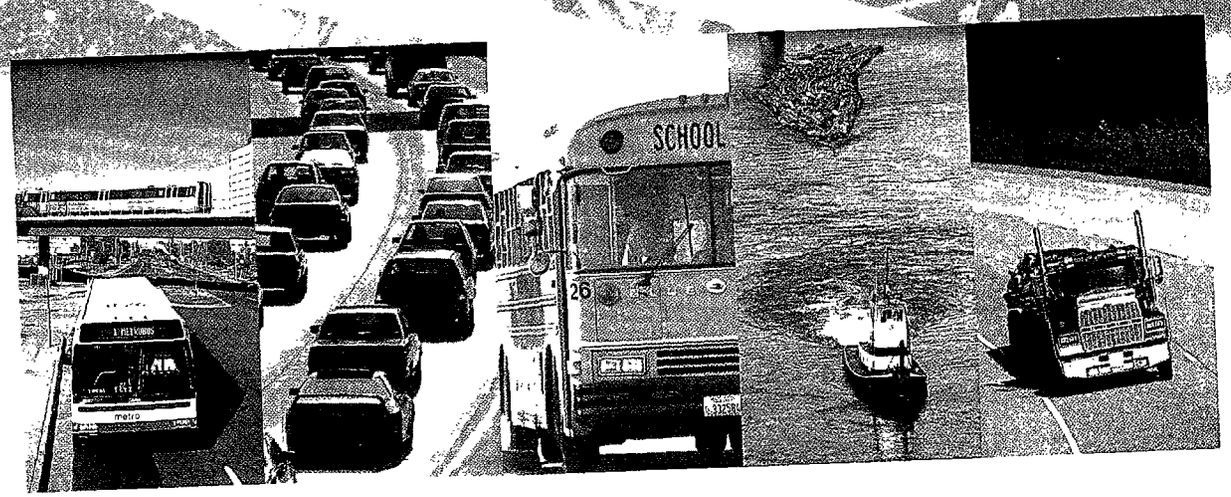
Transportation for a Competitive America



American Association of State Highway and Transportation Officials

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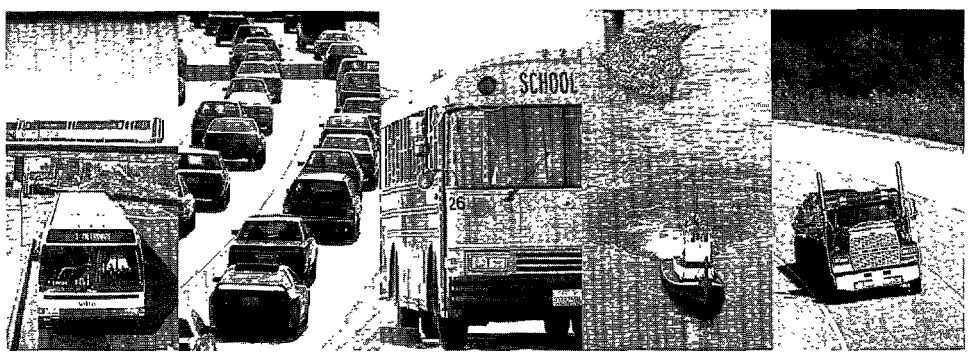

American Association of State Highway and Transportation Officials

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Preface

The transportation system in the United States is at a critical juncture. The system carries more people and goods than ever before, and travel demand is certain to continue to grow. Failure to accommodate that demand will threaten our ability to compete in the international marketplace, and it will jeopardize jobs, the nation's economic stability, and our quality of life.

The Intermodal Surface Transportation Efficiency Act, which provided the basis for our current transportation programs and funding, expires in 1997. As Congress begins structuring the next transportation legislation, it will be taking a hard look at the who, what, when, where, and even why of federal involvement in transportation.

AASHTO members-the departments of highways and transportation in the 50 states, Puerto Rico, and the District of Columbia-are responsible for planning, designing, building, and operating the infrastructure needed for our nation's transportation system. After extensive discussions and deliberations, they recently approved a series of policy statements on the next generation of federal surface transportation legislation:

Federalism: Federalism and Reauthorization of the Intermodal Surface Transportation Efficiency Act
Planning: Issues in Planning and Recommendations
Environment: Environmental Issues and Transportation
Research: Innovation for Transportation
Finance: Alternative Financing Proposals
The Bottom Line: Transportation Investment Needs 1998-2002

This report summarizes the recommendations contained in those policy statements.

As we go to press in the spring of 1996, Congress is considering abolishing or temporarily rescinding the 4.3 cents per gallon tax levied on motorists. This tax is currently being deposited in the General Fund, where it is used to offset the deficit, rather than in the Highway Trust Fund, where other federal motor fuel tax revenue is deposited.

The debate in Congress over abolishing or rescinding this 4.3 cents per gallon tax demonstrates the strongly held and prevalent belief that fuel taxes should be used solely for transportation purposes. AASHTO wholeheartedly endorses this concept, and in its recommendations urges Congress to direct that all highway fuel taxes be deposited into the Highway Trust Fund and used to maintain and improve the safety and performance of our surface transportation system.

It needs to be understood that AASHTO's recommendations regarding the 4.3 cents per gallon tax go beyond whatever decision Congress makes in 1996 on its future. The point in our findings is that the revenue collected from this 4.3 cents per gallon tax is needed to provide resources sufficient to maintain current conditions on our nation's highway and transit systems. This will still be true if Congress repeals the 4.3 cents per gallon tax.

