

**Transportation Initiatives Responding to Recommendations of the  
Panel on 21st Century Freight Transportation  
led by Congressman John J. Duncan, Jr.**

**Submitted by Rail Solution<sup>1</sup>  
David Foster, Executive Director**

**1. Introduction.**

Rail Solution has examined in detail the report of the Panel on 21st Century Freight Transportation and has considered various solutions that would address the recommendations of the Panel report. In the subsequent discussion, we offer a number of transportation initiatives, which, if taken, would have a massive impact on the capacity and efficiency of the U.S. freight transportation system. The initiatives would have a significant positive effect on the economy in all regions of the country, would stimulate economic development, and offer lower cost transportation. These initiatives would be accomplished with a majority of the investment from private sources, with government participation for portions that are in areas that have historically been public investment.

**2. Recommendations of the Panel on 21st Century Freight Transportation.**

The following are recommendations of the Panel together with notation of which of these are covered by the initiatives proposed by Rail Solution.

<b>Recommendations of the Panel and Initiatives Recommended by Rail Solution</b>	
<b>Panel Recommendation</b>	<b>Rail Solution Recommended Initiative</b>
To safely and efficiently meet the needs of freight movement in the 21st century, the Freight Panel recommends that Congress should:	
1. Direct the Secretary of Transportation, in coordination with the Secretary of the Army and the Commandant of the U.S. Coast Guard, to establish a comprehensive national freight transportation policy and designate a national, multimodal freight network;	1. The U.S. needs an overall multimodal freight policy and network, including all forms of transportation, as it now exists and then a planned network for needed changes, emphasizing switches of modes for the future for medium and long range freight. (e.g. switch of truck to rail in many corridors) See Recommended Initiative 1 for detailed recommendations and recommended legislation to enable meeting this objective of the Panel.
2. Ensure robust public investment in all modes of transportation on which freight	2. Transportation projects, such as high performance freight rail can be financed

<sup>1</sup> RAIL Solution is a 501(c)(3) non-profit organization that has developed the Steel Interstate System concept. (<http://steelinterstate.org>)

<p>movement relies, and incentivize additional private investment in freight transportation facilities, to maintain and improve the condition and performance of the freight transportation network;</p>	<p>through a set of initiatives utilizing incentives such as loan guarantees, tax abatement, changes in treatment of foreign profits of American corporations, and public-private partnerships, and public funding for some features. If all these measures were implemented, the amount available for investment would be \$145 Billion to \$270 Billion range, which is enough to make a serious dent in the transportation infrastructure requirements for the future while fixing the broken system we have now. With the present levels of investment in rail by private companies, a modern system serving most of America will never be attained. See Recommended Initiative 2 for recommended program and recommended legislation.</p>
<p>3. Promote and expedite the development and delivery of projects and activities that improve and facilitate the efficient movement of goods;</p>	<p>3. The modernization of the American railroad system will be based on the type of projects and activities that improve and facilitate the movement of goods more efficiently than any other overall investment. Rail Solution proposes the modernization of the railroad system using the concept of the Steel Interstate System. See Recommended Initiative 3 for recommended program and recommended legislation.</p>
<p>4. Authorize dedicated, sustainable funding for multimodal freight Projects of National and Regional Significance through a grant process and establish clear benchmarks for project selection. Projects eligible for such funding would have a regional or national impact on the overall performance of the multimodal freight network identified by the Secretary of Transportation;</p>	<p>4. A prototype modernization project covering a complex corridor with various modes of freight transportation is the type of project that meets this recommendation. Rail Solution is suggesting the development of three (3) regional prototype multimodal corridor systems of highways, rail, airports, water, and intermodal optimized for freight transportation with complementary benefits for passenger rail. See Recommended Initiative 4 for recommended program and recommended legislation.</p>
<p>5. Direct the Secretary of Transportation, in coordination with the Secretary of the Treasury and the Secretary of the Army, to identify and recommend sustainable sources of revenue across all modes of transportation that would provide the necessary investment in the Nation's multimodal freight network and align</p>	<p>5. In addition to stimulating private investment in transportation infrastructure, as outlined for our private financing initiatives in Recommended Initiative 2, the Federal Government must look to new sources for revenue to maintain the existing infrastructure and also undertake improvements required</p>

