S. HRG. 107–671

TEA-21 REAUTHORIZATION: FREIGHT ISSUES

JOINT HEARING

BEFORE THE

SUBCOMMITTEE ON SURFACE TRANSPORTATION AND MERCHANT MARINE

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

AND THE

SUBCOMMITTEE ON TRANSPORTATION, INFRASTRUCTURE AND NUCLEAR SAFETY

OF THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE

ONE HUNDRED SEVENTH CONGRESS

SECOND SESSION

ON

SEPTEMBER 9, 2002

Printed for the use of the Committee on Commerce, Science, and Transportation and the Committee on Environment and Public Works

U.S. GOVERNMENT PRINTING OFFICE

81–728 PDF WASHINGTON : 2003

For sale by the Superintendent of Documents, U.S. Government Printing Office
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TEA-21 REAUTHORIZATION: FREIGHT ISSUES

MONDAY, SEPTEMBER 9, 2002

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
SUBCOMMITTEE ON SURFACE TRANSPORTATION AND
MERCHANT MARINE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUBCOMMITTEE ON TRANSPORTATION, INFRASTRUCTURE, AND
NUCLEAR SAFETY,
Washington, DC.

The subcommittees jointly met, pursuant to notice, at 2:38 p.m. in room SR–253, Russell Senate Office Building, Senator Breaux [chairman of the Subcommittee on Surface Transportation and Merchant Marine] presiding.

Present for the Committee on Commerce, Science, and Transportation: Senator Breaux.

Present for the Committee on Environment and Public Works: Senators Reid, Jeffords, and Inhofe.

OPENING STATEMENT OF HON. JOHN BREAUX, U.S. SENATOR FROM THE STATE OF LOUISIANA

Senator BREAUX. The committee will please come to order. I would like to welcome our colleagues from the Environment and Public Works Committee who are with us this afternoon for this very important hearing, particularly Senator Reid and Senator Inhofe and also Senator Jeffords and others who I know will be attending. This is a joint hearing of the Subcommittee on Surface Transportation and Merchant Marine and the Subcommittee on Transportation, Infrastructure, and Nuclear Safety. I also thank all of our witnesses for being with us.

I would just make a brief comment to point out that one of our fastest-growing segments of our economy, and our gross domestic product for this country, is international trade. This segment of our economy is completely dependent on our transportation sectors and on the intermodal transportation of the goods that are engaged in commerce.

Today we are going to look at what has become one of the backbones of our entire Nation's economy, the infrastructure for the intermodal transportation system of the United States. I think all of us who represent port areas are familiar with the importance of an intermodal, interconnected, transportation system, that without it we will not continue to be one of the great trading nations of the world.

Intermodal containers, for instance, in the ocean shipping area, are increasing dramatically. It used to be that a ship that had 2,000 containers on it was considered one of the largest in the world. Today we have ships carrying 7,000-plus containers. If those containers were lined up one behind the other on rail cars, it could extend over 35 miles, just from the containers on one large container ship.

So we want to look at the problems associated with intermodal transportation. I am delighted that our leader on the Democratic side, Senator Reid, who has been so active in these transportation measures from an appropriations standpoint and others, is with us to help with this hearing this afternoon. Senator Reid, any comments?

OPENING STATEMENT OF HON. HARRY REID, U.S. SENATOR FROM THE STATE OF NEVADA

Senator REID. Thank you very much, Mr. Chairman. I am very happy that we have here with us the chairman of the full committee, Senator Jeffords, who has been so good at allowing us to do things on the committee. As chairman of this subcommittee, I appreciate his allowing us to do this joint hearing.

Senator Breaux, you being from a State where you see these ships come in all the time, you are used to them. But for me, every time I go to a place where we have freight that comes by ship I am stunned how big these are. I cannot imagine a ship could stay afloat with 35 miles of railroad cars in it. It is just hard for me to comprehend that we have vessels that can do all of that.

I am happy to co-chair this hearing with you, Senator Breaux. The subcommittee that you chair, Surface Transportation and Merchant Marine, is extremely important and, even for those of us who are not in ports, we all understand or should understand that solving America's freight and passenger transportation problems will require a comprehensive intermodal and flexible approach.

Jurisdiction over surface transportation programs is divided between our committee and your committee. We have to do everything we can to coordinate our efforts. You and I have been around long enough that it is a question of what we can get done and do it as quickly as we can. Once we get something done, there is a lot of credit to pass out. We do nothing, and I think we'll get discredit for that.

We need to work not only with our committees, but we have to work in Finance, Budget, and Appropriations. So we have to do a lot to set the policy agenda. We can do that. We cannot begin to address the significant problems facing our Nation's transportation system unless we have adequate funding. Each of these committees I have mentioned will be an important partner in our efforts to secure the additional funding and budget protection necessary to write a transportation bill that addresses our Nation's significant highway, transit, and rail infrastructure needs.

Funding problems—today we will deal with freight transportation. Efficient transportation of freight is essential to our Nation's economic growth and global competitiveness. Nearly $10 trillion worth of freight is transported each year on our roads, railroads and waterways. We depend on our transportation system to

get everything from food and other agricultural products to consumer goods to construction materials to coal to their destinations.

Freight transportation will double in the next 20 years. This growth in freight will vastly outpace the growth of our road and rail system and it can simply overwhelm our transportation infrastructure. Already, bottlenecks exist at border crossings with Canada and Mexico and in metropolitan areas. The next transportation bill will have to address these capacity issues and improve access to intermodal facilities.

In addition, we have to address operational issues that impact the reliability of our transportation system. Intelligent transportation systems will play a critical role.

We are fortunate to have a number of distinguished witnesses today. I especially look forward to Katie Dusenberry, who chairs the Arizona State Transportation Board, to talk about the traffic bottleneck at Hoover Dam. As a result of the closure of Hoover Dam, we have had to divert traffic—2,100 trucks a day now are detoured 23 miles or more.

Senator Breaux, you have heard me talk about my home town of Searchlight. That is where they go, 2,300 trucks every day. It is dangerous. It is the busiest two-lane highway in Nevada and it is extremely dangerous and it is only going to get worse. This bridge is essential to freight movements on the Cana-Mex corridor and is a top priority for our entire region of the country.

Senator Breaux, one of the things that we have to keep in mind also is if you look at a chart, on numbers, trucks haul most of the stuff and we want to do what we can to make sure that our highways get the attention they need. But it is kind of a misleading figure to look simply at numbers, because the trucks cannot haul most of the stuff until it gets to them and most of that comes with rail or through ocean traffic, barge traffic. So we have a lot to do to make sure that we better understand the freight system. If there were ever an area where we cannot be provincial, that is, we in Nevada have to care about Louisiana even though we do not have—in Las Vegas, four inches of rain a year. You get that much in a couple of hours—we have to be concerned because if we are going to keep Las Vegas economically sound, we are going to have to figure a way to get the traffic from Long Beach, New Orleans, and other places.

[The prepared statement of Senator Reid follows:]

STATEMENT OF HON. HARRY REID, U.S. SENATOR FROM THE STATE OF NEVADA

Welcome to today's hearing on freight transportation issues. I am pleased to cochair this hearing with Senator Breaux and the Commerce Subcommittee on Surface Transportation and Merchant Marine he chairs. Solving America's freight and passenger transportation problems will require a comprehensive, intermodal, and flexible approach. Jurisdiction over surface transportation programs is divided between the Environment and Public Works Committee, the Banking Committee, and the Commerce Committee, and we will have to closely coordinate our efforts. This joint hearing is an important example of that cooperation, and I look forward to working closely with Senator Breaux and our other partners throughout the TEA–21 reauthorization process.

In addition to working with the Commerce and Banking Committees on policy issues, I intend to work closely with the Finance, Budget, and Appropriations Committees on funding issues. While we have a lot of important policy work ahead of us, we cannot begin to address the significant problems facing our nation's surface transportation system without adequate funding. Each of these committees will be

an important partner in our efforts to secure the additional funding and budget protection necessary to write a transportation bill that addresses our nation's significant highway, transit, and rail infrastructure needs.

One particular funding need that we will address at our hearing today is freight transportation. The efficient transportation of freight is essential to our nation's economic growth and global competitiveness. Nearly 10 trillion dollars worth of freight is transported each year on our roads, railroads, and waterways. We depend on our transportation system to get everything—from food and other agricultural products to consumer goods to construction materials to coal—to its destination.

Freight transportation is expected to double in the next 20 years, as the economy grows and international trade increases. This growth in freight traffic will vastly outpace the growth of our road and rail systems and threatens to overwhelm our transportation infrastructure.

Already, key bottlenecks exist at road and rail connections to major U.S. seaports, at border crossings with Canada and Mexico, and in metropolitan areas where roads and rail infrastructures are stretched beyond their capacity.

This next transportation bill will have to address these capacity issues and improve access to intermodal facilities if we are to keep our economy moving and maintain our leadership in international trade.

In addition, we must address operational issues that impact the reliability of our transportation system. Intelligent Transportation Systems will play a crucial role in improving the reliability of our transportation infrastructure and ensuring the flow of up-to-the-minute information to users and managers.

We are fortunate to have a number of distinguished witnesses with us today to provide our committees with insights into the freight challenges we face and, we hope, some proposed solutions to these problems.

One witness I would like to particularly thank for making the trip to be here is Katie Dusenberry, who chairs the Arizona State Transportation Board. Ms. Dusenberry will be testifying on an issue that is of vital importance to my State and the entire Southwestern region—the closure of the Hoover Dam to truck traffic due to post-September 11th security concerns.

As a result of the closure of the Hoover Dam bridge to freight traffic, over 2,100 trucks per day are now detoured 23 miles or more. To address this problem, the States of Arizona and Nevada are working together, and with the Federal Government, to build a Hoover Dam Bypass Bridge. This bridge is essential to freight movements on the CANAMEX corridor and is a top priority for my State. The Department of Interior has identified the Hoover Dam bypass project as its No. 1 national security priority.

I am pleased that Ms. Dusenberry has joined us to provide her expert testimony on this project.

Again, thank you to all of our witnesses for your participation today. Our first panel will consist of Associate Deputy Transportation Secretary Jeffrey Shane, who is also the Director of the Office of Intermodalism, and Jay Etta Hecker from the U.S. General Accounting Office. Thank you for agreeing to be with us today and I look forward to your testimony.

Senator BREAUX. Thank you very much, Senator Reid.

In order of appearance, I recognize the chairman of the full Environment and Public Works Committee, our friend Jim Jeffords.

OPENING STATEMENT OF HON. JIM JEFFORDS, U.S. SENATOR FROM THE STATE OF VERMONT

Senator JEFFORDS. Thank you. Senator, I appreciate all the work you have done along with Senator Reid in putting this hearing together. Coordinating two committees is not an easy task. It is so essential, and I applaud your efforts.

Today's hearing lays important groundwork for the TEA–21 reauthorization next year. The proper and efficient handling of freight is absolutely critical to the American economy. It is that simple. Without this, consumer prices would skyrocket, factories would have temporary shutdowns, businesses could not function, and families would even worry about food shortages in the land of plenty.

I care about freight issues. They are important to me in Vermont and to every county and every State in the Union. Chairmen Reid and Breaux have highlighted some important facts. I will repeat one: The U.S. transportation system carried over 15 billion tons of freight valued at over $10 trillion during 1998. Trucks carry about 80 percent of that value.

Now for the most critical point: The volume of freight that needs to be carried in the United States will more than double by the year 2020. Thus, the transportation bill for the next generation of Americans, which we are currently crafting and will pass next year, must address this issue in a positive manner.

America needs to invest in vital intermodal freight infrastructure so that American businesses have competitive choices and more opportunities. For example, our international ports should offer multiple options, such as train and truck, to move incoming freight or to efficiently load ships with American products. Careful strategic investments near urban areas, factories, border crossings, ports or elsewhere can greatly help. Of course, I understand that regional needs vary, which is why the new law must embrace flexibility and local decisionmaking. For example, Vermont has a strong tradition of moving heavy freight by rail to the St. Lawrence Seaway. Freight moves through Vermont north to the Province of Quebec and south to the Eastern Seaboard. Vermont's granite and marble quarries, its dairy farms and its timber industries produce relatively heavy products, and its high-tech industries such as IBM produce high value but low weight products. Allowing flexibility, local decisionmaking, and competitive choices will provide for efficient intermodal freight movement.

Those who ship and receive freight in America are concerned with efficiency and timeliness. We need intelligent freight systems in addition to intelligent transportation systems. The buyer's cry is: I want it on time and unbroken. Yet this week's New Yorker magazine, in an article entitled "Stuck in Traffic," explains how congestion threatens efficiency on our highways. The article wonders if the world will end, not with a bang, but with a traffic jam.

America has spent hundreds of billions of dollars building, improving, and repairing our massive highway transportation systems. I will push for a similar revitalization of our rail system. We need a modern rail equivalent to our highways.

Rail will yield strong benefits throughout our Nation. First, movement of goods onto rail can usually reduce congestion on our roads and permit truck freight to move faster and safer. Second, it will make our highways last longer as the heavy freight is moved by rail. Truck shipments exert a tremendous toll on our Nation's highways.

Third, more targeted, strategic, less costly investments can help move huge volumes of freight while offering businesses another viable option. For example, much of the truck traffic on Route 7 in Vermont could be handled by rail through precisely targeted strategic investments in rail corridors, instead of through expensive road-building projects. Each Senator in this room probably has similar examples for their States.

In closing, let me again emphasize my interest in working with everyone in this room on these critical freight issues. I look forward to hearing the testimony here today. Thank you, Mr. Chairman.

Senator BREAUX. Thank you, Senator Jeffords. Senator Inhofe.

OPENING STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Senator INHOFE. Thank you, Mr. Chairman. I think you are aware that this committee is having a scheduling conflict with Senator Armed Services. So I will not be able to stay.

I did want to come down and express myself on a couple of things. The significance of a reliable freight transportation system is always imperative, although it is more so now in times of war. As the ranking member of the Transportation and Infrastructure Subcommittee, I now have the opportunity to work more closely on making sure that transportation needs are met.

I believe there is still much that needs to be done in accomplishing our goals. I am pleased to be meeting today in conjunction with the Commerce Subcommittee and discussing the matters at hand. We face many challenges with our current transportation system concerning the consequences on our economy and our environment. While I understand the focus on improving our important border infrastructures to handle increasing traffic volumes in the future, my concern is committing to the enhanced safety and security of commercial vehicle operations at our borders.

Mr. Chairman, when you and Senator Reid talked about the ports, a lot of people are not aware that Oklahoma is a port. We are the home of America's most inland port. So we have extensive operations there.

I am certain it is possible to have a transportation system that is safe and secure, as well as efficient and productive. The past two reauthorization acts developed and promoted by this committee have been instrumental in stimulating surface transportation policy. As the committee considers reauthorization proposals, it is necessary to review whether changes need to be made. I would be interested to hear our witnesses. I believe it is necessary to define what program changes might need to be implemented in reauthorization to aid the improvement of intermodal connections surrounding ports, railheads, and other intermodal transfer facilities.

Mr. Chairman, I ask unanimous consent to insert testimony for Mr. Jim Fisk of MagTube Incorporated and Charlotte Thorton on innovative approaches for freight transportation issues, if I might.

Senator BREAUX. Without objection, it will be made a part of the record.

Senator INHOFE. Thank you, Mr. Chairman.

[The prepared statement of Senator Inhofe follows:]

STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Thank you Mr. Chairman. Today's hearing on freight and intermodal transportation is exceptionally important to me. A reliable freight transportation system is always imperative, although it is particularly important these days during times of war.

As the ranking member of the Transportation and Infrastructure Subcommittee, I now have the opportunity to work more closely on making sure that transportation

needs are meet. I believe there is still much that needs to be done in accomplishing our goals.

We face many challenges with our current transportation system that causes concerning consequences on our economy and environment.

While I understand the focus on improving our port and border infrastructures to handle increasing traffic volumes in the future, my concern is committing to the enhanced safety and security of commercial vehicle operations at our borders. I am certain it is possible to have a transportation system that is safe and secure, efficient and productive.

A better understanding of freight demands and similar issues helps us to analyze the increasing demand for freight transportation, assessments of the implications of freight demands for the entire surface transportation system and improvements in freight efficiency and security.

The past two reauthorization acts developed and promoted by this committee have been instrumental in stimulating surface transportation policy. As the committee considers reauthorization proposals, it is essential to review whether changes need to be made.

I will be interested to hear if our witnesses believe it is necessary to define what program changes might need to be implemented in reauthorization to aid the improvement of intermodal connections surrounding ports, railheads and other intermodal transfer facilities near our ports and borders.

Mr. Chairman, I ask for unanimous consent to insert testimony from Jim Fiske, from Magtube, Inc. and Charlotte Thorton on innovative approaches for freight transportation issues.

Mr. Chairman, I look forward to today's hearing and want to welcome all of our witnesses.

Senator BREAUX. Thank you. We have that waterway all the way up to Oklahoma from Louisiana.

Senator INHOFE. We do, we do.

Senator BREAUX. Thank you very much, colleagues.

I would like to welcome and am pleased to have Mr. Jeffrey Shane, who is Deputy Secretary for Policy at the Department of Transportation, back before the committee; also, Ms. JayEtta Hecker, who is with the General Accounting Office and has just done an extensive report on some of these issues, particularly in the marine transportation area, to present testimony.

Mr. Shane, Mr. Secretary, we have your testimony. We note it is an extensive document. If you could help us summarize it, we will proceed to questions. Ms. Hecker, the same for you.

STATEMENT OF JEFFREY N. SHANE, ASSOCIATE DEPUTY SECRETARY AND DIRECTOR, OFFICE OF INTERMODALISM, UNITED STATES DEPARTMENT OF TRANSPORTATION

Mr. SHANE. Chairman Breaux, Chairman Reid, Chairman Jeffords, and Ranking Member Inhofe: Thank you very much for allowing me to represent Secretary Mineta today and testify on freight transportation intermodalism. These are issues that affect our economy, as we have just heard, in profound ways and both committees are to be commended for the leadership you have shown in this area.

Mr. Chairman, you referred to my longer statement. I assume it will be placed in the record. I would appreciate that.

Senator BREAUX. Without objection, it will be.

Mr. SHANE. Thank you very much, and I will try to summarize within the time allotted.

With the possible exception of our obligation to ensure for our citizens a safe and secure transportation system, DOT has no higher priority than facilitating the seamless transportation of goods throughout our country and in international trade flows. Conges-

tion, bottlenecks, choke points, and all the consequences of insufficient capacity and inefficient intermodal connections impede that growth, raise costs to consumers, and impair our economic well being in ways that are simply too often overlooked.

Ensuring smooth global supply chains has become of even greater importance as companies increasingly shift to just-in-time manufacturing techniques, and ability to move freight and cargo quickly across the different modes of our transportation system serves as the linchpin of that manufacturing revolution.

The growth of international trade, particularly as the world moves toward a far more liberal framework for trade, represents another key challenge to our transportation system. While we have included a wide range of trade and transportation statistics in the longer statement that I have submitted for the record, I would like to draw your attention again to just one, the one cited by both Chairman Reid and Chairman Jeffords: that the volume of shipments into and out of the United States is expected to double between now and 2020.

It is essential that our ports and our airports and border entry points have the capacity to accommodate these increases, especially with the more aggressive security procedures that will have been put in place in response to September 11.

ISTEA and TEA–21 have created a solid framework for addressing the transportation and logistics needs of our country. As we move forward with the reauthorization of TEA–21, however, one thing is clear. The demand on our Nation's transportation system is growing faster than supply. Statistics show that population growth combined with substantial increases in vehicle miles traveled and freight tonnage moved have resulted in rising levels of congestion on our Nation's highways, despite increased Federal investments under ISTEA and especially under TEA–21. Projected future growth in all of these areas will only worsen congestion without a strong commitment to make our infrastructure far more robust and far more efficient than it is today.

Imagine, if you will, what travel on our highway system would be like today if our freight rail system were suddenly shut down. By the year 2010, you will not have to imagine it, because expected increases in truck traffic over current levels will be equal to the entire volume of freight that is carried on our Nation's rail system today. That is why Secretary Mineta believes that the administration and Congress have to work together to make increasing the efficiency of freight transportation a central feature of our surface transportation reauthorization legislation next year. Coordination between the modes and enhanced private involvement in the system are two themes that need to be emphasized in that effort because, although much has been accomplished over the last decade based on improvements put in place by ISTEA and TEA–21, the promise of intermodalism, more efficient movement of passengers and freight throughout all parts of our transportation system, and the potential for private sector participation in infrastructure expansion have yet to be fully realized.

In conclusion, it is clear that the commercial movement of freight was successfully woven into a number of TEA–21's programs, especially in the areas of funding flexibility, border and corridor plan-

ning, and the application of new technologies. We will need to think carefully about all of these issues as we build on TEA–21 by enhancing existing programs and, where appropriate, developing new ideas to ensure that our freight transportation system can meet future challenges.

As you know, earlier this year Secretary Mineta outlined a series of principles that will guide us through the reauthorization process. Using those principles as our base, we have been carefully examining proposals put forward by stakeholders as we develop our reauthorization proposal. For example, we will work with our partners in the States and in metropolitan planning organizations to achieve wider application of innovative financing programs.

We will consider changes to the Borders and Corridors program that will encourage broader transportation planning and integrate infrastructure investments with national and international business developments. We will continue to apply innovative technologies through the ITS program and in collecting data on freight movements and trade flows, and we will work closely with the private sector to formulate innovative transportation solutions that develop new ways to utilize public-private partnerships that leverage scarce Federal funds.

I am confident that, working together, the administration, Congress, and our stakeholders can expand our transportation infrastructure to ensure increased mobility, security, and prosperity for years to come.

Thank you very much again for the opportunity to appear here today. I look forward to answering any questions you may have.

Senator BREAUX. Thank you, Mr. Secretary.

Next, from the General Accounting Office, Ms. Hecker.

STATEMENT OF JAYETTA HECKER, DIRECTOR, PHYSICAL INFRASTRUCTURE GROUP, UNITED STATES GENERAL ACCOUNTING OFFICE

Ms. HECKER. Thank you, Mr. Chairman, Senator Reid, and Senator Jeffords. We are really honored to be here today. We, as you noted, are releasing the report on marine transportation financing and a framework for infrastructure investments today. But because of the focus on the freight issue, I will broaden my remarks to focus more on the broader context of freight issues.

I will cover four areas: first, the background, which will include this review of the growth that people have talked about; the new data that we collected for you on expenditure and direct receipts from users of the different modes; some data on Customs fees that you particularly wanted us to gather; and finally, the framework for review of critical decision points in evaluating investments in transportation.

The scope of our work, in addition to this work on maritime, is focused on a long body of work on capital budgeting, needs estimates, and, Federal highway R&D. We have work, not yet released, in response to requests from the Environment and Public Works Committee on mobility challenges, innovative finance, State capacity and project delivery. In addition, there is a wide range of expert studies that date back to 1994, a major commission on inter-

modal freight challenges, the TRB report, the intermodal freight connectors report, and many other technical reports.

The background issue that I would just like to cover is really putting the issue on the table that you have all stated, and that is, the enormous increase in projected freight tonnage. According to the Federal Highway Administration's updated figures, freight tonnage by all modes will increase by 41 percent in the next 10 years and 76 percent by 2020.

[Chart.]

This shows the different growth rates for the different modes. As can be seen in the chart, it is estimated that there will be a 43 percent increase in the 20-year period for freight transported by water, a 55 percent increase by rail and an 84 percent increase by truck.

Now, this really obscures the new challenges, because the key of intermodal transportation is really figuring out ways that the intersection and connections between these modes are addressed as well.

[Chart.]

The second point is the history of the funding approaches and receipts from the different modes. This chart depicts the average amounts collected and expended by mdoe for fiscal years 19992001. As can be seen, the maritime users, or the expenditures in the maritime sector, are about $4 billion a year, with user assessments covering about $1 billion. The aviation expenditures are about $10 billion a year, with $11 billion of user assessments and the highway area has about $25 billion of expenditures, with the average for the same period being $34 billion in user assessments.

The key difference here is that the marine system largely relies on general revenues, whereas the aviation and highway systems have historically relied almost exclusively on collections from users.

[Chart.]

I turn now quickly to the third area that you asked us to address and that is the amount of duties that are collected on imported goods transported by the different modes. This basically is in pie chart form and shows that a little over 75 percent of the import fees are collected on goods that come in through the maritime sector. As you see, almost $4 billion comes in through aviation Customs fees and less than $1 billion comes over the land borders of Canada and Mexico.

Now, what is important about the Customs duties is that clearly these are duties or taxes on the value of selected imported goods. This, of course, is a traditional source of revenue for the general fund. It is paid by importers of the taxed goods and varies based on where our trade agreements are and the type of commodity.

Therefore, it is not really a good proxy as a tax on users of the marine system. Although we recognize there is a proposal and discussions to designate Customs duties for the marine transportation system, this is clearly a policy call by the Congress. However, some funds, actually about 30 percent of Customs fees, are already designated for specific uses by the Government, and that includes such areas as agriculture and food programs, migratory land conservation, aquatic resources, reforestation. So some of those duties are already earmarked.

The other thing about the potential for designating Customs duties is that they really are not a new source of capital for the Federal Government. It is money that is already coming in, already accounted for, already spent, and therefore, the notion or the proposal that somehow you can draw on that would amount to a draw on the general fund of the U.S. Treasury.

The fourth area—and I am sorry to see the yellow light go on because this is the most interesting contribution that we are trying to make—is a framework for developing national freight policy for consideration of transportation investment decisions. As you see, we basically outline four key steps: defining national goals, defining the roles of the different levels of Government, developing approaches and tools that promote cost-sharing and efficiency, and finally, evaluating performance.

The key thing about the goals issue is that it needs to be intermodal and it has not been. This other whole issue of the so-called "orphan" status of the intermodal freight connectors. We still have a very stove-piped system and we need a conception of national goals for transportation that are integrated, intermodal, and freight-oriented.

Another element about the goals involves developing Government commitment to performance and results. Therefore, another key indicator of the goals is having performance-oriented measures for system performance and efficiency.

Defining roles, as I said earlier, is about the relative roles of the different levels of Government. The role of MPOs is a key thing here. They have not really paid attention or placed priority on freight. It is rational on their part to do so because while they do not benefit, they bear most of the costs. So there are some structural issues about the relative roles of Government.

The third area, on determining appropriate tools, really is driven by the roles issues. As you define the relative roles, you implement and effectuate those by using the appropriate tools that leverage Federal funding and promote accountability and efficiency. A key thing that I think several of you already alluded to is that in appropriate tools, we also have non-investment and non-capital tools to improve the efficient use of the existing system. That would involve tools such as demand management and congestion pricing; technology improvements which include the ITS area that several of you mentioned; enhanced maintenance and rehabilitation, and improved management and operations.

Quickly, the final area is basically evaluation. We need to understand how current policies work and we need to track the performance of proposed policies. The more it is framed as performance of the efficiency of the system, the more likely we will be able to determine whether we are really getting the improved efficiency in the performance of the transportation system instead of focusing on capital or completed projects. Evaluations allow us to determine the outcome we want to achieve.

That concludes—I am sorry about the red light—my remarks. The key is that the freight intermodal focus is clearly a cornerstone of the next generation of transportation legislation.

Senator BREAUX. Thank you, Ms. Hecker and Mr. Secretary.

I take it, Ms. Hecker, to start with you—and I want Mr. Shane to comment on it—the fact that you are proposing what you have labeled a framework for developing an effective Federal investment strategy indicates that in GAO's opinion we do not have that now?

Ms. HECKER. We continue to have policies and legislation specific to different modes. Certainly the maritime legislation has never been integrated in a systematic way with highway authorization. Furthermore, the whole issue of freight has not been systematically examined. For example, our railroad policies and the effect of some of those policies on the freight infrastructure and the tradeoffs between different modes has not been systematically explored.

So yes, I think there is real value in moving toward a more systematic view of transportation requirements.

Senator BREAUX. Mr. Secretary, we have an office over in DOT that is an Intermodal Office. Is that not what they should be doing?

Mr. SHANE. That is right, and as a matter of fact, Mr. Chairman, I head that office. So that I like to think that we are doing some of that.

I do not disagree, however, with Ms. Hecker that there is certainly more room for further integration. We all know that. To some extent there is an element of stovepiping in the legislation that we have and that we continue to work on. But it would be unfair to characterize ISTEA, for example, the Intermodal Surface Transportation Efficiency Act, and the Transportation Efficiency Act for the Twenty First Century, TEA–21, as completely oblivious to the importance of further integration and intermodal planning.

I think there has been an awful lot of that and there have been some very powerful results as a result. Programs like the CMAQ program, the congestion mitigation program, TIFIA, an assortment of other elements of TEA–21, have indeed funded more integrated approaches to transportation and encouraged intermodal planning at the State and local and regional level.

So I am interested in what GAO has been doing and we would certainly look forward to consulting more and finding out, particularly as we move through the reauthorization process with Congress, where there might be further opportunities for improvement. But I do not think it is fair to characterize the system as totally stove-piped even today.

Senator BREAUX. Are you all working on the reauthorization from a conceptual standpoint as far as recommendations to the Congress?

Mr. SHANE. We are, Mr. Chairman, and I would go further and to say we are beyond the conceptual standpoint. We have been organized—we have got 200 people at the Department of Transportation organized into functional groups, cross-modal, cross-cutting, working with stakeholders in all elements of the transportation sector, working with each other, and thinking great thoughts, if I might say, about the future of these programs, such that by early next year, once we have gone through an exercise with OMB—as you know, that is always required as the administration puts a proposal together for the Congress—we hope to transmit a bill which will be, I think, hopefully, the center of gravity for Congress's deliberations over the reauthorization of TEA–21.

Senator BREAUX. Are we likely to see from those recommendations any type of thinking outside of the box, so to speak? Or are we talking about pretty much the same type of planning and recommendations that we have had in the past?

Mr. SHANE. I hope you are going to see some out-of-the-box thinking, Mr. Chairman. I have been impressed probably more than any other aspect of TEA–21 with the effectiveness of those parts of the program which have been able to leverage Federal money, that is to say to encourage private sector participation, to encourage State governments and other levels of Government to really step up to the plate in a more important way.

In an era of scarce resources—I mean, the era of cheap money is all over and we all know that—it is critical that we find even more effective ways of doing that. Programs like TIFIA, the intermodal connectors program, a variety of others, have produced I think disproportionate gains for relatively small expenditures, and we need to pursue as many opportunities of that sort as we can going forward or we are simply not going to have the resources solely at the Federal level to really meet the demands that we all have acknowledged here this afternoon. Senator Breaux: My final question is in what timeframe are we likely to have a completed package of recommendations from a conceptual standpoint?

Mr. SHANE. Our intention, of course subject to OMB's process, but I cannot imagine that that is going to be an impediment because we have been working with OMB already, is to get the bill, the administration bill, to the Congress very shortly after it returns in January or February of next year.

Senator BREAUX. Senator Reid.

Senator REID. Would both of you give me your thoughts on what we can do when we reauthorize TEA–21 to get the most efficient use out of the transportation infrastructure? Not theory; I mean actual things that we can do.

Ms. HECKER. I think the four areas that I mentioned in terms of focusing on operations and not just construction——

Senator REID. Give me specific things, because all this theory is good, but we have to do something specific.

Ms. HECKER. ITS and the lack of integration of ITS is a specific example. We have not really taken full advantage of the technology to streamline the flow of traffic to have a single standard for ITS. There is a lot more research that is promising about the role of technology.

The focus on operations is another area. It goes precisely to your point.

Senator REID. Tell me what you mean by that? "Focus on operations," what does that mean?

Ms. HECKER. The efficient performance and utilization of the existing system, that it is underutilized——

Senator REID. How do we legislate that?

Ms. HECKER. Well, there has been a comprehensive study that I would rather defer to, that has talked about their permeating all aspects of the Federal relationship——

Senator REID. Ms. Hecker, the only reason I pin you down a little bit is it is easy to get all these theories, that we should evaluate performance, establish goals, develop approaches, but when it

comes down to it, this subcommittee that I am responsible for, next year we have to do real specific things and we are not going to sit around and say, "We are going to evaluate these goals and evaluate performance."

We do not have the benefit of doing that and that is why we need experts like you and Mr. Shane to tell us specifically what we can do to make this new transportation bill meet the modern needs of this clogged transportation system we have.

Ms. HECKER. Well, I think the programs that we talked about, the Border and Corridor programs and the connector programs, it shows that they have not received adequate attention. So some shift of either the funding available or the restrictions will be missing to bring attention to these intermodal links.

Senator REID. You have the time to think about some of the things that we should do. This is your opportunity to give us some specific ideas of things that we could do in the next bill.

You have mentioned the intelligent transportation system, but be more specific. This does not mean we are going to follow everything that you are recommending, but at least it will give us some direction and insight as to what you think we could do to improve the intelligent transportation system.

An example of that is the new Amber Alert that works so well. People really look up on those road signs to get some idea what is going on. So we will leave the record open for a couple weeks for you to give us some specific ideas as to what we can do to improve TEA–21.

Senator REID. Mr. Shane, do you have any ideas?

Mr. SHANE. Yes, Senator, I have a few ideas. I think what I said before is my main—one of my main ideas, the notion that we need to leverage our Federal funds much more effectively. That is not a theory; that is something that we need to find ways of doing along the lines that were explored in TEA–21, I think quite successfully. By leverage, I mean—if you look at the national highway system intermodal connectors, that is a tiny fraction of the mileage on the national highway system. Yet, according to the report that we submitted to Congress that was requested in TEA–21, in the year 2000 the physical quality of those portions of the national highway system is far inferior to the national highway system generally, and the consequences of that inferior quality have a disproportionate negative impact on the efficiency of our whole freight transportation system.

So by attacking a tiny little fraction of the overall mileage on the national highway system through a program of that kind, we extract disproportionately huge benefits. It is that sort of opportunity that we need to pursue.

I mentioned the CMAQ program. You have got real intermodal success stories coming out of CMAQ, including rail success stories, because States have been able to use that money in very creative ways. The TIFIA program, which is a loan guarantee program, it actually requires the expenditure——

Senator REID. I am very familiar with that.

Mr. SHANE [continuing]. Of relatively little money. Again, it stimulates private sector interest in infrastructure expansion in ways

that we have not seen before. We need to find more ways to exploit tools like that.

Finally—and I do not mean by any means, last or least; it is not the least; it may be the most important—the Corridors and Borders program. There is so much interest in trying to facilitate the movement of freight through regional planning, including sometimes very complicated assemblages of Government entities and private sector entities, in order to really streamline the flow of freight in our system, that if the Borders and Corridors program is not big enough we need to figure out ways of either making it bigger or making it more creative such that it has the effect.

Senator REID. It has not worked very well. In theory it should have worked better than it has worked. I think we have to do some things to change it, because I think theoretically it is a great program.

Mr. SHANE. I agree, and there is a huge amount of pent-up interest in it; and the results of solving that problem in the reauthorized program I think will be huge and of enormous benefit to the economy.

Let me just add one last thing if I may, and that is that working with all of these programs one thing that continues to impress me—and I am not just talking about the surface transportation programs; I am talking about all of our programs—when the private sector comes in and wants to do business with us, whether it is to expand highway infrastructure or airport infrastructure or anything else, particularly if it is a program that actually makes some Federal money available, they find themselves in a Faustian bargain. Even when there is enormous interest in trying to build infrastructure in ways that will respond to the demands that we have in the system today, sometimes our procedures can be counterproductive.

One of the things I would like to see us do in the reauthorization process—and I am not here to make any announcements of bright new ideas; these are in process now—is to find ways of really streamlining our own clearance process for these projects. I am talking about all of the transportation projects that are funded or stimulated in any way by the Federal level.

If I may go on for a second, I can give you an example of the sort of thing I mean. We have a security program which has been a huge success. It actually began, Senator Jeffords, in Vermont, called Operation Safe Commerce—a public-private partnership emerging more or less spontaneously in order to test the security of container transportation in our system in international transportation.

Nobody at the Federal level suggested it, nobody approved it. It just happened. Well, we began to think that it was a good idea and we set up an executive steering committee. In fact, I co-chair the executive steering committee with the Deputy Commissioner of Customs, Don Browning. It is an example of how much interest there is in Washington in something that really works.

But now I am noticing something that worries me. Now that we have an executive steering committee, suddenly it has become a Government program. In a funny way, one of the worst things that happened was that they got an appropriation of $28 million. Now

we have to be really responsible. Now we have to have procedures and accountability and we have to have, you know, the Inspector General looking at things, and all of a sudden a spontaneous effort to set up a test bed for container security could, unless we are very careful—and I want to assure you that we are trying to be very careful—if we are not very careful, we will stymie it. It'll grind to a halt just by virtue of the fact that the Federal Government has now applied all of its usual procedures and safeguards and everything else.

We need to get past that mentality in our transportation infrastructure programs or we will not meet the demand that our country will face in 2020 for sure.

Senator BREAUX. Senator Jeffords.

Senator JEFFORDS. Well, thank you very much. I appreciate your testimony. Thank you for your comprehensive testimony, I should say. I look forward to working with you in the TEA–21 reauthorization effort.

Later in this hearing Mr. Huerta on behalf of the Coalition for America's Gateways and Trade Corridors will ask for funding of $2 billion annually for the Borders and Corridors program. You may have just referred to that. But Mr. Wickham of the American Trucking Associations will explain that the congestion at the 7 busiest border crossings costs the trucking industry about 2.6 million hours in delay time per year. Also, Mr. Larrabee of the Port Authority of New York and New Jersey will explain the estimate that trade in all types of cargo will not double, but triple, by the year 2020. Just this weekend, as I rode to New York I enjoyed a visit from Amtrak, letting us know how they feel about the importance of moving more and more of the cars off the highways and onto the railroads and to work in that direction.

So we have a tremendous need here to understand exactly how all of this is going to happen. I hope that you are working in a way that you can assist us in finding the means and the ways that we can accommodate all these changes that are needed. It is going to be huge in the sense of the cost to be able to orderly transfer our transportation systems between the freight and airways and all of that, to do the best job we can do.

So I just believe you will be doing that, but would like for you to tell me you will. Mr. Shane?

Mr. SHANE. I will, Senator.

[Laughter.]

Senator JEFFORDS. Thank you. I thought that might smooth things down a little bit.

Also, Ms. Hecker, I appreciate the detailed report the GAO submitted to our two committees.

You point out the need for significant improvements to our marine transportation system and note that the marine transportation system is generating billions of dollars of revenue. The report discusses aging infrastructure, changes in the shipping industry, and increased concerns about security.

It has been said that the footnotes often contain either the most boring or the most intriguing points in the study. Footnote 12 of your report notes that under current law 30 percent of the gross receipts from Customs duties, about $15 billion per year, is re-

served for agricultural and food programs. Your report further notes that congestion challenges often occur where transportation modes connect, such as in ports.

You also note that if there is an enhanced Federal role, you recommend that the enhanced Federal participation supplement participation by others rather than just replacing it.

Your report has drawn a picture for us, but you have not connected the dots, which indeed may be our job. But can you give us a rough estimate of the cost of addressing the aging infrastructure and the new security concerns?

Ms. HECKER. I will try to answer directly, but the direct answer is, "No, I cannot give you the number." We have actually done some of this work, and I think there was testimony before you, Senator Reid, on reviewing all of the estimates of the needs of the different modes. They cannot be added up. They are done with inconsistent assessments. Most of these assessments do not assume capacity constraints. Therefore, if they are not capacity-constrained, these assessments cannot tell you whether it can grow that much and many of these studies do focus on opportunities for more efficient management and utilization of the system.

So there really is not a single estimate of the cost of addressing the aging infrastructure and security concerns. It is a comprehensive challenge of the whole performance of the system, that we need some initiatives to build, but we need efficient, leveraging financing methods that, as you said precisely, do not supplant or replace State, local, private funds, but supplement entice, and trigger additional expenditures by other parties. Then we need some of those efficiency-inducing operations.

So there really is not a single number. I apologize; I like to answer questions directly, but the answer is no, there is not one single number.

Senator JEFFORDS. Thank you.

Thank you, Mr. Chairman.

Senator BREAUX. I would like to ask one final question on this. They tell me that 75 percent of goods that enter and exit the United States, imports and exports, by volume, and about 60 percent I guess by value, come through the ports around the country. But to get to the ports, a lot of it is coming by truck, by rail, and what have you. So it really is all interrelated.

The report from Ms. Hecker points out that about 80 percent of the funding for the ports comes from the general treasury; and the opposite is true, almost 100 percent of the aviation, trucks, and highways is really coming from user fees.

The question is is the administration talking or looking at ways to increase the funding for the ports? The ports as I have traveled around the country are horribly congested. The trucks cannot get in, the railroads cannot. It is very difficult to coordinate because of the volume and the congestion at the ports. These are very expensive propositions.

Is the administration looking at any different recommendations on how we raise the money for ports, which are going to affect rail and trucks as well?

Mr. SHANE. Yes, Mr. Chairman, we are. Captain Bill Shubert of the Maritime Administration has certainly been speaking with me

and with Secretary Mineta at some length about the possibility of coming back to Congress with some proposals. Unfortunately, I cannot suggest any detailed programs right now, but I am hoping that in the not too distant future we will engage in a more specific discussion of that very important issue.

Senator BREAUX. I hope this discussion is going on, because if we have intermodalism each mode is being financed in a different fashion and yet they are all totally interrelated. To the extent that you can think outside of the box in trying to figure out ways that all of these fees can be coordinated for all methods of transportation, I think that that is going to be very, very helpful.

The Customs duties for the ports are not going to the ports; they are going to the general treasury and they finance agriculture and other good things out of the general treasury. But I think that most of the users like to see the users' fees targeted to the services that they are getting. Now, if that happened we may have a little less funding out of the general treasury for the ports, if it is offset by user fees. But I think we really need some in-depth thinking about how we are going to be financing the intermodalism forms of transportation. I hope you would address that specifically.

Senator REID. Mr. Chairman, would you yield?

Senator BREAUX. Absolutely.

Senator REID. People go to the gas pump and that goes to highways. We get all kinds of user fees to take care of our airports. But as you say—and that money goes directly to the airports and to the highways, whereas the problem you have with ports, as you indicated, that money can be used for anything else.

So I think we need some help on that.

Senator BREAUX. Then we have got the 4.3 cent gas tax and we know all the debate on that, with the railroads still, I take it, still, and barges as well, still paying it for deficit reduction; trucks, highways are not paying it. I mean, is there a consistency here or is there an inconsistency here?

Do you envision any recommendation on that?

Mr. SHANE. All of this is being examined. I know this is a waffle, Mr. Chairman, but it is all being examined. We have to get on top of these issues, and I am hoping that we will come back to you very shortly.

Senator BREAUX. That is important, because I think what I am hearing from GAO is, when we are talking about trying to coordinate all of this, that it has to be better coordinated if we are going to have an intermodal transportation system. How we help finance it, how we address the problems associated with each one of them has to be interconnected. I think there is room for improvement in that particular regard, and that is what we hope we see in the new recommendations.

Senator REID. Mr. Chairman, the other problem we have is that typically, even though you say you think you have things worked out with the Office of Management and Budget, you do not, believe me. The problem we have is they are focused on a 1-year plan. All they care about is what this year looks like. They do not care about what it looks like next year or the year after or the year after.

We have got to pass a 5-year bill here. So we have to do something that takes into consideration more than 1 year. That is why

the suggestion of Senator Breaux is so important. We need somebody to help us on this. Otherwise we are going to do some things that they really may not like. We could use some help. That is why I was so direct with Ms. Hecker. We need more than generalities and we need more than theories. We need some real specific things that we can do to make this 5-year program we are going to promote and pass next year one that is good for 5 years.

Mr. SHANE. If I could just comment very briefly, the reason I said what I said about OMB was that typically——

Senator REID. Do not worry. We will cover for you.

[Laughter.]

Senator BREAUX. We will not tell them you said it.

Mr. SHANE. I am not going to even go there.

[Laughter.]

Mr. SHANE. Typically we have a procedure whereby the bill is submitted to OMB, it is all wrapped up tidily, and that will be sometime later in the fall, and then we find out what they think about it and then we have a big argument with them. What we determined to do this time at DOT was to actually give them a fairly detailed preview of the direction of some of our thinking, because we did not want to be surprised. We did not want to do a lot of work and then have it just "offed" by OMB at some late stage.

They for their part were interested in knowing whether we really were doing something. So we had a reciprocal reason for wanting to meet. I have to say it was a very positive meeting. I think there was a lot of mutuality in terms of the way both OMB and DOT were looking at the importance of being creative about these programs going forward.

So it is not a political statement when I say I think we will do OK with OMB. Funding levels are obviously going to be a struggle. They always are. That is the game. But in terms of the actual shape of the programs, the content, and thinking out of the box and that sort of thing, OMB is prepared to be quite creative and they have been quite cooperative.

We would be prepared to even sit down with staff and provide the same kind of preview, so that you do not just receive a black box sometime early next year and open it and see for the first time what it is we have in mind. We really do want to work cooperatively and creatively as we move forward. That is the only process that is going to produce the kind of benefits we need.

So I offer that and we are prepared to come up.

Senator BREAUX. And do not be afraid of new ideas.

Gentlemen, thank you. Ms. Hecker, thank you very much. Both of you are excused.

We would like to welcome up the next panel of witnesses and thank them for being with us: Ms. Katie Dusenberry, who is chairman of the Arizona Department of Transportation Board; Ms. Michael Wickham—Mr. Michael Wickham, chairman and CEO of Roadway Express; Mr. Ed Hamberger, who is President of the Association of American Railroads; Mr. Rick Larrabee, the Director of Port Commerce for the Port Authority of New York and New Jersey; Mr. Michael Huerta, Coalition for America's Gateways and Trade Corridors; and Mr. John D. Caruthers, who is chairman of

the I–69 Mid-Continent Highway Coalition and one of my constituents from Shreveport.

We thank all of you for being with us and are anxious to receive your testimony. Ms. Dusenberry, we have you listed first and we would love to hear from you first.

STATEMENT OF KATIE DUSENBERRY, CHAIRMAN, ARIZONA DEPARTMENT OF TRANSPORTATION BOARD

Ms. DUSENBERRY. Good afternoon, Senator Reid, Senator Breaux, and the other members of the committee. Thank you for the opportunity to present to you the views of the Arizona Department of Transportation Board and the freight industry regarding the Hoover Dam Bypass Bridge.

I am Katie Dusenberry, as you said, chairman of the Arizona Department of Transportation Board and chairman also of Arizona's CanaMex Task Force Subcommittee on Transportation. You probably are wondering why I am testifying before you in dealing with concerns of commercial vehicles. You see, I am in the trucking business. My husband, our son, and I own and operate a 78-year-old family owned trucking company with offices and warehouses in five Arizona cities. We employ over 250 hardworking people and have almost 300 pieces of commercial vehicles. So I have a keen understanding of hauling issues.

As has been mentioned before, the freight business is rapidly changing, from distribution of farm-to-market and domestic products to delivery of export and import goods to and from entry ports to consumers everywhere in our country and in the world. If you live in the city, everything you wear, everything you eat, even what you are sitting on, comes to you by truck.

One of those important port-to-port transportation corridors is the CanaMex corridor which runs from Mexico City, Mexico, through five U.S. States and into Edmonton, Alberta, Canada. This is an essential north-south trade route for commercial vehicles and their products. The biggest functional failure in this north-south corridor is the restriction of commercial vehicles across Hoover Dam.

This brings me to sharing with you the importance of completing full Federal funding for the Hoover Dam Bypass Bridge across the Colorado River. Prior to the terrorist attacks on September 11th, 2001, the only highway for freight and passenger vehicles to go between two large metropolitan areas, the cities of Phoenix, Arizona, and Las Vegas, Nevada, an important link in the CanaMex corridor, was to cross the Colorado River on a two-lane road, one in each direction, atop the Hoover Dam.

This dam, built almost 60 years ago, reached its road capacity more than 10 years ago. Envision the steep grades of the approach roads, with their sharp hairpin turns, turns so sharp that freight trucks could not pass on the turns and would come to a complete stop before entering the turn to allow any oncoming truck to navigate that turn. Speeds on those approach roads ranged from 5 to 18 miles per hour. If accidents occurred, delays of 2 to 5 hours were very common, and one accident a few years ago resulted in an 18-hour delay. Cars and trucks would be backed up for miles.

So planning for the bridge began long before September 11. But since then, commercial vehicles are restricted from crossing the dam. They are now diverted 23 miles at a cost of $30 million per year in fuel costs alone, to another inadequate river crossing, down a winding mountain road where some trucks in the last few months have lost control, resulting in serious accidents.

The Hoover Dam crossing is the only highway in the country that has not been reopened to commercial traffic since 9–11. This is not surprising since the dam is a high security risk and any breach of the dam would flood more than 250,000 people and cutoff electric power to over 1.3 million in California, Nevada, and Arizona.

The project to build the dam and its approaches in Nevada and Arizona will cost $234 million. Through commitments from the States of Nevada and Arizona, together with Federal moneys from the TEA–21 Borders and Corridors discretionary funds, we have pieced together $126 million. The environmental impact statement is finalized. The record of decision for the project approval is in hand. With the money we have, design and construction of the approach roads in Nevada and Arizona are under way.

$108 million is needed to complete this nationally needed project. We are asking you to give this project your highest priority in discretionary funding to ensure full funding of this bypass bridge and meet our anticipated completion date of 2007.

Thank you for allowing me to testify this afternoon. If you have any questions I would be pleased to answer them.

Senator BREAUX. Thank you very much.

Senator REID.

Senator REID. Mr. Chairman, thank you.

I am going to ask Ms. Dusenberry, have you ever been to Searchlight?

Ms. DUSENBERRY. No.

Senator REID. You have never been to Searchlight, Nevada?

Ms. DUSENBERRY. No.

Senator REID. Oh, boy.

Ms. DUSENBERRY. Where is Searchlight, Nevada? I travel a lot in Arizona, but I am sorry I have not been to Searchlight.

Senator REID. Have you been to Laughlin?

Ms. DUSENBERRY. Yes.

Senator REID. Just a few miles from Searchlight. You should get up there sometime.

Ms. DUSENBERRY. I need to get up there.

Senator REID. Yes.

Ms. DUSENBERRY. Do they have gambling—no.

[Laughter.]

Senator REID. You realize that is where all the traffic is going, is through Searchlight?

Ms. DUSENBERRY. Ah, the traffic now, the truck traffic now.

Senator REID. Mr. Chairman, I have a series of questions that I would like to submit to each of these witnesses. I would ask if they within a couple weeks would get back to us with responses to those questions. Is that OK with you?

Senator BREAUX. Without objection. I know that Senator Reid, because of his other duties, is going to have to be departing before

perhaps everyone finishes. But that would be totally acceptable. He has worked very hard on getting these witnesses here and I know he is going to look forward to your responses.

Senator REID. Thanks, Mr. Chairman.

Senator BREAUX. With that, our next, Mr. Wickham.

STATEMENT OF MICHAEL W. WICKHAM, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, ROADWAY EXPRESS, INC., ON BEHALF OF AMERICAN TRUCKING ASSOCIATIONS

Mr. WICKHAM. Chairman Reid, Chairman Breaux, thank you for the opportunity to testify on behalf of the American Trucking Association and Roadway Corporation. Having spent my entire career at Roadway, I am most proud of the fact that we continue to improve our safety record year after year, mile after mile, and today our trucks and drivers are the safest on the road.

When moving freight, whether modally or intermodally, safety is the No. 1 priority. The trucking industry, ATA, and Roadway believe the one thing that we can and must do to improve the efficient movement of freight is to refocus our traffic laws to prevent excessive speeding. Excessive speed simply is a factor in nearly one-third of all fatal accidents and more than one-fifth of accidents involving trucks. We ask Congress to provide specific funding for speed enforcement for both truckers and motorists and section 402 and the MCSAPS program.

Trucks move 67 percent of the freight tonnage, 86 percent measured by value. This is freight that moves by trucks alone. It does not touch any other mode. While the intermodal movement of freight can and does play an important part and should be encouraged, the potential for rail intermodal transportation to slow the growth of truck traffic is limited by market forces beyond the control of Congress, the States, and to some extent the modes themselves. Today, just 1.2 percent of the freight moves in rail intermodal shipments. Despite anticipated growth in this sector, which will exceed trucking growth, by 2014 rail intermodal shipments will capture only 1.5 percent of the freight market, while trucking's market share as measured by tonnage will expand to 69 percent.

It is not constructive to assume that the business logistics trends of the past half century, which have made trucks the dominant mover of freight, will somehow reverse themselves and that our Nation's reliance on trucks will subside. Congress should focus its attention and resources where they are needed most and will pay the greatest dividends for our country, and that is on improving the efficiency of the highway system and the productivity of the trucking industry.

Efficient highways have allowed trucks to deliver freight on time. This has allowed manufacturers to substantially reduce their inventories through the use of just-in-time logistics, saving the U.S. economy hundreds of billions of dollars and creating thousands of jobs. Unfortunately, congested and unreliable highways threaten to reverse these gains. Congress should not allow the performance of critical highway corridors to continue to deteriorate, nor should highway money be further diverted under the false notion that investing in other modes will negate the need for highway investments.

The national highway system carries 75 percent of all truck traffic. Yet 40 percent of travel on urban national highway system routes takes place under such congested conditions that even a minor incident can cause severe traffic disruptions. We strongly urge Congress to make improving the national highway system its priority during highway reauthorization through significantly higher dedicated funding. Congress should also consider innovative ideas such as the construction of voluntary truck-only highways.

Improving the national highway system connections to intermodal terminals is of primary concern to all freight modes, including the trucking industry. They should receive dedicated funding. However, if we focus our attention on the 2,000 miles of connector highways and ignore the 160,000 miles of other national highway system highways that tie the intermodal facilities together, the efforts at the ports and points will be pointless.

ATA supports the expansion of the Borders and Corridors program. Along with representatives of other freight modes, we are a member of the Coalition for America's Gateways and Trade Corridors and we associate ourselves with the Coalition's remarks. We hope that Congress will ensure that in the future the program focuses on the most critical corridors and border crossings and that funding eligibility is not expanded.

While infrastructure improvements are essential, we recognize that highway capacity expansion cannot itself solve all of our problems. Nor is there sufficient funding available to address our many needs. Fortunately, there are ways to improve the freight system's efficiency beyond adding highway capacity. Congress can take a significant step by granting States the authority they need to reform their truck size and weight regulation. Using fewer trucks to move goods would reduce congestion significantly and would improve important safety, air quality, and economic benefits and lower pavement costs.

Congress and the States should achieve—could achieve for free what they would otherwise have to invest billions of dollars in expanding transportation capacity to accomplish. Missing or ignoring such opportunities would be shortsighted.

I realize that there are misgivings about the safety implications of reforming size and weight regulations. However, the best available evidence indicates that increasing trucks' capacity can actually produce safer highways. A DOT study found that triples and other longer combinations have an accident rate which is half that of other trucks.

This evidence reflects our company's own experience with triples. Since 1990, Roadway triples have been involved in exactly one fatality. That is one fatality over 155 million miles of travel. Triples are the safest trucks in our fleet by far and there is no practical or scientific basis for the Federal law that restricts States from determining where they should operate.

Neither ATA nor any of us in the industry is interested in seeing these trucks operate except where they can be run safely and where their operation does not produce additional infrastructure costs. ATA strongly recommends that Congress look to the recently completed TRB study on truck size and weight as a guide toward responsible implementation of size and weight reform. Next year

Congress has the opportunity to decide whether the American people will share the road with a safer, more productive truck or a lot more trucks. That choice is critical.

Thank you for the opportunity to share the industry's ideas.

Senator BREAUX. Thank you, Mr. Wickham.

From the railroads' perspective, Mr. Hamberger.

STATEMENT OF EDWARD R. HAMBERGER, PRESIDENT AND CHIEF EXECUTIVE OFFICER, ASSOCIATION OF AMERICAN RAILROADS

Mr. HAMBERGER. Thank you, Mr. Chairman, for the opportunity to be here today. I am particularly pleased to participate in this unprecedented joint committee hearing. I think it is appropriate that the committees recognize the importance to coordinate transportation public policy, much as carriers coordinate the transportation of America's goods outside of the Beltway.

Rail intermodal freight transportation has been the fastest growing segment of traffic for the U.S. freight rail industry over the past 2 decades, growing from 3.1 million trailers and containers in 1980 to nearly 9 million in 2001. It now accounts for approximately 20 percent of revenue for class 1 carriers and moves seamlessly throughout the North American rail network.

There are numerous reasons why rail intermodal transportation has become such a vital part of the U.S. and indeed North American freight transportation mix. One, it saves shippers and customers money by combining the door to door convenience of trucks with the long haul efficiency and cost effectiveness of rail.

Two, it saves fuel. In fact, on average a railroad can carry a single ton of freight 400 miles on one gallon of fuel, the equivalent of Baltimore to Boston.

Rail intermodal improves air quality. According to the EPA, for every ton-mile, a typical locomotive emits roughly three times less nitrogen oxide and particulate matter than a typical truck.

Four, rail intermodal reduces highway congestion. An intermodal train can take approximately 280 trucks from the highways or the equivalent of 1,100 automobiles.

We have heard a lot about the increased demand that is going to be out there for freight transportation, and clearly to meet that demand freight railroads will have to invest heavily in projects that increase efficiency and capacity. Railroads are incredibly capital-intensive, as you know, Mr. Chairman. In the year 2000, railroads put almost 18 percent of their revenues into capital expenditures, more than four times as much as the average for manufacturing.

In terms that Congress often deals with, if that had been translated into a per-gallon excise tax it would have equaled $2.05 for every gallon of fuel burned by the industry reinvested back into that industry, our industry, the freight railroads.

Unlike my good friend Jeff Shane, let me not waffle, Mr. Chairman. We need that 4.3 cents back. It is $170 million a year, $2 billion since it was enacted, that would go back into the industry and back into the infrastructure.

We have joined the Freight Stakeholders Coalition and in my testimony we have outlined nine specific recommendations. Let me

just highlight four of those: one, dedicate funds for the NHS connectors to the intermodal freight facilities.

