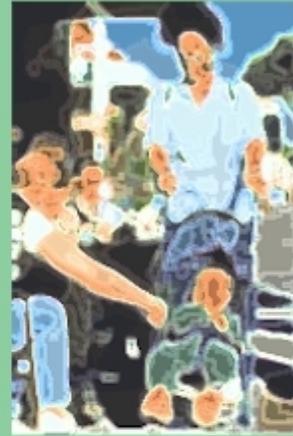


SURFACE TRANSPORTATION POLICY PROJECT

CHANGING DIRECTION

FEDERAL TRANSPORTATION SPENDING IN THE 1990s



March 2000

A TRANSPORTATION AND QUALITY OF LIFE PUBLICATION

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Executive Summary

Transportation is changing in the United States. As highways fill beyond capacity, forward-looking transportation officials have started to invest in a diversified transportation system that gives residents options beyond driving. Changes in federal transportation law in the past decade have made this diversification possible. However our analysis of transportation spending patterns shows that the move toward greater choice is stalling, and we may be reverting back to strategies that won't effectively address the transportation problems of the 21st century. This report details transportation trends from the past decade and what they mean for our future.

In this report, STPP analyzes ten years of data from the U.S. Department of Transportation's Fiscal Management Information System as well as reports from the Federal Transit Administration that track how the states have spent federal transportation dollars. These reporting systems cover more than 360,000 individual transportation projects undertaken with federal funds in the 1990s.

Our major findings are:

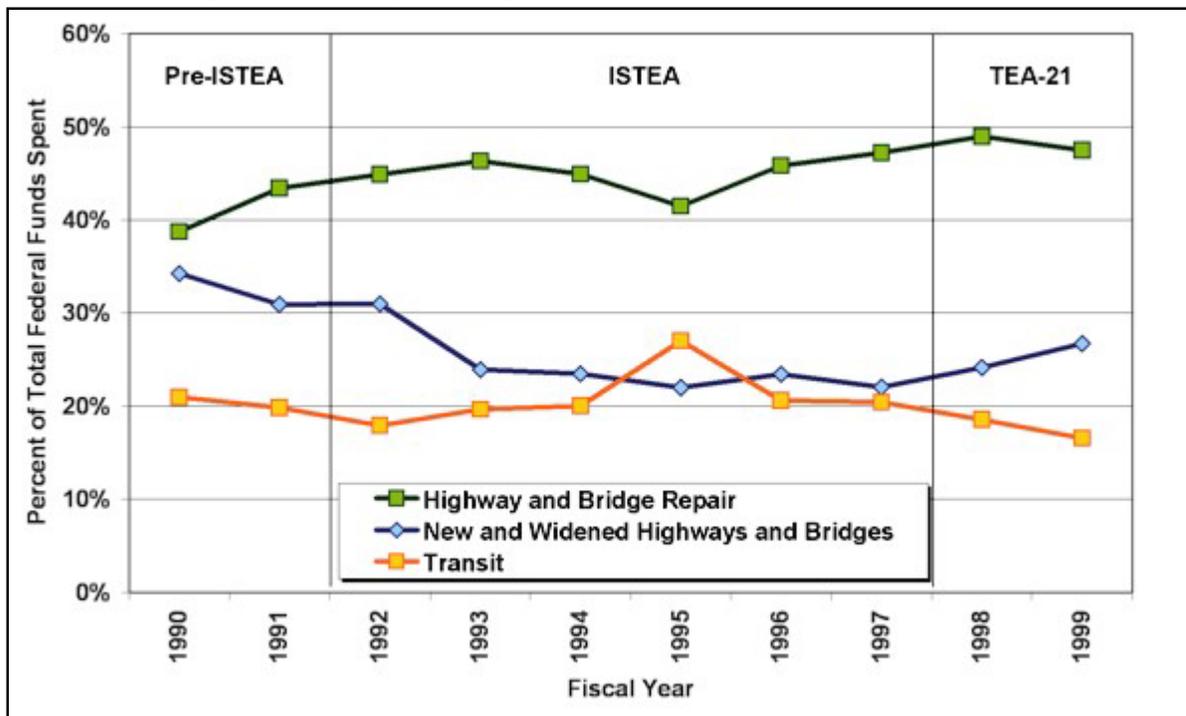
1) In the 1990s, federal transportation spending changed for the better. More money started going to fix bad roads, reduce impacts on the envi-

ronment, and get people out of congestion by giving them a wider set of transportation choices. The share of federal funds going to road repair grew from 39 percent in 1990 to 49 percent in 1998. Spending on public transportation almost doubled, from about \$3 billion in 1990 to almost \$6 billion in 1999. These changes stem from new federal transportation policies adopted in 1991.

2) We're seeing some improvements on the ground. Road conditions are finally improving after years of decline. From 1994 to 1998, the share of major roads in less than good condition fell from 67 percent to 56 percent. In addition, the long-term decline in public transit usage reversed in the mid-1990s as bus and train service improved. Transit ridership has increased by more than 15 percent since 1996. The policy changes of the 1990s are starting to work.

3) Unfortunately, the positive trends in spending have stalled. Funding that had been going to repair roads and bridges and provide people transportation choices is now going to build new and wider highways. As shown below, in the last two years, the portion of federal funds going to new and wider roads grew by 21 percent, just as the portion of funds going to transportation alternatives fell by 19 percent.

Federal Transportation Spending in the 1990s



4) *Spending is reverting to old, ineffective patterns that are not what the public wants.*

The upsurge in spending on new and wider roads shows that many transportation officials are trying to address congestion by building roads. However, a growing body of transportation research shows that such spending is not an effective method for fighting traffic congestion. In addition, polls and surveys from around the country show that most people want more travel choices, not more roads. For example, in a 1999 Hart Research poll in Washington State, suburban voters favored transit over roads by more than three to one when asked how state transportation funds should be used to reduce traffic and increase availability of convenient and safe transportation.

5) *In many states, decision makers have been slow to innovate or respond to the public will.*

Although state and regional transportation officials have new opportunities to pursue innovative transportation strategies, few are seizing these opportunities. In spite of new policies, new research and new public attitudes, they're doing things the same old way. States now have the discretion to use federal funds for a wide variety of projects, but less than 7 percent of this "flexible" funding has gone to providing new transportation alternatives. Almost 90 percent has gone to traditional highway projects.

Transportation Spending Trends

Federal transportation funding and policy took a new turn in the early 1990s, when the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 opened up federal transportation spending to uses beyond road building. The states, led by their Departments of Transportation, decide how to spend the money. This report details just how much the states have taken advantage of the new opportunities presented by ISTEA and its successor, the Transportation Equity Act for the 21st Century (TEA-21). We measure progress in four areas: providing choice; fixing the roads; improving safety and the environment; and, improving accountability.

Providing Choice. Federal spending data show the states have invested more heavily than ever before in offering their residents transportation choices. Funding for bike paths and lanes, side-

walks, and other facilities for walkers and cyclists exploded, growing from \$7 million in 1990 to \$222 million in 1999. Funding for buses and rail transit nearly doubled. This means that more Americans have more travel choices, making it possible for more people to avoid driving on our increasingly congested road system.

But the state commitment to choice is still questionable. While the federal government has opened much of its transportation funding to a variety of uses, few state Departments of Transportation (DOTs) are taking advantage of this new flexibility. Only a tiny fraction of this money has been used to diversify citizens' transportation options. The states have underspent in categories specifically designed to give people more transportation options, such as the Transportation Enhancements program, deciding instead to use the funds on roadways.

Road Repair. Over the decade, the states shifted their investment in roads toward repair as encouraged by Congress. The investment of more than \$100 billion in repair resulted in a modest improvement in road condition nationwide. But as noted above, the trend may be reversing as state DOTs again invest more heavily in the construction of new roads and the widening of existing ones. Of all the road-building money spent in the 1990s, 16 percent was spent in the final year of the decade.

Safety and the Environment. While much has been made of safety improvements on our roadways, auto accidents remain the leading cause of death among Americans under 35 years of age. The amount spent per year on safety has risen throughout the decade, but curiously, the portion of federal funds spent on safety fell slightly, from six to four percent of all FHWA-administered funds. In addition, while nearly 16 percent of all traffic deaths in the 1990s were bicyclists or pedestrians, less than two percent of federal safety dollars were used specifically to improve safety for these road users.

The best financial measure of transportation spending on environmental problems is the Congestion Mitigation and Air Quality Improvement (CMAQ) program. This funding source is intended to help states meet air quality goals as set out in the Clean Air Act. The most effective use of these funds is on projects that will continue to reduce pollution for

years to come by giving people choices beyond driving. Short-term benefits are achieved through inspection and maintenance programs and other measures that lessen auto pollution without changing automobile dependence. By our analysis, 42 percent of CMAQ funding went toward long-term benefits, 50 percent went toward short-term benefits, and eight percent was spent on road-expansion projects with no pollution reduction benefit.

Accountability. Federal funds for planning and administration grew dramatically during the decade, rising from \$257 million in 1990 to \$893 million in 1999. But it is hard to tell whether this investment in planning led to better outcomes. States are not required to establish any methods to measure progress toward transportation goals. This makes it difficult for policy makers or citizens to determine the effectiveness of transportation spending.

The Picture at the State Level

In order to draw a picture of state performance, we compared how the states have spent their federal transportation dollars, and then divided them into four categories. States that failed to take advantage of the broad range of new opportunities are categorized as “behind the times.” These states underspent in at least five out of seven spending measures relating to everything from transit to safety to road repair. Another grouping of states show a weak commitment to improving travel choices, and are categorized as “offering few choices.” The spending patterns of a third group of states are considered “middle of the road.” They show mixed results, with strong spending in some areas analyzed, and weak spending in others. Some states, often led by officials in their metropolitan areas, used higher amounts of federal

transportation dollars in the 1990s to begin providing their residents with more choices, better road conditions, and improved safety and environmental protection. These states are called “open to change,” in recognition that while they have begun to shift transportation spending, they still have a long way to go.

Behind the Times

- Arizona
- Arkansas
- Colorado
- Georgia
- Hawaii
- Idaho
- Iowa
- Louisiana
- Mississippi
- Nevada
- South Carolina
- Tennessee
- Texas
- Wisconsin

Offering Few Options

- Alabama
- Delaware
- Indiana
- Kansas
- Kentucky
- Michigan
- Montana
- Nebraska
- North Carolina
- North Dakota
- Oklahoma
- South Dakota
- West Virginia
- Wyoming

Middle of the Road

- Florida
- Maine
- Maryland
- Massachusetts
- Minnesota
- Missouri
- New Hampshire
- New Mexico
- Ohio
- Oregon
- Pennsylvania
- Utah
- Virginia

Open to Change

- Alaska
- California
- Connecticut
- Illinois
- New Jersey
- New York
- Rhode Island
- Vermont
- Washington

Introduction

Federal transportation policy went through big changes in the last decade, led by the 1991 enactment of the Intermodal Surface Transportation Efficiency Act (ISTEA). ISTEA introduced new underlying principles to the federal transportation spending program: more control over decision making at the state and local level; a greater emphasis on public participation; new attention to providing citizens with alternatives to driving; and an increased commitment to maintaining existing roads before building new ones. These principles fundamentally altered the way transportation policies are made in this country.

Since 1956, when the modern federal transportation program was created, the main goal of federal spending had been to build and maintain a nationwide network of Interstate highways. As it was to be a national system, a high level of control was exerted from Washington. The federal government provided 90 percent of the money, and controlled both the design of the roads and the routes they would take. ISTEA changed this.

