



Positions for the Mississippi Valley Freight Coalition on Federal Reauthorization

MVFC 09
February 2010

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Supported by:



The Mississippi Valley Freight Coalition (MVFC) is a regional organization that cooperates in the planning, operation, preservation, and improvement of transportation infrastructure in the ten-state Mississippi Valley region. Managed by CFIRE.

Technical Report Documentation

1. Report No. MVFC 09	2. Government Accession No.	3. Recipient's Catalog No. CFDA 20.701	
4. Title and Subtitle Positions for the Mississippi Valley Freight Coalition on Federal Reauthorization		5. Report Date February 2010	
		6. Performing Organization Code	
7. Author/s Ernie Wittwer, University of Wisconsin-Madison		8. Performing Organization Report No. MVFC 09	
9. Performing Organization Name and Address National Center for Freight and Infrastructure Research and Education (CFIRE) University of Wisconsin-Madison 1415 Engineering Drive, 2205 EH Madison, WI 53706		10. Work Unit No. (TRAIS)	
		11. Contract or Grant No. TRI 3439783	
12. Sponsoring Organization Name and Address Wisconsin Department of Transportation 4802 Sheboygan Ave Madison, WI 53707		13. Type of Report and Period Covered Final Report [9/1/08 – 3/31/10]	
		14. Sponsoring Agency Code	
15. Supplementary Notes Project completed for the MVFC with support from CFIRE and the Wisconsin Department of Transportation.			
16. Abstract Federal transportation authorizing bills have a huge impact on the direction of the nation's transportation programs. Not only do they provide the funding to carry out national programs, but they also contain the policy frameworks that will guide the use of state and local funds over the period of the bill. The existing federal authorization expired on October 1, 2009. The nation has operated under a series of continuing resolutions since that time. In anticipation of the end of the authorization and the debate on a new authority, the states of the Mississippi Valley Freight Coalition (MVFC) identified defining regional positions on reauthorization as one of its priority projects. This effort built upon an earlier effort by the MVFC to agree on broad concepts and to prepare testimony. That testimony was presented to the National Surface Transportation Revenue and Policy Commission by Teresa Adams (UW-Madison) and Kirk Steudle (Michigan DOT).			
17. Key Words Freight, reauthorization, legislation, rail, maritime, highways, Mississippi valley, coalition	18. Distribution Statement No restrictions. This report is available through the Transportation Research Information Services of the National Transportation Library.		
19. Security Classification (of this report) Unclassified	20. Security Classification (of this page) Unclassified	21. No. of Pages 34	22. Price -0-

Form DOT F 1700.7 (8-72)

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Executive Summary

Federal transportation authorization bills have a huge impact on the direction of the nation's transportation programs because they both provide the funding to carry out national programs and also contain the policies that guide the allocation of funds at the state, regional, and national levels. Since the existing federal transportation authorization expired on October 1, 2009, the nation has operated under a series of continuing resolutions.

In anticipation of the end of the authorization and the debate on a new authority, the ten states of the Mississippi Valley Freight Coalition (MVFC) worked to define regional positions on reauthorization. These positions and the desirability for regional cooperation are predicated on the similarities of the states and the relative differences between the Mississippi Valley region and other major freight-moving regions of the country. While this region contains only 22 percent of the nation's population, it accounts for:

- 32 percent of manufacturing jobs
- 31 percent of manufacturing gross domestic product (GDP)
- 84 percent of automotive production
- 38 percent of machinery production
- More than 70 percent of soybean and grain production
- Nearly 50 percent of livestock production

Each of these major elements of the regional economy uses the freight transportation system to move raw materials, the intermediate products of production, and finished products.

The transportation system of the Mississippi Valley region is unique.

- All of the nation's class I railroads converge in Chicago, the busiest rail hub in the nation.
- The region is served by a vast, underused, and under-maintained maritime system comprised of the Great Lakes and the Mississippi River system.
- The region is the crossroads of the country, with significant amounts of pass-through traffic that adds nothing directly to its economy.

The Technical Committee of the Mississippi Valley Freight Coalition developed the following positions by conducting a series of meetings, conference calls, and draft position papers.

Programs

The MVFC makes the following program recommendations:

- Support the AASHTO-recommended programs that apportion \$18 billion over six years from the highway account to the states for freight programs; and \$42 billion over six years from new sources, half of which should be apportioned to the states and half assigned to projects of national significance.
- Ensure that apportionment criteria reflect the interests of the region and are based on the region's share of manufacturing GDP, railroad mileage, taxed diesel fuel, share of rail activity, and other economic measures.
- Ensure that project selection criteria also reflect the interests of the region and consider the economic importance of the project in terms of total employment or

percentage of GDP. Preference should also be given to manufacturing or agricultural production industries and the facilities that serve them.

Rail Transportation

Efficient freight rail transportation is important for the region. Currently rail capacity is challenged. The MVFC supports the development of a national rail policy and investment program that includes the following aspects:

- Expanded rail services in the form of expanded intermodal and other shorter-haul services.
- Public incentives to support expanded capacity and services, in the form of direct capital funding and tax credits.
- Publicly funded projects included in state rail plans to ensure that the projects are in the public interest and to encourage the rail companies to participate in transportation planning.
- Expanded funding for rail-crossing improvements with economic efficiency criteria included in the project selection process.

Maritime Transportation

A truly intermodal transportation system requires maritime transportation. The MVFC recommends support for the maritime mode with the following provisions:

- Expanded investment in dredging to keep navigation channels near authorized depths to promote efficient maritime transport.
- Additional investment in locks and dams on both the rivers and lakes to bring them to current operational standards and to provide additional capacity.
- Removal of existing legislative obstacles (harbor maintenance tax, the Jones Act, etc.) to the expanded use of maritime transportation.
- Additional investment in maritime research to improve efficiency and environmental performance.
- Additional tax provisions to encourage investment in new or expanded maritime resources.
- Support for demonstrations of new maritime services such as containers on ship or barge, roll-on/roll-off operations, ferry operations, etc.

Institutional Issues

The states of the MVFC should work with AASHTO, USDOT, and Congress to develop institutional arrangements that will allow for the improved planning, construction, and maintenance of the freight transportation system. These institutional arrangements should include:

- A redefined role for the USDOT that will allow it to better coordinate the activities of the states and private companies in planning, constructing, and operating an intermodal freight transportation system.
- An expanded understanding and use of regional groupings of states—such as the MVFC and others—to address issues of concern to those states.
- A refined methodology for states to voluntarily join together to cooperate in interstate arrangements.

- Improved legislation and technical standards to enable states to elect tolling as a revenue measure and to support uniform collections technology.
- Guidance at the federal level to help state agencies protect the public interest in public/private partnerships (P3s).
- Requirements for the USDOT and state DOTs to plan and develop freight transportation projects in a multimodal manner and to include intermodal connectivity.

Performance Measures

The MVFC states should:

- Embrace performance measurement and the use of measures for effective management as a necessary and reasonable step toward improving the effectiveness of transportation programs and the accountability of transportation agencies.
- Work toward appropriate use of measures as tools for understanding, managing, and improving performance.
- Insist that measures be developed that reasonably reflect the needs and situations of specific states and regions as well as the nation.
- Commit to the effort required to define, refine, and report meaningful measures.

Truck Size and Weight

The MVFC should support the 97,000-pound, six-axle truck configuration recommended by the American Trucking Association, if:

- The units are powered sufficiently so that they can accelerate safely in traffic.
- The units have sufficient braking capability to stop safely in emergency situations.
- The industry is willing to pay additional fees to compensate for the costs incurred by the public sector.

The Oberstar Bill

At the time of writing, the next surface transportation authorization bill (known as the Oberstar Bill) is still in draft form and contains undefined aspects, especially where funding is concerned. As such, it is difficult to compare the draft legislation to the MVFC reauthorization recommendations. With that caveat, here is how the Oberstar Bill aligns with MVFC recommendations.

