Vancouver, BC. It is Amtrak’s most popular route outside of the Northeast and California.

The Downeaster, launched in 2001 with a single train, now operates five daily round trips between Portland, ME and Boston; it is one of Amtrak’s fastest growing services.

For states wishing to provide new or expanded passenger rail, the incentives to partner with Amtrak are substantial. With the advantages of federally guaranteed access to the tracks, priority for their trains, and federal indemnification (unique to Amtrak) against liability for passenger

“Without a doubt, the most significant advance in US intercity passenger rail in recent history has been Amtrak’s strategic partnerships with individual states on corridors of 500 miles or less.”
rail accidents, regardless of fault, Amtrak enjoys a real competitive edge. Amtrak also offers the advantages of a national reservations system, an existing network of routes, stations and terminals in 46 states, experience with planning, forecasting and working with the freight railroads, and national marketing capacity. The general framework of such partnerships is that the state pays for or leases the equipment from Amtrak, which runs the service, while the state pays the differential operating costs not recovered from fare revenues.

Agreements with the Railroads
Agreements must also be made with the host railroads, including infrastructure projects proposed by the railroad and paid for by the state. Before agreeing to new passenger service, the railroads apply criteria to protect their interests, such as that passenger service must be complimentary to freight development, and the operator should fully compensate the railroad for use of the tracks, should not expect the railroad to subsidize passenger service, and should fully cover liability for passenger train accidents. With such conditions, the railroads set a high bar for starting new passenger service, at the same time limiting competition and arguably limiting the future growth of passenger rail. The greatest opportunities arise when capacity improvements for passenger rail correspond to the freight railroad’s own strategic investment plans for the corridor.

Virginia’s Intercity Corridor Routes
Virginia has a network of increasingly popular passenger trains and has ambitious plans for expansion with both high speed and conventional trains to meet a growing need. But financial and political challenges loom at both the state and federal levels ...

“The Virginia News Letter

“Virginia has a network of increasingly popular passenger trains and has ambitious plans for expansion with both high speed and conventional trains to meet a growing need. But financial and political challenges loom at both the state and federal levels ...”

The Lynchburg train is proving that enhanced frequency and reliability of passenger service on an under-served corridor can quickly generate new ridership and revenue. In its first eight months of service, the train has already exceeded Amtrak’s annual goals by 52.3 percent for ridership and 53.3 percent for revenues. Furthermore, on-time performance has averaged 81 percent.

Future of the Lynchburg-DC Corridor
The Virginia Department of Rail and Public Transportation’s 2008 Statewide Rail Plan, as well as the Office of Intermodal Planning and Investment’s draft Virginia Surface Transportation Plan (VTrans2035), provides for a second round trip train to Washington, New York and Boston for the Lynchburg-DC corridor within six years, with one of the two trains extending to Roanoke. In the meantime, bus feeder service from Roanoke to the Lynchburg station would be a first step in re-establishing passenger rail for Roanoke.

For the longer-term, the state plan calls for extension of passenger service from Roanoke to Bristol and from Bristol to Richmond by 2030. The Bristol extension provides an opportunity for an interstate connection to Chattanooga, assuming Tennessee would partially fund the service, an unlikely prospect at this time.

Missing from the state plan is any enhancement of passenger service for Danville, which is already a stop on the daily Crescent. The city’s economic development office has done much to promote the Crescent, however, the inconvenient schedule (northbound trains depart at 4:57 a.m.; southbound trains at 11:14 p.m.), along with the lack of a staffed ticket office, works against future growth in ridership. A rail connection to Charlotte and Greensboro to the south and Washington to the north would provide sorely needed economic benefits for Danville and Southside Virginia.

Richmond Northeast Regional Trains
A second new state-sponsored extension of the Northeast Regional, this one from Richmond to Washington, was launched on July 20, 2010, adding a tenth daily train to Richmond’s existing schedule of service to Washington. With the addition of this train, hourly northbound morning departures are now available from the Staples...
Mill station. VDRPT plans to extend the train to Norfolk by 2013, giving Norfolk its first passenger service since 1970. In preparation for the Norfolk extension, $93 million in state-funded improvements to the NS line between Norfolk and Petersburg were approved, with the 30 percent match waived to facilitate the project. With the planned extensions of Northeast Regional service to both Roanoke and Norfolk, 70 percent of Virginians will have access to intercity passenger rail.