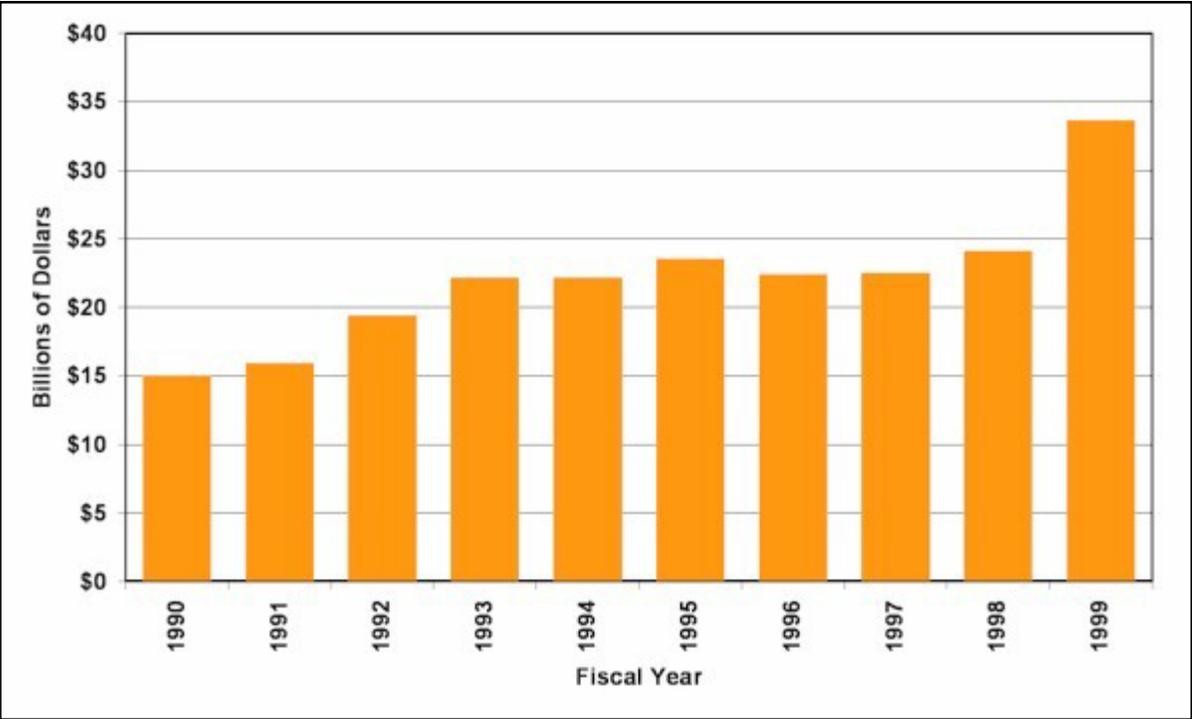
ISTEA ended the era in which most federal money could be used only for one thing: road construction. Now, states and localities can choose to use

a major share of their federal funding on almost any transportation project. In addition, ISTEA created new funding programs to reduce air pollution and provide communities with tools to enhance their environment with appropriate transportation projects. When ISTEA expired in 1997, Congress enacted a new spending program, called the Transportation Equity Act for the 21st Century, or TEA-21. It continued ISTEA's policy framework, while increasing overall funding by more than 40 percent. The big increases in spending brought about by ISTEA and TEA-21 are shown in Figure 1.

The purpose of this report is to describe whether changes in federal transportation policy have made a difference for Americans seeking better roads, more choices, and other improvements to the transportation system. Have new priorities at the federal level resulted in new spending patterns by the state Departments of Transportation? What are taxpayers getting out of all this spending?

To answer this question, we obtained and analyzed Federal Highway Administration records from their Fiscal Management Information System (FMIS), as well as reports provided by the Federal Transit Administration. The FMIS contains records

Figure 1. Total Federal Spending for Transportation



for approximately 360,000 federally funded transportation projects undertaken across the country in the 1990s; its uses and limitations are detailed in Chapter Four and in the Methodology.

While federal transportation spending is a multi-step process, for our analysis we considered money “spent” when the state committed funds by awarding a contract. As a result, these numbers differ slightly from the official obligation tables published by FHWA. This analysis also differs in that it is perhaps the first time anyone has analyzed all federal transportation dollars simply according to the type of project funded, such as a bicycle facil-

ity or a road repair. Most analyses focus on what money is given to the states, not on how these funds are actually used.

The analysis described in chapters One through Four is divided into four parts: Providing Choice, Fixing the Roads, Protecting Public Safety and the Environment, and Assuring Accountability. Various measurements generated in these four sections were then combined to create an overall picture of the policy choices being made in each state. This analysis, which groups the states in several categories based on the choices they have made, appears in Chapter Five.

CHAPTER ONE

Providing People with More Transportation Choices

Transportation spending has just begun to provide Americans with more transportation choices. But further progress is not assured.

The central message sent by the federal transportation policy of the 1990s was a new emphasis on choice. The era of one-size-fits-all transportation policy was over, replaced by an emphasis on giving local governments choices in how to spend federal money, and on giving citizens more choices in how they get around.

Why Choice is Important

ISTEA and TEA-21 offer state and local policy makers new options. During the heyday of Interstate highway construction, when federal money focused on road building, state and local officials who felt that new roads would solve their problems were in luck. Those who felt otherwise could get little assistance from the federal government. Now states and localities have a high level of choice. More than a quarter of federal transportation money – almost \$50 billion out of the \$190 billion given out between 1992 and 1999 – could have been used on almost any surface transportation project, from road repair to transit to bike lanes.

But important as it is to give *government officials* new choices, this has little meaning for most users of the transportation system. What citizens care about is whether *they* have choices. And this can only happen if state and regional policy makers exercise their options and decide to invest money in diversifying the transportation system. If all the money goes into roads, they will never be able to provide more than a small minority of their population with access to other options – high-quality bus service, new light rail lines, safe and convenient bike lanes and bike paths, and walkable neighborhoods.

Providing travel options beyond the automobile is becoming increasingly important as our transportation system matures. Almost all of the United States is served by an intricate network of Interstate highways and local roads. Now a primary challenge facing transportation planners is the traffic congestion clogging these roads.

One of the best ways to fight congestion is to give people a way to avoid it entirely. In places where people enjoy quality train and bus service, where bicycling is safe and convenient, and where children can walk to school, traffic congestion affects far fewer people. Residents can make choices

The Public Wants Choice

A 1998 poll in Minneapolis/St. Paul showed that 88 percent of the residents believe a more balanced investment approach that boosts transit use is somewhat or very important to the region's quality of life.

In a 1999 Hart Research poll in Washington State, suburban voters favored transit over roads by more than three to one when asked how state transportation funds should be used to reduce traffic and increase availability of convenient and safe transportation.

A recent poll of St. Louis County (suburban St. Louis) residents showed 70 percent of residents surveyed thought light rail expansion was important or very important. It was the highest ranked priority ahead of other county services such as parks, public safety, and sewers.

A June 1999 survey of residents, businesses and employees in downtown Detroit showed that most people support new mass transit over redesigning the local Interstate or building more roads to relieve congestion.

In a February 2000 poll by the San Francisco Bay Area's Metropolitan Transportation Commission, 76 percent of people surveyed named improved public transit as a high priority for the region. Only 36 percent named road building as a high priority.

Even in Atlanta, known for its road network, residents have consistently expressed a desire for more choices. A 1998 *Atlanta Journal-Constitution* poll found that 62 percent of residents of suburban Gwinnett County believe public transportation should be "greatly expanded."

about how they get around – and how much time they are willing to spend stuck in daily traffic jams. Those who still choose to drive face less congested conditions because fewer cars are on the road network. Unfortunately, most Americans still do not really have much choice. The suburban areas where 60 percent of Americans live are generally poorly served by transit, and often inconvenient and unsafe for walking or bicycling, especially for children. Spending time in the car is mandatory, and sitting in traffic is unavoidable.

Providing transportation options is also important for the millions of Americans who cannot or choose not to drive: children, the elderly, people with low incomes or with disabilities. Poor accessibility in suburban regions has become a major problem for employers who have trouble filling low-wage jobs, and for the workers who need those jobs but cannot afford a car. The Federal Transit Administration’s Jobs Access program is one attempt to begin to rectify this problem (see *Job Access*, page 14).

Public opinion surveys of various kinds show that most people want a wider range of choices than they are getting. Polls taken across the country indicate that people want travel alternatives in their communities.¹ (See *The Public Wants Choice*, page 11). Nationally, polls indicate that transportation is becoming an increasingly significant issue. A recent poll sponsored by the Pew Center for Civic Journalism² indicates that sprawl and traffic have joined crime as top national concerns. In

the four cities surveyed,³ sprawl, unfettered growth and traffic congestion were the overwhelming concern, outstripping crime, the economy and education.

How Federal Dollars Have Promoted Choice

When it comes to providing more transportation choices for the average citizen, our analysis shows that federal transportation policy changes in the past decade have just begun to steer money in new directions to diversify our portfolio of transportation modes.

Biking and Walking. Perhaps the most dramatic change in transportation spending in the 1990s was the huge increase in funding for the most fundamental and cost-effective forms of transportation – bicycling and walking. Policy changes included in ISTEA made it possible for the first time to spend a significant amount of federal transportation funds on making it safer and easier to bicycle and walk. As a result, the amount of federal money spent on such projects in 1999 was 30 times higher than the amount spent in 1990, growing from just over \$7 million to more than \$222 million. These figures probably understate spending, because many improvements are made as part of building or widening roads and may not be recorded as bicycle/pedestrian projects.⁴

This level of spending, while still modest, meant that communities all over the United States received their first multi-use paths and bike lanes.

For example, the 22-mile Pere Marquette Trail in Michigan connects Midland and several other communities, while the 19-mile West Orange Trail in central Florida uses an abandoned rail corridor to connect four cities.

While showcase projects are important, one of the most important innovations was TEA-21’s direction that communities take bicyclists and pedestrians into consideration when planning most roads. For example, besides the well-known recreational trails in the surrounding area,

Figure 2. Federal Spending on Bicycle and Pedestrian Projects

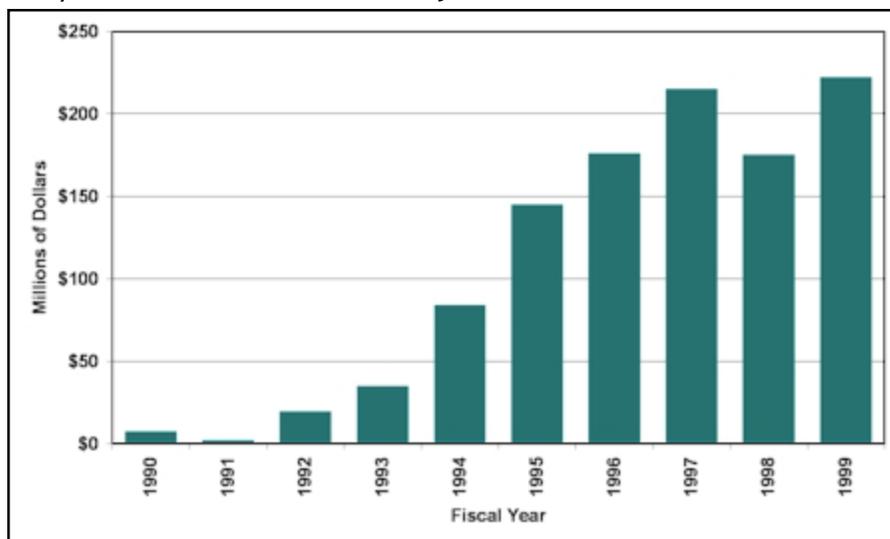
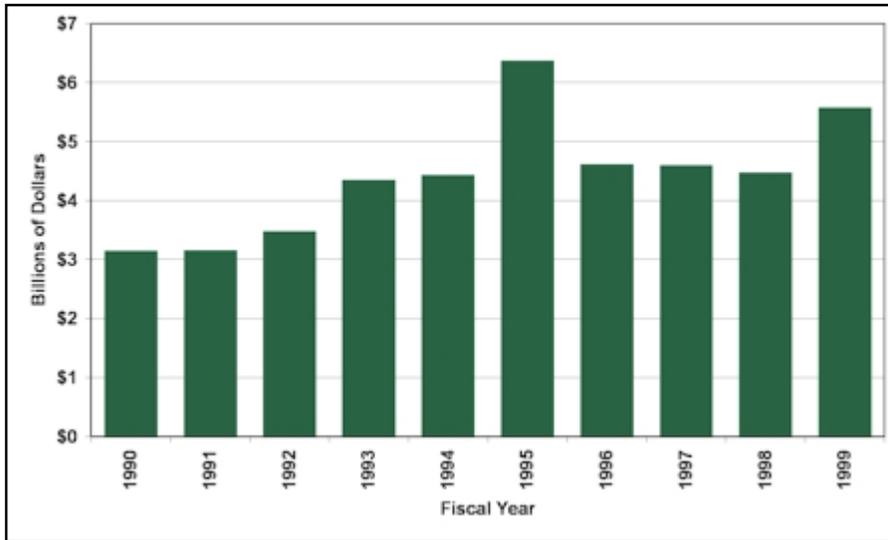


Figure 3. Federal Spending on Transit Projects



Tucson, Arizona, has installed more than 200 miles of on-street bike lanes funded through ISTEA. Building roads with bicycle lanes, wide curb lanes, and sidewalks is extremely cost-effective, and can make a big difference in providing more transportation choices.