Francis B. Francois
Executive Director, AASHTO
June 1996

Introduction

The U.S. transportation system is the lifeblood of American society. It connects rural and urban areas, homes and work sites, farms and markets. It allows American manufacturers to aggressively compete for national and international trade. It ties communities together, and it provides access to parks and recreational areas. It provides speedy response to emergencies.

But the transportation system must be maintained and improved if it is to continue to meet the nation's needs. Because the system usually operates smoothly, most people take it for granted. Only when travel and shipments are disrupted by a storm or other calamity do they realize how important transportation is to their economic and social well-being.

The transportation system in the United States is unequaled anywhere in the world. Streets and highways, buses, subways, sidewalks, bike paths, barges, ferries, and railroads together compose a network of accessible, efficient, and safe surface transportation facilities.

The transportation system is, however, starting to deteriorate. Transportation agencies are losing the ability to keep pace with the system's critical maintenance and reconstruction needs, and every year they fall further behind. Like an automobile, our highway and transit systems require periodic maintenance. Skimping on maintenance and repairs could cause a breakdown in the system, with potentially disastrous consequences: unsafe roads and transit systems, increased user costs, and restricted trade.

The federal government plays a key role in the nation's transportation system. Only the federal government can ensure the continuity, uniformity, and intermodalism of the system. Most of the major innovations and improvements in the system are funded by the federal government.

With federal funding for highways and transit programs about to expire, Congress must take steps now to ensure that the transportation system will continue to provide for personal mobility, economic development,

TRANSPORTATION-A LIFE SAVER

When disaster struck California in 1994 with the Northridge earthquake, the transportation system became a life saver. Although operations were significantly disrupted, the bulk of the highway system remained safe for travel, allowing emergency teams to provide desperately needed rescue and medical services.

Once the immediate emergency was over, the state turned to rebuilding the damaged transportation system. To expedite the process, the California Department of Transportation and the Federal Highway Administration cut through the red tape and implemented an innovative procurement process. Doing so significantly accelerated the reconstruction process, allowing roadways to be opened to traffic much earlier than expected.

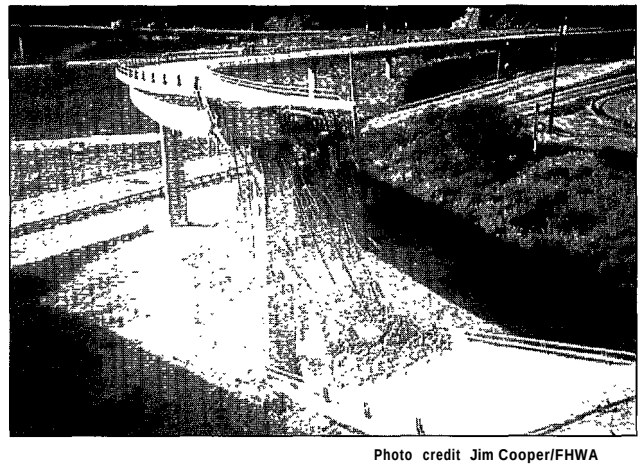


Photo credit Jim Cooper/FHWA

TRANSPORTATION LEGISLATION

In 1991, Congress passed a landmark bill-the Intermodal Surface Transportation Efficiency Act (ISTEA). It called for the development of a national intermodal surface transportation system, and it included funding for highway construction, highway safety programs, and mass transit programs. The goal: a U.S. transportation system that would continue to provide a network of safe, effective, convenient, and efficient means for moving people and goods.

ISTEA was developed with broad-based support and consensus from state and local governments and the many organizations involved in planning, designing, operating, and maintaining the surface transportation system. The result: a bill that gave more responsibility to state and local governments; improved regional planning, with equal consideration for all modes of transportation; introduced greater flexibility and simplicity to transportation programs; and recognized that transportation needs and priorities vary not only from state to state, but also within a state.

The National Highway System, designated by Congress in 1995, has its roots in ISTEA, which called for the identification of a 160,000-mile system of the most important roadways in the United States. ISTEA expires in 1997.

international competitiveness, and national defense.

Soon, Congress will begin drafting legislation for the transportation system that will carry the nation into the 21st century. This legislation will build on the intent of the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA), which expires in 1997, and the National Highway System Designation Act of 1995. In shaping this new legislation, Congress has the opportunity to streamline processes that currently hamper the ability of state and local governments to provide the best possible transportation system.

State transportation officials, who are responsible for designing, building, operating, and maintaining many of the nation's most heavily traveled public-sector transportation facilities, recently developed a series of reports that recommend steps that should be taken to ensure that the transportation system will continue to serve America well into the next century. [1]

[1] This publication summarizes those reports. The full reports are available from the American Association of State Highway and Transportation Officials. See Appendix B.

The reports contain four key recommendations:

- The maintenance needs of the nation's highways and transit systems outstrip the funds currently available. The 4.3 cents per gallon in user taxes collected from motorists should be deposited in the Highway Trust Fund and be spent on system maintenance, rather than deposited in the General Fund.
- State and local governments should be given more flexibility in determining how, when, and where transportation resources are spent, to maximize the benefit to mobility, safety, and the environment.
- Many of the key concepts of ISTEA, such as state and local cooperation, intermodal planning, and public participation, should be retained.
- Burdensome and unnecessary provisions imposed by ISTEA and earlier laws should be eliminated or reduced. The National Highway System Designation Act was a first, and major, step in this direction.

Transportation: The Key to Economic Growth

A strong transportation system is critically important to the nation's economy. Transportation brings, and in turn is spawned by, economic development. For more than 60 years, the gross domestic product has grown in direct relationship to the growth in travel in the United States-evidence of the strong link between transportation and the economy. A robust, growing economy requires a transportation system capable of sustaining it.