Future Extensions to Hampton Roads
A Richmond/Hampton Roads Passenger Rail Project Environmental Impact Statement (EIS) was the subject of several public hearings in January 2010. Responding to overwhelming public opinion and to an agreement signed by the localities, the Commonwealth Transportation Board (CTB) approved a plan for three conventional speed (79 mph) round trip daily trains between Richmond and Newport News (a net increase of one round trip over existing service), and six daily round trip trains at 90 - 110 mph speeds between Richmond and downtown Norfolk, including stops in Petersburg and Chesapeake. The city of Norfolk has created a visionary plan for a Downtown Intermodal Facility that includes a fully integrated transportation hub for intercity rail, high speed rail, the Tide Light Rail Line, inner- and intercity buses and ferry operations. The Norfolk Southern mainline runs adjacent to the site, which already has a light rail station as well as interstate and ferry access. Called “Harbor Park” after the adjacent stadium on the Elizabeth River waterfront, the plan includes high-density, mixed use development of residences, shops and offices. The plan epitomizes transit oriented development (TOD), the integration of land use and transportation planning, and the use of bus and light rail feeder systems to provide access to high speed and intercity rail. According to Norfolk State Senator, Yvonne Miller, who chairs the Senate Transportation Committee, “We’re in an evolving process as people are beginning to understand they can live in a world without cars if they have good passenger rail.”

High Speed Rail Brings Global Competitiveness
In order to keep America competitive in the global economy, it is essential to develop a 21st Century transportation system. Intercity passenger rail, optimally operating at high speeds and connecting the metropolitan centers within the country’s high-density, high-growth mega regions, will be a vital, economy-strengthening part of that system. All the nations in the Group of Twenty Finance Ministers and Central Bank Governors (G-20) except three (Canada, Australia and Mexico) either have a high speed rail (HSR) system in operation or have a future system funded and in some stage of development. Except for Canada, each has announced a national plan for high speed rail during the past decade. China, France, Germany, Japan and Spain are the world’s leaders, with trains running between major cities at speeds of 125 to 217 mph (depending on the country) and carrying millions of passengers annually. Even in the Middle East, the countries in the Gulf Co-operation Council (GCC) have committed to over $119 billion transportation investments in the next decade, over 90 percent of which is for rail projects. One project is for a GCC-wide $60 billion rail network, with trains traveling at speeds up to 217 mph on 1,300 miles of electrified track.

The US Conference of Mayors (USCM) commissioned a study of the potential economic and environmental impacts of high speed rail for four metropolitan areas: Los Angeles, Chicago, Orlando and Albany. Based on their findings, the USCM recommends that Congress include a dedicated, sustainable fund for high speed rail in the surface transportation bill that is up for renewal this year. Amtrak’s electrified Acela trains in the NEC achieve speeds up to 150 mph on some stretches, making it the nation’s fastest intercity passenger service. Its 100 trains per day capture 60 percent of the air/rail market between New York and Washington. On most of the rest of the system, Amtrak’s standard diesel locomotives are capable of speeds of 110 mph but run at maximum speeds of 79 mph, due to federal safety regulations that have been in place since 1951. However, with the Positive Train Control safety systems Congress has mandated to be in place on all American rail lines by 2015, speeds higher than 79 mph will be feasible.

High Speed Rail for Virginia
Richmond anchors the federally-designated Southeast HSR (SEHSR) Corridor, the only HSR corridor in Virginia, which runs from Jacksonville, FL to Richmond, with connections to Savannah and Atlanta, GA; Charlotte, Greensboro, Durham and Raleigh, NC; and with a spur from Richmond to Hampton Roads. The corridor, which is shown in Figure 3, encompasses one of the nation’s fast-growing mega regions, with population scheduled to grow 26 percent in twenty
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8 years.51 Being strategically located between the NEC and the Southeastern states, Virginia’s Urban Crescent is in an ideal position to benefit from high speed rail.