Even with the increases in spending, bicycle and pedestrian projects remained a miniscule portion of total federal transportation dollars, never growing beyond one percent of the total. Figure 2 shows the increase in federal funds going to bicycle and pedestrian projects over the decade.

Providing Choice with Transit. When he signed TEA-21 in 1998, President Clinton noted that it “ensures an appropriate balance between highway and transit spending.” Federal funds going to provide bus and train service have grown substantially since 1990, with funds increasing from just over \$3 billion in 1990 to close to \$6 billion in 1999. (See Figure 3.) However, the funding balance between highways and transit has actually gotten a bit worse in the last two years.

While funding increases for transit are good news for those who believe in providing more choices, they must be seen in the context of greater overall funding for transportation. Between 1990 and 1999, use of federal funds for transit in-

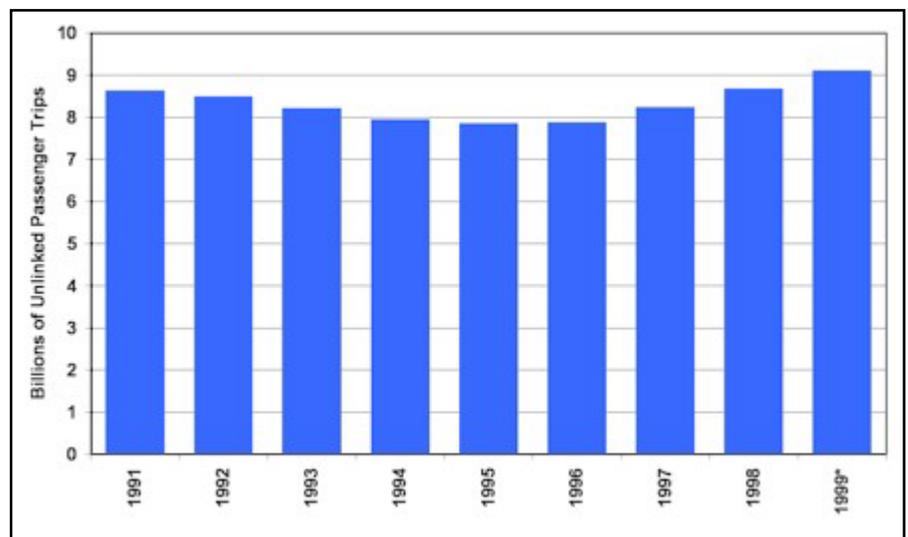
creased by 75 percent, but overall funding for highways increased by 124 percent. On the whole, in spite of the changes in transportation policy during the 1990s, the share of federal funds going to transit grew slightly over the first part of the decade, but then fell again (see Figure 5, page 20). Transit spending in the first two years of TEA-21 makes up a smaller portion of federal transportation outlays than during the years of ISTEA, moving from 21 percent of all federal dollars dur-

ing ISTEA to less than 17 percent.

While the record for federal funding of transit may be ambiguous, the result of the absolute increase in dollars spent is not. Even though transit’s share of total funds has not risen, the increase in dollars flowing to transit is helping bring about a resurgence in transit use. After continuing declines in ridership throughout the 1980s and early 1990s — a time when funding was flat or declining — the last few years have seen a sharp upswing in ridership. Total transit boardings have increased almost 16 percent in just the last four years. This is shown in Figure 4⁵.

Improving Transit Quality. This increase in ridership is in large part due to improvements in the quality and extent of transit service made possible

Figure 4. U.S. Transit Ridership, 1991 to 1999



by greater funding. While some residents were dubious about who would use St. Louis' MetroLink light rail system, after just three days of operation, more than 180,000 people had used the system. MetroLink averaged 40,000 daily riders within two years of its 1993 opening, twice what was projected, and more than the year 2010 forecast. The presence of this new system is resulting in neighborhood revitalization and development.

Transit investments bring a variety of benefits beyond providing rides to users. They help motorists by reducing congestion, save individuals and governments millions of dollars by providing transportation to people without cars, and help improve air quality. By one estimate, the public realizes five dollars in cash savings for each tax dollar invested in transit services.⁶ Some metropolitan areas, such as Dallas, are using rail transit to help spark future cost-effective development patterns. The DART light rail system opened in Dallas in

1996 with 20 miles of track and 20 stations, and the transit agency and the city are promoting transit-oriented development opportunities around the stations. The DART board recently approved a new route for light-rail with nine new stations, which is scheduled to be completed by 2008.

Innovative transit is not limited to light rail. For example, an electric shuttle service is available in Miami's South Beach community, which is drawing non-traditional transit users. The "Electrowave" fleet of seven 22-passenger buses runs 18 to 20 hours every day taking passengers to 30 stops around South Beach for 25 cents per ride. The emission-free shuttle buses make it easy for visitors and residents to move around without driving, significantly reducing emissions and congestion in the area.

More and more communities are also looking at transportation in terms of the whole trip, and providing for good connections

between different modes. Many communities have added bicycle racks to their city bus fleets, extending the reach of bicycle travelers. For example, King County Metro, the transit agency for the Seattle metropolitan area, took advantage of ISTEA in the early 1990s by equipping all 1,200 of the agency's fleet with bike racks. Now all city buses are purchased with bike racks installed. Others have focused on improving pedestrian access to transit stops. And some have created multi-modal transportation centers, where travelers can easily transfer between private automobiles, buses, and long- and short-haul trains. The Central Ohio Transit Authority's Linden Transit Center in Columbus is the transfer point for their clean-fuel bus system. The Linden Transit Center connects a high un-

Job Access

For welfare recipients, a lack of transportation choices has a very real consequence: many of them cannot get to the jobs they desperately need. By some estimates, 50 percent of new job growth is in areas not served by transit. And a large portion of welfare recipients do not have access to a car.

A new federal transportation funding program is designed to help close the transportation gap for welfare recipients and other low-income workers. The Job Access and Reverse Commute program encourages innovative community-based programs that provide vanpools, city-to-suburb bus lines, and other services aimed at getting those coming off welfare to jobs. The program is administered by competitive grant, and \$70 million in grants to 49 states were awarded in 1999.

Among early recipients was the Worcester Regional Transit Authority in Massachusetts, which is using Job Access funds to establish new bus service connecting 29 major employers, 24 daycare centers, 26 training facilities and 2 GED test centers. Northwest Ohio Commuter Link has begun a van service that works with job placement agencies in Toledo, and has helped welfare recipients get to daycare and hold down jobs for the first time in years.

Unfortunately, the program has been slow to get off the ground. This is partly because community groups seeking to provide a vanpool must meet the same bureaucratic requirements faced by a big-city transit agency. In addition, the second year of funding for this program was extensively earmarked by Congress, and the future of the competitive grant system for this program is in doubt.

For more information about the Jobs Access and Reverse Commute Program, visit the Federal Transit Administration's website: <http://www.fta.dot.gov/wtw/>

employment area to needed employment sites. It serves transit and community needs by providing a major transfer point, a child care center, banking services, an outlet of Children's Hospital and the Columbus Health Department office for pre- and post-natal care. Such improvements make transit a more attractive and viable option for many people.

The Picture at the State Level. While national trends are important, much of the real action is at the state and local level, where many important decisions are made. State Departments of Transportation make most spending decisions in metropolitan areas. This is done in cooperation with Metropolitan Planning Organizations (MPOs).

States have varied widely in their investments in alternative transportation modes this past decade: some have made a major commitment to expanding transportation options. Others have stuck to using federal funds to provide roads.

Spending patterns can be hard to sort out since federal funding for transit varies greatly from one state to another. A major source of these variations is the differing allocations of federal money received by different states. The details of the federal transit funding formulas are complicated, but in general, areas with higher transit usage receive more money. In addition, areas that are making substantial new investments to expand transit service receive more federal money under the New Starts program (see *New Starts for Transit*, page 19). In Table 1 we show spending of federal dollars on public transit and bicycling and walking in each state on a per capita basis.

Also revealing is how states changed their spending habits during the decade: which states made a stronger commitment to providing choice, and which did not. Table 2 compares the percentage of federal funds each state spent on alternative transportation modes early and late in the decade, with the states that showed the largest increases at the top of the list. States near the bottom of the list either failed to place more priority on using federal funds to provide alternatives, or were already investing federal funds heavily in alternatives systems at the beginning of the decade. In this table, alternative modes is defined to include transit, biking and walking facilities, as well as "travel demand management" techniques to promote the use of

Table 1. Federal Funds Spent on Alternative Modes

| State | Average Annual Spending per Capita (1990 to 1999) | |
|-------------------|---|----------------|
| | Bicycle and Pedestrian | Transit |
| Alabama | \$0.67 | \$4.66 |
| Alaska | \$6.27 | \$8.55 |
| Arizona | \$0.26 | \$8.54 |
| Arkansas | \$0.32 | \$3.76 |
| California | \$0.09 | \$21.85 |
| Colorado | \$0.50 | \$12.18 |
| Connecticut | \$1.02 | \$20.33 |
| Delaware | \$1.40 | \$7.50 |
| Florida | \$0.58 | \$10.55 |
| Georgia | \$0.77 | \$12.26 |
| Hawaii | \$0.43 | \$21.89 |
| Idaho | \$0.33 | \$3.72 |
| Illinois | \$0.24 | \$25.74 |
| Indiana | \$0.41 | \$7.12 |
| Iowa | \$0.65 | \$6.70 |
| Kansas | \$0.64 | \$3.53 |
| Kentucky | \$0.34 | \$4.74 |
| Louisiana | \$0.29 | \$8.78 |
| Maine | \$0.59 | \$6.90 |
| Maryland | \$0.42 | \$19.87 |
| Massachusetts | \$0.42 | \$29.11 |
| Michigan | \$0.24 | \$7.46 |
| Minnesota | \$0.45 | \$7.00 |
| Mississippi | \$0.07 | \$2.96 |
| Missouri | \$0.05 | \$14.98 |
| Montana | \$2.01 | \$4.34 |
| Nebraska | \$0.80 | \$5.27 |
| Nevada | \$0.26 | \$8.92 |
| New Hampshire | \$1.21 | \$3.63 |
| New Jersey | \$0.11 | \$35.93 |
| New Mexico | \$1.29 | \$5.23 |
| New York | \$0.48 | \$45.02 |
| North Carolina | \$0.35 | \$4.22 |
| North Dakota | \$2.36 | \$4.72 |
| Ohio | \$0.47 | \$10.65 |
| Oklahoma | \$0.45 | \$3.90 |
| Oregon | \$0.94 | \$33.29 |
| Pennsylvania | \$0.21 | \$22.05 |
| Rhode Island | \$1.20 | \$16.22 |
| South Carolina | \$0.22 | \$3.29 |
| South Dakota | \$1.20 | \$4.46 |
| Tennessee | \$0.74 | \$6.22 |
| Texas | \$0.17 | \$10.78 |
| Utah | \$0.36 | \$20.16 |
| Vermont | \$1.13 | \$13.04 |
| Virginia | \$0.14 | \$6.77 |
| Washington | \$0.83 | \$13.61 |
| West Virginia | \$0.31 | \$5.41 |
| Wisconsin | \$0.31 | \$7.58 |
| Wyoming | \$2.40 | \$4.17 |
| Nationwide | \$0.41 | \$16.85 |