Transportation has made the world smaller by bringing markets closer together. International trade now accounts for almost one-quarter of the U.S. economy. The ability to move immense amounts of raw materials and perishable items across great distances at competitive prices makes that trade possible. More than 1 million businesses, employing over 12 million people, now serve the country's transportation needs.

Americans spend 20 percent of their total household budgets on transportation-with much of that used for commuting to work, shopping, and other day-to-day travel. Each year, 4.5 million visitors from other countries travel to the United States, and the intermodal transportation system makes it possible for them to experience the tourist attractions and national parks spread throughout the vast reaches of this country. Yet the nation spends only $1 on the transportation system for every $8 it spends on cars, boats, bikes, and other personal vehicles.

The United States is now entering a defining era, one that will affect its transportation system for years to come. There is public pressure to scale back the federal role in all programs, including transportation, and to reduce taxes at the state and local levels. But a failure to adequately fund transportation maintenance and improvement projects could cripple the nation's mobility and economy. According to the U.S. Department of Transportation, every dollar invested in the highway system will return more than $2.60 in benefits to the economy. To remain competitive in the global economy requires a well-functioning, broad-based, intermodal transportation system.

The United States has made significant investments in transportation, and those investments have clearly paid off. For ex-

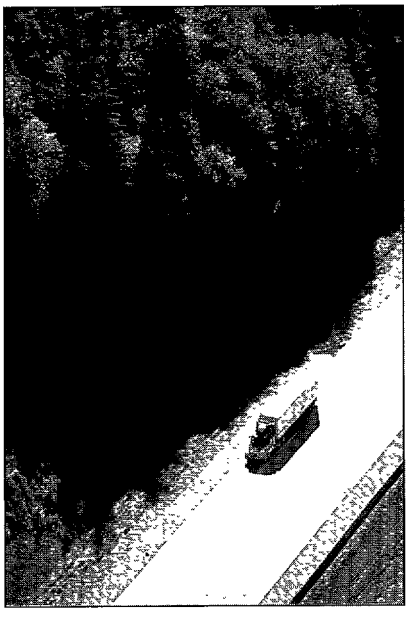
BUSINESS DEPENDS ON OUR TRANSPORTATION SYSTEM

American business relies on our intermodal transportation system to efficiently move groceries, household goods, and other consumer products to market. For example, Wells Dairy in LeMars, Iowa-"the ice cream capitol of the world"-has grown to a $400 million business by expanding into markets both outside of the state and outside of the country. This growth was possible because of the reliable, efficient linkages between trucks, planes, ports, and rail.

By the time Wells Dairy Blue Bunny ice cream reaches the consumer's freezer, it will have traveled by several different modes. Shipments to the Caribbean, for example, first travel by refrigerated trucks to Chicago. There, the ice cream is loaded onto a refrigerated railcar, which transports it to Jacksonville, Florida. In Jacksonville, the product is transferred to the cargo hold of a ship. Once the ship reaches its destination port, the ice cream is again loaded onto a truck, for delivery to stores and restaurants.

ample, the Interstate system, which represents only 1 percent of all roads but carries 21 percent of all traffic, has made travel safer, simpler, and more efficient. The nation's investments in transportation have not only led to more efficient movement of goods, but they have also promoted economic growth and allowed jobs and industry to be dispersed throughout the country.

Protecting this investment in the country's transportation system requires timely maintenance, rehabilitation, and replacement strategies. By acting now to continue the pattern set over the past decade of steady, moderate increases in transportation investment, the United States can ensure that the transportation system will be able to meet tomorrow's needs.



ON THE ROAD AGAIN. . .

The trucking industry is a major element of the U.S. economy, logging 353 billion miles and nearly 3 billion tons of freight each year and employing almost 8 million people. Tractor-trailers account for only 3 percent of the total number of registered vehicles in the United States. Yet trucking companies contribute, through highway user taxes, approximately $20 billion annually to federal and state governments to defray highway costs.

"The National Highway System is our office," says the American Trucking Associations' Ted Scott. "It's where we do our business. A small improvement in trucking efficiencies will result in large economic gains for the nation."

For example, UPS has 70,000 trucks on the road daily. If traffic congestion delayed every UPS driver for only 5 minutes each day, it would cost UPS more than $40 million per year.

Partners in Building and Operating the Transportation System

The transportation system plays a crucial role in interstate commerce, international trade, personal safety and mobility, and national defense. Improvements to the system are an investment in the nation's future.

The lion's share of the responsibility for roads and transit falls on state and local governments, who own the public-sector portion of the U.S. transportation system. They maintain and operate more than 95 percent of the almost 4 million miles of roads in the United States. But the federal government also plays a key role, by providing technical expertise, leadership, and funding for highway improvements and for the development of innovative solutions to transportation problems.

State transportation agencies design, build, and maintain most of the nation's highways and many of its transit systems. They work with local agencies to coordinate and plan statewide, multimodal transportation projects. During the planning process, they thoroughly evaluate and weigh safety issues, community needs, environmental concerns, and cost constraints to develop the best possible system for a specific area.

Local governments-cities and counties-play a critical role in maintaining the transportation system. Local governments operate transit systems and maintain almost 3 million miles of roads. On tribal lands, Native American tribal governments are responsible for setting transportation policy. They work closely with neighboring state and local governments.

In urban areas, metropolitan planning organizations (MPOs) play an important role in deciding how and where transportation funds will be spent. The MPOs work in partnership with state and local highway agencies to reach consensus on transportation issues that cut across jurisdictional boundaries. The MPO's plans become part of the state's plans. MPOs have been involved in transportation decision making for some time, and ISTEA granted MPOs in the larger metropolitan areas of the country even more control over those decisions.