Programs

Three programs important to the MVFC are included in the Oberstar Bill. No funding amounts are listed at the time of writing.

Freight Program

The Oberstar Bill includes provisions for the creation of a national freight program. Projects in this program must be consistent with state freight plans and have state freight advisory committees. Each project must include performance measures, targets, and reporting. Corridor coalitions may be designated as projects in the national freight program; such coalitions must include states, MPOs, major transportation modes, and freight stakeholders. Coalitions may receive grants for planning.

Funding for projects in this program would be apportioned to the states. The basis for the apportionment is not yet specified.

Critical Asset Investment Program

The Critical Asset Investment (CAI) program focuses on the rehabilitation of the National Highway System (NHS); general capacity projects are not eligible. The CAI plan would include a six-year investment strategy, which must be approved by the Secretary of the USDOT. This program requires specific measures and targets: percentage of deficient NHS bridge deck area and percentage of highways rated at or below fair. The cost of developing management systems is also eligible.

Funding for projects in this program would be apportioned to the states. The basis for the apportionment is not yet specified.

Projects of National Significance Program

The Projects of National Significance program includes projects with a range of evaluation criteria, ranging from economic impact to location to NAFTA traffic impacts. The Transportation Research Board will evaluate the selection process.

In order to be eligible for this program, a project must cost more than \$500 million or more than 75 percent of the amount apportioned to the relevant state in the previous fiscal year. Rail and port projects are both eligible.

Rail Transportation

The Oberstar Bill includes several provisions for freight rail projects, including a Class II and Class III grant program (\$50 million per year). Rail projects showing a public benefit are eligible for designation as projects of national significance. The bill also would require the Secretary of the USDOT to report annually on the condition and performance of railroads.

Maritime Transportation

The Oberstar Bill suggests that short-sea shipping—defined to include the Great Lakes and inland waterways—should be considered in freight plans.

Institutional Issues

The Oberstar Bill includes a number of institutional requirements and mandates:

- New offices of intermodalism, expedited project delivery, livability, and public benefit
- Requirements for a national transportation strategic plan
- Parameters for private financing of public facilities
- Mandates for uniform toll collection devices
- Recognition of corridor coalitions for planning

Performance Measures

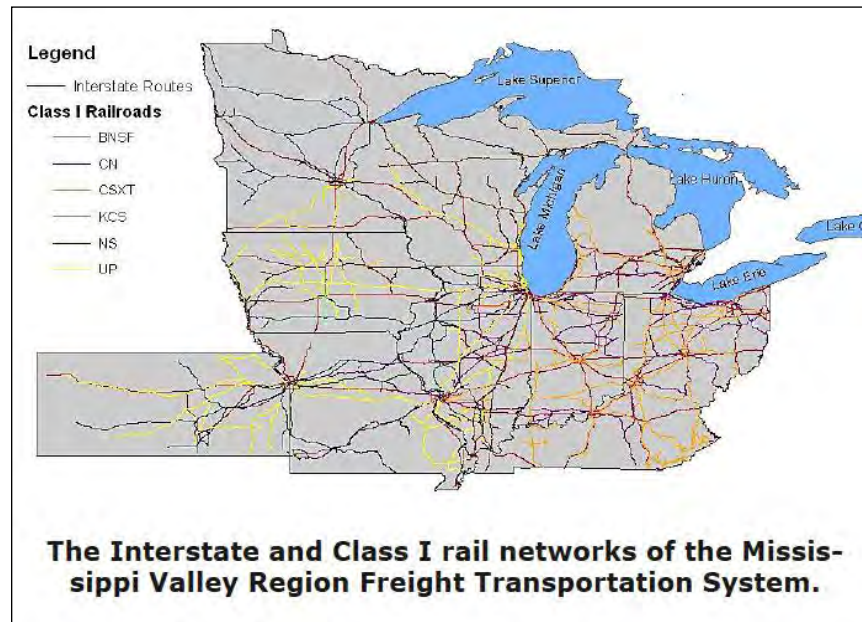
The Oberstar Bill includes requirements for performance measures, targets, and reporting for all programs.

Truck Size and Weight

There are no provisions for changes to truck size and weight regulations in the Oberstar Bill.

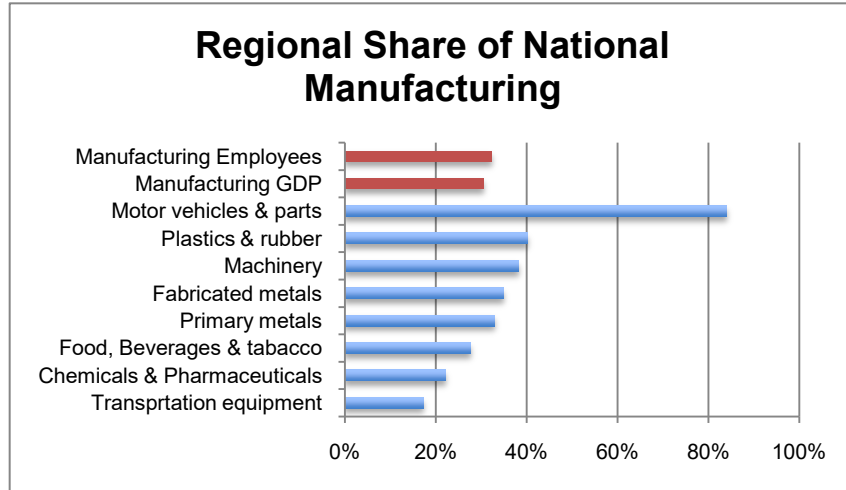
MVFC Authorization Recommendations

The states of the MVFC are favored with an extensive and diverse transportation system. This system has served the region's economy well for many years, but it is now challenged. Locks and dams on the Mississippi River system are antiquated; highways are aging, in need of repair, and operating at near capacity; rail beds are aging and railroads are also largely operating near capacity; and, Great Lakes shipping requires investment in dredging and lock expansion.



Success in the global economy of the twenty-first century requires that we use the parts of our transportation system in complementary ways. Policies, intermodal facilities, communications, transparent funding, and collaborative planning are all needed. The next transportation authorization bill must support these goals with increased, modally flexible funding and national policies that promote the development of all modes.

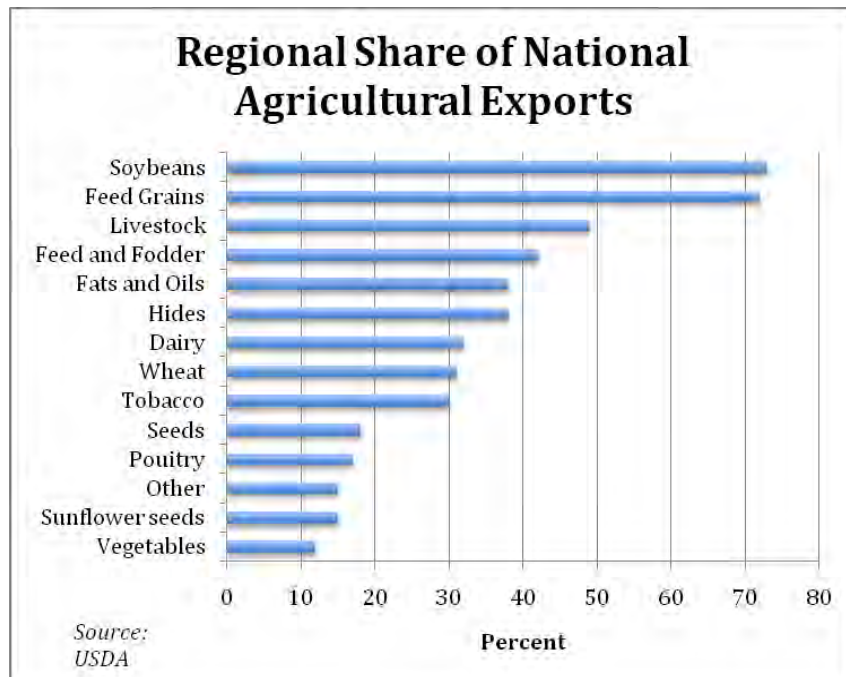
The states within the region share similar economic bases—heavy manufacturing and agriculture, both of which depend on robust transportation systems to move the large and heavy products. The region generates a large amount of freight. And, because of its central location, the region supports significant traffic that neither starts nor ends within the region. Despite losses in industrial employment in recent years, the region remains the nation's workshop.