In 2004, Virginia and North Carolina entered into a compact to promote development of the first phase of the SEHSR Corridor, a joint project to implement 162 miles of a fully grade-separated system with service between Charlotte and Raleigh through Richmond to Washington and the NEC, at top speeds of 110 mph and an average 85–87 mph.52 VDRPT estimates that just the Richmond to North Carolina portion of the HSR project will take 1.1 million cars off the highways annually, saving 5.6 million gallons of fuel and reducing CO₂ emissions by 33,713 tons each year.53

Federal Funding for High Speed Rail

President Obama announced an $8 billion program of grants to states for high speed rail as part of the American Recovery and Reinvestment Act (ARRA) of 2008. Both Virginia and North Carolina submitted proposals relating to the SEHSR Corridor. North Carolina received $520 million to increase track speeds and train frequencies between Raleigh and Charlotte, and $25 million to improve existing service from Raleigh north to Virginia. Virginia received $75 million for improvements to the Richmond to Washington corridor, including 11 miles of third track between Richmond and Fredericksburg. While these amounts fall far short of what will be needed for eventual 110 mph service, they signal a tangible commitment on the part of both the federal government and the two neighboring states to advance the SEHSR project.54

An additional $2.5 billion for high speed rail was included in the 2010 federal budget, and $1.4 billion has been approved for the 2011 transportation budget by the House of Representatives.55 The second round of HSR grant awards has been announced, and Virginia is expected to submit a proposal. While Virginia enjoys several advantages for winning a larger award, including an existing Statewide Rail Plan, a positive history with Norfolk Southern and CSX and a dedicated fund for rail infrastructure, the state has made no commitments to put “skin in the game” (i.e., commit state funds) and has no dedicated fund for passenger rail operations, both of which are important factors in the grant competition. In addition, Virginia has no source of matching funds to meet federal matching requirements for future high speed rail grants.56

The Importance of a Connecting Feeder System

Although the projected growth in Virginia’s Urban Crescent will drive much of the success of Virginia’s HSR initiative, the existence of an effective “feeder system” of connecting conventional speed passenger trains from outlying communities will be a key contributor to building ridership, as it is with the world’s most successful HSR systems. This means planning now for connections to Richmond from communities in Central and Southwest Virginia. Europe’s prototype HSR systems were not built in a vacuum. They were developed incrementally and built upon an already-successful and growing intercity passenger rail network. Unlike America, Europe never lost its “culture” of train riders who routinely depend upon passenger rail for intercity transportation. The more Virginia invests now in a conventional intercity passenger rail network, the bigger the payoff will be when high speed rail finally comes.

A Visionary Proposal for the I-81 Corridor

No discussion of the future of passenger rail in Virginia would be complete without acknowledging a visionary proposal for a future “Steel Interstate” along Norfolk Southern’s Shenandoah Line, which parallels I-81 from Knoxville, TN to Harrisburg, PA, advanced by Salem-based advocacy group, RAIL Solution.57 To date, the corridor has received some attention from VDRPT and Norfolk Southern for its potential to divert


Note: EIS refers to an economic impact statement and ROD refers to the record of decision, the final step in the EIS process.
I-81 freight traffic from truck to rail, but it has received no serious attention as a passenger corridor. RAIL Solution sees the Shenandoah Line as a potential demonstration project for the Steel Interstate System, a rail version of the Interstate Highway System conceptualized by the Department of Defense and popularized by Gil Carmichael. The design of “Interstate II,” as it is sometimes called, is for multiple high capacity, electrified and grade-separated through tracks engineered, signaled and dispatched for 79 - 115 mph. The tracks would carry both conventional and intermodal freight shipments as well as intercity passenger trains. RAIL Solution commissioned commercial artist J. Craig Thorpe to create this visual of the Shenandoah Rail Corridor as it might look as a Steel Interstate. His lithograph is shown in Figure 4.

Challenges for the Future Expansion of Intercity Conventional and High Speed Rail

Virginia's ability to move forward with its ambitious plans to expand conventional and high speed rail will depend upon the successful resolution of several important issues at both the national and state levels. While the following are by no means the only challenges that will be faced, they are among the most significant for the short term.

Funding Passenger Rail Operations

One of Virginia's most pressing issues is the lack of a stable, dedicated and sustainable source of funding to pay for the operating costs of state-sponsored trains. To give an idea of the amounts involved, the existing agreement with Amtrak for the two new Northeast Regional trains to Washington required a contractual commitment from the state of $17.2 million ($10.6 million for the Lynchburg train; $6.6 million for the Richmond train) over a three-year period. The actual amount of reimbursement is determined by the revenue generated from ticket sales. The alternative is to fund rail operations through annual appropriations from the General Fund, but this is unreliable, subject to political intervention, and could jeopardize Virginia's ability to enter into future contracts.