Transportation demands vary dramatically from state to state, and even within a state. States with large manufacturing centers and heavily populated urban areas, for example, have different needs than states whose economies primarily depend on tourism. Snowbelt states have different needs than those in more temperate climates, and rural America's needs differ from the needs of urban areas. By working closely with local agencies, MPOs, and the public, state transportation departments ensure that all constituencies are served.

RECOMMENDATIONS

An economical, reliable, safe, and environmentally compatible transportation system is vitally important to the nation's economic and social well-being. To improve transportation safety, provide more cost-effective transportation services, and reduce waste, the next

FEDERAL GOVERNMENT'S ROLE

U.S. Department of Transportation
Federal Highway Administration

The federal government has a keen interest in supporting a multimodal transportation system that will provide for national defense, enhance interstate commerce, and strengthen the nation's economic competitiveness in international trade. Through the U.S. Department of Transportation, the federal government provides funding and leadership for roadway and other transportation improvements, planning activities, research projects, and advanced technologies. Only the federal government can ensure the continuity, uniformity, and intermodalism of the nation's transportation system.

surface transportation bill should address the following issues.

- Increase federal funding for highway and transit improvements and make funding more predictable. Adequate, predictable funding will allow states to plan and Implement more cost-effective, practical transportation improvements.
- Clearly define the roles and responsibilities of the various government agencies involved in delivering transportation programs. The lines have become blurred, causing confusion, overlapping responsibilities, and duplication of effort.
- Make federal legislation and regulations more flexible and less prescriptive. The number of categorical programs should be reduced. Decisions on whether to build a transportatron facility should be made at the state and local levels and be based on engineering studies, community interests, and professional judgment. Congress should avoid earmarking funds for specific projects. Funding set-asides, sanctions, and unwarranted requirements can thwart the planning process. Allowed to work unimpeded, the transportatron planning process will yield sound decisions.
- States should continue to have the authority for, and be the leaders in, planning and implementing statewide transportation programs. States should also continue to be major partners with MPOs in planning urban transportation programs.

THE NATIONAL HIGHWAY SYSTEM

In 1995, Congress passed a bill approving the National Highway System (NHS). The NHS is a 161,000-mile network of roadways that will provide for personal mobility, economic development, international competitiveness, and national defense. Most of the roads and highways included in the NHS are already in service.

The NHS includes all of the Interstate highway system, as well as highways critical to our national defense or otherwise considered to be of high priority. The NHS constitutes less than 4 percent of the nation's road and street mileage, but it will carry more than 75 percent of commercial truck traffic, 42 percent of all rural highway travel, and 40 percent of all urban highway travel. It provides access to major ports, airports, rail terminals, military bases, and transit lines.

The members of the American Association of State Highway and Transportation Officials strongly supported the development of the NHS, calling it a key component of the intermodal transportation system and an investment in America's future.

According to Federal Highway Administrator Rodney Slater, the National Highway System will be "the backbone of our national transportation network into the 21st century.. . , providing the means for sustained economic strength, productivity, growth, and competitiveness in the global marketplace."

Needs Outpace Investment

Americans are traveling almost twice as much as they did in 1973, and the number of cars and trucks on the nation's roads has increased by more than 50 percent. Although transit ridership is up in some areas of the country, most people still travel in privately owned motor vehicles. With 9 out of 10 personal trips taking place on roads and highways, the nation is more reliant than ever on the highway system. But the highway system has increased only 3 percent since 1973. It is no wonder that many roads are congested and in need of repair.

HIGHWAY INVESTMENT NEEDS

The U.S. Department of Transportation recently released a report on the status of the nation's highways, bridges, and transit.2 The report delivers some good news, countered by some worrisome trends.

The good news is that the past decade has seen some improvement in the condition of the highway system. The amount of pavement in need of immediate repair has declined, bridges are in better shape, and rush-hour traffic is less congested in some urban areas. These improvements are a direct result of the extensive repair and maintenance work initiated in the 198Os, when the nation, alarmed by sharply deteriorating highway conditions, increased funding for highway improvements.

But the number of at-risk roads, bordering on poor condition, is increasing. Without preventive maintenance and repairs, those roads will soon become major problems for travelers and shippers.

In metropolitan areas, highways can no longer meet the demand being placed on them. During the boom in highways repair work in the 198Os, little or no additional capacity was added to the roadways. The resulting traffic congestion delays motorists and diminishes air quality.

As suburban areas increasingly become key regional employment and residential centers, more and more workers are using Interstate highways for commuting. The result: about 70 percent of peak-hour travel on the Interstate system occurs under congested conditions. The price of traffic congestion in the 50 largest urban areas in the country is about $43 billion per year-the cost of delayed deliveries and lost time.

CHANGING DEMOGRAPHICS

In the past three decades, travel in the United States grew at a rate three times as fast as the growth in population. While much of this increase is due to the substantial increase in population, other factors, including employment growth, smaller households, and an increase in the number of licensed drivers and vehicles, have also played a significant role. And more commuters are linking trips, such as dropping children off at school on their way to work and stopping for groceries on the way home.

The United States has more vehicles per capita than any other nation in the world. During the past decade, 19 million workers joined the workforce-and most of them choose to drive, in their own car with no passengers, to work each day. During that time, the growth in private vehicles outpaced the growth in population.

There are more vehicles on our roads today than there have ever been. And motorists are driving more miles each year. That all adds up to more wear and tear on our highway system, and increased congestion in urban areas.

2The Status of the Nation's Highways. Bridges, and Transit: Conditions and Performance.

