



Testimony of

**William R. Buechner, Ph.D.
Vice President, Economics and Research
American Road and Transportation Builders
Association**

**Submitted to:
Committee on Environment and Public Works
United States Senate**

**Hearing:
The Importance of Transportation Investments to the
National Economy and Jobs**

March 3, 2010

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Senator Boxer, Senator Inhofe and Members of the Committee—

On behalf of the American Road and Transportation Builders Association, I want to thank you for the opportunity to testify on the impact of transportation investment on jobs and the American economy.

My name is William Buechner. I am a professional economist and have been ARTBA's Vice President for Economics and Research for 12 years. Prior to joining ARTBA in 1996, I served 21 years as a member of the core economics staff of the Congressional Joint Economic Committee, where I staffed more than 300 hearings on economic policy, unemployment, inflation and investment policy, among a wide range of other topics. I earned my Ph.D. in economics at Harvard University, where I served as senior research associate for the late John Kenneth Galbraith.

ARTBA is the oldest national transportation construction association. The Association is a federation whose primary goal is to aggressively grow and protect federal transportation infrastructure investment to meet the public and business demand for safe and efficient travel. ARTBA provides programs and services designed to give its more than 5,000 public and private sector members a global competitive edge.

How Do Transportation Infrastructure and the Transportation Construction Industry Fit Into the U.S. Economy?

The firms and public agencies that design, build, maintain and manage the U.S. transportation infrastructure network—together with those who manufacturer and produce the equipment, materials, supplies and services necessary for their work—comprise the U.S. transportation construction industry. Its impacts on the U.S. economy are enormous:

- **Annual Output Value**—More than \$120 billion of construction work was performed on the nation's transportation systems during 2009, making transportation construction the second largest construction activity after homebuilding. To put this in broader context, the industry's output exceeds the output value of the nation's farms and cattle

ranches (\$97.5 billion), tobacco industry (\$57.2 billion), motion picture industry (\$82.7 billion), Wall Street trust and financial instruments firms (\$117.1 billion), automotive repair and maintenance firms (\$116.8 billion) and radio and television media (\$61.7 billion), to name a few.

- **Annual Contribution to GDP**—As the money invested in transportation construction industry employment and purchases moves through the economy, it generates more than \$244 billion in total annual U.S. economic activity—nearly two percent of the nation’s Gross Domestic Product (GDP). This is larger than the annual GDP of Portugal (\$232 billion), Israel (\$205 billion), or New Zealand (\$117 billion).
- **Creating & Sustaining American Jobs**—The transportation construction industry supports the equivalent 3,383,200 American jobs. This includes 1,685,400 direct jobs in transportation construction and related-activities and 1,697,800 jobs induced, or sustained, by transportation construction industry employee, firm and agency spending throughout the economy.

To put the industry’s impact on U.S. employment in context, it directly provides more American jobs than U.S. food manufacturers (1,449,700), motor vehicle and parts manufacturers (661,900), mining, quarrying, and oil and gas extractor firms (634,000), plastics and rubber product manufacturers (622,100), beverage and tobacco product manufacturers (182,700) and petroleum and coal products manufacturers (113,200), among others.

- **Contributions to U.S. Payroll & Taxes**—Transportation construction activity in the U.S. generates \$159.3 billion annually in direct and induced American wages. These workers contribute an estimated \$13.1 billion each year in state and federal payroll tax revenue.

But that is only a small part of the picture. Without the infrastructure built, maintained and managed by the U.S. transportation construction industry, *virtually all of the major industry sectors that comprise the U.S. economy—and the American jobs they sustain—would not exist or could not function.*

Dependent Employment—There are a number of industries that could not exist without the investments that have been made in the nation’s transportation infrastructure. Tourism, manufacturing, transportation and warehousing, agriculture and forestry, mining, retailing and wholesaling *are fully dependent on the work done by the U.S. transportation construction industry for the movement of products* as well as for access to workforce and raw materials. These dependent industries provide more than 78.6 million American jobs with a total payroll in excess of \$2.8 trillion and their employees contribute more than \$235 billion annually in state and federal payroll taxes.

Importance of Transportation Infrastructure and Transportation Construction to the Nation's Economy and Jobs

This hearing focuses on two important ways transportation investment affects the nation – first, by directly and indirectly supporting millions of well-paid jobs in the United States and second, by contributing to the productivity and competitiveness of the American economy.

With the U.S. economy struggling to recover from the worst economic recession since the Great Depression, the most immediate benefit of transportation construction is its impact on jobs. According to the Federal Highway Administration, every \$1 billion invested in the nation's highways supports 27,823 jobs. This includes 9,537 on-site construction jobs, 4,324 jobs in supplier industries and 13,962 jobs throughout the rest of the economy, including jobs in retail trade, wholesale trade, transportation, manufacturing and medical services, among many others. Investment in public transportation, airports and water transportation support similar numbers of jobs.

Last year, more than \$120 billion of construction work was put in place on transportation projects. That investment supported more than 3.3 million jobs.

Our experience with the American Recovery and Reinvestment Act (ARRA) illustrates the job impact of transportation investment. Despite lingering controversy about other elements of the legislation, there is no question that the \$48 billion for transportation improvements has supported tens of thousands of jobs in construction and supporting industries that would otherwise have disappeared. Furthermore, that support will continue into 2010 and even beyond as construction work proceeds on the 12,500 highway, bridge, transit and airport projects that have been authorized to date.

To observe the anniversary of enactment of the Recovery Act, ARTBA prepared fact sheets showing the number of jobs supported by ARRA highway projects underway or completed in each state. We found that, nationwide, the 7,348 ARRA-financed highway improvement projects underway or completed as of mid-February 2010 have supported or are supporting 480,435 full-time equivalent (FTE) jobs on an annualized basis¹, including 164,681 on-site construction jobs, 74,665 jobs in supplier industries and 241,090 jobs throughout the rest of the economy. ARRA-financed transit and airport improvements support additional jobs.