Table 2. State Trends in Funding Alternative Modes

| State | Percent of Federal Funds to Alternative Modes, 1990-91 | Percent of Federal Funds to Alternative Modes, 1998-99 | Change in Share Spent on Alternative Modes |
|----------------|--|--|--|
| Alaska | 2% | 8% | 334% |
| Vermont | 4% | 15% | 251% |
| Utah | 14% | 46% | 228% |
| Washington | 10% | 20% | 99% |
| Wyoming | 2% | 3% | 98% |
| Nevada | 6% | 12% | 92% |
| Delaware | 4% | 8% | 90% |
| New Hampshire | 5% | 9% | 71% |
| North Dakota | 2% | 4% | 71% |
| South Dakota | 2% | 4% | 63% |
| Idaho | 3% | 4% | 58% |
| Minnesota | 9% | 14% | 58% |
| Rhode Island | 11% | 18% | 56% |
| Hawaii | 17% | 26% | 51% |
| Georgia | 14% | 21% | 46% |
| Arkansas | 5% | 6% | 28% |
| Kansas | 4% | 5% | 27% |
| Massachusetts | 28% | 36% | 26% |
| Iowa | 6% | 7% | 23% |
| New Mexico | 5% | 5% | 13% |
| New Jersey | 32% | 37% | 13% |
| Oregon | 22% | 25% | 11% |
| California | 33% | 36% | 9% |
| Virginia | 12% | 13% | 9% |
| Connecticut | 22% | 24% | 8% |
| Wisconsin | 9% | 10% | 5% |
| Louisiana | 10% | 11% | 3% |
| Colorado | 20% | 21% | 1% |
| Oklahoma | 6% | 6% | 0% |
| Texas | 12% | 12% | 0% |
| Florida | 18% | 18% | 0% |
| Montana | 3% | 3% | -3% |
| Alabama | 7% | 7% | -7% |
| Indiana | 11% | 10% | -8% |
| New York | 52% | 47% | -9% |
| Arizona | 14% | 12% | -9% |
| Ohio | 18% | 16% | -12% |
| Maine | 7% | 6% | -12% |
| Mississippi | 5% | 4% | -13% |
| Tennessee | 10% | 9% | -14% |
| West Virginia | 5% | 5% | -14% |
| Pennsylvania | 24% | 21% | -14% |
| Illinois | 34% | 28% | -19% |
| Nebraska | 7% | 5% | -19% |
| Kentucky | 8% | 6% | -20% |
| South Carolina | 6% | 4% | -24% |
| Michigan | 14% | 9% | -38% |
| Missouri | 24% | 15% | -40% |
| North Carolina | 8% | 5% | -45% |
| Maryland | 35% | 15% | -58% |

these modes, as well as carpooling, vanpooling, and teleworking.

Trouble on the Horizon

The national trend toward providing more transportation choice, shows that the policy changes enacted with ISTEA and continued in TEA-21 are bringing more money to the important task of diversifying our transportation system. However, other indicators show signs of trouble.

States have More Choices, but Are Not Using Them. Although ISTEA and TEA-21 enshrined a new approach to transportation spending at the federal level, there is scant evidence that this new spirit has penetrated into many of the state bureaucracies that administer federal funds. Most state DOTs continued to spend federal transportation dollars as they did before: on highways. The great majority of federal funds going to provide citizens with alternatives to driving result from the minimums for these activities set at the federal level, rather than policy choices at the state level. Of the almost \$50 billion given to the state Departments of Transportation for any surface transportation project between 1992 and 1999 (known as “flexible” funds), almost 87 percent went to highway and bridge projects. Less than 7 percent went to providing people with more choices (see Table 3).

When these numbers are broken down on a state-by-state basis, reasons for the low rate of “flexing” begin to emerge. A few states have embraced the opportunity to spend money in new ways, but most have not. Of the \$3.3 billion in flexible funds that went to provide alternatives to driving, \$ 2.7 billion, or 82 percent came from just 5 states (New York, California, Pennsylvania, Oregon, and Virginia). Table 4

shows the percentage of flexible funding each state used for alternative modes.

The potential of flexibility is demonstrated by Oregon, where officials have developed a couple of programs specifically aimed at using flexed funds for new purposes. One is the Transportation Growth Management Program, a joint committee of the state Department of Transportation and the state Department of Land Conservation and Development, which makes grants for long-term planning projects and quick responses to revise poorly thought-out development proposals. Another program is the Oregon Transportation Network, which provides transit to elderly and disabled citizens.

While the measures described in Tables 3 and 4 do not capture all spending to provide alternatives to the car, they give a picture what priority is assigned to various types of spending when states have discretion to spend as they wish. These figures indicate that in all but a few states, officials apparently assign a low priority to providing transportation choices.

Budget Loopholes Allow Non-Highway Funds to Remain Unspent. Another way to judge the commitment of state agencies to choice is to compare their usage rate for highway funds to their usage rate for other funds. For complex reasons, states are given more transportation money by the federal government every year than they are allowed to spend. In budget parlance, the states get more “budget authority” than “obligation authority.” This absurd situation means that in an average year, only about 90 percent of the funds dispersed to the states can actually be spent.

States can respond to this in a number of ways: they can spread the shortfall evenly across all programs, or they can fully fund some programs while cutting back on others. Monitoring the choices they make in this behind-the-scenes process provides one way to judge the internal priorities of state transportation and regional planning agencies.

Table 5 (page 18) shows obligation rates for one highway-only funding category, the National Highway System, and two non-highway funding categories, Transportation Enhancements and Congestion Mitigation and Air Quality (CMAQ). The

Table 3. Use of Flexible Funds, 1992 to 1999

| | Millions of Dollars Spent (1990 to 1999) | Percent of Total Flexible Funds Spent |
|------------------------------------|--|---------------------------------------|
| Bridge and Highway | \$43,282.2 | 86.8% |
| Alternative Modes | \$3,286.4 | 6.6% |
| Other | \$2,591.0 | 5.2% |
| Administration and Planning | \$496.3 | 1.0% |
| Intelligent Transportation Systems | \$190.9 | 0.4% |
| Total | \$49,846.9 | 100.0% |

Table 4. Share of Flexible Funds Spent on Alternative Modes by State, 1992-1999

| State | Percentage of Flexible Funds Used for Alternative Modes (1992 to 1999) |
|-------------------|--|
| Alabama | 1.0% |
| Alaska | 2.3% |
| Arizona | 1.8% |
| Arkansas | 0.6% |
| California | 13.3% |
| Colorado | 3.7% |
| Connecticut | 2.0% |
| Delaware | 0.3% |
| Florida | 0.8% |
| Georgia | 2.3% |
| Hawaii | 1.6% |
| Idaho | 0.4% |
| Illinois | 0.6% |
| Indiana | 0.0% |
| Iowa | 0.7% |
| Kansas | 0.0% |
| Kentucky | 0.4% |
| Louisiana | 1.9% |
| Maine | 1.0% |
| Maryland | 0.1% |
| Massachusetts | 5.8% |
| Michigan | 1.4% |
| Minnesota | 7.2% |
| Mississippi | 0.0% |
| Missouri | 0.7% |
| Montana | 0.0% |
| Nebraska | 0.1% |
| Nevada | 0.6% |
| New Hampshire | 0.3% |
| New Jersey | 4.0% |
| New Mexico | 0.9% |
| New York | 54.2% |
| North Carolina | 0.5% |
| North Dakota | 2.0% |
| Ohio | 2.1% |
| Oklahoma | 0.1% |
| Oregon | 15.2% |
| Pennsylvania | 9.0% |
| Rhode Island | 13.3% |
| South Carolina | 0.1% |
| South Dakota | 0.0% |
| Tennessee | 0.6% |
| Texas | 1.4% |
| Utah | 0.5% |
| Vermont | 8.8% |
| Virginia | 6.8% |
| Washington | 7.7% |
| West Virginia | 0.3% |
| Wisconsin | 0.7% |
| Wyoming | 0.1% |
| Nationwide | 6.5% |

Table 5. Obligation Rates for Selected Highway and Non-Highway Programs

| Overall Obligation Rate (1992 to 1999) | | | |
|---|------------------------------------|--|--------------------------------|
| State | Transportation Enhancements | Congestion Mitigation and Air Quality | National Highway System |
| Alabama | 70% | 78% | 105% |
| Alaska | 101% | 66% | 106% |
| Arizona | 50% | 97% | 94% |
| Arkansas | 56% | 63% | 93% |
| California | 54% | 81% | 72% |
| Colorado | 77% | 59% | 94% |
| Connecticut | 96% | 86% | 120% |
| Delaware | 69% | 79% | 99% |
| Florida | 100% | 77% | 99% |
| Georgia | 68% | 88% | 116% |
| Hawaii | 69% | 61% | 75% |
| Idaho | 56% | 61% | 104% |
| Illinois | 63% | 88% | 95% |
| Indiana | 64% | 59% | 97% |
| Iowa | 57% | 92% | 100% |
| Kansas | 71% | 81% | 91% |
| Kentucky | 75% | 87% | 90% |
| Louisiana | 29% | 71% | 85% |
| Maine | 70% | 80% | 88% |
| Maryland | 68% | 68% | 153% |
| Massachusetts | 47% | 64% | 111% |
| Michigan | 57% | 76% | 102% |
| Minnesota | 42% | 44% | 98% |
| Mississippi | 64% | 93% | 101% |
| Missouri | 41% | 89% | 107% |
| Montana | 78% | 71% | 110% |
| Nebraska | 72% | 75% | 79% |
| Nevada | 69% | 60% | 113% |
| New Hampshire | 76% | 74% | 91% |
| New Jersey | 83% | 89% | 88% |
| New Mexico | 91% | 74% | 96% |
| New York | 75% | 87% | 102% |
| North Carolina | 70% | 81% | 98% |
| North Dakota | 76% | 90% | 88% |
| Ohio | 71% | 74% | 89% |
| Oklahoma | 75% | 97% | 95% |
| Oregon | 62% | 76% | 109% |
| Pennsylvania | 51% | 74% | 139% |
| Rhode Island | 52% | 90% | 123% |
| South Carolina | 67% | 77% | 95% |
| South Dakota | 64% | 100% | 87% |
| Tennessee | 63% | 64% | 99% |
| Texas | 37% | 64% | 123% |
| Utah | 75% | 77% | 88% |
| Vermont | 85% | 71% | 42% |
| Virginia | 46% | 77% | 114% |
| Washington | 60% | 79% | 101% |
| West Virginia | 75% | 84% | 94% |
| Wisconsin | 26% | 64% | 85% |
| Wyoming | 100% | 67% | 89% |
| Nationwide | 64% | 78% | 100% |

National Highway System program provides funds to the states to repair or expand roads on the 165,000-mile National Highway System. The Transportation Enhancements program provides funding for projects to better integrate the highway system with communities. Eligible uses include bicycle paths, improvements to benefit pedestrians, preservation of historic transportation facilities, purchase of scenic easements along highway corridors, and other related activities. (See *Transportation Enhancements*.) Congestion Mitigation and Air Quality (CMAQ) funds can be used for any surface transportation project that helps states and localities meet federal air quality standards. Common uses of these funds include public transit, computerized traffic signal systems, and car emissions inspection programs.

As can be seen, in all but a few states highway spending clearly trumps other priorities. The national average obligation rate for the National Highway System is 100 percent, meaning that most states made sure that they actually obligated all of the NHS money that received budget authority. In contrast, only 64 percent of the funding authorized for the Transportation Enhancements program was actually obligated, leaving many projects unfunded. The CMAQ program fared somewhat better, with an obligation rate of 78 percent. Although the overall federal program is structured to provide a balance between traditional highway spending and more innovative approaches, this budget loophole gives the states a chance to evade the minimum levels established for alternative transportation projects.

Backsliding. Evidence indicates that the progress made in the 1990s to create a more balanced federal funding program has stopped, and we may be heading backwards. The share of federal funds used to provide people with alternatives to driving has begun to fall after

New Starts for Transit

One of the most notable transportation trends of the 1990s has been a huge increase in the demand for brand-new rail and busway transit systems. Fifteen metropolitan areas used federal funds to help open new systems or significantly extend lines in the 1990s, creating the basic infrastructure to provide decades of fast, comfortable transit to millions of Americans. In the year 2000, eight more cities are building new systems or significant extensions of existing ones. All of these systems have been partially funded under a federal transit program called "New Starts." Since 1990, New Starts has funded almost \$6 billion in new rail and bus infrastructure. A total of 191 cities have signaled their interest in using this program to help build new rail systems. However, this is hardly a case of federal largess. Most communities dip into their own pockets to fund these transportation systems. Federal dollars often pay as little as 50 percent of the costs, far below the 80 percent match more common on major federally-funded road projects.