A REPAIR IN TIME, SAVES NINE

By judiciously applying preventive maintenance treatments to pavements, highway departments can extend the service life of the pavements. The key is knowing when and where to apply the treatments.

Preventive maintenance for pavements has traditionally been given short shrift in the United States. With the demand for highway construction and maintenance outpacing funding, it is often hard for highway agencies to justify sending crews to work on a road that appears to be in good condition. As a result, many roadways are allowed to deteriorate to the point where they need major restoration, reconstruction, or rehabilitation. But the savings in preventive maintenance costs is more than offset by the higher costs to rehabilitate the pavement.

Although the number of deficient bridges is 20 percent less today than in 1990, there are still nearly 100,000 bridges that are classified as deficient. In addition, more than one-third of the nation's bridges were constructed in the 1960s and 197Os, and those 125,000 bridges are now reaching the end of their useful life.

The number of roads and bridges that will soon require rehabilitation is already large, and growing, according to the U.S. Department of Transportation. Any slowdown in highway investments or in meeting the needs brought on by traffic growth could quickly reverse the advances made over the past decade.

To keep highways and bridges in their current physical condition-no better, no worse-will require an investment of $149 billion over the 5-year period beginning in 1998. To improve the physical condition of the system to a level economically justified (where the value of the benefits gained from the improvements outweigh the costs) would cost an additional $69 billion, for a total of $2 18 billion.

These expenditures address only the *physical condition* of the highway system. To maintain the current level *of service* (that is, the efficiency of traffic flow) would cost $115 billion over the 5-year period; to improve the level of service to a point economically justified would require an additional $24 billion.

To bring both the physical condition and the level of service of U.S. highways to a point that is economically justified would thus require $357 billion over the 5-year period. Yet federal, state, and local funds available for capital investments in highways during that period are projected to range only between $210 billion and $270 billion-a potential shortfall of up to $147 billion.

To make all economically justified improvements, the nation as a whole needs to invest an average of $72 billion each year an highways and bridges. That's almost twice as much as was invested in highways in 1993.

New revenues needed to bring the system up to economically justified levels would amount to $18 billion per year-equivalent to a penny per mile of travel, or a 2 percent increase in the cost of operating an automobile. That cost would, however, be recouped by an expected 2 percent reduction in vehicle operating expenses brought on by smoother pavements, improved fuel consumption, safer roads, and fewer delays.

The shortfall is huge, but it is not insurmountable. Depositing the 4.3 cents in fuel taxes now going to the General Fund in the Highway Trust Fund would be a major step toward meeting those needs.

If the United States fails to make adequate investments in the highway system, the hard-won improvements in the condition of the nation's roads and bridges will be lost and service will deteriorate. Roads and bridges carrying light traffic volumes would likely be affected first, but eventually the more heavily traveled main roads would also be affected. The costs of owning and operating a vehicle would rise as a result of damage caused by

potholes, less efficient fuel consumption, more traffic congestion, and higher insurance premiums. Goods shipments would become less efficient, thus weakening trade competitiveness.

TRANSIT INVESTMENT NEEDS

Each weekday, more than 6.8 million commuters use some form of transit, eliminating the need for more than 1,000 lanes of urban highways. Millions more Americans use transit each day to get to school, the doctor's office, social services, recreational facilities, and other facilities. When most people think of transit services, subways and buses in large cities generally come to mind. But transit also plays an important role in smaller cities and rural areas, where it may be the only form of transportation for many citizens.

Transit involves a wide range of services, including buses, subways, commuter rail, on-demand services for elderly travelers and others with special needs, and commuter vans.

Transit services are generally funded in two ways: through fees collected from users (fare box receipts) and through support from local, state, and federal governments (tax revenues). Government support helps ensure that transit services remain affordable to the user and also helps transit systems offset some of the increased costs they incur in meeting government mandates, such as the requirements in the Americans with Disabilities Act. Federal aid for transit services has steadily declined, forcing state and local governments to more than double their funding for transit since 1982. This has posed a hardship for state and local governments, because to get the funds they have had to drain budgets for other services.

The U.S. Department of Transportation recently released a report on the status of the nation's transit systems. Although recent investments have allowed transit systems to keep their vehicles running, they lack funds to replace vehicles and facilities at the end of their useful life. Some metropolitan areas have invested in constructing new transit facilities, but the older, heavily utilized rail transit systems face growing needs for modernization. The rails themselves are in good condition, but aging elevated structures, outdated signal systems and power facilities, and passenger stations all need improvement.

Continuing investments must be made to maintain the safe operation of transit vehicles and facilities. Transit services need to be expanded to meet the requirements of the Americans with Disabilities Act and to assist urban areas in meeting clean air goals. Ever-increasing traffic congestion, coupled with the inability to add highway lanes in major metropolitan areas, leads to a demand for additional transit capacity.

To maintain the transit system in its current condition will require an investment of $25 billion over the S-year period beginning in 1998. To improve the physical condition of the system to federal guidelines would cost another $10.5 billion, for a total

Photo credit:
Larry Levine/WMATA

TRANSIT'S ROLE IN RURAL AREAS

When most people think of transit, they picture buses and subways in large metropolitan areas. But transit also plays an important role in rural areas. There are more than 5,000 local and regional organizations providing transit services in rural and small urban areas.