The 2010 General Assembly passed legislation calling for VDRPT to conduct a study of how Virginia might pay for passenger rail operations in the future. In pursuit of the study, VDRPT is conducting a survey of best practices in other states. Rail advocacy groups such as Virginians for High Speed Rail have promoted a series of amendments to the REF to permit the fund to be used for intercity passenger rail operations; permit a discretionary waiver of the 30 percent match for passenger projects; supplement the fund by raising the vehicle rental tax; and leverage the fund for the sale of bonds to match federal grants for high speed rail. The fact that a sizable portion of...
the rental car tax is paid by out-of-state travelers adds to its political attractiveness over other sources.

While this may be a politically practical solution for the short term, even with the suggested modifications, the REF is simply not a large enough resource to support the kinds of public investments that will be required if Virginia is to develop a 21st Century passenger rail network. Relying upon a resource that annually generates barely enough to pay for one highway interchange to fund both infrastructure and operations for passenger rail is not a visionary plan, nor even a very realistic one. Virginia’s Transportation Trust Fund (TTF) currently distributes 78.7 percent of revenues to highway construction and 14.7 percent to transit. Rail revenues are distributed through the REF. An equitable distribution formula would more effectively balance direct funding for transportation alternatives with funding for roads and highways. Transit receives TTF funding because bus transit is recognized for taking cars off the roads and therefore adding capacity to the entire transportation system. Transit is also acknowledged for its cost-effective and efficient use of road capacity. Rail transportation also diverts cars and trucks off our highways and does so in an environmentally responsible manner, minimizing the public costs in terms of fuel and energy usage and harmful CO₂ emissions. Passenger rail should be funded on par with transit, and both should receive direct funding from transportation fund revenues in proportion to how large a role we project that they could play in Virginia’s transportation system as contrasted with their current, limited roles. If passenger rail and transit were fully funded and developed to their maximum capacity, they would provide competitive alternatives to cars and air travel.

As a means of generating transportation revenue, the Commonwealth Transportation Fund itself almost certainly will require an overhaul within the next decade. Gasoline tax revenues have been declining and are already falling short of what is needed just to maintain Virginia’s present highway system, due in part to more fuel efficient vehicles and to the effects of inflation on the fixed-rate-per-gallon system that has not changed since 1987. Several states are exploring a method of generating transportation funding based upon vehicle miles traveled (VMT); at least one Department of Transportation study has concluded the VMT tax is “workable and practical, a genuine alternative to the gasoline tax.”

For infrastructure and equipment needs, earmarks and grant programs to states from the USDOT are another means of funding intercity passenger rail projects, much as the Federal Transit Administration’s New Starts program has provided grants for urban commuter rail start-ups (including Norfolk’s new Tide Light Rail) for the past thirty years.

**Escalating State Obligations**

In 2008, Congress passed the Passenger Rail Investment and Improvement Act (PRIIA) (HR 2095), which fundamentally changed Amtrak’s role within the national passenger rail system, giving states a larger role and greater flexibility, as well as greater financial responsibility, for planning, developing and operating new corridor and high speed rail services. The bill provides for $1.8 billion in grants to the states with an 80/20 federal/state match, and $1.3 billion to Amtrak for infrastructure and facilities. The bill introduces an element of competition heretofore lacking in the choice of who will operate state-sponsored services, presumably forcing Amtrak to become more efficient, cost effective and high performing.

Section 209 of the legislation requires Amtrak to standardize its contracts with the states, including the allocation of operating and capital costs, and mandates that all existing corridor (short distance) routes be fully state-supported by 2013. In Virginia, this would affect four existing daily Northeast Regional trains serving Richmond, two of which also serve Newport News, which Amtrak currently pays for. It may also affect the Carolinian between Charlotte and Raleigh to New York, with stops in Virginia, which is supported by North Carolina. While one cannot assail the legislation’s goals, the impact of Section 209 could dramatically alter Virginia’s plans for expanding passenger service. Without the funds to assume the operating costs on four, possibly five, existing trains, not to mention sustaining its two new regional services, Virginia could face the real possibility of having to make difficult and politically unpopular choices between maintaining all of its existing routes and expanding new ones, or simply choosing between existing services to maintain. Either scenario would be a serious setback for Virginia’s intercity passenger rail network.