<p>contributions with use of, and expected benefit of increased investment in, such network; and</p>	<p>for the future. Rail Solution recommends that the Department of Transportation review the costs of building and maintaining infrastructure to determine the proper rates that should be paid by various users and undertake other studies directed at increasing revenue without increasing transportation prices. See Recommended Initiative 5.</p>
<p>6. Review, working through the Committee on Transportation and Infrastructure and the Committee on Ways and Means, the Secretary's freight funding and revenue recommendations and develop specific funding and revenue options for freight transportation projects prior to Congress' consideration of the surface transportation reauthorization bill in 2014.</p>	<p>In the reauthorization process of Congress, it is important that adequate funding be provided for planning truly multimodal transportation solutions. Many of the corridors need integrated planning of rail, highway, waterway, and air. Often one or more of these modes are left out. There has been inadequate planning for the full utilization of rail, perhaps because most of the systems are privately owned and operated, yet they carry a high percentage of the freight. It is important that appropriations provide planning funds for multi-state, multimodal regional transportation corridors. See Recommended Initiative 6.</p>

## **Transportation Initiatives Proposed by Rail Solution to Implement the Recommendations of the Panel on 21st Century Freight Transportation**

Following are 6 initiatives that respond to the recommendation of the Panel on 21st Century Freight Transportation. As each initiative is structured to offer a reasonably complete explanation to justify the recommended actions and legislation, there is some redundancy in the background material presented by all of the initiatives as a whole.

### **Recommended Initiative 1**

#### **Development of overall multimodal freight policy and network.**

**Panel Recommendation 1:** Direct the Secretary of Transportation, in coordination with the Secretary of the Army and the Commandant of the U.S. Coast Guard, to establish a comprehensive national freight transportation policy and designate a national, multimodal freight network;

**Discussion of the Panel recommendation:** The recommendation of the panel is excellent in that it recommends comprehensive policy and designation of a multimodal freight network. The present legal framework for development of policy and development of a truly representative freight network fall short of the desired mark, and needs to be fixed with additional legislation. MAP-21 does not address freight needs through a truly comprehensive and adequately funded multi-modal approach. The national freight policy should consider all modes of transportation strategically and support the full range of transportation infrastructure, including freight rail. The present Federal law does not apparently permit that. Yet, freight rail carries more than 40 percent of freight, and its share of intermodal freight is growing. Making freight maps and databases with rail omitted is like making a stool with just two legs.

Also, it is not clear that state plans can be developed with more than cursory inclusion of freight rail. The planning for transportation is done on a state-by-state basis which leads to balkanization of the planning for freight transportation in major corridors. The planning is often poorly coordinated between states. There should be provisions by law for multimodal corridor planning carried out by regional planning organizations that operate as a regional consortia, so that integration of planning for multi-state corridors is almost automatic. The present corridor coalitions are not set up to do this, and they are dominated by highway planning, often omitting rail from serious consideration.

**Recommendations for the Federal Government:** Legislation should be enacted as follows:

- 1) to require that all modes of freight transportation be considered equally in establishing policy, considering future alternatives, and certainly in mapping out baseline information, such as freight networks and transportation data.
- 2) should provide for comprehensive planning of initiatives for freight corridors, based on best utilization of all modes of transportation.
- 3) roles and funding should be provided for regional and rural planning entities to organize a regional planning consortia, so that the regional consortia can undertake such comprehensive planning in regional multi-state corridors.

## Recommended Initiative 2

### **Private financing of high performance rail and other transportation infrastructure through creative financial initiatives**

**Panel Recommendation:** Ensure robust public investment in all modes of transportation on which freight movement relies, and incentivize additional private investment in freight transportation facilities, to maintain and improve the condition and performance of the freight transportation network;

**Discussion of the Panel Recommendation:** Rail Solution has examined this recommendation of the Panel from the standpoint of what measures could be undertaken to modernize the American freight rail system on a schedule that would enable rail to provide much of the solution for future freight transportation capacity.

Railroads are unique in that they are mostly privately owned and can attract capital based on profitability. The capital they can attract, of course, depends on a host of factors, many of which can be set by the government ( local, state, and federal) to facilitate investment.

Because Rail Solution accomplishes an elegant transportation revolution by substituting private investment for public expenditure, modernization of the railroad system will cost just a fraction of public capital and operational costs of expanding the current highway capacity and maintaining it just to accommodate projected U.S. freight movement growth. High performance rail can be financed through a set of initiatives utilizing incentives such as loan guarantees, tax abatement, tax reductions for investment of un-repatriated foreign profits of American corporations, and public-private partnerships, and public funding for some features.