¹ In a recent statement submitted to the Joint Economic Committee, the Congressional Budget Office testified that the best measure of the job impact of federal spending is the number of full-time equivalent jobs supported for one year—that is the number of full time jobs that would be supported if the funds were spent over one year. The actual number of jobs might be different – for example, if the funds were spent over two years, they would support half the number of jobs but they would last for two years. Similarly, if some of the jobs were part time, there would be more jobs. The standard measure of FTE jobs over one year eliminates all of these complications.

Highway projects underway or completed in California support the largest number of FTE jobs, almost 35,200, as would be expected since California is the biggest recipient of federal highway funds. Next is Texas, where ARRA-financed projects underway are supporting almost 29,300 FTE jobs, followed by Pennsylvania at 24,987.

I would like to point out that Pennsylvania was not the third largest recipient of Recovery Act highway funds. But it has done an excellent job of getting highway projects under construction and is thus supporting more jobs right now with its ARRA funds than states that have lagged behind in getting projects started. And some smaller states have done even better, like Utah and Maine.

The problem at this point is that states will use up much of their Recovery Act highway funds on project construction this year and most of what's left will be used up next year. After that, the money will be gone and so will the jobs. At that point, the only federal support for highway construction and construction jobs will be the regular highway program. If Congress enacts another one-year extension of the highway program at existing investment levels for FY 2011, virtually all the jobs supported by the Recovery Act will disappear and those construction workers would go back on the unemployment rolls.

It is thus critical, in both the short and long term, for Congress to enact a robustly-funded multi-year surface transportation authorization bill, and there could be no more welcome development than this committee's decision to move forward on that issue.

Importance of Highways to the Nation's Economic Competitiveness

To think of the federal highway program only as a jobs program is a fundamental mistake. Jobs are only part of the contribution of transportation investment to the U.S. economy. Much more important is the contribution of investment in transportation infrastructure to the long run growth, productivity and competitiveness of the American economy. And on this front, we face a serious challenge.

The U.S. economy is a vast network of businesses that produce goods and services for America's 115 million households, for export to foreign countries or for use by other businesses. The tie that binds these businesses to their customers, suppliers and workers is the U.S. highway system. Each year, almost 80 percent of the value of freight shipments in the U.S. is carried by trucks along the nation's highways.

The foundation of a modern economy is a transportation system that moves freight efficiently, safely and on time. This lesson was learned during the 1960s and 1970s when construction of the Interstate Highway System allowed American firms to access a nationwide market and take advantage of scale economies that yielded significant increases in productivity.

Since then, highway capacity has failed to keep pace with demand and our nation's highways have become more and more congested. Wasted time and fuel have increased transportation

costs, making U.S. products more expensive here and abroad. The poor reliability of the system has forced U.S. companies to invest more in warehousing, hold more inventories, invest more in logistics and change production schedules. All of these make the U.S. less competitive.

And our trading partners are taking advantage of our mistakes, by investing heavily in their own transportation systems. China and India, which already have a labor cost advantage, are pushing ahead on plans to vastly upgrade their highway and rail transportation systems, making them even more competitive as we fall back.

To illustrate the cost of failing to invest in our nation's highways, I would like to quote from an article by Michael Lind in the December 2009 issue of *McKinsey Quarterly*:

“Along with advanced telecommunications, the low cost and reliability of freight transportation in the United States have been critical to the country's economic success. But America's failure to modernize its overloaded freight transportation infrastructure—chiefly the railroad network and highways used by trucks, but also inland waterways, ports, and airports—is imposing costs on American efficiency. As a result of congestion (highway delays, for instance), the penalty on American growth exacted by logistics costs rose from 8.6 percent of GDP in 2003 to 10.1 percent in 2007, even before the crisis.”

The recession temporarily reduced the amount of freight traffic on the nation's highways, providing a window to address the need for increased investment. But that window is starting to close. According to the Bureau of Transportation Statistics, the Freight Transportation Services Index increased 2.9 percent during the last seven months of 2009, indicating that freight transportation is once again on the rise. As the economy recovers, freight shipments will continue to grow.

Will our highway system be able to accommodate the traffic and contribute positively to U.S. competitiveness or will transportation continue to act as a brake on the U.S. economy? The answer to that question may well depend on next surface transportation authorization bill.

Because of the importance of highways and highway investment to freight transportation, and its impact on the competitiveness of the U.S. economy, I would like to go into that issue in more depth.

Each year, U.S. manufacturing firms, mining companies and wholesalers ship more than \$8 trillion dollars worth of products through the nation's transportation system. When shipments of farm products, construction materials, retail firms and exports to other countries are included, the total comes to more than \$11 trillion.

A few products, primarily bulk products like coal and ores, can be carried efficiently by rail or barge. High value products needing time-sensitive delivery can be carried by air.

But by far the largest fraction of shipments is carried on the nation's highways by 18-wheelers and other trucks. For the vast majority of businesses, truck transportation provides the most flexible, efficient and cost-effective way of delivering products to customers.

A survey of manufacturing, mining and wholesale commodity flows conducted by the U.S. Bureau of the Census in 2007 found that almost 80 percent of the \$11.7 trillion of shipments by these three sectors of the U.S. economy were carried exclusively by truck along the nation's highways. Of the \$3.3 trillion not carried exclusively by trucks, truck transportation still played an important role as part of multimodal shipments that also involved rail, water or air transportation. In fact, only \$1.3 trillion, or just over one tenth, of all shipments did not involve truck transportation.

Other surveys, including the Federal Highway Administration's Freight Analysis Framework data, show a similar dependence on the nation's highways to ship the freight and products that allow our economy to grow and prosper.

The importance of the nation's highways to the growth and performance of the national economy has been recognized by policymakers for almost a century. The first legislation authorizing the federal government to invest in highways was enacted by Congress in 1916. In 1956, Congress created the Eisenhower System of Interstate Highways and established the Highway Trust Fund to finance a nationwide highway system designed to serve the national economy. The transportation efficiencies brought about by these decisions were a major contributor to the post-war growth of the U.S. economy. Recent innovations like the adoption by U.S. firms of just-in-time delivery have continued to cut transportation costs and improve productivity.