**Improving On-Time Performance**

Under the agreements establishing Amtrak, the host railroads are expected to facilitate the on-time performance of passenger trains by giving them priority on the tracks, for example, by moving a longer, slower freight train onto sidings to allow the passenger train to pass. In reality, when conflicts in the complex choreography between freight and passenger trains on shared tracks arise, as they frequently do, the tendency of railroad
dispatchers to resolve the conflict in favor of their own delivery schedules is all too prevalent.

Amtrak is working with both CSX and Norfolk Southern to improve the on-time performance of Virginia’s passenger rail network, resulting in a 16.4 percent decrease in delays in 2007 and a further 36.6 percent decrease in 2008. This is critically important as Virginia prepares to invest more public money into passenger rail. Infrastructure issues account for the majority of delays, followed by interference from other trains. The regional trains tend to perform better than the national routes, although the Crescent remains one of the lowest on-time performers. However, as long as Amtrak is constrained by having a year-to-year federal funding cycle, instead of the multi-year funding structure of every other modality, there will be problems that Amtrak cannot solve without the ability to plan and implement long term programs designed to improve its passenger service.

**Freight Industry Concerns about Higher Speeds**

The race for states to compete for high speed rail grants under ARRA has raised new issues with the freight railroads, who are reluctant hosts to higher speed passenger trains. The shared-track paradigms that have worked reasonably well in the past may not be well suited for speeds of 90 mph or greater. For speeds above 110, the passenger trains must be separate from freight operations, grade separated at highway crossings, and electrified to lessen the weight created by diesel engines and fuel tanks.

Virginia’s host railroads have each developed guidelines concerning how fast passenger trains can run on their tracks. Norfolk Southern’s policy is that passenger trains cannot operate at speeds higher than 79 mph. If a state wants higher speeds, it will have to run them on separate tracks (i.e., build their own). CSX allows passenger speeds up to 90 mph; for higher speeds, CSX also requires that they be on separate tracks, and the railroad goes farther to require that the separate tracks be located at least 30 feet from their freight operation.

The railroads see no additional benefits to their bottom line from the costly upgrades and higher standards of track maintenance required for higher speed passenger trains. To the contrary, according to Union Pacific spokesperson Mark Bristol, the idea that a freight railroad would benefit from a high speed service is “a common misconception.” “That’s not important to our business plan,” says Bristol. “We have some examples on projects at traditional speeds where we’re willing to contribute because we’re eliminating bottlenecks that help both freight and passenger rail, but on higher speeds it’s hard to find those synergies.” What such constraints and lack of synergies between state plans for high speed rail and the freight railroads means for the long term is difficult to say, but at the very least, they introduce another layer of complexity in the already convoluted relationship between passenger and freight rail.

**Industry Resistance to Federal Railroad Administration (FRA) Rules**

An additional issue is the freight railroads’ rejection of the guidelines issued by the FRA for recipients of federal grants for high speed rail projects. Among the provisions meeting the strongest resistance from the industry are the requirements to meet measurable service outcomes for passenger trains, such as the number of daily trips, trip time and on-time performance. The FRA places the burden of meeting the targets on the railroad, and requires the railroad to correct the problems at its own expense. Failure to do so over a period of time would result in a penalty amounting to a pro-rata share of the federal grant. Another provision requires that any new capacity created by the federal grants be reserved for future passenger trains exclusively, i.e. it cannot be used to increase freight carrying capacity.

The Association of American Railroads (AAR) filed suit against the FRA guidelines on July 2, 2010, charging they are “contrary to law” and represent “arbitrary and capricious agency action” and asking the court to vacate the guidelines. The FRA’s position is that it is protecting the public interest by ensuring that $8 billion in federal grants doesn’t just end up in railroad stockholder’s pockets, and that federal investments accomplish their intended outcomes according to enforceable standards of performance. This lawsuit bears close watching for its potential to dramatically affect the structure of the public/private partnerships that are at the foundation of every state’s HSR projects.

**An Agenda for Progress**

Momentum has been building and the needs are clear. Now is obviously the time for a strong state-wide effort to set realistic goals for Virginia’s rail future and follow through on them.

**We Must Shift Our Transportation Priorities**

As a nation, our single-minded concentration on building roads and manufacturing motor vehicles has brought us to a very different place in 2010
than the idyllic images projected in the 1950s. We have long commutes on congested highways, accidents that kill 40,000 people annually, air pollution and climate change with cars and trucks major contributors, skyrocketing fuel prices, dependency on foreign oil, and vanishing farms and forests caused by the proliferation of sprawl—inducing suburbs—all byproducts of over sixty years of car- and highway-centric priorities.