More than 20 percent of the U.S. population lives outside of metropolitan areas. Many of these people depend on transit services to take them to the grocery store, to the doctor, and other destinations. Although the frequency of operations is much lower in rural areas than urban areas, the area of coverage is generally much larger.

investment level of $35.5 billion over 5 years. These expenditures only address the physical condition of existing transit facilities. A number of new fixed guideway transit facilities are under construction or planned in our nation's urban areas to accommodate increased local demand. The investment needed to maintain current bus and rail transit performance, based on growth rates contained in urban area transportation plans, will cost $14 billion over the 5-year period. Providing additional transit service in urban and rural areas to increase mobility and improve the level of service would add another $22.5 billion.

To bring the physical condition of existing U.S. transit systems up to acceptable levels and provide additional service where planned and necessary would require $72 billion over the 1998-2002 period. Federal, state, and local funding for transit during that period is projected to be between $27 billion and $39 billion-a potential shortfall of up to $45 billion.

State and local governments are already shouldering much of the burden of financing transit operations and are reaching their limit. Unless the federal government increases its contribution for transit operating costs, transit fares will have to double.

If the nation fails to adequately invest in transit, service will deteriorate and traveler safety could eventually be jeopardized. The smaller urban and rural transit systems, which rely heavily on government support, would be most affected first, leaving people without access to jobs, health care, education, and social services. Larger metropolitan areas would also be affected, as traffic congestion would increase and many citizens would become isolated. The worsening conditions would be felt throughout the economy.

OTHER TRANSPORTATION NEEDS

PASSENGER RAIL

Since 1970, America's intercity passenger service has been provided by Amtrak, a for-profit corporation. In an effort to balance its costs against revenues and to reduce its reliance on federal funding, Amtrak has significantly cut its routes and schedules. Yet higher expenses lie ahead. Much of its fleet and infrastructure is reaching the end of its service life. For example, the average passenger car is 22 years old, and 40 percent of the cars are in need of a major overhaul. To keep Amtrak's equipment in good repair will cost $7.2 billion over the next 6 years. Upgrading the equipment and improving service would cost significantly more.

PORTS

America's ports and waterways fall under the responsibility of several public-sector and private-sector agencies. At the federal level, the major players are the U.S. Army Corps of Engineers and the U.S. Coast Guard. At the local level, port authorities, which are formed under state and local compacts, are chiefly responsible for meeting the ports' capital needs.

For the S-year period beginning in 1994, spending for ports is expected to be $5.8 billion-double that of 1993. More than 50 percent of the cost is attributed to specialized cargo (such as intermodal containers); 15 percent is for infrastructure improvements, including roadways, rail access, parking, lighting, and sewers. Historically, capital investments for ports were funded through the sale of bonds. Over time, however, the funding source has shifted to user fees.

BICYCLISTS AND PEDESTRIANS

When the nation grappled with gasoline shortages in the 197Os, some state and local

governments made their communities more amenable to bicyclists. ISTEA encouraged this by allowing federal-aid funds to be used for bicycle and pedestrian facilities.

Nationwide, bicyclists and walkers account for only 4 percent of all commuters. But that number rises to more than 13 percent in Boston and 9 percent in Philadelphia.

Most of the 99 million bicyclists in this country use their bicycles for recreation, rather than for basic transportation. Although 470,000 people commute to work each day by bicycle, the land-use decisions made in this country do not, on the whole, encourage biking to work. If bicycle facilities were made safer, more attractive, and more accessible, commuting by bicycle may increase.

A significant number of the injuries and fatalities that occur on the highway system involve pedestrians. If pedestrian facilities could be improved to make walking safer, more people might choose to walk to work.

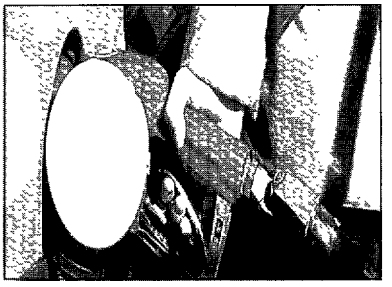
The cost of improving bicycle and pedestrian facilities varies greatly, from a few thousand dollars per mile for paint markings to almost half a million dollars per mile for separated paths and sidewalks.

Financing Highway and Transit Improvements

Fuel tax revenues have traditionally been reserved for transportation purposes and form the principal source of funding for transportation improvements. Yet a portion of these taxes are instead being diverted to nontransportation purposes, despite transportation funding levels that fall well below the nation's needs. Although some of the shortfall may be made up from other sources (such as the private sector), it will not be enough to ensure that the quality, efficiency, and safety of the transportation system does not suffer.

RECOMMENDATIONS

- Fund federal highway and transit programs at the highest levels the fuel taxes can sustain. The 4.3 cents per gallon in user taxes currently being spent on nontransportatron purposes should be deposited in the Highway Trust Fund and be spent on transportation improvements.
- Give states additional flexibility in managing and disbursing federal funds. This would allow states to undertake more projects, expedite project constructron, better manage capital for larger projects, and devise solutions for each state's particular needs.
- Allow tolls on Interstate highways, provided the revenues are used to Improve highways in that corridor.
- Assist states in pooling their federal funds to implement projects of regional significance, such as a bridge that crosses jurisdictional lines.
- Help states develop additional financing mechanisms for transportation Improvements, such as state infrastructure banks. These mechanisms would augment-not replace-federal funding, and would encourage a larger private-sector role in transportation development.



WHERE DOES THE MONEY COME FROM?

The money to build, maintain, and operate our transportation system comes from both the public sector and the private sector.

In 1993, federal, state, and local governments spent a total of $88.5 billion on highways. Most of those funds were collected from user fees, such as fuel taxes. States contributed more than half (53 percent) of the 1993 highway expenditures. County, city, and other local governments contributed 26 percent, and the federal government provided 21 percent.

Transit expenditures in 1993 totaled $15.4 billion. The federal government provided 21 percent of those costs; the remaining 79 percent came from state and local funds.