The system (approximately 40,000 route miles of rail system) can be rebuilt at a cost in the \$500 to \$750 Billion range and financed over a period of 25 years at a rate of \$20 to 30 Billion per year, making it the modern-day equivalent of highway interstate, but transforming the rail system with mostly private funds. With the present levels of investment in rail by private companies in actual modernization and capacity expansion, a modern system serving most of America will never be attained. Rail companies are investing \$10 to 15 Billion per year, but much of that is in replacement of capital equipments and systems. The actual expenditure on modernization is probably less than \$10 Billion per year. Incentives are required because the capital requirements are very high, and the present rate of investment in rail, although high, is insufficient to transform the system.

Mostly, the highways are financed from user tax revenues, but the general revenue stream is being drawn on more and more. Private investment is more difficult because of the reluctance of Americans to accept tolls, especially for existing highways. More attention needs to be given to requiring users to pay according to usage. It has been documented that trucks may not be paying their share of taxes for roads that they use, so they are getting a subsidy.

Other transportation modes have built-in arrangements for government subsidy of infrastructure, such as port, airports, and waterways. Many of these, however, could be financed though private-public partnerships.

## **Potential Additional Sources of Revenue**

### **Treatment of profits held in overseas accounts**

Many estimates put the profits held by U.S. corporations in overseas accounts at levels of \$2 Trillion and growing by perhaps \$250 Billion per year. So, about \$50 Billion per year is being avoided in taxes and \$250 Billion per year are available for increased investment. The \$2 Trillion is already invested somewhere. If the practice of allowing corporations to defer taxes on profits were ended, then there would be \$50 Billion a year in tax revenue that could be invested in transportation infrastructure. If the practice is not ended, then another remedy is to require that, on an annual basis, 50% of the profits held in overseas accounts be invested in U.S. transportation infrastructure projects. That would yield \$125 Billion per year invested in transportation infrastructure. This range of capital (\$50 B to \$125 B) approaches the level of the U.S. transportation budget. Of course, neither of these measures deals with the present \$2 Trillion in overseas accounts. Companies should be required to, over some reasonable period, invest these profits in U.S. transportation infrastructure or else pay the full tax. Some of these ideas are discussed in this reference by independent researcher Alan Drake.<sup>2</sup>

### **Tariff on imports for transportation infrastructure**

The U.S. could impose a tariff on imports if the tariff is used in the economy to decrease the imbalance of international trade for the U.S. The U.S. is a net importer, so it would qualify under World Trade Organization rules. Increasing the efficiency of the transportation system would make the U.S. more efficient and productive, making American goods more competitive in the world market. Also, the implementation of electrification will directly reduce oil import volume, directly improving the U.S. balance of payments. A number of products could be exempted, such as food products, pharmaceuticals, and medical devices. The imbalance in 2012 was over \$700 billion.<sup>3</sup> The imports for 2012 less an allowance for the exempted products (\$700 million) would be approximately \$2 trillion. If an import tax of one percent were applied to this amount, the tax raised would be \$20 billion.

This method of financing is also discussed in more detail by Alan Drake.<sup>4</sup> In the case of implementing the tariff on imports, the U.S. Government on behalf of the citizens would take an equity interest in private transportation companies, such as rail. Legislation would be required to set up an authority with the power to invest directly in rail companies, or indirectly through underwriting leases for equipment and facilities. This public interest could be sold off to private shareholders over a period of years.

---

<sup>2</sup> Alan Drake, <http://oilfreetransport.blogspot.com/2012/06/building-oil-free-cross-country.html>

<sup>3</sup> All foreign trade statistics from U.S. Census Bureau, <http://www.census.gov/foreign-trade/index.html>

<sup>4</sup> Alan Drake, <http://oilfreetransport.blogspot.com/2012/06/that-fellow-behind-tree.html?view=magazine>

### **Tax credits for investment in speed and capacity increases in transportation infrastructure.**

Another way to incentivize the building of a modern freight rail system and other transportation infrastructure is to enact tax credits to railroad companies and other companies for investing in expansion of transportation infrastructure, such as modernizing rail corridor infrastructure. The railroad companies are already investing back into their systems a very high percentage of their earnings. But, tax credits would increase the level of investment, and companies not even involved in the rail industry would be attracted to invest in transportation corridors that have excellent future potential. Improved corridor facilities would be leased back to the railroad companies or other operating companies. If the tax credit provisions were made available for all investors, together with provisions requiring capacity improvements, the capital that could be obtained would be substantial- certainly in the range of \$50 to \$100 Billion per year.