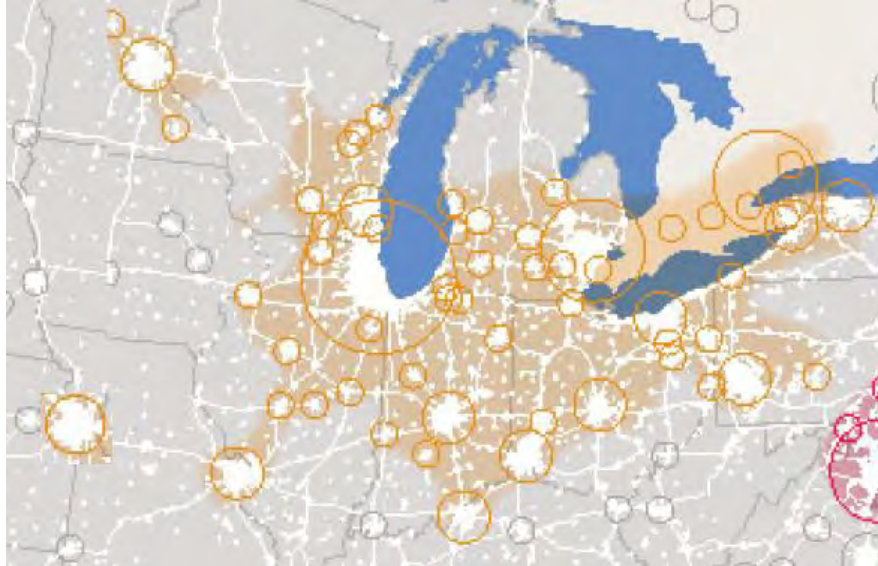
Source: National Association of Manufacturers

While the Mississippi Valley region accounts for more than 22 percent of the nation’s population, it holds 32 percent of the manufacturing jobs and accounts for 31 percent of the manufacturing GDP.

Agriculture, the other major component of the region’s economy, tends to be focused on the production of grains and livestock. The states in the region lead in 18 of the USDA’s 21 categories of top agricultural exports.



A fully connected multi-modal transportation system is essential to support the continued growth the Great lakes Mega-Region, a collection of economic activity centers that run from the Twin Cities to Louisville and from Pittsburgh to Kansas City. Keeping the transportation systems functioning to meet the needs of this diverse set of economic activities will be a challenge to all of the states.



Great Lakes Mega-Region (Image: America 2050 Prospectus)

All of these factors point to the need for transportation policies crafted to meet the unique needs of the central portion of the country, policies that support true intermodal freight transportation with adequate capacity to meet the needs of the region's industries and farms.

Programs

The MVFC should support the AASHTO recommendations to:

- Authorize \$18 billion over six years to be apportioned to the states from the highway account for freight projects on the National Highway System (NHS).
- Authorize \$42 billion over six years, half to be apportioned to the states and half allocated to projects of national significance. Revenues will be from new sources. A range of projects would be eligible.

The way that funds are allocated and projects are selected will determine the benefit of such programs. As such, the states of the MVFC should make their support a condition of whether the apportionment of this new program funding is equitable and whether the selection criteria for projects of national significance are reasonable.

Background

Seven of the ten MVFC states are donor states—they pay more into the federal highway trust fund than they receive in normal apportionments. In the past two decades, minimum return provisions have mitigated the impact of this issue. The new transportation bill must not reintroduce donor/donee issues. Instead, the legislation should seek to mitigate this problem by recognizing regional differences and by capturing the significance of these differences in apportionment and project selection.

The MVFC region is unique in a number of ways:

- Because of its central location, it hosts a large amount of flow-through traffic. On the key East-West routes in Indiana, Illinois, and Iowa, more than 25 percent of the truck tonnage passes through the region.

- The region generates a large amount of freight because of the nature of its economy, which is based on heavy manufacturing and agriculture.
- The region is host to the country's largest rail hub: Chicago, the only place on the continent where all the class I railroads converge.
- The region has substantial maritime resources: the Mississippi River System and the Great Lakes.

The freight transportation requirements of these unique features must be recognized in any criteria devised to allocate funds or to select projects for discretionary funding.

Potential Apportionment Factors

The apportionment of freight funding should preserve the entire transportation infrastructure, support the economy, and promote the most efficient movement of freight. With these goals in mind, a number of factors might be considered for the distribution of apportioned funds to the states:

1. **Taxed diesel fuel.** Taxed diesel fuel serves as a proxy for truck miles traveled. It captures the region's significant pass-through traffic and reflects the huge amounts of freight generated by the region's manufacturing and agricultural economies.
2. **Share of National Highway System mileage.** The National Highway System (NHS) contains the nation's major truck routes and therefore represents the country's economic backbone. A state's share of the NHS also accurately represents the extent of the state's highway-related responsibilities. Apportionments based on the share of NHS mileage should be preferred to the share of interstate mileage because the former is a more complete reflection of transportation's contribution to economic productivity.
3. **Share of class I rail mileage.** Like the share of NHS mileage, share of class I track mileage provides an indication of the size of the freight transportation system within a state or region. As the home for the nation's major rail hubs, the responsibility for rail in this region is huge, as are the rail-related needs.
4. **Share of manufacturing GDP.** An expanded freight transportation program aims to foster the growth of US manufacturing. Sharing federal transportation funding based on a state's contribution to manufacturing GDP would demonstrate the importance of this key economic sector and enhance its competitiveness.
5. **Share of navigable waterways.** Historically, the nation's waterways have not been included in the federal surface transportation system and in transportation authorization legislation. These waterways carry a large amount of freight and must be considered as a part of the intermodal freight transportation system. This is especially true for the Mississippi Valley region.
6. **Share of rail activity.** A number of measures of rail activity could be used as a part of the allocation process: carloads originated, carloads terminated, carloads carried, tons originated, tons terminated, and tons carried. All of these measures provide good indications of the region's freight rail activities.

Potential Project Selection Criteria

AASHTO recommends that \$21 billion be allocated to freight projects of national significance. These projects should be selected for funding based on some determination of national need or benefit. The states of the MVFC should be very concerned about the basis upon which these selection decisions will be made. A defined, structured approach should be developed to help remove some of the arbitrary

nature of discretionary funding, to reduce the probability that the program would become the subject of earmarking, and to ensure that the projects selected are truly the most meritorious. A formal cost-benefit method would be most appropriate.

An analysis of this type should rely heavily on the economic importance—as measured by annual dollar value, percent of GDP, or total employment—of the industries supported by the proposed project instead of a traditional cost-benefit analysis that relies on direct project impacts—time saved, crashes reduced, etc. The purpose of the freight program, because it is an economic development program, is fundamentally different from traditional transportation programs and projects. For example, using the traditional model, a rail grade separation project in a large urban area might save a few minutes of motorist time for thousands of motorists each day, but the project might have minimal impact on the overall efficiency of the industries that use either the highway or the rail corridor. On the other hand, improvements to a transshipment facility might have a very small benefit for direct transportation users; but, because of enhanced reliability or speed, it might have a large impact on the competitive position of the industries served by the facility.