Two, develop ways to increase available funds without new user fees and taxes, through innovative financing options. We have identified two of those. One would be to institute tax incentives and tax-exempt financing for companies that invest in intermodal freight infrastructure. Examples of qualified assets would include track and roadbed located on intermodal corridors and intermodal transfer facilities and related equipment. The second option would allow the funding of rail infrastructure through tax-exempt indebtedness, which would include track, bridges, tunnels, terminal facilities, signals, and computer systems.

Let me just digress for 1 second because I cannot let Mr. Wickham's statement go unanswered when he said that it would not cost the Government anything to increase the size and weight of trucks. You realize, of course, that the Secretary, the Department of Transportation, has issued a report that indicates that at 80,000 pounds trucks pay approximately 60 percent of the damage that they do to roads and bridges. At 100,000 pounds that number falls below 50 percent. So indeed it is not at no cost at all and in fact it would merely exacerbate the already uneven playing field on which we find ourselves competing.

Three, significantly increase funds for an expanded corridor, border, and gateway program. We belong to Mr. Huerta's coalition and he will talk about that.

Four, increase funding and promote the use of the CMAQ program to reduce congestion and improve air quality.

In addition to the Freight Stakeholders Coalition agenda items, we have two additional others: one which we discussed at length with the Environment Committee some time ago, to increase funding of the section 130 grade crossing program and clarify that the funds may be used for maintenance; and two, expand the rail rehabilitation and financing program and remove the restrictive program requirements. This committee has already endorsed that by a vote of 17 to 3.

As you mentioned in your opening comments, Mr. Chairman, our Nation's global supremacy is derived in large part from a transportation system that is second to none. Freight railroads are an indispensable part of that system. We are confident that we can continue to play a major role in meeting our Nation's future transportation needs. As you know, we move 40 percent of the Nation's goods by ton-mile right now.

But for those needs to be met efficiently, it is imperative that the intermodal push initiated by ISTEA and TEA–21 be developed further. We look forward to working with both these committees, others in Congress and others in the private sector to see that this can occur.

Thank you.

Senator BREAUX. Thank you, Mr. Hamberger.

Next we have Admiral Larrabee. I am particularly glad to have you with us today, Admiral. I know that a year ago tomorrow you were in the World Trade Center in obviously extreme difficult circumstances and situation. We are very delighted to have you with us today and look forward to hearing your testimony.

STATEMENT OF RICK LARRABEE, DIRECTOR OF PORT COMMERCE, PORT AUTHORITY OF NEW YORK AND NEW JERSEY

Mr. LARRABEE. Thank you, Mr. Chairman. Mr. Chairman, thank you for the invitation to be here today to testify on matters of intermodal transportation and port access. The work of your committees demonstrates the importance of considering how separate modes of transportation operate as part of a total system. My hope is that this hearing will heighten your interest in this subject, further your understanding of how the efficient movement of intermodal cargo is a matter of national interest, and convince you that improvements in the Federal policy and the level of assistance are warranted.

The Port Authority of New York and New Jersey is a bi-State public authority whose mission on behalf of the States is to identify and meet the critical transportation infrastructure needs of our region and provide access to the rest of the Nation and to the world. We operate the region's major aviation and marine facilities, as well as PATH, the commuter transit system, ferry and bus terminals, the interstate tunnels and bridges, and other facilities.

Our airports are responsible for roughly 20 percent of all U.S. international cargo, which, combined with domestic cargo, totaled nearly 2.9 million tons in 2000 and a value of $150 billion.

The seaport serves 35 percent of the U.S. population and over 200 nations. The terminals in New York and New Jersey handled over 3 million containers last year and $80 billion of general bulk and breakbulk cargo moved through the port in 2001. Another 1 million containers arrive in our region via rail from the West Coast.

Meanwhile, 250 million vehicles traveled annually over our bridges and through our tunnels and 2.5 million buses used our two bus terminals in New York City.

These statistics attest to the vitality of the trade and the economic activity of the Nation and our region. But it also hints at a major challenge we and other regions face: to make sure American gateways and freight corridors have the capacity to keep up with the growth in trade and a larger economy. To be clear, this is not a case of "build it and they will come." It is a matter of build it because the cargo is already coming. In fact, it is already here, resulting in even greater congestion.

Addressing these challenges will require investing in the infrastructure and adjusting policies to foster smart solutions for long terms. Partnerships are coming together locally and regionally to support projects and we need a strong Federal partner to accelerate these activities.

The Port Authority is coordinating with the States of New York and New Jersey and is in the process of developing specific recommendations for future legislation. Therefore, I will devote the remainder of my statement to some general observations for your consideration. These are in no particular order.

First, we and other ports greatly appreciate the attention that Congress and the administration are giving the maritime transportation system. It is our hope that the Federal Government will act affirmatively on identifying MTS infrastructure requirements.

Second, congestion can be found throughout the country, but it is especially severe in major gateways and metropolitan areas that are essential elements of the Nation's economic infrastructure and security. These areas, including the New York-New Jersey region, deserve special attention and face unique challenges to upgrade aging facilities, new, modern standards to accommodate larger and heavier container freight movements.

Third, expanding capacity should not mean that trucking alone will have to bear the brunt of the growth. Clearly, trucking will be an essential part of the transport strategy in the decades to come, carrying more and more freight, but in our region and others trucking and the highways on which they depend are not expected to have the capacity to handle the growing population and anticipated doubling and tripling of domestic and international cargo. Therefore, a greater share of our future transportation needs needs to be addressed by other modes, which leads me to my fourth point.

Your committee should consider to foster the development of other modes to accelerate increased demand. Rail certainly is one part of the answer. We are building three new intermodal rail yards at our maritime terminals in order to dramatically expand our capacity to move containers on rail. In addition, the Port Authority is working with the railroads and public agencies to identify specific rail regional projects that will improve line and terminal capacity.

Another answer can be found off our shores. We are undertaking a program to encourage intermodal cargo to move by water wherever possible. There is tremendous underutilization of capacity on the water that can bring new capacity to intermodal transportation along major corridors with less investment. It is not the solution, but if examined for associated capital, energy, and environmental costs, it can be part of a solution with Federal support.

Fifth, innovations approved by Congress in TEA–21, such as Congestion Mitigation Air Quality and national corridor planning and development programs, were very worthwhile policy steps to take. These innovative programs could be improved and expanded even further, especially to add to the capacity of major gateways.

Sixth, investments in freight movements could also benefit passenger services. These include TEA–21 projects intended to divert freight from heavily traveled automobile routes to dedicated freight corridors, whether on land or water. We have undertaken a comprehensive look at how intermodal freight improvements can be strategically planned and implemented to stitch together freight corridors. Already underway is a project to bring intermodal rail to Howland Hook Marine Terminal on Staten Island, a significant step to improving direct rail service to New York City.

Another project referred to is the Port Authority's Port Inland Distribution Network, PIDN, which would mitigate against growing congestion at marine terminals and highways by transshipping cargo via railroads and barges destined for Northeast locations. There is a strong interest in PIDN among Northeast States as alternatives to congested corridors like I–95.

Federal interest and support could help such initiatives demonstrate how water transportation can manage part of the freight

growth. Flexibility in Federal programs can be a way to support these initiatives.

Last, the use of intelligent technology has proved very worthwhile in our region for managing the flow of our busy highways and crossings.

I think your committee can benefit greatly by the thoughtful attention that has been given to these issues by my counterparts here today as well as in Government and the private sector, including a number of transportation and freight-related associations identified in my written testimony. Federal freight transportation policy is still in its adolescent stage, which means there is great opportunity for improvement to meet the challenges I have described.

Thank you again for allowing the Port Authority of New York and New Jersey to participate.

Senator BREAUX. Thank you very much, Admiral.

Mr. MICHAEL HUERTA.

STATEMENT OF MICHAEL P. HUERTA, SENIOR VICE PRESIDENT AND MANAGING DIRECTOR, ACS STATE AND LOCAL SOLUTIONS, ON BEHALF OF THE COALITION FOR AMERICA'S GATEWAYS AND TRADE CORRIDORS

Mr. HUERTA. Good afternoon, Chairman Breaux. It is my pleasure to be with you today to review our Nation's freight transportation system and needs. I would like to briefly summarize my formal statement and would welcome the opportunity to respond to any questions that you might have.

As you know, my name is Michael Huerta. I am a Senior Vice President and Managing Director of ACS State and Local Solutions. ACS is a premier provider of business process and information technology outsourcing solutions to world-class commercial and Government clients. We provide travelers with time and money-saving transportation technologies, including the operation on behalf of several agencies of EasyPass, the electronic toll collection system in the Northeast, which is actually fully interoperable from Maryland to Massachusetts, and the PrePass waste station preclearance system at more than 200 locations in 24 States coast to coast.

From 1993 to 1997, I served as Associate Deputy Secretary of Transportation and was the Director of the Office of Intermodalism.

I appear today on behalf of the 23 groups that comprise the Coalition of America's Gateways and Trade Corridors. The coalition's sole interest is to encourage adequate Federal investment in our Nation's intermodal freight infrastructure. Our members include motor carriers, railroads, ports, and freight corridors—in short, the men and women that move America's freight.

International trade is the key to America's economic future. The imports and exports that fuel our economy are doubling every 10 years and freight traffic within the U.S. borders will increase 100 percent by 2020. You have heard from all the witnesses about the tremendous growth in international trade. Any way you cut it, freight transportation is growing dramatically.

This growth in freight is good for all of us, in fact very good. Rapidly accelerating trade, combined with domestic growth, have cre-

ated a $10 trillion U.S. commodity flow that produced millions of new job opportunities and a higher standard of living for Americans.

However, these benefits will only last as long as we can keep the freight moving. As part of the reauthorization process, we must rethink the portion of TEA–21 that was devoted to freight-related projects. The facts are the current port and trade corridor system is at the present time very pressed to accommodate the traffic we have today. That infrastructure is failing. Intermodal connectors currently have up to twice as many engineering deficiencies and pavement deterioration issues as the national highway system routes, and at the same time demands on intermodal connectors are expected to double by 2020.

Recognizing the growing freight needs, as part of TEA–21 Congress established the National Corridor Planning and Development Program and the Coordinated Border Infrastructure Program, commonly referred to as the Borders and Corridors programs. The legislation also provided $140 million annually for these programs combined.

Unfortunately, the current Borders and Corridors programs have fallen short of the intended goals for two reasons. First, the programs were funded at levels far less than necessary to meet freight transportation and intermodal connector needs. As witness to that, since the beginning of the programs, requests from the States and metropolitan planning organizations have exceeded Federal funds available by a ratio of 15 to 1.

Second, the Borders and Corridors programs have been extensively earmarked in the annual appropriations process, frequently allocating funds to projects that may or may not have been those with the greatest national significance to the movement of freight.

With respect to the reauthorization of TEA–21, the coalition strongly recommends that the programs be continued, but bolstered to ensure that the original goals are met. The coalition respectfully commends several recommendations to the committee for your consideration.

First, to meet the high level of demand, funding for the Borders and Corridors programs must be increased and increased dramatically. The coalition believes that a minimum of $2 billion is needed annually. The distribution of funds should be freight-specific. There should be a qualification threshold based on freight volumes and freight-related congestion to ensure that the limited dollars that are received reach the corridors, the borders, and the gateways of the greatest significance to trade.

Third, the designation of entities eligible should be expanded to include other public and quasi-public organizations that may not today be qualified to receive funds under the program.

Fourth, the Borders and Corridors program should be redefined to address the needs of all trade gateways, not only the land corridors and gateway-connected trade corridors. Many gateways that handle huge volumes of freight are not eligible for funding because they may not be at so-called borders. For example, we do not think of Illinois as being a border State, but one-third of the Nation's freight passes through Chicago and it is the largest intermodal hub in the Nation. Similarly, inland ports are also important gateways

that enable the efficient movement of goods throughout the entire country.

The designated high priority corridors available for funding under the Borders and Corridors programs need to be reexamined to ensure freight-intensive areas can apply for funding. Currently there are many important projects in need of funding that do not fall in one of the 43 priority corridors designated under TEA–21. In conclusion, I would like to say that America's freight is America's future. We must keep the infrastructure that underpins the movement of freight strong. That means additional Federal investment. Every dollar invested in the highway system yields $5.70 in economic benefits to the Nation, but at the same time investment in the freight infrastructure is also critical for national defense. Ports and their connectors have always been the point of embarkation for defense material and this role is even more important in the wake of the terrorist attacks of a year ago.

Thank you for the opportunity to offer the coalition's views and I look forward to responding to your questions.

Senator BREAUX. Thank you very much, Mr. Huerta.

Next we will hear from my friend John Caruthers, who is chairman of the I–69 Highway Coalition. I kind of use the names "Caruthers" and "I–69" interchangeably now. It is like you are one and the same thing. So we are delighted to have you with us, John, and pleased to receive your testimony.

STATEMENT OF JOHN D. CARUTHERS, JR., CHAIRMAN, I–69 MID-CONTINENT HIGHWAY COALITION

Mr. CARUTHERS. Thank you, Mr. Chairman, and thank you for the compliment, and thank you for the opportunity to discuss with you the importance of I–69 to the efficient movement of the Nation's freight.

I–69 when finished will span the Nation's heartland from the Canadian border to the Mexican border, traversing 9 States—Michigan, Illinois, Indiana, Kentucky, Tennessee, Mississippi, Arkansas, Louisiana, and Texas. Two sections of this system are already existing and open to traffic. The first one starts at Port Huron, Michigan, on the Canadian border and extends to Indianapolis. The second, Interstate 94, extends from Port Huron southwest to Detroit and west to Chicago.

The rest of I–69 is under development, from Indianapolis south to Memphis, Tennessee; Shreveport; Bossier City, Louisiana; and Houston, Texas; to the Lower Rio Grande Valley and Laredo at the Mexican border. Completion of I–69 will not require an entirely new facility. In some areas it will link existing interstates or upgrade and link other existing highways. Work is under way along the entire I–69 corridor.

While I–69 traverses 9 States, it is important to the Nation as a whole. Trade has shifted, particularly since NAFTA, from an east-west to a north-south trend. Canada and Mexico are now our two largest trading partners. Last year, 2001, 80 percent of the U.S. trade with Mexico and 67 percent of U.S. trade with Canada went by truck and I–69 corridor accounted for 63 percent of the Nation's truck-borne trade with both Canada and Mexico.

The Michigan border points of Detroit and Port Huron account for 48 percent of our truck-borne trade with Canada and the Texas border between Laredo and the Lower Rio Grande, Brownsville and McAllen, accounts for over 49 percent of our truck-borne trade with Mexico.

Looking at freight flows nationwide, not just with Canada and Mexico, approximately half of the total freight shipped in the United States in 1997, over 5 billion tons, passed through, originated, or terminated in the I–69 corridor. Freight is entering and leaving the I–69 corridor by truck, rail, air, and water. 17 of the Nation's top 25 seaports are in this corridor. 13 inland waterway ports and 15 of the Nation's top 25 air cargo airports are directly served by I–69.

Every major eastern and western rail carrier and both Canadian carriers have terminal operations on the I–69 corridor. There are truck-rail intermodal facilities in every major city along the corridor. I–69's port of Houston leads the Nation in foreign waterborne tonnage, and container traffic in the Gulf of Mexico ports served by I–69 is growing faster than the national average or faster than traffic at Atlantic or Pacific ports.

Trade entering I–69 from all modes of transportation is growing faster than in the rest of the Nation. Trade tonnage moving through I–69 points of entry from 1990 to 1999, including land, sea, and air, grew 18.3 percent, or more than twice as fast as the national average of 8.3 percent.

A Federal Highway Administration study suggests that the recent growth in freight traffic will continue through the year 2020. The vast majority of the new growth will be in the trucking industry, with the dominant movement on the Southwest to Northeast direction, a movement ideally suited for the I–69 corridor.

Yet there is no direct interstate-level highway from Indianapolis to the Mexican border. When the interstate system was initially designed, it was laid out generally east-west, reflecting the demographics, trade patterns, and defense needs at the time. When the interstate was completed in 1995, some of the newer north-south sections like I–69 were left unfinished. The premise of the Corridors and Borders program was the recognition that within the 160,000 mile National Highway System there were unfinished corridors essential to the Nation's trade and economic growth that needed to be completed and merited a separate program. The program, however was only funded at $140 million a year nationwide and many of the projects that qualified or were earmarked for funding were of local, not national, interest.

Despite insufficient funding, the I–69 corridor made such significant progress that all of I–69 can go to construction during the period of the TEA–21 reauthorization. Much of it can be completed if dedicated funds are available to do so.

Having built the interstate system, we cannot rest on our laurels. We must invest our resources in those unfinished corridors that serve today's and tomorrow's 21st century trade flows, such as I–69. There are a number of mechanisms to accomplish this: limiting the Borders and Corridors program to major trade corridors and increasing its funding, dedicating program funds to complete unfin-

ished interstate links, or funding freight corridors. Any of these options would work, whether alone or in combination.

The point is we must recognize the need for and build the infrastructure to serve our Nation's freight flows. The traffic is there. The intermodal connections, rail, water, and air, are also there. The trade is surging at Houston, Detroit, and Laredo. Yet the interstate-level facility to transport these products safely, efficiently, and economically, I–69, remains unfinished.

Thank you very much.

Senator BREAUX. Perfect timing, John. Thank you very much, and thank all of the witnesses for being here. I think the discussion today has been good. It is going to give a lot of our professional staff some ideas and thoughts as we approach the reauthorization of TEA–21.

Obviously, I heard my questions to the Assistant Secretary to start thinking outside the box about what we need to be doing in these areas. I realize that in the private sector it is awfully difficult to bring about a great deal of cooperation because all of you—not all of you at the table, but railroads and truckers and ocean-bearing traffic and aviation—are all financially competitors. So it is hard for you to sit down and figure out what is good for the whole country when you have a responsibility to your independent modes of transportation, with railroads and the trucking industry and aviation industry and ocean-bearing traffic for the ports.

Mr. Huerta, in the coalition that you have, how difficult is it to get these various competitive modes to sit down and say, all right, what are we going to do to make it work? I mean, we have got congestion at the ports. We do not have enough railroads coming into the ports, we cannot get enough trucks in to pick up the containers. We are going to double the amount of containers coming in and going out in the foreseeable future.

How difficult is it to try and bring about cooperation? What needs to be done in that area? I am sure each one of these segments would like to do it all by themselves, and that is not going to happen. So how do we get them to work together to come up with some recommendations that can make sense for the Congress?

Mr. HUERTA. Mr. Chairman, one thing that we hear in our coalition meetings and that I think you heard today is that there is unanimity among all the modes of surface transportation that we are not doing enough about freight transportation. The discussions that we have had at the coalition focus on the fact that, while there are many ways that you can fund freight programs under the current categories through which the surface program is reauthorized, generally it is very hard to build the level of support for freight programs, because they may extend beyond the borders of a particular State or a particular metropolitan area.

These are national needs that are out there and when you are looking at something from the point of view of a particular region, it is sometimes hard to put that national lens on and look at the world that way. What you have heard from all of us is that international trade is extremely important, the growth of the economy domestically is extremely important, and moving the freight through the system is going to be essential in the coming years.

So we all agree on things like the Borders and Corridors program. It was a terrific concept. It has worked very well. There just is not enough money.

Likewise, there are many other ways that you can get freight projects identified. What we would like to see is how do you give them the priority. We are looking for more than just, yeah, you can spend money on a freight project. We would actually like to see some funds designated for freight projects. Senator Breaux: Address a question that is a concern to me about the congestion at the ports of our Nation. We have got 75 percent of the traffic by volume either going out or coming into ports internationally, and of course NAFTA has brought a lot more by trucks through Canada and through Mexico. But that traffic coming in and out of the ports which are so congested is going to be coming by rail, it is going to be coming by trucks, and if we do not have a system in these ports to make it work better, we are just going to have some ports that are so congested you are not going to get railroads coming in or trucks coming in or anything going in and out, in the timeframe that we need it, to be effective and to be efficient in the world community.

So I mean, tell me a little bit about what they did to the Alameda corridor? Is that helpful in looking at possible solutions, what they were doing out there?

Mr. HUERTA. It is helpful and it in fact has been used as a model for many other port access projects around the country. But let us step back and look at Alameda in terms of what it involved. The project had something like a 13-year history before it actually got into construction and it was an extremely complicated thing to try to move through the traditional funding process.

Ultimately, it was funded through a combination of user fees and local funds that were generated by the two port authorities in Los Angeles and Long Beach. Then the Federal portion, the largest piece of the Federal portion, was actually a Federal loan. But we did not have the authority to do that project when the loan idea was first proposed. It required special legislation that was enacted by Congress as part of the national highway system designation.

That success at Alameda, though, became the model for the TIFIA program, which works for large infrastructure projects such as this, where there is a user fee that can perhaps repay the costs of the loan and other funds that might be in place. However, a loan program is not going to work all the time. There are major corridor and access projects at rail terminals, at trucking terminals, and at ports around the country that might not be able to support a user fee, and that does not make them any less important in terms of elevating their profile for funding.

But they have the added complexity that a port access project, for example, in the State of Washington or in the State of New York, benefits people far into the interior of the country. Under the current planning and funding framework, it really falls to the State or the metropolitan area where that project is located to lead that project through the overall funding mechanism and to make it a priority in that region.

What we need is a way for these big mega-projects to assume the national profile that they really have, such that they are not the

responsibility of a single State or a single metropolitan area to carry them out and fund them.

Senator BREAUX. Maybe, Admiral, you can get in on this. But if we have needs at all of the ports—and I am talking about ports, but I am really talking about making it more efficient for railroads to serve ports, for the trucking industry to serve the ports, as well as the ships taking the goods and services in and the containers in and out of the ports to operate more efficiently.

So give me some discussion on the concept of port user fees. I know there is all this, all right, we are going to be noncompetitive if we have to have user fees. Well, user fees are paid by the ultimate consumers of the product. I have always had the concept that if they are the same across the board no one has an unfair advantage, if everybody is paying the same user fee that is dedicated for port development and infrastructure in those seaports around the country.

Is that concept a viable concept as a means of getting extra funds for fixing the ports and eliminating some of the congestion, or is it a bad idea? We have got to find out where we have the money and it is not going to be easy and somebody is going to be unhappy. Talking about taxes, they are unhappy. Talking about fuel taxes, they are unhappy. Talking about user fees, they are unhappy. Do we need more money? Yes.

Admiral

[Laughter.]

Senator BREAUX. The shippers are behind you.

Mr. LARRABEE. There are a lot of people behind me, Senator.

I do not know. To me it goes back to I think the testimony given for GAO today, and that is what are our real needs, what are the benefits that we can look at, and then I think the question of where do we get our funding. For us, as we spend—in my particular port over the next 3 years, we will spend nearly $2 billion on improving channels, on improving terminals, and on improving rail infrastructure. We are going to spend about $290 million just to create a greater capacity to handle cargo by rail. We think that in the next 10 years we can shift, at least in our port, what now constitutes about 14 percent of our cargo going out by rail to about 24 percent. We can shift barge traffic by from 2 percent to about 21 percent. I am not suggesting that we are going to change the fact that trucks are still going to be a predominant feature in our region, but the notion that there is great public benefit by looking at this system in a smarter way to me has value, and I think the issue of who pays for it can be a lot easier when you have figured out a better way to handle this.

The issue of who pays for this right now, of course, and things like the harbor maintenance tax, there is a great deal of controversy over that and I do not know that you can get anybody to agree on a rational approach. That is a decision the Federal Government is going to have to make.

Senator BREAUX. We cannot even decide whether it is a fee or a tax.

What about the concept of moving some of the traffic in the ports to staging areas away from the ports? I mean, most of our ports are right in the urbanized areas. The port of New Orleans is right

downtown. The port of Houston is right downtown. Your ports in New Jersey and New York are right in the middle of the greatest urban area probably in the world. Los Angeles, they all have it.

We all have the same problem, which is the port is right in the middle of urbanized areas. That was fine 100 years ago, but today how do you get the trains in, how do you get the trucks in, how do you handle all that volume going right down in the middle of an urbanized area in order to pick it up or to take it there? It does not work anymore.

So the concept by some is to move, I guess, the staging area further away from the actual port facility in an urbanized area, so you can get the stuff to an area and put it on the rails and put it on the trucks, instead of having to do it right in the middle of New Orleans or right in the middle of New York City, for instance. Does that make any sense?

Mr. LARRABEE. We have over the last couple of years looked at where all of our freight goes. I can tell you by zip code where every container that comes into the port ultimately is destined for. We know that about 90 percent of the cargo that goes outside the immediate New York-New Jersey region goes to one of 7 or 8 load centers, places like Albany, New York, and Buffalo, New York, places like Camden, New Jersey, and Providence, Rhode Island. Once we have identified the fact that a lot of that cargo goes to those places, the next thing we have looked at is how do you get it there in a more efficient way. Dedicated rail and dedicated barge service has become the way that we have begun to look at it. We think that we can move cargo more efficiently, at a cheaper price, in about the same amount of time, with a greater degree of reliability, by using dedicated rail and barge.

As I suggested before, we think we can improve the intermodal split from what now is an 85 to 87 percent truck-only operation to something that closely approaches 50 percent by truck and the rest by other modes. That is an approach that is gaining interest in all the Northeast States. It reduces traffic and congestion and air quality problems. It reduces maintenance on the roads, and in our mind is going to dramatically increase the productivity of the Port of New York and New Jersey.

Senator BREAUX. Mr. Wickham, let me have your comments and thoughts about that? I am not suggesting this is a way of lessening traffic overall, but only in the immediate vicinity of the downtown urban ports around the country, to have a staging area, I would take it, where trucks would come in away from the actual port sites. Do these ideas have any merit or what are your thoughts?

Mr. WICKHAM. I think they do. That freight ends up on a truck sooner or later anyway. When it goes to Albany, the container is unstuffed and it becomes a trucking shipment at that time.

When I look at the national transportation system that we have, I think some of the fights that modes have over productivity are silly, because at the end of the day the whole system is more productive if every element of the system is as productive as it can be safely. So some of the debate that goes on I think does not serve any good purpose.

I think the way to look at this system is to maximize the productivity of every participant in the transportation system. That takes

away the need for more capacity in a lot of cases. Productivity is capacity. So that concept that you are talking about, consolidating farther away from the port to reduce the transportation out of the port, does not bother me at all.

Senator BREAUX. I am glad to hear you say that. It seems to me—I am just thinking offhand, which is what I normally do—is the fact that these ports around the country are trying to build all these staging areas where you come in with your trucks, and it is like—how you do it I will never understand. You have got this big yard of containers and the trucks are coming in, picking them up, taking them out, and trying to do all of this in the middle of a city.

It seems to me that if you had a dedicated rail line leaving that port facility and just running these container cars out further away from the port outside the city, and then having their trucks come in, because all these containers cannot go to every little town and destination in America by rail because they are not there. But you could have the dedicated rail line taking it outside of the port to a central staging area where the trucks could come in.

It seems to me that that certainly helps the congestion and makes it more efficient as far as the ports are concerned.

Mr. WICKHAM. Well, it is one of the reasons that you have as many containers in Chicago as you do. They originated in Alameda and came through on a rail leg to be distributed in the Midwest. That I think is maximizing the efficiency of the whole system.

Senator BREAUX. I was interested in your comments, Mr. Wickham, on safety and speed and also the recommendations on the States having greater authority again on the size and weights. All of these are arguments we have been through on will continue, and I appreciate your recommendations on those areas.

On speed, I thought in the old days all the trucks had Governors on them that would restrict the amount of speed. They do not do that anymore, or do they?

Mr. WICKHAM. Oh, yes, we do. Our fleet does. Most big fleets do. But my point was not just the truck speed; it is the automobile speed as well. The statistics indicated that in a large percentage of the accidents involving trucks the other vehicle was speeding. We want to see very strict enforcement of speed for cars and trucks, because I think that is the lowest-hanging fruit we have in the safety area right now.

Senator BREAUX. Well, those are things that we are going to be discussing, I know, in the reauthorization and they are good suggestions.

Mr. Hamberger, on the question about rails in the ports, I take it, am I correct, that the cost of the rails serving the ports is a port cost, not a railroad cost? And if you are building something to do business, should not the rails be picking up the costs of the equipment?

Mr. HAMBERGER. I am not precisely sure what you are asking. It is my understanding that the intermodal yards that are built, for example just 18 miles outside of L.A., are those built, maintained, and run by the railroad companies. I know that each of our members has spent hundreds of millions of dollars in the last 2 years building intermodal yards, in some cases, establishing partnerships with ports on facility improvements. Two of them right outside of

Chicago, both UP and BN-SF; down in Georgia, Norfolk Southern. I know they have done some work in Harrisburg to take intermodal shipments from New York-New Jersey as well.

Senator BREAUX. Admiral, is that your understanding about who bears the costs of the rails within the port system? Is that the port or is that the railroads?

Mr. LARRABEE. Senator, typically the formula that I am familiar with is that the port builds the intermodal rail facility inside the port. But as you build capacity in a port like New York and New Jersey, you have to look down that system to make sure that you are not creating a bottleneck someplace else.

So we have been working very closely with all of our railroads to make sure that as we build the capacity in the Port of New York and New Jersey that their systems are able to handle that increase in activity. So I think that there is a balance as you get further away from the port.

Senator BREAUX. So the current system, I take it, from a port perspective is working all right as far as the intermodal railroads? I mean, you would like the railroads to pick it all up, I am sure.

Mr. LARRABEE. My agency is unique in that we are required to be financially self-sufficient. So when I propose a project like "ExpressRail," which will grow our rail capacity in one terminal from about 25,000 lifts to a million lifts in the next 5 years, I have got to find a way to get a return on that investment. And I will charge a user fee or a tariff for those movements. We have used that formula very successfully.

Senator BREAUX. Do you have the authority to do that as the port?

Mr. LARRABEE. Yes. We have bonding authority that covers all of our lines, and that is where all of our capital money comes from, paid back to investors. But I have got a responsibility as a business line to make sure that that money is recovered.

Senator BREAUX. Ms. Dusenberry, thank you. I know that Senator Reid was very much wanting to hear what you had to say and was very aware of the project that you spoke to. With regard to that project, what does Congress need to do to help in getting it implemented? Is it a funding question or is it—what is it?

Ms. DUSENBERRY. It is a very definite funding question. The shortfall in the amount of funds we have been able to accumulate is $108 million and we feel this needs to come in a stream from the Federal Government, either a stream that we can borrow against, or one lump sum would be very nice if you wanted to give it to us in one lump sum.

Senator BREAUX. But I take it your people say that under the existing highway formulas that you do not get adequate funding to do the type of project that you suggested?

Ms. DUSENBERRY. That is true. Both Nevada and Arizona have contributed $20 million, each State, toward this project out of our regular flow of HRF funds that come into our State, and we feel from this point on that it is a Federal highway, it is on Federal land, it is going to be run by FHWA, and we feel our contribution cannot be any more.

Senator BREAUX. Well, I think you have made a good point. I think Senator Reid has been a big supporter of this project. My

only suggestion is that I think you ought to go visit Searchlight, Nevada.

Ms. DUSENBERRY. I will need to go to Searchlight.

Senator BREAUX. If you could just drive through Searchlight, I think it would make——

Ms. DUSENBERRY. I think I can drive through it very quickly.

Senator BREAUX. Oh, yes, it will not take a lot of time.

[Laughter.]

Ms. DUSENBERRY. We would like to invite you to the groundbreaking of our bypass bridge approaches.

Senator BREAUX. Well, I would like to come.

Ms. DUSENBERRY. On October 21st, if you can. It is going to be on the top of Hoover Dam, so you can see what the congestion is.

Senator BREAUX. I will go there right after——

Ms. DUSENBERRY. We will go to Searchlight.

Senator BREAUX. I will go there right after I go to the I–69 groundbreaking.

[Laughter.]

Senator BREAUX. Mr. Caruthers, thanks, John, for being with us. I've never seen—I have been in this business almost 30 years this month and I do not think I have ever seen a coalition nationally on a project like this that you have been able to put together. I think that is what really has made it successful, because it has really involved not just one State, but all the States along the route, and that is not easy because everybody has different ideas about how to do it. But it has been really important.

I guess one of the things that—I do not know why, but when we built the interstates back starting in the Fifties it really was an east-west bias, was it not? We were building highways east and west, but north-south sort of to a large port of the country really got left out.

How much more important is that north-south highway now since NAFTA was passed? It seems like you talked about we have had huge numbers of increase in amount of trade from Canada and from Mexico going north-south.

Mr. CARUTHERS. That is right. I believe I mentioned that Louisiana exports to Mexico have tripled. Texas has doubled. Truck-borne freight I am talking about, travel, now. Even as far north as Indiana—and for example, Illinois' trade exports to Mexico by truck have tripled. Their trade with Canada has doubled. So this is going on in every State in the I–69 corridor.

Senator BREAUX. Mr. Wickham, how important is that type of a corridor? It seems to me when you are going north-south through the central part of the country you are really on—you do not have a lot of interstates that you can travel over.

Mr. WICKHAM. That is correct, and it is becoming more important. You can obviously see the east-west bias. I think it was done for the defense reasons, that the highway system was put in place. But it is apparent that the north-south direction was lacking and it is becoming more and more important.

We have subsidiaries in Canada and in Mexico and we can connect ourselves operationally and information systems-wise, but the crossings become problematic and then transportation north and south after you make the crossing is a little more difficult than it

is east and west. But it is obviously becoming more and more important because of NAFTA and the growth.

Senator BREAUX. Thank you.

Mr. Caruthers, what is the most important priority that we should be doing from a congressional standpoint? I guess maybe the reauthorization for I–69. Where are we in terms of—what are the priorities now? Where are we now?

Mr. CARUTHERS. Well, it seems to me—and I am thinking like you, from off the cuff right now—the freight bottlenecks are at the borders and in the corridors, and the Borders and Corridors program seems to me to be the simple structure already in effect that needs only one thing, and that is funding.

Senator BREAUX. I–69, if we had more funding in it, would be able to benefit directly from that.

Mr. CARUTHERS. That is right. That is right. We can finish it almost within the TEA–21 reauthorization of 6 years if the funding is provided.

Senator BREAUX. Ms. Dusenberry, you had a comment?

Ms. DUSENBERRY. I mentioned in my testimony that the Hoover Dam Bypass Bridge was a part of the CanaMex corridor. Mexico is a—the western part of Mexico, west of the Sierra Nevada mountains, which are hard to traverse across in Mexico, is the largest producer of produce that comes into the United States. That border crossing—those border crossings in Arizona are extremely important.

We are working on a study now, we are calling it "The CyperPort," in Nogales, Arizona, where we are looking at electronically serving all of the trucking so there is no paper exchanged. We are working on a uniform bill of lading so that the trucking across the border can run paperless and seamless across the border.

We hope that this technology that we are developing will transfer to other border crossings, both in Canada—Canada has been interested in what we are doing—in Canada and the other Mexican ports when we get this seamless system developed.

Senator BREAUX. Well, I think the committee has had some good ideas and some good suggestions. I think it is good that we were able to start talking about this before the fact. We have TEA–21 coming up, but I think with Senator Reid and Senator Jeffords and Senator Inhofe all wanted, and our staffs, to get some discussion now so we get these ideas being thought about as to what we need to be doing. I think that your points are all well taken.

Admiral, good luck to you and all the people at the port for the rest of the week. I know it is a particularly trying time, but we appreciate your service and being with us today.

With that, the committees will stand adjourned.

Whereupon, at 4:37 p.m., the hearing was adjourned.]

[Additional statements submitted for the record follow:]

STATEMENT OF HON. JEFFREY N. SHANE, ASSOCIATE DEPUTY SECRETARY AND DIRECTOR, OFFICE OF INTERMODALISM, U.S. DEPARTMENT OF TRANSPORTATION

Chairman Breaux, Chairman Reid, Ranking Members Smith and Inhofe, and Members of the Committee: Thank you for inviting me to testify today on the topic of "Freight and Intermodalism." I would like to commend your committees for their continued leadership on these important issues and in supporting our efforts to ensure the seamless transportation of goods throughout our country. I believe that

ISTEA and TEA–21 have created a solid framework for addressing the transportation and logistics policy issues currently facing our Nation, and the lessons we have learned will serve as important guideposts during the upcoming reauthorization debate.

Demands on our nation's transportation system are growing faster than supply. While statistics show that since 1970 our population has grown 40 percent and vehicle miles traveled have doubled, the Federal Highway Administration's Highway Statistics Manual indicates that our highway physical infrastructure has increased by only 6 percent during that timeframe. In fact, according to the Texas Transportation Institute, the costs associated with congestion in the 68 urban areas they studied totaled $67.5 billion for 2000, including 3.6 billion hours of extra travel time and 5.7 billion gallons of fuel burned by vehicles sitting in traffic. Even after the significant investments in surface transportation infrastructure under ISTEA and TEA–21, our transportation system is still experiencing rising levels of congestion that adversely impacts the free movement of freight on our nation's roadways.

In 1998 (the latest year for which data are available), the U.S. transportation system carried nearly 4 trillion ton-miles of freight valued at over $9 trillion. Of this, shipments totaling $7.8 trillion were primarily domestic movements, with an additional $1 trillion representing international merchandise. By the year 2020, forecasts predict that the U.S. transportation system will handle cargo valued at over $28 trillion, of which $24 trillion will be domestic movements and over $4 trillion will pass through our nation's gateways.

Truck shipments accounted for 71 percent of total tonnage and 83 percent of the value of U.S. shipments based on the 1998 data. Trucks also make the vast majority of local deliveries, although the industry also carries large volumes of freight between regional and national markets. Water and rail also carry significant shares of total U.S. tonnage, but much smaller shares when measured on a value basis. Air cargo shipments, on the other hand, moved less than 1 percent of total tonnage but carried 12 percent of the value of freight shipments during 1998.

To put these figures into a broader context and provide a better sense of the challenges we must face, the increase in the volume of freight being shipped on our nation's highways will, by the year 2010, equal the total volume of freight currently carried on our entire rail system in the average year.

One of Congress' principal goals in establishing a unified, Federal Department of Transportation (DOT) in 1967 was to facilitate coordinated transportation services across all modes while encouraging these services to be provided by private enterprise whenever possible. Another goal was to ensure that the connections between and among the transportation modes function smoothly while facilitating international trade and economic development. The Department provides a common framework that meets the various needs of our highway, marine, aviation and rail systems by ensuring greater coordination among programs affecting different modes of transportation while increasing the connectivity of these modes.

The landmark Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) increased funding flexibility and emphasized intermodal planning. The financial reforms of the Transportation Equity Act for the 21st Century (TEA–21) gave States and local governments vastly greater resources and the flexibility with which to implement the intermodal solutions fostered by ISTEA. Together, they have laid a sound framework for future Federal surface transportation programs and the intermodal strategies needed to leverage and improve system management and utilization.

Although much has been done over the past decade, the promise of intermodalism—the efficient movement of freight and passengers through all modes of our transportation system—has not yet been fully realized. As bottlenecks grow and system congestion worsens, the Department increasingly will be asked to facilitate projects that enhance freight transportation efficiency. Also, in the aftermath of 9/11 participants in the transportation system have been called upon to integrate security measures into their operations, and the Department has initiated several programs to encourage that integration. For the freight industry, this will require strong private sector involvement with the Federal Government empowered to foster cooperation across all modes through new public/private partnerships.

Freight Movement and International Trade

Understanding future freight activity, both foreign and domestic, is important for matching infrastructure supply to demand and for assessing investment and operational strategies. The U.S. economy depends upon a wide variety of products that move within State boundaries, through interstate commerce, and to and from various parts to the world. Using data from its Freight Analysis Framework (FAF), the

Department has developed information on current and projected freight flows, including a forecast of activity through the year 2020.

FAF projects annual domestic freight volumes will nearly double between 1998 and 2020, increasing from 13.4 billion tons to over 22.5 billion, which raises the question of which modes will carry these new shipments. The FAF forecast assumes that growth in freight activity will be captured largely by increases in air and truck shipments. Domestic air cargo tonnages are projected to double, although its share of total tonnage would remain fairly small. Movements by truck are expected to almost double over the 1998 to 2020 period, capturing a larger share of total traffic. Finally, while both rail and domestic water shipments are projected to increase, their volumes are not expected to grow as dramatically over the forecast period, mainly because of slower demand growth in many of the key commodities carried by these modes.

Since the 1970's, international trade has emerged as a major component of the U.S. economy, as imports of consumer goods, petroleum, and manufactured products have increased along with exports of raw materials, agricultural products, and manufactured goods. This trend toward increased international trade is expected to continue, as suggested by DRI/WEFA's projection that over 30 percent of the U.S. economy will be tied to international trade in goods and services by the year 2020, up from 23 percent in 1998.

This projected growth in trade has led to concerns over congestion at U.S. ports, airports, and borders entry points. International trade, expressed in tons, is forecasted to grow at an annual rate of 2.8 percent and more than double by 2020. While increases are expected for all regions of the world, the largest growth will likely come in our trade with Mexico, Canada, Asia and South America. Cargo trade with our NAFTA partners moves primarily by truck and/or rail, and most international shipments of water and air cargo are transferred to or from trucks, rail cars or barges after arriving in the United States or before heading to export markets. Given the importance of trade to our nation's economy, identifying ways to more efficiently move freight across our borders will be critical in the years ahead.

NHS Intermodal Connectors

The condition of the existing transportation system and its connections directly affects the efficient movement of cargo. When Congress created the National Highway System (NHS), it recognized the need to provide adequate highway access to intermodal freight terminals. Intermodal passenger terminals are generally well served by NHS connectors but infrastructure connecting freight terminals to primary NHS routes is often in need of improvement.

NHS connectors are typically short, averaging less than two miles in length, and are usually local, county or city streets that have lower design standards than mainline NHS routes. They typically serve heavy truck volumes moving between intermodal freight terminals and mainline NHS routes, primarily in major metropolitan areas. Despite the fact that connectors are less than 1 percent of total NHS mileage, they are the "front door" to the freight community for a broad array of intermodal transport services and options.

TEA–21 directed the Secretary of Transportation to conduct a review of the NHS connectors that serve intermodal freight terminals and submit a report to Congress. The objectives of the review were to: (1) evaluate the condition of NHS connector highway infrastructure to major intermodal freight terminals; (2) review improvements and investments made or programmed for these connectors; and (3) identify impediments and options to making improvements to the intermodal freight connectors.

The findings of our report to Congress, dated July 2000, are especially relevant as we consider reauthorization of TEA–21:

- Intermodal connectors that primarily serve freight terminals have significant mileage with pavement deficiencies and generally exhibit inferior physical and operational performance than other similar NHS facilities;
- An analysis of investment practices shows a general lack of awareness and coordination for freight improvements within the State departments of transportation and metropolitan planning organizations (MPO) planning and programming process; and
- Given the pressing needs for passenger-related projects and the fact that many of the benefits from an increased freight investment are received outside of the investing jurisdiction, there is little incentive for local investment in freight projects.

The ability to recognize and effectively address connector needs within the context of our overall intermodal freight system are important elements in preserving and promoting the substantial productivity gains we have witnessed as a result of better supply chain management.

Multi-State and Cross-Border Transportation Planning

End-to-end movements of commercial freight must be viewed within the context of a transportation system that is not bounded by State or international borders. A regional perspective and decisionmaking capability is required to provide effective coordination for the infrastructure planning and investments that support these commercial activities. Recognizing that the health of their economies depends upon efficient movement of goods along regional transportation system segments that often lie beyond their immediate responsibility, several State and Provincial Departments of Transportation have joined together to promote regional transportation consortia. The following examples illustrate this coordinated and complementary approach to regional transportation planning and infrastructure development:

- I–95 Corridor Coalition (I–95CC): The geographic region represented by the I–95CC consists of 12 States (ME, VT, NH, MA, CT, RI, NY, NJ, PA, DE, MD, VA) and the District of Columbia. With a population of just over 67 million people, it is home to nearly a quarter of the nation's inhabitants and a quarter of the nation's jobs, but contains only 6 percent of the landmass of the Nation. The population density of the region makes efficient goods movements both essential and extremely challenging in this largely urbanized environment. DOT representatives from the 12 States and the District of Columbia have developed an intermodal strategic plan for the I–95CC that is addressing freight transportation needs within the context of the region's social, economic, and environmental goals.
- Gulf/Rivers Intermodal Partnership (G/RIP): In a cooperative effort of seven southeastern and Gulf State departments of transportation, regional planning entities and four public port authorities, G/RIP works to improve waterside/landside infrastructure investments through education programs for public planners. The partnership uses the region's ports as classrooms in addition to periodic forums with senior regional public and private sector policymakers to discuss topical infrastructure issues.
- International Mobility and Trade Corridor (IMTC): The IMTC is a coalition of over 60 U.S. and Canadian business and government entities whose mission is to identify and pursue improvements to cross-border mobility in the "Cascade Gateway", which includes four land border crossings between British Columbia and Washington State. Two-way trade at the Blaine, WA, border crossing alone was valued at more than $35 million per day in 2000. Congestion and processing delays at the Blaine border crossing result in over $40 million in additional operating costs annually—losses that exceed 1 day's revenue generated by this commercial traffic. IMTC-sponsored projects are funded through bi-national financial partnerships at Federal, regional, and local levels.

TEA–21's Record

congressional support for the commercial movement of freight was woven into many parts of TEA–21, helping to strengthen the nation's transportation system through: enhanced stability and flexibility of funding; the borders and corridors programs; and increased application of new information technologies.

Stability and Flexibility of Funding

TEA–21 revolutionized transportation funding through its budgetary firewalls and innovative financing provisions as well as by providing record amounts for surface transportation programs. The budgetary firewalls that were introduced created confidence among grantees regarding program funding. As a result, States and localities have relied upon these assurances and increased their funding levels to match or even exceed Federal commitments made in TEA–21. The Department sees its role as one of exercising leadership in convening public and private sector parties to undertake innovative financing of major transportation projects.

One of the most impressive intermodal success stories is the Alameda Corridor freight project. The Alameda Corridor is a multi-modal project that uses a mix of private funds and public programs, including a $400 million loan from the Department of Transportation, to improve rail and highway access and to reduce traffic delays in the critically important area of the Ports of Los Angeles and Long Beach. The recently completed $2.4 billion project, which opened for revenue service on April 15, 2002—on time and within budget—will have far-reaching economic benefits that extend well beyond Southern California.

The funding flexibility created under ISTEA and continued in TEA–21 allows States and communities to tailor their transportation choices to meet their unique needs. It enables State and local decisionmakers to consider all transportation options and their impacts on traffic congestion, air pollution, urban sprawl, economic development, and quality of life.

TEA–21's innovative credit program has further augmented both the highway and transit programs. The Transportation Infrastructure Finance and Innovation Act (TIFIA) has provided almost $3.6 billion in Federal credit assistance to 11 projects of national significance, representing $15 billion in infrastructure improvements. These loans, loan guarantees, and lines of credit for highway, transit, rail, and intermodal projects have encouraged private investment to strengthen transportation infrastructure.

Despite these successes, there are still areas where we can improve. For example, while freight transportation projects are often regional or multi-State in scope, funding is typically distributed through States and localities. Also, conventional financing programs have provided funding for a wide variety of projects focused on individual modes of transportation, but when dealing with major intermodal projects these programs have often proven insufficient. Finally, because TEA–21's programs are oriented toward the public sector, it can be difficult to truly incorporate the needs of private sector transportation carriers and shippers in the planning process.

The Borders & Corridors Program

TEA–21 established the National Corridor Planning and Development and Coordinated Border Infrastructure Program (also known as the "Borders and Corridors" program). Both programs are financed by one funding source, which is authorized at $140 million annually from fiscal year 1999–2003. Due to the obligation limitation provisions of TEA–21, awards the first 3 years averaged about $123 million, but based on the law's RABA provisions and congressional direction awards for the fourth year (FY 2002) will be nearly $480 million.

congressional designation (or "earmarking") of projects in the Borders and Corridors program increased from 0 percent in fiscal year 1999 to about 50 percent in fiscal year 2000 and 65 percent in fiscal year 2001. Given this trend and the cost of preparing full applications, in May 2001 the FHWA solicited 'Intent to Apply' for fiscal year 2002 in place of full applications with a provision that full applications would only be requested if warranted based on that year's DOT Appropriations Act. When Congress designated 100 percent of the funding for fiscal year 2002, FHWA did not solicit full applications and instead requested abbreviated applications for projects designated by Congress. As a result, congressional earmarking has prevented the Department from taking a strategic approach and using the program to facilitate trade through targeted transportation investments that maximize system efficiency.

Awards under the Borders and Corridors program have been as follows:

FY 1999—$123.1 million
FY 2000—$121.8 million
FY 2001—$123.6 million
FY 2002—$478.0 million

For some projects construction is nearly complete or underway. One project that has essentially been completed is near the World Trade Bridge between Laredo, Texas and Nuevo Laredo, Mexico. Before this bridge was opened, traffic queues up to 4 miles long were common on an existing bridge and traffic was grid locked for several miles along I–35. Subsequent to its opening, trucks were diverted to the new bridge leaving the existing bridge to serve autos, buses and pedestrians. The gridlock has now disappeared and travel time has been reduced dramatically for trucks, autos and pedestrians while improving safety and creating jobs.

Some construction projects currently underway that are likely to be completed in the next two or 3 years include the FAST (Freight Action Strategies) corridor in Washington State and the Bridge of the Americas and the Paso del Norte Bridge between El Paso, Texas and Ciudad Juarez, Mexico. In the FAST project, replacing a number of highway/rail grade crossings with grade separations will improve safety, relieve congestion and improve operation of the water ports and the rail lines. In El Paso, a modest expenditure (about $3 million for each bridge) will improve physical inspection capacity on each bridge by as much as 40 percent.

Other projects are at least three or more years from completion including such important bottleneck relief projects as: the Ambassador Bridge Gateway in Detroit, Michigan; the SR 905 connector to the border crossing south of San Diego, California; and the Hoover Dam Bypass between Arizona and Nevada. Finally, the future I–69 between Michigan and the Texas lower Rio Grande Valley, which is more of a new access and economic development project, is probably more than a decade from completion.

Application of New Information Technologies

Any seamless transportation system—present or future—relies heavily on information technology. The same information revolution that has swept through the private sector and increased our nation's productivity must also be applied to our transportation systems. "Smarter" systems have the potential to dramatically reduce the barriers and costs that currently limit the ability of passengers and freight carriers to operate across modes. They also will help us to ensure safer and more secure freight transportation networks.

TEA–21 authorized a total of $603 million for Intelligent Transportation Systems (ITS) research for fiscal years 1998 through 2003, which has funded important research projects that support freight movements by focusing on system optimization and more effective use of existing infrastructure. These efforts also facilitate the integration of the operational aspects of all of our transportation systems, while system construction projects address their physical connectivity. Intermodal freight is a major emphasis of DOT's ITS efforts, and the Department is currently conducting several ITS operational tests designed to improve the efficiency and security of the inter-modal movement of freight.

For example, the Chicago O'Hare cargo project uses a "smart card" and biometric identifiers to identify the shipment, vehicle and driver during transportation from the shipper to and through the air cargo terminal. Another project, Cargo-Mate, has particular applicability to port and container security, in addition to enhancing the efficiency of freight movement. This system is designed to perform real-time processing of asset and cargo transactions, provide for the surveillance of cargo movement to and from ports, and provide an integrated incident and emergency response capability.

In a cooperative venture between Washington State and British Columbia, under the auspices of the International Mobility and Trade Corridor (IMTC), electronic cargo seals are being deployed to demonstrate the use of low cost disposable technology to track cargo movements and monitor the security of containerized freight. This test will examine the use of a Congestion Notification System to improve truck access to the Port of Tacoma. When these and related projects are completed and the technologies deployed, the IMTC will have the first fully operational bi-national electronic commercial vehicle operations (CVO) border crossing system in North America.

The Department also is participating in the International Trade Data System (ITDS), which will create a single Federal data base for all international trade and transportation transactions. Expected to become operational in FY2004 at the nation's busiest land borders, and at all land, sea and air ports of entry by 2006, ITDS will extend the benefits of customs modernization across the entire Federal Government. The ITDS and Customs' Automated Commercial Environment (ACE) are being jointly developed so that taxpayers and Federal agencies will have a single system for processing international trade and transportation information that will also serve as an important tool in facilitating the transport of cargo.

Continued Federal, State and local investment in the development of new transportation technology has the potential to yield enormous operational benefits and give transportation professionals much greater capacity to manage increasingly complex systems.

Security Issues

The events of 9/11 have made us all realize that transportation planning must also make the security of freight shipments a top priority, in addition to the system's safety and efficiency. As freight moves from one mode to another, from ship to rail to truck for example, we must ensure that these modes and the public are protected from terrorist attacks. The Transportation Security Administration (TSA) now oversees transportation security across all modes, with the most prominent of course being the new requirements for aviation. However, TSA is also concentrating on sea, rail and land shipments and the links between these modes when assessing possible security threats. Intermodal connectivity is critical for national security, and TSA is coordinating with the other modes in DOT, other Federal agencies, and industry to achieve the highest possible security levels for the transport of goods.

Operation Safe Commerce (OSC) is an innovative public-private partnership dedicated to enhancing security throughout international and domestic supply chains while facilitating the efficient movement of legitimate commerce. The overall objective is to provide valid recommendations and workable solutions to legislators, regulatory agencies, the International Maritime Organization and the World Customs Organization on how best to address the critical issue of international cargo security. I serve as co-chairman of the Executive Steering Committee that directs the

OSC initiative along with the Deputy Commissioner of the U.S. Customs Service, and have been very pleased with the substantial progress we have made so far.

A recently completed initial pilot test applied available technology to analyze the supply chain security of a shipment from Eastern Europe to New Hampshire by equipping a cargo container with onboard tracking, sensor and container door seals. This shipment was monitored as it was transported through numerous countries, and the jurisdictions of several Customs administrations, using various transportation modes. I11OSC proposes to develop and test security practices to govern the packing, loading and movement of cargo throughout several international supply chains. This effort will seek to prototype various solution sets in order to test combinations of physical, technological and logistical security practices that will best secure domestic and international supply chains.

Operation Safe Commerce will attempt to do this by addressing three key components to secure supply chain management. First, it will demonstrate what is needed to ensure that a shipper exerts reasonable care and due diligence in properly packing, securing and manifesting the contents of a shipment of goods. Second, it will demonstrate various methods to ensure that the electronic documentation accompanying a cargo shipment is complete, accurate and secure from unauthorized access. Third, it will test supply chain security procedures and practices, and implement enhanced manifest data elements and container sealing procedures, to determine which applications of information and technology are most effective in securing international and domestic shipments.

Operation Safe Commerce will serve as a technology and business practice "laboratory" to vet innovate solution sets that support the objectives of other Federal initiatives such as the Department of Transportation Container Working Group, the U.S. Customs Container Security Initiative and Customs—Trade Partnership Against Terrorism, and the Department's Intelligent Transportation System and the Borders and Corridors Programs.

These efforts will continue once TSA and the United States Coast Guard transfer their missions and functions to the proposed Department of Homeland Security. Secretary Mineta fully supports these efforts to improve our Nation's homeland security, and if approved by Congress the Secretary has pledged to fully cooperate with the new Department to ensure that security over all modes of transportation is enhanced.

Building on TEA–21

As we consider the reauthorization of TEA–21, we continue to face many of the same challenges that confronted the authors of ISTEA and TEA–21. Applying an intermodal approach to these challenges enables us to extract the maximum amount of capacity from our existing infrastructure through creative programs and wise investments.

Accordingly, intermodalism plays a large role in the core principles and values that motivate the Department's preparation for TEA–21's reauthorization. We will seek to do the following:

- Preserve funding flexibility to allow the broadest application of funds to transportation solutions, as identified by States and local communities.
- Strengthen the efficiency and integration of the Nation's system of goods movement by improving international gateways and points of intermodal connection.
- Focus more on the management and performance of the system as a whole rather than on "inputs" or functional components.
- Develop the data and analyses critical to sound transportation decisionmaking.
- Foster the development and deployment of technology, to support intermodal freight security, productivity, and safety.
- Expand and improve innovative financing programs, in order to encourage greater private sector investment in the transportation system, and examining other means to augment existing trust funds and revenue streams.

Supporting the efficiency of commercial freight transportation continues to be a cornerstone of the Department's vision for America's transportation system. ISTEA and TEA–21 legislation gave us many tools to bring this vision to reality, and our experience has given us new ideas for programs that will get us even closer to our goal of a seamless transportation network. Greater investments in transportation infrastructure and wider use of information technology will certainly be required to achieve this goal.

The Department looks forward to working with our partners in State DOTs, metropolitan planning organizations, and private industry to apply innovative funding strategies such as TIFIA and State Infrastructure Banks to develop large-scale projects that might otherwise be beyond the financial means of the individual stakeholders.

We will also consider possible changes to the Borders and Corridors Program that would encourage broader transportation planning on the basis of economic regions and export markets to ensure that our infrastructure investments are truly integrated with regional and national business developments.

Private industry has made it clear to the Department that reliable information on product shipments is of critical importance to them. If our transportation system is to provide adequate levels of service for the freight industry and their customers, we must continue to apply innovative technologies through the ITS Program and collect information on commodity movements to provide a firm foundation for transportation planning.

The Department will also work with the private sector to formulate innovative approaches to providing transportation solutions and develop the professional capacity to apply these solutions to the challenges that confront us. We will consider new ways to develop public-private partnerships that can leverage public infrastructure investments and ensure that the private sector is more engaged in our planning processes.

I am confident that working together, the Administration, Congress, States and localities, and the private sector can preserve, enhance, and establish surface transportation programs that will result in increased mobility, security and prosperity, as well as more transportation choices for all Americans.

Mr. Chairman and members of the committee, thank you again for the opportunity to testify before you today. I look forward to responding to any questions you may have.

RESPONSES BY JEFFREY N. SHANE TO ADDITIONAL QUESTIONS FROM SENATOR REID

Question 1. Freight transportation is expected to double in the next 20 years. This increase in freight traffic will occur at the same time that congestion on our roads is already at levels many of us consider unacceptable. Clearly capacity issues have to be at the top of our list as we begin to reauthorize our surface transportation programs. However, in addition to building new physical capacity, we will need to seek ways to squeeze more out of our existing transportation infrastructure through intelligent transportation systems, better operations, and perhaps a more efficient mix of transportation choices. For example, to move passengers and freight from congested roads to rail. Please give your thoughts on what we can do when we reauthorize TEA–21 to get the most efficient use out of our transportation infrastructure.