### **Fair payment for use of transportation infrastructure.**

As previous mentioned, there should be studies of the present structure and costs to determine equitable means of every user paying fair share for use of the highways and other facilities. That applies to all modes, especially for trucks, busses, and cars.

### **Recommendations for the Federal Government**

Enact legislation that generates revenue from one or more of these sources to raise capital from private sources or taxes, all for transportation infrastructure:

- 1) The profits held in overseas accounts by U.S Corporations, which could generate investment capital in the range of \$50 Billion to \$125 Billion per year.
- 2) Tariff on selected imports, which could generate tax revenue on the order of \$20 Billion per year.
- 3) Tax credits for investment in transportation infrastructure, which could generate investment capital in the range of \$50 to \$100 Billion per year.
- 4) New allocation of costs to revenue producing taxes or fees. Perhaps \$25 Billion per year is being missed because of higher efficiency of vehicles.

If all these measures were implemented, the amount available for investment would be \$145 Billion to \$270 Billion range, which is enough to make a serious dent in the transportation infrastructure requirements for the future while fixing the broken system we have now.

### **Recommended Initiative 3**

#### **Modernization of the railroad system using the concept of the Steel Interstate System**

**Panel Recommendation:** Promote and expedite the development and delivery of projects and activities that improve and facilitate the efficient movement of goods;

**Discussion of the Panel Recommendation:** To improve and facilitate the efficient movement of goods, the nation requires a modern, fast, high capacity rail system. It is possible to create such a system and obtain greatly increased capacity at lower cost if rail is used extensively instead of relying almost totally on expansion of the highway system. The approach of Rail Solution to the Steel Interstate is to develop a fast freight rail system incrementally that can accommodate all classes of freight traffic as well as passengers on highly efficient shared infrastructure. Its 40,000 route miles would serve a large percentage of the cities and towns of America, and it would be achieved with mostly private financing.

Present railroad executives may not favor the option we are proposing for modernization of the American freight rail system because it is aggressive and does not fit their financial model, which typically is based on selective improvements for the best return over a short time horizon. So the difference in planning is the horizon. In the case of what Rail Solution proposes, the horizon is 25 years, compared to the present industry horizon which is closer to 10 years.

The details of the design and financing for the U.S. Steel Interstate System are given in Appendix A. The concept for the Steel Interstate and its financing is summarized next.

#### **North American Steel Interstate System and its financing**

By modernizing 40,000 miles of existing rail lines into a high-capacity rail network, the [Steel Interstate System \(SIS\)](#) will reliably move containers, trailers, whole trucks and time-sensitive freight at highway competitive speeds. The SIS will utilize both long distance container freight and short distance solutions that employ truck drive-on/drive-off (open intermodal) technology. As depicted in Figure 1, the system will be multi-tracked, grade-separated from roadways, employ automatic train control for safety, and configured for speeds in the range of 79-110 mph, with potentially greater speeds for some classes of traffic. The system will be electrified incrementally as traffic density grows on the busiest corridors, bringing even more efficiency.

As a dividend, the Steel Interstate System offers potential for fast [passenger service](#)—serving up to 90% of the U.S. population. Implementing passenger service in corridors where public demand is sufficient will not require placing capacity or speed constraints on any freight service. Passenger rail service is more feasible with SIS because the cost of the infrastructure is shared with freight rail.



**Figure 1. Features of the Steel Interstate System**

### **Financing the Steel Interstate System:**

The Steel Interstate costs are just a fraction of public capital and operational costs of expanding the current highway capacity and maintaining it just to accommodate projected U.S. freight movement growth. That is because of the fact that the SIS accomplishes an elegant transportation revolution by substituting **private investment for public expenditure**. High performance rail can be financed through a set of initiatives utilizing incentives such as loan guarantees, tax abatement, tax reductions for investment of un-repatriated foreign profits of American corporations, and public-private partnerships, and public funding for some features. The system (approximately 40,000 route miles of rail system) can be rebuilt at a cost in the \$500 to 750 Billion range. That can be built and financed over a period of 25 years at a rate of \$20 to 30 Billion per year, making it the modern-day equivalent of highway interstate, but transforming the rail system with mostly private funds. With the present levels of investment in rail by private companies, a modern system serving most of America will never be attained.