Because a freight program should support the economic growth of the nation, industries that produce products that rely on the freight system should receive additional support. In the final analysis, the economic wellbeing of the nation is dependent upon the materials produced—not on the materials consumed—within the nation.

Actions Required

1. MVFC states should insist upon a transparent and public process for developing and applying apportionment criteria.
2. MVFC states should also insist on a transparent and public process for developing and applying the project selection criteria for any discretionary program.
3. Both the apportionment process and the project selection process should consider freight-specific factors.
4. Both the apportionment process and the project selection process should deal with all of the freight transportation modes.
5. The project selection process should contain analytic processes that consider the importance of the industry being supported by the project and the impact of the project on the competitive position of that industry.
6. The project selection process should be clearly defined and followed as the program is implemented.
7. The project selection process should give greater weight to industries that produce products within the country, whether for export or domestic use.

Rail Transportation

Efficient freight rail transportation is important for the Mississippi Valley region. Currently rail capacity is challenged. The MVFC supports the development of a national rail policy and an investment program that includes the following aspects:

- Expanded rail services in the form of expanded intermodal and other shorter-haul services.
- Public incentives to support expanded capacity and services, in the form of direct capital funding and tax credits.

- Publicly funded projects included in state rail plans to ensure that the projects are in the public interest and to encourage the rail companies to participate in transportation planning.
- Expanded funding for rail crossing improvements to allow economic efficiency criteria to be included for project selection.

Background

Historically, public involvement in rail has followed two guiding principles:

- Funding is proportionate to the benefits received.
- Rail company solvency is good for the public.

Each of these principles deserves further consideration.

Countless rail/highway crossing projects use the notion of proportional investments and benefits. A rail crossing improvement, particularly a separation, provides benefits in terms of operational efficiency, safety improvements, and avoided maintenance costs to the highway user and to the rail company. If the benefit is determined to be 30 percent to the rail company and 70 percent to the highway user, the cost of the improvement is similarly divided. While the presence of federal railroad crossing safety funds sometimes skews this allocation in routine projects, the basic approach has been applied to a number of high-profile projects such as Alameda and the Chicago Region Environmental and Transportation Efficiency (CREATE) program.

In the context of the transportation system as a whole, the validity of this proportional approach varies based on the type of benefit accrued. For example, closing rail crossings increases the operating speeds for trains, which in turn reduces the cost of transportation and increases the competitive position of industries—without considering the broad economic impact of the change. Similarly, freight moved by rail usually requires less fuel and produces fewer greenhouse gases than freight moved by truck. Both cases suggest that moving freight by rail has a greater public benefit and should be funded accordingly.

Rail companies in the US have always been private entities. Since deregulation, the rail companies have had a fair amount of freedom to pursue the policies and markets that made them profitable. As a result, the rail industry is now more profitable than it has been in nearly a century. But one might question whether profitability alone serves the public interest. Might services and actions that do not contribute significantly to the rail industry's bottom line be in the public interest? If that is the case, what public policies could be used to bring about those services? The free market does not produce all of the services required by the public interest, while regulation nearly destroyed the rail industry. Is there another approach?

The states of the MVFC should insist that all privately owned capital projects receiving public assistance be included in a state-prepared transportation plan. This approach, which is similar in concept to the Statewide Transportation Improvement Program (STIP) required of highway projects, would ensure that rail companies take part in state transportation planning efforts. It would also ensure that such projects meet some test of being in the public interest.

The definition of *public benefit* should also be expanded so that project selection criteria for rail/highway crossings include economic efficiency factors. The current rules focus on safety benefits. However, because separating or closing crossings also allows trucks and trains to move more efficiently, the benefit also accrues to rail companies, truckers,

industries, and the public at large. This short-term action would allow more crossings to be addressed, which would in turn benefit rail operations. Transportation agencies and rail companies have a long history of cooperation in this area.

Actions Required

1. Take an active role in articulating a national rail policy that clearly outlines a vision of how rail fits within an overall view of transportation services.
2. Support expanded freight-related revenue sources, including:
 - Climate change legislation
 - Customs revenues
 - Bill of lading fees
 - Container fees
 - Diesel fuel tax increases
 - Innovative financing
 - Tax credit bond financing
 - Government-business partnerships
 - Removing obstacles to private investment
 - Freight transportation value tax
 - Weight-distance tax
3. Support a program for freight transportation, which would be available to rail.
4. Support tax credits for rail capital investments, but insist that all such investments be included in state transportation plans.
5. Insist that all publicly supported investment in private facilities be included in the state transportation plan.
6. Support additional funding and broadened project selection criteria for rail/highway crossing projects.

Maritime Transportation

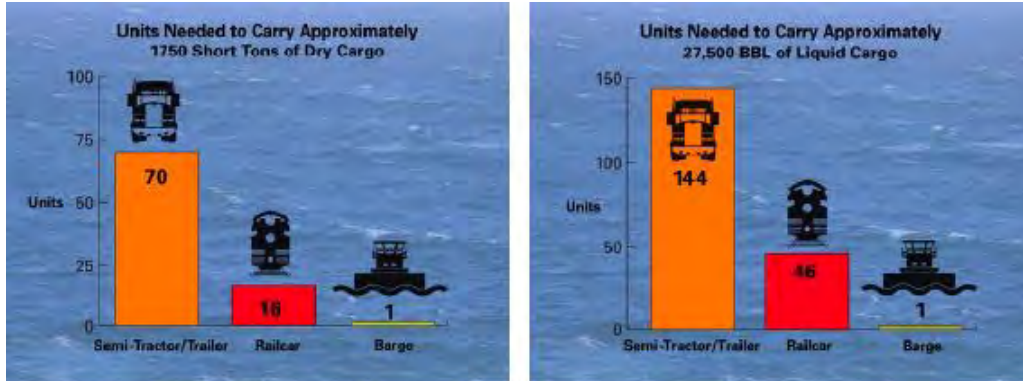
A truly intermodal transportation system requires maritime transportation. Freight transportation services provided by the Mississippi River system and the Great Lakes hold the potential for adding freight transport capacity that is low cost, congestion free, and relatively low in its environmental impact. Waterborne freight transportation should be included in the transportation authorization bill.

The MVFC recommends support for the maritime mode with the following provisions:

- Expanded investment in dredging to keep navigation channels near authorized depths to promote efficient maritime transport.
- Additional investment in locks and dams on both the rivers and lakes to bring them to current operational standards and to provide additional capacity.
- Removal of existing legislative obstacles to the expanded use of maritime transportation. Modify the harbor maintenance tax and the Jones Act to bring them into compliance with current circumstances.
- Additional investment in maritime research to improve efficiency and environmental performance.
- Additional tax provisions to encourage investment in new or expanded maritime resources.
- Support for demonstrations of new maritime services such as containers on ship or barge, roll-on/roll-off operations, ferry operations, etc.

Background

Water is the most fuel-efficient and air quality positive mode of freight transportation. A study conducted by the Texas Transportation Institute compared modes of transportation. One barge can carry the same amount of dry cargo as 16 rail cars or 70 trucks or the same amount of liquid cargo as 46 rail cars or 144 trucks.



Transporting freight by barge produces significantly less emissions per ton-mile than rail or truck transportation.