Impact of highway congestion on freight transportation

In recent years, however, the performance of our nation's highway system has deteriorated due to inadequate investment. Most of the concern has focused on the growing amount of time commuters and travelers spend driving in congested conditions and the resulting cost of wasted time and fuel. But congestion also has a negative effect on the nation's economy by impeding the flow of freight, which raises transportation costs and reduces productivity of the nation's businesses.

A study prepared recently for the Federal Highway Administration found that bottlenecks on the nation's highway system—caused by congested intersections, poor highway operations, inadequate capacity and poor alignments—impose 243 million hours of delay on truck shipments with the direct costs of the delays totaling \$7.8 billion per year. As the study found:

Freight bottlenecks are a problem today because they delay large numbers of truck freight shipments.... Higher transportation prices and lower reliability can mean increased supply costs for manufacturers, higher import prices, and a need for businesses to hold more expensive inventory to prevent stock outs. The effect on individual shipments and transactions is usually

modest, but over time the costs can add up to a higher cost of doing business for firms, a higher cost of living for consumers, and a less productive and competitive economy.(P.1-1)

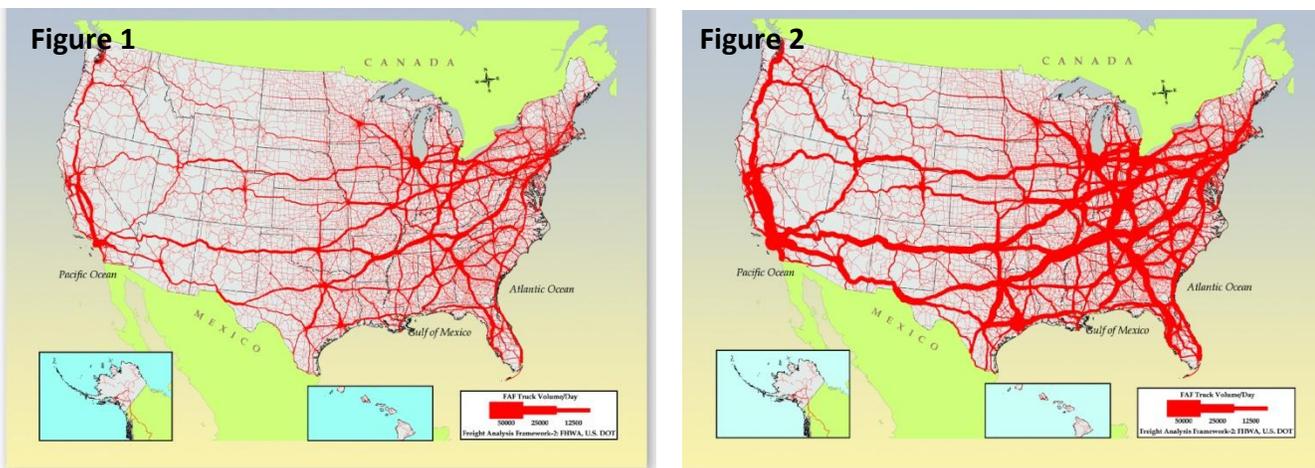
A major part of the problem is that, because of the lack of a national vision, the capacity of our nation's highway system has failed to keep pace with the volume of traffic. Since 1982, the number of miles traveled by all vehicles on the nation's highways has almost double but capacity has grown only 6.5 percent. As a result, the average amount of time spent by highway users including trucks in congested conditions has almost tripled.

The growth of truck traffic illustrates the need for a national approach to highway capacity. Between 1987 and 2002, the number of trucks on the nation's highways increased almost 50 percent from 3.6 million to 5.4 million, while the number of miles traveled rose more than 60 percent. The biggest increases in both numbers and vehicle miles traveled were registered by the largest trucks, which are capable of transporting 80,000 pounds of freight pounds or more.

As we look into the future, it is virtually certain that the need for a national vision will become even more important, because truck traffic is projected to double by 2035. According to the Federal Highway Administration, the volume of truck-borne freight will increase from 11.5 billion tons in 2002 to 22.8 billion tons by 2035. Trucking is projected to be the fastest growing mode of freight shipments except for air freight, which even with the growth will take only a fraction of one percent of the total volume. The value of truck shipments is projected to triple, from \$8.8 trillion in 2002 to \$23.8 billion in 2035, emphasizing the critical importance of highway transportation to the nation's economy.

The pressure this would put on the nation's highway infrastructure is shown in Figures 1 and 2. Figure 1 illustrates the volume of long-haul truck traffic along major U.S. highways in 2002. Figure 2 shows projected truck traffic along the same routes in 2035. North-south routes in the east and west and east-west routes along the midsection of the country all show truck traffic doubling or worse.

Estimated Average Daily Long-Haul Truck Traffic, 2002 and 2035



Source: Federal Highway Administration, Freight Analysis Framework

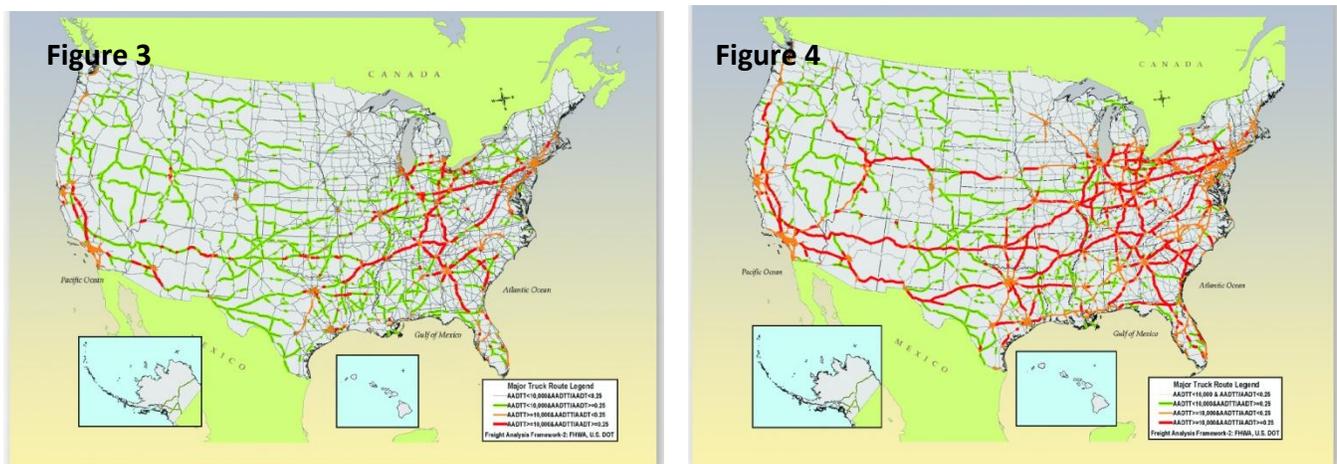
There are many miles of road in the United States where trucks make up one-quarter of the total traffic or more. More than 4,000 miles of these roads carry heavy truck traffic, defined as more than 10,000 trucks per day. Some examples include:

- I-5 from California to Washington State, where truck traffic averages 10,000 per day and can hit over 35,000 trucks on some segments;
- I-70 from Missouri to Ohio where average volume exceeds 11,000 trucks per day and maxes at 26,000; and
- I-95 from Washington, DC to Florida, where truck traffic averages 10,000 per day with segments at 31,000.
- Segments of I-10, which runs from California to Florida, can carry more than 55,000 trucks per day while segments of I-15, from California to Utah, can see truck traffic of more than 60,000 per day.

On thousands of additional miles, trucks comprise more than one-quarter of the traffic but the number of trucks per day is less than 10,000. Figure 3 shows that highways where trucks are one-quarter or more of the traffic exist all across the country, including many rural areas.

By 2035, trucks will be one-quarter or more of the traffic on 14,000 miles where the number of trucks averages 10,000 per day, an increase of almost 230 percent. As Figure 4 shows, this would include almost all of I-10, almost all of I-40 and much of I-80, in addition to current heavy truck routes. Highways all up and down the East and West Coasts would be congested with truck traffic. The average number of trucks would grow to 20,000 per day on almost all of I-10, to 27,000 per day on I-15, and to 31,000 per day on I-95—double to triple the current volume. Virtually every state would have some major freight highway with heavy truck traffic.

Highways With More than 10,000 Trucks per Day, 2002 and 2035

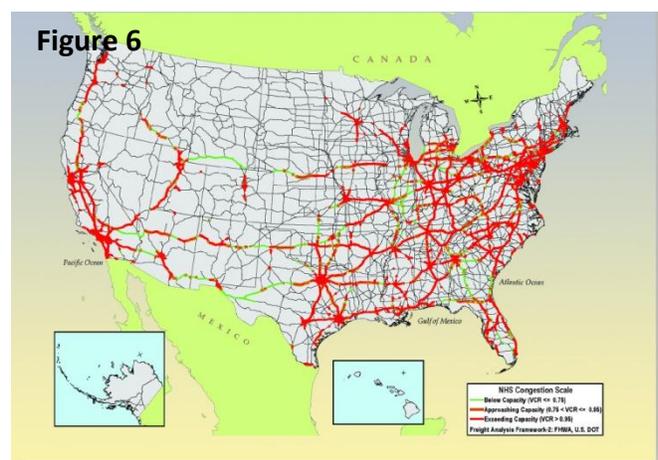
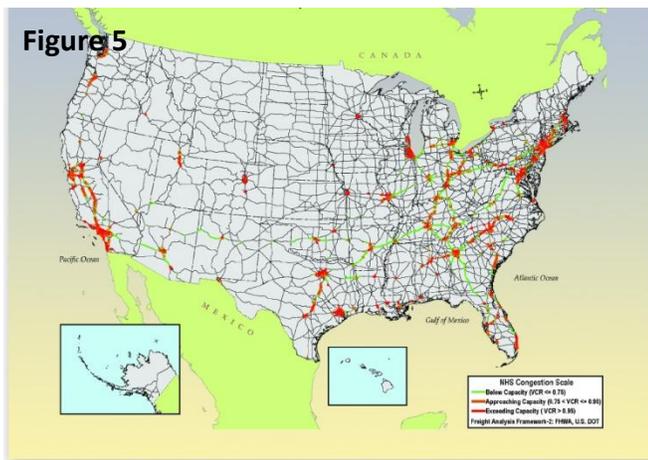


Source: Federal Highway Administration, Freight Analysis Framework

And as time goes on, the nation's freight will spend much more time in congested highway conditions than today. Currently, recurrent congestion slows or stops traffic on over 6,300 miles of highways that carry more than 10,000 trucks per day as shown in Figure 5. By 2035, a projected 28,100 miles of major truck routes will experience recurrent congestion that slows or stops traffic, shown in Figure 6.

- Of the 550 miles of urban segments on I-5, more than 65 percent currently experience heavy congestion; by 2035, that will grow to 95 percent. Congestion on non-urban segments will grow from 31 percent to 85 percent.
- On I-10, 53 percent of urban segments currently experience heavy congestion; by 2035, 96 percent will be congested. Congestion on non-urban segments will spread from 4 percent to 45 percent.
- On I-70, 97 percent of urban segments will be congested by 2035 compared to 53 percent today. Congestion on non-urban segments will grow from 16 percent to over 87 percent.
- And on I-95, congestion on urban segments will grow from 60 percent currently to virtually 100 percent, while congestion on non-urban segments will increase from 26 percent to 55 percent.

Peak Period Congestion on Major Truck Routes, 2002 and 2035



Source: Federal Highway Administration, Freight Analysis Framework

When American citizens and elected officials think about the nation's transportation challenges, the common focus is on congestion, public safety, and overall quality of life. These outcomes alone warrant dramatic upgrades to the nation's highway, transit and rail networks. What is often overlooked, however, is the role effective transportation systems play in a country's competitiveness in the global marketplace. Transportation networks are the circulatory system

of an economy and can enable, or impede, domestic and international commerce through the efficiency of freight transportation.