### **Steel Interstate System benefits:**

- **Economic dividends** accruing to the U.S. are broad and diverse; these include:
  - Lower **domestic shipping costs** -> ripple across the economy, spurring economic productivity
  - **Private investment** in rail infrastructure substitutes for tax-payer-funded highway expansion and repair, thus reducing overall cost for the taxpayer.
  - Strengthened **rural and "fly over" city economies** result from access to high performance transportation, because the Steel Interstate would serve a large percentage of U.S. cities and towns.
  - Reduced **oil imports** -> enrich the national balance of payments account
  - **Oil-free mobility** minimizes exposure to world oil prices and risk of supply disruptions -> electrified rail is a better medium-term choice than converting freight to run on **natural gas**
- **National security** is well-served. The SIS enhances American competitiveness and economic strength in the global context and reduces absolute dependence upon oil for moving goods and the American people.
- **Safety and public health** benefits of the SIS:
  - Compelling freight **traffic safety** improvements -> diminishes **congestion**
  - Clearing the **air** -> promotes **public health**

- **Environmental advantages** of implementing the SIS:
  - Preserving our [landscape](#) from avoidable pavement and sprawl
  - Restoring [air and water quality](#)
  - Lowering the nation's [carbon footprint](#)
  - Incentivizing [renewable energy development](#)

### **Recommendations for the Federal Government**

Legislation should be enacted to support the development of the Steel Interstate using a concept of private financing and government financing of some aspects of the Steel Interstate that expand access and convenience. The following legislative initiatives are needed:

- 1) provide for the development of a proposed 40,000 route mile Steel Interstate map, taking into account the freight traffic that exists and freight traffic that should be diverted from highway to rail based on analysis of the competitiveness of a high speed, highly dependable rail system.
- 2) provide for investment by the government in railroads with ownership held by American citizens, with provisions from purchase of the stock by railroads in the future.
- 3) provide for investment in railroad capital improvements through leasing agreements with railroads, with provisions for purchase of those improvements in future by the railroad companies.
- 4) provide up-front financing of feasibility studies for combined multimodal rail-highway freight corridor initiatives aimed at seeking the best design for future transportation.
- 5) provide for conduct of feasibility and engineering studies of multistate, multimodal freight corridors by consortia of regional and rural planning agencies.
- 6) provide for direct funding of above studies to consortia of regional and rural planning agencies.
- 7) provide funding for costs of organizing regional consortia and for development of proposals for multimodal freight corridor improvements.
- 8) provide that rail any investments in transportation infrastructure can be allocated to railroad modernization.
- 9) provide that taxpayers will receive stock or other financial interest for tax funds received from taxes and invested in railroads.
- 10) provide for government funding of capital improvements in rail in exchange for access to rail lines for passenger traffic.
- 11) For feasibility studies in multimodal rail-highway freight corridors, provide for funding of study of inclusions of passenger rail and highway bus lines for improved service to all of America.