Response. Improving intermodal freight efficiency will involve both public agencies and private freight companies. In particular, we must focus on:

(1) improvements to the NHS freight connectors, providing for greater opportunities to use truck/water and truck/rail options to move freight in and out of terminals;

(2) greater deployment of Intelligent Transportation Systems to improve system operations and to ensure intermodal conveyance of critical freight information for efficiency and security-this should include not only an ITS backbone for information exchange between the roadside and vehicles, but should also include other transport modes, and agencies involved in trade facilitation and security;

(3) continued development of international standards for cargo security, to enable efficient and secure trade among NAFTA partners, and with other international trading partners;

(4) enhanced use of innovative finance to leverage additional investment for freight transportation improvements; and

(5) additional emphasis on intermodalism to make better use of all modes for freight transport.

Question 2. We clearly have significant freight transportation needs across our Nation. How do we determine what our freight priorities should be? Do we have sufficient information to determine which freight corridors, border crossings, port, intermodal facilities and connector should be our top funding priorities? Where is our freight infrastructure least efficient and where is the growth expected to occur?

Response. Since 2000, the Department has engaged in a comprehensive effort to (1) improve our understanding of freight flows; (2) define and analyze trends that might affect the demand, supply, and distribution of future freight transport requirements; and (3) work with State and local governments, other Federal agencies, and the private sector to define public policy strategies to enhance the planning, finance, and operation of the Nation's intermodal freight network. As part of this effort, we continue to work with major trade associations and governmental organiza-

tions to devise strategies that appropriately address freight efficiency, along with the national objectives of safety, security, and environmental awareness.

As part of this effort, we have developed the Freight Analysis Framework (FAF), a multimodal analytical system that enables us to map domestic and international freight movements and, when linked with transport network information systems, to match and compare systems demands with supply, both under current conditions and under future scenarios. When combined with other information systems developed to track maritime and rail movements and cross border freight flows, the FAF provides a powerful data/analytical system to determine the relative importance of corridors, gateways and border crossings, and regional freight movements.

The FAF, validated by extensive meetings with State and local officials and the private sector, suggests that major freight transport challenges form around: (1) major trade transport gateways, including certain maritime ports of entry, land crossings with Canada and Mexico, and significant trade hubs; (2) long distance multistate and international trade corridors; and (3) State and local freight concerns. Future trade forecasts suggest that volumes will increase at all major gateways and along trade corridors. This growth is likely to vary by region, however, as population and economic growth continues to shift and international trading patterns change in response to variations in market conditions.

Domestic freight demand is expected to increase by approximately 67 percent from 1998–2020 while international freight is expected to increase by approximately 85 percent. For example, US-Canada trade is expected to double over that time period, and US-Mexico trade is expected to increase by more than 200 percent. These increases in trade will require an emphasis on gateways, hubs, border crossings, and long distance trade corridors as we prepare to reauthorize our nation's surface transportation programs next year.

The FAF, in combination with stakeholder documentation of need, can be used to quantify the relative magnitude of growth along major corridors, and has been used extensively as we define the Department's surface transportation reauthorization initiatives. Mapping current and future freight flows is a valuable first step in defining the geography and magnitude of freight movement but is not, in itself, sufficient to define where our resources and attention should be focused. When overlaid on system condition information, however, the combination of demand and supply provides valuable insight into the freight bottlenecks that we need to address in this reauthorization package.

With freight transportation primarily the responsibility of the private sector, Federal transportation policies offering near term solutions to these problems are limited in their effectiveness. Longer term, federally led strategies to identify and deal with these problems, however, can have significant effects on future efficiencies. Advanced Federal policies and programs to strengthen intermodal capacity at gateways and along major trade corridors can result in important improvements to the Nation's trade transport network.

As we look to the future, we are evaluating institutional, financial, and technology enhancements that would enable State and local governments, in partnership with the Federal Government, to identify bottlenecks, establish priorities, and develop comprehensive funding strategies to mitigate the freight bottlenecks that can threaten our economic well-being if they are not properly addressed.

Question 3. The Borders and Corridors Program has not worked very well. One improvement we should consider is to revise this program to encourage public-private partnerships through a greater emphasis on innovative finance and other creative incentives. How else can we improve the Borders and Corridors program to target the highest priority freight corridors and intermodal facilities.

Response. It is difficult to judge exactly how well the National Corridor Planning and Development and Coordinated Border Infrastructure (NCPD/CBI) discretionary grant program, as set forth under the Transportation Equity Act for the 21st Century (TEA–21), has performed. This is due, in part, to the fact that projects funded under the program have increasingly been earmarked during the appropriations process rather than selected through a competitive application process as originally intended by Congress. From fiscal year 1999 to fiscal year 2002, over two thirds of all NCPD/CBI funds went to projects identified in appropriation act report language (the percentage was 100 percent in fiscal year 2002), thereby severely limiting the Department of Transportation's ability to administer these programs in a strategic way. Moreover, the amounts made available often are not sufficient to fund an entire project, further limiting the program's usefulness in enhancing our nation's primary border crossings and trade corridors.

With respect to your suggestion "to encourage public-private partnerships through a greater emphasis on innovative finance and other creative incentives", the Depart-

ment agrees that a greater emphasis on innovative finance should be a part of any future program.

The Department also agrees that projects should "target the highest priority freight corridors and intermodal facilities." One way to accomplish this is to emphasize the importance of having proposed projects be consistent with the continuing, cooperative, and comprehensive transportation planning process required by sections 134 and 135 of title 23 United States Code.

Question 4. One way to squeeze more capacity out of existing infrastructure is through more rapid deployment of ITS and an increased focus on the operations and management of regional transportation systems. How much potential do ITS initiatives have for improving the efficiency of freight operations and what can we do to promote the development of a freight-friendly ITS infrastructure?

Response. Freight oriented ITS provides a direct benefit by linking improvements in systems operations to supply chain logistics and domestic and international cargo security. Following 9/11, various Federal agencies have developed cooperative agendas designed to promote more secure domestic and international cargo movement, combining the resources of ITS with trade facilitation functions (Customs, INS, USDA, etc.), and our international trade partners. Cooperative efforts with the private sector, through the Intermodal Freight Technology Working Group (IFTWG) have identified opportunities, currently deployed and under evaluation, to use ITS to enhance "end to end" supply chains. Programs like Operation Safe Commerce and the Container Working Group are identifying best practices in technology deployment, standards, and interoperability, and the lessons being learned will provide valuable guidance on the use of ITS to better integrate improvements in safety, security, and freight productivity.

ITS and systems operations strategies have enormous potential to effect capacity improvements and enhance freight flow. Whether the ITS initiative is focused on passenger movement or transportation more generally, freight movement can be enhanced. For example, advanced traveler information systems or incident management systems provide for better system utilization through improvements in real time information and the management of recurring and non-recurring types of delay. While passenger transportation clearly benefits from such ITS initiatives, trucking—both long distance shipments through metropolitan areas and local runs handling pick up and deliveries, also benefit from improved network utilization.

Advanced technology through the expanded use of ITS is widely regarded, both within government and by the private sector, as perhaps the most cost-effective strategy to improve both trade transport efficiency and security.

Question 5. What can we do to promote better regional freight planning and how do we ensure that planning agencies take a comprehensive, intermodal approach to infrastructure planning and development? In particular, when it comes to freight, how do we bring the private sector into the public planning process?

Response. Traditionally, the metropolitan planning process has primarily focused on the movement of passengers, with the movement of freight generally treated as secondary. The general public typically views freight as a necessary evil, with people complaining about waiting at rail crossings or sharing roads with trucks and public agencies complaining about the damage trucks cause to a region's roadways. While existing Federal regulations stipulate that freight is to be considered in local transportation planning, relatively few regions have successfully implemented freight projects through traditional planning approaches.

Development of a better regional freight planning process requires both a mutual understanding of public and private sector perspectives and outreach by State and local transportation planners to the freight industry. Freight operators generally believe that the transportation planning process is too slow to address their short-term, bottom-line needs, and therefore not worth their time and effort. Local transportation planners can help overcome this perception by soliciting the involvement of local freight operators in planning operational changes as part of Congestion Management System (CMS) initiatives. They can also do so through timely implementation of small, non-controversial improvements like turning radii or signal timing at key intersections identified by local freight operators.

In addition, there is a need to provide strategic data, analysis, and information for decisionmakers in both the public and private sectors. In this regard, the work of the Freight Analysis Framework (FAF) serves as a bridge between the two groups. The private sector, which may be unwilling to share detailed commodity information or operational strategies, can use the FAF to highlight the need for increased focus on freight, while the public sector can use the FAF to understand the growth of freight movements and its potential impact on both the local economy and its infrastructure. Maps generated using the FAF have been very useful in re-

directing the discussion from an "Us versus Them" mentality to a "We" based on a shared perception of the need to improve freight productivity.

RESPONSES BY JEFFREY N. SHANE TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. Mr. Shane, in your testimony you mention a project involving the monitoring of containers from overseas as they travel to, and in, the United States.

I assume that this relates to putting electronic devices which can be tracked by satellite onto sealed containers coming into the U.S. either by water, rail, or on trucks. These devices could be placed on the containers overseas or in other countries, or at entry into the United States after inspection of the contents. Under this approach a container packed anywhere in the world and certified safe at that point can be tracked and delivered to a consignee in the U.S. with assurance it has not been tampered with enroute.

The objective is to have a "real-time solution" that can be monitored in the appropriate marine, rail, or other intermodal terminal. At first, this approach could be integrated into an overall regional approach where marine and rail terminals are interconnected and where appropriate governmental agencies such as Customs can also be connected. As other regions come on line this could expand to national coverage. These devices could be built into the locking device and could also indicate whether the container was opened prior to intended delivery.

From a security standpoint the idea is, if an emergency situation arises, that law enforcement would be able to obtain a history of how containers were moved within the U.S., or to be able to locate a particular container in the U.S. In addition, this information could be very useful to the shipper and the intended recipient if there were unexpected delays.

Would you explain your views on this approach? What would be the cost and lead time necessary to implement this concept to all containers entering or leaving the U.S.?

Response. DOT has co-chaired with U.S. Customs two significant efforts to address the vulnerability posed by marine containers and other freight, also pulling together the expertise of other governmental and private sector stakeholders. Most notably have been our joint efforts on the Container Working Group (CWG) and Operation Safe Commerce (OSC), two important efforts that support the President's National Strategy for Homeland Security.

The Container Working Group has been an ongoing effort since December 2001. The working group explored the problem of improving container security through solutions offered by business practices, security technology, information technology, and international activities. They produced a report with a number of recommendations in March, and they continue to pursue these recommendations. Key to these efforts will be the continued development of Intelligent Transportation Systems, the International Trade Data System, the U.S. Customs Automated Commercial Environment (ACE) System, and the implementation of G–7/WCO standardized messages and data sets.

Operation Safe Commerce will complement the CWG by testing technology or process solutions offered by the private sector to improve supply chain security. OSC was initiated by a test of off-the-shelf technology to seal, track, and monitor a single container shipped from Slovakia to New Hampshire This is the test I mentioned during my testimony. It would be premature to assume, however, that this approach is the best answer since we haven't yet embarked upon the more comprehensive set of OSC tests that we hope to fund in the coming months.

We intend to continue rapid progress on both the CWG and OSC, and wherever possible, encourage multi-use systems that improve service quality for the transportation system as well as security and safety.

The costs for developing and implementing a secure container regime have yet to be determined given that we must first test what does or doesn't work in real operating environments. By encouraging the private sector to test out solution sets for container security through the OSC initiative, we will be able to identify what in fact works and what is cost effective to the government and the industry. Accordingly, the lead-time must be viewed as a series of incremental steps over a period of time as we incorporate security proven solutions into the world fleet of over 14 million containers in active use today.

Question 2. Since 9/11 there have been numerous studies and articles that have been written on the lack of knowledge we have on the contents and travel paths of goods in our country. Do you see this as a problem that needs to be rectified?

What can be done to make sure, at the very least, hazardous materials are being tracked?

Response. Judicious application of emerging technology for certain high-risk hazardous materials, including technology designed to track and monitor shipments, can be an important security tool. Indeed, we have encouraged hazardous materials shippers and transporters to investigate the use of tracking or monitoring systems for enhancing hazardous materials transportation security.

In a Security Advisory published in the Federal Register on February 14, 2002, DOT's Research and Special Programs Administration (RSPA) identified a number of actions that persons involved in the transportation of hazardous materials could take to enhance security and recommended actions commensurate with the level of threat posed by the specific hazardous material being transported. To improve en route security, RSPA recommended that shippers and carriers consider utilizing advanced technology to track or protect shipments en route to their destinations. Such tracking technology could include satellite tracking or surveillance systems or could be as simple as frequent checks with drivers by cell phone to ensure everything is in order.

In a May 2, 2002 NPRM RSPA proposed that shippers and carriers develop and implement security plans for certain high-risk shipments of hazardous materials. The security plan would be based on a risk assessment performed by the shipper or carrier to identify security risks and develop appropriate measures to reduce or eliminate risk. As proposed, a security plan must include measures to improve en route security, and such measures could include shipment tracking or monitoring systems. In addition, we proposed revisions to current shipping documentation requirements to assist law enforcement personnel to promptly ascertain the legitimacy of hazardous materials shipments during routine or random roadside inspections and to identify suspicious or questionable situations where additional investigation may be necessary.

On July 16, 2002, RSPA and DOT's Federal Motor Carrier Safety Administration (FMCSA) issued a joint ANPRM inviting comments on the feasibility of specific security enhancements and the potential costs and benefits of deploying such enhancements. Security measures being considered include: escorts, vehicle tracking and monitoring systems, remote vehicle shut-offs, direct short-range communications, and notifications to State and local authorities.

Finally, DOT has also undertaken an operational evaluation of cutting-edge communications and tracking technology, electronic seals, and biometric identification to evaluate their potential for enhancing security.

If we find tracking or other methods to be effective, we will consider initiating appropriate regulatory actions.

Question 3. Has the Department undertaken, or do you know of any studies that could be provided to the committee that discuss the benefits of improving rail corridors to freight movement?

Response. There has been growing interest in the possibility of alleviating regional transportation problems by improving rail corridors and eliminating critical rail bottlenecks.

- AASHTO has prepared a "Freight Bottom Line" report that considers the national implications of such an approach and finds that the benefits of public sector investment in rail corridors could be substantial. The report should be available from AASHTO soon.
- The city of Chicago, all the major railroads and several other groups are developing a plan to alleviate rail congestion in Chicago while also reducing highway congestion due to blocked grade crossings. This study is expected to identify a number of critical projects that will establish several high volume corridors through Chicago.
- The Mid-Atlantic Rail Operations Study identified a $6.2 billion program of public and private investments to address choke points limiting the capacity of the rail system between Virginia and New York.
- The State of Virginia has done a study of the potential for upgrading the rail lines that parallel I–81 to alleviate the need to rebuild and expand that highway that is now very congested with trucks. In cooperation with the Federal Railroad Administration and the State of Tennessee, that study is being expanded to consider marketing issues so as to better estimate the service requirements and diversion potential from a rail improvement program.

Question 4. We have heard that the Department does not have sufficient personnel to effectively handle important issues of the freight community. I would be willing to work with DOT on this important matter. How can Congress assist the Department in ensuring that the mission and personnel of DOT are suited not only to providing mobility to the general public but to the freight community as well?

Response. The Department is committed to ensuring that freight has a "voice" in policy deliberations, legislative initiatives, and in resource commitments. Congress can further assist the Department in effectively handling issues important to the freight community by acting on the Administration's request to establish an Under Secretary of Transportation Policy position as part of an overall restructuring of the Department's policy apparatus. Within this new and elevated structure, we would be able to combine and enhance resources to ensure that freight issues are accorded their rightful attention and visibility, and are addressed on an even par with passenger issues.

STATEMENT OF JAYETTA HECKER, DIRECTOR, PHYSICAL INFRASTRUCTURE ISSUES, GENERAL ACCOUNTING OFFICE

Mr. Chairmen and Members: We are pleased to be here today to discuss challenges in defining the Federal role with respect to freight transportation issues. There are concerns that the projected increases in freight tonnage for all transportation modes will place pressures on the marine, aviation, and highway transportation systems. As a result, there is growing awareness of the need to view various transportation modes, and freight movement in particular, from an integrated standpoint, particularly for the purposes of developing and implementing a Federal investment strategy and considering alternative funding approaches. An intermodal perspective appears especially important as the Nation reacts to the increased security needs for transportation networks and as it plans for better, more efficient transportation for the future. At your request, we have done work focusing on the marine component of the national transportation system.

My testimony today, which is based on our report[1] that is being issued today, addresses three topics: (1) the Federal funding approaches used for the marine transportation system as compared with the aviation and highway systems, (2) the amount of customs duties on imported goods shipped through the marine, aviation, and highway systems, and (3) a framework to assist the Congress as it considers future Federal investment decisions. Our recently completed work on marine transportation is based on our analysis of data collected from 15 Federal agencies that expended revenue on the various transportation systems and/or collected funds from users of the systems during fiscal years 1999 through 2001. We also collected data from the U.S. Customs Service on the amount of duty collected on commodities imported by the various transportation modes. We applied the estimates developed by the U.S. Census Bureau on the percent of collections attributable to water, sea, and land transportation modes to total customs duties collected by the U.S. Customs Service during fiscal years 1999 through 2001. To develop a framework to assist the Congress in making decisions about the Federal role in financing the marine transportation system, we built on prior GAO work on Federal investment approaches and managerial best practices and interviewed U.S. Army Corps of Engineers and Department of Transportation officials. See appendix I for a more detailed explanation of our scope and methodology.

In summary:

- The Federal approach for funding the marine transportation system relies heavily on general revenues, while the approach for funding the aviation and highway systems relies almost exclusively on collections from users of the systems. During fiscal years 1999 through 2001, funding for about 80 percent of the average $3.9 billion expended each year on the marine transportation system came from the U.S. Treasury's general fund. During the same period, nearly all of the $10 billion in Federal funds expended each year for the aviation system and the $25 billion in Federal funds expended each year for the highway system came from revenues generated by users of those two systems.
- During fiscal years 1999 through 2001, customs duties on imported goods transported through the transportation systems averaged $15 billion each year for the marine transportation system, $4 billion each year for the aviation system, and $900 million each year for the highway system. Customs duties are taxes on the value of imported goods and have traditionally been viewed as revenues to be used for the support of the general activities of the Federal Government. Unlike the collections based on the use of the highway and aviation systems, customs duties are paid by the importers of the taxed goods. Revenues from these duties are deposited into the U.S. Treasury's general fund, and the majority of these revenues are used for the general support of Federal activities. To help finance improvements to the

[1]U.S. General Accounting Office, Marine Transportation: Federal Financing and a Framework for Infrastructure Investments, GAO–02–1033 (Washington, DC.: Sept. 9, 2002).

marine transportation system, some maritime stakeholders, such as port authorities, have suggested earmarking a portion of revenues generated from customs duties. Some customs duties are currently earmarked for specific purposes, such as agriculture and food programs. However, in that case, a portion of the duties on imports must be used to encourage the export and the domestic consumption of farm products and to reestablish farmers' purchasing power—that is, for assisting markets that are arguably adversely affected by the importation of goods. Further earmarking of customs duties for new spending would have significant budget ramifications in an already constrained Federal budget environment.

- Diverse industry stakeholders believe that substantial new investments in the maritime infrastructure may be required from public and private sources because of an aging infrastructure, changes in the shipping industry, and increased concerns about security.[2] A systematic framework would be helpful to decisionmakers as they consider the Federal Government's purpose and role in providing funding for the system and as they develop a sound investment approach to guide Federal participation. In examining Federal investment approaches across many national activities, we have identified four key components of such a framework—establishing national goals, defining the Federal role, determining appropriate funding tools, and evaluating performance—could potentially be applied to all transportation systems.
- The first component—establishing national goals for the system—requires an in-depth understanding of the needs of the system and the relationship of the system to other transportation modes. For example, the efficient movement of freight often involves using several different transportation modes, making investment decisions, and developing coherent freight policies would logically need to occur while focusing on the entire transportation system rather than a single mode.
- The second component—clearly defining the Federal role relative to other stakeholders—is important to help facilitate the planning and implementation of improvements across modes and to better ensure that Federal participation supplements and enhances participation by others, rather than simply replacing their participation.
- A third component—determining the funding tools and other approaches that will maximize the impact of any Federal investment—is important to help expand the capacity to leverage funding resources and to promote shared responsibilities. For example, in the $2.4 billion Alameda Corridor Program, State and local stakeholders had both a financial incentive to relieve congestion and the commitment and ability to bring financial resources to bear.
- The final component ensures that a process is in place for evaluating performance and accountability periodically so that defined goals, roles, and approaches can be reexamined and modified, as necessary.

Background

The nation's surface transportation systems facilitate mobility through an extensive network of infrastructure and operators, as well as through the vehicles and vessels that permit passengers and freight to move within the system. Maintaining the systems is critical to sustaining America's economic growth. This is especially important given that projected increases in freight tonnage will likely place pressures on these systems. According to the Federal Highway Administration, domestic and international freight tonnage across all surface modes will increase 41 percent, from 14.4 billion tons in 1998 to 20.3 billion tons in 2010. According to the forecasts, by 2010, 15.6 billion tons are projected to move by truck, a 44 percent increase; 3 billion tons by rail, a 32 percent increase; and 1.5 billion tons by water, a 27 percent increase.[3] Some freight may be moved by more than one mode before reaching its destination, such as moving by ship for one segment of the trip, then by truck to its final destination.

Over 95 percent of the U.S. overseas freight tonnage is shipped by sea. The United States accounts for 1 billion metric tons, or nearly 20 percent of the world's oceanborne trade. As the world's leading maritime trading nation, the United States depends on a vast marine transportation system. In addition to the economic role it plays, the system also has an important role in national defense; serves as an alternative transportation mode to roads and rails; and provides recreational value through boating, fishing, and cruises.

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[2]We did not systematically evaluate the claims regarding new infrastructure investments. Recent work has recognized the as yet undefined financial requirements for enhancing the security of ports. See U.S. General Accounting Office, Port Security: Nation Faces Formidable Challenges in Making New Initiatives Successful, GAO–02–993T (Washington, DC.: Aug. 5, 2002).

[3]The Federal Highway Administration's maritime freight projections do not include international trade of bulk products and some inland domestic bulk shipments.

Traditionally, Federal participation in the maritime industry has been directed mainly at projects related to "waterside" issues, such as keeping navigation channels open by dredging, icebreaking, or improving the system of locks and dams; maintaining navigational aids such as lighthouses or radio systems; and monitoring the movement of ships in and out of the nation's coastal waters. Federal participation has generally not extended to "landside" projects related to ports' capabilities, such as building terminals or piers and purchasing cranes or other equipment to unload cargo.[4]

These traditional areas of Federal assistance are under pressure, according to a congressionally mandated report issued by the Department of Transportation in 1999,[5] which cites calls to modernize aging structures and dredge channels to new depths to accommodate larger ships. Since this report, and in the aftermath of September 11, the funding focus has further expanded to include greater emphasis on port security. Many of the security improvements will require costly outlays for infrastructure, technology, and personnel. For example, when the Congress recently made $92.3 million in Federal funding available for port security as part of a supplemental appropriations bill,[6] the Transportation Security Administration received grant applications totaling almost $700 million.[7]

With growing system demands and increased security concerns, some stakeholders have suggested a different source of funding for the marine transportation system. For example, U.S. public port authorities have advocated increased Federal funding for harbor dredging. Currently, funding for such maintenance is derived from a fee on passengers and the value of imported and domestic cargo loaded and unloaded in U.S. ports. Ports and shippers would like to see funding for maintenance dredging come from the general fund instead, and there was legislation introduced in 1999 to do so.[8] Regarding funding for security, ports are seeking substantial Federal assistance to enhance security in the aftermath of the events of September 11. In other work we have conducted on port security,[9] port and private-sector officials have said that they believe combating terrorism is the Federal Government's responsibility and that, if additional security is needed, the Federal Government should provide or pay for it.

Federal Approach to Financing the Marine Transportation System as Compared with the Aviation and Highway Systems

Unlike the funding approach used for the aviation and highway transportation systems, which are primarily funded by collections from users of the systems, the commercial marine transportation system relies heavily on general tax revenue. For all three transportation systems, most of the revenue collected from users of the systems was deposited into trust fund accounts. Figure 1 summarizes the expenditure and assessment comparisons across the three transportation systems.

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[4]One exception has been intermodal connections, such as rail or highway connections. The Federal Government has traditionally participated in funding such projects.

[5]U.S. Department of Transportation, An Assessment of the U.S. Marine Transportation System: A Report to Congress (Washington, DC.: September 1999). GAO did not verify the accuracy of the information contained in this report.

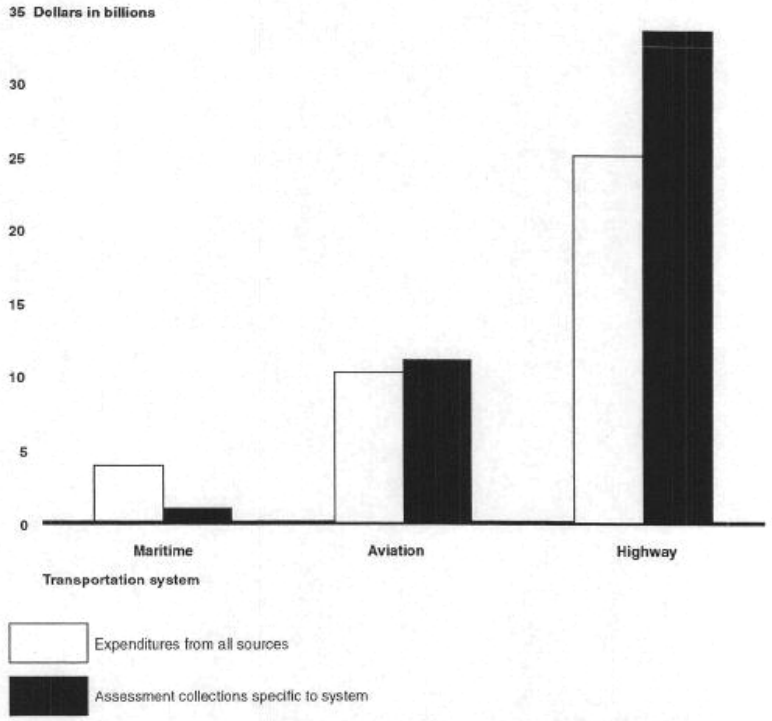
[6]Although $93.3 million was made available in the supplemental appropriations bill, $1 million was authorized for administrative expenses. As of June 17, 2002, 77 grants for 144 ports security projects were awarded.

[7]The Transportation Security Administration, the Coast Guard, and the Maritime Administration reviewed applications under the Port Security Grants Program, which is based on the seaport security provisions contained in the Department of Defense and Emergency Supplemental Appropriations for Recovery from and Response to Terrorist Attacks on the United States Act of 2002 (Pub. L. No. 107–117, H.R. Conference Report 107–350). An additional $105 million was appropriated for the Port Security Grant Program as part of another supplemental appropriation act passed August 2, 2002 (Pub. L. No. 107–206).

[8]H.R. 1260 was introduced, but not enacted, in the 106th Congress to repeal the Harbor Maintenance Tax and return to funding the costs of operating and maintaining Federal navigation channels from general revenues.

[9]U.S. General Accounting office, Port Security: Nation Faces Formidable Challenges in Making New Initiatives Successful, GAO–02–993T (Washington, DC.: Aug. 5, 2002).

Figure 1: Comparison of Federal Expenditures and Assessments on Users Specific to Each Transportation System (Average for Fiscal Years 1999–2001)



Source: GAO analysis of data provided by the agencies that expended and/or collected funds.

During fiscal years 1999 through 2001, Federal agencies expended an average of $3.9 billion each year on the marine transportation system with about 80 percent of the funding coming from the general revenues. During the same period, Federal agencies expended an average of $10 billion each year on the aviation system and $25 billion each year on the highway system. The vast majority of the funding for these expenditures came from trust fund accounts. (See app. II.):

Federal agencies collected revenue from assessments on users of all three transportation systems during fiscal years 1999 through 2001.[10] Collections from assessments on system users during this period amounted to an average of $1 billion each year from marine transportation system users, $11 billion each year from aviation system users, and $34 billion each year from highway system users. Most of the collections for the three systems were deposited into trust funds that support the marine, aviation, and highway transportation systems.[11] (See app. III.) Trust funds that support the marine transportation system include the Harbor Maintenance

[10]Such assessments include both user fees and excise taxes. User fees are charged to users for goods or services provided by, or activities regulated by, the Federal Government. User fees generally apply to activities that provide benefits to identifiable recipients and are normally related to the cost of the goods or services provided. They may be paid into the general fund or, under specific statutory authority, may be made available to an agency carrying out the activity. User fees may also be collected through a tax such as an excise tax. Since these collections result from the government's sovereign powers, the proceeds are generally recorded as budget receipts, not as offsetting collections. Excise taxes can also be dedicated to specific programs and agencies.

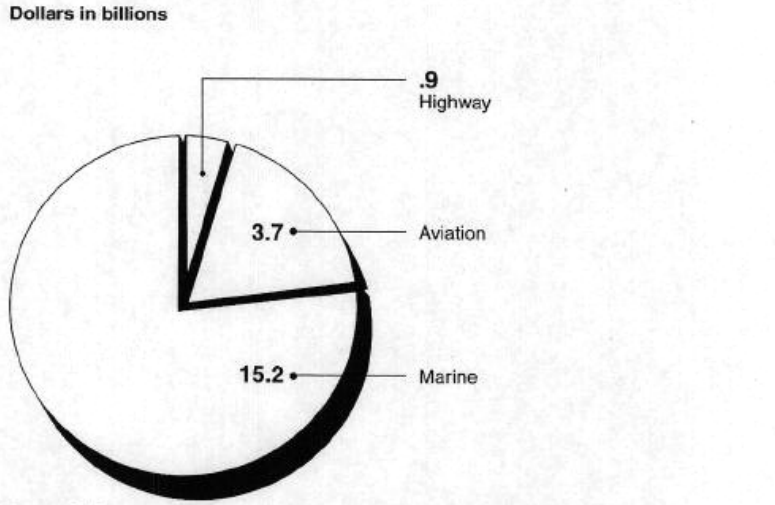
[11]Collections are deposited into the U.S. Treasury and can be used for the general support of Federal activities or may be earmarked by law for specific purposes and credited to a trust fund. A Federal trust fund is an accounting mechanism used to link earmarked receipts with the expenditures of those receipts. It is designated in law as a "trust" fund.

Trust Fund and the Inland Waterways Trust Fund. Trust funds that support the aviation and highway transportation systems include the Airport and Airway Trust Fund and the Highway Trust Fund.

Comparison by Transportation Modes of the Amount of Customs Duties Collected

The Federal Government assesses customs duties on goods imported into the United States and the majority of these collections are deposited into the U.S. Treasury's general fund to be used for the support of Federal activities. As can be seen in figure 2, the amounts from customs duties levied on imported goods carried through the marine transportation system are more than triple the combined amounts collected from customs duties levied on the goods carried through the aviation and highway systems. During fiscal years 1999 through 2001, customs duties on imported goods shipped through the transportation systems averaged $15.2 billion each year for the marine transportation system, $3.7 billion for the aviation system, and $928 million for the highway system. (See app. IV for details on customs duty collections by year.):

Figure 2: Comparison of Customs Duty Amounts Collected for Commodities Transported on the Marine, Aviation, and Highway Transportation Systems (Average for Fiscal Years 1999 through 2001)



Source: GAO computations based on data provided by the U.S. Customs Service.

Some maritime stakeholders, particularly port owners and operators, have proposed using a portion of the customs duties for infrastructure improvements to the marine transportation system. They point out that the marine transportation system is generating billions of dollars in revenue, and some of these funds should be returned to maintain and enhance the system. However, unlike transportation excise taxes, customs duties are taxes on the value of imported goods paid by importers and ultimately their consumers—not on the users of the system—and have traditionally been viewed as revenues to be used for the support of the general activities of the Federal Government.

Notwithstanding the general trend, a portion of revenues from customs duties are currently earmarked for agriculture and food programs, migratory bird conservation, aquatic resources, and reforestation.[12] It should be noted, however, that in these

[12]Under Section 612c of Title 7, 30 percent of the gross receipts from customs duties are designated for agricultural and food programs. Pursuant to 16 U.S.C. 3912, all duties on guns and ammunitions are credited to the Migratory Bird Conservation Fund and pursuant to 26 U.S.C. 9504, duties on fishing tackle and yachts and pleasure craft are credited to the Sports Fish Restoration Account of the Aquatic Resources Trust Fund. In addition, tariffs from wood and certain wood products are credited to the Reforestation Trust Fund up to a total of $30 million (16 U.S.C. 1606(a)).

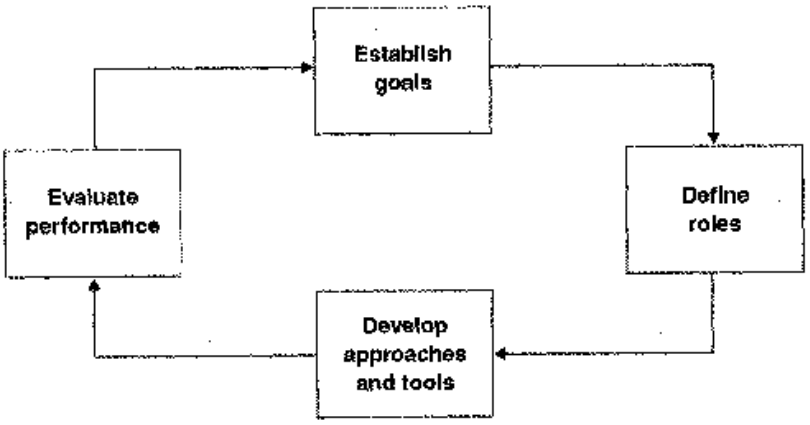
cases, some relationship exists between the goods being taxed and the uses for which the taxes are earmarked. Designating a portion of the remaining customs fees for maritime uses would not represent a new source of capital for the Federal Government, but rather it would be a draw on the general fund of the U.S. Treasury. This could lead to additional deficit financing, unless other spending were cut or taxes were increased.

Systematic Framework Could Help Guide Decisions When Making Investment Choices for the Marine Transportation System

Some maritime industry stakeholders have suggested that substantial new investments in the maritime infrastructure by Federal, State, and local governments and by the private sector may be required because of an aging infrastructure, changes in the shipping industry, and increased concerns about security.[13] These growing and varied demands for increased investments in the maritime transportation system heighten the need for a clear understanding about the Federal Government's purpose and role in providing funding for the system and for a sound investment approach to guide Federal participation. In examining Federal investment approaches across many national activities, we have found that issues such as these are best addressed through a systematic framework. As shown in figure 2, this framework has the following four components that potentially could be applied to all transportation systems:

- Set national goals for the system. These goals, which would establish what Federal participation in the system is designed to accomplish, should be specific and measurable.
- Define clearly what the Federal role should be relative to other stakeholders. This step is important to help ensure that Federal participation supplements and enhances participation by others, rather than simply replacing their participation.
- Determine which funding tools and other approaches, such as alternatives to investment in new infrastructure, will maximize the impact of any Federal investment. This step can help expand the capacity to leverage funding resources and promote shared responsibilities.
- Ensure that a process is in place for evaluating performance periodically so that defined goals, roles, and approaches can be reexamined and modified, as necessary.

Figure 2: Framework for Developing an Effective Federal Investment Strategy



Source: GAO.

Establish National Goals to Guide Federal Participation

An initial decision for Congress when evaluating Federal investments concerns the goals of the marine transportation system. Clearly defined national goals can serve as a basis for guiding Federal participation by charting a clear direction, es-

[13]We did not systematically evaluate these claims regarding new infrastructure investments. Recent work has recognized the as yet undefined financial requirements for enhancing the security of ports. See U.S. General Accounting Office, Port Security: Nation Faces Formidable Challenges in Making New Initiatives Successful, GAO–02–993T (Washington, DC.: Aug. 5, 2002).

tablishing priorities among competing issues, specifying the desired results, and laying the foundation for such other decisions as determining how assistance will be provided. At the Federal level, measuring results for Federal programs has been a longstanding objective of the Congress. The Government Performance and Results Act of 1993[14] has become the primary legislative framework through which agencies are required to set strategic and annual goals that are based on national goals, measure performance, and report on the degree to which goals are met and on what actions are needed to achieve or modify goals that have not been met. Establishing clear goals and performance measures for the marine transportation system is critical to ensuring both a successful and a fiscally responsible effort.

Before national goals for the system can be established, however, an in-depth understanding of the relationship of the system to other transportation modes is required. Transportation experts highlight the need to view the system in the context of the entire transportation system in addressing congestion, mobility, and other challenges and, ultimately, investment decisions. For example, congestion challenges often occur where modes connect or should connect, such as ports where freight is transferred from one mode to another. The connections require coordination of more than one mode of transportation and cooperation among multiple transportation providers and planners. A systemwide approach to transportation planning and funding, as opposed to focus on a single mode or type of travel, could improve the focus on outcomes related to customer or community needs.

Meaningful goal setting also requires a comprehensive understanding of the scope and extent of issues and priorities facing the marine transportation system. However, there are clear signs that certain key issues and priorities are not yet understood well enough to establish meaningful goals for the system. For example, a comprehensive analysis of the issues and problems facing the marine transportation system has not yet been completed.[15] In setting goals for investment decisions, leading organizations usually perform comprehensive needs assessments to obtain a clear understanding of the extent and scope of their issues, problems, and needs and, ultimately, to identify resources needed. These assessments should be results-oriented in that they determine what is needed to obtain specific outcomes rather than what is needed to maintain or expand existing capital stock.[16] Developing such information is important for ensuring that goals are framed in an adequate context. The call by many ports for Federal assistance in dredging channels or harbors to 50 feet is an example. Dredging to 50 feet allows a port to accommodate the largest of the container ships currently being constructed and placed in service. However, developing the capacity to serve such ships is no guarantee that companies with such ships will actually choose to use a port. Every port's desire to be competitive by having a 50-foot channel could thus lead to a situation in which the Nation as a whole has an overcapacity for accommodating larger ships. The result, at least for the excess capacity, would signal an inefficient use of Federal resources that might have been put to better use in other ways.

Define the Federal Role Relative to Other Stakeholders

Establishing the roles of the Federal, State, and local governments and private entities will help to ensure that goals can be achieved. The Federal Government is only one of many stakeholders in the marine transportation system. While these various stakeholders may all be able to share a general vision of the system, they are likely to diverge in the priorities and emphasis they place on specific goals. For example, the Federal Government, with its national point of view, is in a much different position than a local port intensely involved in head-to-head competition with other ports for the business of shipping companies or other businesses. For a port, its own infrastructure is paramount, while the Federal Government's perspective is focused on the national and broader public interest.

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[14]Pub. L. No. 103–62.

[15]The 1999 marine transportation system report identified a number of issues and problems facing the marine transportation system. These included increased dredging requirements to accommodate larger container ships, aging and limited capacity of lock and dam systems on inland waterways, and congestion due to ineffective intermodal connections. In January 2000, the Secretary of Transportation chartered the Marine Transportation System National Advisory Council to help implement the recommendations contained in a report issued by the Department of Transportation entitled An Assessment of the U.S. Marine Transportation System: A Report to Congress. An interagency committee was also established to facilitate implementation of the recommendations in the report. Recognizing the need to thoroughly analyze the issues and problems facing the marine transportation system, the interagency committee is in the process of seeking contract support for a comprehensive analysis assessing the future needs and funding of the marine transportation system.

[16]U.S. General Accounting Office, U.S. Infrastructure: Funding Trends and Federal Agencies' Investment Estimates, GAO–01–986T (Washington, DC.: July 23, 2001).

Since there are so many stakeholders involved with the marine transportation system, achieving national goals for the system hinges on the ability of the Federal Government to forge effective partnerships with nonFederal entities. Decision makers have to balance national goals with the unique needs and interests of all nonFederal stakeholders in order to leverage the resources and capabilities that reside within State and local governments and the private sector. Future partnering among key maritime stakeholders may take on a different form as transportation planners begin focusing across transportation modes in making investment decisions instead of making investment decisions for each mode separately. The Alameda Corridor Program in the Los Angeles area provides an example of how effective partnering allowed the capabilities of the various stakeholders to be more fully utilized. Called the Alameda Corridor because of the street it parallels, the program created a 20-mile, $2.4 billion railroad express line connecting the ports of Los Angeles and Long Beach to the transcontinental rail network east of downtown Los Angeles. The express line eliminates approximately 200 street-level railroad crossings, relieving congestion and improving freight mobility for cargo. This project made substantial use of local stakeholders' ability to raise funds. While the Federal Government participated in the cost, its share was only about 20 percent of the total cost, most of which was in the form of a loan rather than a grant.

Just as partnerships offer opportunities, they also pose risks based upon the different interests reflected by each stakeholder. While gaining the opportunity to leverage the resources and capabilities of partners, each of these nonFederal entities has goals and priorities that are independent of the Federal Government. For the Federal Government, there is concern that State and local governments may not share the same priorities for use of the Federal funds. This may result in nonFederal entities replacing or "supplanting" their previous levels of commitment in areas with new Federal resources. For example, in the area of port security, there is a significant funding need at the local level for overtime pay for police and security guards. Given the degree of need, if more Federal funding was made available, local interests might push to apply Federal funding in this way, thereby transferring a previously local function to the Federal arena. In moving toward Federal coverage of basic public services, the Congress and Federal officials would be substantially expanding the Federal role.

Develop Funding Tools and Other Approaches That Maximize the Federal Return

When evaluating Federal investments, a careful choice of the approaches and funding tools that would best leverage Federal funds in meeting identified goals should be made. A well-designed funding approach can help encourage investment by other stakeholders and maximize the application of limited Federal dollars. An important step in selecting the appropriate approach is to effectively harness the financial capabilities of local, State, and private stakeholders. The Alameda Corridor Program is a good example. In this program, State and local stakeholders had both a financial incentive to relieve congestion and the commitment and ability to bring financial resources to bear. Some other ports may not have the same level of financial incentives or capabilities to undertake projects largely on their own. For example, in studying the extent to which Florida ports were able to implement a set of security requirements imposed by the State, we found that some ports were able to draw on more financial resources than others, based on such factors as size, economic climate, and funding base.[17] While such information would be valuable in crafting Federal assistance, it currently is largely unavailable. Relatively little is known about the extent of State, local, and private-sector funding resources across the country.

The Federal Government has a variety of funding tools potentially available for use such as grants, direct loans, loan guarantees, tax expenditures, and user fees. Through cost sharing and other arrangements, the Federal Government can use these approaches to help ensure that Federal funds supplement—and not supplant—funds from other stakeholders. For example, an effective use of funding tools, with appropriate nonFederal matches and incentives, can be valuable in implementing a national strategy to support Federal port investments, without putting the government in the position of choosing winners or losers.

Federal approaches can take other forms besides those that relate specifically to making funding available. These following approaches allow increased output without making major capital investments:

- Demand management. Demand management is designed to reduce travel at the most congested times and on the most congested routes. One demand manage-

[17]U.S. General Accounting Office, Port Security: Nation Faces Formidable Challenges in Making New Initiatives Successful, GAO–02–993T (Washington, DC.: Aug. 5, 2002).

ment strategy involves requiring users to pay more to use congested parts of the system during such periods, with the idea that the charge will provide an incentive for some users to shift their use to a less congested time or to less congested routes or transportation modes. On inland waterways, for example, congestion pricing for locks-—that is, charging a toll during congested periods to reflect the additional cost of delay that a vessel imposes on other vessels—might be a way to space out demand on the system. Many economists generally believe that such surcharges or tolls enhance economic efficiency by making operators take into account the external costs they impose on others in deciding when, where, and how to travel.

- Technology improvements. Instead of making extensive modifications to infrastructure such as locks and dams, it may be possible to apply Federal investments to technology that makes the existing system more efficient. For example, technological improvements may be able to help barges on the inland waterways navigate locks in inclement weather, thereby reducing delays on the inland waterway system.
- Maintenance and rehabilitation. Enhancing capacity of existing infrastructure through increased maintenance and rehabilitation is an important supplement to, and sometimes a substitute for, building new infrastructure. Maintenance and rehabilitation can improve the speed and reliability of passenger and freight travel, thereby optimizing capital investments.

Management and operation improvements. Better management and operation of existing infrastructure may allow the existing transportation system to accommodate additional travel without having to add new infrastructure. For example, the U.S. Army Corps of Engineers is investigating the possibility of automating the operation of locks and dams on the inland waterways to reduce congestion at bottlenecks.

Examining Outcomes to Determine the Effectiveness of Investments

Regardless of the tools selected, results should be evaluated and lessons learned should be incorporated into the decisionmaking process. Evaluating the effectiveness of existing or proposed Federal investment programs could provide decisionmakers with valuable information for determining whether intended benefits have been achieved and whether goals, responsibilities, and approaches should be modified. Such evaluations are also useful for better ensuring accountability and providing incentives for achieving results.

Leading organizations that we have studied have stressed the importance of developing performance measures and linking investment decisions and their expected outcomes to overall strategic goals and objectives.[18] Hypothetically, for example, one goal for the marine transportation system might be to increase throughput (that is, the volume of cargo) that can be transported through a particular lock and dam system on the nation's inland waterways. A performance measure to gauge the results of an investment for this goal might be the increased use (such as number of barges passing through per hour) that results from this investment and the economic benefits associated with that increase.

In summary, Mr. Chairmen, the projected increases in freight tonnage will likely place pressures on the nation's surface transportation systems. Maintaining these systems is critical to sustaining America's economic growth. Therefore, there is a need to view various transportation modes from an integrated standpoint, particularly for the purposes of developing and implementing a Federal investment strategy and alternative funding approaches. In such an effort, the framework of goals, roles, tools, and evaluation can be particularly helpful—not only for marine transportation funding, but for other modes as well.

Mr. Chairmen, this concludes my testimony. I will be happy to respond to any questions you or other Members may have.

APPENDIX I: SCOPE AND METHODOLOGY

To determine the amount of Federal expenditures to support the commercial marine,[19] aviation, and highway transportation systems and the amount of collections from Federal assessments on the users of these systems for fiscal years 1999, 2000, and 2001, we reviewed prior GAO reports and other relevant documents, and interviewed officials from the Office of Management and Budget and various industry representatives. On the basis of this determination, we contacted 15 Federal agen-

[18]U.S. General Accounting Office, Executive Guide: Leading Practices in Capital Decision-Making, GAO/AIMD–99–32 (Washington, DC.: Dec. 1998).

[19]Noncommercial activities, to include Coast Guard missions such as search and rescue and drug and migrant interdiction, as well as recreational activities, were excluded from our review as our focus was on the commercial marine transportation system.

cies and asked them to provide information on the expenditures[20] and collections[21] that were specific to the transportation systems, relying on each agency to identify expenditures and collections related to activities that support the transportation systems. In addition, we also received data from the U.S. Customs Service on the amount of duty collected on commodities imported by the transportation modes. The U.S. Customs Service provided estimates, developed by the U.S. Census Bureau, on the percent of collections that were attributable to water, sea, and land transportation modes. We applied these percentages to the total customs duties collected for fiscal years 1999, 2000, and 2001 provided by the U.S. Customs Service to compute the amount of total customs duties collected by the marine, aviation, and highway transportation systems each year.

We performed limited reasonableness tests on the data by comparing the data with the actual trust fund outlays contained in the budget of the U.S. Government for fiscal years 2001, 2002, and 2003. Although we had each agency validate the data provided, we did not verify agency expenditures and collections.

To identify initial considerations that could help the Congress in addressing whether to change the scope or nature of Federal investments in the marine transportation system, we conducted a review of prior GAO reports and other relevant studies to identify managerial best practices in establishing strategic plans and Federal investment approaches. We also interviewed U.S. Army Corps of Engineers and Department of Transportation officials to obtain information on the current state of the commercial marine transportation system, the ability of the system to keep pace with growing demand, and activities that are under way to assess the condition and capacity of the infrastructure. Our work was carried out from January 2002 to September 2002 in accordance with generally accepted government auditing standards.

APPENDIX II: EXPENDITURES FOR THE MARINE, AVIATION, AND HIGHWAY TRANSPORTATION SYSTEMS BY SOURCE OF FUNDS (FISCAL YEARS 1999–2001)

Federal agencies spent an average of $3.9 billion annually on the marine transportation system, $10 billion annually on the aviation system, and $25 billion annually on the highway system. Whereas the primary source of funding for the marine transportation system is general tax revenues, the vast majority of Federal funding invested in both the aviation and highway systems came from assessments on users of the systems. During the 3-year period, general revenues were the funding source for 80 percent of the expenditures for the marine transportation system. In contrast, assessments on system users were the funding source for 88 percent of the amount spent on the aviation system and nearly 100 percent of the amount spent on the highway system.

Table 1: Total Expenditures for the Marine, Aviation, and Highway Transportation Systems Summarized by the Source of Funds (Fiscal Years 1999—2001)

dollars in millions

Sources of funds	1999	2000	2001	Average
Marine Transportation System				
General revenues	$3,250	$2,994	$3,117	$3,120
Revenue from system users[1]	467	902	876	748
Total Marine Transportation System	$3,717	$3,896	$3,993	$3,868
Aviation Transportation System				
General revenues	$969	$1,007	$1,070	$1,015
Revenue from system users[1]	8,410	9,438	9,963	9,270
Total Aviation Transportation System	$9,379	$10,445	$11,033	$10,285
Highway Transportation System				
General revenues	$90	$68	$116	$91
Revenue from system users[1]	22,730	25,031	27,231	24,997

[20]For the purposes of this report, expenditures are outlays to pay Federal obligations identified by the agency for each fiscal year to support these systems, but may include payments for obligations incurred in previous fiscal years.

[21]Assessment collections are fees and taxes paid by users of a system that were identified by the agencies and may include revenues credited to Federal funds, offsetting collections, and offsetting revenue.

Table 1: Total Expenditures for the Marine, Aviation, and Highway Transportation Systems Summarized by the Source of Funds (Fiscal Years 1999—2001)—Continued

dollars in millions

Sources of funds	1999	2000	2001	Average
Total Highway Transportation System	$22,820	$25,099	$27,347	$25,088

Note: Figures are nominal and have not been adjusted for inflation.
[1]Includes trust fund and reimbursable agency accounts.
Source: GAO analysis of data provided by agencies that expended funds

Appendix III: Distribution of Amounts Collected from Users of the Transportation Systems (Fiscal Years 1999–2001)

Federal agencies collected an average of $1 billion annually from users of the marine transportation system, $11.1 billion annually from users of the aviation system, and $33.7 billion annually from users of the highway system. For all three transportation systems, most of the collections were deposited into trust fund accounts. During the 3-year period, 85 percent of the amounts collected from marine transportation system users, 94 percent of the amounts collected from aviation system users, and nearly 100 percent of the amounts collected from highway system users were deposited into trust fund accounts.

Table 2: Amounts Collected from Marine, Aviation, and Highway Transportation System Users and Accounts Receiving the Collection (Fiscal Years 1999—2001)

dollars in millions

Source of funds	1999	2000	2001	Average
Marine Transportation System				
General fund	$93	$97	$99	$96
Trust fund accounts	741	857	891	830
Reimbursable agency acounts	41	51	54	49
Total Marine Transportation System	$875	$1,005	$1,044	$975
Aviation Transportation System				
General fund	$421	$437	$466	$441
Trust fund accounts	11,663	9,860	9,581	10,368
Reimbursable agency acounts	236	255	265	252
Total Aviation Transportation System	$12,320	$10,552	$10,312	$11,061
Highway Transportation System				
General revenues	$1	$2	$2	$2
Trust fund accounts	32,255	35,134	33,683	33,691
Reimbursable agency acounts	24	24	22	23
Total Highway Transportation System	$32,280	$35,160	$33,707	$33,716

Note: Figures are nominal and have not been adjusted for inflation.
Source: GAO analysis of data provided by agencies that expended funds

Appendix IV: Amount Collected From Customs Duties on Commodities Transported on the Transportation Systems (Fiscal Years 1999–2001)

Unlike the fees and taxes on users that are earmarked to support the transportation systems, customs duties are not an assessment on the system; rather, duties are assessed on imported goods transported by the systems. The majority of customs duties collected are deposited in the U.S. Treasury's general fund for the general support of Federal activities.[22] On average, the Customs Service reported $19.8 bil-

[22]Under Section 612 of Title 7, about 30 percent of the gross receipts from customs duties are designated for agricultural and food programs. In addition, pursuant to 16 U.S.C. 3912, all duties on guns and ammunitions go to the Migratory Bird Conservation Fund and pursuant to 26 U.S.C. 9504, duties on fishing tackle and yachts and pleasure craft go to the Sports Fish Restoration account of the Aquatic Resources Trust Fund. Also, tariffs from wood and certain

Continued

lion collected annually for commodities imported by the transportation modes, with nearly 80 percent collected from the marine system.

Table 3: Amount of Customs Duties Collected for Commodities Transported on the Marine, Aviation, and Highway Transportation Systems, Fiscal Years 1999 through 2001

dollars in millions

Transportation System	1999		2000		2001	Percent	Average Amount
	Amount	Percent	Amount	Percent	Amount		
Marine	$14,310	75	$15,624	76	$15,637	79	$15,190
Aviation	3,577	19	4,053	20	3,371	17	3,667
Highway[1]	1,168	6	880	4	735	4	928
Total custom duties collected	$19,055	.....	$20,557	.....	$19,743	.....	$19,785

Note: Figures are nominal and have not been adjusted for inflation.
[1]Includes amounts collected by rail.
Source: GAO computations based on data provided by the U.S. Customs Service.

RESPONSES BY JAYETTA HECKER TO ADDITIONAL QUESTIONS FROM SENATOR REID

Question. In your statement, you emphasize the importance of a more system-wide approach to Federal transportation programs-and in particular, focus on promoting intermodal approaches to meeting the rapidly growing requirements for freight infrastructure. You also proposed use of a framework to assist in refining Federal transportation policies focusing on national goals, defining roles of the many public and private stakeholders, selecting appropriate government tools to best leverage Federal resources, and evaluating performance of programs and policies. Can you discuss how this framework might assist the Congress in defining and developing a coherent national freight policy-and challenges and options that should be considered during the forthcoming reauthorization of the Transportation Equity Act for the 21st Century (TEA–21)?

Response. Moving toward a coherent national freight policy requires solutions that cut across modes and better prepare the Nation for the ever-expanding growth of international trade. Responding to that challenge requires evaluating the performance of existing legislation and programs in promoting an efficient intermodal freight transportation industry, establishing the promotion of an efficient intermodal freight industry as a national goal, defining the Federal role relative to other stakeholders, and developing funding tools and other approaches that maximize the return on the Federal investment. An elaboration of each component of this framework follows:

Evaluation of Performance of Existing Legislative Framework and Programs in Promoting an Efficient Intermodal Freight Transportation Industry

Evaluating the results of Federal investment programs and incorporating lessons learned into the decisionmaking process could provide decisionmakers with valuable information for determining whether intended benefits have been achieved and whether goals, responsibilities, and approaches should be modified. Such evaluations are also useful for better ensuring accountability and providing incentives for achieving results. For example, one goal for the marine transportation system might be to increase throughput (the volume of cargo) that can be transported through a particular lock and dam system on the nation's inland waterways. A performance measure to gauge the results of an investment for this goal might be the increased capacity that results from this investment and the economic benefits associated with that increase. Assessing progress in achieving this goal is, therefore, dependent on carrying out analyses of accurate and complete data.

Establishing Promotion of an Efficient Intermodal Freight Industry as a National Goal to Guide Federal Participation

There appears to be substantial consensus that promoting an efficient intermodal freight industry should be a central national goal for reauthorization of the core transportation legislation. The challenge is how to make such language more integral to the future structure and performance of transportation programs. One shift would be to consider articulation of a national goal related to freight/intermodal

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wood products are transferred to the Reforestation Trust Fund up to a total of $30 million (16 U.S.C. 1606(a)).

transportation in performance terms—and to structure revised or new programs around specific performance goals.

Clearly, in setting national goals and defining outcomes, the explicit focus would be on a system-wide, rather than mode-specific approach to transportation planning and funding and could include a focus on outcomes that users—both freight and passengers, both intercity and local—desire from the transportation system.[1] The key for achieving the goals, regardless of how detailed, is to align the goal with the roles of the various stakeholders and the funding approaches selected. For example, a performance oriented funding system could be developed in which the Federal Government would first define certain national interests of the transportation system—such as identifying freight corridors of importance to the national economy—then set national performance standards for those systems that States and localities must meet. Federal funds would be distributed to those entities that are addressing national interests and established standards. Any Federal funds remaining after meeting the performance standards could then be used for whatever transportation purpose the State or locality deems most appropriate to achieve State or local mobility goals.

Another feature of performance goals could include a focus on congestion, which is increasingly affecting travel times and the reliability of transportation systems. In the aggregate, congestion results in thousands of hours of delay every day, which can translate into costs such as lost productivity and increased fuel consumption. In addition, a decrease in travel reliability imposes costs on the traveler in terms of raising the cost of moving goods resulting in higher prices for consumers. While there is some evidence that freight transportation costs related to managing business operations have decreased as a percentage of gross national product (indicating that producers and manufacturers adjust to transportation supply by switching modes or altering delivery schedules to avoid delays and resulting cost increases), these adaptations by businesses represent economic inefficiencies that can be very costly. Increasing congestion can cause businesses to avoid a substantial number of trips that might result in a corresponding loss of the benefits of those trips.

National goals for the transportation system could also recognize that the concept of capacity is broader than just the physical characteristics of the transportation network (e.g., the number of lane-miles of road or locks on a waterway). The capacity of transportation systems is also determined by how well they are managed and operated. Evidence has mounted that congestion on highways was in part due to poor management of traffic flows on the connectors between highways and poor management in clearing roads that are blocked due to accidents, inclement weather, or construction. For example, in the 75 metropolitan areas studied by the Texas Transportation Institute, 54 percent of annual vehicle delays in 2000 were due to incidents such as breakdowns or crashes. In addition, the Oak Ridge National Laboratory reported that, nationwide, significant delays are caused by work zones on highways; poorly timed traffic signals; and snow, ice, and fog.[2]

Another dimension of sound and efficient transportation systems that could be defined in national goals is the recognition of full life-cycle costs and benefits of various transportation programs, and building that concept into system-wide transportation planning and funding. Cost-benefit frameworks that transportation agencies currently use to evaluate various transportation projects could be more comprehensive in considering a wider array of social and economic costs and benefits, recognizing transportation systems' links to each other and to other social and financial systems. A model worthy of exploration is the Federal Transit Administration New Starts Program, where projects compete nationally, and are all scored not only for their projected transportation benefits but also for their effectiveness in assuring provisions are made to cover the long term operational costs of the system.