What is even more remarkable is the program's popularity despite the high hurdles transit projects face in getting funded. Unlike new roads, new rail systems are usually subject to approval by a local referendum. They also face a rigorous review process in which the Federal Transit Administration evaluates each project before it is allowed to move on to the next phase of development. Neither the Federal Highway Administration (FHWA) nor most state Departments of Transportation have a similar review process for major road projects.

Officials in metropolitan areas across the country willingly meet these requirements because of the benefits provided by good transit systems. A recent survey by the United States Conference of Mayors found that all but three of the nation's top fifty metropolitan economies are planning some kind of rail investment. According to the Conference, "This level of local activity delivers a strong message about the value of these projects as a means to strengthen local transportation systems, combat growing traffic congestion, focus growth and development in fixed transit corridors and secure other important public benefits."⁷

Cities that used federal money to help open new transit systems or significant extensions in the 1990s include: Atlanta; Baltimore; Chicago; Dallas; Jacksonville; Los Angeles; Miami; Memphis; Portland, OR; Sacramento; Salt Lake City; San Diego; San Jose; San Francisco Bay Area; San Francisco; Washington, DC.

Additional cities using New Starts funding to construct lines to open in the next few years are: Boston; Denver; Houston; Northern New Jersey; Pittsburgh; St.

Transportation Enhancements

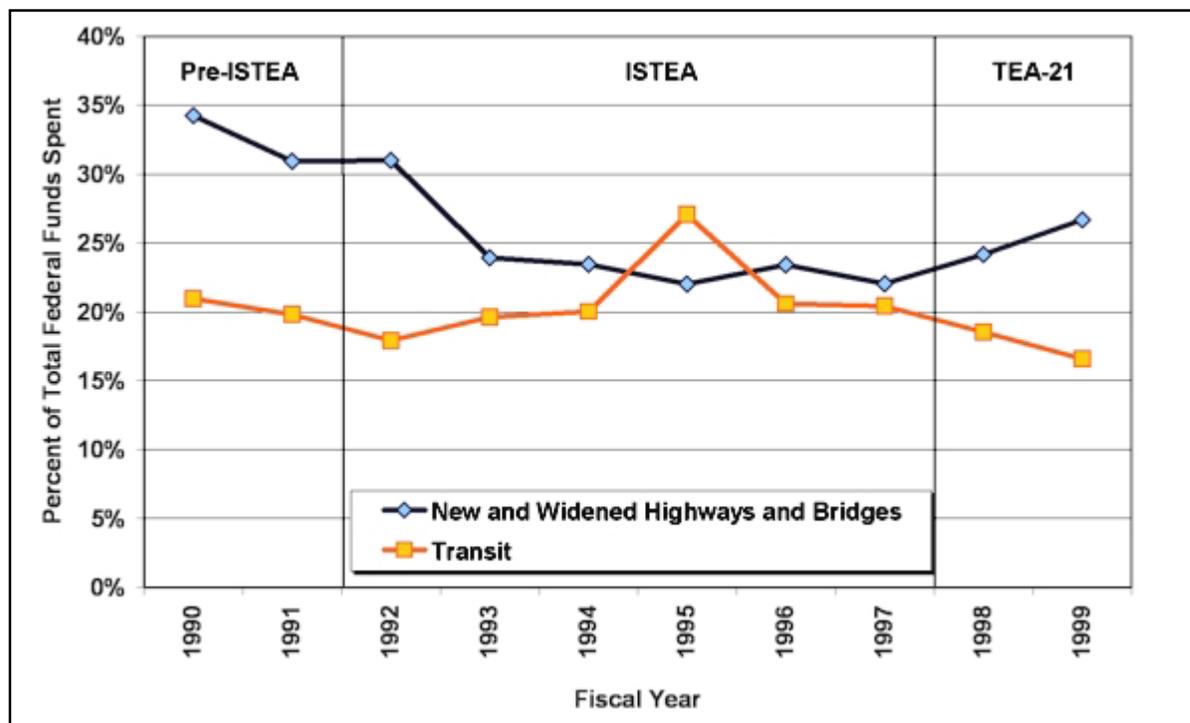
One of the most popular new programs of the 1990s is the Transportation Enhancements (TE) program. It is designed to enhance the transportation system by encouraging diverse modes of travel, improving traveler amenities, fostering local economic development, and bringing direct benefits to communities from transportation spending. The TE program has funded many small, locally-based projects that are popular in their communities and help mitigate the negative impacts of past highway expansions. These include multi-use paths, railroad station restorations, main street revitalizations, and scenic land acquisitions.

For example, the city of Mountain View in California's Silicon Valley used TE funds to help build part of the Stevens Creek Trail, which provides travel links between residential neighborhoods, jobs, and schools, and serves a recreational purpose across the Valley. The trail includes a bridge crossing a major highway and four rail lines. In Tampa, Florida, TE funds were used to restore the historic Union station, which had closed in 1984. The restored station is now serving as a multi-modal transportation hub for trains, buses, and soon-to-open trolley line, and is an anchor for a growing tourist district.

The National Transportation Enhancements Clearinghouse reports that a little over half (52 percent) of TE money is programmed for bicycle and pedestrian projects, about 30 percent for preservation and scenic purposes, and 15 percent for landscaping. Independent reports indicate that some states, Texas and North Carolina, for example, have devoted large portions of their Enhancement funds to highway wildflower plantings and rest-stop renovation. While these may be worthy projects, they are traditionally funded through regular highway programs. This repeats an unfortunate pattern found in other spending programs: although new policies are being pursued at the national level, some states are figuring out how to use the new programs to keep doing the same old things.

A more serious problem is that many states have simply failed to spend Enhancements dollars in a timely way, or at all (see main text for information on obligation rates). This indicates the low priority some states give to this popular new program. The low rate of spending represents opportunities missed and delays for local project sponsors. The National Transportation Enhancements Clearinghouse notes that obligation rates for enhancements funds are dropping even as total funding goes up, creating an even larger backlog of available but unobligated funds.⁸

Figure 5. Portion of Federal Funds to Transit and New Roads



years of general stability. For the years covered by ISTEA, 1992 to 1997, an average of 21.8 percent of the federal program went to providing alternatives to driving. By 1999, just two years later, this had fallen to just 17.3 percent of total federal transportation dollars (see Figure 5).

The declining commitment to alternative modes of transportation can be explained by looking at the one type of funding that has seen its share of federal spending grow in the past two years: the con-

struction of new highways and the widening of existing ones (see Chapter Two for details). If the trends we have seen develop in the last two years continue, it will signal the return to the bad old days before ISTEA. Back then, big budgets for road building made it impossible to either fund adequate road repairs or provide people with alternatives to the car. With the need for choice growing more urgent with every traffic jam, this trend signals a step backwards.

Tackling Land Use and Transportation with TCSP

A small new federal program is getting big attention: the awkwardly named “Transportation and Community and System Preservation Pilot Program” (TCSP). This competitive grant program encourages citizens to form partnerships with local governments to make the transportation system more efficient by finding better ways to mesh development patterns and transportation facilities. The program has sparked broad interest: more than 500 communities applied in the first round of funding. But while TCSP is supposed to be funded at roughly \$25 million per year, Congress has taken to earmarking a large portion of the funds, reducing the amount available for competitive grants.

The first round of funding in 1999 helped create some notable projects. In Boise, Idaho, a coalition of government, citizen and business groups will do research and hold community design charettes to help identify barriers to smart growth and infill development and define realistic alternatives to existing land use and transportation policies. The planning department of Mono County California received funding to develop a plan for the rural Yosemite gateway community of Lee Vining that balances the need for tourism and growth with community stability, safety and environmental protection.

For more information about the TCSP program, visit <http://tcsp-fhwa.volpe.dot.gov/index.html>

CHAPTER TWO

Fix It First: The Nation's Roads

In the 1990s, the United States put a greater emphasis than ever before on repairing the nation's roads. But this commitment may be flagging, even though the roads still need plenty of attention.

Roads are the backbone of federal transportation spending; more than 70 percent of all transportation funding goes to road projects. The 1990s showed a significant shift in the type of spending on roads, as states put more money into filling potholes and fixing bridges. However, a large portion of funding still goes toward building new roads and widening old ones, despite growing evidence that these projects provide little long-term congestion relief.

Fixing It First

Road repair is important to motorists: highway users surveyed by the National Quality Initiative said one of their highest priorities in improving the travel environment is pavement condition.¹ Poor road and bridge repair was first recognized as a major problem in the 1970s, and dedicated federal repair funds for the Interstate system and for bridges helped improve conditions. At the beginning of the 1990s Congress addressed this problem again in ISTEA by dedicating substantial funding to repair of roads and bridges. Some states

Table 6. Federal Spending for Road and Bridge Repair

| | Billions of Dollars | Percent of Total Federal Transportation Spending |
|-----------------------|---------------------|--|
| 1990 | \$5.8 | 39% |
| 1991 | \$6.9 | 43% |
| 1992 | \$8.7 | 45% |
| 1993 | \$10.3 | 46% |
| 1994 | \$10.0 | 45% |
| 1995 | \$9.8 | 41% |
| 1996 | \$10.3 | 46% |
| 1997 | \$10.6 | 47% |
| 1998 | \$11.8 | 49% |
| 1999 | \$16.0 | 47% |
| Ten Year Total | \$100.1 | 45% |

Bad Roads Cost Drivers

The failure to adequately maintain roads costs drivers. Motorists pay both for road repair (through gas taxes) and for the damage caused to their cars by bad roads. In STPP's report *Potholes and Politics 1998*, STPP estimated the costs to drivers of rough roads in terms of increased wear and tear, repair expenses and decreased fuel economy. We found poor roads in our metro areas cost American drivers an estimated \$5.8 billion per year.

responded with their own emphasis on "fix it first" programs, vowing to dramatically improve road conditions. TEA-21 continued the trend; slightly increasing dedicated funding for road and bridge repair.

The result of this emphasis shows up in the spending record over the past decade: the share of federal dollars going toward repair increased from 39 percent in 1990 to a high of 49 percent in 1998. A total of more than \$100 billion in federal spending went to fix our nation's Interstate highways and other major roads in the 1990s.

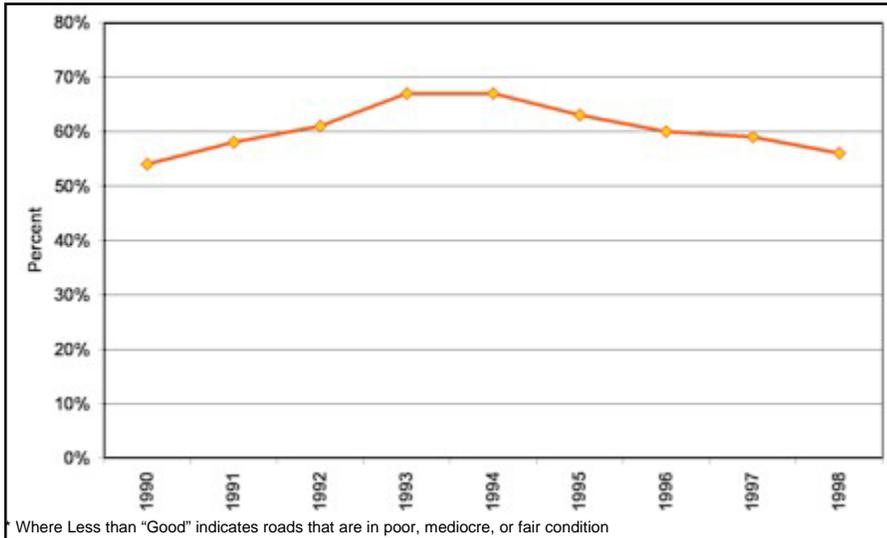
The State Picture. Over the decade, a majority of states increased the portion of federal highway funding they used for road maintenance.² Hawaii increased federal repair spending the most, from an average of six percent of FHWA-administered funds in the first two years of the decade to 61 percent in the closing years. In 1999, North Dakota spent 91 percent of its available federal highway dollars on highway maintenance, up from 59 percent early in the decade.