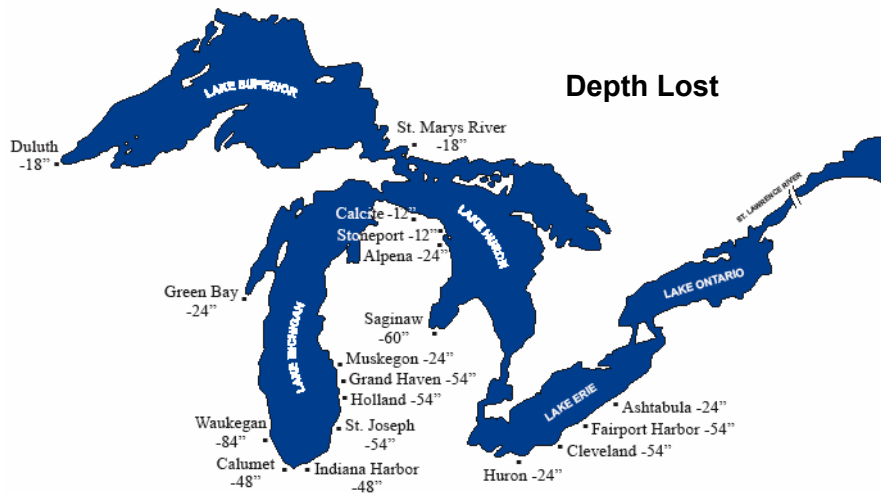
Summary of Emissions - Grams per Ton-Mile.

Emissions (grams/ton-mile)				
	HC	CO	NO _x	PM
Inland Towing	0.01737	0.04621	0.46907	0.01164
Eastern Railroad	0.02419	0.06434	0.65312	0.01624
Western Railroad	0.02423	0.06445	0.65423	0.01621
Truck	0.020	0.136	0.732	0.018

Inland towing gets 576 ton-miles per gallon, compared to 413 ton-miles for rail or 155 ton-miles for truck freight.

Despite the benefits of using maritime freight, a recent report on the Great Lakes – Saint Lawrence Seaway states that the system is operating at only about half of its potential capacity. At the same time, highways and railroads in the region struggle to meet demands.

Dredging is a major issue on the Great Lakes. A recent presentation by the head of the Great Lake Carriers Association highlighted the dimension of this problem. Many ports have lost depth measured in feet.



Dredging is also a problem on the rivers of the region, where operating depths are also down.

Antiquated locks presents a major problem for freight shipping in the Great Lakes and the Mississippi River system. On the rivers, these locks require tows break into parts to pass through the locks, wasting time and fuel. On the Great Lakes, the system shuts down when a lock fails, harming resiliency.

Actions Required

1. Include the Great Lakes and other inland waterways in the next transportation authorization bill for planning and funding.
2. Increase funding for dredging and lock and dam renovations.
3. Revise the Jones Act to allow the acquisition of used vessels for use on the Great Lakes.
4. Modify the harbor maintenance tax so that scheduled services such as roll-on/roll-off or ferry operations are not penalized.
5. Establish tax credits, similar in concept to those being proposed for railroads, to promote the investment in capacity and renovation of privately held marine capital assets.
6. Provide funding for research on maritime issues.
7. Support demonstration projects to encourage the expanded use of waterborne freight.

Institutional Issues

The states of the MVFC should work with AASHTO, USDOT, and Congress to develop institutional arrangements that will allow for the improved planning, construction, and maintenance of the freight transportation system. These institutional arrangements should include:

- A redefined role for the USDOT that will allow it to better coordinate the activities of the states and private companies in planning, constructing, and operating an intermodal freight transportation system.
- An expanded understanding and use of regional groupings of states—such as the MVFC and others—to address issues of concern to those states.

- A refined methodology for states to voluntarily join together to cooperate in interstate arrangements.
- Improved legislation and technical standards to enable states to elect tolling as a revenue measure and to support uniform collections technology.
- Guidance at the federal level to help state agencies protect the public interest in public/private partnerships (P3s).
- Requirements for the USDOT and state DOTs to plan and develop freight transportation projects in a multimodal manner and to include intermodal connectivity.

Background

The flow of people and goods do not stop at state lines. Facilities, regulations and practices that change at state lines are often seen as an impediment to travel and the movement of freight. Similarly, national and international transportation companies—package carriers, trucking companies, railroads, airlines, barge operators, and ship lines—often find it difficult to deal with differing state regulations. State agencies often find it difficult to deal with transportation companies on issues of service and policy. Most of our nation’s transportation policy and management approach is based on the primacy of state governments or, particularly in the case of rail, private companies.

At the same time, both state and federal agencies have promoted the use of alternative financing mechanisms. The most obvious of these mechanisms—imposing tolls—is often hindered by federal rules that make it difficult to impose tolls on existing facilities and by the lack of technical standards for toll collection devices.

Other alternative financing arrangements, such as those involving public/private partnerships, are executed in an ad hoc manner. Such ad hoc arrangements have left some in the industry and the public questioning whether the public interest may have been sacrificed for short-term financial expediency. The federal government should provide standards, templates, and analytic tools to ensure that the public interest is protected in these alternative-financing arrangements.

Role of the Federal Government

The current role of the federal government varies by mode. In the case of highways, they serve as a major provider of funding and play a major role in engineering standards, planning, environmental processes, and research. They do not develop national plans or even development policies. With few exceptions, how highway facilities are developed, maintained, and operated falls to state and local governments.

In rail, the federal role is primarily concerned with issues of safety. As with highways, the federal government has a very limited role in decisions related to the extent or nature of service. For maritime transportation, the federal role deals with safety and with maintaining navigation channels, locks and dams, and navigation systems. In the air, safety and security are the primary roles, focusing on traffic control systems and the security of the traveler.

The US government plays a limited role and there is no national transportation plan. National transportation goals are not tied to meaningful strategies or implementations. This is not the case in the rest of the developed and developing world. The European Union, for example, plans the construction of highways, railroads, and waterways as well as information and navigational systems. All of these EU-wide efforts serve to draw the region closer together and reduce the cost of transport.

Regional Groupings

Over the past decade a number of regional groups, including the MVFC and the I-95, I-5, and I-10 corridor coalitions, have developed to deal with transportation issues larger than individual states. In each case the states have recognized the need to develop strategies and plans to meet transportation needs for an entire region. In each case the coalitions are organized in informal or semiformal ways using letters of agreement or charters. None of these are binding arrangements that extend beyond the current administration or legislature. Federal funding programs do not specifically recognize these regional entities. All federal funding for these coalitions is funneled through one or more of the member states.

For the purposes of planning, strategizing, and cooperating, these informal arrangements work well enough. For developing capital projects or for owning regional facilities, these informal arrangements are not sufficient. For example, several states in the MVFC are developing a plan for truck lanes on I-70. When the planning is complete, these states must either implement these projects individually within their own boundaries or enter into a formal interstate compact arrangement.

The interstate compact is the only device now available that binds states to joint actions. Such compacts require approval by each state legislature and approval by Congress. Once approved by Congress, the compact has the force of federal law. This formal process is cumbersome, time-consuming, and often controversial. But, it is often preferred to the informal process when undertaking significant capital expenditures. An informal process may leave a facility incomplete when priorities shift or result in a patchwork of franchises and administrative arrangements as each state pursues the project independently.

Actions Required

1. AASHTO should initiate a national dialog on the role of the USDOT and on the need for a more active agency, an agency that would develop national plans and strategies in cooperation with state and local agencies and private interests.
2. The states of the MVFC should join with AASHTO and the FHWA to work with the states involved in the I-70 project to use it as a case study for developing regional arrangements that are robust enough to support capital project development and operations.
3. MVFC states should urge that the next transportation authorization bill specifically recognize, encourage, and directly fund regional organizations.
4. MVFC states should urge that the next transportation authorization bill create a mechanism that will enable states to use tolling when it is appropriate. It should also urge the federal government to create technological standards for toll collection to help minimize the public opposition to tolls.
5. AASHTO should begin the process of developing analytic tools, templates, and standards to assist states and local governments in the application of public/private partnership arrangements.

Performance Measures

The MVFC states should:

- Embrace performance measurement and the use of measures for effective management as a necessary and reasonable step toward improving the

effectiveness of transportation programs and the accountability of transportation agencies.

- Work toward appropriate use of measures as tools for understanding, managing, and improving performance.
- Insist that measures be developed that reasonably reflect the needs and situations of specific states and regions as well as the nation.
- Commit to the effort required to define, refine, and report meaningful measures.