Defining the Federal Role Relative to Other Stakeholders

A central challenge of developing and refining national transportation policies and programs, particularly relative to freight transportation, is the intersection of public and private interests. A specific role issue surrounding development and refinement of a national freight transportation policy is the Federal vs. the State and local role in selecting and prioritizing freight projects. The structure of the core highway and transit programs since passage of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) is to delegate decisionmaking and project prioritization to

[1]U.S. General Accounting Office, *Surface and Maritime Transportation: Developing Strategies for Enhancing Mobility: A National Challenge*, GAO–02–775, (Washington, DC: Aug. 2002).

[2]S.M. Chin, O. Franzede, D.L. Greene, H.L. Hwang, and R. Gibson, *Temporary Losses of Capacity Study and Impacts on Performance,* Report No. ORNL/TM–2002/3 (Oak Ridge, TN: Oak Ridge National Laboratory, May 2002).

States and metropolitan planning organizations (MPOs). Because control of transportation investment decisions has been delegated to State and local governments, freight projects funded through programs such as the Congestion Mitigation and Air Quality Program (CMAQ), the National Highway System (NHS), and the Surface Transportation Program (STP) have to be identified as priorities within the State and MPO planning processes. In contrast, Federal discretionary grant programs such as the National Corridor Planning and Development and Coordinated Border Infrastructure programs (Borders and Corridors programs) provides funds over and above the annual State highway apportionment. Therefore, to address the role issues, congressional action could be guided by assessment of the relative strengths and weaknesses of programs that require freight projects to be identified as priorities within the State and MPO-led planning processes (CMAQ, NHS, and STP) relative to the experience with programs funded with resources over and above the regular formula allocations to the States (Borders and Corridors programs).

The diverse proposals put forth by various freight interests range from expanding eligibility and funding of any or all of these existing programs to numerous proposals for new freight set-aside programs. Thus, a central decision point for the Congress in defining a national freight policy is determination of the extent to which incentives can be refined sufficiently to enable local transportation planning to reflect national interests and priorities for intermodal freight needs or whether a directly federally administered program holds greater promise to efficiently meet the critical needs of this key segment of the transportation industry.

Developing Funding Tools and Other Approaches That Maximize the Return on the Federal Investment

Our recent mobility report on strategies for enhancing mobility identified the need for using a full range of tools to achieve desired mobility outcomes, providing more financing options, and developing additional revenue sources.[3] While new construction may hold some promise to ease congestion in certain bottlenecks, it is not always a viable solution due to cost, land, regulatory, or administrative constraints. Thus, balanced attention and priority needs to be given to using noncapital alternatives to meet capital investment needs. In December 1998, GAO reported that leading private sector and public organizations consider just such alternatives in their capital decisionmaking process.[4] These alternatives can include (1) improving the management and operation of the existing system by increasing corrective and preventative maintenance and rehabilitation and (2) managing or reducing travel demand through pricing incentives. For example, capacity can be enhanced by performing needed maintenance on existing transportation systems to improve the speed and reliability of passenger as well as freight travel. In addition, investing in Intelligent Transportation Systems—technologies that enhance the safety, efficiency, and effectiveness of the transportation network—can serve as another way of increasing capacity and mobility without making major capital investments.[5] Finally, instituting tolls or fees during peak travel times may lead people to schedule recreational trips or move freight during less congested times or by alternate routes.

Regarding financing, the current system of financing surface and maritime transportation projects limits options for addressing mobility challenges. Separate funding for each mode at the Federal, State, and local level can make it difficult to consider possible efficient and effective ways for enhancing mobility. Providing more flexibility in funding across modes could help address this limitation. Transportation experts have also expressed concern that "earmarking" or designation by the Congress of Federal funds for particular transportation projects bypasses traditional planning processes used to identify the highest priority projects, thus potentially limiting transportation agencies' options for addressing the most severe mobility challenges. Bypassing transportation planning processes can also result in logical connections or interconnections between projects being overlooked.

The public sector could expand support for alternative financing mechanisms to access new sources of capital and stimulate additional investment in surface and maritime transportation infrastructure. These mechanisms include both newly emerging and existing financing techniques such as providing credit assistance to State and local governments for capital projects and using tax policy to provide in-

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[3]U.S. General Accounting Office, *Surface and Maritime Transportation: Developing Strategies for Enhancing Mobility: A National Challenge,* GAO–02–775, (Washington, DC: Aug. 2002).

[4]U.S. General Accounting Office, *Executive Guide: Leading Practices in Capital Decision-Making,* GAO/AIMD–99–32, (Washington, DC: Dec. 1998).

[5]Intelligent transportation systems include technologies that improve traffic flow by adjusting traffic flow on highways; facilitating traffic flow at toll plazas; alerting emergency management services to the locations of crashes; increasing the efficiency of transit fare payment systems; and other actions.

centives to the private sector for investing in surface and maritime transportation infrastructure. However, these mechanisms currently provide only a small portion of the total funding that is needed for capital investment and are not, by themselves, a major strategy for addressing mobility challenges. Furthermore some of these mechanisms, such as Grant Anticipation Revenue Vehicles, could create difficulties for State and local agencies to address future transportation problems, because agencies would be reliant on future Federal revenues to repay the bonds.[6]

Finally, a key issue is how Federal revenues are raised and what level of funding is targeted. New or increased taxes or other fees imposed on the freight sector, while never an attractive option, could also help fund mobility improvements. For example, one way to raise revenue for funding mobility improvements would be to increase taxes on heavy trucks that move freight. According to FHWA, heavy trucks (weighing over 55,000 pounds) cause a disproportionate amount of damage to the nation's highways and have not paid a corresponding share for the cost of pavement damage they cause.

Better aligning sources of revenues or user fees with actual use and damage, including contributions to congestion and pollution, hold promise to not only provide a source of revenue, but to promote more efficient use of congested infrastructure. Congestion is in part due to inefficient pricing of the infrastructure because users—whether they are drivers on a highway or barge operators moving through a lock—do not pay the full costs they impose on the system and on other users for their use of the system. If travelers and freight carriers had to pay a higher cost for using transportation systems during peak periods to reflect the full costs they impose, they would have an incentive to avoid or reschedule some trips and to load vehicles more fully, resulting in less congestion.

RESPONSES OF JAYETTA HECKER TO ADDITIONAL QUESTIONS FROM SENATOR REID AND SENATOR JEFFORDS

Question 1. Freight transportation is expected to double in the next 20 years. This increase in freight traffic will occur at the same time that congestion on our roads is already at levels many of us consider unacceptable. Clearly, capacity issues have to be at the top of our list as we begin to reauthorize our surface transportation programs. However, in addition to building new physical capacity, we will need to seek ways to squeeze more out of our existing transportation infrastructure through intelligent transportation systems, better operations, and perhaps a more efficient mix of transportation choices. Please give your thoughts on what we can do when we reauthorize Transportation Equity Act for the 21st Century (TEA–21) to get the most efficient use out of our transportation infrastructure.

Response. Our recent work on surface and maritime transportation mobility provides insight on several strategies that offer promise for enhancing the efficiency of the transportation infrastructure and addressing mobility challenges, especially growing congestion.[7] We developed these strategies based upon expert opinion drawn from two panels of surface and maritime transportation experts that we convened in April 2002. These strategies include:

Strategy 1: Encourage the development of transportation planning and funding systems that focus on the entire surface and maritime transportation system rather than on specific modes or types of travel to achieve desired mobility outcomes. Some examples of alternative planning and funding systems include the following:

- Performance-oriented funding system. The Federal Government would define certain national interests of the transportation system, set national performance standards for those systems, and distribute Federal funds to entities that address national interests and meet the performance standards.
- Federal financial reward-based system. Federal support would reward those States or localities that apply Federal money to gain efficiencies in their transportation systems, or tie transportation projects to land use and other local policies to achieve community and environmental goals, as well as mobility goals.

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[6]U.S. General Accounting Office, *Transportation Infrastructure: Alternative Financing Mechanisms for Surface Transportation*, GAO–02–1126T, (Washington, DC: Sept. 25, 2002). In addition, a broad review of the performance of Innovative Finance alternatives has recently been released by a FHWA contractor. See *Performance Review of U.S. DOT Innovative Finance Initiatives,* Cambridge Systematics, Inc., July 2002.

[7]See U.S. General Accounting Office, *Surface and Maritime Transportation: Developing Strategies for Enhancing Mobility: A National Challenge,* GAO–02–775 (Washington, DC: Aug. 30, 2002) and U.S. General Accounting Office, *Surface and Maritime Transportation: Challenges and Strategies for Enhancing Mobility,* GAO–02–1132T (Washington, DC: Sept. 30, 2002).

• System with different Federal matching criteria for different types of expenditures that might reflect Federal priorities. For example, if infrastructure preservation became a higher national priority than building new capacity, matching requirements could be changed to a 50 percent Federal share for building new physical capacity and an 80 percent Federal share for preservation.

• System in which State and local governments pay for a larger share of transportation projects, which might provide them with incentives to invest in more cost-effective projects. Reducing the Federal match for projects in all modes may give States and localities more fiscal responsibility for projects they are planning. If cost savings resulted, these entities might have more funds available to address other mobility challenges. Making Federal matching requirements equal for all modes may avoid creating incentives to pursue projects in one mode that might be less effective than projects in other modes.

Strategy 2: Use a full range of techniques to achieve desired mobility outcomes. The techniques that offer promise for achieving more efficient use of the transportation infrastructure are as follows:

• Increase infrastructure maintenance and rehabilitation. An emphasis on enhancing capacity from existing infrastructure through increased corrective and preventive maintenance and rehabilitation is an important supplement to, and sometimes a substitute for, building new infrastructure. Maintaining and rehabilitating transportation systems can improve the speed and reliability of passenger and freight travel, thereby optimizing capital investments.

• Improve management and operations. Better management and operation of existing surface and maritime transportation infrastructure is another technique for enhancing mobility because it may allow the existing transportation system to accommodate additional travel without having to add new infrastructure. For example, the Texas Transportation Institute reported that coordinating traffic signal timing with changing traffic conditions could improve flow on congested roadways. Shifting the focus of transportation planning from building capital facilities to an "operations mindset" may require a cultural shift in many transportation institutions, particularly in the public sector, so that the organizational structure, hierarchy, and rewards and incentives are all focused on improving transportation management and operations.[8]

• Increase investment in technology. Increasing public sector investment in Intelligent Transportation System (ITS) technologies that are designed to enhance the safety, efficiency, and effectiveness of the transportation network, can serve as a way of increasing capacity and mobility without making major capital investments. ITS includes technologies that improve traffic flow by adjusting signals, facilitating traffic flow at toll plazas, alerting emergency management services to the locations of crashes, increasing the efficiency of transit fare payment systems, and other actions. Other technological improvements include increasing information available to users of the transportation system to help people avoid congested areas and to improve customer satisfaction with the system.

• Use demand management techniques. Another approach to reducing congestion without making major capital investments is to use demand management techniques to reduce the number of vehicles traveling at the most congested times and on the most congested routes. One type of demand management for travel on public roads is to make greater use of pricing incentives. In particular, some economists have proposed using congestion pricing that involves charging surcharges or tolls to drivers who choose to travel during peak periods when their use of the roads increases congestion. These surcharges might help reduce congestion by providing incentives for travelers to share rides, use transit, travel at less congested (generally off-peak) times and on less congested routes, or make other adjustments. The surcharges may also lead businesses to move freight during less congested times or by alternate routes. At the same time, congestion pricing generates more revenues that can be targeted to alleviating congestion in those specific corridors. In addition to pricing incentives, other demand management techniques that encourage ride-sharing through carpools and vanpools may also be useful in reducing congestion. We note, however, that demand management techniques on roads, particularly those involving pricing, often provoke strong political opposition and raise equity issues that arise from the potentially regressive nature of these charges (i.e., the surcharges constitute a larger portion of the earnings of lower income households and therefore impose a greater financial burden on them).

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[8]Joseph M. Sussman, "Transitions in the World of Transportation: A Systems View," *Transportation Quarterly* 56 (2002): 21–22.

Strategy 3: Provide more options for financing mobility improvements and consider additional sources of revenue. There are three potential elements to this strategy, as follows:

- Increase funding flexibility. The current system of financing surface and maritime transportation projects limits options for addressing mobility challenges. For example, separate funding for each mode at the Federal, State, and local level can make it difficult to consider possible efficient and effective ways for enhancing mobility. Providing more flexibility in funding across modes could help address this limitation.
- Expand support for alternative financing mechanisms. The public sector could also expand its financial support for alternative financing mechanisms to access new sources of capital and stimulate additional investment in surface and maritime transportation infrastructure. These mechanisms include both newly emerging and existing financing techniques such as providing credit assistance to State and local governments for capital projects and using tax policy to provide incentives to the private sector for investing in surface and maritime transportation infrastructure.[9] These mechanisms currently provide a small portion of the total funding that is needed for capital investment and some of them could create future funding difficulties for State and local agencies because they involve greater borrowing from the private sector.
- Consider new revenue sources. A possible future shortage of revenues may limit efforts to address mobility challenges, according to many of the panelists that we consulted. For example, some panelists said that because of the increasing use of alternative fuels, revenues from the gas tax are expected to decrease, possibly limiting funds available to finance future transportation projects. One method of raising revenue is for counties and other regional authorities to impose sales taxes for funding transportation projects. A number of counties have already passed such taxes and more are being considered nationwide. However, several panelists expressed concerns that this method might not be the best option for addressing mobility challenges because (1) moving away from transportation user charges to sales taxes that are not directly tied to the use of transportation systems weakens the ties between transportation planning and finance and (2) counties and other taxing authorities may be able to bypass traditional State and metropolitan planning processes because sales taxes provide them with their owns funding sources for transportation.

New or increased taxes or other fees imposed on the freight sector could also help fund mobility improvements, for example, by increasing taxes on freight trucking. The Joint Committee on Taxation estimated that raising the ceiling on the tax paid by heavy vehicles to $1,900 could generate about $100 million per year.[10] Another revenue raising method would be to dedicate more of the revenues from taxes on alternative fuels, such as gasohol, to the Highway Trust Fund rather than to Treasury's general fund, as currently happens. However, this would decrease the amount of funds available for other Federal programs. Finally, pricing strategies, mentioned earlier in this statement as a technique to reduce congestion, are also possible additional sources of revenue for transportation purposes.

Question 2. We clearly have significant freight transportation needs across our Nation. How do we determine what our freight priorities should be? Do we have sufficient information to determine which freight corridors, border crossings, ports, intermodal facilities, and connectors should be our top funding priorities? Where is our freight infrastructure least efficient and where is the growth expected to occur?

Response. GAO has not performed work in this area. Therefore, we are unable to directly address your questions concerning the nation's freight priorities. We believe, however, that the Federal programs established in core transportation legislation should be evaluated to determine the extent to which these programs are enhancing freight transportation. As such, we are currently working with your staffs to undertake such work.

It would be prudent to evaluate the results of Federal programs to determine if programs are enhancing freight transportation. There appears to be substantial consensus that the reliability and effectiveness of the nation's freight transportation system is being constrained because of increasing demand and capacity limitations. Projected increases in the volume of freight being transported over the nation's transportation infrastructure and changes in the freight industry, such as just-in-time delivery and e-commerce, are placing new demands on the transportation sys-

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[9]See U.S. General Accounting Office, *Transportation Infrastructure: Alternative Financing Mechanisms for Surface Transportation*, GAO1–02–1126T (Washington, DC: Sept. 25, 2002).

[10]See U.S. General Accounting Office, *Highway Financing: Factors Affecting Highway Trust Fund Revenues*, GAO–02–667T (Washington, DC: May 9, 2002).

tem by requiring more freight to be shipped more frequently over the system. Furthermore, capacity and mobility limitations of the existing infrastructure-such as the need for deeper harbor channels to accommodate bigger ships, terminal capacity/expansion limitations, congestion on intermodal connectors, and aging and limited low-capacity locks on our nation's rivers-could potentially pose threats to our ability to move goods efficiently. While system stakeholders have maintained that demand and capacity limitations have not received the attention necessary to meet projected needs, these issues have not been evaluated on a system-wide basis.

Although the Intermodal Surface Transportation Efficiency Act (ISTEA) and TEA–21 allowed transportation planners to consider freight transportation requirements when developing transportation plans and making investment decisions, freight carriers and users have questioned whether the mandate set forth in core transportation legislation has been successful. Because control of transportation investment decisions has been delegated to State and local governments, freight projects funded through most of the programs have to be identified as priorities within the State and metropolitan planning organization (MPO) planning processes. States and MPOs, however, must weigh the need for freight transportation projects against priorities for other transportation projects. Furthermore, freight systems are global in scope whereas the perspective of State and local planners is limited to the area over which they have jurisdiction.

In our recent report on maritime finance,[11] we provide a framework for national infrastructure investment. The first component of this framework calls for evaluating results and incorporating lessons learned into the decisionmaking process. We are currently working with your staffs to evaluate many of these freight transportation issues.

Question 3. The Borders and Corridors programs have not worked very well. One improvement we should consider is to revise this program to encourage public-private partnerships through a greater emphasis on innovative finance and other creative incentives. How else can we improve the Borders and Corridors programs to target the highest priority freight corridors and intermodal facilities?

Response. In your question, you raised concern that the Borders and Corridors programs have not worked well and inquired about approaches (other than innovative finance and incentives) that might improve the programs. Absent an evaluation of the programs, we are not able to take a position on whether the programs have been successful in advancing freight projects. We can, however, provide information on noncapital alternatives to meet capital investment needs based on our recent work on surface and maritime transportation mobility.[12]

According to a report issued by the Federal Highway Administration (FHWA),[13] since States and MPOs must balance competing priorities for scarce transportation funding, the project prioritization process established in ISTEA and TEA–21 may serve to detract focus from freight projects within the State and MPO decisionmaking process. A common complaint of freight carriers and users of the system is that freight issues cannot compete with other politically popular projects, such as passenger projects. The Borders and Corridors programs, established in TEA–21, addressed this difficulty by providing funds over and above the annual State highway apportionment.

The FHWA report also notes that although the programs have been a good source of funding for freight projects, the programs have purportedly been oversubscribed and much of the program funds have been earmarked for non-freight projects. The apparent demand for funds under these programs suggests that there is a need for such programs. As previously noted, we are not able to take a position on whether the programs have been successful. We can, however, provide strategies that could be considered when developing the legislative reauthorization package.

In our recent mobility report on strategies for enhancing mobility, we identified the need for using a full range of tools to achieve desired program outcomes. While new construction may hold some promise to ease congestion in certain bottlenecks, it is not always a viable solution due to cost, land, regulatory, or administrative constraints. Therefore, noncapital alternatives to meet capital investment needs should also be considered. These alternatives can include improving the management and operation of the existing system through corrective and preventative maintenance and rehabilitation and/or managing or reducing travel demand through pricing in-

[11]U.S. General Accounting Office, *Marine Transportation: Federal Financing and a Framework for Infrastructure Investments*, GAO–02–1033, (Washington, DC: Sept. 9, 2002).

[12]U.S. General Accounting Office, *Surface and Maritime Transportation: Developing Strategies for Enhancing Mobility: A National Challenge*, GAO–02–775, (Washington, DC: Aug. 30, 2002).

[13]Federal Highway Administration, *Freight Financing Options for National Freight Productivity*, (Washington, DC: Apr. 2001).

centives. Another alternative we proposed in our mobility report involves instituting tolls or fees during peak travel times which may lead people to schedule recreational trips or move freight during less congested times or be alternate routes.

Question 4: One way to squeeze more capacity out of existing infrastructure is through more rapid deployment of Intelligent Transportation Systems and an increased focus on the operations and management of regional transportation systems. How much potential do Intelligent Transportation System initiatives have for improving the efficiency of freight operations and what can we do to promote the development of a freight-friendly ITS infrastructure?

Response. We have not done any recent work to evaluate Intelligent Transportation Systems (ITS) initiatives or to identify strategies for promoting "freight-friendly" ITS infrastructure. As noted in our response to question 1, however, our recent work on strategies for addressing mobility provides information about Intelligent Transportation Systems (ITS). The Department of Transportation's ITS program applies proven and emerging technologies-drawn from computer hardware and software systems, telecommunications, navigation, and other systems-to surface transportation. In fiscal year 2001, nearly 50 percent of FHWA's $387.2 million research and technology budget was allocated to intelligent transportation systems.[14] A number of intelligent transportation systems offer promise for improving the efficiency of freight transportation. For example, highway-rail intersection systems are being developed to coordinate traffic signal operations and train movement and notify drivers of approaching trains using in-vehicle warning systems. Also, commercial vehicle intelligent transportation systems are being developed that will apply technologies to improve the safety and productivity of commercial vehicles and drivers, reduce commercial vehicles' operations costs, and facilitate regulatory processes for the trucking industry and government agencies.

Question 5. What can we do to promote better regional freight planning and how do we ensure that planning agencies take a comprehensive, intermodal approach to infrastructure planning and development? In particular, when it comes to freight, how do we bring the private sector into the public planning process?

Response. GAO has not reviewed the freight planning process. We are therefore unable to proffer suggestions on how the process can be improved. At this time, we are planning to undertake work that would allow us to more fully address this question.

We can provide the following observations based on our recent work on surface and maritime transportation mobility and expert panels we convened to discuss major transportation issues:

- Planning with a regional focus. Experts participating in a conference we sponsored on June 14, 2001 to discuss major transportation issues raised concerns about integrating freight needs into transportation planning and investment decisions.[15] Conference speakers supported more planning with a regional focus-with participation by Federal, State, and local entities-to make better use of Federal transportation assistance.
- Modal limitations. Experts participating in a conference we sponsored on January 26, 1999 noted that freight stakeholders must become full partners in making transportation policy so that surface transportation investments are linked to freight needs.[16] Facilitating freight users' and suppliers' involvement in transportation policy will enhance the nation's ability to move freight seamlessly across different transportation systems. In addition, manufacturers and freight companies regard the Department of Transportation's "stovepipe" organization as a major obstacle to working with the Federal Government. They find it difficult to discuss intermodal projects or emerging issues with a single DOT agency that is responsible only for highway or maritime issues.
- Knowledge/expertise. The January 26, 1999 conference participants also noted that the public sector must better understand the needs and problems of moving freight nationally and regionally. State transportation departments and MPOs, however, may not have sufficient expertise, or in some cases, authority to effectively identify and implement mobility improvements across modes or types of travel.[17]

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[14]U.S. General Accounting Office, *Highway Research: Systematic Selection and Evaluation Processes Needed for Research Program*, GAO–02–573 (Washington, DC: May 24, 2002).

[15]U.S. General Accounting Office, *Physical Infrastructure: Crosscutting Issues Planning Conference Report*, GAO–02–139, (Washington, DC: Oct. 1, 2001).

[16]U.S. General Accounting Office, *Surface Transportation: Moving into the 21st Century*, GAO/RCED–99–176, (Washington, DC: May 1, 1999).

[17]U.S. General Accounting Office, *Surface and Maritime Transportation: Developing Strategies for Enhancing Mobility: A National Challenge*, GAO–02–775 (Washington, DC: Aug. 30, 2002).

• Research. The January 26, 1999 participants noted that Federal policymakers should renew their commitment to funding nationally important research. While TEA–21 substantially increased States' research funding, it considerably reduced funds for Federal research. State research programs focus on short-term practical problems whereas Federal research focuses on long-term and high-risk research, intermodal problems, and transportation policies.

• Best practices. In our recently issued mobility report, experts offered the Alameda Corridor as an example of successful cooperation and coordination of freight needs. The Alameda Corridor is designed to improve cargo movement from California's ports of Los Angeles and Long Beach to the rest of the country. Its planning, financing, and building required cooperation among private railroads, the local port authorities, the cities of Los Angeles and Long Beach, community groups along the corridor, the State of California, and the Federal Government.

Question 6 (from Senator Jeffords). I have a hypothesis that if more was done to provide strategic investment in rail infrastructure, we could reduce congestion on our highways and improve the quality air we breathe. For instance, in Chicago, it is my understanding that a majority of the truck traffic in the metro area is a result of cargo being off loaded from one rail line and being shipped to another part of town to be loaded on another train to continue its journey. If funding were made available for improving rail-to-rail connections in the Chicago area, what kind of effect would consolidating rail yards and rail lines in the Chicago area have on truck traffic on the highway system?

Response. GAO has not conducted work on rail-to-rail connections in the Chicago area and therefore, we are unable to comment on the effect consolidating rail yards and lines in the Chicago area would have on truck traffic.

STATEMENT OF KATIE DUSENBERRY, CHAIRMAN, ARIZONA DEPARTMENT OF TRANSPORTATION BOARD

Good morning Mr. Chairman and members of the committee. Thank you for the opportunity to present to you today the views of the Arizona Department of Transportation Board regarding the Hoover Dam Bypass Project and the impact on commercial trucking.

For the record, my name is Katie Dusenberry, and I am the Chairman of the Arizona Department of Transportation Board. The Board is responsible for a variety of transportation activities prescribed by Arizona statute.

Introduction

Over the past 10 years, there has been a significant growth in freight due to improvements in manufacturing processes and new technologies. This growth, while important for economic vitality, stresses our trade gateways and corridors. U.S. DOT has estimated that freight traffic will double over the next 20 years making the condition of these trade corridors even more critical. Our economic growth and ability to maintain a competitive edge in international markets depends on the condition and capacity of these trade corridors to accommodate the ever increasing freight traffic.

History

U.S. Highway 93 is part of the major transportation network in the western United States and is the primary, direct north-south connecting highway linking two major metropolitan cities, Phoenix, Arizona and Las Vegas, Nevada, in two of the fastest growing States in the United States. U.S. 93 is one of the highway segments that makes up the route from Mexico City, Mexico to Edmonton, Canada known as the CANAMEX Corridor. This corridor was formally designated as a high-priority trade corridor by the National Highway System Designation Act of 1995. The Corridor runs from Mexico City to I–19 in Nogales to Tucson, I–10 from Tucson to Phoenix, US 93 in the vicinity of Phoenix to the Nevada Border, US 93 from Arizona to Las Vegas and I–15 from Las Vegas through Montana to Edmonton, Canada.

The CANAMEX Corridor represents an opportunity for economic development that facilitates trade and encourages economic growth throughout the region. The interest in developing this Corridor is to facilitate transportation distribution, commerce and tourism. A preliminary study of the potential positive economic impact if the CANAMEX Corridor is fully developed suggests over a 30 year period:

- Economic development (value added) of $1.2 billion;
- Economic efficiencies of $509 million;
- Approximately 1,900 new permanent jobs.

These figures reflect completion of a number of projects within the Corridor including the Hoover Dam Bypass project.

Prior to the terrorist attacks on 9/11/01, the direct route for all traffic, including commercial trucks, to reach either Arizona or Nevada was a road across the top of Hoover Dam consisting of two lanes of traffic, one in each direction. The approach from Arizona to the Hoover Dam consists of approximately 1.2 miles of roadway and from Nevada, 2.2 miles of roadway. On the approach to Hoover Dam from both Arizona and Nevada, steep grades, hairpin turns, and inadequate sight distance are encountered by freight and passenger traffic reducing speeds to between 8 to 18 MPH. Commercial trucks are often too large to pass each other on the extreme hairpin curves and must come to a complete stop. On both the Arizona and Nevada approaches, the grades are greater than 6 percent. The existing 6.3 miles north and south of the Dam requires an average of 16.5 minutes to cross due to the nature of the road and the traffic on the Dam itself. To remedy the inadequacy of this route, the Federal Highway Administration (FHWA) in cooperation with the States of Arizona and Nevada and other affected Federal and State agencies has taken a leadership role in developing plans to construct a new bridge to cross the Colorado River in the vicinity of Hoover Dam. This bridge is entirely on Federal property and therefore should be largely a Federal financial responsibility.

Since 9/11/01, the road across the Hoover Dam has been closed to commercial trucking and over 2,100 trucks per day are now detoured to other highways. Commercial truck traffic must now route through Laughlin, an additional 23 miles or I–40 an additional 70 miles, adding dozens of travel miles to each trip. This creates a negative financial impact of $30 million per year, based on only the additional mileage, which is ultimately passed on to the consumer. The detours currently being used by commercial trucks are not designed to handle this traffic volume and weight. The Hoover Dam crossing is the only major highway in the Nation with ongoing restrictions as a result of the terrorist attack.

Purpose of Project

The purpose of the project, a joint effort among Arizona, Nevada and the Federal Government is to significantly reduce traffic on the road atop the Hoover Dam and will accomplish the following objectives:

- Remove a major bottleneck to interstate and international commerce and travel by reducing traffic congestion and accidents in this segment of the major commercial route.
- Separate tourist and commercial traffic to reduce congestion.
- Improve efficiency and reduce cost to the shippers of freight by reducing travel time.
- Replace an inadequate federally owned highway river crossing, first constructed over 60 years ago, with a new bridge that meets current roadway design criteria and improves both vehicle and truck capacity on U.S. 93 in the area of the Dam.
- Minimize the potential for pedestrian—vehicle accidents on the Dam crest and on the Nevada and Arizona approaches.
- Protect the Hoover Dam, visitors, employees, equipment, and power generation capabilities and Colorado River waters while enhancing the visitors' experience at Hoover Dam.

The FHWA recommended the Sugarloaf alignment as the best location to construct the bridge. This location is approximately 1,500 feet downstream from Hoover Dam. This site requires constructing 2.2 miles of highway approach in Nevada and approximately 1.2 miles of highway approach in Arizona and a 2,000-foot long bridge.

Travel Times

The current travel time across the top of the Hoover Dam averages 16.5 minutes up to 60 minutes during peak hours. The proposed bypass bridge and approaches would reduce the travel time to only 6 minutes.

When accidents occur on and near the Dam, significant traffic backups of over ten to 15 miles result. Since there are no alternative routes to which traffic can shift, this results in delays ranging from two to 5 hours for motorists. There have been incidents of up to 18 hours delay.

Accident Statistics

The number of tourists traveling to the Lake Mead Recreational Area and Hoover Dam was 1.03 million in 1997 and was projected to increase to 1.6 million in 1999. Since 1964 more than 500 accidents have occurred in the 3.4 mile stretch of highway on or near the Hoover Dam. Commercial trucks were involved in 96 of these

accidents. Forty-three accidents between 1985 and 1991 involved one or more personal injuries, including two fatalities. In each accident, the cause was partially attributable to sharp curves, narrow highway widths, insufficient shoulder widths, poor sight distance and slow travel speeds. Especially in regards to freight traffic, the previous configuration of putting trucks across the Hoover Dam with two-lane traffic, steep approaches, sharp curves at the entrances and heavy pedestrian traffic, the Hoover Dam was a serious accident location.

One mile of the Hoover Dam road reflects a much higher accident rate than the three-mile adjoining segments. The half-mile segments of US 93 approaching the Dam have an accident rate of 3.97 per million vehicle miles traveled. That rate is over three times the Nevada average of 1.15 per million vehicle miles traveled for rural principal arterial routes.

Traffic on the road across the Hoover Dam was 5,500 vehicles per day in 1993 and currently is 11,500 vehicles per day. 18 percent to 20 percent was truck traffic prior to 9/11/01. Future traffic is projected to be 21,000 in 2017 and 26,000 in 2027. As the average annual daily traffic across the Dam continues to increase, the number of accidents is increasing accordingly as congestion on the Dam also increases.

Security

Since Hoover Dam holds the waters of Lake Mead, the largest water reservoir in the Nation, the U.S. Department of Interior has identified the Hoover Dam Bypass Project as its No. 1 national security priority. The massive Dam provides vital flood control for more than a quarter million people living in the Colorado River region and generates four billion kilowatt-hours of energy for 1.3 million people in the tri-State regions of California, Arizona and Nevada.

Project Status

- Hoover Dam Bypass Project received its record of decision for project approval in April 2001. The Environmental Impact Statement has been finalized.
- This project is the No. 1 priority of the States of Arizona and Nevada. Only an additional $108 million is needed to ensure full funding for this project.
- The design is over 95 percent complete for the Arizona approach. Nevada's approach is 60 percent complete. The bridge design is 30 percent complete.

Funding

	Current
Nevada & Arizona State funds	$40,000,000
Federal Funds previously committed	$86,000,000
Additional Federal Funding needed	$108,000,000
Total Project Budget	$234,000,000

We are requesting $108 million to complete the Hoover Dam Bypass Project. Because there are no complex interchanges and only one small area of roadway on either side of the bridge to construct, we are confident that the bridge as designed will be completed within the entire project budget of $234 million dollars. The bridge's design ensures that it will accommodate anticipated traffic volumes including increased freight that will be generated due to the north-south trade from Mexico to Canada well into the future.

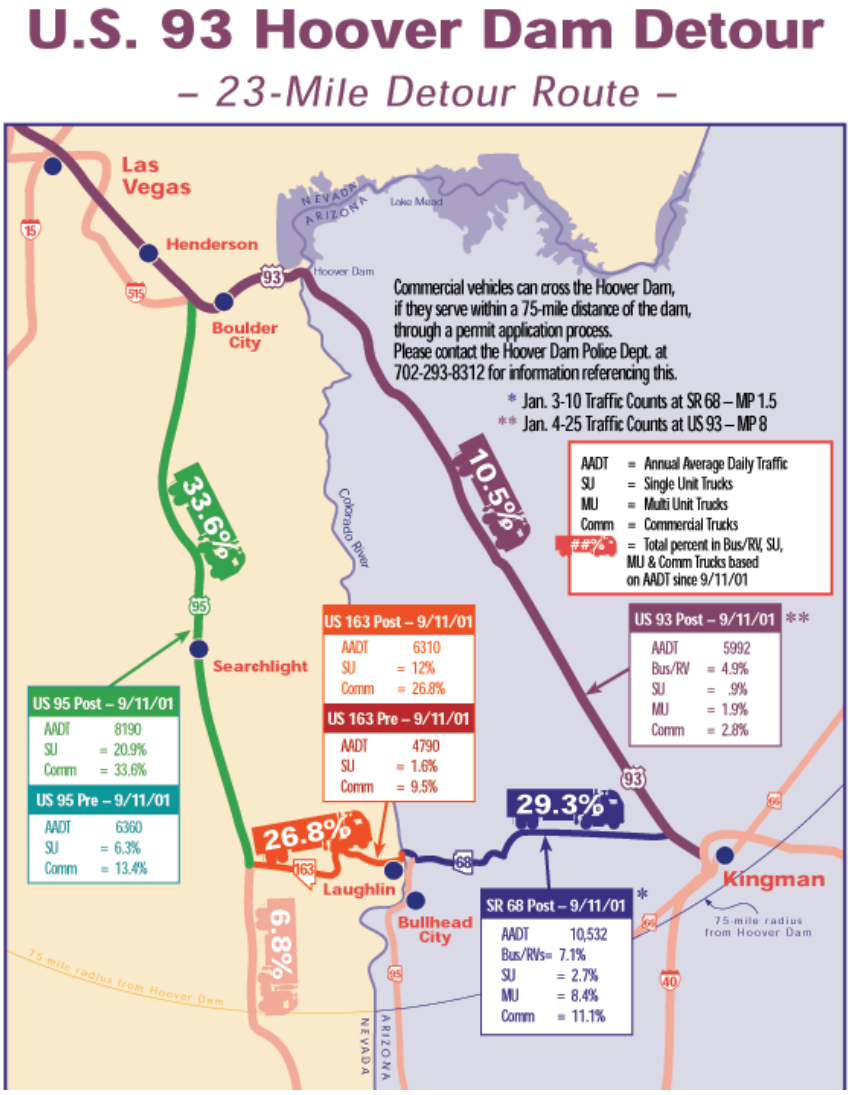
GARVEE Bonds/Innovative Financing

Because of the great need to construct the Hoover Dam Bypass, Grant Anticipation Revenue Vehicles (GARVEEs) are being considered as a mechanism to provide immediate funds to complete the construction of the Hoover Dam Bypass through the issuing of bonds. Even though bond financing incurs interest and other debt-related costs, delaying the project would create greater costs such as inflation, lost driver time, freight delays, and wasted fuel. Both Arizona and Nevada are interested in pursuing this as an option to allow construction to begin immediately, while allowing Federal funding to occur over time. This allows for completion of the Hoover Dam Bypass by mid 2007 and thereby, providing a safe and efficient route for commercial trucking.

Conclusion

Mr. Chairman and members of the committee, we urge you to consider providing an additional $108 million dollars to fully fund the Hoover Dam Bypass. The bypass project is vital to the efficient movement of commercial freight and will substantially reduce the additional miles and travel times that commercial trucks are currently experiencing. This project is also a critical part of the development of the

CANAMEX Corridor which runs from Mexico to Canada and will provide economic growth and safer transportation by increasing commercial freight, commerce and tourism.



STATEMENT OF MICHAEL W. WICKHAM, CHAIRMAN AND CEO, ROADWAY CORPORATION, FOR THE AMERICAN TRUCKING ASSOCIATIONS, INC.

Chairmen Reid and Breaux, Senators Inhofe and Smith, members of the Subcommittees, thank you for the opportunity to express the trucking industry's perspectives regarding freight transportation. I am Michael Wickham, Chairman of the Board and Chief Executive Officer of Roadway Corporation. Roadway is headquartered in Akron, OH. The company was founded in 1930, and today we are one of the Nation's leading providers of less-than-truckload (LTL) freight transportation services. Roadway provides seamless service between all 50 States, Canada,

Mexico, and Puerto Rico, with international freight services for 140 countries. We have subsidiaries in Canada and Mexico, and we operate 379 terminals throughout North America. Roadway employs more than 26,000 people. Roadway's Mexican and Canadian operations connect our neighbors with 96 percent of the U.S. population through seamless cross-border operations and services. In addition, Roadway ships over three billion pounds of truckload freight annually. Through Roadway Air, our company provides time-definite air freight delivery services.

I am appearing before the Subcommittees today on behalf of the American Trucking Associations, Inc. (ATA) and Roadway Corporation. ATA is the national trade association of the trucking industry. We are a federation of affiliated State trucking associations, conferences, and other organizations that together include more than 37,000 motor-carrier members, representing every type and class of motor carrier in the country. We represent an industry that employs nearly ten million people, providing one out of every 14 civilian jobs. While we are a highly diverse industry, we all agree that a good highway system is crucial to our Nation's economy, to the safety of all drivers, and to our bottom line. This includes the more than 3 million truck drivers who travel over 400 billion miles per year to deliver to Americans 86 percent of their transported food, clothing, finished products, raw materials, and other items.[1]

American industrial and commercial enterprises are able to compete more effectively in the global marketplace due to the benefits of safe and efficient trucking. Truck transportation is the most flexible mode for freight shipment, providing door-to-door service to every city, manufacturing plant, warehouse, retail store and home in the country. For many people and businesses located in towns and cities across the United States, trucking services are the only available means to ship goods. Trucks are the only providers of goods to 75 percent of American communities. Five percent of the Nation's GDP is created by truck transportation. Actions that affect the trucking industry's ability to move its annual 8.9 billion tons of freight have significant consequences for the ability of every American to do their job well and to enjoy a high quality of life.

BUILDING ON SUCCESS: MAKING OUR NATION'S HIGHWAYS SAFER FOR ALL MOTORISTS

Having spent my entire career in the trucking industry, I am most proud of the fact that we continue to improve our safety record, year after year, mile after mile. Safety must be paramount in our consideration of future reauthorization programs and policies. ATA takes safety concerns very seriously. Our industry has strongly promoted many safety improvements that have made trucking safer today than it has ever been in the past. Between 1985 and 2000, the fatal accident rate involving trucks has fallen 44 percent. Furthermore, research by the AAA Foundation, and a study done by the University of Michigan at the request of the USDOT, found that in about three-quarters of accidents involving a passenger vehicle and a truck, the actions of the truck driver were not a factor leading to the accident.[2]In fact, today's truck driver is the safest driver—passenger or commercial—in our Nation's recorded history.

Even though the trucking industry is taking proactive steps to improve our safety record, ATA is very concerned about America's overall highway safety experience. Each year, more than 40,000 people lose their lives as a result of a traffic accident. This is an unacceptable loss of life and an economic tragedy. As Secretary of Transportation Norman Mineta announced earlier this year, the economic impact of motor vehicle crashes is over $230 billion per year. This represents an annual economic loss of $820 for every American. Investing additional resources in projects and programs that improve highway safety produces more than human benefits; it has positive economic consequences as well. However, we should also spend our money wisely, directing precious resources toward those activities that will produce the greatest safety benefit, based on sound scientific evaluation of the causes of crashes and appropriate remedies.

It is clear that truck safety has improved over the last 20 years. An interesting question, however, is "What has caused the improvement?" This is a tough question to answer for both industry and government officials. It's fairly clear that some programs that have been implemented in the last 10 to 20 years have contributed to the overall positive picture. The industry-supported Federal-State truck safety inspection grant program (known as the Motor Carrier Safety Assistance Program or

[1]87.3 percent by revenue. American Trucking Associations, *U.S. Freight Transportation Forecast to 2013*, 2002.

[2]"Driver-Related Factors in Crashes Between Large Trucks and Passenger Vehicles," Federal Highway Administration, April 1999; "Identifying Unsafe Driver Actions that Lead to Fatal Car-Truck Crashes," AAA Foundation, April 2002.

MCSAP) has had an impact by improving trucks' condition; the Commercial Driver's License (CDL) program has contributed by raising the bar for driver entry into the industry; and the implementation of voluntary drug testing by the industry and a mandatory Federal drug and alcohol testing program have also contributed in a positive way. It is very likely that the increase in seat belt use by truck drivers and other motorists have also had a positive impact. Many other industry and government initiatives are likely to have had some benefit as well. The point here, however, is that we still need to have a better understanding of what has worked and why. Additionally, we still do not understand thoroughly how and why truck crashes occur.

Section 224 of the Motor Carrier Safety Improvement Act of 1999 (MCSIA, P.L. 106–159) required the Secretary of Transportation to conduct a comprehensive study to determine the causes of, and contributing factors to, crashes involving large trucks and buses. The primary purpose of this study requirement was to have a comprehensive analysis and report that would yield information to help FMCSA and the States identify activities and safety measures that would likely lead to significant reductions in the frequency, severity and rate per mile traveled of crashes involving large trucks and buses. ATA fully supported this study concept during the truck safety debate in 1999 that resulted in the passage of MCSIA.

FMCSA initiated this study in 2000 with the assistance of the National Highway Traffic Safety Administration (NHTSA), and the State agencies involved in commercial vehicle safety efforts. The study will not be complete until the end of 2003 at the earliest. However, a FMCSA official recently confirmed that preliminary information suggests that driver actions—both passenger and commercial—appear to be a more significant factor in accident causation than previously thought, and that enforcement resources may have to be redirected to reflect these findings.[3]

Other studies and data confirm these preliminary findings.[4] Congress and the U.S. DOT have traditionally taken different approaches to improving traffic safety versus truck safety. NHTSA's traffic safety programs have included education and outreach, traffic enforcement programs aimed at changing driver behavior, and crash data analysis. FMCSA's truck safety programs, on the other hand, have focused on increasing the number of regulatory requirements on drivers and carriers, enforced through on-road safety inspections and facility compliance audits. Since so much of truck safety is rooted in overall traffic safety, Congress should seriously consider much more of a traffic safety approach to improving truck safety.

Earlier this year, ATA's President and CEO, William Canary, challenged our State and Federal partners to seriously address one of the most pervasive and dangerous violations of the law that drivers encounter every day—speeding. FMCSA reports that speeding (exceeding the speed limit or driving too fast for conditions) was a contributing factor in 22 percent of fatal crashes involving a truck in 2000. Since the majority of fatal truck crashes are multi-vehicle crashes involving one or more passenger vehicles, this 22 percent figure includes speeding on the part of the truck driver, or speeding on the part of the other driver, or speeding by both parties. Also, according to a recent FMCSA study, driving at an unsafe speed was the second most frequent unsafe driving act committed by passenger vehicles in the vicinity of large trucks. Following too closely was the most frequently cited unsafe driving act by motorists.

Additionally, NHTSA reports that speeding was a contributing factor in 29 percent of all fatal crashes in 2000. This means that more than 12,000 people lost their lives in 2000 in part due to speed-related crashes. This is simply unacceptable. The time has come to combat excessive speeding. There are four words that every motorist and every commercial vehicle driver needs to remember when they buckle up and take the wheel of their vehicle: *Safe Speeds Save Lives!*

The Section 402 Highway Safety Grant Program administered by the NHTSA supports many outreach and enforcement programs, including the priority programs to encourage the proper use of occupant protection devices and reduce drug and alcohol impaired driving. While these programs clearly deserve a high priority for NHTSA, ATA is concerned that strong, visible speed enforcement may not be getting the focus, attention and funding it deserves by NHTSA.

Additionally, the Motor Carrier Safety Assistance Program (MCSAP) administered by FMCSA focuses on priority truck and bus safety initiatives that, for the most part, do not address speeding truck and bus drivers, or other motorists. The MCSAP

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[3]"FMCSA Crash Data Analyst Says Study May Alter Inspections," *Transport Topics*, Aug. 26, 2002, p. 2.

[4]"Driver-Related Factors in Crashes Between Large Trucks and Passenger Vehicles," Federal Highway Administration, April 1999; "Identifying Unsafe Driver Actions that Lead to Fatal Car-Truck Crashes," AAA Foundation, April 2002.

program, a generally successful truck and bus safety inspection program, is simply not putting enough emphasis on traffic enforcement activities. Strong speed enforcement aimed at commercial vehicle drivers, as well as other motorists with which commercial drivers share the road, needs to take on a much greater role in the MCSAP program. In fact, there is currently an artificial constraint that keeps the amount of speed enforcement activity in the MCSAP program small. FMCSA's regulations require that all speed enforcement stops (as well as all other types of traffic enforcement stops) of trucks include an appropriate North American Standard Inspection of the truck or the driver, or both, for the activity to be eligible for MCSAP funding. This inspection requirement, found at 49 C.F.R. 350.111, is unnecessary and unwarranted. Additionally, since speeding and other unsafe driving behaviors of non-commercial drivers play an even greater role in truck-involved crashes than do the actions of the commercial driver, the MCSAP program must include traffic enforcement efforts aimed at unsafe motorist behavior.

ATA recommends that Congress authorize additional funding for the Section 402 Highway Safety Grant Program administered by NHTSA, and the MCSAP truck safety grant program administered by FMCSA, specifically for increased traffic and speed enforcement efforts in the upcoming highway reauthorization. ATA further recommends that Congress make it clear in legislative language that MCSAP funding may be used for State speed enforcement efforts aimed at both commercial and non-commercial drivers, and that speed enforcement activities aimed at commercial drivers do not have to be linked to a North American Standard Inspection. Additional funding, additional emphasis, and greater Federal leadership is needed on this issue to reduce the speed of all drivers on our highways and to save lives.

ATA is also a firm believer in the life-saving benefits of seat belts. ATA recommends that Congress continue to support and fully fund the occupant protection programs of NHTSA, including the ongoing 'Click It or Ticket' grant program.

IMPROVING THE SAFETY AND EFFICIENCY OF INTERMODAL EQUIPMENT

Mr. Chairman, while we try to cooperate with our intermodal partners in many areas, and will do so during this reauthorization cycle, there is one area on which we disagree, and I am afraid that the footdragging by Federal agencies and by many in the rail and ocean carrier industries to work with us to resolve the "roadability" issue is having serious safety and economic impacts. Since the advent of containerized shipping in the 1970's, a serious safety loophole has crept into the Federal Motor Carrier Safety Regulations (F.M.C.S.R.s).

As containerized intermodal freight has evolved over the decades, the Federal safety regulations have not kept pace. As a result, 750,000 intermodal chassis are operating in a safety loophole. These frame-like trailers are used exclusively to haul intermodal containers, and are interchanged between steamship lines, railroads, and motor carriers. The chassis are also classified as commercial motor vehicles by the USDOT. However, they evade USDOT safety oversight.

The F.M.C.S.R.s fundamentally assume that motor carriers have daily management control over all commercial motor vehicles they take onto public roadways. Based on that assumption, the regulations read, "Every motor carrier shall systematically inspect, repair, and maintain . . . all motor vehicles subject to its control."[5]

USDOT's interpretation of *systematic maintenance* is,". . . *a regular or scheduled program to keep vehicles in a safe operating condition*."[6]It explains that the agency does not specify maintenance intervals, leaving that decision to motor carriers, based on fleet and vehicle considerations. So how does USDOT know if a motor carrier is failing to "keep vehicles in a safe operating condition?" When roadside safety inspections, typically conducted by State police, drive a motor carrier's SAFESTAT (violation) numbers above a certain threshold, the agency and State police send an envoy to the motor carrier's place of business to audit the maintenance and employee training records, inspect the carrier's equipment, etc.

While railroads and foreign-owned steamship lines (collectively called "providers") own or lease the intermodal chassis,[7] and control its daily disposition, they claim not to be motor carriers, thus not technically responsible for the condition of their equipment under Federal safety regulations. However, they do affix the annual inspection sticker on their equipment, which constitutes an act of certification that the equipment was inspected in detail at least once a year. Providers conduct the annual inspection pursuant to the F.M.C.S.R.s, but many do not conduct systematic

[5]49 CFR Part 396.3. Inspection, repair, and maintenance

[6]*Regulatory Guidance to the Federal Motor Carrier Safety Regulations,* at 49 CFR 396.3; emphasis added.

[7]While this is the general practice, some ports have different arrangements.

maintenance on the same equipment, which is likewise mandated by the F.M.C.S.R.s. In fact, providers are generally unaware of the existence of the Federal systematic maintenance requirement. This explains the poor condition of intermodal chassis and points to USDOT's failure to close their own regulatory loophole to hold the controlling party accountable for the safety compliance of their own chassis.

SAFESTAT is the USDOT's computer analysis of their data base containing motor-carriers' accumulated violations. They use it to judge how safely a motor carrier maintains the commercial vehicles under its control. By contrast, it is impossible to assess providers' adequacy in performing systematic maintenance because USDOT resists including them in the SAFESTAT program. Ironically, USDOT says the reason it has not moved forward to close the intermodal equipment safety loophole is because they do not have the data to indicate a problem with the providers' chassis!

A new study[8] conducted jointly by the Federal Motor Carrier Safety Administration and the University of Maryland at College Park provides support to ATA's position on the Roadability issue. This study looked at 11 sectors of the trucking industry, one of which was intermodal operations. Researchers used nine safety performance measurements and other data managed by the USDOT to analyze the safety performance of each sector. One significant finding is that intermodal trucking operations were found to be average or better-than-average in six of the nine measurements. However, in the two measurements relating to vehicle condition, and the one relating to accidents, the intermodal sector ranked poorly. Specifically, among the 11 sectors, intermodal operations ranked last for vehicle safety condition, second-to-last (tenth) for accumulating vehicle out-of-service violations, and ninth for reportable accidents. Thus, the latest research findings from FMCSA confirm what intermodal trucking executives have been saying for years (that the equipment controlled by steamship lines and railroads, and subsequently provided to motor carriers for brief periods of time, are not maintained by those controlling parties as required by the Federal Motor Carrier Safety Regulations.

In summarizing the roadability issue, providers claim they are not motor carriers, thus they are not responsible for maintenance of their chassis. Providers say the motor carriers are responsible. The motor carriers point out that they do not control the providers' equipment; they neither own it, lease it, control its maintenance treatment, conduct annual or periodic inspections on it, nor do they control its daily disposition. The regulations reasonably require truckers to maintain only the equipment they actually control. In the meantime, USDOT has acknowledged that it has jurisdiction over the issue, but has failed to place safety responsibility. That places the 750,000 chassis squarely in a safety loophole, which the USDOT has yet to close.

Enforcement needs to be redirected from the motor carriers, who are powerless to include interchanged intermodal equipment in their periodic maintenance programs, and placed on the parties who decide every day whether to repair a chassis, or hand it off to a motor carrier without the benefit of this USDOT-mandated maintenance benefit. Therefore, ATA is recommending that Congress pass legislation which forces the USDOT to equitably enforce laws designed to ensure the safe condition of all regulated equipment, including intermodal chassis.

THE NATIONAL HIGHWAY SYSTEM: THE BACKBONE OF AMERICA'S FREIGHT TRANSPORTATION SYSTEM

Trucks move 67 percent of freight tonnage, 86 percent measured by value.[9] This is freight that moves by truck alone; it does not touch another mode. Truck freight is a vital component of America's economy. Trucks are the only providers of goods to 75 percent of American communities. For every $20 spent on freight transportation, $17 will accrue to trucks.[10] This pre-eminence is likely to grow. According to the Federal Highway Administration (FHWA) the demand for freight transportation services will increase by 87 percent by 2020.[11] The trucking industry will be asked to transport nearly 2.7 billion more tons of freight in 2014 than we carry

[8]Motor-Carrier Industry Profile Study Evaluating Safety Performance by Motor Carrier Industry Segment: by Thomas P. Keane of the Federal Motor Carrier Safety Administration (USDOT); Dr. Thomas Corsi of the University of Maryland, College Park, and Kristine N. Braaten of Econometrics, inc, April 1, 2002. This study was published in the *Proceedings of the International Truck and Bus Safety Research and Policy Symposium* on April 3–5, 2002 in Knoxville, TN, an event hosted by the Center for Transportation Research at the University of Tennessee.

[9]American Trucking Associations, *U.S. Freight Transportation Forecast to 2013*, 2001.

[10]Ibid.

[11]Federal Highway Administration, *National Freight Trends/Issues, System Flows, and Policy Implications,* 2000.

today.[12] This increase of 2.7 billion tons alone is more than 500 million tons greater than the total volume of freight that the railroads will carry in 2014 (See Appendix A). To accommodate this higher demand level, the number of trucks will increase over the next 12 years by 31 percent, adding 1.9 million more trucks to the road, over 157,000 trucks each year. The largest increase, 58 percent, will be among smaller trucks, which tend to operate mostly in urban areas and are not subject to competition from other modes. Overall, truck vehicle miles traveled (VMT) will increase by 36 percent, or 60 billion miles, by 2013.[13] Thus, more trucks will be traveling more miles on a highway system that will see very little capacity expansion over the next dozen years.

This is not a sustainable trend, and it should not be allowed to continue. While the growth in truck demand is inevitable, limiting highway capacity growth is not. Congress has the ability to ensure that the growth in highway capacity matches the growth in vehicle travel.

The intermodal movement of freight can play an important role and should be encouraged. Roadway relies heavily on the railroads for a large portion of our long-distance movements. Last year, one-quarter of my company's delivery miles were on a train. This saved Roadway nearly 24,000,000 gallons in fuel use. However, we believe that we have reached the limit of our railroad utilization potential.

The ability of rail intermodal transportation to slow the growth of truck traffic is limited by market forces beyond the control of Congress, the States and, to some extent, the modes themselves. Today, just 1.2 percent of freight moves in a rail intermodal shipment.[14] Despite anticipated growth in this sector that will exceed trucking growth, by 2014 rail intermodal shipments will capture just 1.5 percent of the freight market, while trucking's market share, as measured by tonnage, will expand to 69 percent.[15]

It is not constructive to assume that the business logistics trends of the past half-century which have made trucks the dominant mover of freight will somehow reverse themselves, and that our Nation's reliance on trucks will subside. Congress should focus its attention and resources where they are needed most and will pay the greatest dividends for our country—on improving the efficiency of the highway system and the productivity of the trucking industry. Although the past two reauthorization acts developed and promoted by these Subcommittees have been instrumental in revitalizing Federal surface transportation policy, there is still a distance to go, with some longstanding obstacles and some new challenges to face.

One of these challenges is basic highway infrastructure. At a time when many stakeholders, including those appearing at this hearing, have legitimate concerns about the future of intermodal connectivity, alternative transportation, and transportation enhancements, there often is a loss of focus on the original purpose of Federal involvement in surface transportation: namely, to help the States build and maintain a national system of highways. As the Subcommittees consider their reauthorization proposals, it is imperative to review whether this goal is still being met. According to the Department of Transportation's 1999 Conditions and Performance report, even with the high levels of funding authorized by the Transportation Equity Act for the 21st Century (TEA–21), there is still a shortfall in Federal funding of over $25 billion each year just to maintain current conditions on our highways and bridges. While it is inconceivable under current economic conditions to consider completely eliminating the shortfall during this upcoming reauthorization cycle, serious thought must be given to reducing the shortfall.

As America's economy becomes even more dependent on trucks, so too will the economy be affected by the impacts of congestion on the trucking industry's ability to meet shippers' needs. While manufacturers and distributors demand ever more speed and reliability from the trucking industry, our ability to meet those demands are being challenged by growing highway congestion.

For businesses whose livelihoods depend on road transportation, these costs are particularly heavy. No industry is as negatively affected by congestion as trucking. It used to be possible for truckers to schedule their deliveries through congested urban areas at off-peak times. However, increasingly, such times do not exist. Current congestion levels are now compelling revisions to the language of congestion itself. It is no longer proper to discuss the "rush hour," when it lasts for 3 hours, twice a day. On the Interstate System, for example, more than half of peak-hour

[12]Based on unpublished data from ATA's Economics and Statistics Group.
[13]American Trucking Associations, *U.S. Freight Transportation Forecast to 2013*, 2001.
[14]Ibid.
[15]Based on unpublished data from ATA's Economics and Statistics Group.

travel on urban Interstates occurs under congested conditions.[16] Under such circumstances, it is becoming almost nonsensical to employ terms such as "peak" and "non-peak." In years past, it was possible to schedule deliveries outside of the rush hour window; increasingly, that is no longer possible.

Our highway capacity was perhaps adequate for our Nation's economic and social functioning a generation ago, but today it is increasingly stressed. Over the past 30 years, the nation's population has risen by 32 percent, truck registrations have risen by 45 percent, truck vehicle-miles traveled (VMT) has risen by 145 percent, but road mileage has only increased by 6 percent.[17] This has led to unprecedented levels of congestion across the country.