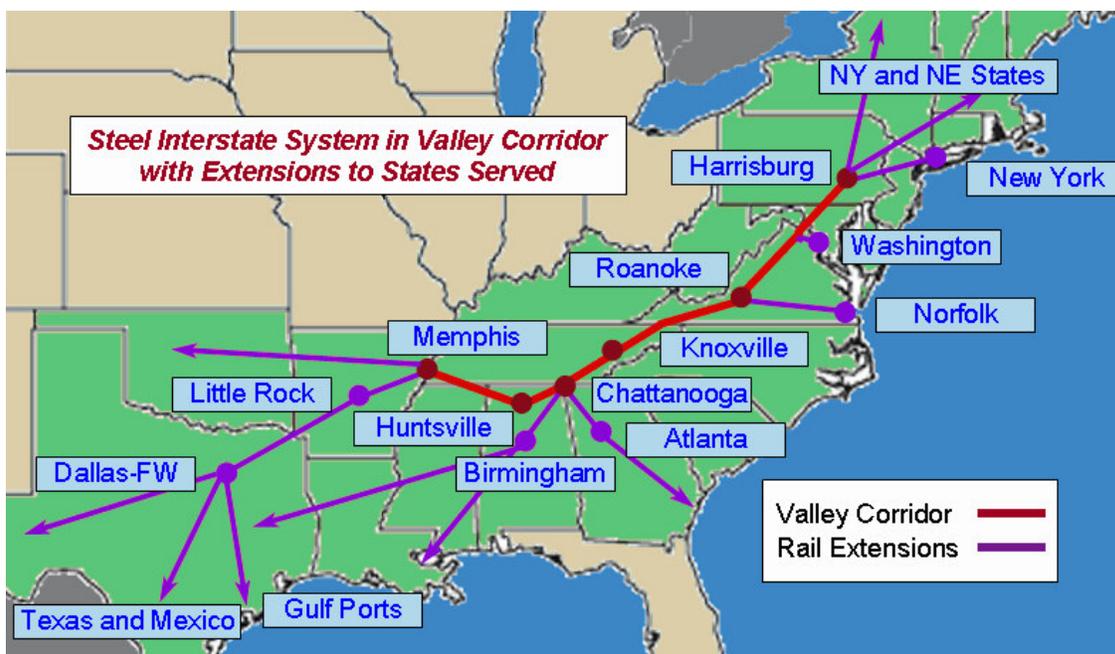
## Recommended Initiative 4

### Prototype System of highways, rail, airports, water, and intermodal optimized for freight transportation

**Panel Recommendation:** Authorize dedicated, sustainable funding for multimodal freight Projects of National and Regional Significance through a grant process and establish clear benchmarks for project selection. Projects eligible for such funding would have a regional or national impact on the overall performance of the multimodal freight network identified by the Secretary of Transportation;

**Discussion of the Panel Recommendation:** To advance the concept of multimodal freight Projects of National and Regional Significance (PNRS), Rail Solution proposes that the Steel Interstate be demonstrated by a prototype system in one of the busiest freight corridors in the country. Details of the Rail Solution proposal are given in Appendix B.

The [regional SIS prototype](#) would be built to demonstrate the principles and technology of the Steel Interstate. Although the prototype can be built in any major, 1000+ mile, freight corridor, Rail Solution proposes that a prototype system be built on a rail system paralleling the I-81/I-40 Corridor between Harrisburg, PA, and Memphis, TN, as shown in Figure 2.



**Figure 2. Route of the Valley Corridor Prototype SIS**

The rail corridor, which we call the Valley Corridor, would attract truck freight from one of the highest density truck corridors in America. The Valley Corridor can be expanded on both ends and in other locations to transform the entire region to a truly multimodal corridor. The Valley Corridor parallels I-40, I-81, and a short section of I-75 in Tennessee, and is strategically located to collect from and discharge to these highway routes: I-30, I-24, I-55, I-56, I-75, I-65, I-26, I-77, I-

64, I-66, I-76, and I-80. The Valley corridor would serve major freight airports, including Memphis, Huntsville, and Dulles (via corridor extension). It would service major ports by extensions: at New York and New Jersey, Norfolk, Mobile, New Orleans, Houston, and Galveston.

RAIL Solution has been discussing with various governmental entities and the Norfolk Southern Corporation a proposal to undertake a feasibility study and preliminary engineering analysis of a project for a prototype demonstration of the Steel Interstate concepts. This project would provide both freight and passenger service on the same system at speeds in the 60 to 110 mph range, the exact range depending on the type of traffic, whether general freight, intermodal freight, or passenger traffic. At this point, Norfolk Southern has not endorsed this project. The project, to be known as the Valley Corridor Route Steel Interstate Prototype, would upgrade the western half of the Norfolk Southern Corporation's Crescent Corridor to meet the required standards to operate rail service according to the requirements of the National Rail Plan<sup>5</sup> and the outline of specifications of the Steel Interstate System that has been proposed by RAIL Solution.

The Steel Interstate System addresses most of the elements of the vision of the 2010 National Rail Plan. The specific ways in which it addresses the Rail Plan vision for service to cities, towns, and regions follows:

- **Regional Corridors:** The SIS network, as conceived by RAIL Solution, connects all sizes of communities across America. The SIS serves both freight and passenger traffic on the same systems at speeds from 60 to 110 mph. Thus, both freight and passenger traffic will be served on a national network connecting all cities because of the fact that rail freight must connect most American towns and cities. The system will interconnect with the high speed passenger rail systems. However, these will be a separate system from the SIS.
- **Emerging/Feeder Routes:** The SIS network will utilize much of the existing rail system to connect smaller communities and more distant areas, thus providing access of these areas and communities to the larger network.
- **Community Connections:** The SIS will provide a lower cost option for higher speed passenger rail, for quicker and safer travel from outlying areas to major hubs for air traffic, and compete head-to-head with airlines and automobiles for intermediate distance passengers, traveling distances between cities up to 500 miles.