Developing alternative sources of energy and decreasing our reliance upon fossil fuels is slowly becoming a national priority. To this end, hybrid and alternative fuel vehicles are an important part of the solution. However, as environmental historian Alfred Runte observes, “Making a wiser choice for travel is not about making our worst habits greener.” Trains are more fuel-efficient, more energy efficient and emit fewer greenhouse gases per passenger mile than automobiles and trucks. As CSX asserts in TV and print ads, “Our trains can move a ton of freight 436 miles on a single gallon of fuel.” Trains respect the landscape, requiring a smaller footprint and less environmental disruption than highways. Trains contribute to the kinds of land use that concentrate development around public transportation and centralize goods and services around high-density, mixed-use, pedestrian friendly urban centers instead of sprawling suburbs. And train travel is far safer than highway travel.

“Cars and airplanes were not inevitable—they were the nation’s choices,” says Runte. “For once, invite the possibility that we made the wrong choice, or at least that our choices have been incomplete. … The passenger train, as a means of movement and preservation, is still the choice too good to lose.”

**We Need Long-term Goal-Setting**

It is often said among Virginia passenger rail advocates that the state lacks an overarching vision for passenger rail. While it is fine to speak of broad goals such as alleviating congestion and protecting the environment, these do little to guide actual planning and decision-making for how to utilize Virginia’s limited resources. Dick Beadles, Founder of the Virginia Rail Policy Institute, passenger rail advocate, and a member of the Virginia Rail Policy Board, maintains that the public benefits from the state’s rail investments are not governed by an overall strategic vision. Beadles said, “I’m not saying the [freight] projects are necessarily bad. … But the Department of Rail and Public Transportation largely reacts to what rail companies, large and small ask for, and what they ask for is not in sync with the larger concerns of the commonwealth. We ought to figure out what we, the commonwealth, want to achieve and try to hand the money out based on that.”

The Warner Administration launched an effort to define such goals when it convened the Commission on Rail Enhancement for the 21st Century in 2004. Many of the recommendations in the Commission’s report have since been achieved or are in the process of being implemented. The next step should be to convene a task force representing Virginia rail advocates, environmentalists, local governments, colleges and universities, businesses and economic development authorities, tourism and national security agencies to lay out goals for a 21st century passenger rail system in Virginia. The goals should be specific and transferable into metrics and benchmarks. Some hypothetical examples of what such goals might look like would be: (1) “Every college and university in the commonwealth with an enrollment of (x) number of students or more will be connected to Washington, DC by intercity rail by the year 2030;” (2) “Every regional airport with an annual volume of (y) or more flights will have light rail to the regional center by 2040;” (3) “Any region with a population of (z) or greater will be served by at least three daily round trip passenger trains to Washington, DC and the NEC, with schedules that meet the needs of both the business and leisure traveler, by 2030.”

**We Need to Act Now**

While achieving these goals will be constrained by the realities of budgeting and resources, they would provide a guidepost for planning future projects and allocating future resources, and we can measure our progress against them. The freight stakeholders already have their corporate goals, and areas of compatibility between the two sets of goals will be a great place to start. Think of the billions of dollars we spent on the Interstate Highway System, and the billions we continue to spend on roads and highways, then contemplate what we could do if we shifted priorities and spent those billions on creating a 21st Century rail network. The future is ours to define and ours to create, but we must start doing it now.

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for the 21st Century in 2004 and was president of the Virginia Transit Association from 1998-2000. She holds a B.A. in psychology from the University of Colorado and a Ph.D. in psychology from the University of Illinois at Urbana-Champaign.

Endnotes

Note: When available, web links for sources are shown. At the time of publication all of the links worked. However, some links are unstable and may not work with current browsers or they may be modified or withdrawn.