Through new innovations such as just-in-time delivery, the trucking industry has played a vital role in improving U.S. productivity. This would have been difficult, if not impossible, to achieve without an efficient network of good roads that connect markets, centers of industry, and multi-modal transportation facilities. These productivity improvements let U.S. industry sell more goods and services at lower prices, both at home and abroad. As a result, more people can be employed at higher wages. Since salary increases are firmly tied to the increase in the amount of goods and services each worker produces, living standards are improved. In addition, these real wage increases result in elevated tax revenues. However, if congestion cannot be effectively managed, it will be difficult for industries to meet these foreign and domestic challenges. The resulting productivity losses will take a severe human toll as stiff competition from abroad wipes out existing jobs and reduces the ability of our economy to create new jobs for a rapidly expanding population.

The National Highway System (NHS), which carries 75 percent of the Nation's truck traffic, is the backbone of the trucking industry. Yet it is also critical to the efficient movement of rail, waterborne and air freight. No matter how efficient these other modes become on an individual basis, their speed and reliability will ultimately be limited by the efficiency of the trucks that they rely on for part of their intermodal movements.

Unfortunately, the performance of the NHS has deteriorated to the point where nearly half of urban Interstate miles are congested during peak periods. Forty percent of travel on urban NHS routes takes place under such congested conditions that even a minor incident can cause severe traffic flow disruptions and extensive queuing.[18] Average annual investment requirements just to maintain conditions on NHS highways and bridges were $26.8 billion in 1997.[19] The actual capital outlay was $22.5 billion, a $4.3 billion, or 19.1 percent shortfall. This was despite the fact that the 160,000-mile NHS carries 40 percent of all traffic and 75 percent of truck traffic.[20] Continued funding shortfalls will only harm road and bridge conditions, further exacerbating congestion levels. We urge Congress to reevaluate the current distribution of Federal highway funds during the next reauthorization period and consider whether a greater emphasis should be placed on the NHS.

We are also extremely concerned about the condition of the Nation's bridges. According to a recent study by The Road Information Program (TRIP), approximately one in four of the country's major, heavily traveled bridges is deficient and in need of repair or replacement.[21] However, some States have conditions that are much worse than the national average indicates. Thirty-four percent of bridges that are 20 feet or longer in Louisiana are either structurally deficient or functionally obsolete. Oklahoma has the highest percentage of deficient bridges in the country. Approximately one-third of the State's bridges 20 feet or longer are in need of immediate repair or replacement because of deterioration or because they no longer meet current design standards. However, the worst news is reserved for Oregon, where more than 350 bridges will have to be replaced in the near future and several major truck routes, including sections of the State's Interstate Highway System, have been load-posted. Additional Federal funds must be dedicated to the Bridge Program to prevent this type of situation from permeating throughout the country.

Perhaps nowhere are the effects of many years of neglect and under-funding of the NHS more pronounced than with the situation facing NHS intermodal connec-

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[16]Federal Highway Administration and Federal Transit Administration, *1999 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance*, May 2, 2000.

[17]Federal Highway Administration, *Highway Statistics,* 1999.

[18]Federal Highway Administration and Federal Transit Administration, *1999 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance*, May 2, 2000.

[19]Ibid.

[20]Ibid.

[21]"Showing Their Age: The Nation's Bridges at 40." The Road Information Program, May 2002.

tors. In its report to Congress,[22] the U.S. Department of Transportation found that connectors to ports were found to have twice the percentage of mileage with pavement deficiencies when compared to non-Interstate NHS routes. Furthermore, DOT found significant physical and geometric deficiencies that made it difficult for trucks to move safely and efficiently between the NHS and intermodal terminals. DOT identified 616 intermodal freight terminals in the United States. This includes 253 truck-and-port terminals, 203 truck-and-rail terminals, and 99 truck-and-air terminals.

It is useful to understand just how important these intermodal intersections are to the U.S. economy. Any product that is produced in the United States must access the global marketplace in the most cost-efficient manner possible. The producer or manufacturer is the party that decides how to receive or ship freight. They make their decisions based on many factors, including just-in-time delivery factors, reliability of delivery times, security, freight value-to-weight ratios, and cost. Shippers also avail themselves of the inherent virtues of each mode of freight carriage. The only way they can take advantage of these efficiencies and values is if the interfacing mechanisms that join the different freight modes is adequate for the transfer. Many times, this is not the case.

Improving intermodal connections also benefits communities, surrounding ports, railheads, and other Intermodal transfer facilities. In many situations, improving connectors will separate commercial vehicles from surface traffic that passes through congested neighborhoods. Often, these neighborhoods are clean-air non-attainment areas, and improved intermodal connectors would likely produce more efficient trucking operations, which will in turn result in fewer emissions.

ATA encourages Congress to set aside funding for improvement of intermodal connectors and to make innovative financing options more available for addressing connector deficiencies. This should include lowering the threshold for TIFIA funding eligibility. We further urge Congress to make changes to the State and metropolitan planning processes to ensure that projects which benefit freight on a regional and national scale receive greater consideration. Project selection should be determined by the U.S. DOT in cooperation with the freight community, State DOTs and other stakeholders.

It is important to keep in mind, however, that as critical as improving intermodal connections is, if the overall highway system is allowed to deteriorate, investing in connectors will be for nought. The 2,000 miles of connector roads will only be as efficient as the 160,000 miles of NHS highways that bind intermodal terminals and other points of loading and offloading together.

Congress should also consider more creative ways of financing highway improvements and adding highway capacity. New innovative techniques would allow States to leverage existing funds. In addition, we support the spending down of the current cash balance in the Highway Trust Fund (HTF) to fiscally responsible levels; crediting the Highway Account with gasohol tax revenues that currently go into the General Fund; ending the gasohol subsidy or crediting the HTF from the General Fund for the cost of the subsidy; crediting interest on HTF balances; and eliminating fuel tax evasion.

Some have suggested that fuel taxes should be increased to pay for growing demand. For nearly 50 years, the trucking industry has supported the concept of a user-supported system. However, the relationship between those who provide financial support for the system and those who determine how the money is spent must be a two-way street. Over our objections, Congress has continuously expanded highway program eligibility to include projects that provide few or no benefits to highway users (e.g. bicycle paths, light rail). Therefore, we cannot and will not invest additional moneys in a highway program whose value to our industry is slowly diminishing. Furthermore, any discussion about trucks paying additional fees to meet their full cost responsibility must be preceded by an acknowledgment that our industry has been prohibited by the Federal Government from operating our safest, most pavement-friendly vehicles, and that such prohibition is an obstacle to the industry's ability to meet our full cost responsibility.

ATA applauds the efforts of Senators Ernest Hollings and John McCain to eliminate the TEA 21 toll pilot program. ATA is opposed to any attempts to toll existing non-toll highways. However, we would not oppose toll financing that delivered an economic benefit to the trucking industry and did not restrict our use of existing roads. For example, we believe that Congress should consider supporting the construction of truck-only highways. While we will evaluate each project on its merit, any congressional proposal should include all of the following constraints:

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[22]*NHS Intermodal Freight Connectors, A Report to Congress;* Prepared by the U.S. Department of Transportation, July 2000.

- The project should add capacity;
- Use of the lanes should be voluntary;
- If the highway is tolled, trucks should receive a rebate on Federal and State fuel taxes paid for using the facility;
- The facility should allow for the use of more productive trucks; and
- The facility should have a safe design.

IMPROVING FREIGHT PRODUCTIVITY

An effective approach to saving lives, relieving congestion and improving air quality is to reduce the number of trucks on American roads. Given a fixed amount of freight for America's trucks to move, the only way to reduce the number of trucks is to improve the productivity of the trucks themselves, and of their drivers. This is analogous to carpooling—it increases capacity without increasing the road lane-miles. To improve truck productivity, Federal size and weight regulations must be reformed.

Federal law currently limits States' ability to control size and weight on their own highways. The limits imposed are lower than those mandated by other nations' governments, including our northern and southern neighbors, who are major trade partners and business competitors. This creates an economic disadvantage for American businesses and it causes additional costs and administrative problems when it comes to moving international freight, including intermodal containers.

There has been no legislative relief to these laws in 20 years, despite considerable improvements in truck safety and better driver training. Decades of experience and volumes of research indicate that more productive vehicles can be safely operated without a detrimental effect on safety or the condition of highways and bridges.[23]

At the request of Congress, the Transportation Research Board (TRB) recently issued a new report on the impacts of Federal truck size and weight regulations.[24] Among the report's conclusions was that the largely static and inflexible system of Federal regulation that currently exists". . . discourages private-and public-sector innovation aimed at improving highway efficiency and reducing the costs of truck traffic . . . ," including costs related to accidents involving trucks.[25]

In a nutshell, the TRB report concludes that States should be given greater authority, with strong Federal oversight, to make decisions with regard to the size and weight limits of trucks on highways under their jurisdiction. This reflects ATA's own policy. TRB further recommends that Federal regulatory oversight of weight limits should not be extended to the NHS, as H.R. 3132, the Safe Highways and Infrastructure Preservation Act (SHIPA) seeks to do.[26]

There is no doubt that continuing or further restricting current Federal size and weight limits will cost lives. While it would not make sense from a safety or economic standpoint to allow larger or heavier trucks to operate on every highway or in every State, Congress cannot continue to ignore the growing body of evidence that supports the fact that opportunities to prevent accidents through size and weight reform are available. Those States that identify these opportunities should be allowed to take advantage of them.

Allowing the expanded operation of more productive trucks would have two safety benefits. First, carriers would need fewer trucks to haul a given amount of freight, reducing accident exposure. Second, studies have consistently found that certain trucks with greater carrying capacity have a much better safety record than trucks that are in common use today. A study sponsored by the Federal Highway Administration found that the accident rate for longer combination vehicles (LCVs) is half that of other trucks.[27]

A recent Canadian study found that LCVs have an accident rate that is five times lower than the rate for tractor-semitrailers.[28] This study also found that during the 10-year period after LCVs were authorized to operate on a large scale in Alberta Province, the number of registered trucks dropped by 19 percent, even though the economy grew and non-truck vehicle registrations grew by 23 percent. The report

[23]See for example Transportation Research Board, Truck Weight Limits—Issues and Options, 1990, and New Trucks for Greater Productivity and Less Road Wear, 1990.

[24]Transportation Research Board Special Report 267, Regulation of Weights, Lengths and Widths of Commercial Vehicles, 2002.

[25]Ibid., p. 5–1.

[26]Ibid., p. 5–16.

[27]Scientex. Accident Rates For Longer Combination Vehicles, 1996.

[28]Woodrooffe and Assoc. Longer Combination Vehicle Safety Performance in Alberta 1995 to 1998, March 2001.

concluded that increased truck productivity due to expanded LCV use was the most likely reason for this reduction in truck registrations.

In Nevada last year, just .02 percent of vehicles involved in an accident were triples.[29] Of the more than 36,000 accidents in Montana, including 1,326 accidents involving trucks, just one accident involved a triple. The year before, there were two triples accidents in Montana, in 1999 there was one, and in 1998 there were none.[30] In Colorado, of the 4,226 accidents involving trucks in 2000, just nine involved triples; none of the triples accidents involved a fatality.[31]

This data reflects Roadway Corporation's experience with triple-trailer trucks. Since 1990, Roadway triples have been involved in exactly one fatal accident. That is one fatal accident in over 155 million miles of travel. Last year, there were just five accidents involving Roadway triples, one accident every 2.5 million miles. By comparison, on average, all vehicles nationwide are involved in an accident every 430,000 miles.[32] Triples are by far the safest trucks in our fleet and among the safest vehicles on the highway.

Furthermore, Congress and the States can avoid large investments in pavement maintenance and rehabilitation, as well as capacity expansion, by allowing States to make common-sense changes to their size and weight regulations. Gross weight can increase exponentially and not cause additional pavement damage so long as axle-weight is controlled. This is why, for example, a turnpike double that weighs 126,000 pounds causes half the damage of an 80,000 pound tractor-semitrailer on a ton-mile basis. In addition, if trucks are able to ship the same amount of freight in fewer trucks, the need for capacity expansion could be avoided, fuel use and emissions could be lowered, and costs to American manufacturers and consumers could come down.

The Federal restrictions on States that limit their ability to determine what types of trucks are allowed to operate on State-owned—and controlled highways have no basis in science or logic and can no longer be justified. Our opponents on this issue continually attempt to represent the industry's ultimate goal as unfettered access to the highway system by more productive trucks. Such a position would be completely illogical, and it thoroughly misrepresents the industry's position. It would be foolish for the trucking industry to disregard the infrastructure and safety impacts of putting trucks on highways that they were not meant to handle or in traffic conditions that are unsuitable. Ultimately, the trucking industry itself would pay the price in terms of higher user fees, weight-posted bridges, higher insurance premiums and tighter government regulation. We are not asking Congress to increase truck sizes and weights. We are simply asking Congress to give States the ability to determine the safest and most cost-effective regulatory regime for their own highway systems.

IMPROVING THE FREIGHT PLANNING PROCESS

ATA believes that the current planning process does not effectively address the movement of freight. The Federal Government has effectively devolved its responsibility for ensuring a safe and efficient highway system to State and local governments. While this has allowed planning agencies to address the unique demands of local transportation needs, and to respond more effectively to citizens' concerns, it has also resulted in a parochial system of transportation planning and programming that essentially ignores freight needs. MPOs, for example, may ignore a deficient connector road that links a seaport or rail-head to the Interstate Highway System because the project's benefits are not believed to be as beneficial as other local projects. However, most of the benefits of the project may accrue beyond the geographic scope of the State or local planning agencies' analyses.

We do not blame these agencies for failing to include these far-reaching benefits in their analyses; they simply do not have the resources or expertise necessary to do so. The Federal Government is the only governmental entity with the expertise, resources and standing to identify freight projects of national significance. We urge Congress to give FHWA the necessary tools and direction that allow the agency to ensure that crucial freight bottlenecks are dealt with quickly and effectively.

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[29]Nevada Department of Transportation.
[30]Montana Department of Transportation.
[31]Colorado State Patrol.
[32]"Traffic Safety Facts 2000," National Highway Traffic Safety Administration.

FREIGHT STAKEHOLDERS: WORKING TOGETHER TO ENSURE FUTURE ECONOMIC COMPETITIVENESS

ATA has joined with representatives of our modal freight partners and our customers in promoting a joint agenda designed to facilitate the efficient movement of freight. A joint statement is attached at Appendix B. The joint statement may be the most extensive united effort by the freight transportation community ever at the Federal level, and this points to both the growing interdependence of freight modes and the seriousness with which we regard Congress' decisions in the next reauthorization bill. In brief, the freight community is requesting additional investment in freight projects, including intermodal connectors, and in border crossings and corridors with significant freight traffic; the creation of a national freight industry advisory group to assist in the freight planning process; additional money for freight research and professional development; creation of new or expanded innovative financing options for funding freight projects; and more emphasis on funding freight projects that reduce congestion and improve air quality under the Congestion Mitigation and Air Quality Improvement (CMAQ) program.

We have also joined with our freight partners to secure additional funding for the Borders and Corridors programs that were created in TEA 21. The Coalition for America's Gateways and Trade Corridors, of which ATA is a founding member, is calling for a significant increase in funding for these crucial programs. We are concerned about the significant earmarking that has undermined the effectiveness of these programs. However, we believe that the original intent of the programs—to ensure that the infrastructure necessary to accommodate current and future freight needs, due in part to massive trade expansion—is still valid. We strongly urge Congress to extend the Borders and Corridors programs during TEA–21 reauthorization, and to make the programmatic and financial changes that are necessary to ensure the future mobility of America's freight transportation system. In addition, we urge Congress to refrain from expanding the eligibility of the program beyond its current parameters.

IMPROVING THE EFFICIENCY OF NAFTA-RELATED FREIGHT

Trade volumes between the United States and its two North American Free Trade Agreement (NAFTA) partners have reached record levels: For 2000, U.S.-Mexico trade reached $248 billion, while U.S-Canada trade amounted to $408 billion. The growth in NAFTA trade is especially impressive if one considers that in 1993, the year before NAFTA was implemented, U.S.-Mexico trade stood at just $81 billion, while trade with Canada was valued at $211 billion. The movement of imports and exports across our international land borders depends on an efficient and effective transportation system.

Unfortunately, the development of physical and human resources at U.S. international land borders has not kept pace with the growth in NAFTA trade. Congestion at U.S. ports of entry is the norm, and considering the heightened security that will continue into the foreseeable future due to the September 11 attacks, these problems have been compounded. This creates inefficiencies in the movement of cargo among the North American trading partners, straining the present-day capacity of human resources and facilities at U.S. land borders. Because trucks haul more than 80 percent of the U.S.-Mexico freight bill and more than 70 percent of the U.S.-Canada freight bill, they are critical to the success of NAFTA and its attendant economic benefits. Delays result in additional freight transportation costs, and threaten to diminish NAFTA's promise.

Data from a Federal Highway Administration (FHWA) analysis of the seven busiest border crossings (which account for 60 percent of truck crossings) reveal that congestion at these ports of entry cost the industry about 2.6 million hours in delay time per year, at a financial cost of at least $88 million.[33] In addition, trucks waste about 2.6 million gallons of fuel annually, with a resulting environmental impact of 23,000 tons of carbon dioxide and more than 300 tons of nitrous oxides. Congress should ensure that adequate resources are dedicated to the development of infrastructure and human resources along the U.S. borders with Canada and Mexico in order to meet the challenges associated with rapidly increasing trade growth among the three countries.

Some examples of where Federal resources could be applied include:

[33]"Commercial Vehicle Travel Time and Delay at U.S. Border Crossings," Federal Highway Administration, Office of Freight Management and Operations, June 2002.

- Funding for the construction of truck inspection facilities, and for hiring truck inspectors, both at the Federal and State level, to inspect trucks entering the United States from Mexico.
- Construction of ports of entry solely for commercial traffic on the U.S. northern and southern borders.
- Planning and development of quality access roads between ports of entry and the National Highway System.

In addition, ATA has actively supported the funding and development of the Automated Commercial Environment (ACE) and the International Trade Data System (ITDS) to make cross-border movements of cargo, vehicles and drivers more efficient and secure.

We ask the Subcommittees to look at technologies under development that can facilitate enforcement efforts while at the same time expedite the movement of freight across our borders. One such system being designed presently by U.S. Customs, with input from the trade community, is the Automated Commercial Environment, or "ACE."

In 1993, along with legislation implementing the NAFTA, Congress passed the Customs Modernization Act, or "Mod Act," establishing a new operating environment for U.S. Customs and the international trade community. Concepts such as "informed compliance," "shared responsibility," and "reasonable care" imposed greater obligations on U.S. Customs to provide improved information concerning the responsibilities and rights of the trade community. At the same time, the legislation mandated U.S. Customs to develop a new automated customs processing system to replace the antiquated and overburdened Automated Customs System (ACS). Nearly 10 years after the passage of the Mod Act, ACE is still in its nascent stage, but it is finally under significant development, and its full deployment is expected within the next three to 4 years. The present head of U.S. Customs, Commissioner Robert Bonner, has recognized the importance of developing such a system to give Customs greater tools to improve its information collection and improve the efficiency with which it processes millions of transactions every year.

Mr. Chairman, it is important that Congress continue to provide adequate funding for the full development and implementation of the ACE system. In order to defend our Nation from potential future terrorist attacks, and at the same time process the legitimate commercial goods so important to our Nation's economy, we must provide our border enforcement agencies the necessary tools and resources to fulfill their duties and responsibilities. It is also critical that no new user fees be imposed for the future development of ACE, especially if the current Merchandise Processing Fee (MPF), which raises about $900 million each year and is slated to end in 2003, is earmarked for some other budgetary purpose. If the MPF is supposed to be for Customs commercial processing, then this fee should be used for nothing but for improving Customs commercial operations.

Mr. Chairman, ATA supports the implementation of NAFTA's trucking provisions in order to improve the efficiency with which cross-border operations take place between the U.S. and Mexico. ATA is also a strong advocate for ensuring that all carriers operating in the U.S.—Canadian, Mexican or U.S. carriers—meet all U.S. safety and environmental standards, as well as all financial operational responsibilities.

Furthermore, implementing NAFTA's trucking provisions would enhance the security of cross-border trucking operations by simplifying the movement of trailers across our common borders. In a report to Congress issued in 1997 by the White House on U.S.-Mexico anti-drug cooperation, the U.S. Customs Service wrote:

The high congestion of truck traffic entering the United States is, in part, a result of restrictions imposed by both the United States and Mexico on crossborder motor carrier operation . . . over 50 percent of commercial trucks enter the United States empty, contributing to border congestion and increasing the inspection burden for border agencies.

NAFTA's trucking provisions allow for carriers throughout North America to improve their ability to make cross-border trucking more efficient, effective, safer, and more secure.

It is also important that we work with our counterparts in Canada and Mexico to improve harmonization of border operations and infrastructure development to establish technology and mechanisms to facilitate and expedite the gathering, sharing, and exchange of information and data to clear cargo and people crossing our land borders efficiently and securely. We must continue to find solutions that improve the processing of the legitimate flows of people and cargo, while simultaneously improving our security through stronger relationships between the trade community and law enforcement agencies at our borders.

ENSURING THE SECURE AND EFFICIENT MOVEMENT OF FREIGHT

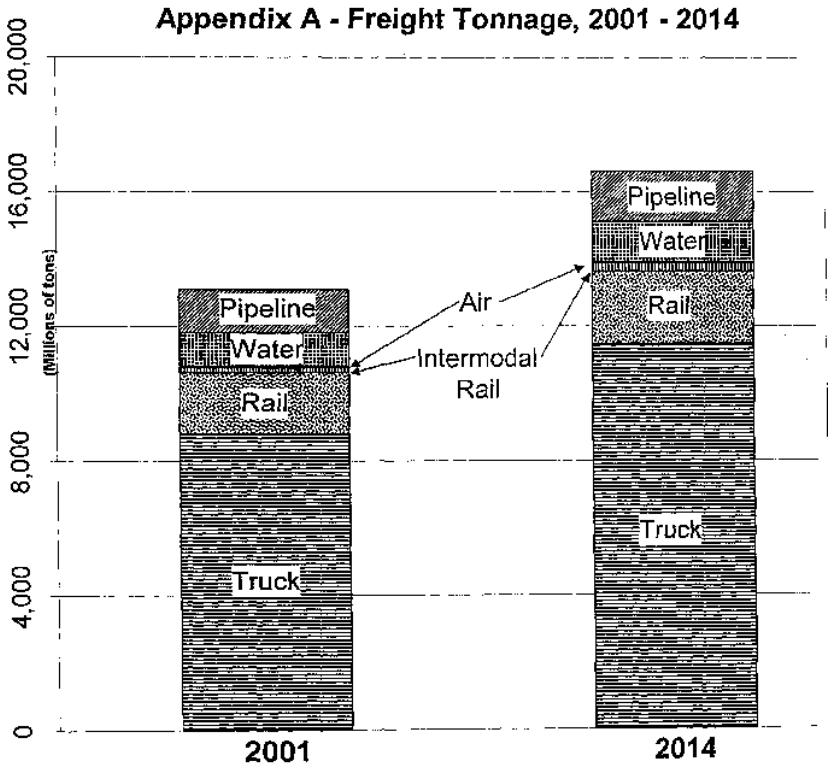
In our efforts to protect the country from the terrorist threat, strategic planning for this new type of war must take into account three critical principles with respect to the trucking industry.

First, the timely communication of threat related information is the single most important short-term objective that must be met. In order for trucking companies to properly deploy our security resources and instruct our drivers on the proper steps needed to protect themselves, the public and our customers' goods, we need detailed communications so that we can understand and appreciate the threat, evaluate our company's exposure and act in time to avoid becoming victims of terrorism.

Second, our professional drivers, dispatchers, managers and supervisors are the most critical elements in protecting trucks from becoming the objects of, or the mechanism for, terrorist attacks. Drivers have control of our equipment 90 percent of the time, and therefore they are the most vulnerable to terrorism. We have an obligation to train our 3.2 million professional drivers to recognize terrorist operational acts, report these acts to the proper authorities, and react appropriately. The trucking industry needs Federal help to complete this effort in no more than 3 years.

Third, productivity is the lynchpin of America's global economic competitiveness. In our efforts to conduct our war on terrorism, we must give equal attention to the preservation of our abilities as transportation enterprises to creatively and efficiently move the goods and instruments of commerce where needed, when needed. Any new regulatory framework must adhere to the core principal of "the green light is on" for trucks unless there is a substantial, direct and immediate threat that would justify slowing or restricting commercial flows.

Thank you for the opportunity to offer our thoughts regarding the upcoming reauthorization of the Federal surface transportation legislation. We look forward to working with the Subcommittees to improve the safety and mobility of our Nation's freight transportation system.



APPENDIX B

FREIGHT STAKEHOLDERS TEA–21 REAUTHORIZATION AGENDA

1. Protect the integrity of the Highway Trust Fund. Reauthorize the firewalls provided for in TEA–21 to ensure that the funds collected are used for their dedicated purpose and not for deficit reduction.

2. Dedicate funds for NHS highway connectors to intermodal freight facilities. The NHS Intermodal Freight Connectors report that was sent to Congress documents the fact that these road segments are in worse condition and receive less funding than other NHS routes. Targeted investment in these "last mile" segments would reap significant economic benefits compared to the associated costs.

3. Form a national freight industry advisory group pursuant to the Federal Advisory Committee Act to provide industry input to USDOT. The advisory group should be funded and staffed, and it should consist of freight transportation providers from all modes as well as shippers and State and local planning organizations. Despite the best efforts of the agency to function as "One DOT," there is still not enough of a focused voice for freight. An Advisory Group would meet the need for regular and professional interaction between USDOT and the diverse freight industry, and could help identify critical freight bottlenecks in the national freight transportation system.

4. Create a Freight Cooperative Research Program. Increasingly, industry issues are public issues that would benefit from a dedicated, funded research effort led by an industry-based steering/oversight group, such as the one described above, to ensure useful research results to benefit the freight transportation system as a whole. One option would be to dedicate a portion of the States SP&R dollars to freight issues. Freight data issues would fall under this program as well.

5. Expand freight planning expertise at the State and local levels. Given the importance of freight mobility to the national economy, States and MPO's should be provided additional funds for expert staff positions dedicated to freight issues (commensurate to the volumes of freight moving in and through their areas).

6. Develop ways to increase available funds without new user fees and taxes by creating a toolbox of innovative financing options specifically aimed at freight capacity improvements and enhancements. Options could include (1) lowering of the threshold for TIFIA funding eligibility (2) development of tax incentives, and (3) expansion of the State infrastructure banks (SIBs).

7. Significantly increase funds for an expanded corridor/border and gateway program. This would build on the highly popular but under-funded "Corridors and Borders Program" (Sections 1118 and 1119), but adds the important concept of gateways. The funding should be freight specific, and there should be a qualification threshold (based on volumes) so that dollars get directed at high volume corridors/borders/gateways rather than wish-list projects.

8. Streamline environmental permitting for freight projects. Multiple and often duplicative Federal laws and regulations delay environmental review of transportation projects. Language in TEA–21 directing Federal agencies to streamline the review process for highway projects has not been effective and other measures to simplify the review process for all freight projects should be considered.

9. Increase funding and promote use of the Congestion Mitigation and Air Quality Improvement Program for freight projects that reduce congestion and improve air quality. CMAQ was designed to fund projects that will help reduce transportation-related emissions. Although CMAQ has supported some freight projects, it has been used primarily to address passenger needs. CMAQ funding should be dedicated to projects that can be shown to reduce congestion or improve air quality. Total funding for CMAQ should be increased and the use of CMAQ funds for freight projects should be clarified and strongly encouraged.

American Association of Port Authorities
Contact: Mary Beth Long or Jean Godwin 703–684–5700

American Trucking Associations
Contact: Darrin Roth 703–838–1900

Association of American Railroads
Contact: Jennifer Macdonald 202–639–2533

Coalition for America's Gateways and Trade Corridors
Contact: Leslie Blakey 202–828–9100

Intermodal Association of North America
Contact: Joni Casey 301–982–3400

National Association of Manufacturers
Contact: Larry Fineran 202–637–3174

National Industrial Transportation League
Contact: Kathy Luhn 703–524–5011

U.S. Chamber of Commerce
Contact: Ed Mortimer 202–463–5451

World Shipping Council
Contact: Lars Kjaer 202–589–1234

RESPONSES BY MICHAEL W. WICKHAM TO ADDITIONAL QUESTIONS FROM SENATOR REID

Question 1. In your testimony you state that the value of the highway program to your industry is diminishing because of "expanded highway program eligibility to include projects that provide few benefits to highway users." I find that statement astonishing. Do you really believe that highway programs that encourage nontraditional solutions to traffic congestion like HOV lanes, intelligent transportation systems, and transit are of no benefit to highway users? Every person who commutes on transit, takes the train, or shares a ride with a friend, means one less car clogging our roads. No one benefits from transit use more than those of us who drive on our roads every day. Are you saying that because States have the flexibility to spend highway funds on non-construction programs that you do not believe the highway program has value to your industry?

Response. ATA believes strongly in a Federal highway program that is funded by highway users for the benefit of highway users. Highway maintenance and capacity expansion are critical components of a highway program that promotes a safe and efficient surface transportation system. However, as your question suggests, we

must also look beyond these traditional methods and seek out more innovative ways of improving the condition and performance of our highways.

You mentioned Intelligent Transportation Systems (ITS), for example. ATA supports eligibility of ITS under the highway program. ITS can be an effective means of communicating system problems, which allows traffic agencies to respond more quickly and gives motorists the information they need to avoid these problems. States, in partnership with the trucking industry, use ITS to more effectively target their truck inspections, improving the efficiency of responsible carriers and enhancing highway safety. In addition, under certain circumstances, HOV lanes can be an effective tool for relieving congestion and improving air quality, and ATA does not oppose their eligibility under the highway program.

However, an increasingly larger share of Federal highway revenues is being used for projects whose effectiveness at curbing congestion and saving lives is questionable. For example, while transit can effectively relieve congestion in some areas, in most of the cities where rail transit systems have recently been established, it will not be an effective strategy for addressing the growing traffic that plagues our urban areas. It is important to recognize that transit demand is very concentrated. One-half of the national ridership is in New York and Chicago and 76 percent is in seven metropolitan areas. In urban areas, transit accounts for just 2–3 percent of all trips. Even if transit ridership were to double in the next 10 years—an ambitious goal since ridership actually declined over the previous decade—because highway use would also rise, transit's share of trips would only grow to 3–3.5 percent. Transit is largely beneficial for commutes to and from work. However, commutes now make up less than 20 percent of all trips, and less than one out of three trips during rush hours are trips between home and work.

According to a study by the Texas Transportation Institute, areas that were more active in adding roadway capacity to respond to increased travel were able to slow the increase of regional traffic congestion. However, not all highway projects need add more traffic lanes or new highways to achieve substantial improvements. According to one study, improving conditions at the 167 worst traffic bottlenecks around the country would reduce travel times by an average of 38 minutes per day, result in 287,000 fewer accidents, including 1,150 fewer fatalities, reduce carbon monoxide emissions by 45 percent, smog-forming emissions by 44 percent and carbon dioxide emissions by 71 percent at those sites. Unfortunately, a lack of resources, in part because of the diversion of highway funds to non-highway projects that are less effective, is preventing States from making these crucial investments.

We have concerns with other eligible activities, such as those under the CMAQ and enhancements programs. While some would argue that these programs divert relatively few resources from the highway program, the impact of this diversion is actually quite large. For example, we find it difficult to understand how it is in the national interest to invest more than twice as much Federal money on bicycle paths than on truck safety programs.

ATA does not oppose using highway user fee revenues for nontraditional programs. We oppose the use of this money on programs that have been shown to be ineffective at reducing congestion and improving highway safety. We believe that in the face of limited resources, the Federal Government should make strategic investments that deliver the most cost-effective results.

Question 2. In your testimony, you argue for reduced Federal restrictions on truck size and weight. You make many safety claims that are refuted by a recent U.S. Department of Transportation study on truck size and weight, which estimated that multi-trailer trucks have an 11 percent higher fatality crash rate than single trailer trucks. While I differ with your conclusions on safety, I will not dwell on that issue here. However, I will ask you to address the conclusion of the Department of Transportation study that allowing bigger trucks on our roads would result in bridge capital costs of over.$50 billion and well over $200 billion in additional costs due to delay from bridge construction and repairs.

Response. It should first be noted that the U.S. DOT's Comprehensive Truck Size and Weight Study to which you refer was roundly criticized by the academic community, State departments of transportation, the trucking industry, and others. In fact, AASHTO passed a resolution (attached) calling on the Department to delay release of the report until its many deficiencies could be addressed; unfortunately, the uncorrected report was released anyway. Therefore, 'we would caution Congress against using the Study as a basis for making policy decisions.

Specifically, to the multi-trailer truck accident rate that appeared in the Study. Some have used this analysis to argue that longer combination vehicles (LCVs) are less safe than single-trailer trucks. In fact, because about 80 percent of the vehicle miles traveled by multi-trailer trucks are by non-LCVs, the statistic cannot be applied to this class of vehicle. Nonetheless, we cannot allow DOT's study to stand un-

challenged. Almost all previous evaluations of the multi-trailer trucks that make up the bulk of vehicles that comprise DOT's research found that these vehicles were either as safe or safer than single trailer trucks. The most comprehensive evaluation of the safety of twin trailer trucks to date is a 1986 study by the Transportation Research Board (TRB Special Report. 211). That study concluded that, "overall, twins clearly appear to be about as safe a method of hauling freight as the tractor-semitrailers they replace."

DOT did, in fact, contract with an independent consultant to complete a study on the safety experience of LCVs versus other, more common, trucks (Accident Rates for Longer Combination Vehicles. FHWA, October 1996). This study found that LCVs, including triples and heavy doubles, had an accident rate which was half that of the trucks they would replace. The study also concluded that truck configuration, not highway environment or driver factors, was the reason for this finding.

This statistic is reflected by other research. For example, Alberta Province found that LCVs had the lowest accident rate of all vehicles on their highways, including passenger vehicles. In fact, single-trailer trucks had an accident rate five times higher than LCVs. States have also found that LCVs are extremely safe. In Nevada, for example, triples were involved in just .02 percent of all accidents in 2000; none were fatal.

LCVs have been in operation for more than 50 years. Today, they operate on rural roads in the west, eastern turnpikes and in large urban areas, in nearly half the States. No State has ever rescinded their operating authority, for the simple reason that LCVs contribute to a much safer and a much more efficient highway system.

Regarding the bridge costs cited in the DOT study. Of all the criticisms leveled against the study, those regarding bridge costs were probably the most severe. DOT assumes that any bridge not rated to carry the loads modeled by the study would automatically be replaced. This simply does not happen in the real world. In practice, States would choose to either replace or strengthen the affected bridges, or to load-post them.

As part of its research, the panel that conducted the most recent TRB truck size and weight study (TRB Special Report 267) obtained from DOT a list of highway structures in California identified by the bridge analysis method used in the study as requiring replacement if a specified type of larger truck were to come into use. Four were selected for analysis. Each of the four structures exceeds the threshold overstress criterion applied in the DOT study under the assumed loading by just a few percent, and therefore the DOT study would assume that all four bridges would have to be replaced given the heavier loads. The four structures were examined by engineers of the State DOT, who reported to the committee that, following its normal practices, the State would not replace, strengthen, or restrict the use of any of the four structures if heavier tractor-semitrailers within the range analyzed in the DOT 2000 study came into use.

This is not to say that increasing the weight of trucks will not produce additional bridge costs, or that some interchanges may not have to be rebuilt to accommodate longer trucks. However, these are one-time investments whose costs pale in comparison with the tremendous savings associated with less pavement damage, less pollution, fewer accidents and greater economic productivity if size and weight laws were reformed.

Question 3. You argue that allowing longer combination vehicles will reduce the number of trucks on our roads. Isn't the real impact likely to be a shift of freight from rails to our already overburdened road infrastructure?

Response. While evaluations of increases in truck productivity all predict some shift of freight from rail to truck, the magnitude of this shift is generally considered to be very low. A 1990 TRB study (TRB Special Report 225) found that under various scenarios where truck productivity increased, rail diversion would range from 2.2 to 6.6 percent, and all scenarios resulted in overall truck VMT reductions. Furthermore, it is very likely that the shift of freight from existing trucks to other, more productive trucks, will result in a net reduction in both the number of trucks on the road and truck miles, even when rail diversion is factored in. For example, the previously referenced Alberta study found that over the 11-year period following the introduction of higher weight trucks to the province, the number of registered trucks dropped by 19 percent, even though non-truck registrations grew by 23 percent and the economy expanded.

The fact is that trucks and trains compete for very little business. Even with a productivity increase that makes truck transportation more attractive to rail shippers, the fact that freight railroads enjoy very large profit margins on most routes means that the railroads simply have to lower their rates slightly to keep this business. Herein lies the real reason for rail opposition to trucking productivity gains. This competition is a positive factor for shippers, who will realize lower shipping

costs, and consumers, who will see lower retail prices. The most likely market for truck-rail competition is in the rail intermodal segment. Rail carload shipments are simply too price-sensitive for trucks to compete effectively in this market segment. Even if trucks were somehow able to draw 100 percent of all rail intermodal business, however, this would increase annual truck volumes by less than one-fifth of 1 percent nationwide (Freight Transportation Forecast . . . To 2013, DRI-WEFA, 2001).

According to the FHWA, truck volumes will nearly double by 2020 and trucks' market share will expand from 71 percent in 1998 to 75 percent in 2020. This growth is inevitable, but a doubling of the number of trucks needed to accommodate this growth is not inevitable. Increasing trucking productivity through sensible size and weight reform will slow the growth of trucks and reduce their societal impacts.

RESPONSE BY MICHAEL W. WICKHAM TO ADDITIONAL QUESTION FROM SENATOR JEFFORDS

Question 1. Mr. Hamberger of the Association of American Railroads notes that railroads are three or more times more fuel efficient as trucks. He points out that the :EPA estimates that for every ton-mile, a typical locomotive emits roughly three times fewer nitrogen oxides and particulate matter than the typical truck. He also points out that "rail competitive trucks, which are the heaviest, highest mileage operators among all trucks, do not come close to fully paying for the damage they cause to our highway system."

Response. As noted above, the potential for shifting freight from truck to rail, or vice versa, is extremely limited, and significant growth in truck traffic is inevitable. Therefore, any comparison of modal impacts becomes an academic exercise. Nonetheless, we are pleased to have the opportunity to respond to Mr. Hamberger's statements.

According to new data produced under contract to the FHWA, in 2000, trucks' ton-miles were double that of rail. Therefore, if Mr. Hamberger's statement that trucks produce three times more emissions per ton-mile than railroads is correct, then trucks would have to emit six times more total NOx and PM than railroads. In fact, according to the EPA, trucks' total emissions of NOx and PM were just 2.7 times greater than the total emissions for rail. Therefore, on a ton-mile basis, trucks produce only about 1.35 times as much NOx and PM as locomotives.

However, this does not tell the whole story. When measuring emissions on a ton-mile basis, what is left out is the fact that the commodities hauled by trucks are comprised of a far greater proportion of high-volume, low-weight freight than the commodities hauled by railroads, which haul mostly low-volume, heavier freight. Therefore, expressing trucks' volumes in terms of weight instead of area understates the amount of freight trucks are actually carrying, resulting in a disproportionately high amount of freight being assigned to railroads. This produces an emissions level which favors railroads.

Furthermore, rail moves are almost always more circuitous than truck moves. Therefore, if one considers the environmental impact of shifting freight from truck to rail, the impact of this longer route must be considered. If there is an increase in distance of greater than 35 percent, then the environmental benefits of shifting the freight to rail are wiped out by this factor alone.

Also to be considered is the fact that if there is to be a truck to rail shift, this will likely occur as an intermodal movement. Therefore, the environmental impacts of the truck deliveries on both ends of the rail movement must be considered. These are not inconsequential impacts. The average truck drayage move is roughly 90 to 120 miles long, typically with a significant urban component. The trucks involved are generally older—and therefore more polluting—than the typical trucks involved in long-distance movements.

The issue of whether railroads pollute less than trucks is not that simple, and it should not be automatically assumed that a rail move produces less pollution than a truck move. In fact, FHWA has rejected States' requests for using CMAQ money on freight rail projects because they found that shifting freight from truck to rail would actually have a negative environmental impact.

One other point should be made. Trucks contribute approximately $35 billion in Federal and State highway user fees each year, which are used, in part, to offset the societal costs of the pollution that they produce. The railroads, on the other hand, pay just $170 million in user fees, and these revenues are not tied to societal costs produced by the railroad industry. There is little doubt that these revenues do not approach the health costs associated with pollution emitted by locomotives.

This brings us to the second part of the question, which refers to trucking industry cost allocation. It is interesting that Mr. Hamberger attacks trucks for paying too little for their infrastructure and societal costs when his own industry fails to pay a single penny to compensate for the safety, environmental and congestion societal impacts of rail operations. (NOTE: While the question refers only to infrastructure costs, other societal impacts are now included in cost allocation studies. In addition, while the railroads do pay a tax on diesel, unlike highway user fees, there is no tie between these fees and the costs imposed by the railroads which are borne by the public.)

While the FHWA Cost Allocation Study found that certain trucks do not pay their cost equity, there are several factors that contributed to this conclusion and that must be examined. First, there were several problems with the study which produced erroneous results. This is not to deny that there are trucks in operation which do not pay their fair share. However, it should also be noted that the study found that certain classes of trucks paid more than their fair share. It would be virtually impossible to achieve a perfect balance. While such an effort should be made, it must be recognized that results will always change depending on the assumptions and data used, which are constantly evolving. Therefore, there will always be some vehicles that will be found to not pay their allocated share of the costs.

Mr. Hamberger complains that "rail competitive trucks" do not pay for the damage they do to highways without defining what a rail competitive truck is. Since the railroads and the "safety groups" they associate themselves with regularly criticize triple-trailer trucks, we assume that these are among the class to which Mr. Hamberger refers. However, it is widely recognized that the markets served by triples are generally not rail-competitive.

When looking at the factors which result in a determination that a truck is not paying its cost equity, an objective analysis must lead one to the conclusion that this finding was made because of Federal restrictions on truck size and weight, not despite the restrictions. As the recent TRB study (TRB 267) found,. significant opportunities exist for States to reduce their infrastructure and societal costs if they are given flexibility to reform their size and weight limits. It is the Federal regulatory system that prevents carriers from putting trucks on the road that are more infrastructure-friendly and safer. For example, many States allow the operation of heavier trucks on non-Interstate highways, but are prevented from granting these trucks access to the Interstates by Federal law. If they were to use the Interstates rather than lower-order roads, the infrastructure, safety, congestion and environmental costs resulting from these trucks' operation would be lower, and thus the trucks would come closer to achieving cost equity.

There are two ways to address the cost inequities of certain trucks. Congress and/or the States can increase the taxes imposed on these trucks, thus lowering the competitiveness of critical U.S. industries and increasing consumer prices. Alternatively, Congress can give the States the opportunity to improve their size and weight regulations, thus potentially changing the current vehicle fleet to one that is safer, less polluting, more productive and that produces lower infrastructure costs. The former choice benefits the railroads at the expense of the rest of the Nation. The latter would result in slightly lower railroad profitability, but the overall benefits to the Nation could be very significant.

STATEMENT OF EDWARD R. HAMBERGER, PRESIDENT AND CHIEF EXECUTIVE OFFICER, ASSOCIATION OF AMERICAN RAILROADS

On behalf of the members of the Association of American Railroads (AAR), thank you for this opportunity to discuss key issues relating to our nation's freight transportation capabilities as a result of the remarkable growth of international trade.

Since Colonial times, the growth and vitality of our economy has been closely tied to the development of trade. The railroads' role in the settlement and development of the United States is well known, and yet the efficiency of our ports, international border crossings, and inland transportation systems is just as critical today. We must take steps to insure that our freight transportation system will be able to handle what is certain to be a huge increase in international trade volume in the years ahead. Today, I will focus on ways that our nation can combine the advantages of various transportation modes to reduce costs, save energy, better protect the environment, and increase transportation efficiency—thereby enhancing our productivity and international competitiveness.

INTERNATIONAL TRADE

International trade is becoming the lifeblood of both the world and U.S. economy, and has been a major driving force behind world economic growth over the past decade. From 1990 to 2000, global GDP increased at an average annual rate of 2.0 percent, but the volume of world merchandise trade increased during the same period at an average annual rate of 7 percent—more than three times as much. In the case of the United States, which is the world's single largest exporting and importing nation by a significant margin, GDP over the same period increased at an annual average rate of 3.2 percent, while the volume of merchandise exports increased at an average annual rate of 6.5 percent and imports increased at an annual rate of 8.5 percent.[1]

The importance of international trade relative to U.S. economic output has also risen dramatically. In 1975, U.S. exports plus imports was equal to less than 16 percent of GDP, but by 2000 that figure had risen to more than 26 percent.[2] Manufacturers and agricultural producers in the United States depend upon foreign trade to reach markets for their products, and consumers have enjoyed both a richer variety of products and lower prices as a result of trade opportunities. According to the Office of the U.S. Trade Representative, U.S. exports alone support more than 12 million American jobs, including one in five jobs in the manufacturing sector.[3]

In 2001, the value of U.S. international merchandise trade was $1.9 trillion. According to figures from the Maritime Administration, United States ports handled over 1.1 billion tons of foreign trade in 2001. The liner sector, consisting mostly of containerized shipments, accounted for 68 percent of the value of this trade.[4] More than 20 million loaded containers were imported or exported through our nation's ports in 2001, with the ports of Los Angeles and Long Beach ranked number 1 and 2, respectively—each handling over 3.3 million loaded containers. Additional intermodal traffic flows across our borders with Canada and Mexico. Our ports and border crossings also handle significant volumes of bulk commodities, including grain, coal, non-metallic minerals, forest products, and petroleum products. Railroads serve U.S. ports on the Atlantic, Pacific, and Gulf coasts and the Great Lakes, and provide through service to and from Canada and Mexico at more than 30 border crossings. Railroads handled approximately 5.2 million international containers in 2000, which represented about one-half of their total intermodal traffic.[5]

U.S. trade with Canada (long our largest trading partner) and Mexico (now our No. 2 trade partner) has grown rapidly following the lowering of trade barriers under the North American Free Trade Agreement of 1993. Together, Canada and Mexico account for approximately one-third of U.S. foreign merchandise trade.[6] The value of this North American trade had increased by 85 percent from 1994 to 2000, before declining slightly in 2001 largely following the September 11 terrorist attack. The freight railroads of Canada, Mexico, and the United States, which form a seamless, integrated network that provides the world's most efficient, lowest-cost rail service, have achieved major increases in their trans-border traffic—up 22 percent by value between Canada and the United States and up 72 percent between Mexico and the United States just from 1997 to 2000.[7]

Our seaports, airports, and land border crossings—the gateways that connect us to the rest of the world through commerce—are clearly critical to the economic well being of our Nation. Moreover, more efficient modern container ships carrying 6,000 or more TEUs[8] are increasingly being used, up from the 4,500-TEU standard that has been dominant up to now. These larger ships will place increasing demands on port and landside facilities.

Existing congestion at these facilities must not be permitted to worsen. Moreover, as the Federal Highway Administration documented in a recent study,[9] funding for intermodal connectors—public roads averaging less than two miles in length that

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[1] World Trade Organization, International Trade Statistics 2001, Table I.1, p. 19, available at www.wto.org/english/res—e/statis—e/its2001—e/its01—toc—e.htm).

[2] Economic Report of the President, February 2002, p. 253.

[3] Office of U.S. Trade Representative, Benefits of Trade: Information on the Globalization Debate, September 19, 2001 available at www.ustr.gov/new/benefits.html.

[4] See "U.S. Foreign Waterborne Transportation Statistics," U.S. Maritime Administration press release, March 28, 2002, available at www.marad.dot.gov/statistics/usfwts/PR2001/PRDEC2001.htm.

[5] Intermodal Association of North America, Year 2002 Industry Statistics—Overview; American Association of Port Authorities; and Association of American Railroads data and analysis.

[6] U.S. Department of Transportation, Bureau of Transportation Statistics, Transportation Statistics Annual Report 2000, BTS01–02, Washington, DC. 2001, p. 161.

[7] AAR analysis of U.S. Bureau of Transportation Statistics transborder trade data.

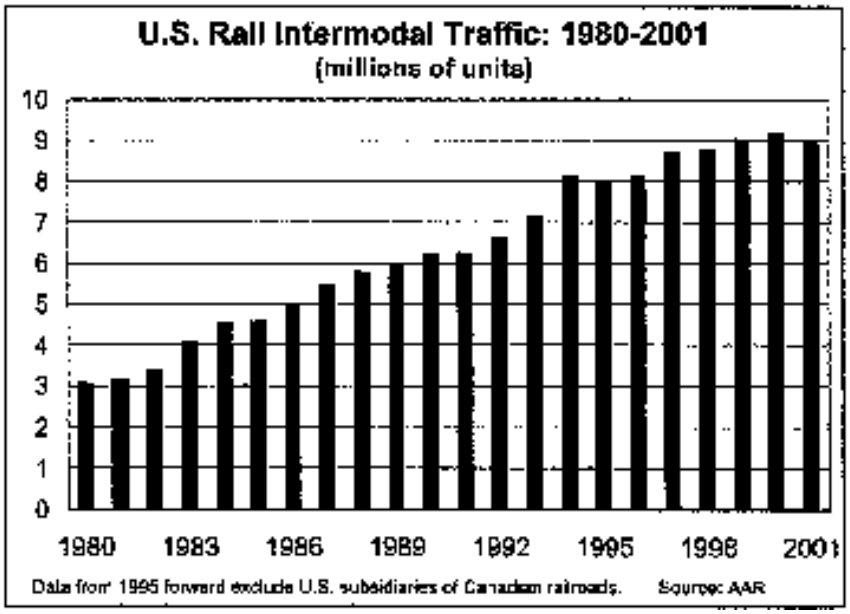
[8] Twenty-foot equivalent units.

[9] U.S. Federal Highway Administration, NHS Intermodal Freight Connectors, July 2000, p. 4.

lead to/from major intermodal terminals—has not been adequate under the Transportation Equity Act for the 21st Century (TEA–21) and these critical components of the freight transportation system suffer many deficiencies. According to the FHWA, "States and MPOs often see freight as a low priority when compared with the pressing needs of passenger travel. NHS connectors are "orphans" in the traditional State and MPO planning processes." We must make the investments needed to improve our ability to handle international traffic efficiently, while limiting impacts on surrounding communities in terms of congestion, noise, and air pollution.

GROWING IMPORTANCE OF RAIL INTERMODAL SERVICE

U.S. freight railroads move just about everything—from lumber to vegetables, from coal to orange juice, from grain to automobiles, from chemicals to scrap iron—and connect businesses with each other across the country and with markets overseas. America's freight railroads carry more than 40 percent of the nation's intercity freight (measured in ton-miles); about 70 percent of vehicles from domestic manufacturers; 67 percent of the nation's coal to coal-fired power plants (coal generates more than half the nation's electricity); and massive amounts of grain, chemicals, forest products, ores, and other commodities. They also contribute billions of dollars to the economy through wages, purchases, and taxes.



Intermodal rail freight transport—the movement of cargo in trailers or containers by rail in combination with at least one other mode of transportation—has been the fastest growing major segment of traffic for the U.S. freight railroad industry over the past decade. Indeed, while volumes of non-intermodal rail traffic for 2002 to date are below those of last year for the same period as a result of the weak economy, U.S. rail intermodal traffic through August 2002 is 5.1 percent above the 2001 level, including increases of between 7.4 percent and 9.4 percent each month from April through August. U.S. intermodal traffic has grown from 3.1 million trailers and containers in 1980 to nearly 9.0 million in 2001. It now accounts for approximately 20 percent of revenue for Class I carriers and is vying for the No. 1 ranking among all rail commodities. Approximately half of U.S. intermodal traffic is either U.S. exports and imports, and intermodal traffic moves throughout the North American rail network.

There are several reasons why intermodal transport has become such a vital part of the U.S. freight transportation mix:

1. Convenience and lower cost

Intermodal combines the door-to-door convenience of trucks with the long-haul efficiency and cost-effectiveness of rail. As a result, railroads, trucking companies,

international steamship lines, intermodal marketing companies, and others engage in productive partnerships to combine the best characteristics of all modes.

2. Fuel efficiency

Railroads are the mode of choice in terms of fuel efficiency. According to studies sponsored by the U.S. Department of Transportation (U.S. DOT) and others, railroads are three or more times as fuel efficient as trucks. Fuel efficiency means reduced emissions and reduced dependence on foreign oil.

3. Improved air quality

The Environmental Protection Agency estimates that for every ton-mile, a typical locomotive emits roughly three times fewer nitrogen oxides and particulates than a typical truck. Other studies suggest that locomotives have a much greater environmental advantage relative to trucks, depending upon the pollutant measured.

4. Reduced traffic congestion

An intermodal train can take approximately 280 trucks from the highways. Since a single combination truck requires the same highway capacity as approximately four automobiles, a single intermodal train can mean the equivalent of more than 1,100 fewer cars on the highway. According to the Texas Transportation Institute's (TTI) 2002 Urban Mobility Study, the aggregate cost of highway traffic congestion in just the 75 urban areas the institute studied is $67.4 billion, representing the cost of 3.6 billion hours of extra travel time and 5.7 billion gallons of fuel wasted while sitting in traffic. Since 1982, according to TTI, the cost of congestion has risen by approximately 400 percent in inflation-adjusted terms. Rail intermodal service is a highly effective way to reduce the staggering costs of highway congestion and the associated pressure to build costly new highways.

5. Innovative technology, specialized equipment, and tailored services

Doublestack trains—with specialized rail cars that can accommodate one container atop another—are now in widespread use. RoadRailers look like conventional trailers, but come equipped with both rubber tires and detachable steel wheels so they can ride directly on the rails or on a highway. By using specialized equipment, railroads are targeting midand short-distance hauls, in addition to traditional long-haul markets. Rail service offerings include the use of flat cars in dedicated trains operating on a fixed schedule that are specially designed to quickly load, unload and carry standard, non-reinforced highway trailers without damage to the goods or the trailers themselves.

Capital Expenditures as a Percentage of Revenue for Various U.S. Industries: 2000

All manufacturing	3.7%
Petroleum & coal products mfg	2.1%
Transportation equip. mfg	2.6%
Food manufacturing	2.7%
Wood product mfg	3.3%
Machinery mfg	3.1%
Fabricated metal product mfg	3.7%
Primary metal product mfg	3.8%
Paper manufacturing	4.9%
Computer & electr. product mfg	5.5%
Chemicals manufacturing	4.6%
Nonmetallic mineral product mfg	6.2%
Class I Railroads	**17.8%**

Source: U.S. Bureau of the Census, AAR

The market for intermodal freight is extremely competitive, and U.S. freight railroads must continue to make major investments so that they can further enhance their cost efficiency and meet customer service requirements that are continually becoming more stringent.

Railroads are incredibly capital intensive, and each year freight railroads must invest heavily to maintain and improve their infrastructure and equipment, that, together, comprise a national system that is the envy of the world. In 2000, Class I railroads directed 17.8 percent of their revenue to capital expenditures; the comparable figure for the U.S. manufacturing sector as a whole was just 3.7 percent. Indeed, since 1980 when the Staggers Rail Act partially deregulated the rail industry, major U.S. railroads have spent more than $290 billion for this purpose—an average of more than $13 billion per year over this extended period. Much of this spending is either directly attributable to intermodal service (e.g., the construction or expansion of intermodal hubs, raising underpass clearances to allow for doublestack trains) or indirectly related to intermodal traffic (e.g., capacity expansion and enhanced signaling systems to allow faster, more frequent trains of all types throughout the rail network).

In addition to making necessary infrastructure improvements, railroads have responded to customer needs by instituting a series of operational improvements and service initiatives. Some of these initiatives involve the improved use of information technology. For example, most major railroads now offer comprehensive Internet-based car ordering, car tracing, pricing, and billing capabilities. Railroads have also increasingly entered into productive partnerships with other carriers. These alliances expand the focus for a particular railroad beyond the interchange point, encompassing the total movement and providing customers with seamless service—giving rail customers more value for their transportation dollar.

Since the Staggers Act, freight railroads have improved earnings, but as a group they still do not come close to earning their cost of capital. In 2001, the rail industry's cost of capital (as determined by the Surface Transportation Board (STB), an independent regulatory agency within the U.S. DOT) was 10.2 percent, compared with a return on investment (ROI) of 6.9 percent, as determined by the STB. Rail profitability is consistently in the bottom quartile of all industries.

This cannot continue forever, and this fact explains why—notwithstanding the tremendous gains railroads have made in intermodal and other service offerings in recent years, and the massive investments they have made—the future strength and vitality of our nation's rail system requires that earnings be aligned with investment needs.

Especially over the past couple of years, freight railroads have become increasingly constrained in how much capital they can devote to infrastructure. Rail stockholders and outside capital providers are becoming ever more focused on the railroad financial performance, and now increasingly insist that railroads demonstrate a compelling case for further investments. This financial discipline is necessary and appropriate in a market economy, but it discourages railroad investments that would yield significant public benefits (e.g., congestion mitigation, emissions relief, enhanced mobility, enhanced safety, economic efficiency), but only limited direct railroad benefits. As profit-driven private entities, freight railroads simply cannot afford to make investments, including investments in intermodal projects and facilities, that yield primarily public benefits.

Unless this issue is addressed head on, it will worsen in the years ahead as pressure on our nation's freight rail network intensifies. The U.S. DOT expects freight traffic to nearly double in the next 20 years. Rail customers will continue to demand improved service levels. With highway congestion consuming a growing share of our nation's economic output, and with the need to reduce emissions, conserve fuel, and promote safety on the rise, the need for railroads to provide relief will increase.

Surface Transportation Reauthorization

TEA–21 expanded the reliance on an intermodal approach to transportation planning that was the focus of the landmark Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). Today, we are seeing the benefits that can be gained by taking this comprehensive approach.