Highway projects financed by the private sector include construction of roads in new residential and commercial developments, improvements to existing roads necessitated by the increased traffic caused by those new developments, and toll roads that offer an opportunity for investment.

The federal government's share of funding comes from the Highway Trust Fund, which was established in 1956. The Trust Fund is financed by taxes on gasoline, diesel, and special fuel, as well as taxes on tires and heavy trucks. Currently, 4.3 cents of the 18.4 cent-per-gallon federal gasoline tax is deposited in the General Fund, rather than the Trust Fund.

Transportation Planning Issues

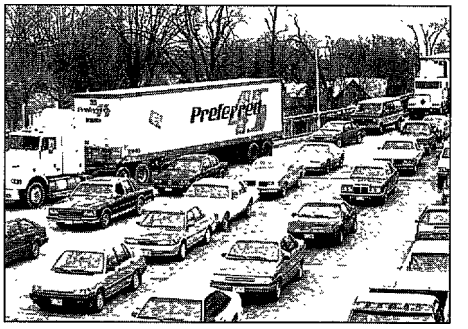


Photo credit Michigan DOT

In crafting ISTEA, Congress included language that encouraged states to take the lead in working with local governments and others to develop multimodal plans that would serve metropolitan areas, as well as the entire state. More flexible funding and design standards were also encouraged, as ISTEA allowed each state to set transportation priorities based on expected benefits.

To ensure the provision of safe, efficient, and dependable transportation services, the next transportation act should consider the following issues.

ROLLING WAREHOUSES

Today's manufacturers rely on "just-in-time" deliveries. Instead of warehousing several months worth of parts, they keep only a couple of days' worth on hand. This keeps their overhead to a minimum and makes companies more competitive in the marketplace. By carefully tracking inventories, companies order only when they need to. But if a shipment is delayed because of road conditions or traffic congestion, production can grind to a halt, costing the manufacturer lost income and productivity.

These rolling warehouses place even greater demands on the transportation system. Intermodal connections are pivotal to the success of the just-in-time delivery systems.

RECOMMENDATIONS

- Redirect federal regulations away from sanctions and mandates, which force highway agencies to adopt certain policies and procedures, or else lose a portion of federal construction funds. Sanctions are counterproductive; they lead to a reduction in already inadequate funding levels and impose priorities not necessarily based on the statewide multimodal planning process.

  In the National Highway System (NHS) Designation Act of 1995, Congress made significant strides in eliminating some of the most onerous of these provisions, such as the requirement that crumb rubber be added to asphalt paving mixes. The NHS bill was a first step, and the next surface transportation bill should continue down that path.

- Simplify and reduce the number of federal regulations and clearances needed for transportation program delivery. Overly prescriptive interpretations by federal agencies have led to overly restrictive or unworkable regulations. These matters are further complicated by multiagency approval requirements, fiscal constraint provisions, and confusing language regarding the roles and responsibilities in delivering transportation programs.

  For example, highway and transit planning regulations require a detailed alternative mode analysis known as a major investment study (MIS). An MIS can take years to complete and often costs millions of dollars. These studies are not an ISTEA requirement, but rather an interpretation by regulators. In practice, the MIS requirement has been inconsistently interpreted and enforced, and it duplicates statutory requirements. such as the transportation planning process set forth in ISTEA and the environmental planning processes of the National Environmental Policy Act.

- Eliminate funding for demonstration projects and reduce set-asides and suballocations. Funding that is set-aside or earmarked for special projects impedes states' planning and budgeting processes and limits their flexibility. Highway and transit funds should be spent where they will do the most good; state and local governments cannot afford to spend transportation funds on projects that will not yield significant improvements.

- Strengthen the states' role in the federal-state partnership. States should be given the flexibility to implement transportation plans and programs at levels beneficial to each locality. The transportation planning issues facing rural areas, for example, are not necessarily similar to those of densely populated urban areas. Programs that work in some areas might not work in others.

- Recognize the central role of MPOs and local governments in the federal-state-local partnership. MPOs and local governments should continue as active partners in a state's transportation planning, programming, and project delivery.

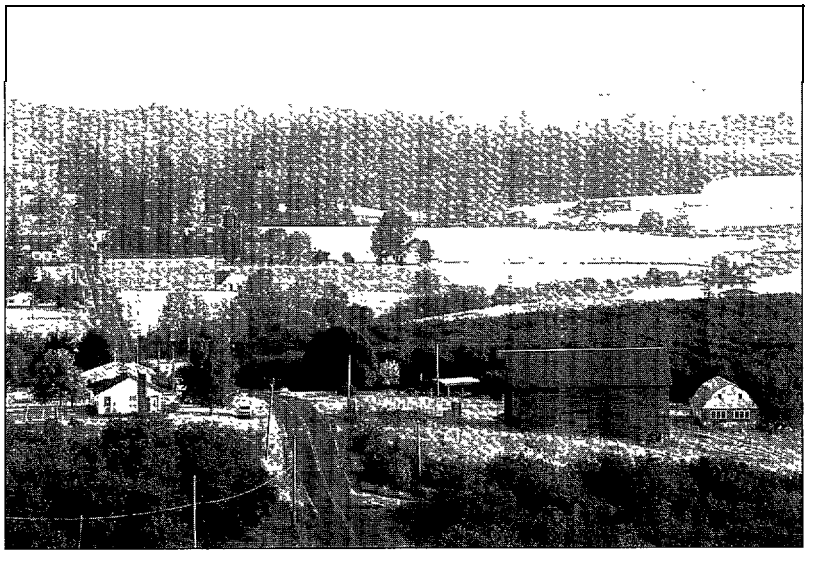
Environmental Issues

On the planning and construction phases for highways, transitways, and other facilities, transportation agencies thoroughly evaluate the effect a project will have on the environment. Transportation facilities are developed to meet a locality's needs, but those needs must be balanced against other societal concerns, such as protecting the environment.