The amount of diversion of truck traffic that may be feasible at 50% rate for long-distance trucks has been estimated at over 10,000 per day on average for Tennessee and Virginia on the I-40- I-81 interstate routes. That is equivalent to more than 30 trains per day. (At present Norfolk Southern operates one through intermodal train each way each day on this route.) Additional diversion of freight can be anticipated if open modal, quick-loading technology were used.

---

<sup>5</sup> National Rail Plan, September 2010, U.S. Department of Transportation, Federal Railroad Administration. This is the shortest route of the two parallel rail lines of the Crescent Corridor that one can take between the Mid-South (Memphis and Birmingham and Harrisburg, PA).

## **Financing the Valley Corridor Prototype SIS**

RAIL Solution has prepared a budgetary estimate, or a estimate of the order of magnitude of the cost of the Valley Steel Interstate Prototype System - approximately 1000 miles of multi-tracked, grade-separated, fast speed rail (top speed 110 mph). The estimate is based on factors and costs compiled from various literature sources. The total cost is \$13.375 billion.

Private corporations (Norfolk Southern) would pay for 88 percent of the cost, and 12 percent of the costs would be borne by governments, primarily the Federal Government. The private capital would be raised under the provisions of the finance incentives that were outlined in Section 3.2. There must be incentives offered. Another means of financing are government guaranteed loans. Details of the financing alternatives are given in Appendix B.

## **Recommendations for the Federal Government**

Legislation probably needs to be enacted to support the development of prototype regional demonstrations of the Steel Interstate, which would use the concept of private financing and government financing of some aspects of the prototype that expand access and convenience. Because of the higher risks of undemonstrated high performance freight rail systems, the government support of the systems initially will need to be at higher levels, particularly with funding feasibility and preliminary engineering studies. Legislation and/or policies should be implemented for the following provisions to support the development of the prototype systems:

- 1) The provision of financing should follow the recommendations presented previously in Section 3.3 for financing the North American Steel Interstate System. The primary difference is that initially more government funding is required for feasibility studies and preliminary engineering.
- 2) Legislation should be enacted to fund feasibility and preliminary engineering studies of the three (3) regional prototype multimodal freight corridor systems, containing both highways and prototype Steel Interstate systems, all to be done in separate regions of the country. The level of funding for the study of each regional corridor should not exceed \$10 Million per study, with a split 80 percent Federal funds, 20% private funds.
- 3) Legislation should be enacted to set forth a formula for funding the construction of the 3 regional prototype systems, with provisions to go ahead with construction of such regional prototype systems to be based on favorable outcomes of design and financial analysis that meet pre-established baseline performance requirements.
- 4) Legislation should provide for conduct of feasibility and engineering studies of regional prototype multimodal freight corridor systems, containing both highways and prototype Steel Interstate systems by consortia of regional and rural planning agencies.
- 5) Legislation would provide for direct funding of above studies to multi-state consortia of regional and rural planning agencies.
- 6) Legislation would provide funding for costs of organizing regional consortia and for development of proposals for regional multimodal freight corridor containing highways and a Steel Interstate prototype system.

- 7) Legislation should provide that the planning for the regional prototype multimodal freight corridors systems, must incorporate system integration with all freight transportation modes in the corridor, with optimized use of each mode in the integrated system.
- 8) Under provisions of this legislation, regional multimodal freight corridor systems not incorporating modernization of the incorporated rail system to Steel Interstate standards along at least 50 percent of the corridor would not qualify for regional prototype funding.
- 9) The legislation would provide for the construction of new rail lines where that is a reasonable and cost effective alternative for assuring a multimodal approach to the regional prototype multimodal freight corridor.

## **Recommended Initiative 5.**

### **Increasing government revenues for transportation infrastructure construction, operation, and maintenance**

**Panel Recommendation:** Direct the Secretary of Transportation, in coordination with the Secretary of the Treasury and the Secretary of the Army, to identify and recommend sustainable sources of revenue across all modes of transportation that would provide the necessary investment in the Nation's multimodal freight network and align contributions with use of, and expected benefit of increased investment in, such network;

**Discussion of the Panel Recommendation:** It is important that adequate funding be provided for planning truly multimodal transportation solutions. Many of the corridors need integrated planning of rail, highway, waterway, and air. Often one or more of these modes are left out. There has been inadequate planning for the full utilization of rail, perhaps because most of the systems are privately owned and operated, yet they carry a high percentage of the freight.