As planning for the reauthorization of TEA–21 proceeds apace, the AAR is pleased to be an active participant in the Freight Stakeholders Coalition, an organization comprised of diverse freight interests that work cooperatively to promote policies benefiting freight transportation. Besides the AAR, members of the Freight Stakeholders Coalition include the American Association of Port Authorities, the American Trucking Associations, the Coalition for America's Gateways and Trade Corridors, the Intermodal Association of North America, the National Association of Manufacturers, the National Industrial Transportation League, the U.S. Chamber of Commerce, and the World Shipping Council.

The Freight Stakeholders Coalition has unified behind a nine-point agenda designed to promote sound, effective transportation solutions. The agenda includes:

1. Protect the integrity of the Highway Trust Fund

Reauthorization of the firewalls provided for in TEA–21 would ensure that the funds collected in the HTF would be used for dedicated transportation purposes and not for deficit reduction or general government operations.

2. Dedicate funds for National Highway System (NHS) highway connectors to intermodal freight facilities

NHS intermodal freight connectors provide for a broad array of intermodal transport services and options. The FHWA has identified 517 NHS freight terminals (253 ocean and river ports, 203 truck/rail terminals, and 61 pipeline/truck terminals). These 517 freight terminals, augmented by 99 major freight airports, connect to the mainline NHS via more than 1,200 miles of NHS connectors. Typically, connectors are located in older, industrialized and mixed land use areas that are subject to physical constraints and environmental considerations.

TEA–21 directed the FHWA to review the condition of connectors and potential investments to improve their condition. In a June 2000 report to Congress, FHWA found that the connectors have significantly poorer physical and operational characteristics, and are underfunded when compared with all NHS mileage. Such conditions on these "last mile" segments can slow freight movement, damage goods in transit, and decrease efficiency and safety. U.S. DOT estimates show that the cost of improving connectors to an adequate level of service over the 2002–2020 timeframe is $3.5 to $4.0 billion.

3. Establish a national freight industry advisory group to provide input to the U.S. DOT

The advisory group should be funded and staffed, and should consist of freight transportation providers from all modes as well as shippers and State and local planning organizations. There is not a sufficiently focused Federal voice for freight; an advisory group would meet the need for regular and professional interaction between the department and the diverse freight industry, and could help identify critical freight bottlenecks in the national freight transportation system.

4. Create and fund a Freight Cooperative Research Program

More accurate and timely data on freight movements would allow State and local governments to plan transportation infrastructure improvements that more closely match actual transportation needs. To this end, a dedicated, funded research effort led by an industry-based steering/oversight group would allow for the collection and dissemination of more timely, complete, and detailed commodity flow and other types of freight data and better planning tools for freight planning professionals and others.

5. Expand freight planning expertise at the State and local levels

Unfortunately, transportation planning typically focuses almost exclusively on highway and transit projects, with scant attention paid to freight (including freight rail). To address this deficiency, planning organizations should be strongly encouraged to consider freight transportation needs, including railroad projects and intermodal projects, more fully in their planning. Given the importance of freight mobility to the national economy, States and metropolitan planning organization (MPOs) should be provided additional funds for expert staff positions dedicated to freight issues, commensurate to the volumes of freight moving in and through their areas.

6. Develop ways to increase available funds without new user fees and taxes by creating a toolbox of innovative financing options specifically aimed at freight capacity improvements and enhancements

New capital investment in critical freight transportation infrastructure leads to major public benefits including higher productivity, enhanced global competitiveness, and a higher standard of living for our Nation. With freight traffic now forecast to double within the next 20 years, the United States must expand its limited transportation infrastructure dollars by leveraging additional public and private sources of funding. This will require innovative approaches to maximize transportation-related investments.

Two financing options in which freight railroads are most interested are discussed below.

The first option calls for tax incentives and tax exempt financing to companies that make investments in intermodal freight infrastructure. This option would provide targeted income tax benefits (investment tax credits, expensing in lieu of capitalization, accelerated depreciation, and/or tax-exempt financing) to companies for investments made in qualifying assets to improve the efficiency or increase the capacity of the national intermodal freight transportation system. Qualifying assets would include track and roadbed located on intermodal corridors, intermodal transfer facilities, freight handling machinery and equipment at intermodal transfer facilities, and intermodal information infrastructure. Under this option, the tax benefits would accrue to any company that made such investments, not just railroads. Such a program would recognize the huge societal benefits derived from an expansion of intermodal transportation solutions.

The second option calls for allowing the funding of rail infrastructure through the issuance of tax-exempt indebtedness. Under this option, holders of "Qualified Railroad Indebtedness (QRI)" would qualify for an income tax exclusion for interest earned on the QRI. QRI would be any type of indebtedness, regardless of the form, issued to fund the acquisition, construction, improvement, maintenance, or repair of "Qualified Railroad Property" (QRP). QRP, in turn, would be any expenditure for the acquisition or maintenance of depreciable property, such as track, bridges, tunnels, grading, wharves and docks, terminal facilities, signals, computer systems, and

public improvements either used or to be used in the railroad's trade or business. The tax benefits would flow directly to the holders of the indebtedness in the form of income tax exclusion for interest earned, and indirectly to railroads in the form of lower capital costs.

7. Significantly increase funds for an expanded corridor/border and gateway program

This proposal would build on the highly popular but underfunded "Corridors and Borders Program," but adds the important concept of gateways. The funding should be freight specific, and there should be a qualification threshold (based on volumes) so that dollars get directed at high volume corridors/borders/gateways rather than wish-list projects. The AAR is a member of the Coalition for America's Gateways and Trade Corridors, which is leading the effort among freight interests to expand funding for this important program.

8. Streamline environmental permitting for freight projects

Multiple and often duplicative Federal laws and regulations delay environmental review of transportation projects. Language in TEA–21 directing Federal agencies to streamline the review process for highway projects has not been effective. Consequently, other measures to simplify the review process for all freight projects should be considered.

9. Increase funding and promote the use of the Congestion Mitigation and Air Quality Improvement Program (CMAQ) for freight projects that reduce congestion and improve air quality

CMAQ was designed to fund projects that will help reduce transportation-related emissions. Although CMAQ has supported some freight projects, it has been used primarily to address passenger needs. CMAQ funding should be dedicated to projects that can be shown to reduce congestion or improve air quality. Total funding for CMAQ should be increased and the use of CMAQ funds for freight projects should be clarified and strongly encouraged.

In addition to the Freight Stakeholder Coalition proposals outlined above, the railroad industry proposes additional measures which we believe will enhance the ability of our nation's transportation providers to function effectively. Like the proposals from the Freight Stakeholder Coalition, the rail proposals expand further the emphasis on intermodalism that was fundamental to the original TEA–21 legislation. The rail proposals include the following:

1. Increase funding for the Section 130 grade crossing program and clarify that funds can be spent on maintenance activities

The most critical safety problems faced by railroads are collisions at highway-rail grade crossings and incidents involving trespassers on railroad rights-of-way. Both of these problems generally arise from factors that are largely outside of railroad control. In 2001, these two categories accounted for 96 percent of rail-related fatalities.

Due largely to railroads' and others' efforts to close grade crossings and to educate the public about the dangers of grade crossings, in conjunction with the Section 130 Federal grade crossing program, the number of collisions, injuries, and fatalities at highway-rail grade crossings has fallen steadily over the years. From 1980 to 2001, the number of grade crossing collisions was reduced 70 percent, injuries declined by 70 percent, and fatalities were down 49 percent. Despite these impressive declines, far too many grade crossing accidents occur each year.

The Section 130 Program provides Federal funds to States and local governments to eliminate or reduce hazards at highway-rail grade crossings on public highways. Current funding, under a set-aside to the Surface Transportation Program of TEA–21, is approximately $155 million per year. The vast majority of Section 130 funds have been spent on the installation of new active warning devices such as lights and gates, upgrading existing devices, and replacing or improving grade crossing surfaces.

The high cost of current active warning devices—approximately $150,000, on average, per installation—has limited the number of crossings at which they have been installed. Research into improved low-cost grade crossing warning systems is underway, but increased Federal funding for highway-rail crossing hazard abatement would permit additional crossings to be protected immediately.

The Section 130 program is an important element of the HTF. Grade crossing warning devices are highway traffic control devices, there to protect the motoring public, not trains.

Increasing Section 130 funding and clarifying that such funds can be spent on grade crossing maintenance projects would allow additional crossings to be protected and further enhance highway safety.

2. Expand the Railroad Rehabilitation and Improvement Financing (RRIF) Program and remove restrictive program requirements

The Railroad Rehabilitation and Improvement Financing (RRIF) program provides low-interest loans and loan guarantees (not direct Federal grants) to help finance railroad capital investments. As authorized by TEA–21, RRIF authorizes up to $3.5 billion in direct loans and loan guarantees, of which at least $1 billion is reserved for small railroad projects. It is administered by the Federal Railroad Administration. Due largely to an exceedingly long delay in the release of implementing regulations and overly restrictive regulatory requirements (especially lender of last resort and collateral requirements), to date very few RRIF loans have been approved.

Railroads seek a major expansion of the RRIF program, and an easing of regulatory barriers to its use, in order to help railroads of all sizes—both freight and passenger—to continue to provide safe and efficient transportation service. Pending legislation (S. 1530—"RAIL–21", H.R. 2950—"RIDE–21", and S. 1991 "The National Defense Rail Act") would increase to $35 billion the amount of loans and loan guarantees available through the RRIF program. These proposals would also countermand unnecessary existing regulatory barriers pertaining to lender of last resort provisions and collateral requirements.

OPPOSITION TO TRUCK SIZE AND WEIGHT INCREASES

Notwithstanding the broad agreement detailed above among the freight railroads and other transportation modes on many issues relating to our national transportation needs and capabilities, there are some limited areas of disagreement among the modes. One such area concerns truck sizes and weights. Recently, proposals to allow larger and heavier trucks on our nation's highways have been offered. The rail industry strongly opposes these efforts.

Under current Federal law, trucks operating on the 46,000-mile U.S. Interstate Highway System can have a gross vehicle weight of no more than 80,000 pounds, and the use of longer combination vehicles (LCV—a tractor and two or more trailers or semi-trailers longer than 28 feet each) is limited to 14 Western States that allowed such trucks before 1991. These limits were frozen by Congress in the 1991 ISTEA legislation, largely in response to concerns about the safety of longer and heavier trucks. Since then, various interests have proposed that the weight limit be increased (for example, to 97,000 pounds) and that the use of LCVs be permitted on all or parts of the U.S. interstate highway network. Since 1991, all attempts to thaw the Federal freeze have been rejected by Congress.

Increased truck size and weight (TS&W) limits would, according to the U.S. Department of Transportation, have a disastrous effect on freight railroads. Railroad revenues would decline by $2.9 billion to as much as $6.7 billion per year. Contribution to railroad fixed and common costs would fall by $2.1 billion to $3.1 billion per year. As the contribution to fixed costs declined, less funding would be available for current and future investments, and so fewer such investments would be made. The reduction in investment would directly translate into reduced capacity, lower efficiency, degradation of service, a reduced ability to handle freight, and, eventually, further disinvestment. Remaining shippers on the rail network would face higher rates, reduced service, or both. Social costs associated with diversion of rail traffic to truck—more highway accidents, pollution, greenhouse gases, congestion, energy consumption, noise—would rise, and the cycle would continue in a vicious circle. This outcome is certainly not in the best interest of our Nation.

A primary basis for the rail industry's opposition to larger and heavier trucks is the unfair dichotomy between costs paid and costs incurred among the modes. Rail-competitive trucks, which are the heaviest, highest mileage operators among all trucks, do not come close to fully paying for the damage they cause to the highway system. The U.S. DOT's recent comprehensive Highway Cost Allocation Study concluded that combination trucks weighing 80,000 to 100,000 pounds pay an estimated 50 percent of their cost responsibility, and trucks weighing over 100,000 pounds would pay only 40 percent of their cost responsibility. Rail-competitive trucks already underpay by billions of dollars per year, representing an enormous competitive hurdle that railroads must overcome. Liberalizing TS&W limits would only exacerbate the existing inequity.

A committee of the Transportation Research Board (TRB), an arm of the National Research Council, which in turn is part of the National Academy of Sciences, recently released a report on the truck size and weight issue. The report was Special Report 267: Regulation of Weights, Lengths and Widths of Commercial Motor Vehi-

cles. The report recommends an immediate thaw in the TS&W freeze via the introduction of 90,000-pound single trailer trucks and a 50 percent increase in the weight of double trailer combination vehicles (while also boosting the size of the vehicles). These dramatic changes would be followed by further TS&W increases and the authorization of LCVs through "pilot programs" overseen by a proposed new government agency. The TRB report calls for much of the regulatory authority associated with TS&W to be transferred from the Federal Government to the States.

The TRB report has many shortcomings that undermine its usefulness in the debate over TS&W, as detailed in Dr. Gerard McCullough's August 2002 evaluation of the report, undertaken for the AAR and included here as Attachment 1. As Professor McCullough[10] explains, the TRB report starts with the faulty premise that there is widespread "dissatisfaction" with existing TS&W limits, when, in fact, existing limits represent an equilibrium wherein the needs of truckers and truck shippers are balanced against the safety concerns of motorists and the national goal of maintaining a healthy overall freight transportation system. Professor McCullough notes that the TRB report contains no new quantitative analysis. For example, the report is critical of the way previous studies calculated bridge damage costs due to changes in TS&W, but does not provide an estimate of what it views as the correct costs. Instead, the report says that the correct analysis has not been done yet. In other words, the TRB report admits it does not know what the effect would be of a TS&W thaw on bridge costs, but it nevertheless recommends a thaw.

Professor McCullough stresses that an efficient freight market is one in which the users absorb the full marginal costs that they impose. Unfortunately, the TRB offers no specific proposal by which the substantial current truck underpayment for the pavement damage they inflict would be ameliorated. These underpayments would sharply increase as gross vehicle weight increased, making existing inequities even worse. Finally, as the TRB report admits, serious questions exist regarding the safety implications of increasing TS&W limits. Yet the TRB calls for addressing this issue by instituting a "pilot program" that would essentially force unknowing and likely unwilling highway users to participate in an experiment to determine the safety implications of changes in TS&W.

As noted above, increasing the size of trucks without insuring full cost recovery would greatly exacerbate the problems caused by large trucks. It is interesting to note that under a recent proposal by the Reason Foundation, a Los Angeles "free market" think tank, truck-only tollways would be built on highway median strips. Under Reason's proposal, LCVs and heavier trucks would be allowed on the truck tollways, but the roads would be completely user-financed. Railroads are pleased that the Reason proposal explicitly endorses what the railroads have long maintained—that heavy trucks should pay their own way.[11] Every year that goes by means that motorists pay billions of dollars in subsidies, while heavy trucks continue to avoid their cost responsibility.

COMMUTER AND INTERCITY PASSENGER ACCESS

Another important issue that could significantly affect the freight railroads' ability to provide the quality of service that today's freight shippers require to remain competitive in the global marketplace is the increasing demand for both intercity and commuter rail service.

Rail passenger service can play an important role in alleviating highway and airport congestion, decreasing dependence on foreign oil, reducing pollution, and en-

[10]Dr. McCullough is Associate Professor of Applied Economics, University of Minnesota, St. Paul, MN, and Senior Consultant, Charles River Associates, Boston, MA. He is former Director of the Center for Transportation Studies at Minnesota and former Deputy Director of the Center for Transportation Studies at the Massachusetts Institute of Technology (MIT). He has been a consultant on transportation to the World Bank and the Federal Highway Administration (FHWA) and various private organizations. He was a Special Assistant at the U.S. Department of Transportation from 1977–1980. His Ph.D. is from MIT.

[11]While a detailed analysis of the Reason proposal is beyond the scope of this testimony, it should be noted that while railroads support the requirement that trucks fully repay the cost of the damage they cause to the highway system, care should be taken to insure that all costs—such as right-of-way acquisition, property taxes, truck staging areas, etc.—be fully recovered. For example, the publicly owned median should not just be given to the private sector motor carrier industry without their having to pay for it. Railroads repaid the Federal Government several times over for the value of the land grants they received from the Federal Government. A 1943 study by the Board of Investigation and Research concluded that the value of compensation provided by railroads to the Federal Government has "fully counter-balanced these aids which were conferred many years ago." A 1977 study by the U.S. Department of Transportation concluded that". . . the Federal Government has been a net beneficiary of its railway aid programs," having been more than fully reimbursed for its land, with interest.

hancing mobility and safety. Freight railroads have demonstrated their willingness to work cooperatively with Congress, Amtrak, commuter railroads, the States, and local jurisdictions to insure that the public's transportation needs can be met in the most efficient possible manner. Currently, freight railroads host commuter operations in cities around the Nation, operate commuter trains under contract to local authorities in several cities, and own 97 percent of the mileage over which Amtrak operates. Moreover, at least 29 cities are proposing to establish new or expanded commuter rail operations, and the U.S. Department of Transportation has designated 11 corridors for the introduction of high speed passenger rail systems across the country.

Freight railroads once provided all of our nation's rail passenger service, but large and growing deficits following World War II led them to exit the business. Existing rail passenger service is supported primarily by the public through Federal, State, or local government programs. While passenger railroading is important to our country, it pales in comparison to the importance of freight railroading. Our privately owned freight railroad system is a vital and strategic national asset—moving more freight, more efficiently, and at lower rates than anywhere else in the world, according to Lou Thompson, the World Bank's Railways Advisor. The safe, efficient, and cost-effective transportation service that freight railroads provide is critical to the domestic efficiency and global competitiveness of our Nation.

Therefore, we must find the most effective way to provide the passenger services that America needs, but without burdening the freight rail system—operationally, financially, or in any other way. Congress should resist calls to legislate mandated passenger access to freight-owned track, as proposed in H.R. 2654 in the current Congress. Access by passenger railroads to facilities owned by private freight railroads must be negotiated on a case-by-case basis by the parties, without government interference.

Freight railroads have developed a series of principles regarding the future of intercity passenger rail service. Our principles call for future rail passenger public policy to acknowledge the extreme capital intensity of railroading and to ensure that railroads' investment needs can be met. Policies which add to freight railroads' already enormous investment burden, such as further saddling them with the support of passenger rail infrastructure needs, or which reduce their ability to provide the quality of service needed by their freight customers, must be avoided. To do otherwise would undercut our nation's freight rail capabilities and be counterproductive in addressing our country's congestion, environmental, safety, and economic concerns.

SECURITY OF OUR NATION'S RAIL NETWORK

Finally, I would like to touch on the issue of security. This issue is relevant to this hearing because of the tension between the free flow of commerce and the assurance that our transportation systems are adequately protected from terrorist threats. Congress should strike a proper balance between protecting our country's transportation assets and its citizens, and providing for the free flow of goods and promoting our international competitiveness.

Following the terrorist attacks on September 11, 2001, railroads took numerous proactive steps to increase the security of our nation's rail network. Railroads immediately began developing a comprehensive Terrorism Risk Analysis and Security Management Plan. The industry formed a security task force composed of railroad representatives with expertise in areas such as operations, legal issues, railroad police activities, hazardous materials transportation, and information technology. Outside consultants with expertise in intelligence and counter-terrorism were retained to provide advice on best practices.

The task force created five Critical Action Teams addressing hazardous materials, operations security, infrastructure, information technology and communications, and military liaison. The task force undertook a comprehensive risk analysis which identified critical assets, vulnerabilities, and threats, and assessed the overall risk to people, national security, and the nation's economy. The task force then identified more than 50 countermeasures. The Terrorism Risk Analysis and Security Management Plan, which is now in effect, utilizes all this information and establishes four different alert levels, with implementation of specific countermeasures dependent on the alert level in effect.

The plan also provides for the establishment of a Railway Alert Network (RAN), a 24-hours-aday, 7-days-a-week communications center operated by the AAR. Through the RAN, railroads share information with the intelligence community. In addition, the RAN provides a means for instituting appropriate alert levels and beginning to take the appropriate countermeasures.

The AAR also operates the Surface Transportation Information Sharing and Analysis Center (ST-ISAC). Presidential Decision Directive 63 called for the creation of private sector ISACs to protect the nation's critical infrastructure from attack. The ST-ISAC, formed at the request of the U.S. DOT, collects, analyzes, and distributes security information from worldwide resources to protect vital information technology systems from attack. The ST-ISAC also operates 24-hours-a-day, 7-days-a-week.

CONCLUSION

Our nation's global economic supremacy is derived in large part from a transportation system that is second-to-none. Freight railroads are an indispensable element of that system. Going forward, we must ensure that our freight transportation capabilities will meet the increasing demands placed upon it. We are confident that the rail industry can play a major role in meeting this challenge. However, our nation's ability to provide transportation alternatives that promote mobility, economic efficiency, and environmental responsibility depends critically on the further development of the intermodal approach initiated by ISTEA and TEA–21 in which the full capabilities of each mode can be fully realized. No less important to freight railroads is the rejection of public policies that would unnecessarily and unfairly restrict their capability to deliver their maximum value to the U.S. economy.

ATTACHMENT 1

[August 2002]

EVALUATION OF TRANSPORTATION RESEARCH BOARD SPECIAL REPORT 267: REGULATION OF WEIGHTS, LENGTHS AND WIDTHS OF COMMERCIAL MOTOR VEHICLES

(By Gerard J. McCullough, Ph.D.)

Dr. McCullough is Associate Professor of Applied Economics, University of Minnesota, St. Paul, MN, and Senior Consultant, Charles River Associates, Boston, MA. He is former Director of the Center for Transportation Studies at Minnesota and former Deputy Director of the Center for Transportation Studies at the Massachusetts Institute of Technology (MIT). He has been a consultant on transportation to the World Bank and the Federal Highway Administration (FHWA) and various private organizations. He was a Special Assistant at the U.S. Department of Transportation from 1977–1980. His Ph.D. is from MIT.

EXECUTIVE SUMMARY

The purpose of this memorandum is to provide an evaluation of the Transportation Research Board's (TRB) Special Report 267: Regulation of Weights, Lengths and Widths of Commercial Motor Vehicles (hereafter, "the Report"), which was released on May 16, 2002. The Report was produced by the TRB Committee for the Study of the Regulation of Weights, Lengths and Widths of Commercial Motor Vehicles ("the Committee").

The Report contains a series of conclusions and recommendations regarding TS&W regulation in the United States. It concludes that "opportunities exist for improving the efficiency of the highway system through reform of Federal truck size and weight regulations" (p. ES–1) and finds that "changes in truck size and weight regulations . . . offer the greatest potential to improve the functioning of the [highway] system" (p. ES–2). The Report recognizes that "it is essential to examine the safety consequences of size and weight regulation" (p. ES–3), but cautions "it is not possible to predict the outcomes of regulatory changes with high confidence" (p. ES–3).

To facilitate the liberalization of TS&W limits, the Report recommends a revised regulatory regime that would involve Federal supervision of State-set limits with evaluation provided by an independent Commercial Traffic Effects Institute (CTEI). The Committee calls for pilot studies to evaluate the consequences of changes in TS&W regulations, and recommends that States be allowed to issue permits for the operation of longer and heavier trucks once the CTEI is established and able to monitor and evaluate their performance.

The Report adopts a too-narrow analytical perspective that significantly limits its usefulness in establishing national transportation policy. The report starts with the questionable assumption that there is widespread dissatisfaction with existing Federal truck size and weight regulations, when, in fact, the current system represents a balancing of the needs of truckers and truck shippers against the needs of motor-

ists and the national goal of maintaining a healthy overall freight transportation system. In addition, it also fails to recognize:

- The need for an analysis of total freight supply and demand, including the role of shipper logistics costs.
- That changes in TS&W limits affect the capacity of the highway freight network and this in turn affects the performance of railroad and other freight networks (and their shippers).
- That the goal of TS&W regulation—after safety—should be to improve the overall efficiency of the national freight market, not just to reduce direct trucking costs.
- That an efficient freight market is one in which the users absorb the full marginal costs that they impose.

There is no analytical basis, either in the Report or in earlier TS&W studies evaluated by the Committee, for many of the Report's most important conclusions and recommendations. For example, the Committee's recommendations for immediate changes in TS&W (subject to the creation of a CTEI) are not consistent with its own finding that the effects of such changes are uncertain. Nor is there any legal or economic analysis of why an independent CTEI would be more effective, or more appropriate, than the Federal DOT in determining the need for, and evaluating the performance of, TS&W regulations. There is also no analysis from an experimental design perspective of how the committee's pilot studies would demonstrate the effects of changes in TS&W limits, or an explanation of the potentially serious ethical issues a pilot program might entail.

Perhaps most importantly, the Report does not evaluate the effects of changes in TS&W limits on the overall freight transportation market. Unfortunately, this decision causes it to omit certain points which are essential to a thorough evaluation of TS&W regulations. These include:

- Significant diversion of freight tonnage off the rail and barge networks and onto the highway network.
- Significant increases in the social cost—accidents, pollution, greenhouse gases, congestion, energy consumption, and noise—of moving this freight.
- Potential increases in the rates paid by freight shippers who remain on the rail network.
- Potential disinvestment by railroads, reduced intermodal and other service offerings by railroads, and secondary diversion of more freight onto the highway system.

The Report has some strengths. It recognizes the uncertainty that exists regarding the benefits and full costs of changes in TS&W limits; the need to better understand nuisance-related and stress-related costs from mixed auto and truck traffic, and the potential benefit of separating auto and truck.; the potential role of cost-based user fees in managing infrastructure and mitigating negative effects of trucks; and the importance of regulatory institutions and enforcement mechanisms.

Overall, because of its shortcomings, the Report provides extremely limited usefulness to policymakers interested in evaluating TS&W regulations. Previous studies relating to TS&W issues, produced by the U.S. Department of Transportation and other TRB Committees, do a more satisfactory job of including all pertinent factors in their analyses.

I. BACKGROUND

The current U.S. truck fleet comprises about 8 million vehicles, about a fourth of which are combination trucks. Most combination trucks are large, with about 70 percent having registered maximum gross vehicle weights (GVW) over 75,000 pounds. The number of trucks on the road is small by comparison to private passenger vehicles, but because on average trucks are driven more frequently, their share of vehicle miles traveled (VMT) is disproportionate to their numbers. However, combination trucks still make up only about 5 percent of total VMT, as shown in Table 1.

Table 1. Total Vehicles and Vehicle Miles Traveled by Vehicle Class (2000)

		Total VMT (millions)	Percent of Total Vehicles	Percent of Total VMT
Autos	137,967,488	1,612,393	61.1 percent	58.6 percent
Pickups/Vans	79,084,979	924,018	35.0 percent	33.6 percent
Buses	746,125	7,601	0.3 percent	0.3 percent
Single Unit Trucks	5,926,030	70,583	2.6 percent	2.6 percent
Combination Trucks	2,096,619	135,208	0.9 percent	4.9 percent

Table 1. Total Vehicles and Vehicle Miles Traveled by Vehicle Class (2000)—Continued

		Total VMT (millions)	Percent of Total Vehicles	Percent of Total VMT
Total	225,821,241	2,749,803	100.0	100.0

Note: Autos category includes motorcycles.
Source: Federal Highway Administration, Highway Statistics 2000, Table VM–1.

Despite their relatively small numbers, trucks have an important and significant impact on the U.S. highway system. Trucks are disproportionately involved in fatal traffic accidents[1] and are a major factor in urban traffic congestion and noise pollution.[2] Trucks also produce significant emissions and because of the their weight, produce much greater wear on pavement than do private passenger vehicles.[3]

Since the creation of the Interstate Highway System, trucking has become an increasingly important component of the U.S. freight market. Trucks now carry about 29 percent of total intercity freight volume in terms of ton-miles in the United States versus the 41 percent carried by railroads. In terms of revenue, trucking is even more significant—intercity trucking now represents 81 percent of all intercity expenditures for freight transportation in the United States, as shown in Table 2

Table 2. Freight Transportation Outlays by Type of Transport—2000

Mode	Millions of dollars	Percent of total
Rail	36,454	9.0 percent
Truck-intercity	328,632	80.7 percent
Water	3,501	0.9 percent
Oil pipeline	9,467	2.3 percent
Air carrier	19,800	4.9 percent
Other	9,111	2.2 percent
Total	407,119	100.0 percent

Source: Eno Transportation Foundation, Inc., Transportation in America 2001.

Existing TS&W Regulation

The dimensions and weights of commercial vehicles are regulated at both the Federal and State levels. Federal laws regulate both maximum permissible gross vehicle weights and maximum axle weights, and the width, length, and number of trailers. A summary of current Federal TS&W regulations is provided in Table 3.

All States have laws governing the weights and dimensions of trucks. All but seven States apply some modification of the Federal regulations on a limited basis through permits, exemptions, and "grandfather rights." Altogether, regulations in the 50 States and the District of Columbia represent over 40 different combinations of single axle, tandem axle, bridge formula, gross vehicle weight, and interstate/non-interstate specifications.[4]

Table 3. Summary of Current Federal Truck Size and Weight Regulations

	Criteria	Applicability	Limit
Weight	Single Axle limit on Interstate System	Interstate System	20,000 lbs.

[1]According to the Federal Motor Carrier Safety Administration, large trucks are involved in 9 percent of fatal accidents and 78 percent the victims in truck-related fatal accidents are occupants of the other vehicles. See Large Truck Crash Profile: The 1998 National Picture, Tables 1 and 4.

[2]The Federal Highway Administration has found that a combination truck imposes the congestion costs equivalent to 2.5 to 15 automobiles, depending upon the highway's grade and speed, the weight-to-power ratio of the truck, and the vehicle length, and that the most common semi-trailer trucks impose more than 30 times as much noise pollution costs as autos. See Federal Highway Administration, 1997 Federal Highway Cost Allocation Study Final Report, August 1997, Table V–26.

[3]Pavement wear increases exponentially with vehicle weight, such that 80,000-pound trucks on urban interstates impose marginal pavement costs per mile that are more than 400 times greater than automobiles. See Federal Highway Administration, 1997 Federal Highway Cost Allocation Study Final Report, August 1997, Table ES–6.

[4] A complete inventory of current State size and weight limits, as well as a thorough discussion of the nature, extent, and present status of grandfather rights is provided in U.S. Department of Transportation, Comprehensive Truck Size and Weight Study, Volume II Issues and Background, 2000, pp II–8—II–24.

Table 3. Summary of Current Federal Truck Size and Weight Regulations—Continued

	Criteria	Applicability	Limit
	Tandem Axle limit on Interstate System	Interstate System	34,000 lbs.
	Total gross vehicle weight	Interstate System	80,000 lbs.
	Gross weight on any group of two or more consecutive axles (bridge formula).	Interstate System	500(LN/(N–1)+12N+36)
Size	Vehicle width	National Network	102 inches
	Semi-trailer length	National Network	48 feet (minimum)
	Twin trailer length	National Network	28 feet (minimum)

Notes: National Network refers to a network of roads designated by the Secretary of Transportation pursuant to the Surface Transportation Assistance Act of 1982. It includes virtually all Interstates and some other highways and totals more than 200,000 miles. For Bridge Formula W = overall gross weight on any group of two or more consecutive axles to the nearest 500 lbs., LN = distance in feet between the extreme of any two or more consecutive axles, and N = number of axles in the group.

Source: U.S. DOT, Comprehensive Truck Size and Weight Study, Volume I Summary Report, p. 3.

Federal TS&W regulation has its origin in the creation of the Interstate Highway System in 1956. The passage of the regulations was motivated by the significant role of the Federal Government in funding 90percent of the construction of the system. The Federal weight limits were originally set at 73,280 pounds, 18,000 pounds, and 32,000 pounds for gross vehicle weight, single axle weight, and tandem axle weight, respectively, but were increased to those shown in Table 3 in 1975.

In 1982, the Federal role in TS&W regulation was increased through the passage of the Surface Transportation Assistance Act (STAA), which required States to adopt Federal weight limits on Interstate highways and allow single 48-foot trailers and twin 28-foot trailers on a "National Network" designated by the Secretary of Transportation in consultation with the States. This network consists of virtually the entire Interstate system plus another 156,000 miles of highways.

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) prohibited the States from expanding either the number of routes on which Longer Combination Vehicles (LCVs) could be operated or the maximum weights and dimensions allowed for these vehicles.[5] This regulation has come to be known as the "LCV freeze" and in 1998 it was extended by the Transportation Equity Act for the 21st Century.

The study of TS&W issues by the Federal Government predates its involvement in funding of the highway system. The first major study was completed in 1941 by the Interstate Commerce Commission.[6] A major impetus for these studies has been the claim that higher size and weight limits increase the efficiency of the freight markets. The main findings of previous TS&W studies, especially those that are relevant to conclusions and recommendations in TRB Special Report 267, are reviewed in Appendix A1.

II. OVERVIEW OF TRB SPECIAL REPORT 267

The Transportation Equity Act for the 21st Century (TEA–21) contained a provision specifically requiring the Secretary of Transportation to request that TRB conduct a TS&W study. The charge given in the act is quite general in scope, specifying only". . . a study regarding the weights, lengths, and widths of commercial motor vehicles operating on Federal-aid highways . . ." and that the study provide policy recommendations.[7]

The law requires TRB to consult with the U.S. Department of Transportation, States, the motor carrier industry, freight shippers, highway safety groups, air quality and natural resource management groups, and commercial motor vehicle driver representatives. It requires TRB to consult with "other appropriate entities," although it does not specify what these entities might be. It also requires TRB to consider and evaluate the impact of its recommendations on the economy, the environment, safety, and service to communities.

The Committee for the Study of the Regulation of Weights, Lengths and Widths of Commercial Motor Vehicles was formed in 1998, and its original purpose was to review certain aspects of the U.S. DOT's TS&W study. As it happens, TRB had already begun planning for a TS&W study before TEA–21, and so the Committee was

[5]Longer combination vehicles (LCVs) refers to multi-trailer combinations longer than the standard twin 28-foot trailer combination vehicle (the so-called STAA double). The LCVs include seven-axle "Rocky Mountain" doubles, eight-axle "B-Train" doubles, nine-axle "turnpike doubles", and seven-axle tripletrailer combinations.

[6] Interstate Commerce Commission, Federal Regulation of the Sizes and Weight of Motor Vehicles; Letter from the Chairman, Interstate Commerce Commission, 77th Congress, 1st Session, House Document No. 354, August 14, 1941.

[7]P.L. 105–178, Section 1213, Subsection (i).

reassigned to this task when the law was passed. The committee consisted of 13 members representing State transportation officials, professional researchers, and academics, overwhelmingly in the field of civil engineering, with a small representation from economics. A summary list of the members and their respective affiliations is provided in Appendix A2.

As part of the process of conducting the study, the Committee solicited comments from outside parties on the issue of changes to TS&W regulations. Of the 46 organizations receiving letters, 25 provided comments in response. The full list of organizations contacted is shown in Appendix A3.

The Committee's request for comments included the following three specific questions:

1. What revisions to Federal law and regulations regarding commercial vehicle weights, lengths, and widths should the committee consider?
2. What factors should it take into account in evaluating possible revisions?
3. Should the committee recommend revisions to Federal law and regulations?

Responses to the three questions were quite varied. In response to Question 2, four respondents explicitly stated that the Committee should not consider the issue of modal competitiveness or the diversion of freight from the railroads in evaluating possible TS&W revisions. Three of these were trucking industry interests.[8] The other was the National Industrial Transportation League.

The basic conclusion in Special Report 267 is that increased TS&W limits have the "greatest potential" to improve highway freight efficiency, but that their full effects (including safety effects) are uncertain and that there is a "substantial probability" that there will be safety ramifications. To facilitate the liberalization of TS&W limits, the Report proposes a revised regulatory regime that would involve Federal supervision of State-set limits with evaluation provided by an independent Commercial Traffic Effects Institute (CTEI). The Report suggests that the States should not be able to begin liberalizing the regulations until the CTEI is established and is able to conduct careful assessments. A full list of the Report's conclusions and recommendations is in Table 4.

Table 4. Conclusions and Recommendations of TRB Special Report 267

Conclusions	Recommendations
1. Opportunities exist for improving the efficiency of the highway system through reform of Federal truck size and weight regulations. Such reform may entail allowing larger trucks to operate.	1. Create a Commercial Traffic Effects Institute
2. Appropriate objectives for Federal truck size and weight regulations are to facilitate safe and efficient freight transportation and interstate commerce, to establish highway design parameters, and to manage consumption of public infrastructure assets.	2. Evaluate the consequences of changes in truck size and weight regulations through pilot studies
3. Changes in truck size and weight regulations made in coordination with complimentary changes in the management of the highway system offer the greatest potential to improve the functioning system.	3. Allow certain immediate changes in Federal regulations
4. The methods used in past studies have not produced satisfactory estimates of the effect of changes in truck weights on bridge costs.	4. Allow certain Longer Combination Vehicles (LCVs)
5. It is not possible to predict the outcomes of regulatory changes with high confidence.	5. Routes and roads to which Federal standards should apply
6. It is essential to examine the safety consequences of size and weight regulation. Research and monitoring needed to understand the relationship of truck characteristics and truck regulations to safety and other highway costs are not being conducted today.	6. Conduct research on enforcement, environment and safety effects, bridge costs, freight markets, driver stress, and dedicated truck infrastructure.
7. Although violations of size and weight regulations may be an expensive problem, monitoring of compliance with the regulations is too unsystematic to allow the costs involved to be estimated.	

[8]The American Trucking Associations, the Distribution & LTL Carriers Association, and the National Automobile Transporters Association.

III. EVALUATION OF TRB SPECIAL REPORT 267 GENERAL OBSERVATIONS

The most detailed analysis in the Report (pp. 2–17 to 2–29) focuses on new probabilistic techniques for assessing bridge costs. The actual analysis of freight market efficiencies—the raison d'Etre for the Report—is limited to a few bullet-points on pages 2–12 and 2–13. There is some discussion on pages 2–36 to 2–39 of the relationship between freight markets and land use—a topic some would regard as very important—but the Report elects not to weigh these effects: "Predicting and evaluating the effect of changes in size and weight regulation on land use would be extremely difficult" (p.2–39).

The Report does recognize the uncertainty that exists regarding TS&W issues. The Executive Summary cautions: "Throughout its work, the Committee found that a lack of information about the costs and benefits of truck transportation and the impacts of the size and weight regulations hindered its effort to provide useful policy advice" (p. ES–1). In a more detailed summary of these uncertainties (p. 2–11), the Report concludes that pavement impacts and traffic impacts are well enough understood to facilitate regulatory change, but that there is inadequate knowledge of safety effects, bridge costs, changes in the volume of truck traffic, motorist stress and discomfort, and administrative feasibility. Not all would accept the claim that the infrastructure and traffic effects are well known.[9]

The Report also acknowledges the potential importance of motorist comfort and distress to TS&W. The Report does not devote an extensive amount of time to discussing the issue, but it does acknowledge that research should be conducted to determine whether these effects are "real costs that should be considered in evaluations of highway regulations" (p. 5–18).[10] The Report also mentions the potential benefits to be gained from separating truck and auto traffic by constructing separate highway and bridge facilities for trucks. Road Work, the 1989 Brookings Institution study of the U.S. highway system by Small, Winston, and Evans developed this idea that there may be "diseconomies of scope" that result from combining cars and trucks on the same system."[11] The Report acknowledges that separate truck facilities could help to accommodate the growth in freight demand, though it does not discuss the financing of these facilities.[12]

Finally, the TRB Report recognizes the potential role that cost-based user fees could play in managing the utilization of highways and bridges and mitigating the negative effects of trucks. Though the Report's discussion is mostly limited to cases where the imposition of fees would facilitate the implementation of higher TS&W limits (p. 3–28), the general endorsement of highway pricing is a policy advance. This is coupled with the important recognition that the design of regulatory institutions and enforcement mechanisms as well as standards are important elements of the regulatory process.

A major shortcoming of the Report is that it fails to provide any real analysis of supply and demand in the freight market, even though the explicit aim of the Report is to increase the efficiency of this market. The economic theory upon which the Report is based is uncomplicated: "The regulations have important economic consequences because trucking accounts for four-fifths of expenditures on freight transportation in the United States, and trucking costs are influenced by truck size and weight."

The DOT Comprehensive Truck Size and Weight Study does not necessarily contradict this theory, but it does provide a more thorough picture of the freight market to provide a basis for careful policy decisions. For example, the U.S. DOT study points out in Chapter IV that overall logistics costs—not truck or rail rates—are the

[9]The Committee appears to be less than certain about its knowledge of traffic effects. It recognizes (pp. 236) that the methods used to estimate congestion and pollution costs involve "oversimplified treatment on the complex interactions between trucks and other vehicles in the traffic stream. Changing the traffic volume, dimensions, and acceleration abilities of trucks will change how motorists drive around them, affecting other vehicles' patterns of acceleration and braking." The Committee also acknowledges (pp. 233 to 2–34) that the predicted effects on traffic flow depend critically on freight diversion forecasts, (which the Report discounts).

[10]The Report makes the methodological suggestion that the only way to evaluate the economic value of driver stress is to observe changes in traveler behavior where automobile drivers chose different routes to avoid big trucks. To see the limitations of this method, consider a case with which the Committee members might be familiar-the installation of Traveler Information Systems on public transportation systems. The economic value of these systems, which let travelers know in real time when the next bus or train is arriving, is not measured solely by the number of travelers who divert from highway to transit. The valuation should include some measure of the usefulness of information provided existing users.

[11]Small, K., Winston, W., and Evans, C., Road Work: A New Highway Pricing & Investment Policy, Washington DC: The Brookings Institution, p. 102.

[12]The Report also acknowledges here that "other modes" (p.5–18) will be part of the solution.

factors that determine freight market decisions. It notes that savings in inventory carrying costs are about equally important as reductions in (truck and rail) transportation costs in increasing the efficiency of freight markets. The U.S. DOT study also spends a considerable amount of time analyzing the impact of TS&W regulations on the freight railroad industry (Volume III, Chapters II, III, IV, XI). These impacts are important because they have direct bearing on the overall efficiency of the freight market.

The notion of freight market efficiency developed in Special Report 267 is too narrow to be useful in a discussion of national transportation policy. The sole focus of the Report is on the movement by truck from Point A to Point B at the lowest direct expense to some motor carriers and shippers. An efficient national freight market is an intermodal system of air, water, highway, rail and shipper activities which take full advantage of linked networks of transport assets. Moreover, (as the TRB itself recognized in Special Report 246[13]) an efficient freight market is one in which the users absorb the full marginal costs that they impose.

Using this metric, Special Report 246 found rail operations to be two-to-five times more efficient than truck operations on a corridor-by-corridor basis. This suggests that higher TS&W limits, which would divert freight from the rail network onto the highway network, would increase social costs and decrease efficiency. One could argue that the reduction in private costs to truckers and truck shippers could partially offset this effect, but a national policy report should make that argument explicitly.

POINT-BY-POINT EVALUATION OF REPORT CONCLUSIONS AND RECOMMENDATIONS

This section provides a point-by-point evaluation of the TRB Report's conclusions and recommendations. A serious shortcoming of the Report is its failure to establish an analytical basis for the recommendations which it makes. There is no analytical justification, for example, either in earlier TS&W studies or the Report itself, for its novel regulatory proposal—Federal "supervision" of State TS&W permitting with oversight provided by an independent Commercial Traffic Effects Institute (CTEI). Nor is there an analysis from an experimental design perspective of how the Report's pilot studies would demonstrate the effects of changes in TS&W. Other recommendations for immediate change that the Report makes appear to be inconsistent with its own finding that the effects of increased TS&W limits are uncertain. The Report does suggest that States should not be able to begin liberalizing the regulations until the CTEI is established and is able to conduct careful assessments.

A. Conclusions of the TRB Report

Conclusion 1: Opportunities exist for improving the efficiency of the highway system through reform of Federal TS&W regulations. Such reform may entail allowing larger trucks to operate.

The proper focus of TS&W policy should not be solely on lowering the private costs of trucking firms and/or some freight shippers, but on minimizing the public costs (infrastructure, safety, pollution, energy consumption, congestion) of truck transportation and ensuring the overall efficiency of the national freight market. An efficient market is one in which the users absorb the full marginal costs that they impose.

It is wrong for the Report to conclude—without a more careful analysis—that there is a direct relationship between increases in TS&W limits and increases in freight market efficiency. The data for such analyses were available to the Committee in TRB Special Report 246, in a 1998 DOT-sponsored study by David J. Forkenbrock of the University

of Iowa entitled External Costs of Truck and Rail Freight Transportation, in the DOT's 2000 Comprehensive Truck Size and Weight Study, and in the 2000 Addendum to the 1997 Federal Highway Cost Allocation Study.

According to the 2000 Addendum to the 1997 Federal Highway Cost Allocation Study, heavy trucks in the 75,000–80,000 pound range cover only 80 percent of the infrastructure costs they impose, and heavy trucks in the 80,000–100,000 pound range cover 50 percent.[14] The full marginal social cost of bigger trucks—much of it not recovered—is on the order of $0.20 to $0.70 per mile.[15]

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[13] TRB Special Report 246, Paying Our Way: Estimating Marginal Social Costs of Freight Transportation, 1996, Table ES–1, p. 8.

[14] Federal Highway Administration, 2000 Addendum to the 1997 Federal Highway Cost Allocation Study Final Report, Table 7.

[15] Ibid., Table 13.

Table 5 summarizes the relevant results of the TRB's own Special Report 246, comparing the efficiency of two representative freight movements by rail and by 5-axle tractor semitrailer:

- Case 1 compares the full costs of a grain movement from Walnut Grove, MN to Winona, MN, a distance of about 200 miles. Case 1A summarizes the full costs of a direct truck move using local roads. Case 1B analyzes the truck costs by Interstate. Case 1C is a combined truck/rail movement.
- Case 3 compares the full costs of a container movement from Los Angeles, CA to Chicago, IL, a distance of about 2,000 miles. Case 3A is a truck movement by Interstate. Case 3B involves truck and container railcar.

In both corridors, the rail movements are more energy-efficient and labor-efficient and impose lower social costs. The modes are competitive largely because of public subsidies to trucking and the high valuation that shippers place on the flexibility and speed of the truck mode.

Table 5. Efficiency Comparisons: Truck versus Rail ($)

	Case 1A	Case 1B	Case 1C	Case 3A	Case 3B
Marginal External Cost					
Congestion	8.94	6.25	0.00	295.81	0.75
Accidents	46.04	26.11	9.19	89.43	77.72
Air Pollution	6.54	6.75	1.43	63.65	34.83
Energy Security	3.10	3.63	0.39	16.64	5.36
Noise	2.31	0.00	0.78	20.68	12.65
Marginal cost of public infrastructure	38.63	61.02	0.00	141.47	1.81
Total	105.57	103.77	11.78	627.67	133.12
Less: User fees ($/truckload)	51.16	59.90	0.65	285.14	10.50
Equals: Net subsidy ($/truckload)	54.41	43.87	11.13	342.53	122.62
Carrier's average cost ($/truckload)	454.16	442.73	124.87	2469.06	1049.44

Source: TRB Special Report 246, Tables 4–2, 4–3, and 4–4.

The implication is that the liberalization of TS&W might improve the efficiency of the highway system, but in so doing it would also add external costs (negative impacts on other transportation modes, and increased costs to some transport users) that would not be recovered. Thus, total freight transport efficiency would be harmed.

Conclusion 2: Appropriate objectives for Federal TS&W regulations are to facilitate safe and efficient freight transportation and interstate commerce, to establish highway design parameters, and to manage consumption of public infrastructure assets.

The Report recognizes here that the goal of TS&W regulation is not to improve the efficiency of the "highway system," but to balance the public costs of truck travel against the efficiency of the freight transportation market. However, the Committee does not follow its own admonition, because the focus throughout the Report is overwhelmingly on lowering the private costs of trucking.

A more balanced statement of goals is in the DOT's National Freight Transportation Policy Statement (January 1997), which guided the Comprehensive Truck Size and Weight Study. These goals include:

- Ensure a safe transportation system;
- Promote economic growth by removing unwise or unnecessary regulation and through the efficient pricing of publicly financed transportation infrastructure;
- Protect the environment and conserve energy;
- Provide funding and a planning framework that establishes priorities for allocation of Federal resources to cost-effective infrastructure investments that support broad National goals;
- Promote effective and equitable joint utilization of transportation infrastructure for freight and passenger service.

Notice the emphasis on safety, transportation infrastructure (not just highways), environment, and effective and fair use of all of the nation's transportation assets. It is worth noting, also, that when the DOT conducted its Comprehensive Truck Size and Weight Study, direction was provided by a Policy Oversight Group which included officials from FHWA, the Federal Railroad Administration, and the Maritime Administration. In addition, a Multimodal Advisory Group was established to provide technical assistance.

It is surprising that a national panel of transportation experts would view this broad set of goals and multimodal working structure as a "shortcoming" (p. 2–1),

and yet that is the conclusion of the TRB Special Report 267. The Report claims that a fundamental problem with the 2000 study and earlier studies is that "analyses have not started with clear definitions of the objective of regulation" (p. 2–1) which should be "asking how the size and weight regulations can be used as a part of a strategy for increasing the benefits of the highway system" (p. 2–3). What the Report means by "increasing the benefits" is liberalizing the TS&W limits.

Conclusion 3: Changes in TS&W regulations made in coordination with complimentary changes in the management of the highway system offer the greatest potential to improve the functioning of the system.

The Report provides no analytic basis for its conclusion that changes in TS&W have "the greatest potential" to improve the functioning of the freight market or the efficiency of the highway system. There is no analysis of the role of logistics costs, for example, or of the impact of deregulation, computerization, containerization, and advanced communications on freight productivity. Nor is there a complete analysis of the role that prices could play in making highways more efficient.

The Report's failure to consider logistics contrasts with the U.S. DOT's Comprehensive Truck Size and Weight Study, which recognizes that the freight market properly understood is a $600 billion activity (p. IV–12). The DOT study estimates that business logistics costs declined by about $65 billion during the 1980's, but that a large portion of that savings ($30 billion) was attributable to reductions in inventory carrying costs. The other $35 billion of savings was attributed to reductions in transportation costs for all modes including truck, rail, water, pipeline and air.

With respect to the highway system, Special Report 246 concludes that the best way to guarantee improvement for all users of the system would be to charge the right prices. Quoting the earlier Committee:

It is desirable that shippers and carriers pay the full social cost of their freight operations—that is, that the special taxes and fees paid by the shipper or carrier for each shipment of freight be enough to offset the cost to the government of the shipment and the external costs that the shipment imposes on others. If the shipper and carrier do pay the full cost of each freight shipment, then they will be more likely to use transportation services responsibly and efficiently.[16]

TRB Special Report 267 also recognizes the potential role that cost-based user fees could play in managing the utilization of the highway system, but the focus is on applying these fees to larger-permit trucks in order to "facilitate" the implementation of higher TS&W limits (p. 3–28). There are technical problems with such a fee scheme that are discussed below under Recommendation 3. The more general problem is that the pricing described in this Report would do little to reduce the truck-related stresses that motorists feel, the safety risks they face, or the cross-subsidies they pay for infrastructure.

Conclusion 4: The methods used in past studies have not produced satisfactory estimates of the effect of changes in truck weights on bridge costs.

In its Comprehensive Truck Size and Weight Study, the U.S. DOT estimates that nationwide legalization of six-axle 97,000-pound single trucks would reduce shipper costs by 5.1 percent, but increase bridge costs by 33.1 percent. Similarly, nationwide operation of LCVs would decrease shipper costs by 11.4 percent, but increase bridge costs by 34.4 percent. Large expenditures for bridges—$53 billion in capital costs and $266 billion in user delay costs—would offset the efficiency gain to truckers and truck shippers.

The reason for this large estimate is that heavier singles and LCVs would overstress bridges beyond their design limits and force them to be replaced. The DOT recognizes that it probably overestimates bridge costs since "some bridges could be strengthened and replacement of bridges on highways with low volumes of the damaging vehicles would not have to be improved at all."[17]

The TRB Report puts considerable emphasis on the fact that a risk-based analysis would reduce the projected cost of bridge replacement.

Very high estimates of bridge costs from liberalized regulations are inconsistent with the experience of jurisdictions—in particular Michigan and Ontario—that have opened their roads to use by trucks much heavier than the Federal weight limits without experiencing costs of the magnitude estimated. Most important, the DOT estimates ignore the great potential for lower-cost methods of maintaining bridge safety that the States are increasingly capable of applying because of the widespread adoption of bridge management systems (p. 2–29).

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[16]TRB Special Report 246, Paying Our Way: Estimating Marginal Social Costs of Freight Transportation, 1996, p. 1.

[17]U.S. Department of Transportation, Comprehensive Truck Size and Weight Study, Volume I Summary Report, 2000, p. ES–20.

The Report recognizes that a proper, risk-based analysis has not yet been conducted. It does not fully acknowledge the difficulties that might be involved in such an analysis or the possibilities for upward revision of the DOT estimates. The Report is skeptical of the DOT's ability to predict regulatory outcomes in markets governed by supply and demand (see Conclusion 5 below), but confident of its ability to predict the behavior of State highway agencies and the legislative committees that fund these agencies.

Also, as the Report notes on p. 2–19, the U.S. DOT study omits fatigue costs attributed to larger vehicles markets which State engineers feel are underestimated. And, as the Report notes on p. 2–21, there are alternative rating systems for judging how much a bridge can be loaded and the choice of the higher rating system would revise the DOT estimate upward. The methods used in the past may not have produced satisfactory estimates, but they have not necessarily produced exaggerated estimates, as the Report claims.

Conclusion 5: It is not possible to predict the outcomes of regulatory changes with high confidence.

It is true that there is uncertainty involved in the prediction of regulatory outcomes. However, economists have made considerable progress in the empirical analysis of various network industries, and these results have been used extensively to improve the regulatory framework and the functioning of the economy. An example which a TRB panel should have been aware of is railroad deregulation in 1980. The regulatory changes accompanying rail deregulation were supported by extensive economic studies before the fact, and have been validated by subsequent analyses. One might point to similar work in most other network industries—airlines, electricity, telecom, gas, water, etc.[18]

It is one thing to conclude, as the Report does (p. 2–6), that a 1986 TRB committee was not able to predict the exact length (53 ft) of the trailers that the trucking industry would adopt in response to a change in statutory language, or (p. 2–6) that a 1970's Canadian study did not anticipate the variety of specialized trucks that would evolve as a result of new provincial weight limits. It is another thing to decide—as the Committee apparently does—that it could disregard the work in the Comprehensive Truck Size and Weight Study aimed at forecasting the effects of TS&W changes on the intercity freight markets.

Those effects can be quite striking. The illustrative TS&W scenarios analyzed in the DOT study show that bigger trucks would divert between 4.0 percent and 19.6 percent of annual rail traffic (measured in car-miles) onto the highway system (Table ES–12). This means between 1.02 billion car-miles and 5.0 billion car-miles would be converted into highway trailer-miles each year. It also means a projected loss of railroad contribution to fixed costs ranging from 38.2 percent to 55.8 percent. This is money that would no longer be available to the railroads to cover the fixed costs of their operations and sustain investment.

The problem that the DOT report recognizes is that railroad fixed costs are high, so the losses would have to be recovered (to some extent) in the form of higher prices to remaining rail shippers. In other words, a reduction in costs to some highway shippers must lead to an increase in rates for some rail shippers. In response to trucks cutting rates, railroads in many cases would have to lower their rates to stay competitive or else lose the traffic. Losing traffic means that remaining shippers must bear the burden of providing fixed costs, and so on, and you get a vicious circle. The TRB Committee, with a mandate to consider overall economic efficiency, should have recognized this.

Conclusion 6: It is essential to examine the safety consequences of TS&W regulation.

In its Comprehensive Truck Size and Weight Study, the U.S. DOT concludes that safety must be the primary goal of TS&W policy along with "the considerable public concern about mixing larger trucks with passenger cars on our highways."[19]

Collisions between medium to heavy trucks and other, smaller vehicles (principally passenger cars and light trucks and minivans) can be particularly lethal to the occupants of the smaller vehicles, principally because of the difference in weight (mass) between the two vehicles, and for head-on collisions, the high vehicle closing speeds typically involved. In total, collisions with medium to heavy trucks account

[18]Economists involved in these reforms are aware of the mistakes that have been made and of the limitations of such analyses, but no one has concluded that the analysis efforts are irrelevant. For a critical overview of these developments see Michael A. Crew and Paul R. Kleindorfer, "Regulatory Economics: Twenty years of Progress?" pp. 5–22, in a special issue of the Journal of Regulatory Economics, 21(1), January 2002.

[19] US Department of Transportation, Comprehensive Truck Size and Weight Study, p. V–1.

for 22 percent of all passenger car and light truck/van occupant fatalities sustained in collisions with other motor vehicles. (p. V–2)

The DOT study acknowledges that it is difficult to use statistical inference to establish a relationship between TS&W limits and highway safety. Longer combination vehicles account for less than 2 percent of annual truck VMT, while 5-axle single trailers comprise 65.4 percent. It is difficult to develop robust estimates for vehicles larger than the typical vehicle in use. Also, the crash rates for larger vehicles now operating in highly controlled situations may not be transferable to other operating situations. The DOT's approach, therefore, is to focus on the systematic components of truck safety, comparing physical differences in vehicles and equipment, driver performance, and operating environment in standard versus larger trucks.

The TRB Report recognizes the lack of conclusive information about the relationship between truck size and weight and truck safety. It also recognizes that this kind of information is critically important in formulating potential changes to TS&W regulation. The approach that the Report proposes is different from the DOT's and raises serious questions. According to the Report, pilot studies would solve the information problem by facilitating "direct observation of the primary impact of interest" (p. 5–9) which would be frequency and severity of accidents. This amounts to the use of unknowing or unwilling human subjects (motorists) in large-scale (or lengthy) safety experiments.

The most successful past studies of the relative accident rates of trucks of differing dimensions have used data obtained from truck operators that include records of large numbers of trips made by different kinds of trucks operating between the same origins and destinations . . . In pilot studies involving a small number of vehicles, it would not be possible within a reasonable time span to measure small differences in relative accident risks. (pp. 5–9, 5–20)

The pilot studies are endorsed despite the DOT's findings that combination trucks are more susceptible to rollover than conventional trucks and induce greater driver fatigue, as well as repeated substantiation that the public is strongly opposed to longer, heavier trucks and, therefore, would likely not wish to be party to a "pilot study" to examine the safety effects of TS&W changes.[20]

Conclusion 7: Monitoring of compliance with TS&W regulations is too unsystematic to allow the costs (of violations) to be estimated.