Background

NCHRP Synthesis 311: *Performance Measures of Operational Effectiveness for Highway Segments and Systems* offers a simple definition of performance measurement:

Performance measurement is a process of assessing progress toward achieving predetermined goals...

This definition was developed from the perspective of a single agency. Viewing performance measurement from a regional or national view introduces additional complexity in the way that measures are defined and used. Complexity arises from the variety and multiplicity of the data systems, definitions, and collection methods of each state. Even in those cases where definitions seem comparable, collection methods and processing differences can make cross-state comparisons problematic. For example, even basic data elements such as pavement ride can vary markedly across state lines because of the tools used to collect the information, the attention given to calibration, or the timing of the collection.

Each state also pursues different objectives as they develop performance measures. Measures that seem comparable may be quite different when considered in light of the objectives for which they were developed and are used. State and regional differences in environment and context can markedly change perceptions and standards. For example, a definition of “bad” congestion in the Northeast will be very different than in most parts of the Midwest. Similarly, an acceptable response to a two-inch snowfall in Minnesota differs from what is acceptable in Georgia. All of these differences between states and regions have to be considered and understood as measures are developed and used.

Uses for Measures

Performance measures serve a number of purposes:

1. **Process Improvement.** Measures allow agencies to better understand how their services and facilities are performing and to use data to improve their processes.
2. **Monitoring progress.** The trend line of performance measures over time allows an agency to monitor its progress toward attaining defined goals.
3. **Accountability and transparency.** Well-structured measurement systems allow agencies to better communicate with their audiences—legislators, stakeholders, customers, and the general public.
4. **Benchmarking.** Benchmarking is the process of selecting comparable organizations against which programs, services, and facilities can be measured in order to make improvements.
5. **Allocating funds.** The Surface Transportation Policy and Revenue Commission has suggested that allocating funds is an appropriate use of performance measures.
6. **Finding fault.** Perhaps the worst use of measures is to simply find fault.

Types of Measures

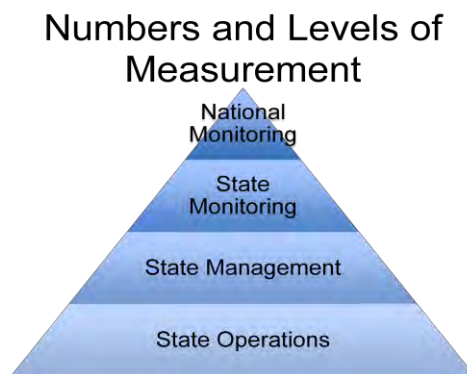
There are four types of measures: inputs, outputs, outcomes, and results.



Inputs are the ingredients that go into doing transportation: contract dollars, hours of labor, tons of asphalt, etc. Outputs are the immediate results of the inputs: miles of renewed pavements, etc. Outcomes are the immediate objectives of the effort: smooth pavements, etc. Results are the larger objectives: an enhanced traveling experience, reduced fuel consumption, etc.

Numbers and Levels of Measurement

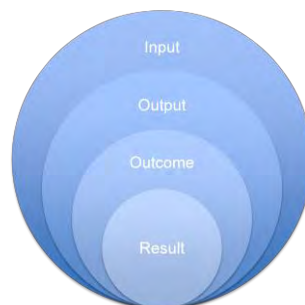
The number of the measures that are appropriate differ based on the purpose at hand. Too many measures may confuse the issues; too few may miss key aspects of the program or process.



For example, relatively few measures should meet the needs of national monitoring and accountability. More will be required for senior state managers to carry out their responsibilities. More still will be needed for mid-level state managers who are concerned with improving processes. Still more will be required for lower level managers, who supervise the daily operations of a state agency.

The key to making this approach workable is that the measures at the lower levels have a logical, nested relationship to those fewer measures at higher levels.

Nesting of Measures



Fewer results measures should be supported by a greater number of outcome measures. More output measures are needed to support the outcome measures. More input measures support the output measures. This nesting also applies to levels of government and management: few measures at the national level; more for senior state managers; more still for mid-level state managers; and many more for lower level managers.

Potential Freight Measures

There are a number of potential outcome and result freight measures appropriate for the state, regional, and federal levels.

Area	State	Regional	Federal
Economic Efficiency	Percentage of state product required for transportation and warehousing.	Percentage of regional product required for transportation and warehousing.	Percentage of Gross Domestic Product required for transportation and warehousing.
	Travel time on major corridors across the state or between major origins and destinations within the state.	Travel time between major regional origins and destinations.	Travel time between major national origins and destinations.
	Variation in travel time on major corridors across the state or between major origins and destinations within the state.	Variation in travel time between major regional origins and destinations.	Variation in travel time between major national origins and destinations.
	Average time required for weight and safety enforcement.	Number of weight stations with full CVISN capability.	Number of weight stations with full CVISN capability.
	Cross-border variations in freight regulation: size and weight, permitting, enforcement, etc.	Intra-regional variations in freight regulation: size and weight, permitting, enforcement, etc.	
	Average time lost at major transshipment, (both intra-modal and intermodal) terminals within the state.		Average time lost at major national freight transportation hubs.

Area	State	Regional	Federal
	Average time lost at river and lake locks.		Average time lost at river and lake locks.
	Average time lost at border crossings.		Average time lost at border crossings.
Safety	Truck-involved fatalities.	Truck-involved fatalities.	Truck-involved fatalities.
	Truck-involved crashes.	Truck-involved crashes.	Truck-involved crashes.
	Truck-involved crash rates.	Truck-involved crash rates.	
	Rail crossing fatalities.	Rail crossing fatalities.	Rail crossing fatalities.
	Rail crashes and derailments.	Rail crashes and derailments.	Rail crashes and derailments.
	Rail crash and derailment rates.	Rail crash and derailment rates.	
	Rail crossing crash rates.	Rail crossing crash rates.	
			Maritime crashes.
Environment	Carbon emissions per ton-mile of freight.	Carbon emissions per ton-mile of freight.	Carbon emissions per ton-mile of freight.
			Frequency of spills of hazardous materials.
	Freight mode share.	Freight mode share.	Freight mode share.
Resiliency	Length of detour around key facilities.		
	Emergency response plans in place and current.	Emergency response plans in place and current.	Emergency response plans in place and current.

Area	State	Regional	Federal
	Emergency response time in the case of a major incident.	Emergency response time in the case of a major incident requiring regional support.	Emergency response time in the case of a major incidents requiring federal response.
	Availability of alternative modes.	Availability of alternative modes.	Availability of alternative modes.

This suggested list of measures and the split between state, regional, and federal measures is intended to provide each governmental level with the information needed to communicate with stakeholders and to improve the activities assigned to them. This arrangement is the first step in an attempt to solve the problems that arise when developing and using regional and national measures. There remains a great deal of work to develop specific measures, to identify data sources, and to establish the processes for use, support, and publication.

Actions Required

1. Convene a working group of interested state and federal transportation officials with representatives of the transportation industry to define specific measures, definitions, and standards.
2. Establish a freight mobility study charged with updating and reporting measures regularly.
3. Help state departments of transportation to understand the measures being developed at a national level and state measures needed to support the national measures.
4. Work with the researchers from the American Trucking Research Institute to refine the efforts now underway to generate travel time and reliability information from truck-based communications systems.

Truck Size and Weight

The MVFC should support the 97,000-pound, six-axle truck configuration recommended by the American Trucking Association, if:

- The units are powered sufficiently so that they can accelerate safely in traffic.
- The units have sufficient braking capability to stop safely in emergency situations.
- The industry is willing to pay additional fees to compensate for the costs incurred by the public sector.