Highway Investment by Trading Competitors

This undeniable fact is clearly recognized by some of the U.S. major trading partners and competitors:

- In 2004, China announced the initiation of a 52,000 mile expansion of its National Transportation Highway System. It should be noted that in 2001, China's investment in highway infrastructure was 2.5 percent of the nation's gross domestic product (GDP). By comparison, U.S. highway investment in 2004 represented 0.65 percent of GDP. As part of its recent economic stimulus plan, China is spending \$88 billion just constructing high speed intercity rail lines, almost twice the entire transportation investment in the Recovery Act.
- India is in the midst of a \$47.8 billion National Highway Development Program that will upgrade 38,000 kilometers of highways connecting the major cities in its Golden Quadrangle and add 1000 kilometers of new expressways.
- The European Union (EU) in 2005 identified "30 Priority Axes"—critical transnational transportation improvement projects slated for \$300 billion in improvements. The EU also has set goals of expanding its highway capacity by almost 3,000 miles and rail network by nearly 8,000 miles by 2020.

These countries have made commitments to improving their surface transportation systems because they recognize the direct correlation between economic strength and the effectiveness of national infrastructure networks.

U.S. Highway Investment Needs

By contrast, there is a massive gap between our nation's highway investment needs and the level of federal highway investment. For decades, the federal highway program has financed about 45 percent of all highway investment in the U.S., with state and local governments providing the rest. But neither side is doing what is needed.

The massive gap between federal highway investment and needs is shown on a state by state basis in Table 1. For example, the table shows that California would need an annual federal investment of just over \$8 billion, in addition to state and local investment, to maintain physical and performance conditions on the state's highways and bridges. In FY 2009, it received just over one-third of that amount. Oklahoma fares even worse, receiving just over one-quarter of its need of federal highway funds. The table also shows that the ARRA highway funds, while helpful, come nowhere near filling the gap. Most other states are in a similar situation.

Table 1 - Federal Highway Program Funding versus Federal Share of Highway Investment Needs

(Millions of dollars)				
State	Highway Program Formula Funding	Federal Share of Annual State Highway Investment Needs, FY 2010 /1		ARRA Highway Stimulus Funds /2
	FY 2009	Maintain Conditions	Improve Conditions	FY 2009-10
Alabama	\$664.2	\$840.7	\$1,222.5	\$513.7
Alaska	\$290.7	\$166.8	\$236.6	\$175.5
Arizona	\$672.4	\$734.4	\$1,126.3	\$522.0
Arkansas	\$410.8	\$1,294.0	\$1,824.0	\$351.5
California	\$3,002.8	\$8,217.3	\$12,141.4	\$2,569.6
Colorado	\$451.1	\$836.3	\$1,266.7	\$403.9
Connecticut	\$422.8	\$627.6	\$952.2	\$302.1
Delaware	\$129.9	\$140.8	\$214.3	\$121.8
Dist. of Col.	\$126.8	\$165.4	\$240.6	\$123.5
Florida	\$1,690.1	\$1,955.8	\$3,133.1	\$1,346.7
Georgia	\$1,143.8	\$1,266.9	\$1,957.4	\$931.6
Hawaii	\$136.0	\$176.5	\$251.0	\$125.7
Idaho	\$244.8	\$697.2	\$968.5	\$181.9
Illinois	\$1,121.7	\$2,208.5	\$3,240.0	\$935.6
Indiana	\$852.5	\$1,152.7	\$1,725.1	\$658.0
Iowa	\$384.4	\$875.1	\$1,196.3	\$358.2
Kansas	\$327.6	\$1,672.7	\$2,297.2	\$347.8
Kentucky	\$568.1	\$609.8	\$940.3	\$421.1
Louisiana	\$555.6	\$1,408.8	\$2,005.2	\$429.9
Maine	\$141.8	\$270.8	\$365.8	\$130.8
Maryland	\$518.5	\$973.5	\$1,437.5	\$431.0
Massachusetts	\$531.9	\$1,047.7	\$1,598.8	\$437.9
Michigan	\$927.0	\$2,010.1	\$2,899.6	\$847.2
Minnesota	\$523.4	\$1,656.5	\$2,449.1	\$502.3
Mississippi	\$389.2	\$966.9	\$1,366.6	\$356.3
Missouri	\$762.0	\$2,039.9	\$2,906.2	\$637.5
Montana	\$315.8	\$176.1	\$238.1	\$211.8
Nebraska	\$244.6	\$406.4	\$568.5	\$235.6
Nevada	\$256.1	\$385.7	\$603.9	\$201.4
New Hampshire	\$146.2	\$280.3	\$421.5	\$129.4
New Jersey	\$859.7	\$2,127.0	\$3,193.0	\$651.8
New Mexico	\$310.2	\$778.8	\$1,103.8	\$252.6
New York	\$1,450.2	\$3,282.3	\$4,887.6	\$1,120.7
North Carolina	\$930.6	\$2,062.3	\$3,262.1	\$735.5
North Dakota	\$207.3	\$247.0	\$338.3	\$170.1
Ohio	\$1,147.4	\$1,254.0	\$1,876.3	\$935.7
Oklahoma	\$504.8	\$1,849.5	\$2,493.4	\$464.7
Oregon	\$372.6	\$647.9	\$974.6	\$333.9
Pennsylvania	\$1,443.9	\$2,722.6	\$3,958.7	\$1,026.4
Rhode Island	\$163.8	\$187.7	\$269.4	\$137.1
South Carolina	\$549.0	\$589.6	\$780.9	\$465.1
South Dakota	\$217.4	\$407.4	\$543.1	\$183.0
Tennessee	\$704.2	\$1,087.8	\$1,688.8	\$572.7
Texas	\$2,868.6	\$4,664.0	\$6,986.8	\$2,250.0
Utah	\$259.4	\$460.0	\$730.7	\$215.5
Vermont	\$134.1	\$216.8	\$300.0	\$125.8
Virginia	\$859.5	\$850.1	\$1,258.7	\$694.5
Washington	\$556.5	\$1,092.3	\$1,604.9	\$492.2
West Virginia	\$350.1	\$871.3	\$1,260.2	\$210.9
Wisconsin	\$642.7	\$874.9	\$1,164.7	\$529.1
Wyoming	\$215.5	\$166.3	\$235.8	\$157.6
Total	\$32,700.1	\$61,701.0	\$90,706.2	\$26,666.1

1/ The "Needs" column shows investment required in FY 2010. The amounts would grow each year with inflation.