This is an important observation, and the report rightly points out the need to better quantify the nature and extent of violations in order to inform the process of TS&W regulation. The Report identifies a number of techniques as being promising for improving enforcement, especially more widespread use of automated, information technology based systems.

B. TRB Report Recommendations

Recommendation 1: Establish an independent Commercial Traffic Effects Institute to monitor and evaluate TS&W changes

The Report stresses that the design of regulatory institutions and enforcement mechanisms, as well as performance standards, are important elements of the TS&W regulatory process. This is an important contribution, but the Report offers no legal, economic or administrative analysis of why a Commercial Traffic Effects Institute (CTEI) would provide more effective regulation than the DOT—especially in an area where there are significant public concerns.

The primary justification for CTEI is that "under present practices Federal size and weight policy has been deadlocked for more than a decade, in spite of general dissatisfaction with the regulation" (p. 5–5). In fact, it is debatable that there is widespread dissatisfaction with the existing TS&W regulations, at least as far as it concerns liberalization, among the general driving public. The Report recognizes that the DOT's recent analysis of TS&W issues was "comprehensive" (p. 5–6), and that the DOT has the authority to regulate truck safety (p. 3–4), but it concludes that the way to end the "deadlock" is to establish a separate agency (p. 5–6).

The CTEI would be an "independent public organization," financed from the Highway Trust Fund, and governed by a congressionally appointed board of Federal, State and industry representatives. The CTEI's professional staff of engineers, statisticians and economists would work on pilot studies and other research funded by government or the private sector. Here is how it might work, according to the Report:

For example, a group of carriers in one industry segment or one region might have a particular interest in having research or a pilot study conducted on a vehicle or operating practice they believed would be of value to them. In such a cir-

[20]Ibid., p. I–22 and V–11.

cumstance, the carriers should be expected to contribute a major portion of the costs of the evaluations. Legislation would be needed to provide the proper legal form for such contributions. (p. 3–5)

The Report predicts that under such arrangements the Institute "would come to be seen by industry, State governments, and others as a means to implement ideas about more efficient highway management and truck regulation" (p. 3–4). This seems accurate, but it is not clear that the public interest would be protected.

Recommendation 2: Evaluate the Consequences of Changes in TS&W Regulations Through Pilot Studies

While the concept of pilot studies is, in principle, not inappropriate for research of this nature, the specific proposal put forth in the TRB report is problematic at best. As described by the Report, the pilot program would expose ordinary travelers to bigger/heavier experimental trucks in traffic if the CTEI determined, based on all available information, that the pilot could be conducted without harm to safety (p. 5–10).

One might consider pharmaceuticals as a model for the evaluation of innovations with the potential to both produce public harm and benefit, but what is proposed here is not really analogous to pharmaceutical regulation. In that industry, it takes about 13 years to develop one new drug, and the process is characterized by systematic, sequential incremental testing of the product for 7–8 years before it is tried on any humans. When human testing begins, extensive tests are initially conducted on healthy human volunteers just to ensure the product does no harm. Critical to the process is extensive monitoring in a controlled environment. Moreover, safety is always first—before a new drug is even tested for efficacy it is tested to ensure that it does no harm to human beings. Clearly, any public policy innovation that could potentially harm the public needs should be examined in a similar risk-averse, safety-based framework.

Nor is it clear that the pilot studies recommended by the Committee would establish the "consequences" of TS&W changes. The DOT study recognizes how difficult it is to use statistical inference to establish a relationship between TS&W limits and highway safety. One reason is that the current use of such vehicles is highly controlled so that the results would not generalize to different operating conditions. The same caveat would apply to pilot studies.

Another troublesome aspect of this recommendation is that it gives individual States responsibilities for making decisions that affect the overall efficiency of the national freight network. Increases in TS&W limits lower the per-ton operating costs of long-haul trucks and this has an immediate effect on rail traffic-about one-third of which (on a ton-mile basis) is competitive with long-haul trucks. Because the rail and highway networks are interrelated—and because the rail network has high fixed costs-all shippers are affected.

The Report fails to recognize that there is a difference between the optimal management of highway pavement and bridge structures and optimal regulation of a complex national freight network. It may make sense for the United States to further "devolve" responsibility for the management of pavement and bridge assets to State highway agencies (or regional agencies, or regulated private firms), but it is wrong to confuse the management of infrastructure with the regulation of national freight operations.

Recommendation 3: Authorize the States to participate in a federally supervised permit program allowing for a) six-axle tractor semi-trailers with maximum weight of 90,000 pounds, and b) double-trailer configurations with each trailer up to 33 feet long

The Committee has been careful in its recommendations regarding changes to existing TS&W limits. The maximum gross vehicle weight of 90,000 pounds for six axle semitrailers, for example, is just below the threshold estimated to cause negative bridge impacts, according to the DOT study.[21] Because axle weights are not increased, such a limit would (according to the DOT study) not necessarily cause increased pavement damage. However, the current bridge formula would allow 33-foot double-trailer configurations with weights up to 120,000 pounds on a nine-axle vehicle, 115,000 pounds on eight axles, or 110,000 pounds on only seven axles. A seven-axle vehicle at 110,000 pounds may not be as damaging to bridges as a 120,000-lb. nine-axle vehicle of the same length, but it certainly does more pavement damage. Notwithstanding the issue of infrastructure impacts, questions still exist regarding the safety implications of increasing TS&W limits, even in this limited fash-

[21]The 90,000-pound GVW six-axle semitrailer is examined as part of "North American Trade scenario." See U.S. DOT, op. cit., Volume III, Table VI-I.

ion. The TRB report describes the lack of statistically reliable evidence both concerning the relationship between truck weight and accident involvement, and regarding the relationship between truck weight and the probability that an accident will result in a fatality (pp. 2–44 to 2–45).

In addition, the Report recognizes that nuisance-related and stress-related costs from mixed auto and truck traffic should be considered in the evaluation of any TS&W policy. In focus groups conducted as part of the U.S. DOT study, a vast majority of automobile drivers said they opposed changes in TS&W regulations.[22] Truck drivers in the survey groups also questioned the need for change. Truck sizes and weights are a serious issue for the public, and this must be an important consideration in any public policy decision.

The Report recommends that "fees related to costs be adopted to accompany the proposed new size and weight limits" (p. 3–27), but it does not appear that these would cover the marginal costs of pilot programs. The Report does not explicitly endorse the pricing of all truck traffic (which would be logical) but only the pricing of experimental permit trucks to cover their "added costs". The report recognizes (p. 3–28) that the "added costs might be proportional to the volume of permit traffic up to some traffic level but increase at an accelerating rate at higher volumes." As truck traffic increases, in other words, the marginal cost of the permit trucks would be increasing. But this implies that increases in conventional truck traffic would also increase the marginal cost of permit trucks, and vice versa. Under the plan that the report describes, increase in marginal costs of existing trucks would not be covered.

Recommendation 4: Allow the States to conduct pilot studies involving any longer combination vehicles as long as the pilot study is judged safe by the CTEI

In addition to proposing the allowance of the 33-foot doubles described in Recommendation 3, this recommendation suggests that States be allowed to conduct pilot studies with any configuration of LCVs, so long as they are judged safe by CTEI.

The open-ended nature of this aspect of this recommendation raises two important questions:

1. What types of LCVs are likely to be proposed for pilot studies?
2. How broad would the scope of these pilots be?

With regard to the first question, the DOT study indicates that the economics of the industry are such that if longer combination vehicles were allowed to operate nationwide, they would become the dominant configuration, eventually constituting the majority of US truck VMT.[23] In this context, the second question becomes critical.

Here the DOT study concludes that "(e)ven if Federal law did not require States to allow larger or heavier vehicles, some States fear that if neighboring States allow LCVs, they will face irresistible pressure to also allow LCVs to keep their businesses competitive."[24] This raises the possibility that, even within the carefully designed pilot studies advocated by the Committee, larger LCVs could eventually dominate the intercity freight market.

A majority of automobile drivers oppose these vehicles. LCVs are less stable than conventional tractor-trailers, and the effects they would have on congestion and pollution are uncertain. LCVs would have a significant effect on the overall viability of railroad operations across their service offerings as described in the discussion under Conclusion 5.

Recommendation 5: Do not extend Federal TS&W regulations to the non-Interstate portion of the National Highway System

The Committee reports a recommendation that there is no justification for extending Federal weight regulation to the non-Interstate portion of the National Highway System. There is no discussion of this issue in the body of the Report and the Committee's congressional mandate is to analyze the regulations "on Federal-aid highways to which Federal regulations apply on the date of enactment of this Act."[25] The recommendation appears to be aimed at HR3132, the "Safe Highway and Infrastructure Preservation Act", which would extend the current Federal TS&W limits beyond the 44,000 miles Interstate system to the entire National Highway System of nearly 157,000 miles.

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[22] U.S. DOT, Volume II, pp. V–17-V–18.

[23] U.S. DOT, Comprehensive Truck Size and Weight Study, Volume III Scenario Analysis, 2000, pp. IV 32—IV–33.

[24] U.S. DOT, op. cit., Volume I Summary Report, p. 40.

[25] PL 105–178, Section 1213.

The recommendation is not inconsistent with the idea proposed in the Report that there should be a "redefinition" of Federal and State TS&W regulatory responsibilities. The Report describes that redefinition as follows:

The Federal Government would have diminished involvement in defining numerical dimensional limits on the Interstates and other Federal-aid highways, since the States would have more discretion with respect to limits on these roads. However, the Federal Government would take on greater responsibility for ensuring that State rules governing the use of vehicles on Federal-aid highways were contributing to meeting national objectives. (p. 3–21)

The Institute (Recommendation 1) would play a key role here, providing "monitoring, oversight and research" (p. 3–21), and the Federal Government would focus on performance standards: "States could propose solutions to problems, and the Federal Government would have to assess whether the proposals met qualitative objectives" (p. 322).

The Report does not identify these qualitative objectives. It also does not recognize that changes in TS&W limits change the capacity of the highway freight network, and this affects the overall efficiency of the national freight network. Because the rail and highway networks are interrelated, all shippers (and all motorists) are affected. State agencies may well provide optimal management of highway and bridge assets but this does not mean that they can optimally regulate the performance of the national freight network.

Recommendation 6: Specific TS&W topics requiring research include enforcement effectiveness, air quality effects, truck characteristics and crash involvement, risk-based bridge costs, freight market behavior, driver stress, and truck-only facilities

The report makes a good case that there are several key areas in which more information would improve TS&W policy.

The recommendation for more freight transportation market research should consider not only the relationship between truck costs and truck traffic, but should examine the broader context of total logistics costs and shipper preferences across modes. Advanced and well-accepted market research techniques now exist that would, within a carefully designed program of research, allow the estimation of models that quantify shippers' relative valuation of the most important freight service characteristics. These models could then be used to forecast the likely impacts of service changes across the freight industry. This work could build on the DOT (2000) study.

The proposed research into the nuisance costs of mixed auto and truck traffic is also an important recommendation, particularly given that the report rightly points out that these costs may be independent of actual accident rates. But the conclusion that such costs should only be considered in policymaking if they lead to observable changes in driver behavior is wrong. The stress or anxiety associated with driving with large trucks may impose costs on drivers that are real, but for a variety of reasons do not cause changes in behavior. Research into the adoption of advanced information technology in the public

transit sector, for example, has demonstrated that travelers may value useful information for its ability to reduce stress and uncertainty, but may not necessarily change their travel patterns as a result of having access to it. Modern market research techniques could similarly be used to estimate and clarify drivers' valuations concerning the stress associated with truck traffic.

APPENDIX A1. PREVIOUS TS&W STUDIES

DOT (1981) An Investigation of Truck Size and Weight Limits

This study was conducted in response to a congressional directive that the U.S. DOT examine the appropriateness of uniform TS&W standards throughout the United States. It examined the range of benefits and costs to the U.S. economy and society, as well as to specific groups, that would result from alternative changes in TS&W regulations. Five categories of changes were considered, including grandfather clause elimination, barrier elimination, uniformity, rollback to pre-1974 limits, and increases in limits.

The study found that transport cost savings from increased truck productivity could exceed the increase in highway and bridge maintenance costs and increased accident costs that would accompany the introduction of higher TS&W limits. At the same time, however, it found that additional infrastructure investments would be required to accommodate such increases, and that it was uncertain as to whether or not funding would be available for these investments. If these investments were not made, the study found that the negative impacts of TS&W changes could be

much greater. The study estimated that diversion from rail would be small under the specific scenarios examined, but did not attempt to estimate the resulting effect on the railroad industry.

TRB (1986) Special Report 211: Twin Trailer Trucks

The purpose of this study was to examine the potential impact of new rules adopted in the 1982 STAA, with a particular focus on safety. It found that twins were probably less safe than semis, but that little change in accidents should be expected because it was assumed that truck VMT would decline overall. On the other hand, it concluded that twins were expected to produce 90 percent more wear on asphalt pavement and 20 percent more wear on concrete pavement than the semis they would replace. This study did not independently estimate the diversion of freight traffic from rail to trucks using twin trailers, but traffic forecasts used in the study assumed that any such diversion would be very small. This assumption was based on the prediction that LTL carriers would be the primary users of twins, and that rail was not a good substitute for LTL truck service.

TRB (1990) Special Report 227: New Trucks for Greater Productivity and Less Road Wear: An Evaluation of the Turner Proposal

The purpose of this study was to evaluate a proposal to reduce road wear and increase truck productivity. Known as the Turner Proposal, the concept was to increase allowable truck lengths and gross vehicle weights but at the same time decrease allowable axle weights. The study evaluated the impact of "Turner Trucks" in terms of productivity, safety, traffic, bridges and pavement. It examined both nationwide and less-thannationwide adoption scenarios.

For nationwide adoption, it found that that savings to carriers or shippers switching to Turner trucks would average 12 percent of linehaul operating costs, and the aggregate cost savings would be 1.4percent of total truck freight shipping. Approximately 4percent of rail ton-miles would be diverted, causing rail to lose 5percent of its gross revenue. Some of the designs proposed were predicted to have negative safety or traffic effects, but the study predicted that total truck VMT would decrease. The study found that bridge costs would be increased markedly, but that pavement wear would be reduced, such that under nationwide adoption the net effect would be a savings in total infrastructure costs. Under less than nationwide adoption, however, the study found that bridge costs could exceed reductions in pavement costs. Overall, the study found that the Turner proposal would produce benefits and recommended that States consider its adoption under certain circumstances.

DOT (1997) Federal Highway Cost Allocation Study

As part of its role in administering the Federal-aid highway system, the Federal Highway Administration has from time to time undertaken analyses aimed at estimating the costs imposed on the various parts of the system by different classes of vehicles. The total costs of building and maintaining the system are generally known, but the purpose of these studies is to allocate the costs among users. Known as Highway Cost Allocation Studies (HCAS), these analyses are major efforts requiring significant data collection and analysis, and have therefore been relatively infrequent. The most recent was conducted in 1997, the first HCAS since 1982.

The 1997 HCAS provides the most up-to-date estimates available of the relative costs imposed on the system by cars and trucks. A specific objective of the study was to determine how changes in the Federal highway program and the user fees that support it have affected the equity of the user fee structure. The study also estimated the responsibility of different vehicle classes for the external costs associated with highway use, an important addition not included in the 1982 report. In addition to estimating marginal pavement and bridge costs imposed by each class of vehicle, therefore, the study estimated per mile congestion and noise costs. An addendum to the report published in 2000 provided estimates of per mile air pollution costs by vehicle class. The study found that combination trucks with registered weights over 75,000 pounds (about 70 percent of all combination trucks as shown in Table A–1) are not paying their fair share of highway costs. Trucks with registered weights of over 80,000 pounds are on average paying only 50 percent or less of the infrastructure costs they impose.[26]

The study was closely coordinated with the Comprehensive Truck Size and Weight Study then being conducted by the U.S. DOT, in order to provide a con-

[26]Federal Highway Administration, 1997 Federal Highway Cost Allocation Study Summary Report, Table 7.

sistent set of assumptions and methods for estimating the differential impacts on the highway system by vehicle class. The DOT study is described below.

DOT (2000) Comprehensive Truck Size and Weight Study

This study was intended to be a comprehensive examination of the issues related to TS&W regulations and the potential impacts of changing them. The aim of the study was not to promote a specific policy objective, which is noted in the TRB Report.[27] Rather the aim of the study was". . . to develop an information base and set of analytical tools upon which to evaluate alternative TS&W options."[28] The study is comprehensive in many respects. For example, it attempts to make". . . a significant improvement in the analysis of diversion from other modes by explicitly considering inventory and other logistics costs that shippers evaluate in making real-world transportation decisions."[29] The study recognizes the role of TRB in evaluating changes to TS&W regulations, with the assumption being that the TRB Committee charged with examining TS&W issues would internalize the results of the DOT study.[30]

APPENDIX A2. LIST OF COMMITTEE MEMBERS AND AFFILIATIONS

Member	Affiliation
James W. Poirot, Chair	Chairman Emeritus CH2M HILL, Mukilteo, WA
Kenneth D. Boyer	Professor, Department of Economics, Michigan State University
Robert G. Dulla	Senior Partner, Sierra Research Inc., Sacramento, CA
Nicholas J. Garber	Professor and Chairman, Department of Civil Engineering, University of Virginia
Thomas D. Gillespie	Research Scientist and Adjunct Professor, University of Michigan
Ezra Hauer	Professor, Department of Civil Engineering, University of Toronto
James H. Kopf	Deputy Executive Director and Chief Engineer, Mississippi Department of Transportation
Sue McNeil	Director, Urban Transportation Center, University of Illinois, Chicago
Eugene E. Ofstead	Assistant Commissioner of Transportation Research and Investment Management, Minnesota Department of Transportation (Retired)
John R. Pearson	Program Director, Council of Deputy Ministers Responsible for Transportation and Highway Safety, Ottawa, Ontario
F. Gerald Rawling	Director of Operations Analysis, Chicago Area Transportation Study
James E. Roberts	Chief Deputy Director, California Department of Transportation, (Retired)
John S. Strong	Professor of Finance and Economics, School of Business Administration, College of William and Mary
C. Michael Walton	Ernest H. Cockrell Centennial Chair in Engineering, Department of Civil Engineering, University of Texas at Austin

Source: Transportation Research Board, TRB Special Report 267.

APPENDIX A3. ORGANIZATIONS CONTACTED BY THE COMMITTEE FOR COMMENTS

Responded	Did Not Respond
American Bus Association	Association of Waste Hazardous Materials Transportation
American Trucking Associations	National Private Truck Council
Distribution & LTL Carriers Association	American Road and Transportation Builders Association
Motor Freight Carriers Association	Associated General Contractors of America
National Automobile Transporters Association	International Brotherhood of Teamsters, AFL–CIO
National Solid Wastes Management Association	JB Hunt Transport
Western Highway Institute	Schneider National Carriers
Owner-Operator Independent Drivers Association, Inc	United Parcel Service
Truck Manufacturers Association	Freightliner Corporation
Truck Trailer Manufacturers Association	Intermodal Association of North America
Federal Express Company	National Small Shipments Traffic Conference
Motor Coach Industries, Inc	Advocates for Highway and Auto Safety

[27]Transportation Research Board, TRB Special Report 267, pp. 2–3.
[28]U.S. Department of Transportation, Comprehensive Truck Size and Weight Study, Volume I Summary Report, 2000, p.4.
[29]U.S. DOT, op. cit., p. 6.
[30]U.S. DOT, op. cit., p. ES–11.

Responded	Did Not Respond
National Industrial Transportation League	Surface Transportation Policy Project
Association of American Railroads	Minnesota Department of Transportation
American Automobile Association	New Jersey Department of Transportation
Coalition Against Bigger Trucks	New York State Department of Transportation
Insurance Institute for Highway Safety	American Association of Port Authorities
Connecticut Department of Transportation	American Assoc. of State Highway and Trans. Officials
Florida Department of Transportation	Commercial Vehicle Safety Alliance
Georgia Department of Transportation	International Bridge, Tunnel and Turnpike Association
Idaho Department of Transportation	National Governors Association
Indiana Department of Transportation.	
Michigan Department of Transportation.	
New York Department of Transportation.	
Texas Department of Transportation.	

Source: Transportation Research Board, TRB Special Report 267, pp. C–21 and C–22.

RESPONSES OF EDWARD R. HAMBERGER TO ADDITIONAL QUESTIONS FROM SENATOR REID

Question. Some of the figures we have seen indicate that much of the growth in freight will be carried on trucks. However, as you mention in your statement, one way to reduce wear and tear and congestion on our roads is to move more people and freight by rail. Since our road infrastructure will be hard pressed to accommodate the expected increase in truck traffic, how can we make rail more competitive and ensure the most efficient division between freight carried by trucks and freight on our rails? Keep in mind that we also will need to move more people by rail in the future, not just freight.

Response. If freight railroads are to continue to provide safe and efficient transportation service that enhances our nation's economic health and global competitiveness, and if they are to play a meaningful future role in relieving congestion, reducing emissions and energy consumption, and improving safety, a number of steps should be taken that remove public policy obstacles and focus public policy choices on rail infrastructure.

First, there should be a more pronounced reliance on public-private financing partnerships for railroad infrastructure improvement projects, especially for projects that provide significant public benefits or meet public needs, such as congestion mitigation, emissions relief, enhanced mobility, and enhanced safety. As outlined in my September 9th testimony, the TEA–21 reauthorization process should include modifications to several transportation infrastructure programs and Federal tax policies to allow freight railroads and other transportation providers to meet vital public transportation needs more efficiently and effectively.

Second, Congress and rail regulators should resist calls to reregulate the rail industry. While it is beyond the scope here to explain in detail why railroad reregulation is such a counterproductive notion, the essential point is that regulatory restrictions that impede railroads' ability to generate sufficient returns would severely compromise their ability both to generate investment funds internally and to attract the outside capital needed to sustain—much less increase—their operations over the long term. Ultimately, if railroads are reregulated, the only realistic alternative to wholesale disinvestment of our nation's rail network would be for the government to step in and subsidize railroads on a massive scale.

Third, a number of Federal laws and regulations that inhibit railroads by treating them less favorably than other modes should be addressed.

For example, under existing truck size and weight limits, rail-competitive trucks cover far less than the costs of the damage they cause to our highways. The shortfall is made up through billions of dollars in subsidies from other highway users to truckers. Equity demands that truckers bear this expense themselves. To make matters worse, various interests have proposed that the existing truck weight limit be increased (for example, to 97,000 pounds) and the use of longer combination vehicles be expanded. Attempts to expand existing truck size and weight limits should be resisted because such expansion would exacerbate existing inequities while severely harming the rail industry. A recent U.S. DOT study found that, depending on the scenario, increased truck sizes and weights would result in a decline in rail revenue of between $2.9 billion and $6.7 billion, a decline in the contribution to railroad fixed costs of between $2.1 billion and $3.1 billion, and a decline in railroad

return on equity of 32 to 46 percent. Such declines would decimate the rail industry's ability to invest in its infrastructure, add significantly to highway wear and tear, increase highway congestion, and diminish highway safety.

Another example of a modal inequity concerns Federal research and development. The "21st Century Truck Initiative" is a public-private research partnership involving many of the nation's largest heavy-duty engine and truck companies and several Federal agencies designed to lead to prototype engines that double existing fuel economy for long-haul trucks and significantly reduce truck emissions. Currently, there is no similar program for locomotives. To correct this inequity, Congress should establish a public-private partnership involving Federal agencies, railroads, and rail suppliers designed to increase the fuel efficiency of, and reduce emissions from, locomotives.

Taxes constitute a third area in which modal inequities hinder railroads. Public policy should ensure that tax laws do not distort market forces by giving one mode a distinct competitive advantage over other modes. Thus, existing tax laws which disadvantage railroads relative to trucks and other modes should be modified.

For example, the 4.3 cents per gallon "deficit reduction" fuel tax paid by railroads but not paid by trucks should be repealed. Likewise, railroad disadvantages created by existing capital recovery provisions should be addressed. Currently, for income tax purposes railroads must capitalize and depreciate, over a period of years, the costs incurred in building their infrastructure. In addition, railroads must capitalize many of the costs of repairing and maintaining their infrastructure. In contrast, the fuel taxes paid by trucking companies (used for both new capital expenditures and highway repair and maintenance) are expenses which can be deducted immediately. This disparity in treatment of infrastructure spending for income tax purposes results in a 9 percentage point penalty for railroads on their capitalized infrastructure investments. It is a significant issue for freight railroads because railroads are enormously capital intensive: in 2000, railroad capital spending was equal to 17.8 percent of revenue, compared with 3.7 percent for U.S. manufacturing as a whole. Railroads also pay hundreds of millions of dollars per year in property taxes on their right-of-way, an expense their trucking competitors do not pay.

Finally, as your question reminds us, freight railroads also face significant and increasing demands for use of their infrastructure for passenger operations. Freight railroads agree that passenger rail can, under the right circumstances, play a role in alleviating highway and airport congestion, decreasing dependence on foreign oil, reducing pollution, and enhancing mobility and safety. However, the importance of passenger railroading to our country pales in comparison to the importance of freight railroading. Therefore, we must find the most effective way to provide the passenger services that America needs, but without burdening the freight rail system—operationally, financially, or in any other way. The goals of reducing pollution and highway congestion can be realized only if we ensure that passenger trains don't interfere with freight service.

To this end, Congress should resist calls to legislate mandated passenger access to freight-owned track. Access by passenger railroads to facilities owned by private freight railroads must be negotiated on a case-by-case basis by the parties, without government interference. For their part, freight railroads will continue to work cooperatively to help passenger railroading succeed where it is practicable, but it is not the responsibility of our nation's privately owned freight railroads to subsidize passenger service. Once policymakers agree on the nature and scope of passenger railroading in this country, they must be willing to commit public funds on a long-term basis commensurate with that determination. To do otherwise would undercut our nation's freight rail capabilities and be counterproductive in addressing our country's congestion, environmental, safety, and economic concerns.

RESPONSE OF EDWARD R. HAMBERGER TO ADDITIONAL QUESTION FROM SENATOR JEFFORDS

Question. Mr. Hamberger, I appreciate your detailed and thorough recommendations regarding TEA21 reauthorization. Would you please expand upon the legislative changes-as opposed to the regulatory changes-you are seeking to the Railroad Rehabilitation and Improvement Financing Program?

Response. AAR is seeking legislative changes to the Railroad Rehabilitation and Improvement Financing (RRIF) program that would ensure that the applicant for a loan or loan guarantee would not have to (1) provide collateral; or (2) demonstrate that it has sought other financial assistance under the program (i.e., lender of last resort provision). S. 1530, the "Railroad Advancement and Infrastructure Law of the 21st Century," or RAIL–21, and a related House measure both include these impor-

tant legislative changes. S. 1530, which has ten Senate cosponsors, is pending in the Senate Committee on Commerce, Science, and Transportation.

STATEMENT OF RICK LARABEE, DIRECTOR OF PORT COMMERCE, PORT AUTHORITY OF NEW YORK AND NEW JERSEY

Chairman Reid and Chairman Breaux, thank you for the invitation to appear before this panel on the matter of intermodal transportation and port access. I am pleased that you chose to conduct a joint hearing of your two committees. After all, the subject is intermodal transportation. Your collective effort demonstrates that it is important to consider how separate modes of transportation operate as a part of a total system. Congress showed great wisdom in acknowledging the role of intermodalism in modern transportation and commerce with the enactment of ISTEA and then TEA–21. Federal policy and support should continue to evolve to foster the productivity and efficiencies that can be achieved through addressing national transportation needs as a system of connecting and complimentary modes.

As a region that has major port facilities and the nation's largest consumer market we especially feel the impact of the economic globalization on a major gateway and its infrastructure. My hope is that this hearing will heighten your interest in the subject, further your understanding of how the efficient movement of intermodal cargo is a matter of national interest, and convince you that improvements in Federal policy and the level of assistance are warranted.

For the record, the Port Authority of New York & New Jersey is a bistate public authority created in 1921 by our States with the consent of Congress. The Port Authority's mission on behalf of the States is to identify and meet the critical transportation infrastructure needs of the bistate region and provide access to the rest of the Nation and to the world. The Port Authority's jurisdiction includes the region's major aviation and marine terminal facilities as well as the PATH commuter transit system, ferry and bus terminals, the interstate tunnels and bridges and other facilities. And appropriate to the subject of this hearing, intermodal transportation was born at Port Newark and, soon after, the first U.S. container port was developed on Newark Bay.

Our operations and projects help move people on air, land and water to the workplace, home and distant places. The region is the most densely populated in the United States and the largest international gateway on the Atlantic. As such, people and freight heavily populate the highways, rail systems and marine terminals as foreign commerce and domestic markets are served in just-in-time fashion. And while you have asked me to focus my remarks on port access I should observe that our region and gateway is as modally diverse as can be, making access and mobility issues that much more complex. Within a one mile radius of our busiest marine terminals is one of the nation's largest air cargo facilities, the northeast corridor rail line serving passengers and freight, interstate highways, and other roads and rail lines in addition to the warehouses, rail yards and businesses that support national and regional commerce. Similar multi-modal views can be seen elsewhere in the bistate area.

Our airports are responsible for roughly 22 percent of all US international cargo, which, combined with domestic cargo, totaled nearly 2.95 million tons in 2000 at a value of $150 billion. The seaport serves 35 percent of the U.S. population and 200 nations. The terminals in New York and New Jersey handled over 3 million container units (as measured in Twenty-foot Equivalent Units) last year and $80 billion of general, bulk and breakbulk cargo moved through the port in 2001. At one container terminal alone over 5,000 trucks go through the gates every day. Our on-dock rail terminal handled 200,000 containers per year and is near capacity. And lest you think that our port is the exclusive gateway for our region's consumers and manufacturers, another 750,000 TEUs arrive in our region via rail from the West Coast. Meanwhile, traveling annually over our bridges and through our tunnels are approximately 250 million vehicles while 2.5 million buses use our two terminals in New York City.

Those statistics attest to the vitality of the trade and economic activity that is at work every day. But it also hints at a major challenge we and other regions face.

That challenge is to make sure that American gateways and freight corridors have the capacity to keep up with the growth in trade and the larger economy. To be clear, this is not a case of build it and they will come. It is a matter of . . . build it because the cargo is coming. In fact it is already here resulting in ever-greater congestion 7 days a week. And whether you are talking about commuter routes, air cargo or port access finding new capacity is a present day issue that will only wors-

en unless actions are taken on a Federal, State and local level to improve efficiencies and expand capacity.

To help you better understand the challenge we face, I would like to paint a present-day intermodal picture for you:

- The New York/New Jersey metropolitan region is a severe nonattainment area for ozone (NOx and VOCs).
- Approximately 87 percent of ocean borne cargo leaves or arrives at the Port of New York-New Jersey in a truck. Almost all of the remainder travel on rail.
- At a growth rate of 4 percent a year, estimates show trade in all types of cargo doubling in our port in little over 10 years. Nationally, trade will double by 2020.
- Demand for consumer goods is driving continued growth in intermodal trade, which is expected to rise at rates exceeding 4 percent annually. In the past recent years actual growth in general cargo at the port has averaged 6 percent. Container traffic is expected to quadruple by 2020.
- Five thousand commercial cargo ships called in the port in 2001.
- While regional population totals are expected to advance slowly at about 0.3 percent per year to 2020, even this modest growth rate will result in an absolute increase of nearly one million people to the population base creating a greater demand for consumer goods and placing further strains on an aging transportation infrastructure.
- Commercial and retail development initiatives along with growing public demand for access to limited waterfront areas are increasing traffic and land pressure on marine terminals, rail yards, and air cargo operations.
- Distribution facilities are migrating to more affordable locations on the region's periphery and in other States further straining our roadway systems and degrading our air quality as trucks must travel greater distances to deliver commodities to consumers in our urban center.
- Our region's highways are at or near capacity. Shortfalls in the rail freight line and yard capacity necessary to accommodate commodity flows are increasing. Competition for capacity on the road and rail systems between commuters and goods movement is fierce.
- Trucks move 90 percent of the region's freight (and 87 percent of the port's intermodal cargo), though they represent about 10 percent of the vehicles on the region's highways and about 7 percent at the Port Authority tunnel and bridge crossings. Freight trains comprise an even smaller proportion of the region's railroad activity, often confined to limited operating times in deference to extensive commuter rail schedules.
- The eight active intermodal rail yards that serve the entire region handle more than 1,000,000 lifts per year and are close to capacity.
- In addition to being among the busiest in the Nation, our airports contend with freight access problems, especially J.F.K. International where trucks and passenger vehicles vie for space on the main access route.

Addressing these challenges will require investing in infrastructure and adjusting policies to foster logistically and environmentally smart solutions for the long term. Partnerships are coming together locally and regionally to support projects and we need a strong Federal partner to accelerate these activities. Such partnerships have proven to be successful, exemplified best by the Alameda Corridor project undertaken by our West Coast friends. The public and private sectors, including Federal and State governments, joined in planning and building the Alameda Corridor. And Federal support was crucial to the project being financially feasible.

It is heartening that the U.S. Department of Transportation-the Federal Highway Administration, Maritime Administration and the Secretary's intermodal staff, in particular-and the freight community have devoted recent years to studying freight and intermodal transportation issues. FHWA maps vividly illustrate what the future holds for our country as international and domestic freight volumes grow at the gateways, borders and along trade corridors. The Maritime Administration's survey of port access problems and recent report of its findings is important work as was the discovery that port access and other intermodal linkages are among the lowest federally funded transportation projects.

The Port Authority, in coordination with the States of New York and New Jersey, is in the process of developing specific recommendations for future legislation. Therefore I will devote the remainder of this statement to some general observations for your consideration. These are in no particular order.

First, we and other ports greatly appreciate the attention that your committees are giving to the maritime transportation system (MTS). For a country that from its earliest days has depended upon maritime transportation to build and sustain a Nation the MTS is the least visible and federally supported transportation system

in the country. That is why we are grateful that that the Bush Administration continued the MTS initiative. Consideration is now being given to identifying MTS infrastructure requirements and it is our hope that the Federal Government will act affirmatively on that information.

Second, congestion and other bottlenecks to efficient transportation can be found throughout the country, but it is especially severe in major gateways and metropolitan areas that are essential elements of the nation's economic infrastructure and security. As such, those areas, including the New York-New Jersey region, deserve special attention. An older and densely developed area like ours, with roadways, ramps and bridges designed for early 20th century conditions have a special challenge to upgrade facilities to standardized lane widths and weight limits that can accommodate the larger and heavier containerized freight movements.

Third, the significant growth in freight movement that is projected for this country will have to be accommodated efficiently or the Nation will suffer the consequences. However, in the Northeast and other heavily traveled areas building new capacity to meet the needs of commerce should not mean that trucking will alone have to bear the brunt of that growth. Clearly trucking will be an essential part of the transport strategy in the decades to come, carrying more and more freight. But in our region trucking and the highways on which they depend are not expected to have the capacity to handle a growing population and the anticipated doubling and tripling of domestic and international cargo. Can many more lanes be added to the region's interstates or to major corridors like I–95, even in the Washington area? And can that be done while maintaining Federal and State clean air objectives? It is evident to us that if we are to avoid debilitating congestion at the port and on the region's highways adjustments will be needed in the modal sharing of intermodal cargo. That leads me to my fourth point.

Even as Congress continues to support the enhancement of highway capacity in the United States your committees should consider how to foster the development of other modes to accommodate increasing demand. Rail certainly is one part of the answer. We are building three new intermodal rail yards at our marine terminals in order to dramatically expand our capacity to move containers on rail. In addition, the Port Authority is working with the railroads and public agencies to identify specific regional rail projects that will improve line and terminal capacity.

Another answer can be found off our shores. We are undertaking a program to encourage intermodal cargo to move by water where possible. That is made possible in part by the costs of congestion, which have made traditionally long distance modes more competitive over shorter hauls. There is tremendous underutilized capacity on the water. And while moving containers on barges can satisfy the market in the Northeast I think that Congress can look into the future and see how fast vessel technology can bring new capacity to intermodal transportation along major corridors. It is not the solution but if examined for its associated capital, energy and environmental costs it can be part of the solution with Federal support.

Fifth, innovations approved by Congress in TEA–21, such as the Congestion Mitigation Air Quality (CMAQ) and National Corridor Planning and Development programs, were very worthwhile policy steps to take. CMAQ helps regions such as ours make sound transportation choices that are consistent with clean air objectives. The corridor program recognized that special conditions in need of special attention exist at the borders and elsewhere. Those innovations were worthwhile directions to take and they could be improved and expanded even further, especially to add to the capacity of major gateways and corridors.

Sixth, while this hearing is concerned with the movement of freight, it is important to note how attention to freight can achieve improvements for passengers. I think especially of projects intended to divert freight from heavily traveled automobile routes to dedicated freight corridors, whether on land or water. Area transportation agencies have intermodal corridor projects in varying stages. Some were authorized for study in TEA–21, such as the New Jersey intermodal corridor and the cross-harbor rail freight tunnel projects. Port Authority staff have undertaken a comprehensive look at how intermodal freight improvements, primarily linkages between existing roads and rail lines, can be strategically planned and implemented to stitch together freight corridors. Already underway is a Port Authority project to link the Howland Hook Marine Terminal on Staten Island to the Chemical Coast Line in New Jersey. That, combined with the improvements that we have made with the State and City at Howland Hook, will bring intermodal rail access to a fast growing area of the port. It is a significant step in improving direct rail service to New York City. Another project, referred to earlier, is the Port Authority's Port Inland Distribution Network (PIDN), which is in the early stages of implementation. PIDN is intended to mitigate against growing congestion at the marine terminals and on the highways by transshipping via railroads and barges those inbound con-

tainers destined for Northeastern locations. The strong level of interest that Northeastern State departments of transportation are showing in PIDN is an indicator of how transportation planners are eager to find alternatives to congested corridors like I–95. An equally strong level of interest on the part of the Federal Government could help such initiatives demonstrate how water transportation can manage part of the freight growth. Flexibility in Federal programs can be a way to support such initiatives.

Lastly, the use of intelligent technology has proven very worthwhile in our region for managing the flow of our busy highways and crossings. Continuing and enhanced Federal support in this area would be welcome including expanding the integrated use of technology to expedite, track and more efficiently manage freight movements in congested metropolitan areas. It could also provide a double benefit of added security for cargo shipments.

Senators, the Port Authority of New York and New Jersey and other agencies of the region know we must dramatically strengthen intermodal service options. My department's twenty-year goal is to reduce port reliance on trucking from 87 percent of modal market share to 57 percent by strongly growing water borne and rail market shares. Our capital plan reflects this with its support for dock and near dock rail extensions, port terminal highway improvements and PIDN developments. To do so we need to improve connections to local intermodal service facilities at or near the port with connector highway improvements as contemplated by the NJDOT International Intermodal Corridor Program and its portway element. New York City and New York State are taking a similar tact with plans for rail access, car float and intermodal rail improvements in the City and Long Island.

In closing I should note that a lot of good work is being done by organizations represented at this hearing and others who are not here. The American Association of Port Authorities, the American Trucking Association, the Association of American Railroads, and the Coalition for America's Gateways and Corridors have joined with others in the freight community to develop a common platform to address freight mobility in future Federal policy. The Coastwise Coalition has worked to identify the potential for the maritime sector to accommodate some of the future demand for freight transportation. I think your committees can benefit greatly by the thoughtful attention that has been given to these issues by my counterparts in government and the private sector. Federal freight transportation policy is still in its adolescent stage, which means there is great opportunity for improvement to meet the challenges I have described.

Thank you again for inviting the Port Authority to participate in this hearing. I welcome any questions you may have.

RESPONSES BY RICK LARRABEE TO ADDITIONAL WRITTEN QUESTIONS FROM SENATOR REID

*Question 1.*Mr. Larrabee, you argue in your testimony that at the same time Congress continues to support the enhancement of highway capacity, we should consider how to foster the development of other modes to accommodate increasing demand. What specific steps do you recommend Congress take to lighten the load on our highways and ensure that other modes share more equally in moving freight through our nation?

Response. The points below will suggest ways that Federal programs can enhance the ability of waterborne systems to serve as an alternative to highway use recognizing that water transportation is the nation's least used mode. One of the reasons why water (and rail) modes do not handle larger volumes of domestic freight is that Federal policy has done such a good job in developing and expanding our interstate road system—understandably so—but it has not paid enough attention to the contributions that non-highway modes can make. The highway focus has worked well over the years but costly capacity constraints, resulting from the strong and continuing growth in commercial truck vehicle miles traveled (VMT), have become a glaring issue. Other modes should be examined for their potential to relieve truck volume related pressures. Federal policy has not been focused on the overall benefits to the highway program that could result from greater Federal support to alternative modal development such as less highway congestion, less wear and tear on the infrastructure, less pressure to add new highway capacity, as well as the general quality of life improvements (i.e.—safety, security, and environmental). ISTEA, through the creation of the Congestion Mitigation Air Quality (CMAQ) program, allowed funding of intermodal freight programs that advanced its "clean air" policy purpose. CMAQ funding for non-highway projects, such as the locally successful Red Hook, Brooklyn to Port Newark Barge, has demonstrated that waterborne services

can help reduce truck VMT in congested areas and mitigate negative environmental impacts. By encouraging additional programs that support multi-modal systems development, the Committee can broaden the means available to simultaneously create freight system efficiency and provide highway congestion relief.

Here in the Northeast, Interstate 95 is not just a vital highway route to North—South travel between some of the nation's largest urban areas; it is the spine of a multimodal transportation corridor. Air, rail and waterborne systems join this essential highway element to create a network for personal and commercial mobility. Just as Northeast rail corridor operations provide relief and alternatives to highway and aviation systems, waterborne improvements can bring increased mobility and shipper choice in the freight realm. Congress should not wait for congestion to build to the point where gridlock finally occurs and forces a change to other modes—only then discovering that the alternative modes are not fully prepared to respond. Federal policy should begin now to support a transition toward modal equilibrium that our economy and society will require in the not so distant future. That equilibrium will certainly have trucking as its most essential element, but the increased cargo burden that growth will bring should be shared by the others.

Following are proposals that I recommend:

Harbor Maintenance Tax Application Reform

Obstacles to the expansion of domestic barge and short sea operations should be removed. One such obstacle is a provision within the Harbor Maintenance Tax (HMT) that creates an economic penalty on inherently domestic freight movements. If a container of imported cargo enters the US at the Port of New York and New Jersey, for example, it is assessed a fee for the maintenance of Federal channels. If that same cargo is off-loaded to a barge and now moves between two US ports (i.e.—Port Newark—Elizabeth and the Port of Boston), the HMT requires that the fee by paid again by the shipper after the goods are discharged in Boston.

Recommendation:

Eliminate the provision in the HMT that allows for double collection of the tax on domestic moves—especially the transshipped cargo. This change will provide a modest but important cost reduction that will make the waterborne alternative more attractive as a service choice. It would also eliminate an unfair "double hit" tax policy that puts the ad valorem tax on the same cargo twice. Based on fiscal year 1999 figures (the latest we have), the tax on all domestic cargo accounts (bulk and non-bulk) raised less than $50 million of the over $500 million that was collected that year. And the portion paid by containerized general cargo likely is a small fraction of the total domestic collection. Voiding the tax application on that cargo seems to be a cost-effective way to encourage consideration of the waterborne mode.

Freight Congestion Relief Grants And Corridor Improvement Funding Targeted To Non-Highway Modes

The startup costs associated with new services are a barrier to the introduction of waterborne alternatives to the truck-only movement of freight. The carriers who could provide such services need to be given the opportunity to demonstrate their effectiveness if we are ever to create congestion relief in critical multi-modal freight corridors. There are major but not insurmountable challenges to the initiation of domestic movements of containerized freight by water. Water carriers (like railroads) have to absorb additional costs of transferring containers at points where transfers to local truck pick up and delivery take place. Economies of scale advantages can only be realized by these intermodal services once they have operated long enough to build a market presence which attracts substantial volumes of general freight. Historically, shippers and ocean carriers have been slow to change their domestic transfer service patterns even when there is good reason to do so. Without some type of external funding assistance to give alternative modes, especially domestic water service operators, a chance to prove themselves, little progress can be made in shifting freight movements.

The Port Authority is developing a barge and rail Port Inland Distribution Network (PIDN) as an alternative to truck-only container distribution in an eight-State market area 75 miles or more distant from Port of New York and New Jersey facilities. Our analysis shows that most of the potential routes can be operationally self-sustaining within 5 or 10 years and that there are substantial public benefits from reduced congestion, air quality improvements and increased economic development opportunities at feeder port locations from such a system. Moreover, the cost of operational support on a per route basis over this time is generally modest (i.e.—less than ten million dollars). PIDN barge service between the Port of New York

and New Jersey and the Port of Albany may begin as early as this December. Some Federal funds, notably CMAQ moneys, will be utilized to help give the barge service its start. Unfortunately, CMAQ grants for waterborne programs compete with other worthwhile CMAQ programs and this puts a practical limit on dollars available. Moreover, CMAQ has a narrow focus on air quality improvements in non-attainment areas and only allows for 2 years of operational support. It does not fully recognize the impact modal alternatives can have on general highway system congestion relief, safety, security or public investment cost effectiveness in multi-modal corridor service and development.

A major barrier to new modal development, even where it enjoys strong local and State support, is the fact that intermodal service development requires multi-State support. Oftentimes, the benefits cross State lines while the major development costs are centered at the service hub and regional port. Thus benefits can reach well beyond these few locations but the sharing of the costs does not. Federal assistance supporting the delivery of broadly distributed benefits would seem ideal to overcome developmental barriers created by MPO boundaries and State lines. The Federal aid would, however, require expeditious Federal approval, based on State and local support, rather than the bottom's up MPO-through-the-State process that makes CMAQ and many other Federal programs difficult to apply even where it may be the intent of Congress to do so.

Recommendation:

New programs, more focused on congestion relief and other public benefits that would occur from the introduction of new intermodal or multi-modal services in congested corridors, are needed. One way to meet this need would be to set criteria to measure the contribution that the waterborne alternatives can make to multi-modal freight corridor congestion relief. If those criteria were satisfied, highway funds could be made available to introduce and sustain regional efforts to establish new systems. To deal with startup challenges, multi-year operational and capital assistance should be included. A greater Federal role to facilitate the application and funding review process for multi-State/multi-MPO applications is essential. An expanded CMAQ program is one way to support such projects in their initial years. A better approach is to create a freight specific CMAQ-like congestion relief program, open to alternative intermodal systems that can demonstrate highway congestion relief.

Question 2. We hear a lot of positive feedback about the Alameda Corridor project and how Federal funds were able to leverage private sector, State and local funds for a project that benefited the port, the trucking companies, and the railroads. How useful is the Alameda Corridor model and can it be replicated elsewhere with some Federal assistance?

Response. The Alameda Corridor project is an ideal model for strategically planning, coordinating, and funding the development of multi-jurisdictional corridors which optimize the movement of freight between and among key maritime, highway, rail and aviation gateways.

The Port Authority of New York & New Jersey has already begun to expand upon the Alameda "model" in our development of a multi-State "Northeast Intermodal Transportation Corridor" (NITC) program. While still in its infancy, the basic tenet of NITC is that it will, with Federal assistance, encourage States from Maine to Maryland to approach the planning and development of their respective freight infrastructure programs in a coordinated, systematic manner consistent with TEA–21's "National Corridor Planning and Development Program" requirements for the development of corridors of national significance.

Corridor programs such as Alameda offer the potential for: 1) removing cargo from the general passenger traffic flows thereby simultaneously reducing the cost to move those goods and enhancing public safety; 2) rationalizing container distribution; 3) improving air quality; 4) enhancing security; 5) fostering the utilization of "brownfields" for warehousing and goods distribution activity; and 6) stimulating local economies. Given the potential benefits, it is clear that Federal policy needs to do more to promote logistically and environmentally sound long-term solutions to the movement of the nations freight.

STATEMENT OF MICHAEL P. HUERTA, SENIOR VICE PRESIDENT AND MANAGING DIRECTOR, ACS STATE & LOCAL SOLUTIONS, ON BEHALF OF THE COALITION FOR AMERICA'S GATEWAYS AND TRADE CORRIDORS

The Coalition

The Coalition for America's Gateways and Trade Corridors is an intermodal organization comprised of more than 22 groups. The Coalition's sole interest is to encourage adequate Federal investment in our nation's intermodal freight infrastructure and technology to ensure safe, efficient and cost effective goods movement.

Borders and Corridors Programs Overview

Recognizing the unprecedented demands international trade is placing on our nation's transportation infrastructure, and bringing a clearer focus on needed freight transportation and intermodal connector projects, Congress established the National Corridor Planning and Development Program (NCPD) and the Coordinated Border Infrastructure Program (CBI) often referred to as the Borders and Corridors Program. Section 1118 and 1119 of the Transportation Equity Act for the 21st Century (TEA–21) provided $140 million annually through a discretionary grant program administered by the Federal Highway Administration's (FHWA) Office of Freight Management & Operations to fund planning, development, construction and operation of projects that serve border regions near Mexico and Canada and high priority corridors throughout the United States.

The Coalition believes that current Borders and Corridors Programs have fallen short of the intended goals when these programs were established for two reasons.

First, the programs included in the TEA–21 Conference Report were funded at levels far less than necessary to meet freight transportation and intermodal connector needs. As witness to that, since the beginning of the programs, funding requests from States and Metropolitan Planning Organizations (MPOs) have exceeded available funds by a ratio of 15:1.

Second, programs were extensively earmarked in the annual appropriations process. In fact, in the transportation appropriations bill for fiscal year 1902 these programs were earmarked for specific projects at more than twice the authorized funding level, causing the FHWA to decline taking grant applications for that year. As a result, funds have not always been allocated to projects with the greatest national significance to the movement of freight.

Reauthorization

With respect to the reauthorization of TEA–21, the Coalition strongly recommends the programs be continued, but bolstered to ensure the original goals are met. With respect to modification, the Coalition respectfully commends several recommendations to the Committee for consideration.

- To meet the high level of demand, funding for the Borders and Corridors Program must be increased to not less than $ 2 billion annually.
- The distribution of funds should be freight specific, and there should be a qualification threshold based on freight volumes and freight-related congestion to ensure limited dollars reach high-volume corridors/borders/gateways.
- Under current law, only States or MPOs are eligible to apply for funding under the Borders and Corridors Programs. It is recommended that the designation of entities eligible to apply for Program funding be expanded to include other public and quasi-public organizations.
- The programs should be redefined to address the needs of all trade gateways, not only land borders, and gateway connected trade corridors. Many gateways that handle high volumes of freight are not eligible for funding because they may not be "borders." For example, while Illinois is not a "border State," one-third of the nation's freight passes through Chicago and it is the largest intermodal hub in the Nation. Similarly, inland ports are also important gateways that enable the efficient movement of goods throughout the country.
- The designated "high priority" corridors eligible for funding under the Corridors Program need to be reexamined to ensure freight intensive areas can apply for funding. Currently, there are many important projects in need of funding that do not fall in one of the 43 priority corridors designated under TEA–21. Highest priority should be given to corridors that move goods to and from trade gateways.

Overall Needs

International trade is the key to America's economic future. Imports and exports, which fuel our economy, are doubling every 10 years. At the same time, freight traffic within the United States' borders will increase 100 percent by 2020. In 1970, for-

eign trade was 10.8 percent of U.S. gross domestic product (GDP). By 2000, it grew to more than 26 percent of the GDP.

This growth trend is expected to continue in all modes of transportation. In the next 20 years, foreign trade moving through American ports is expected to increase by 187 percent, while containerized cargo will experience an explosive 350 percent increase. In response to the overwhelming growth in trade, truck traffic will increase by 200 billion vehicle miles and rail freight shipments are projected to grow by 1 billion tons.

Rapidly accelerating trade combined with domestic growth have created a $10 trillion U.S. commodity flow that produced millions of new job opportunities and a higher standard of living for Americans.

These benefits will only last as long as we keep the freight moving.

While so far freight carriers have done a good job keeping goods moving, in coming years, better, smarter and more truck, rail and intermodal gateway infrastructure will be needed to keep the traffic from stalling in gridlock. Even today, congestion and heavy volume often impede access to major freight terminals. Near dock rail capacity requires significant expansion and capital investment.

Unfortunately, too small a portion of TEA–21 is devoted to freight-related intermodal projects. Meanwhile, intermodal connectors currently have up to twice as many engineering deficiencies and pavement deteriorations as National Highway System non-Interstate routes. While the current port and trade corridor system is pressed to accommodate the current traffic levels, demands on it are expected to double by 2020.

The large burden placed on our freight transportation system has only been exacerbated by increased security concerns since September 11. Intermodal freight infrastructure is critical to national defense. Thirty-eight thousand miles of the interconnected civilian rail system—vital for carrying heavy, oversized equipment and weapons systems—links some 170 strategic defense installations to seaports for military deployment.

Ports and their connectors have always been the point of embarkation for defense materiel, and this role is even more important as our global strategy emphasizes flexible response. Highway connectors play a vital role in the rapid mobilization of personnel and materiel toward points of deployment.

Value of Investment/Cost of Neglect

Investing in transportation yields economic paybacks for all corners of the country. Every dollar invested in the highway system yields $5.70 in economic benefits to the Nation. U.S. freight railroads contribute over $14 billion a year to the economy in wages and benefits to about 200,000 employees and billions in purchases from supplies. And, U.S. ports generate 13 million jobs, contribute $743 billion to the GDP and supply $200 billion in Federal, State and local taxes.

Ignoring these problems will cost our Nation in numerous ways. Growing freight congestion puts our economic growth in peril by creating costly delays for manufacturing, putting a drag on job creation and undermining our ability to compete in the increasingly important global market. Highway congestion alone costs the U.S economy $78 billion annually, while also contributing to air pollution and other environmental concerns. In addition, delays at canal locks nationwide totally some 550,000 hours annually, representing an estimated $385 million in increased operating cost borne by shippers, carriers and, ultimately, consumers.

As you are all probably aware, the Alameda Corridor recently opened in Southern California. We believe this public-private project exemplifies the type needed throughout the country. While at first glance this may seem to be only a rail project, it will also facilitate more efficient truck, ship and rail movement. The benefits from moving freight in and out of our nation's busiest ports faster will not only be felt in Southern California, but will stretch across the rest of the country. The goods that move through the ports of Long Beach and Los Angeles represent $97.3 billion in U.S. trade, support 2,121,500 jobs nationwide and deliver $4.51 billion in State and local taxes throughout the country.

There are many other projects, similar to the Alameda Corridor that still need funding. Here are a few of examples drawn from our members:

- The Port of Pittsburgh will need up to $30 million for rail, road and port improvements.
- To facilitate goods movement San Bernardino County, California needs $383.3 million and Riverside County, California needs $926.7 million.
- For infrastructure improvements Washington State needs $183.8 million.
- The Gateways Cities Council of Governments in California alone needs $4 billion for improvements for goods movement and freight related congestion.

These are just a few examples of tremendous need for intermodal infrastructure improvements.

Recommendation Detail

In response to these problems, the Coalition for America's Gateways and Trade Corridors is asking Congress to:

1. Increase Funding for Freight Mobility

Funding needs for freight mobility are large, and will be met in a variety of ways. It is estimated that some 25 percent of the general highway expenditures go to the benefit of freight movement. Special programs to encourage public-private partnerships will be a key element as well. Given the need for major, targeted investments that meet national needs, but are built by regional, State and local entities, there needs to be a targeted program to encourage and support these projects.

A minimum of $2 billion per year for the Borders and Corridors Programs is required immediately to support designated programs for freight technology and infrastructure, such as intermodal connectors. This amount could productively be doubled as projects move out of design and into construction in the next reauthorization period.

Since the beginning of the program, funding requests from States and MPOs have exceeded available funds by a ratio of 15:1. Much of this funding has gone to the planning, design and engineering of future projects. There is clearly large unmet demand for funding and a growing backlog of projects that are "ready to go." The U.S. Department of Transportation projects that the volume of freight movements in the U.S. will double over the next 20 years. As a result, demands for infrastructure project funding will increase ever further.

2. Utilize Creative Funding Approaches

To provide the level of funding required, Congress should actively explore a variety of funding approaches including the possibility of utilizing general funds. Available funds under the current Borders and Corridors Programs should be increased to support freight-related intermodal projects, especially projects that aim to reduce greenhouse gases.

Attention should also be focused on restructuring and expanding Federal loan and loan guarantee mechanisms to provide grants and long-term credit for intermodal and intermodal connector projects. The program should create incentives for State and local actions taken in support of freight movement projects that are designated under a national program.

3. Establish Freight Mobility as a Central Element in National Transportation Policy and a Key Factor in State and Local Planning

Establishing and maintaining freight mobility as a high national priority must be articulated and reinforced in a variety of ways. Through public pronouncements and policy documents both Congress and the Administration need continually to underscore the importance of freight transportation and the urgency of increasing the capacity and efficiency of our national system.

The Coalition is a member of the Freight Stakeholders Coalition and supports the principles outlined in testimony presented by that organization, which not only call for greater funding but also better freight data and planning.

Freight mobility needs to be given higher priority as an element in State and local transportation planning. Strong relationships exist between the Departments of Transportation and Defense, but these relationships need updating to align them with today's priorities.

Congress should create a National Council on Freight Mobility (including community mitigation) with strong representation from both shippers and carriers, as well as affected communities and other stakeholders, to advise the Secretary of Transportation.

The Council would provide advice and counsel on:

- Overall freight infrastructure expansion strategy
- Developing trends and technology in freight movement
- Determining public interest in freight infrastructure projects

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RESPONSES OF MICHAEL HUERTA TO ADDITIONAL QUESTIONS FROM SENATOR REID

Question 1. Mr. Larrabee argues in his testimony that at the same time Congress continues to support the enhancement of highway capacity, we should consider how to foster the development of other modes to accommodate increasing demand. What specific steps do you recommend Congress take to lighten the load on our highways

and ensure that other modes share more equally in moving freight through our nation?

Response. The Coalition believes competition in the marketplace is the best way to decide questions regarding the distribution of freight among modes to be decided. However, much can be done to improve the overall efficiency of our nation's transportation system.

For example, the Coalition believes too small a portion of TEA–21 is devoted to freight-related intermodal projects. Intermodal connectors currently have up to twice the engineering deficiencies and pavement deterioration than National Highway System non-Interstates routes. Also, while the current gateway and trade corridor system is pressed to accommodate the current traffic levels, demands on them are expected to double by 2020. Seamless transfer of goods between the modes will help meet that demand.