State transportation agencies consider protecting the environment an important part of their mission. But in many cases, complex and often confusing environmental rules, regulations, and laws have resulted in inefficient transportation actions and imposed needless additional costs.

RECOMMENDATIONS

- Streamline federal environmental regulations that affect transportation projects to eliminate overlap and duplication.
- Consolidate the responsibility and authority for reviewing transportation plans within an agency or agencies. This would be more efficient, providing "one-stop shopping" for federal environmental reviews.
- Include cost-benefit analysis and economic considerations in the criteria by which federal agencies set environmental standards. Doing so will help prevent unnecessary regulations and help determine project priorities.
- Before enacting new environmental laws, Congress should work with transportation professionals in state agencies to gain a better sense of the relationship between transportation and the environment and a better understanding of how environmental laws affect transportation development.



Transportation Research leads to Innovation

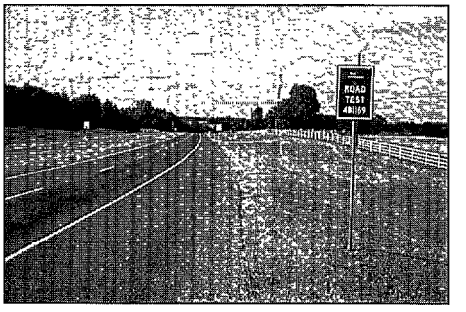
The nation has come a long way since the horse and buggy. Not only is there more personal choice in transportation, but travel is also safer and faster. These improvements are largely due to innovative materials, technologies, and practices that were developed by research programs and adopted by the transportation industry.

Innovative technologies can give transportation agencies an edge on the ever-increasing demands for facility maintenance and improvements. For example, conventional bridge repair techniques often involve major reconstruction, at high cost and with great inconvenience to travelers. Today, however, advanced composite materials allow bridge repair work to be done in less time, with less disruption to traffic, and at a lower cost.

The demands on the transportation system make it more important than ever that the nation continue to encourage and adequately fund transportation research. Federal leadership and funding is essential for developing efficient, effective solutions to the challenges and problems facing the system. It is in the nation's best interest to protect its investment in the transportation system and to provide federal support for technological innovations to maintain and improve the system.

Research programs have led to significant improvements in the transportation system. But there is still much research to be done. State governments and agencies believe in the need for a strong transportation research program. They are committed to continuing their share of funding for local, regional, and cooperative research programs. The investments this country makes in transportation research, development, and implementation are returned many times over in benefits to the economic system, personal safety and quality of life, and national defense.

The next surface transportation bill should address the following issues.



RESEARCH TODAY... BETTER PAVEMENTS TOMORROW

State highway agencies and the Federal Highway Administration are partnering in a unique experiment to study the long-term performance of concrete and asphalt pavements. Known as the long-term pavement performance (LTPP) program, the studies are in-depth investigations, spanning 20 years, of how variations in pavement designs, materials, traffic loads, environment, subgrade soils, and maintenance practices affect performance.

More than 1,800 test sites are being monitored on in-service roadways throughout the country. Eventually, more than 2,600 sites will be monitored. The results will give transportation departments the information and tools they need to build and maintain pavements that will be more durable, longer lasting, and less costly. The LTPP program was established under the Strategic Highway Research Program and is now being managed by the Federal Highway Administration.

RECOMMENDATIONS

- ⇒ Federal leadership and funding are essential ingredients for developing efficient, effective technical solutions to the nation' s transportation challenges.
- ⇒ The federal government should encourage states and other transportation stakeholders to adopt innovative technologies. Funding should not only be provided for research, but also for assistance in Implementing the results of the research.
- ⇒ Transportation research needs are national in scope and local in impact. Programs and funds must address needs at both levels.
- ⇒ State research and development activities should be funded at least at the level that was provided in ISTEA. This will assist transportation departments in finding ways of doing more with less, as they deal with steadily increasing needs and shrinking budgets.
- ⇒ Federal funding for developing and demonstrating intelligent transportation systems (ITS) should be continued. ITS technologies address a number of important transportation issues, including traffic congestion, highway safety, transit services, and goods movement.

An Opportunity to Shape the Nation's Future

A safe, efficient transportation system is at the core of the nation's well-being. Investments in the transportation system are investments in the nation's future: they will make travel safer, and they will encourage growth.

As Congress begins to draft the next surface transportation bill, its members have an opportunity to shape the future of the nation's security, economy, and international competitiveness.

The ideas and suggestions in this report can be boiled down into four overarching recommendations for Congress, as it deliberates on the next surface transportation bill:

- The 4.3 cents per gallon in user taxes collected from motorists should be deposited in the Highway Trust Fund and be spent on system maintenance, rather than deposited in the General Fund, where it is spent on nontransportation purposes.
- State and local governments should be given more flexibility in determining how, when, and where transportation resources are spent, to maximize the benefit to mobility, safety, and the environment.
- Many of the key concepts of ISTEA, such as state and local cooperation, intermodal planning, and public participation, should be retained.
- Burdensome provisions imposed by ISTEA and earlier laws, which hamstring states' efforts to improve the transportation system, should be eliminated or reduced.

For a more detailed discussion of the issues raised in this summary report, please refer to the full reports, which are available from AASHTO.

Appendices

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