2/ ARRA is one-time funding only during FY 2009-10 and thus not available to meet needs in future years.

Freight Movement & State Economies

According to preliminary data from the 2007 Commodity Flow Survey, which was conducted by the U.S. Census Bureau in conjunction with the 2007 Economic Census, more than 12.5 billion tons of freight worth almost \$11.7 trillion dollars are shipped on the nation's transportation system each year.

The critical factor that has made the United States the strongest and most productive economy in the world is that we have a single trans-continental market that allows companies to locate plants and facilities where they are most efficient and can produce at lowest cost but nonetheless reach customers that are hundreds or thousands of miles away through a nationwide transportation system. The ability of our industries to ship products to customers and receive inputs from suppliers anywhere in the country is critical to the performance and productivity of our economy. This requires a national transportation system, one that ties every part of the country and economy together.

In 2007, trucks alone carried 79.9 percent by value of all freight shipments in the United States. Truck combinations with other modes such as rail or water carried another 12.8 percent. With so much of our economy dependent on truck transportation, we clearly need to approach highway investment with a national vision. The federal government must take a lead role in investing in highways, particularly those that are most important to freight transportation.

Highway investment is not just a state issue. No state exists in an economic vacuum. The economic prosperity of each state depends heavily on the ability of its local businesses to access markets and customers around the country. That access is provided primarily by highways. Even if a state were to do an outstanding job of building and maintaining its own highways, that effort would support only a small fraction of the state's overall economic activity. The state's economy would still be vulnerable to highway investment decisions made by policymakers in other states.

This is a particularly important concern for long-haul traffic to distant markets. If road improvements were financed solely or primarily by locally-generated taxes, state departments of transportation (DOTs) would be responsible to invest funds in ways that benefit local taxpayers. DOTs would have little or no incentive to build or maintain roads for the benefit of freight traffic passing through the state. The nation's highway system would become balkanized and no longer support a national economy.

The importance of a nationwide freight system to the economic prosperity of each state is illustrated by the data in Tables 2 and 3. These tables are based on data from the 2002 Commodity Flow Survey, since comparable data from the 2007 survey have not yet been released. But they tell exactly the same story, that highways tie our national economy together. Table 2 shows, for 2002, the total value of products shipped by manufacturers, mining companies and wholesalers that originated in each state, split between shipments carried exclusively by truck and shipments carried by other modes, including intermodal shipments.

Nationwide, over 75 percent of all freight was shipped solely by truck over the nation's highways. For some states, like Nevada, Delaware and Virginia, the fraction was much higher—over 85 percent.

Even more illustrative of the need for a nationwide highway system are the data in Table 3. This table breaks down truck shipments into three groups—shipments that remain entirely within each state, short-haul shipments to adjacent states and long-haul shipments that go through one or more states before reaching their destination. As the table shows, about 55 percent of the value of truck shipments remains within the originating state. Another 19 percent represents short-haul shipments that originate in one state to destinations in adjacent states. The remaining 26 percent are long-haul shipments that go completely through one or more states before reaching their final destinations. The economic prosperity of the states would thus be highly vulnerable if highway responsibilities devolved to state and local governments.

This vulnerability will persist well into the future. The Federal Highway Administration projects that the total value of domestic freight shipments will grow to \$29.6 trillion in 2035. Of this total, 73 percent or \$21.7 trillion is expected to be shipped solely via truck. Nearly \$10.4 trillion in truck shipments, almost half, will go to out of state destinations, of which \$6.0 trillion is projected to go to out of state destinations that are not neighboring states.

These data clearly demonstrate the dependence of shippers in one state on the highway network in other states. Correspondingly, this information also conclusively proves an efficient national system for the movement of freight is necessary.

Table 2. Importance of Truck Transportation to State Economic Prosperity
(Billions of dollars)