In addition to stimulating private investment in transportation infrastructure, as outlined for our private financing initiatives in Section 3.2 , the Federal Government must look to new sources for revenue to sustain the future freight transportation, and it should examine anew the fees and taxes charged for use of transportation infrastructure.

#### **Recommendations for the Federal Government**

Rail Solution recommendations are in two areas: 1) planning and analysis and 2) rethinking the revenue basis.

#### **Planning and Analysis**

Following are recommendations in planning and analysis:

- 1) Legislation should be implemented to require integration of all modes of transportation in any given corridor and should consider multiple uses. Often, in the present system of funding and authorization, complete systems are left out of the planning.
- 2) The Department of Transportation should consider separating some of the planning functions from individual mode sub-offices and give the functions to an Office of Transportation Integration.

#### **Revenue Analysis**

Following are recommendations regarding the review and implementation of changes in the revenue basis for transportation funding. Rail Solution recommends that the Department of Transportation review and analyze these areas as possible revenue producing streams, or possible areas for reduction of costs of transportation by the Federal Government, with executive action or legislation enacted by Congress as necessary to implement desired changes:

- 1) U.S. Postal service switch back to trains for most classes of mail when Steel Interstate fast freight is available.
- 2) Government operating departments, at all levels of government, could pay for use of roads.
- 3) Fees for use of airports, locks on waterways, ports may not be adequate to pay the costs.
- 4) In particular, the present taxes paid by highway users at all levels of government should be analyzed and the system changed to tax revenue formulas to reflect current costs and usage, including the use of VMT (vehicle miles traveled) and weight of vehicle as a basis for the formula.
- 5) The tax revenue formula should be adequate so that general revenue sources are not required to fund the transportation infrastructure.

## **Recommended Initiative 6.**

### **Provide for new multimodal initiatives in the transportation reauthorization bill by Congress in 2014**

**Panel Recommendation:** Review, working through the Committee on Transportation and Infrastructure and the Committee on Ways and Means, the Secretary's freight funding and revenue recommendations and develop specific funding and revenue options for freight transportation projects prior to Congress' consideration of the surface transportation reauthorization bill in 2014.

**Discussion of the Panel Recommendation:** In the reauthorization process of Congress, it is important that adequate funding be provided for planning and analysis of truly multimodal transportation solutions. Many of the corridors that have high density freight need integrated planning of rail, highway, waterway, and air. Often one or more of these modes are left out. There has been inadequate planning for the full utilization of rail, perhaps because most of the systems are privately owned and operated, yet they carry a high percentage of the freight.

Modernization of freight rail would reduce the amount of pavement that has to be funded and maintained. Therefore, it is important that appropriations provide planning funds at an early date (not later than the beginning of fiscal year 2015) for the Steel Interstate system and for multi-state, multimodal regional transportation corridors. These modern corridors cannot be achieved unless they are planned with integration of the various modes to optimize the solutions for future freight movement.

### **Recommendations for the Federal Government for the reauthorization of surface transportation in the next fiscal year (Commencing FY 2015)**

Rail Solution recommends that the Federal Government:

- 1) Take the first steps toward incorporation of Steel Interstate planning into the national transportation planning.
- 2) Lay the foundation for regional prototype Steel Interstate systems by authorizing and funding feasibility studies and preliminary engineering analysis for three (3) regional multi-state, multimodal freight corridor incorporating all modes of freight transportation and provisions for passenger rail options with such studies.
- 3) That it incorporate into law the legislation recommended by Rail Solution in Initiatives 1 through 5.

## **Acknowledgement**

This work is the result of efforts of RAIL Solution, a not-for-profit, 501(c)(3) organization, that studies and advocates modernization of the North American Rail systems, primarily by implementing the concepts of the Steel Interstate System. Individuals contributing to this work are David Foster, Executive Director (Salem, Virginia); Michael Testerman, Vice Chairman (Richmond, VA), and directors of RAIL Solution, Foster Robinson (West Linn, Oregon), Rucker Keister (Lynchburg, VA), A. L. (Pete) Lotts (Knoxville, TN), Ken Marsh (Kingsport, TN), Bob Peckman (Roanoke, VA), Jeff Price (Wycombe, PA), Rees Shearer, Emory, Virginia), Steve Sondheim (Memphis, TN), and Barbara Walsh (Lexington, VA).