1 Based upon Amtrak and Virginia Railway Express 2009 ridership reports and the assumption that each passenger on a train is one less driver on the road.
2 Link to film footage of the Dinah Shore Chery ad at http://www.youtube.com/watch?v=KQZrZq9bNhE
5 Phillips, pp. 78-79.
7 Phillips, p. 79.
8 Virginia Department of Rail and Public Transportation (VDRPT), Statewide Rail Plan Technical Data Update, (December, 2009) Figure 5-1. http://www.drpt.virginia.gov/studies/files/Chapter%205%20%20VA%20Rail%20System.pdf
10 VDRPT, Report to the Governor, p. 17.
13 VDRPT, Technical Data Update, chapter 4, p. 2.
14 Currently, the US Surface Transportation Board classifies eleven railroads having annual operating revenues of $250 million or more as Class I.
15 VDRPT, Technical Data Update, chapter 7, p. 4.
16 VDRPT, Technical Data Update, chapter 6, p. 16.
18 VDRPT, Technical Data Update, chapter 6, pp. 30-31. Compare this to India, with 251 billion passenger miles and 175 billion ton miles of freight per year, or to Japan with 240 billion passenger miles and only about 10 billion ton miles of freight per year. Ibid.
20 VDRPT, Technical Data Update, chapter 7, p. 4. See also McCommons, pp. 87-88.
21 McCommons, p. 49.
24 McCommons, p.88.
26 The Virginia Rail Policy Institute recently evaluated the effectiveness of the Rail Advisory Board. The report concludes that “The RAB has not been fully engaged with DRPT in identifying, selecting, developing and prioritizing rail projects, and its role to date has been largely that of spectator.” The report includes recommendations for improving the overall effectiveness of the REF program and for enhancing the role of the RAB. VRPI, Effectiveness of the Rail Advisory Board, April 7,2010, p. 12. http://vrpi.org/Effectiveness%20of%20the%20Virginia%20Rail%20Advisory%20Board.pdf
30 McCommons, p. 72.
32 The Pacific Surliner begins in San Diego and terminates in San Luis Obispo which is located midway between San Francisco and Los Angeles. The San Joaquin Valley Railroad serves the Fresno-Bakersfield area. The Capitol Corridor is a 168-mile route that runs daily from the San Francisco Bay Area to Sacramento.
33 VDRPT, Technical Data Update, chapter 7, p. 4.
35 Ibid.
36 VDRPT, Statewide Rail Plan, p. 76.
37 The Virginia Surface Transportation Plan (VTrans2015) is a recent update of Virginia’s statewide long-range multimodal transportation plan. www.vtrans.org.
39 A Tennessee Department of Transportation study of potential intercity passenger rail corridors does not prioritize this route, however, due to its “considerable travel time” and “poor ridership projections.”
42 VDRPT introduced a Budget Amendment in the 2010 General Assembly for a waiver of the match requirement.
Still at issue is the role that Richmond’s restored Main Street Station will play in future service to Norfolk. While the City of Richmond would benefit from more frequent trains serving the city center, railroad experts cite operational barriers that would delay trains, create chokepoints, and be very difficult and costly to overcome. VDRPT recently cancelled funding for improvements to support more frequent service to Main Street Station.

Chip Jones, p. 22.


52 The Virginia-North Carolina Interstate High Speed Rail Compact; State Code Chapter 662, Section S 126; http://leg1.state.va.us/cgi-bin/legp504.exe?101+ful+SJ63ER


55 Chip Jones, p. 22.


57 Chip Jones, p. 22.


59 The Virginia-North Carolina Interstate High Speed Rail Compact; State Code Chapter 662, Section S 126; http://leg1.state.va.us/cgi-bin/legp504.exe?101+ful+SJ63ER

60 Senate Joint Resolution 163. http://leg1.state.va.us/cgi-bin/legp504.exe?101+ful+SJ63ER

61 http://www.vbhr.com/

62 Virginia Department of Transportation, Fiscal Year 2009-2010 Commonwealth Transportation Fund Budget, pp. 4-5. (June 2009) http://www.virginiadot.org/about/resources/062209_CTF_Budget.pdf


67 VDRPT, Technical Data Update, chapter 4, p. 8.

68 “Amtrak On-Time Performance Update to the Virginia Rail Advisory Board,” (April 9, 2009); “Amtrak Ridership and Delay Update to the Virginia Rail Advisory Board,” (January 8, 2009).


70 ibid.


73 Bruce Rushton, “Late Trains Could Force Railroads to Give Up High Speed Rail Grants,” The State Journal Register (June 17, 2010).


76 This statistic was developed and is widely distributed by the American Railroad Association. However, it is ironic that the payloads hauled by rail are frequently coal cars on their way to fuel power plants.

77 Runte, p. xvii.

78 Chip Jones, p. 18-24.