The large burden placed on our freight transportation system has only been exacerbated by increased security concerns since September 11. Intermodal freight infrastructure is critical to national defense. Thirty-eight thousand-miles of the interconnected civilian rail system—vital for carrying heavy, oversized equipment and weapons systems—links some 170 strategic defense installations to seaports for military deployment.

Ports and their connectors have always been the point of embarkation for defense materiel, and this role is even more important as our global strategy emphasizes flexible response. Connectors play a vital role in the rapid mobilization of personnel and materiel toward points of deployment.

Accordingly, The Coalition recommends that a larger portion of Federal transportation efforts target intermodal connectors and other infrastructure that improve our nations ability to move goods to and from our international gateways.

Question 2. We hear a lot of positive feedback about the Alameda Corridor project and how Federal funds were able to leverage private sector, State and local funds for a project that benefited the port, the trucking companies, and the railroads. How useful is the Alameda Corridor model and can it be replicated elsewhere with some Federal assistance?

Response. The Alameda Corridor is a great example of how focused Federal funds can leverage the involvement of other governments and the private sector in transportation improvement projects.

We believe this public-private project exemplifies the type needed throughout the country. While at first glance this may seem to be only a rail project, it will also facilitate more efficient truck, ship and rail movement. The benefits from moving freight in and out of our nation's busiest ports faster will not only be felt in Southern California, but will stretch across the rest of the country. The goods that move through the ports of Long Beach and Los Angeles represent $97.3 billion in U.S. trade, support 2,121,500 jobs nationwide and deliver $4.51 billion in State and local taxes throughout the country.

There are many other projects, similar to the Alameda Corridor that still need funding. Here are a few of examples drawn from our members:

- The Port of Pittsburgh will need up to $30 million for rail, road and port improvements.
- The Alameda Corridor East, San Gabriel Valley, and OnTrac Corridors in California need $2.5 billion for infrastructure improvements.
- To facilitate goods movement San Bernardino County needs $383.3 million and Riverside County needs $926.7 million.
- For infrastructure improvements Washington State needs $183.8 million.
- The Gateways Cities Council of Governments alone needs $4 billion for improvements for goods movement and freight related congestion.

In each of these projects, Federal funds will galvanize together the assets of local governments with private sector transportation providers in a manner similar to that which occurred with the Alameda Corridor project. I should note, however, that the Federal assistance the Alameda Corridor project received was primarily in the form of a loan. While this worked for that specific project, it will not work in every case and Congress should look at both grant and loan funds to facilitate projects such as those described above.

Question 3. Many people believe that the Borders and Corridors Programs has not been able to successfully address many key freight issues. One improvement I believe we should consider is to revise this program to encourage public-private partnerships through a greater emphasis on innovative finance and other creative incentives. How else can we improve the Borders and Corridors Programs to target the highest priority freight corridors and intermodal facilities?

Response. One significant step that can be taken is to establish freight mobility as a central element in national transportation policy and a key factor in State and local planning.

Establishing and maintaining freight mobility as a high national priority must be articulated and reinforced in a variety of ways. Through public pronouncements and policy documents both Congress and the Administration need continually to underscore the importance of freight transportation and the urgency of increasing the capacity and efficiency of our national system.

The Coalition is a member of the Freight Stakeholder Coalition and supports the principles outlined in testimony presented by that organization which not only calls for greater funding but also better freight data and planning.

Freight mobility needs to be given higher priority as an element in State and local transportation planning. Strong relationships exist between the Departments of Transportation and Defense, but these relationships need updating to align them with today's priorities.

To advise the Secretary of Transportation, Congress should create a National Council on Freight Mobility (including community mitigation) with strong representation from both shippers and carriers, as well as affected communities and other stakeholders.

The Council would provide advice and counsel on:

- Overall freight infrastructure expansion strategy;
- Developing trends and technology in freight movement;
- Determining public interest in freight infrastructure projects;

With respect to the Borders and Corridors program funds:

- The distribution of funds should be freight specific, and there should be a qualification threshold based on freight volumes and freight-related congestion to ensure limited dollars reach high-volume corridors/borders/gateways.
- Entity eligibility should be clarified and broadened to other public and quasi-public organization, such as multi-jurisdictional authorities.
- The programs should be redefined to address the needs of all trade gateways, not only land borders, and gateway connected trade corridors. Many gateways that handle high volumes of freight are not eligible for funding because they may not be "borders." For example, while Illinois is not a "border State," one-third of the nation's freight passes through Chicago and it is the largest intermodal hub in the Nation. Similarly, inland ports are also important gateways that enable the efficient movement of goods throughout the country.
- The designated "high priority" corridors eligible for funding under the Corridors Program need to be reexamined to ensure freight intensive areas can apply for funding. Currently, there are many important projects in need of funding that do not fall in one of the 43 priority corridors designated under TEA–21. Highest priority should be given to corridors that move goods to and from trade gateways.

RESPONSES OF MICHAEL HUERTA TO ADDITIONAL QUESTION FROM SENATOR JEFFORDS

Question 1. Mr. Huerta, you recommend that a minimum of $2 billion per year be provided for the Borders and Corridors Programs, and that the $2 billion should be doubled in future years. You also recommend that the Congress expand Federal loan and loan guarantee mechanisms for such projects. Would you please expand upon how this $4 billion in annual funding could be used to meet your estimated demand for funding.

Response. The Coalition's recommendation is that funding for the Borders and Corridors Program must be increased to not less than $ 2 billion annually. With respect to how funds can be most productively used the Coalition offers the following recommendations:

- The distribution of funds should be freight specific, and there should be a qualification threshold based on freight volumes and freight-related congestion to ensure limited dollars reach high-volume corridors/borders/gateways.
- Entity eligibility should be clarified and broadened to other public and quasi-public organization, such as multi-jurisdictional authorities.
- The programs should be redefined to address the needs of all trade gateways, not only land borders, and gateway connected trade corridors. Many gateways that handle high volumes of freight are not eligible for funding because they may not be "borders." For example, while Illinois is not a "border State," one-third of the nation's freight passes through Chicago and it is the largest intermodal hub in the Na-

tion. Similarly, inland ports are also important gateways that enable the efficient movement of goods throughout the country.

• The designated "high priority" corridors eligible for funding under the Corridors Program need to be reexamined to ensure freight intensive areas can apply for funding. Currently, there are many important projects in need of funding that do not fall in one of the 43 priority corridors designated under TEA–21. Highest priority should be given to corridors that move goods to and from trade gateways.

STATEMENT OF JOHN D. CARUTHERS, JR., CHAIRMAN, I–69 MID-CONTINENT HIGHWAY COALITION

Messrs. Chairmen and Members of the Subcommittees, it is a pleasure to come before you today to discuss the importance of the completion of Interstate I–69 to the efficient movement of the nation's freight.

When completed, I–69 will span the nation's heartland, connecting Canada and Mexico through the States of Michigan, Illinois, Indiana, Kentucky, Tennessee, Mississippi, Arkansas, Louisiana and Texas. Designated as congressional High Priority Corridors 18 and 20 in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and as Interstate Route I–69 in the Transportation Equity Act for the 21st Century (TEA–21), the I–69 Corridor traverses over 150 counties and hundreds of municipalities, directly serving over 25 million people. The I–69 Mid-Continent Highway Coalition is comprised of cities, counties, States, business, labor and civic organizations all along the I–69 Corridor. It reflects the economic diversity of this vast region, including the agriculture, mining, timber, energy, transportation, chemical, electronic and industrial sectors-current and future users of the I–69 Corridor.

Two sections of the Corridor 18 system—Interstate 69 from Port Huron, Michigan at the Canadian border to Indianapolis, Indiana and Interstate 94 from Port Huron southwest to the Ambassador Bridge in Detroit and west to Chicago, Illinois—are existing-open-to-traffic Interstates. The rest of Corridor 18, as well as Corridor 20, is under development. From Indianapolis south I–69 connects Evansville, Indiana, Memphis, Tennessee, Mississippi, Arkansas, Shreveport/Bossier City, Louisiana and Houston, Texas to the Lower Rio Grande Valley at the Mexican border. Corridor 20 extends along US 59 from Laredo, Texas at the Mexican border through Houston to Texarkana, Texas. A portion of Corridor 20 overlaps Corridor 18. Together, Corridors 18 and 20 comprise I–69.

The I–69 Corridor 18 and 20 system spans over 2600 miles. About 2000 miles from Indianapolis to the Mexican border remain to be completed. Completion of I–69 will not require an entirely new facility from Indianapolis to the Mexican border. In some areas it will link existing Interstates or highways at Interstate standards. In other areas it will require upgrading and linking existing non-Interstate highways and, in others, new construction.

Work is underway along the entire I–69 corridor. Feasibility studies have been completed and have shown that both Corridors 18 and 20 have positive cost benefit ratios returning $1.57 and $1.68 respectively for every dollar invested. Location and environmental studies are in progress and some sections are in design, preliminary engineering and construction. The entire corridor will be ready to go to construction and, in fact, much of it can be completed in the upcoming TEA–21 reauthorization, if funds are available.

While I–69 traverses nine States, it is important to the Nation as a whole; for efficient movement of freight, for trade, intermodal connectivity and economic development. Trade has shifted, particularly after the passage of the North American Free Trade Agreement (NAFTA), from east-west to north-south. Canada and Mexico are now the United States' major trading partners. U.S. Mexican trade has more than doubled since the passage of NAFTA in 1993. U.S. imports from Mexico were up 175 percent from 1993 to 1999. U.S. exports to Mexico rose 109 percent over the same period and trade with Canada increased 73 percent. In 2001, 80 percent of U.S. trade with Mexico and 67 percent of U.S. trade with Canada went by truck. The I–69 Corridor accounts for over 63 percent of the nation's truckborne trade with Canada and Mexico. It has the nation's busiest border crossings on both the Canadian and Mexican borders. The Michigan border points of Detroit and Port Huron account for 48 percent of the nation's truckborne trade with Canada and the Texas border between Laredo and the Lower Rio Grande Valley accounts for over 49 percent of the nation's truckborne trade with Mexico.

Examining the impact of NAFTA trade on just the I–69 States represented at this joint Subcommittee hearing, in my own State of Louisiana truckborne exports and imports to Canada and Mexico grew 47 percent from 1995 to 2000, from $856 million to $1.26 billion. The largest increase in freight traffic has been in truckborne

exports to Mexico which have tripled since 1995. Truckborne exports from Mississippi to Mexico have grown 105 percent since 1995 and truckborne imports have grown 74 percent. Total truckborne trade between Mississippi and Canada and Mexico increased from $984 million to $1.415 billion, or 44 percent between 1995 and 2002. Truckborne trade between Illinois and Canada rose 49 percent from $10.76 billion to $16 billion. Truckborne trade between Illinois and Mexico rose 138 percent from $1.9 billion to $4.6 billion. The value of truckborne trade between Texas and Mexico and Canada has increased from $35.6 billion to $72.2 billion since 1995, 103 percent over 5 years. The largest increase has been in truckborne exports from Texas to Mexico. Michigan and Texas are our nation's two largest trading partners with other countries in North America, accounting for $175 billion in value carried by all modes of surface transportation in 2000. Texas' North American trade is the equivalent of the combined North American trade activity of California, Pennsylvania and North Carolina.

ooking at freight flows nationwide, not just with Canada and Mexico, approximately half of the total freight shipped in the United States in 1997—over five billion tons—passed through, originated or terminated in the I–69 Corridor States. Freight is entering and leaving the I–69 Corridor by truck, rail, air and water. Seventeen of the nation's top 25 seaports are directly connected to I–69 and 13 inland waterway ports serve I–69 cities. Fifteen of the nation's top 25 air cargo airports are readily accessible to I–69. There are 96 rail terminals within 150 miles of the Interstate 69 Corridor. Every major eastern and western rail carrier and both Canadian carriers have terminal operations on the I–69 Corridor. There are truck rail intermodal facilities in every major city along the I–69 Corridor.

The I–69 Port of Houston leads the Nation in foreign waterborne tonnage. The Port of Houston handled 128.8 million tons of foreign cargo volume in 2000, 23 percent more than the foreign freight traffic handled at any other port in the United States. The foreign trade cargo volume handled at the Port of Houston in 2000 was the equivalent of the foreign cargo volume at the Ports of Long Beach, Los Angeles, Portland and Seattle combined. It was also the equivalent of the 2000 foreign cargo volume at the Ports of New York/New Jersey, Hampton Roads, Charleston, and Miami combined. With the exception of the Port of South Louisiana, which is also directly accessible to I–69, the Port of Houston handled more total trade tonnage (imports and exports) in 2000 than any other port in the United States. The Port of Houston has 150 trucking lines and two railroads operating intermodal service.

While the Port of Louisiana is ranked third in the world in total tonnage, with 194 million metric tons of cargo volume, and the Port of Houston is ranked eighth in the world in tonnage with 144 million metric tons, container traffic is also growing. Container traffic in Gulf of Mexico ports served by I–69 is growing faster than the national average or than traffic at Atlantic or Pacific ports. Between 1990 and 2000 Gulf port container traffic increased by 105 percent as compared to the national average of 99 percent. Container traffic in the Port of Houston grew 113 percent.

The I–69 freight corridor also serves the nation's inland waterways. The I–69 Port of Memphis is the second largest inland port in the country. The location of a foreign trade zone, it generates $1.5 billion in economic activity annually. The Port handled 18.3 million tons of domestic trade cargo volume in 2000. More than 275 trucking lines operate regular intermodal services in the Port of Memphis. In the city of Memphis, one of the top ten distribution centers in the United States, all modes of transportation converge and link to I–69. Federal Express operates its main hub in Memphis. The company's delivery of nine million packages a day includes a high percentage of intermodal movements between truck and air. Every major eastern and western rail carrier has a terminal in this I–69 gateway.

Trade entering I–69 from all modes of transportation is growing faster than in the rest of the Nation. The trade tonnage moving through the U.S.' top 50 entry points—including land, sea and air—grew 8.3 percent from 1990 to 1999. Trade tonnage moving through I–69 points of entry grew 18.3 percent, or more than twice as fast as the national average.

A Federal Highway Administration (FHWA) study, "Freight Analysis Framework" 2000, suggests that the recent growth in freight traffic will continue through the year 2020. The study estimates that total domestic freight traffic will increase by approximately 87 percent over the next 20 years and that international trade will increase over 107 percent. The vast majority of the new growth will be in the trucking industry with trucks expected to handle 68 percent of the increased tonnage, 82 percent of the increased value and 62 percent of the increased ton-miles. The FHWA Freight Analysis shows that the majority of the expected growth in truck shipments will continue to be in the central, eastern and southern United States, with a domi-

nant movement in the southwest to northeast direction—a movement ideally suited for the I–69 Corridor.

Yet the I–69 Corridor has not been completed and there is no direct Interstate level highway from Indianapolis to the Mexican border. Completion of I–69 will significantly enhance safety and efficiency along this key international trade route. I–69 will reduce travel time, fuel consumption and costs over the existing circuitous route. It is an essential intermodal link for trade and commodity flow. Completion of the Corridor 18 portion of I–69 alone is also projected to save 3100 lives, avoid 158,000 injuries and 409,000 property damage accidents.

In addition to its national and international trade benefits, I–69 will stimulate economic growth. I–69 traverses some of the nation's most impoverished regions. There are over 9.1 million people living below the poverty level in the I–69 Corridor States. In six of the Corridor States the population in poverty exceeds the U.S. average. There are 13 empowerment zones, enhanced enterprise communities and enterprise communities along the Corridor, including two rural empowerment zones—Mid-Delta and Lower Rio Grande Valley. Construction of I–69 will provide economic growth. The Corridor 18 Feasibility Study estimated that, in the Houston to Indianapolis segment alone, I–69 will create 27,000 jobs, add $11 billion in wages and produce $19 billion in value added through 2025.

When the Interstate system was initially designed in the 1940's and 50's, it was laid out generally east to west, reflecting the demographics, trade patterns and defense needs of the time. Trade has shifted, particularly after the passage of the North American Free Trade Agreement (NAFTA), from east-west to north-south. However, when the Interstate was declared completed in 1995, some of the newer north-south sections like I–69 were left dangling and unfinished. The promise of the National Corridor Planning and Development and Coordinated Border Infrastructure programs in TEA–21, of which the I–69 Mid-Continent Highway Coalition was a major proponent, was the recognition that within the 160,000 mile National Highway System there were some remaining, unfinished corridors of significance to the Nation as a whole, serving national objectives of trade and economic growth, that still needed to be completed and merited a separate program with dedicated funding to do so. Unfortunately, the program was only funded at $140 million a year nationwide and many of the projects that qualified or were earmarked for funding were of local, not national interest. Despite insufficient funding diluted among projects that are not nationally significant, the I–69 Corridor made significant progress. Since the inception of TEA–21, I–69 has received over $245 million from the National Corridor Planning and Development and the Coordinated Border Infrastructure programs and directly from the Highway Trust Fund. Funds have also been provided for specific segments in ISTEA, TEA–21 and appropriations. States have also invested substantial amounts of their own funds.

The Corridor has moved ahead so significantly that all of I–69 can go to construction in the period of TEA–21 reauthorization and much of it can be completed—if dedicated funds are available to do so. The last estimated cost of completing the unfinished portion of I–69 was $8.3 billion, with the Federal share at $6.6 billion.

Having built the Interstate system, which served us well for the latter half of the twentieth century, we cannot rest on our laurels. We must invest our resources in those unfinished corridors that serve today's and tomorrow's 20 first century trade flows such as I–69. There are a number of mechanisms to accomplish this; limiting the Corridors and Borders program to major trade corridors and increasing its funding, dedicating program funds to complete unfinished Interstate links or funding freight corridors. Any of these programmatic options would work—whether alone or in combination. The point is that we must recognize the need for and build the infrastructure to serve our nation's freight flows. The traffic is there. The intermodal connections—rail, water, and air—are there. The trade is surging at Houston, Detroit and Laredo. The maquiladoras in the Lower Rio Grande Valley of Texas are manufacturing automobile parts, electronics, computers, batteries and plastic, glass and rubber components and transporting them by truck for final assembly in manufacturing facilities in Michigan, Indiana, Illinois and Ohio. Corn from Indiana is being trucked to the Lower Rio Grande Valley to be used as corn syrup in soft drinks, fruit juices and candy produced in maquiladoras and shipped worldwide. Cotton is going by truck from Mississippi to be made into clothing apparel in South Texas. Foreign exports from the Port of Houston are going by truck to Chicago and Indianapolis. Yet the Interstate level facility to transport these products safely, efficiently and economically—I–69 remains unfinished.

Interstate 69—High Priority Corridors 18 and 20

- Designated as congressional High Priority Corridors 18 and 20 in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and as Interstate

Route I–69 in the Transportation Equity Act for the 21st Century (TEA–21), the I–69 Corridor traverses over 150 counties and hundreds of municipalities, directly serving over 25 million people. When completed, I–69 will span the nation's heartland, connecting Canada and Mexico through the States of Michigan, Illinois, Indiana, Kentucky, Tennessee, Mississippi, Arkansas, Louisiana and Texas.

• Two sections of the Corridor 18 system—Interstate 69 from Port Huron, Michigan at the Canadian border to Indianapolis, Indiana and Interstate 94 from Port Huron southwest to the Ambassador Bridge in Detroit and west to Chicago, Illinois—are existing-open-to-traffic Interstates. The rest of Corridor 18, as well as Corridor 20, is under development. From Indianapolis south I–69 connects Evansville, Indiana, Memphis, Tennessee, Mississippi, Arkansas, Shreveport/Bossier City, Louisiana and Houston, Texas to the Lower Rio Grande Valley at the Mexican border. Corridor 20 extends along US 59 from Laredo, Texas at the Mexican border through Houston to Texarkana, Texas. A portion of Corridor 20 overlaps Corridor 18. Together, Corridors 18 and 20 comprise I–69.

• When the Interstate system was initially designed, it was laid out generally east to west, reflecting the demographics, trade patterns and defense needs of the time. Trade has shifted, particularly after the passage of the North American Free Trade Agreement (NAFTA), from east-west to north-south. U.S. Mexican trade has more than doubled since the passage of NAFTA in 1993. U.S. imports from Mexico were up 175 percent from 1993 to 1999. U.S. exports to Mexico rose 109 percent over the same period and trade with Canada increased 73 percent. The I–69 Corridor accounts for over 63 percent of the nation's trade with Canada and Mexico. It has the nation's busiest border crossings on both the Canadian and Mexican borders, accounting for 48 percent of the nation's trade with Canada and over 49 percent of the nation's trade with Mexico.

• Yet there is no direct Interstate level highway from Indianapolis to the Mexican border. Completion of I–69 will significantly enhance safety and efficiency along this key international trade route. Completion of the Corridor 18 portion of I–69 alone is projected to save 3100 lives, avoid 158,000 injuries and 409,000 property damage accidents. I–69 will reduce travel time, fuel consumption and costs over the existing circuitous route. It is an essential intermodal link for trade and commodity flow. Seventeen of the nation's top 25 seaports are directly connected to I–69 and 15 of the nation's top 25 air cargo airports are readily accessible to I–69.

• In addition to its national and international trade benefits, I–69 will stimulate economic growth. I–69 traverses some of the nation's most impoverished regions. There are over 9.1 million people living below the poverty level in the I–69 Corridor States. In six of the Corridor States the population in poverty exceeds the U.S. average. There are 13 empowerment zones, enhanced enterprise communities and enterprise communities along the Corridor, including two rural empowerment zones—Mid-Delta and Lower Rio Grande Valley. Construction of I–69 will provide economic growth. The Corridor 18 Feasibility Study estimated that, in the Houston to Indianapolis segment alone, I–69 will create 27,000 jobs, add $11 billion in wages and produce $19 billion in value added through 2025.

• The I–69 Corridor 18 and 20 system spans over 2600 miles. About 2000 miles from Indianapolis to the Mexican border remain to be completed. The last estimated cost of completing the unfinished portion of I–69 was $8.3 billion, with the Federal share at $6.6 billion. Completion of I–69 will not require an entirely new facility from Indianapolis to the Mexican border. In some areas it will link existing Interstates or highways at Interstate standards. In other areas it will require upgrading and linking existing non-Interstate highways and in others new construction.

• ISTEA provided $4.05 million for Corridor 18 Feasibility and Special Issues Studies, the identification of Sections of Independent Utility (SIUs) and Special Environmental Studies. The State of Texas paid for the Corridor 20 Feasibility Study and other location studies out of State only funds. Since the inception of TEA–21, Corridors 18 and 20 have received over $245 million from the National Corridor Planning and Development and the Coordinated Border Infrastructure programs and directly from the Highway Trust Fund. Funds also have been provided for specific segments in appropriations, ISTEA and TEA–21 and States have invested their own funds.

• Work is underway along the entire I–69 corridor. Feasibility studies have shown that both Corridors 18 and 20 have positive cost benefit ratios returning $1.57 and $1.68 respectively for every dollar invested. Location and environmental studies are in progress and some sections are in design, preliminary engineering and construction. The entire corridor will be ready to go to construction and, in fact, much of it can be completed in the upcoming TEA–21 reauthorization, if funds are available.

- The Corridors and Borders program is only authorized at $140 million per year and there has been over $2 billion in demand for funding each year. While I–69 is truly a national/international Corridor, there are many projects that have received funding under the Corridor program that only serve one State or region.
- Completion of I–69 will require funding dedicated to I–69 and other corridors that are truly international in scope and service. I–69 is the nation's preeminent national/international Corridor. It is one of the nation's few unfinished Interstates that remained when the Interstate program was terminated in 1995. It is also one of a handful of high priority corridors that are designated as future Interstates under Section 1105(e)(5)(A) of ISTEA.
- The I–69 Mid-Continent Highway Coalition has been the primary advocate for I–69 before Congress and the executive branch. The Coalition spearheaded the creation of the National Corridor Planning and Development and Coordinated Border Infrastructure programs in the Transportation Equity Act for the 21st Century and has consistently advocated funding for I–69 in annual appropriations and at the Department of Transportation. The Coalition is a dues paying organization of cities, counties, states, business, labor and civic organizations all along the I–69 Corridor. Supporters include over 45 Chambers of Commerce representing over 13,050 businesses. The I–69 Mid-Continent Highway Coalition reflects the economic diversity of this vast region, including the agriculture, mining, timber, energy, transportation, chemical, electronic and industrial sectors-current and future users of the I–69 Corridor.

STATEMENT OF JIM FISKE, CHAIRMAN, MAGTUBE, INC., GOLETA, CA

I am Jim Fiske, Founder and Chairman of Magtube, Inc. of Goleta, California. We are a venture funded-company developing a new freight transportation system that promises faster service, higher security, far better energy efficiency, cleaner operation, and lower cost than any existing mode. Thank-you for giving me this opportunity to present information that I think could have a significant impact on the transportation planning that is so crucial to the economic future of this country.

As I'm sure the Committee is aware, the American transportation industry is vast, encompassing nearly 11 percent of the GNP. According to the Bureau of Transportation Statistics, one out of every 10 U.S. jobs is directly or indirectly related to transportation. Some industry experts say the figure is closer to one out of five when all inventory, logistics, and related corporate functions are included. This industry, and the American population, is now facing severe problems, not the least of which is increasing congestion. For example, according to the Southern California Association of Governments (SCAG) the average speed for a 24-hour weekday period on the greater Los Angeles highway and arterial system is about 38 miles per hour. During the morning peak period in some of the heaviest corridors the average travel speed is less than 20 miles per hour. And Los Angeles is far from alone. In general, demand for transport rises faster than population or average incomes. Roughly 20 percent of U.S. urban areas are experiencing extreme congestion, and the percentage is growing.

The capacity of our highways is clearly being strained to the limit, and yet the Department of Transportation projects that highway demand will only grow. Between the years 2000 and 2025 the number of passenger vehicles is forecast to grow from 219 to 262 million, while intercity ton-miles of freight carried by truck grows by 88 percent. City, State, and Federal agencies have earmarked huge sums of money to deal with this growth. The SCAG Regional Transportation Plan alone includes $15 billion for highway and arterial improvement projects including mixed-flow lanes, interchanges, truck climbing lanes, truck lanes and grade crossings. But even if this plan is completed SCAG projects that Southern California congestion delays could increase more than 100 percent by 2025. Some statistics project that a freeway trip taking 1 hour under normal conditions today will take 3 hours and 10 minutes in 2020.

What are we to do? Government and industry experts are straining to provide improvements but most industry analysts seem to believe that increasing congestion, safety concerns, and environmental damage is inevitable—"an inescapable part of modern urban life worldwide". I am here to tell you that nothing could be further from the truth. The "Electro-Mechanical Revolution" is far from over.

The immensity of the transportation industry aggravates its problems and makes them difficult to deal with, but it also creates a huge potential market for cost effective solutions.

I think there is a common misconception that the passenger transport business is much larger than the freight business, and as a result far more attention has

been focused on improving the infrastructure and technology required to move people than that required to move freight. If this continues, we run the risk of missing a major opportunity. In reality, the freight component of the industry is both larger than the passenger component and far easier to improve. Furthermore, by improving the freight component we will greatly reduce the strain on the passenger component of the industry. But railroad, truck and air transport are all mature technologies with fundamental barriers to improvement. Significant improvement in speed, cost, and quality of service requires a totally new approach that circumvents existing problems.

One possibility frequently overlooked is the pipeline. More than 1.4 million miles of gas and petroleum transmission and distribution pipeline are in service in America. The technology is highly developed, well understood, and extremely cost effective. Transporting a ton of oil by pipeline is nearly 5 times cheaper than shipping a ton of freight by rail, 50 times cheaper than truck, and 170 times cheaper than air. Pipelines are also the safest transport mode and the least disruptive to the environment. But pipelines have two major limitations that prevent their application to general freight—their transport speed is very low (oil travels at roughly 4 miles per hour), and they only carry fluids.

Another possibility is Maglev, or magnetic levitation, which uses magnetic forces to provide both lift and propulsion. Studies sponsored by U.S. Government agencies in the early 1990's compiled a long list of potentially beneficial attributes, including high speed, faster trips, low energy consumption, low operating costs, high reliability, low wear and maintenance, petroleum independence, low pollution, excellent system control, high capacity, safety, convenience, modest land requirements, and low noise. But they also revealed that capital costs exceeding $35 million per mile for maglev systems would result in a very low return on investment, making them commercially infeasible. Since the 1970's Germany and Japan have invested billions of dollars in maglev development. Neither has constructed an operational system. Only the Chinese government, which has purchased the German Transrapid design for a short installation in Shanghai, has been willing to foot the bill for an operational system. Barring a major cost breakthrough, maglev systems will never be constructed by private business alone.

We have found that cost breakthrough.

Engineers constantly improve operational equipment, so it's no surprise that their first impulse after discovering maglev technology was to apply it to an existing transport mode, namely railroad. Over time maglev became synonymous with trains. "Maglev Train" has become a single concept. This is a huge oversight. Trains are the wrong metaphor. Maglev is a powerful technology crippled by its association with the wrong application. Using maglev simply to improve a train is rather like using jet engines to propel a barge.

If maglev technology is applied to pipelines, however, particularly freight pipelines, the result is revolutionary. This combination allows smaller vehicle size, narrower rights-of-way, lower complexity, reduced initial investment, lower energy costs, higher acceleration, higher speed, shorter headway, and higher system capacity. These capabilities reinforce each other to create a new synergy. Costs plummet, performance skyrockets, and the available market increases. Unlike maglev passenger trains, a system of maglev freight pipelines has the potential for a high return on investment.

Magtube is creating just such a system. We have discovered a new maglev technique, for which we have patents pending, with fundamental advantages over previous designs. We are implementing it now. At this moment our first full-size maglev vehicle is floating over its track just outside Santa Barbara, California. Our goal is to create a new transportation paradigm, a arrangement of maglev pipelines or "Magtubes" we call the Magnetic Levitation Freight Transportation Network, or more simply, the Mag Net(. This network will provide a level of speed, safety, security, efficiency, and cost-effectiveness not currently possible for mail, priority packages, perishables, and freight of all types. Transit times will be measured in minutes or hours instead of days. Think of it as an "Internet for Freight." The Mag Net will streamline vital transportation corridors to reduce congestion, transit times, and costs while improving reliability. Construction costs will be a fraction of conventional Maglev, high speed rail, or highway expansion. Shipping costs will be lower than air freight, truck or railroad. The potential for high return on investment will permit private ownership, decreasing highway damage and congestion at no direct cost to the Federal Government. The same design can be used around the globe, providing even greater benefits for countries with poorly developed transport.

We are currently planning the construction of pipelines a bit over six feet in diameter with a projected cost in the vicinity of $5 million per mile. Our vehicles are sized to handle standard freight pallets for easy interchange with other modes. They

will have the capability to move a one-ton payload at up to 500 miles per hour or more through an evacuated tube while providing an energy efficiency equivalent to more than 1000 miles per gallon of gasoline. Magtubes will have very high capacity when fully utilized –10,000 tons per hour or more should be readily achievable for a single pipe. This compares to a capacity of 7000 to 18000 tons per lane per hour for heavy trucks on an uncongested highway. Truck lanes planned for the Los Angeles area are projected to cost over $50 million per lane mile.

The Mag Net's extreme energy efficiency provides a potential energy savings exceeding 8 billion gallons of diesel fuel per year in the U.S. alone, with a 72 million metric ton decrease in CO2 emissions. The carbon monoxide, nitrogen oxides, particulates, sulfur dioxide, volatile organic compounds and noise normally emitted by truck and air freight carriers would likewise be eliminated. With our vehicles traveling through underground tubes, totally isolated from passenger traffic, they will provide a level of safety never before seen in a transportation system.

The Mag Net will also provide an unprecedented level of security.

America's current freight system is barely able to handle the immense traffic flow required for free trade, even with minimal security. But the events of 9/11 have created a frightening dilemma—while cursory inspection of imports is no longer acceptable, thorough screening seems impossible without bringing trade to a halt. Government and industry are struggling to find ways to efficiently move freight across borders while ensuring detection of explosives, chemical weapons, biotoxins, nuclear materials and other contraband. At present officials search only 2 percent of the 11 million freight containers arriving here each year. The solutions that have been proposed, such as they are, provide stop-gap measures at best. They will require huge expenditures and attempt to maximize security primarily by focusing it on a small fraction of shipments. Most trade goods will continue to cross borders without inspection, as they do now, or will encounter severe delays—or both.

Magtube vehicles, on the other hand, will travel silently out of sight, protected by a vacuum, a steel tube, and several feet of earth. Untouchable. With computer control their precise location will always be known to Magtube and our security partners—and no one else. Small, standardized shipping containers will provide compatibility with other shipping modes and easy access for inspection or machine scanning. Automated searches for contraband will be fast and cheap with minimal delays. Nuclear, biologic, and/or chemical sensors can be installed in each vehicle for enhanced detection capability. Freight can be inspected either at its source or at a facility far from any border, then sent to a border crossing with complete assurance that it will remain under constant supervision until it reaches its destination. Whether their cargo is tissue paper or spent nuclear fuel rods, our vehicles will bypass highways, railroads, border inspection stations, and all other sources of congestion or concern. If one link of the Mag Net is shut down its normal traffic will simply be rerouted through other links.

We are currently in the final stages of constructing a laboratory demonstration of a full-scale vehicle and track. In 2003 we plan to begin construction of a second-generation vehicle and a high-speed test track. At the same time we're exploring options for commercial pilot projects—actual revenue-producing freight transport installations—with organizations such as SCAG, other transportation groups in California, New York and Michigan, and the Department of Transportation. Our goal is to be ready to begin the construction of pilot projects in the 2004–2005 timeframe. The most attractive sites for these installations will be those areas with the worst problems, such as clean air non-attainment areas, border bottlenecks, and severely congested cities.

We do not expect or want the Mag Net to be publicly funded. We are in business to design, build, and operate the Mag Net for profit. But there are several things the Federal Government could do to accelerate system startup and expansion. (1) Congress could make freight maglev installations explicitly eligible for DOT's Transportation Infrastructure Finance and Innovation Act (TIFIA) to provide Federal credit assistance such as direct loans, loan guarantees and lines of credit. Additionally with much of the focus of next year's TEA–21 reauthorization on the Congestion Mitigation and Air Quality (CMAQ) program, we would respectfully that it be clarified that technologies such as ours, be eligible, where appropriate and necessary, for CMAQ funding for those areas of the country in air quality non-attainment and maintenance areas. (2) Congress could help provide access to or assistance in acquiring rights-of-way for such installations adjacent to Federal aid highways. (3) Congress could make freight maglev part of any proposed freight component in the next highway authorization. (4) Congress could provide assistance with Federal agencies in identifying pilot projects and planning border crossing installations to improve freight flow and security. (5) Congress could assist us in our discussions with mul-

tiple Federal agencies and with our cross-border trading partners, Canada and Mexico.

Major breakthroughs in transportation technology are exceedingly rare—the railroad, the automobile, the airplane—but they have far-reaching consequences. In 1942 German submarines sank most of our oil tankers along the Gulf and East Coasts. In response we built the government-financed War Emergency Pipeline, the first large-diameter long-distance oil pipeline, and soon discovered it had immense economic and operational advantages. In that case it took a World War to overcome inertia and jumpstart a better method of transportation. We are now facing another crisis, a battle against increasing congestion, major threats to security, stagnating travel, slower goods movement, and increasingly severe environmental impact. We can win this war—without constraining the free movement of goods and people. Indeed, we now have a clear path to a level of mobility previously considered science fiction. The "Network Economy" need not be limited to the exchange of information. If we build the Mag Net and move freight transport below ground everybody wins—shippers, carriers, the government, and the public. This Committee and the Congress can help us do it.

Again, my thanks to the Committee for allowing me to present this testimony. My associates and I are available at your convenience should you care to discuss the information I have presented, or any issue dealing with freight transportation and security.

Energy Efficiency Comparison

Mode	Speed (mph)	BTU/ ton-mile	Ton-miles/Gal. (diesel equiv. *)
Railroad	65	368	377
Long-haul truck	65	1151	120
Truck (avg)	65	2793	150
747–400F	500	10,800	12.5
Air Freight (avg)	500	20,000	7
Mag Tube (est.)	200	48	2890
Mag Tube (est.)	300	49	2831
Mag Tube (est.)	400	60	2312
Mag Tube (est.)	500	81	1712

*138,700 btu/gal

STATEMENT OF THE LOS ANGELES COUNTY ECONOMIC DEVELOPMENT CORPORATION (LAEDC)

Mr. Chairman and members of the subcommittees, the Los Angeles County Economic Development Corporation (LAEDC), a private nonprofit, 501(c)3, is pleased to present this overview of goods movement in Southern California. We appreciate the opportunity to offer this statement as part of legislative hearing record being developed by the U.S. Senate in preparation for the reauthorization of TEA–21. We greatly appreciate the interest and focus of the respective full Committees in the issues surrounding TEA–21. In addition, we are very appreciative of the leadership demonstrated by Senator Barbara Boxer and Senator Diane Feinstein and the great economic and environmental benefits TEA–21 has brought to California's transportation system.

This statement is based from four public policy and transportation studies: the Southern California Freight Management Case Study (enclosed); the Alameda Corridor East Train Study (enclosed); the 60-Mile Circle (available at www.laedc.org the week of September 16th); and the forthcoming On-Trac Corridor Trade Impact Study, 2002. Together these studies, coordinated by the LAEDC, paint a remarkable picture of a region with a rapidly growing population, burgeoning international and domestic trade, and a looming trade transportation capacity crisis that has both local and national implications. Southern California is America's gateway to the Pacific Rim, and our nation's international trade is growing rapidly. Yet, Southern California's infrastructure is inadequate to handle this rising tide of trade, and the region will need Federal assistance and creative solutions to finance the required improvements.

Today we would like to briefly introduce you to the region, describe its key population and trade trends, and summarize the region's infrastructure capacity shortfalls.

Regional Overview

Southern California, the five-county region comprised of Los Angeles, Orange, Riverside, San Bernardino and Ventura Counties, operates on a scale normally associated with States and even countries. At 17 million people and growing, more people live in Southern California than in all of Florida, currently the fourth most populous State in the union. Despite its reputation for making movies and little else, Southern California employs more than a million people in manufacturing. Powered by core strengths in aircraft, biomedical technology, business services, food, furniture, metal fabrication, motion pictures and television production, textiles and apparel and tourism, the region produces over $600 billion in goods and services annually. This places the region's gross domestic product tenth in the world among countries, just behind Canada and Brazil and ahead of Mexico, Spain, India, South Korea and Australia. Home to almost 200 different nationalities and cultures, Southern California is one of the most diverse places on earth. The region is one of the top tourist destinations in the country, and thanks to its combination of wealth, size and reputation for trend setting, comprises one of the world's most important consumer markets.

Regional Trends and Resulting Capacity Shortages

Population and trade growth are the two key trends affecting the region. The five-county Southern California region will add more than 5 million people between 2000 and 2020. This is roughly equivalent to the combined populations of the Cities of Los Angeles and San Diego, or twice the population of Chicago. Much of the growth will be internally generated: In addition to having the largest population base among the 50 States, California also has one of the highest rates of natural increase (births minus deaths as a share of total population). Internal population growth will be supplemented by immigration. California has the highest rate of net international migration of any State, helping make Los Angeles a modern Ellis Island.

Two shocking implications of this growth: First, at current rates of automobile ownership, five million more people will add about 2.7 million private vehicles to the region's already congested freeways. Second, just to maintain the status quo, population growth of more than five million people will require adding twice the infrastructure and services that exist in present-day Chicago. For every school in Chicago, Southern California will need to build two.

In terms of trade, Southern California has emerged as a leading global trade and transshipment center because of its massive internal market, heavy investment in world-class trade infrastructure, and its new role as the distribution center for U.S.-Pacific Rim trade. The massive internal market draws trade both for final consumption and for inputs in valued-added products ranging from shirts that are labeled and placed on hangers to parts that are used in manufacturing. These two factors help to pull in still more trade, and drive up the percentage of international cargo that makes its first stop in Southern California. With so much cargo destined here in the first place, it makes sense for shippers to use the region as a distribution center for the rest of the United States. This role is confirmed by data from the Los Angeles Customs District, which recorded almost one-quarter trillion ($230 billion) dollars in trade for year 2000.

The $230 billion in trade is an underestimate since it is merchandise trade only, therefore excluding some of the region's core strengths such as motion pictures, tourism, and financial services. The number is also low because it is based on port of entry only, thereby excluding the region's NAFTA trade with Canada and Mexico, which travels primarily by truck and rail and thus is counted in border areas such as San Diego, Laredo and Detroit. Even still, the value of merchandise trade at the L.A. Customs District is expected to almost triple to $661 billion, 2000–2020. We'd like to quickly describe the growth trends and capacity issues for the region's ports, railroads, freeways and airports.

Ports—The Ports of Los Angeles and Long Beach are the busiest in the Nation, together handling one-third of all container traffic in the United States and an astonishing 65 percent of all container traffic on the West Coast. With a combined container throughput of 9.5 million Twenty-Foot Equivalent Units (TEU) in 2000, they were the third busiest container facility in the world, behind only Singapore and Hong Kong.

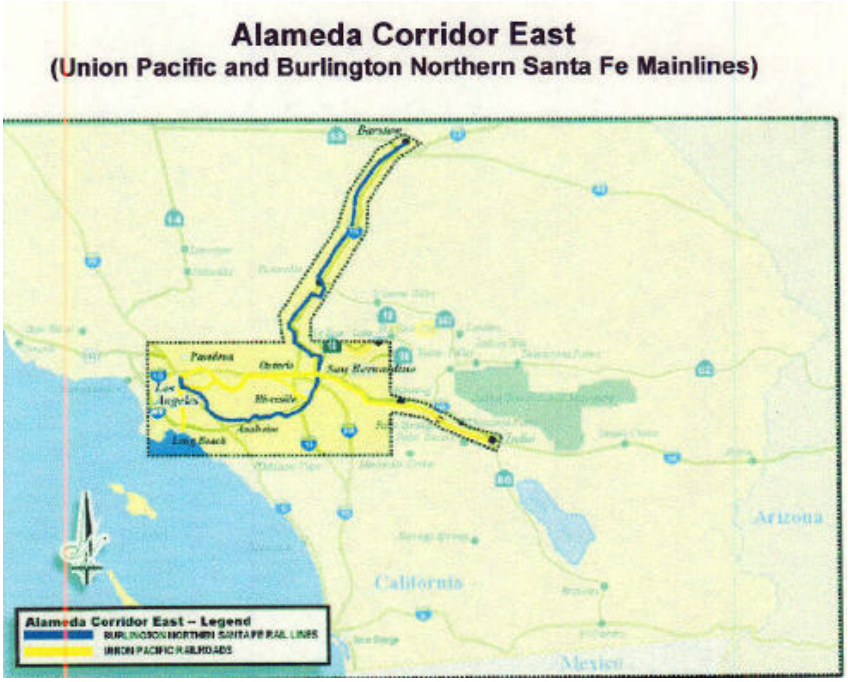
The long-term trend in container traffic at the ports has seen steady growth, though the pace has slowed in recent months. As recently as 1998, the Alameda Corridor Transportation Authority (ACTA) conservatively forecast year 2000 container traffic of 5.6 million TEUs (twenty-foot equivalent units). The actual total was 9.5 million TEUs; no one, including the ports, anticipated that container traffic would grow so fast.

Container traffic on the Alameda Corridor East (see geographic map in Rail Corridors section) is now expected to almost double by 2010, and then double again to 32 million TEUs by 2025. For perspective, consider that a single large ship typically carries 6,000 TEUs. That is enough containers, placed end to end, to build a wall of boxes more than 20 miles long. The forecast growth may seem incredible, but if anything, it is probably conservative. Indeed, for the past 10 years, traffic levels have consistently surpassed previous estimates.

Rail Corridors—Driven by the rising tide of trade flowing through the ports, easterly bound rail traffic is expected to rise dramatically over the next twenty-five years. The newly constructed Alameda Corridor—a 20-mile, high-speed, completely grade-separated train route connecting international trade via the ports and the rail yards just east of downtown Los Angeles—will handle some of the international increases. Yet the Alameda Corridor is only the first link of a massive regional mainline rail corridor network. Domestic and international trade at the two rail yards east of downtown is the starting points of the Alameda Corridor East. This eastbound corridor carries about three times the cargo of the recently completed Alameda Corridor because the intermodal rail yards receive more international goods by truck from the ports and even more domestic or locally produced goods for movement to the rest of the United States. The short answer is that Alameda Corridor East carries about 23 percent of the United States waterborne international trade and is the only corridor in Southern California that carries both domestic and international goods through the region to and from the rest of the United States.

Alameda Corridor East

(Union Pacific and Burlington Northern Santa Fe Mainlines)



As seen in the above graphic, the two rail corridors connect the downtown rail yards with the transcontinental rail network: the Alameda Corridor East (San Gabriel Valley Corridor), via the Union Pacific (UP) tracks through the San Gabriel Valley into San Bernardino and Riverside Counties, and the Alameda Corridor East (OnTrac Corridor), which follows the Burlington Northern Santa Fe (BNSF) mainline through densely populated northern Orange County into Riverside and San Bernardino Counties. Freight and commuter trains also share the tracks of both corridors, further complicating efficient mobility. The OnTrac Corridor, going through the city of Placentia, carries 50 percent of all eastbound rail cargo and is the only

rail artery used by the United Parcel Service to move cargo to Midwest and East Coast destinations. OnTrac Corridor train traffic will rise 210 percent, 2000–2025, while the San Gabriel Valley Corridors train traffic will increase 236 percent over the same period. Rail traffic on these routes, at more than one train every 10 minutes, will easily surpass current capacity, barring major improvements, in the next 3–5 years. Intermodal lift capacity in the region—the facilities that transfer containers between trucks and trains—is greatly constrained. Demand for intermodal lifts is expected to exceed capacity within the next 5 years. Simply put, in just a few years, a shortage of intermodal capacity and additional passenger trains will mean more trucks on the already congested freeways. At the same time, additional freight trains will translate into more cars on the freeway. Without additional capacity it is a no-win situation for local commuters, the other 49 States, and the U.S. Treasury. Local commuters will be impacted because they will reach unbearable congestion. The other forty-nine will see job growth slow because Southern California consumers will see more difficulty receiving goods through eastbound rail corridors, and the U.S. Treasury because the customs revenues collected on imported international goods—an unbelievable 1 percent of all U.S. Treasury revenues comes from customs duties—will likely slow or decrease due to inefficient freight mobility in Southern California. Currently about half of those customs revenues are collected on goods going through Southern California's transportation systems.

Freeway System—On the freeways, the number of vehicle miles traveled in Southern California has been rising faster than population growth. "Rush hour" has become an oxymoron in Los Angeles. The peak travel period has crept up to 6 hours per day, during which the average travel speed drops to 35 miles per hour. The Texas Transportation Institute annually surveys road congestion in metropolitan areas across the U.S., and Los Angeles has had the worst congestion every year since 1982. The latest survey reveals 85 percent of all lane miles are congested, with almost half classified as "extremely congested." As a result, on a per capita basis, the region wastes more hours (56) annually stuck in traffic than anywhere else in the country.

Some freeways handle up to 40,000 trucks daily, and with heavy truck traffic expected to rise 65 percent, 1995–2020, they may soon handle up to 80,000 truck trips daily. Owing to their size and operating characteristics, trucks use a much greater share of freeway capacity than their numbers might suggest. Already, heavy trucks use 45 to 60 percent of capacity on certain freeways, most notably the I–710. Since trucks move 81 percent of all tonnage originating in Southern California (according to the 1997 Commodity Flow Survey), increasing freight flows will mean more trucks on the freeways.

Airports—Southern California's economy is increasingly dependent on airports. Many of the region's leading industries—from tourism to manufacturing to biotechnology—depend on air travel and air cargo. Even businesses that don't rely on air cargo directly benefit from the enhanced business connections and opportunities made possible by direct flights to and from our key overseas trading partners. The region's exports increasingly travel by plane. In 1995, 54 percent of regionally produced exports (by value) were shipped by air, and the percentage is higher today. Indeed, LAX handles more exports by dollar value each year than the Ports of Los Angeles and Long Beach combined.

LAX is already extremely busy. In 2000, LAX was the third busiest passenger airport in the world, after Atlanta (ATL) and Chicago (ORD). Similarly, LAX was the third busiest cargo airport in the world behind only FedEx-hub Memphis (MEM) and Hong Kong (HKG). Although air demand dipped following the September 11, 2001 tragedy, the impact on long-term air travel trends is expected to be slight. Air traffic demand has been skyrocketing, outpacing population growth. Estimates from the Southern California Association of Governments (SCAG) suggest air passenger demand will almost double from 82 million annual passengers (MAP) in 1998 to 157 MAP in 2020. Air cargo volume is expected to triple from 2.8 million annual tons in 1999 to 8.9 million tons in 2020. Preliminary, post-9/11 revisions suggest these levels will be reached two to 3 years later than previously estimated, with passenger growth delayed more than cargo. Overall, the region faces a capacity crisis; particularly now that it seems certain that an airport will not be built at El Toro in Orange County.

Congestion is a problem across all modes of transportation. The region will struggle to accommodate future freight operations; 10–15 year lead times for financing and constructing upgrades to infrastructure are almost guaranteed; current intermodal facilities at local ports and rail yards will reach capacity within 5 years; and without major investments, the rail lines east of downtown Los Angeles will be so congested the rail network will effectively cease to function. These problems will be exacerbated by congestion on the roads. Air cargo facilities, for example, rely on

trucks to feed shipments to the airport and deliver airfreight to its final destination, yet traffic is terribly congested in the vicinity of LAX. Congestion threatens both domestic and international trade moving through the region, and the quality of life for people who live there.

National Implications

Southern California's trade transportation infrastructure should be of great concern to the rest of the United States because the region's global gateways and trade corridors act as conduits for two-way domestic and international surface trade between Pacific Rim nations and every region of the United States. Let's take a quick look at the OnTrac Corridor Trade Impact Study (2002) for two-way domestic and international surface trade during the year 2000 between California and regions of the United States.

The international trade figure for each region represents the two-way trade between other regions of the United States and overseas customers and suppliers that travel via the UP and BNSF train routes that comprise the Alameda Corridor East. The domestic trade numbers represent commerce between California and other States. Roughly half of the domestic trade between California and other States will originate or be consumed in Southern California (based on Southern California's share of the State's GDP). International trade diversion to other ports of entry is cost prohibitive since half of all international goods would still need to be delivered to Southern California. This means that over 20 percent of all U.S. waterborne trade is consumed locally in Southern California, or 45 percent of all customs revenue that is generated in the United States goes through Southern California, or .5 percent of all the revenues of the United States Treasury is collected via customs duties on products imported through Southern California each year.

The Northwest States (WA, OR, MT, ID and WY) received and sent international trade via the Alameda Corridor East in 2000 valued at $2.2 billion dollars. Domestic trade between the Northwest and California for the same year was $60.4 billion. For the Great Plains States (ND, SD, NE, KS, MN, IA and MO), the comparable figures were $8.6 billion and $42.4 billion. The numbers for the Great Lakes States (IL, WI, MI, IN, KY, OH and WV) were $25.0 billion and $69.4 billion. For the Atlantic Seaboard (CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT and VA), the figures were $34.4 billion in international and $74.6 billion in domestic trade. In the Southeast (AR, AL, GA, FL, LA, NC, SC, TN and MS), the numbers were $16.0 billion international and $71.7 billion domestic. For Texas and Oklahoma, the numbers were $12.1 billion international and $54.2 billion domestic. And finally, for the Southwest States (CA, NV, AZ, UT, CO and NM), international trade moving through the Alameda Corridor East rail routes was valued at $98.0 billion and domestic trade with California was worth $80.3 billion. The Southwest was the only region where the international trade was larger than the domestic only because California's international trade is included, but California's domestic trade with itself (worth $1.3 trillion in 2000) is not included in the $80 billion regional total.

All these billions of dollars in domestic and international trade represent the value in two-way trade to other regions of the country and highlight the importance of efficient movement of goods through Southern California for the entire country. The domestic surface trade between California and the other States, worth tens of billions of dollars annually, dwarfs the enormous international trade flows. California consumers represent one of the largest markets for goods produced by other U.S. States. Thus, investing national funds in efficient transportation networks in California is actually in other States' interest. For example, Montana sells Californians about $1.5 billion of domestic products each year and receives about $10 million of international trade through Southern California ports and corridors. Iowa, on the other hand, sells Californians about $5 billion worth of products each year and only buys about $300 million of Californian products in return. So, a lot of jobs depend on Southern California's appetite for products and all the Federal money spent on trade transportation infrastructure in Southern California will ensure that the goods produced in other States continue to reach their California customers in a timely way; may reduce warehousing cost through logistics strategies like "just-in-time" delivery; and will speed goods to and from overseas to destinations throughout the United States.

Reauthorization of TEA–21 and Freight Policy

During the deliberations by your respective subcommittees regarding the reauthorization of TEA–21, we urge that you give strong consideration to the following proposals for Federal action to enhance the efficient movement of goods and freight on the nation's transportation system:

1) Freight movement should be considered a major policy focus and high priority in the TEA–3 legislation;

2) A dedicated category of Federal funding should be established to support freight related transportation infrastructure. Particular support should be given to trade corridor improvements, similar to the Alameda Corridor East extension program in Southern California, and other similar global gateways throughout the country. In addition, support should be given to the implementation of intermodal connectors, including connectors designed to improve ground access at international airports;

3) Increased funding flexibility should be extended to existing TEA–21 funding categories, including CMAQ, providing access to freight related infrastructure, including rail grade-crossing and lowering improvements;

4) Consideration should be given to new and innovative funding sources, including direct user-based fees, similar to the financing arrangement used for the Alameda Corridor project. Another concept we urge you to review is the earmarking of the incremental growth in custom revenues going through the nation's corridors and global gateways. These added funds should be targeted to support unfunded infrastructure improvements in communities that are directly related to the growth of two-way domestic and international trade;

5) New policies and provisions, including changes in Federal tax policy to encourage public private transportation partnerships, including an enhanced role for Class I railroads serving the nation's most severely congested corridors; and

6) Establish an Office of Freight Policy and Implementation in the Office of the Secretary of Transportation. One option would be to expand the current responsibilities of the Office of Intermodalism, and place the management responsibility with the Under Secretary of Transportation.

Mr. Chairman, thank you for the opportunity to submit this statement for the legislative record associated with the reauthorization of TEA–21.

STATEMENT OF HON. JAMES P. MCGOVERN, U.S. REPRESENTATIVE FROM THE COMMONWEALTH OF MASSACHUSETTS

Mr. Chairman, thank you for the opportunity to testify before the Sub-Committee today. I commend you and the members for holding this TEA–21 reauthorization hearing on truck safety. It is, as we all know, a critically important issue.

Mr. Chairman, I appear before the sub-committee this afternoon because I believe strongly that any serious and substantive discussion regarding truck safety begins and ends with the subject of truck size and weight. That is because truck safety is largely a function of truck size and weight. We know this, not only from recent studies and reports, but from our shared common experience as well.

Too many of us, too often, have been unsettled while driving alongside or behind huge triple trailer trucks and other longer combination vehicles known as LCVs. These trucks can be more than 100 feet in length and can sway three to four feet into adjacent lanes of traffic, even on a windless day. In some instances, a truck veering sharply can cause a "crack the whip" effect, where the wheels on one side of the rear trailer are actually lifted off the ground. These life-threatening occurrences are altogether too frequent to be dismissed as dramatized anecdotal evidence. In fact, the research suggests the danger posed by such trucks is very real.

The US Department of Transportation's 2000 Comprehensive Truck Size and Weight Study confirmed that multi-trailer trucks are especially dangerous. According to the DOT study, if the current restrictions on LCVs were removed, they would likely have a fatal crash rate of at least 11 percent higher than single trailer trucks.

An earlier report prepared for the Association of American Railroads suggested that LCVs are actually 66 percent more likely to be involved in a fatal crash. Similar studies have found that heavier trucks take more time and distance to stop and merge into traffic, thereby increasing the likelihood of crashes. Not surprisingly, these same studies have found that increasing truck weight increases the risk of rollover crashes and enhances the risk that collisions between trucks and cars will be fatal for the occupants of the car.

Now, I recognize and appreciate that the Transportation Research Board's (TRB) recent report on truck size and weight finds much of the research I have just cited as inconclusive. And while I congratulate the TRB for their contribution to this policy discussion, I must tell you that I am more than a little troubled by their recommendation that we should instead experiment with bigger trucks on America's roads and bridges. I can assure you my constituents do not care to be guinea pigs in that experiment.

Mr. Chairman, just as our common experience informs our opinion on this issue, so must common sense dictate the solution. I am pleased to be joined by nearly 75 of my colleagues in bi-partisan support of H.R. 3132, the Safe Highways and Infrastructure Preservation Act. This IS common sense legislation that will maintain the reasonable limits that currently exist on truck size and weight on our Interstate System and extend those same limits to the National Highway System. It does not roll back truck size and weight, but rather closes loopholes in the current law that have resulted in a proliferation of overweight trucks. Ultimately, this legislation will both save lives AND protect the nation's multi-billion dollar investment in our highway infrastructure.

Mr. Chairman, the fiscal considerations attendant to this issue must also not be minimized. According to the Federal Highway Administration's 1999 Status Report on the Nation's Surface Transportation System, it will take $1.13 trillion over the

next 20 years simply to maintain our roads and bridges. But, as we are all keenly aware, there is a backlog on road and bridge maintenance. Nearly 30 percent of our nation's bridges—and 50 percent of the bridges in my home state of Massachusetts—are structurally deficient or functionally obsolete. Now, we also know that as truck weight increases, the amount of pavement damage increases exponentially. In fact, according to the DOT's 2000 Comprehensive Truck Size and Weight Study I referenced earlier, bigger trucks would add more than $300 billion in costs to our transportation spending.

Mr. Chairman, as Congress prepares to consider the reauthorization of its major transportation spending bill, I am hopeful that the Safe Highways and Infrastructure Preservation Act will be adopted in some form or fashion.

The legislation makes sense, the timing is right and above all else, the American public must be protected from the danger of still bigger trucks.

Thank you very much.