State	Total value of products shipped	Products shipped by truck		Products shipped by other modes	
		Value	Percent of total	Value	Percent of total
Alabama	\$23.4	\$6.6	28.2%	\$16.8	71.8%
Alaska	\$186.7	\$139.1	74.5%	\$47.6	25.5%
Arizona	\$135.0	\$107.6	79.7%	\$27.4	20.3%
Arkansas	\$148.7	\$105.5	70.9%	\$43.2	29.1%
California	\$1,063.4	\$779.6	73.3%	\$283.8	26.7%
Colorado	\$150.7	\$110.6	73.4%	\$40.1	26.6%
Connecticut	\$100.3	\$78.8	78.6%	\$21.5	21.4%
Delaware	\$6.1	\$5.8	94.6%	\$0.3	5.4%
Florida	\$27.1	\$21.1	77.7%	\$6.0	22.3%
Georgia	\$417.1	\$350.0	83.9%	\$67.0	16.1%
Hawaii	\$331.0	\$277.4	83.8%	\$53.6	16.2%
Idaho	\$20.4	\$14.5	70.8%	\$6.0	29.2%
Illinois	\$147.8	\$115.3	78.0%	\$32.5	22.0%
Indiana	\$58.3	\$43.1	73.9%	\$15.2	26.1%
Iowa	\$881.8	\$744.9	84.5%	\$137.0	15.5%
Kansas	\$328.6	\$251.9	76.7%	\$76.7	23.3%
Kentucky	\$139.0	\$104.4	75.1%	\$34.6	24.9%
Louisiana	\$223.2	\$175.8	78.8%	\$47.4	21.2%
Maine	\$222.3	\$78.9	35.5%	\$143.4	64.5%
Maryland	\$240.6	\$184.8	76.8%	\$55.8	23.2%
Massachusetts	\$155.4	\$132.3	85.2%	\$23.0	14.8%
Michigan	\$44.6	\$36.4	81.5%	\$8.2	18.5%
Minnesota	\$443.3	\$356.5	80.4%	\$86.8	19.6%
Mississippi	\$223.4	\$161.0	72.1%	\$62.4	27.9%
Missouri	\$241.2	\$184.9	76.7%	\$56.3	23.3%
Montana	\$143.9	\$96.1	66.8%	\$47.8	33.2%
Nebraska	\$27.3	\$17.6	64.4%	\$9.7	35.6%
Nevada	\$370.4	\$336.2	90.8%	\$34.2	9.2%
New Hampshire	\$36.9	\$21.9	59.3%	\$15.0	40.7%
New Jersey	\$94.9	\$74.2	78.2%	\$20.7	21.8%
New Mexico	\$38.5	\$26.5	68.9%	\$12.0	31.1%
New York	\$337.0	\$252.0	74.8%	\$85.0	25.2%
North Carolina	\$48.7	\$31.8	65.3%	\$16.9	34.7%
North Dakota	\$56.8	\$41.3	72.6%	\$15.6	27.4%
Ohio	\$392.9	\$292.2	74.4%	\$100.7	25.6%
Oklahoma	\$553.3	\$425.2	76.8%	\$128.1	23.2%
Oregon	\$206.6	\$169.8	82.2%	\$36.9	17.8%
Pennsylvania	\$128.3	\$96.7	75.4%	\$31.6	24.6%
Rhode Island	\$428.5	\$346.9	80.9%	\$81.6	19.1%
South Carolina	\$26.2	\$18.9	71.9%	\$7.4	28.1%
South Dakota	\$178.5	\$155.1	86.9%	\$23.4	13.1%
Tennessee	\$44.4	\$28.4	64.0%	\$16.0	36.0%
Texas	\$345.5	\$278.0	80.5%	\$67.5	19.5%
Utah	\$779.6	\$515.7	66.2%	\$263.9	33.8%
Vermont	\$87.0	\$65.0	74.8%	\$22.0	25.2%
Virginia	\$212.8	\$181.8	85.4%	\$31.0	14.6%
Washington	\$19.9	\$17.2	86.4%	\$2.7	13.6%
Washington, D.C.	\$205.2	\$120.7	58.8%	\$84.6	41.2%
West Virginia	\$271.9	\$222.8	82.0%	\$49.1	18.0%
Wisconsin	\$57.4	\$37.2	64.9%	\$20.1	35.1%
Wyoming	\$31.2	\$11.0	35.3%	\$20.2	64.7%
US total	\$11,082.9	\$8,446.8	76.2%	\$2,636.1	23.8%

Source: 2002 data, U.S. Department of Transportation, Freight Analysis Framework

Table 3. Value of Products Shipped by Truck Within State and to Other States
(Billions of dollars)

State	Total value of products shipped by truck	Shipped within the state			Shipped to other states		
		Value	Percent of total	Short-haul to adjacent states	Percent of total	Long-haul through one or more states	Percent of total
Alabama	\$139.1	\$64.5	46.3%	\$40.2	28.9%	\$34.5	24.8%
Alaska	\$6.6	\$6.4	97.4%	\$0.0	0.0%	\$0.2	2.6%
Arizona	\$105.5	\$75.4	71.5%	\$17.5	16.5%	\$12.6	11.9%
Arkansas	\$107.6	\$40.6	37.7%	\$33.3	31.0%	\$33.7	31.3%
California	\$779.6	\$597.6	76.6%	\$35.7	4.6%	\$146.4	18.8%
Colorado	\$110.6	\$81.2	73.4%	\$9.7	8.8%	\$19.7	17.8%
Connecticut	\$78.8	\$28.5	36.2%	\$23.0	29.1%	\$27.3	34.7%
Delaware	\$21.1	\$5.6	26.6%	\$1.6	7.7%	\$13.8	65.6%
Florida	\$350.0	\$287.6	82.2%	\$15.9	4.6%	\$46.5	13.3%
Georgia	\$277.4	\$137.0	49.4%	\$77.4	27.9%	\$63.0	22.7%
Hawaii	\$14.5	\$14.5	100.0%	\$0.0	0.0%	\$0.0	0.0%
Idaho	\$43.1	\$28.4	66.0%	\$8.0	18.6%	\$6.6	15.3%
Illinois	\$744.9	\$465.3	62.5%	\$144.1	19.3%	\$135.5	18.2%
Indiana	\$251.9	\$92.2	36.6%	\$76.7	30.5%	\$83.0	32.9%
Iowa	\$115.3	\$42.1	36.5%	\$33.1	28.7%	\$40.1	34.8%
Kansas	\$104.4	\$50.2	48.0%	\$21.8	20.8%	\$32.5	31.1%
Kentucky	\$175.8	\$55.1	31.3%	\$53.9	30.7%	\$66.8	38.0%
Louisiana	\$78.9	\$49.5	62.8%	\$12.9	16.3%	\$16.5	20.9%
Maine	\$36.4	\$16.2	44.5%	\$3.1	8.5%	\$17.1	47.0%
Maryland	\$132.3	\$56.7	42.9%	\$41.7	31.6%	\$33.8	25.6%
Massachusetts	\$184.8	\$87.1	47.1%	\$32.9	17.8%	\$64.8	35.0%
Michigan	\$356.5	\$209.6	58.8%	\$51.1	14.3%	\$95.8	26.9%
Minnesota	\$161.0	\$99.5	61.8%	\$18.2	11.3%	\$43.3	26.9%
Mississippi	\$96.1	\$28.3	29.4%	\$27.3	28.4%	\$40.5	42.2%
Missouri	\$184.9	\$90.7	49.1%	\$51.5	27.8%	\$42.8	23.1%
Montana	\$17.6	\$13.9	79.1%	\$1.7	9.5%	\$2.0	11.4%
Nebraska	\$74.2	\$37.5	50.5%	\$13.5	18.2%	\$23.2	31.3%
Nevada	\$41.3	\$19.4	47.1%	\$14.9	36.1%	\$6.9	16.8%
New Hampshire	\$26.5	\$7.2	27.2%	\$8.4	31.8%	\$10.9	41.0%
New Jersey	\$252.0	\$91.2	36.2%	\$54.8	21.8%	\$106.0	42.1%
New Mexico	\$31.8	\$23.1	72.7%	\$5.8	18.3%	\$2.9	9.0%
New York	\$292.2	\$149.0	51.0%	\$60.4	20.7%	\$82.8	28.3%
North Carolina	\$336.2	\$170.3	50.6%	\$66.5	19.8%	\$99.4	29.6%
North Dakota	\$21.9	\$12.9	58.7%	\$5.4	24.8%	\$3.6	16.5%
Ohio	\$425.2	\$191.0	44.9%	\$96.6	22.7%	\$137.6	32.4%
Oklahoma	\$169.8	\$116.5	68.6%	\$37.2	21.9%	\$16.0	9.4%
Oregon	\$96.7	\$57.2	59.2%	\$28.8	29.8%	\$10.7	11.0%
Pennsylvania	\$346.9	\$147.3	42.5%	\$97.1	28.0%	\$102.4	29.5%
Rhode Island	\$18.9	\$5.1	26.9%	\$5.8	31.0%	\$7.9	42.1%
South Carolina	\$155.1	\$59.5	38.4%	\$36.7	23.7%	\$58.9	38.0%
South Dakota	\$28.4	\$16.0	56.6%	\$6.6	23.2%	\$5.7	20.2%
Tennessee	\$278.0	\$87.7	31.6%	\$57.2	20.6%	\$133.0	47.9%
Texas	\$515.7	\$389.7	75.6%	\$37.2	7.2%	\$88.8	17.2%
Utah	\$65.0	\$39.9	61.4%	\$9.1	14.0%	\$16.0	24.6%
Vermont	\$17.2	\$4.3	25.1%	\$7.5	43.3%	\$5.4	31.5%
Virginia	\$181.8	\$96.1	52.9%	\$36.8	20.2%	\$48.9	26.9%
Washington	\$120.7	\$87.1	72.2%	\$13.3	11.0%	\$20.2	16.8%
Washington, D.C.	\$5.8	\$1.1	18.3%	\$3.3	56.6%	\$1.5	25.2%
West Virginia	\$37.2	\$11.6	31.1%	\$15.2	40.8%	\$10.5	28.1%
Wisconsin	\$222.8	\$108.1	48.5%	\$54.8	24.6%	\$59.9	26.9%
Wyoming	\$11.0	\$6.2	56.4%	\$3.7	33.8%	\$1.1	9.8%
US total	\$8,446.8	\$4,658.7	55.2%	\$1,609.2	19.1%	\$2,178.9	25.8%