Background

The efficient movement of freight is critical to the economy of the region. Recent studies in Minnesota and Wisconsin have shown that significant benefits can be found if larger vehicles are allowed. For example, Wisconsin's study predicted an annual net benefit of nearly \$95 million if this configuration was allowed on both state highways and Interstate routes within the state (note that this analysis assumed that surrounding states kept

current weight rules). The bulk of the annual benefits would accrue to the private sector, while all of the increased costs would accrue to the public sector.

According to the [2000 Addendum](#) to the 1997 FHWA Highway Cost Allocation Study, trucks in the 75,000 to 80,000 pound category paid about 80 percent of the costs that they caused to the highway system. Correcting this imbalance and compensating states for the added costs of larger vehicles would require a significant increase in large truck fees.

Safety remains a major concern with larger vehicles, but current technology can provide assurance that even 97,000-pound trucks can have both the power and the braking ability to perform safely. To ensure that the proper equipment is used, any vehicle operating at this new weight must meet all of the requirements of the Federal Motor Carrier Administration related to power, braking, and other safety features.

Actions Required

1. Follow the size and weight debate.
2. Insist that any increase in weight be accompanied adequate power, braking, and other safety equipment requirements.
3. Insist that the operators of large vehicles pay the full cost that results from their use on the public highway systems.

Appendix 1: AASHTO Reauthorization Positions

AASHTO has suggested positions on a range of freight-related issues.

Planning

- Require truckers to submit information similar to the railroad freight waybill.
- Develop assessment and information tools to help better understand freight infrastructure improvements as they relate to economics, safety, job growth, energy use, and greenhouse gases.
- Develop institutions that can perform within and between their jurisdictions.”
- Within two years of the passage of the transportation authorization bill, complete the following:
 - National Freight Network. Develop the criteria necessary to inventory highway, rail, and marine corridors. The objective: increase efficiency and connectivity region-to-region and nationwide.
 - A problem analysis that will document the value of public investment in transportation infrastructure in each category in terms of improved efficiency and productivity of freight movement, improved passenger mobility, and reduced negative impacts on communities and the environment.
 - A methodology and other tools to assist in priority ranking of investments in each category.
 - The identification of projects or groups of projects with the greatest national and/or regional benefit in each category.
 - An estimate of the cost of meeting investment needs in each category.
 - A recommended structure for carrying out an investment program for each category.

Congress should authorize funding to support state-driven multistate, multimodal corridor planning and investment organizations.

Programs

- Authorize \$18 billion over six years to be apportioned to the states for freight projects on the NHS. Funding from the highway account.
- Authorize \$42 billion over six years. Half to be apportioned to the states and half allocated to projects of national significance. Revenues will be from new sources. A range of projects would be eligible.
- Revenue source options:
 - Climate change legislation
 - Customs revenues
 - Bill of lading fees
 - Container fees
 - Diesel fuel tax increases
 - Tax incentives for private investment, specifically support the rail infrastructure tax credit for both class I and short line railroads
 - Innovative financing
 - Tax credit bond financing
 - Government-business partnerships
 - Removing obstacles to private investment

- Longer term options:
 - Freight transportation value tax
 - Weight-distance tax
- Reauthorize existing programs:
 - Freight Planning Capacity Building Program (Sec. 5204(h)). Amend to require funding directly to states.
 - National Cooperative Freight Transportation Research Program (Sec. 5209). Increase funding.
 - Coordinated Border Infrastructure Program (Sec. 1303).
 - Transportation Infrastructure Finance and Innovation Act (TIFIA) (Sec. 1601). Develop technical amendments to make the program more agile and more likely to be useful for freight projects.
 - State Infrastructure Banks (SIB) (Sec. 1602). Strengthen provisions to make multistate SIBs possible and provide federal capitalization for multi-state SIBs.
 - Private Activity Bonds for Intermodal Facilities (Sec. 11143).
 - Capital Grants for Rail Line Relocation Projects (Sec. 9002). Increase authorization.
 - Rail Rehabilitation and Improvement Financing (RRIF) (Sec. 9003) Resolve administrative problems that have made program difficult to use.
 - Rail-Highway Crossings (Sec. 130). Increase authorization. Authorize program for national system crossing projects and sealed corridors.

Other Issues

Public/Private Freight Railroad Partnerships. The federal government should improve the business model for negotiating passenger rail access on a private railroad; help state DOTs determine the appropriate level of publicly funded capacity improvements needed for freight and passenger rail operations on shared-use corridors; and define a negotiating framework needed to reach agreements required during the initial phases of corridor development and in the build out needed for high-performance passenger rail operations.

Section 130. Continue and expand funding for the Section 130 Grade Crossing Program and institute measures to expedite the process.

National Rail Policy. Congress shall articulate a national rail policy.

Sealed Corridors Program. Institute a national program to address the safety concerns along the National Highway System focused on highway/rail grade crossings.

Reauthorization of Short Line Railroad Investment Tax Credit. The Short Line Railroad Investment tax credit generated hundreds of millions of dollars of essential investment to upgrade the infrastructure of short line and regional railroads to the level necessary to carry 286,000-pound cars. These investments must be made in order to maintain a national rail system. The credit was allowed to lapse and should be reauthorized.

Authorization of Freight Rail Investment Tax Credit. Given federal budgetary constraints, investment tax credits for freight rail must have a proven public benefits such as investment in infrastructure improvements that benefit both freight and passenger rail in shared use corridors. The public benefits of the infrastructure improvement must be established in order for private companies to receive federal tax

credits. Other public benefits include, but are not limited to, reduction of adverse community impacts, reductions in greenhouse gas emissions, improving links to state and local economies, reducing highway congestion, containing highway maintenance costs, providing rail service to a wider range of shippers, and improving safety.

Truck Size and Weight. States, in collaboration with the freight transportation industry and the federal government, should investigate the feasibility of regional adjustments in truck size and weight restrictions in particular corridors that demonstrate important economic benefits and meet safety, pavement/bridge impact, and financing criteria.

Performance Management

AASHTO has a number of recommendations relative to the reform of the national transportation programs and the introduction of performance management. They begin with the list of needed reforms and then articulate ideas for fulfilling that reform:

1. Articulate the “federal purposes” for the federal program:
 - Preservation
 - Interstate commerce and rural and urban connectivity
 - Safety
 - Personal mobility and connectivity
 - Operations
 - Environment
2. Refocus the federal program on objectives of genuine national interest:
 - Preservation
 - Freight and economic development
 - Safety
 - Congestion (mobility and accessibility in both urban and rural areas)
 - System operations
 - Environment
 - Intercity passenger rail (funded from dedicated funds outside the Highway Trust Fund)
 - Federal lands
 - Research
 - National defense
3. Restructure the highway program and revise the transit program to focus them on achieving the national objectives selected:

Current Program	Proposed Program
Interstate Maintenance (\$5.0 billion) National Highway System (NHS) (\$6 billion) Bridge (\$4.2 billion)	Preservation and Renewal Program (\$28.4 billion total)
No current Freight Program	Freight Program (\$6.5 billion apportioned to states; \$3.5 billion discretionary)
Highway Safety Improvement Program (\$1.3 billion)	Highway Safety Improvement Program (\$2.6 billion)

Current Program	Proposed Program
No Current Stand Alone Operations Program Category	Operations and Management Program (\$3 billion)
Surface Transportation Program (\$6.5 billion)	Transportation System Improvement and Congestion Reduction Program (\$11 billion)
Congestion Mitigation/Air Quality (\$1.7 billion)	Environment Program: Air Quality and Climate Change (\$3.4 billion) Program to be segmented into two components: <ul style="list-style-type: none"> • Not less than 50 percent of funds to ozone and particulate matter (pm) non-attainment areas for CMAQ projects. • 50 percent to states for transportation climate change initiatives.