Table 7 shows the portion of federal highway funds used for road repair, averaged for 1990-91 and for 1998-99. The states are sorted according to how much they increased the portion of federal dollars going to highway repair.

The Roads have Gotten Better. The increase in federal money appears to have made a difference. After declining early in the decade, road conditions began to improve after the passage of ISTEA. The

miles of roads in less than good condition dropped from 67 percent in 1994 to 56% in 1998. (See Figure 6.) The emphasis on fixing it first really began to work.

Figure 6. Share of Major Roads in Less than “Good” Condition*



Although road conditions have improved since 1994, they are still not yet what they should be. In metropolitan areas, where the vast majority of Americans live and do most of their driving, road conditions improved only marginally, with the percentage of roads in less than good condition dropping only two percentage points during the decade.

Commitment May be Flagging. While the need still exists, commitment to fixing our roads seems to be flagging. In 1999, the trend toward emphasizing repair began to reverse. The huge increase in funding provided by TEA-21 meant that while the absolute dollar amount spent on road repair grew to more than \$5.8 billion, its share of total highway funds shrank, from 49 percent in 1998 to 47.5 percent in 1999. (See Figure 7, page 24.)

In Michigan, Governor John Engler’s administration is reportedly preparing a transportation plan that would shift the state’s priorities from road repair back to building new roads with a \$1 billion state and federal transportation budget named “Build Michigan III.”³

Building New Roads

Even with the welcome trend toward road repair, a large portion of federal dollars is used to build new roads. While the share of transportation funds going to build new roads or widen existing ones fell over the course of the decade – from 34 percent in 1990 to 27 percent in 1999 — this category nonetheless consumed almost \$57 billion during the 1990s. Although this does not match the feverish pace of road building this country went through in the 1960s and 1970s, it still buys a lot of asphalt.

In the last two years, it seems road building is making a comeback. Sixteen percent

of all federal road-building money spent in the 1990s was doled out in the final year of the decade, when funding dedicated to construction of new roads and bridges jumped to almost \$9 billion. Road building is also taking a greater share of all transportation dollars: in 1997, road building commanded just 22 percent of federal transportation funds; by 1999 this figure had risen to 27 percent.

This spending helped build the 85,688 miles⁴ of highway that were added to our road system in the 1990s. Among the many major new road projects undertaken in the 1990s were the Central Artery/Tunnel Project in Boston, referred to as the “Big Dig.” This is a \$10.8 billion, 7.5-mile highway project designed to replace the Central Artery, a six-lane elevated freeway through Boston’s downtown. The new highway will be an eight-to-ten lane underground expressway combined with a 14-lane, two-bridge crossing of the Charles River and a new tunnel under Boston Harbor. In St. Johns, in south central Michigan, a U.S. 27 bypass was built, a 21-mile, \$102 million roadway. North Carolina has spent the decade planning and building bypasses and other highways to meet a 1989 goal

Table 7. State Trends in Funding Road and Bridge Repair

| State | Percent of Fed Highway Funds to Maintenance, 1990-91 | Percent of Fed Highway Funds to Maintenance, 1998-99 | Change in Share Spent on Maintenance |
|----------------|--|--|--------------------------------------|
| Hawaii | 6% | 61% | 977% |
| Delaware | 26% | 59% | 123% |
| Louisiana | 36% | 78% | 117% |
| Virginia | 24% | 42% | 78% |
| Illinois | 51% | 81% | 57% |
| North Dakota | 59% | 91% | 54% |
| Georgia | 29% | 45% | 54% |
| Idaho | 44% | 62% | 43% |
| Rhode Island | 46% | 64% | 39% |
| Wyoming | 59% | 81% | 38% |
| New Jersey | 47% | 64% | 37% |
| Indiana | 50% | 67% | 35% |
| Colorado | 32% | 42% | 33% |
| Arkansas | 40% | 52% | 31% |
| Washington | 49% | 64% | 30% |
| Pennsylvania | 49% | 62% | 27% |
| South Carolina | 38% | 48% | 26% |
| Minnesota | 60% | 73% | 22% |
| California | 52% | 62% | 18% |
| Alabama | 46% | 54% | 17% |
| Wisconsin | 59% | 68% | 16% |
| Nebraska | 55% | 63% | 15% |
| Oregon | 59% | 67% | 14% |
| Maryland | 50% | 57% | 13% |
| Nevada | 48% | 53% | 11% |
| Vermont | 62% | 69% | 10% |
| Michigan | 65% | 69% | 7% |
| South Dakota | 80% | 85% | 6% |
| Massachusetts | 47% | 49% | 5% |
| Alaska | 56% | 59% | 5% |
| Kentucky | 39% | 40% | 4% |
| Connecticut | 72% | 74% | 4% |
| Kansas | 75% | 78% | 4% |
| New York | 72% | 75% | 3% |
| New Hampshire | 70% | 72% | 3% |
| Texas | 43% | 45% | 3% |
| West Virginia | 54% | 55% | 2% |
| Montana | 72% | 72% | 1% |
| Tennessee | 30% | 30% | 0% |
| Oklahoma | 50% | 50% | -1% |
| North Carolina | 38% | 37% | -2% |
| Ohio | 76% | 72% | -5% |
| Utah | 57% | 54% | -6% |
| Florida | 58% | 54% | -8% |
| Mississippi | 59% | 54% | -9% |
| New Mexico | 68% | 62% | -10% |
| Arizona | 50% | 44% | -11% |
| Maine | 83% | 72% | -13% |
| Iowa | 52% | 44% | -15% |
| Missouri | 56% | 38% | -33% |

to bring a four-lane highway within ten miles of every state resident. Most projects are still underway. Many other states have also pressed ahead with extensive road building and widening programs.

What New Roads Mean for Other Types of Transportation Spending.

Because it involves such a large share of federal dollars, the increased commitment to road building has implications for other transportation priorities. The recent increase in funding for road building is matched by a decline in funding for alternative modes (discussed in Chapter One) and road repair. While the portion of federal funds used for road building increased by 11 percent in 1999, the portion of money for transit fell by the same amount, 11 percent. At the same time, the portion of money spent on road repair went down three percent, reversing a long trend toward increased spending on maintenance (see Figure 7, page 24). It appears that the growth in road building may be coming at the expense of these important and popular activities.

The Impact of New Roads on Congestion.

Curiously, this enthusiasm for road building comes at a time when new research is showing that adding road capacity is not an effective way to reduce congestion. Evidence is accumulating that road building provides only temporary relief and may ultimately help increase traffic. A recent STPP analysis of Texas Transportation Institute congestion data found that the amount of road space added in a metro area between 1982 and 1997 had little impact on congestion levels. Over a 16-year period, the places that added the most road

Table 8. Federal Spending on New and Widened Roads and Bridges

| | Billions of Dollars | Percent of Total Federal Transportation Spending |
|-----------------------|---------------------|--|
| 1990 | \$5.1 | 34% |
| 1991 | \$4.9 | 31% |
| 1992 | \$6.0 | 31% |
| 1993 | \$5.3 | 24% |
| 1994 | \$5.2 | 23% |
| 1995 | \$5.2 | 22% |
| 1996 | \$5.2 | 23% |
| 1997 | \$5.0 | 22% |
| 1998 | \$5.8 | 24% |
| 1999 | \$9.0 | 27% |
| Ten Year Total | \$56.8 | 26% |

space per person fared no better in fighting congestion than the places that experienced a decrease in road space per person.⁵ In the same analysis, STPP found that the real culprit in increasing congestion is the increase in driving per person, spurred by sprawling development patterns.

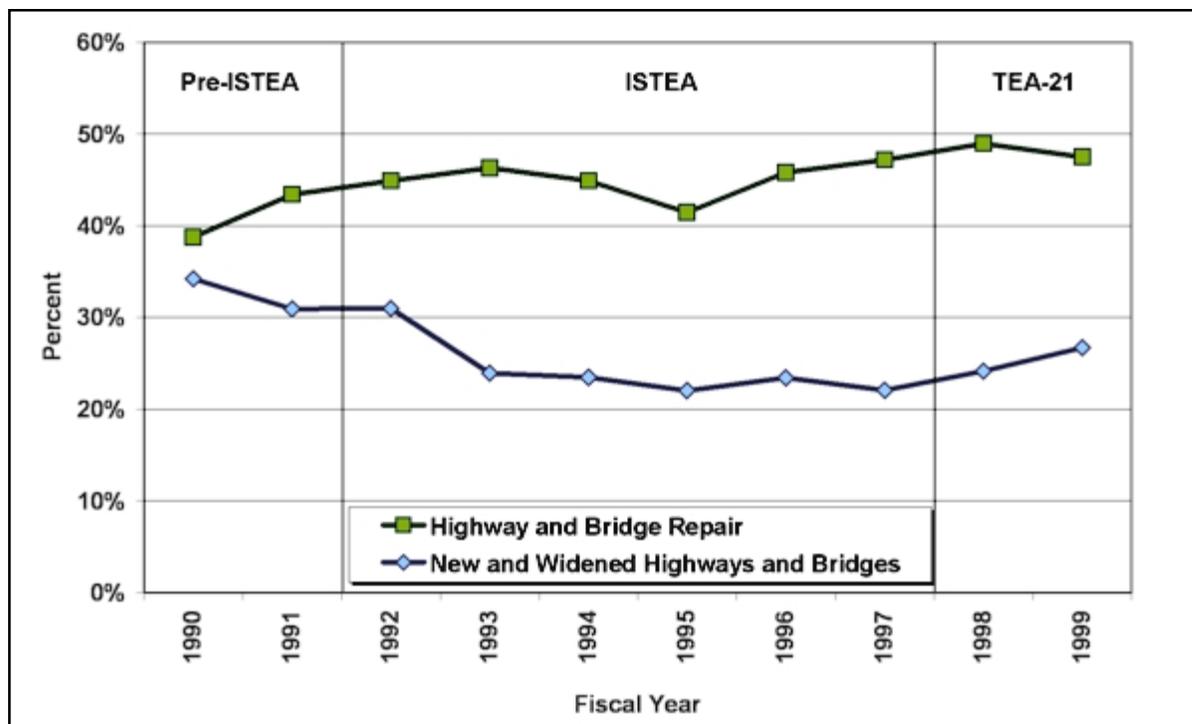
More and more studies are finding that new roads actually generate additional and longer trips, greatly reducing their effectiveness in fighting con-

gestion.⁶ One recent study of highways in Maryland and Virginia found that a ten percent increase in road capacity actually generated 4.5 percent to 5 percent more automobile trips, essentially using up half of the added capacity that was supposed to relieve existing congestion. The author of the study, Lewis Fulton of the International Energy Agency, calls road widening a “naïve” approach to getting rid of congestion.⁷

While some road building is necessary, these studies indicate that heavy investment in road building may be money poorly spent. Some representatives of the road building industry have suggested that increased road capacity is necessary for economic growth and that failing to build more roads would retard the growth potential of the U.S. economy. However, numerous studies indicate that road building in areas that already have an extensive road network will tend to have very modest effects or do no more than shift economic activity from one location within the region to another.⁸

A few communities are going in the opposite direction, and are even considering road demolition as a way to boost economic investment. For example, Akron, Ohio Mayor Don Plusquellic recently raised a stir when he pondered whether the city

Figure 7. Portion of Federal Funds to Road Repair and New Roads

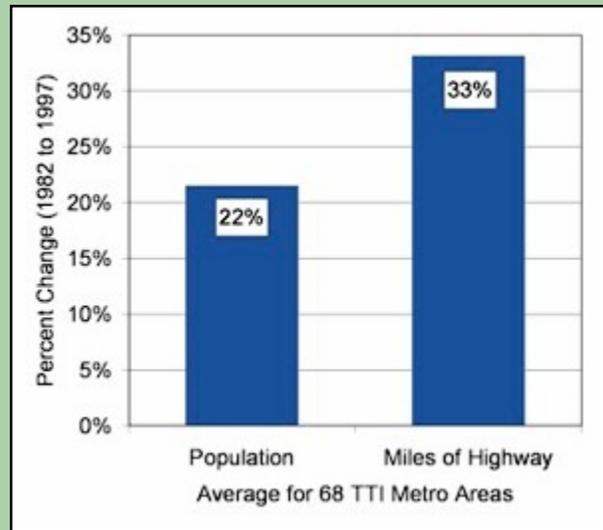


should demolish a mile of its Innerbelt to open up 25 acres of prime real estate for private development and/or green space. The mayor has proposed a one-year feasibility study to explore the

possibilities of a demolition that would cost approximately \$10 million. The \$65 million Innerbelt opened in 1987 and has never had high levels of use.⁹

More Roads than Ever

Some proponents of road-building claim that we need to put spending into road construction because our road system has stopped growing. This is not the case. In fact, the road systems in our major metro areas are expanding as fast or faster than the population of these areas. Data from the Texas Transportation Institute's (TTI) annual report on congestion in 68 metropolitan areas show that on average, the mileage of major roads in these areas grew by 33 percent from 1982 to 1997. At the same time, the population of these areas grew by 22 percent.