Source: 2002 data, U.S. Department of Transportation, Freight Analysis Framework

Keeping America Competitive by Increasing Transportation Productivity: The “Critical Commerce Corridors” Program

Enactment of a multi-year surface transportation reauthorization bill that significantly boosts federal highway and public transportation investment is one of the best steps Congress can take to promote job creation and economic strength. As the two independent commissions Congress created in SAFTEA-LU pointed out, however, the current program structure does not emphasize unmet national transportation needs, such as improving goods movement.

ARTBA believes the next surface transportation reauthorization should establish a new, federally-led program to develop the transportation infrastructure capacity necessary to facilitate U.S. freight flows. As this testimony has already demonstrated, inefficient goods movement is a national challenge that impedes the competitiveness of U.S. firms in the global marketplace and the overall strength of our economy. States cannot be expected to address this dilemma on their own. ARTBA’s proposed Critical Commerce Corridors Program would supplement, not supplant, existing programs by developing a national strategy to facilitate goods movement and providing the resources necessary to implement this plan.

Past ARTBA Chairman Charles Potts, CEO of Heritage Construction & Materials testified about this proposal in detail before this Committee in 2008. While I will not restate his testimony today, I do think it is important to reinforce that we envision the Critical Commerce Corridors program as being financed outside the Highway Trust Fund with new freight-related user fees. The concept of user fee financing for transportation programs has proven to be an effective and stable source of revenue for long-term projects. We should build on this successful model in developing a national freight program. To that end, ARTBA has endeavored to develop a viable new revenue source to support a goods movement.

The “Highway Transportation Services Tax”: A New Federal Revenue Stream to Finance a Freight Movement Program

We believe that the 3C system, which would include truck-only lanes, multi-modal transfer centers, new multi-state corridors and “last mile” connections with the nation’s sea and water ports, rail hubs and airports, should be funded with a new dedicated federal freight-related user fee/tax. ARTBA engaged PricewaterhouseCoopers LLP (PwC) National Economics & Statistics Group to delineate the structure for such a tax and analyze its budgetary impact.

The proposed new federal excise tax would be assessed on the value of transportation services provided by trucks with gross vehicle weight ratings (GVWRs) of more than 26,000 pounds (DOT Class 7 or Class 8 vehicles).

The “Highway Transportation Services Tax” (HTS) would be levied in addition to the federal Highway Trust Fund taxes currently paid by these commercial vehicles. It would be structured similarly to the current excise tax on air cargo services (see Internal Revenue Code Sec. 4271).

PricewaterhouseCoopers has provided ARTBA with a detailed description of how such an excise would be structured, implemented and administered. It has also provided us with detailed annual revenue projections that could be expected from this mechanism through FY 2019.

ARTBA believes that a “Highway Transportation Services Tax” would fund a robust “Critical Commerce Corridors” freight network program and major new capacity projects of national and regional significance.

By financing these new, large expenditure programs focused at meeting national goals with a dedicated revenue stream from the “Highway Transportation Services Tax” rather than the traditional motor fuels excise, additional monies from the later revenue stream would be “freed-up” for investments in the traditional “core” highway and transit programs.

As the Committee proceeds with its development of a multi-year reauthorization bill, we are happy to further discuss both the 3-C concept and the Highway Transportation Services Tax.

Concluding Remarks

Madam Chairman and distinguished members, you have an awesome responsibility. The scope, condition and performance of the surface transportation network that our children and grandchildren have available to them will, in great measure, be determined by the decisions that you make in the next surface transportation authorization bill.

Be assured that the American Road & Transportation Builders Association stands ready to provide any assistance it can to you as you develop that bill.