4. Establish national goals through which the national objectives can be achieved:

Authorization legislation should direct AASHTO in consultation with APTA, the MPOs, and the USDOT to establish national performance goals for each area. Congress should direct that the goal development process be completed within two years or less after enactment of the bill. Once the goals have been approved and formally submitted to the Secretary of Transportation and the US Congress, they would be promulgated as non-binding guidance. No rulemaking process would be required or desired, with the exception of those required to accommodate changes in statute.

1. Develop a state-driven performance management approach to planning and project selection to through which each state will work to achieve the national objectives selected. Refocus the planning and programming process to be more performance-based will require that each state:

- Adopt performance metrics and targets for each of the six key national goals (safety, preservation, etc.) as part of their long range planning process.
- Establish an ongoing performance monitoring and reporting process to track progress in meeting national goals.

5. Develop a state-driven performance measurement process through which each state will measure and report on progress at achieving the national objectives selected:

Establish a performance-oriented pilot program, similar to what USDOT has recently proposed for those states and metropolitan areas that have established performance measures and targets in the six national goal areas that are acceptable to the USDOT. In exchange for establishing an acceptable state performance management process, regulatory relief and funding flexibility would be provided in terms of planning requirements, environmental process streamlining, engineering oversight, and categorical transferability and eligibility limitations.

Appendix 2: ARTBA Reauthorization Positions

The American Road and Transportation Builders Association (ARTBA) issued a 72-page report that outlines their vision of the future of transportation in the US and their recommendations for the next reauthorization. *A New Vision & Mission for America's Federal Surface Transportation Program: ARTBA Recommendations for SAFETEA-LU Reauthorization*, can be found [here](#).

The introduction sets the tone of ARTBA's recommendations.

Think for a moment about America's transportation network... and fast forward to October 1, 2034...

Visualize "Critical Commerce Corridors" that seamlessly connect America's high-speed Interstate highways with all major U.S. water ports, airports and rail hubs into a single cohesive system...

Envision state-of-the-art corridors that create new capacity by utilizing existing Interstate Highway System right-of-way and incorporating tunnels and overpasses, which resulted in:

- Significantly reduced truck freight and passenger vehicle trip times
- Lower energy costs for American businesses
- Improved air quality
- A big drop in the number of 43,000 annual highway fatalities
- Additional roadways to help the public evacuate in times of national emergencies or natural disasters

Imagine a revitalized economy in which America preserves its position as the global economic superpower.

To accomplish this vision, the ARTBA recommends a three-pronged approach. The first deals with substantially improving the funding for the existing core programs.

1. Increase the fuel tax at least 10 cents per gallon.
2. Index the fuel tax to inflation.
3. Enable states with broad authorities to impose tolls for congestion pricing, truck only lanes, high occupancy lanes, and the existing Interstate system, provided that the toll revenues are used for transportation.
4. Establish a transition timeline for moving to a VMT tax to replace the motor fuel tax at some point in the future.
5. Enhance USDOT's authority over the project planning process to reduce the time required to deliver projects.
6. Establish a zero traffic fatality goal for motorists and workers.

The second prong deals specifically with freight and would establish a Critical Commerce Corridors (3C) program to fund capacity and operation improvements focused on freight movement. The 3C network would include:

1. Most—if not all—existing interstate highways and a portion—not defined, the USDOT would lead an effort to define the entire 3C system—of the non-Interstate NHS.
2. New multi-modal trade corridors.
3. New truck only lanes.
4. Last mile military base, port, airport, inland waterway, and rail connections.

5. Tunnels, elevated road, and railways on existing right of way.
6. International gateways.
7. Bottleneck relief.
8. Multi-modal freight-transfer centers.
9. Integrated telecommunication corridors.

Within this system, ARTBA calls for the maximum use of existing rights of way; the use of best in class environmental protection; and the most advanced materials, communications, and safety technologies.

New freight-based user fees would fund the program. Those fees would be defined by a stakeholder outreach program lead by the USDOT. Possibilities include:

1. A bill of lading tax.
2. A weight-mileage use fee.
3. A freight transaction fee.
4. A national freight transfer station entrance fee.
5. Federal customs fees.
6. Additional federal user fees.
7. Tolls as appropriate.
8. A truck mileage tax based on miles driven on the 3C system

See the table of freight-related funding sources below for more information.

A statutory firewall would protect the 3C revenue stream for its purposes. USDOT, in concert with the states and industries would determine the types of things eligible for the program: capacity enhancements, lane widening, bridges and tunnels, bottleneck relief, technology, reconstruction, vertical integration, freight exchange facilities, managed and truck only lanes. Rail investment would be permitted, if rail users also pay the fees imposed. The USDOT would establish standards that will ensure the efficient movement of freight. 3C routes should have at least a level of service -C”.

USDOT would be required to submit the details of the plan to Congress within 24 months of the passage of the next transportation authorization bill. Congress would be required to act within the next year (see the implementation timeline below). A transition period is provided.

Potential “Critical Commerce Corridors” Freight-related Funding Sources

Potential Funding Source	Mechanism for Fee Generation	Amount Raised per 1% Fee	Amount Raised per Penny Fee	Amount Raised per Dollar Fee
U.S. Truck Freight Bills	Total annual U.S. billing > \$622.9 Billion	> \$6.2 Billion	N.A.	N.A.
U.S. All Modes Freight Bills	Total annual U.S. billing > \$739 Billion	> \$7.4 Billion	N.A.	N.A.
Ton-Based Freight Movement by Trucks	> 10.69 billion tons shipped	N.A.	> \$107 Million (at each 1¢ per ton assessment)	\$10.7 Billion (at \$1 per ton assessment)
Ton-Based Freight Movement by All Modes	> 15.5 billion tons shipped	N.A.	> \$155 Million (at each 1¢ per ton assessment)	\$15.5 Billion (at \$1 per ton assessment)
Trucking Ton-Mile Freight Movement	> 1.2 trillion ton-miles traveled	N.A.	> \$12 Billion (at 1¢ per ton-mile traveled assessment)	N.A.
All Modes Ton-Mile Freight Movement	> 4.1 trillion ton-miles traveled	N.A.	> \$41 Billion (at 1¢ per ton-mile traveled assessment)	N.A.
National Vehicle Safety Inspection Tag	241 million registered vehicles	N.A.	N.A.	\$241 Million

“U.S. Freight Transportation Forecast to 2017.” (2006 edition) American Trucking Associations (by Global Insight). ARTBA revenue extrapolation.

“Transportation in America” (2007 edition) Eno Transportation Foundation. ARTBA revenue extrapolation.

“2005 Highway Statistics.” Federal Highway Administration. ARTBA revenue extrapolation.

Proposed “Critical Commerce Corridors” (3C) Program Implementation Timeline

September 30, 2009	Federal highway and transit programs reauthorized. U.S. DOT Secretary mandated to begin process for identifying 3C network, quantifying network cost, creating priority project schedule.
October 2009 – March 2011	U.S. DOT Secretary convenes stakeholder meetings (i.e., state DOTs, major transportation users, MPO’s and local government, multi-modal corridor, gateway city and major commerce hub representatives, environmental constituencies, construction management, transportation planning, financial experts) to develop report to Congress. Report will: (a) identify proposed 3C network map; (b) quantify overall expected cost of 3C network creation, reconstruction, rehabilitation and maintenance; and (c) recommend proposed priority schedule for 3C projects.
March 31, 2011	U.S. DOT Secretary transmits proposed 3C map and implementation plan to Congress.
September 30, 2011	U.S. DOT Secretary transmits recommended revenue generating mechanisms for 3C program financing.
October 2011 – September 30, 2012	Congress considers and votes on 3C program structure and financing proposals (separately, or as one measure). Failure to meet statutory deadline for action (9/30/12) results in automatic withholding of federal funds for freight-related surface transportation infrastructure programs (i.e., Interstate Maintenance, Projects of National & Regional Significance).
October 1, 2012	Funding for initial top-priority, “Tier 1” planning design and construction projects authorized under the “Critical Commerce Corridors” Program begins.