CHAPTER THREE

Protecting Public Safety and the Environment

Safety

The portion of federal dollars spent on safety dropped slightly through the decade, and these investments neglected the most vulnerable road users: bicyclists and pedestrians.

Ensuring safety is one of the most important objectives that federal spending can address in our transportation system. And safety on our nation's roads unquestionably improved over the past decade. However, spending data shows two troubling trends: a shrinking portion of federal dollars is going to safety projects, and federal funds are not rationally distributed according to the risk of death.

The number of transportation fatalities in the U.S. declined in the 1990s. Overall fatalities dropped from 44,599 in 1990 to 41,471 in 1998. For automobile occupants, safety per mile driven has also improved. Yet according to the National Center for Health Statistics, auto accidents remain the leading cause of accidental death among Americans, and the leading cause of death overall for people ages one to 34.

Table 9. Safety Spending as a Share of Total Federal Highway Spending

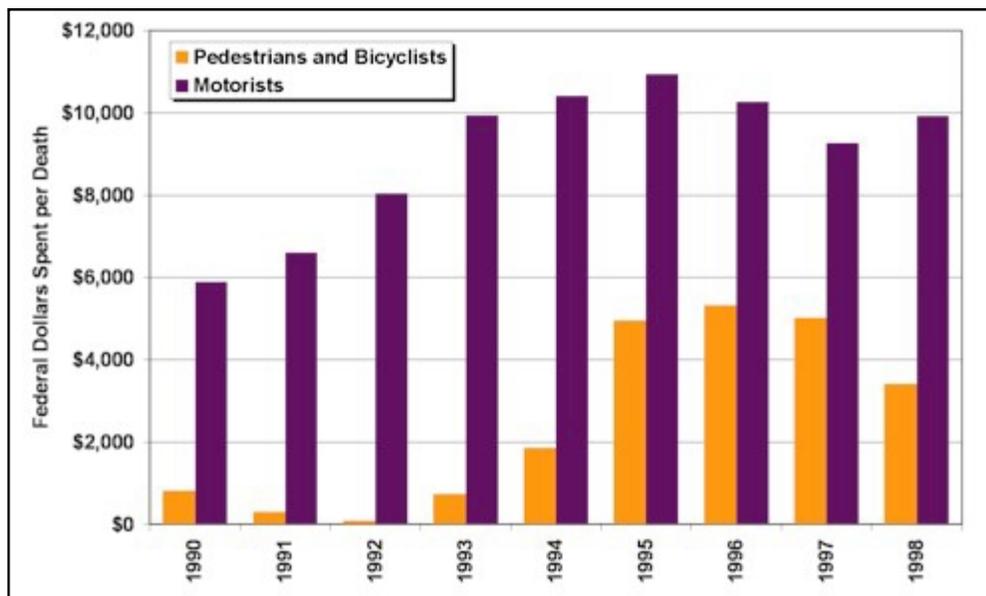
| | Millions of Dollars | Percent of Federal Highway Funds Spent |
|-----------------------|---------------------|--|
| 1990 | \$668.8 | 6% |
| 1991 | \$690.8 | 5% |
| 1992 | \$738.3 | 5% |
| 1993 | \$892.0 | 5% |
| 1994 | \$952.3 | 5% |
| 1995 | \$901.9 | 5% |
| 1996 | \$830.6 | 5% |
| 1997 | \$856.1 | 5% |
| 1998 | \$817.4 | 4% |
| 1999 | \$1,114.2 | 4% |
| Ten Year Total | \$8,462.4 | 5% |

Safety money is failing pedestrians and bicyclists. In the 1990s, almost all federal safety money was used to ensure the safety of motorists, despite the high fatality rate among more vulnerable road users: bicyclists and pedestrians. These road users accounted for an average of nearly 16 percent of all traffic deaths in the 1990s. Yet during that time less than two percent of safety funding

went to projects that specifically protect bicyclists and pedestrians. While part of this discrepancy may be due to imprecise reporting, it also indicates the low priority given to protecting pedestrians and bicyclists.

This situation improved somewhat for pedestrians and bicyclists during the decade, but the amount spent per fatality on bicycle and pedestrian safety still lags far behind the amount spent per automobile death. (See Figure 8.) In 1990

Figure 8. Federal Safety Spending per Roadway Death, Motorists vs. Pedestrians and Bicyclists



\$813 was spent on bicycle or pedestrian safety for every cyclist or pedestrian death, while almost \$6,000 was spent on highway safety for each motorist death. Safety spending for cyclists and pedestrians began to catch up in the middle of the decade, but in 1998 spending on motorists deaths was almost three times higher (see Figure 8).

Curiously, overall spending on safety remained fairly flat during the 1990s, jumping significantly only at the end of the decade when TEA-21 provided a major boost to all programs. The portion of highway money dedicated to safety projects actually declined steadily, from six percent in 1990 to four percent in 1999.

The Picture at the State Level. Federal safety spending varied widely among the state DOTs during the decade, ranging from a high of more than \$15 per person per year in Vermont to less than 50 cents per person per year in neighboring Massachusetts.

One of the most notable state safety initiatives this decade is California's Safe Routes to School program, a new law to help improve traffic safety for children. This new law designates one-third of the state's federal safety funding to uses that make it safer for children to walk or bicycle to school. The law will result in more sidewalks, bike lanes, and other facilities around schools. Other local initiatives, notably in Oregon, Washington, Florida, and Rhode Island, aim to improve bicycling and walking safety through "traffic calming," a set of techniques ranging from narrowed intersections to traffic circles. The intent is to help slow automobile traffic in neighborhoods while improving pedestrian safety and comfort, and research shows decreases in accidents as high as 70 percent. Federal funding is available for local traffic calming projects under TEA-21.

The Environment

Some federal transportation money has been designated to help the environment. But much of the spending goes to projects with short-term benefits rather than programs which will produce long-term pollution reduction.

The effect of transportation investments on the environment is undeniable – for example, as much as 50 percent of ground-level ozone pollution is a result of motor vehicle exhaust. An important part of making transportation more environmentally friendly is to provide people with transportation choices that don't create as much pollution, such as transit, bicycling and

Table 10. Safety Spending per Capita

| State | Average Annual Spending, Federal Funds (1990 to 1999) |
|-------------------|---|
| Alabama | \$3.43 |
| Alaska | \$11.79 |
| Arizona | \$1.10 |
| Arkansas | \$3.69 |
| California | \$3.56 |
| Colorado | \$1.71 |
| Connecticut | \$8.99 |
| Delaware | \$3.38 |
| Florida | \$3.71 |
| Georgia | \$1.89 |
| Hawaii | \$2.46 |
| Idaho | \$1.44 |
| Illinois | \$5.18 |
| Indiana | \$5.36 |
| Iowa | \$3.25 |
| Kansas | \$4.56 |
| Kentucky | \$3.04 |
| Louisiana | \$1.45 |
| Maine | \$3.72 |
| Maryland | \$2.79 |
| Massachusetts | \$0.48 |
| Michigan | \$3.95 |
| Minnesota | \$2.25 |
| Mississippi | \$3.52 |
| Missouri | \$1.47 |
| Montana | \$10.45 |
| Nebraska | \$2.01 |
| Nevada | \$3.65 |
| New Hampshire | \$0.80 |
| New Jersey | \$1.78 |
| New Mexico | \$4.52 |
| New York | \$2.18 |
| North Carolina | \$3.05 |
| North Dakota | \$6.69 |
| Ohio | \$3.93 |
| Oklahoma | \$4.04 |
| Oregon | \$2.31 |
| Pennsylvania | \$1.73 |
| Rhode Island | \$2.28 |
| South Carolina | \$1.10 |
| South Dakota | \$5.46 |
| Tennessee | \$2.60 |
| Texas | \$1.87 |
| Utah | \$2.28 |
| Vermont | \$15.17 |
| Virginia | \$2.02 |
| Washington | \$13.21 |
| West Virginia | \$3.18 |
| Wisconsin | \$2.47 |
| Wyoming | \$4.67 |
| Nationwide | \$3.23 |

Does Reducing Congestion Improve Air Quality?

In the past it was generally believed that reducing congestion was an effective way to improve air quality. This was based on a straightforward logic — the less time cars spend idling in traffic, the less air pollution we would have.

While this may have held true at one time, the emissions control technology added to cars in the past 25 years has changed everything. Almost every car on the road today is equipped with a high efficiency catalytic converter, which eliminates 95 percent of the pollution it produces during normal driving. For the average car trip, most pollution is now emitted in the first few minutes of driving, before the catalytic converter has warmed up. These “cold starts” account for a disproportionate share of pollution from cars. According to the U.S. DOT¹ an average 5-mile trip produces 46 grams of carbon monoxide pollution, fully *two-thirds* of which is generated in the first few minutes after the car is started.

This has important implications for transportation policy. It means that minimizing the time spent waiting in traffic is not an effective way to reduce pollution. The transportation strategies most effective at cutting emissions are those that reduce the number of trips taken by car, such as car-pooling and transit.

walking. This strategy is treated extensively in Chapter One.

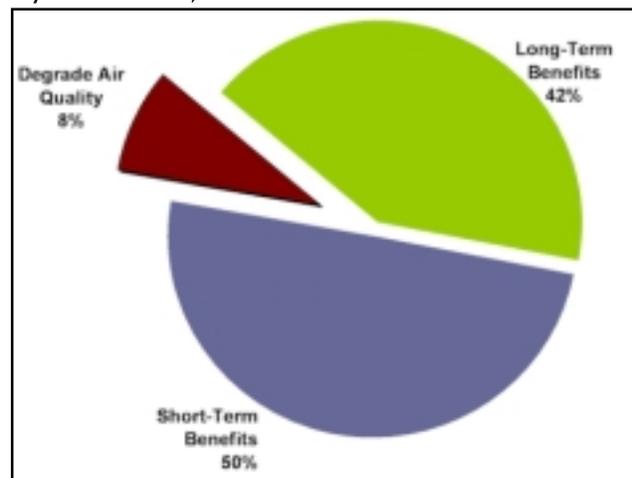
The Congestion Mitigation and Air Quality program (CMAQ) is a federal spending program specifically designated to help cities and states improve their air quality in compliance with the Clean Air Act. An analysis conducted by the U.S. Environmental Protection Agency (EPA) in 1997 estimated that CMAQ programs were reducing harmful emissions (volatile organic compounds, carbon monoxide, and oxides of nitrogen) by about 450,890 tons per year.² A look at this program shows that while it has helped reduce air pollution, much of its funding has gone to projects that have only short-term effects on air quality. A small portion of the money has been used for new highways, which make air quality worse, not better. (See Figure 9.) In addition, the states vary widely in their use of this funding.

The Effectiveness of CMAQ Spending. The most beneficial projects funded by CMAQ are those that will continue to reduce air pollution for years to come: by giving people choices beyond driving, or bringing alternative fuel vehicles into service. For example, Bike Central of Portland, Oregon, used a CMAQ grant to provide 150 bicycle storage lockers and additional clothing lockers at four health clubs in downtown Portland. This gave people a place to safely store their bikes and have a place to shower and change for work. Nationally, 42 percent of CMAQ dollars have gone into such projects, for a total of \$2.6 billion since 1992.

Another example of an innovative long-term CMAQ program is the Center for Neighborhood Technology’s new car-sharing program for Chicago, which will begin in the fall of 2000. Car-sharing acts as a convenient neighborhood-based short-term auto rental service, making it easier for people to give up automobile ownership in favor of occasional automobile use. Vehicles will be available to members on a per-use basis, making car-sharing cheaper than owning a car for many people. Chicago “CarShareGo” will begin its first year with eleven cars with plans to have 47 cars by 2005. Another example is in Rhode Island where the state’s transit agency is beginning to provide buses that run on compressed natural gas.

The largest portion of CMAQ dollars, 50 percent, went to projects that produce only short-term benefits in reducing air pollution. This \$3.1 billion in-

Figure 9. CMAQ Spending by End Use, 1992 to 1999



cluded projects such as emission inspection programs and high occupancy vehicle (HOV) lanes. It also included projects aimed at speeding up automobile travel by clearing accidents or increasing highway capacity through technological means. One of the largest such projects funded by CMAQ is Atlanta's extensive intelligent transportation system, named "NAVIGATOR," which uses sophisticated monitoring systems and message boards to influence traffic movement in an attempt to avoid traffic tie-ups. However, the benefits of these systems remain unclear, because idling vehicles play a minor role in producing pollution. The main aim of these projects is to fit more cars onto the road.

A small portion of CMAQ dollars actually went to build new highways, which contribute to air pollution problems. Since the program began in 1992, \$527 million, or eight percent of CMAQ spending, went for this purpose, much of it in a few states. Such projects defeat the purpose of the CMAQ program.

A Picture of the States. While all states receive CMAQ funding, the amount depends on how many people live in areas with air quality problems. States without serious air quality problems still receive CMAQ money, and can spend it any way they choose. The data shows a wide variability in how the money was used; in a few states, such as Hawaii, Colorado, and Mississippi, almost all of the money built new highways. Other states used almost all the money to improve access via modes that pollute very little, setting themselves up to enjoy long-term benefits from reduced pollution levels. These states included Illinois and Massachusetts. (See Table 11.)

Table 11. Effectiveness of CMAQ Spending by State

| State | CMAQ Funds Spent on Projects with Long-Term Benefits (1992-99) | Total CMAQ Spending (1992-99) | Percent Spent on Long-Term Benefits (1992-99) |
|----------------|--|-------------------------------|---|
| Massachusetts | \$173,679,819 | \$208,051,801 | 83% |
| Illinois | \$200,889,734 | \$285,862,673 | 70% |
| Pennsylvania | \$214,003,800 | \$327,325,430 | 65% |
| California | \$661,688,836 | \$1,059,856,006 | 62% |
| New York | \$396,886,974 | \$670,853,903 | 59% |
| Arizona | \$57,525,469 | \$99,939,766 | 58% |
| Washington | \$60,447,857 | \$121,250,611 | 50% |
| Oregon | \$23,510,070 | \$48,272,450 | 49% |
| Alaska | \$11,244,253 | \$23,367,809 | 48% |
| Missouri | \$23,475,790 | \$52,322,157 | 45% |
| Minnesota | \$10,736,267 | \$24,144,106 | 44% |
| Ohio | \$90,600,349 | \$204,325,565 | 44% |
| Vermont | \$16,588,073 | \$37,633,561 | 44% |
| Idaho | \$9,025,973 | \$20,535,530 | 44% |
| Michigan | \$53,032,515 | \$125,333,469 | 42% |
| Virginia | \$44,984,320 | \$107,424,835 | 42% |
| Rhode Island | \$19,256,118 | \$46,242,377 | 42% |
| New Jersey | \$134,350,000 | \$348,074,294 | 39% |
| Indiana | \$13,414,585 | \$39,170,794 | 34% |
| New Mexico | \$12,797,079 | \$37,906,884 | 34% |
| Maine | \$6,281,781 | \$19,288,665 | 33% |
| Wisconsin | \$20,417,720 | \$64,298,024 | 32% |
| New Hampshire | \$7,043,416 | \$23,375,761 | 30% |
| Florida | \$45,337,859 | \$152,668,015 | 30% |
| Connecticut | \$41,869,600 | \$151,394,223 | 28% |
| Texas | \$107,978,409 | \$393,232,034 | 27% |
| Maryland | \$34,814,000 | \$139,544,545 | 25% |
| Montana | \$7,059,947 | \$28,590,305 | 25% |
| Delaware | \$6,907,120 | \$28,820,855 | 24% |
| Utah | \$7,012,238 | \$30,955,777 | 23% |
| Nevada | \$5,551,834 | \$26,114,967 | 21% |
| Georgia | \$18,856,944 | \$91,546,074 | 21% |
| Tennessee | \$7,655,267 | \$42,957,120 | 18% |
| Colorado | \$2,938,000 | \$17,162,353 | 17% |
| Kentucky | \$8,606,952 | \$50,405,860 | 17% |
| North Carolina | \$12,235,366 | \$71,925,871 | 17% |
| Louisiana | \$3,775,859 | \$25,774,493 | 15% |
| Alabama | \$3,271,673 | \$24,779,891 | 13% |
| Oklahoma | \$3,380,160 | \$35,692,458 | 9% |
| Iowa | \$2,491,251 | \$37,580,787 | 7% |
| West Virginia | \$291,246 | \$32,750,405 | 1% |
| South Dakota | \$86,115 | \$31,340,873 | 0% |
| Nebraska | \$21,363 | \$29,893,229 | 0% |
| Arkansas | \$0 | \$25,190,755 | 0% |
| Hawaii | \$0 | \$20,465,332 | 0% |
| Kansas | \$0 | \$26,460,158 | 0% |
| Mississippi | \$0 | \$32,447,681 | 0% |
| North Dakota | \$0 | \$26,536,806 | 0% |
| South Carolina | \$0 | \$29,057,332 | 0% |
| Wyoming | \$0 | \$27,012,840 | 0% |

CHAPTER FOUR

Assuring Accountability

While more decision-making power has been moved from the federal government to the states, state and local agencies still have a long way to go in including or answering to the public.

The 1990s were supposed to bring more accountability to the way that federal transportation dollars are spent. The new federal transportation laws TEA-21 and ISTEA called on states and regional agencies to open up their decision-making processes, and to spend money in a more accountable way. Unfortunately, progress has been slow in many places.

Planning: Is More Better?

Federal funds used for administration and planning grew markedly in the 1990s, with the amount spent rising from \$257 million in 1990 to \$893 million in 1999. In 1998, about three percent of all federal transportation dollars went to planning and administration.

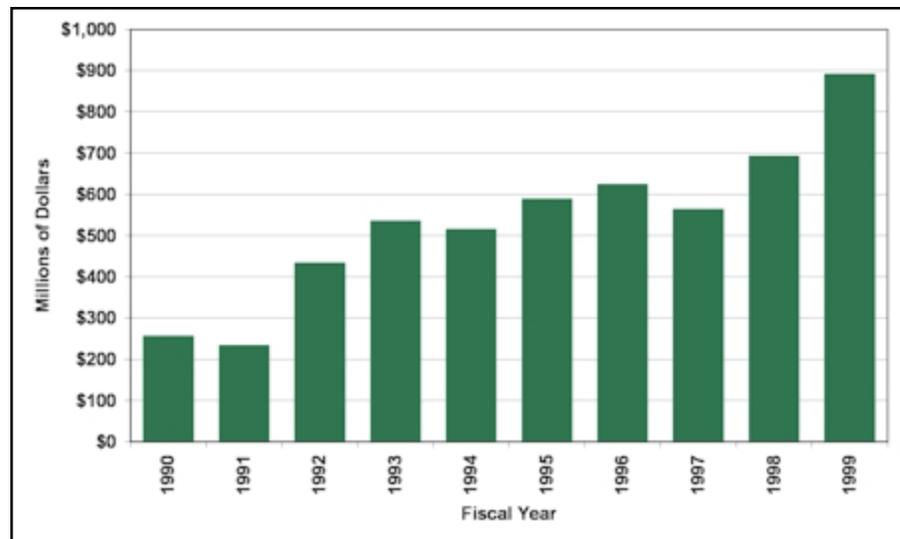
Unfortunately, when we look to see if better planning led to better outcomes, we don't have much to go on. The federal government asks state agencies and metropolitan planning organizations to use a series of planning factors when making transportation decisions – such as using transportation investments to support economic vitality or increase accessibility. But it does not require states to establish any methods to measure progress toward these goals, or to report any results. This makes it difficult to answer the simplest and most important questions that interest policy makers and citizens: *What are we trying to accomplish, and is it working?*

Even the information now available on how and where federal transportation funds are used is not generally available beyond a small

circle of specialists. When people outside the system try to learn more – people like county officials, mayors, and citizens – they often find the data presented in a form so complicated that it defies understanding. The database used in this analysis, the Federal Highway Administration's Fiscal Management Information System (FMIS), is the central repository for information on how federal transportation funds are used. The data it contains, which is used to track individual projects, often fails to answer the most basic questions about transportation spending. The FMIS includes hundreds of classifications of bridge and highway types, with an emphasis on construction materials used. Yet it collects only vague and inconsistent information on bikeways, pedestrian facilities, safety projects and other types of spending (see *Are We Collecting the Right Data?*). Its format makes it difficult to compare states, metropolitan areas, or spending by the type of transportation facility built. The information it contains is generally available only in a static format, in an annual FHWA publication, "Highway Statistics."

The government's transportation information systems stand in sharp contrast to those in the private sector. FedEx customers can locate their packages anywhere in the U.S. instantly over the Internet. Freight haulers use satellite tracking systems to maximize the efficiency of their dispatch-

Figure 10. Federal Spending on Administration and Planning



ing systems. And even some public agencies are making progress: The Department of Housing and Urban Development has an interactive Geographic Information System map of all the projects it funds on its web site. Although some high-tech applications have made their way into the public sector's transportation programs — real-time traffic monitoring and signal timing systems, for example — little effort has gone into making information about the government's use of transportation funds accessible, comprehensible or accountable to the general public. Considering the huge increase in spending on planning, this failure is disturbing.

Public Involvement. Some of the increase in spending for planning undoubtedly went toward fulfilling increased requirements for involving the public in the transportation decision-making process. While no federal data is available about whether public involvement has increased, anecdotal evidence from around the country indicates that public involvement has not met community expectations. Citizens typically complain that hearings are the only form of public involvement offered and that they are often held too late, after decisions have been made. The commitment to

gathering real public comment is also sometimes questionable: in Texas this summer, a single hearing was held (in Austin) for the FY 2000 statewide transportation plan. Official records show that not a single comment was received, yet the public involvement requirement was considered to have been met.

The States vs. Metro Areas. It can be difficult to figure out who is accountable for how federal dollars are spent. While this analysis has focused on how the states choose to use federal transportation dollars, metropolitan areas now have some say over this spending. ISTEA specified that Metropolitan Planning Organizations (MPOs) be in charge of conducting transportation planning in cities with a population over 50,000. These plans must be fiscally constrained and must include public involvement. Many of the most innovative projects funded by federal transportation dollars have come out of this process at the metropolitan level. But in many metro areas the state department of transportation exercises discretion over how much funding is handed over to metropolitan control, and the state DOT often wields considerable influence over the planning process. In rural

areas, state departments of transportation still continue to control the purse strings with very little accountability to local officials.

Are We Collecting the Right Data?

A handful of the more than *one thousand* work types describing bridge projects:

- X000 HWAY OVER WATERWAY-TIMBER-SLAB
- X372 HWAY OVER WATER & RAIL-COMP STL & CONCR-TRUSS
- X564 HWAY OVER RAIL & HWAY-TIMBER & CONCR-ARCH
- X633 HWAY UNDER RAILROAD-STEEL-RIGID FRAME
- X775 HWAY UNDER HIGHWAY-COMP STEEL & CONCR-CANT TRUSS
- X999 OTHER COMBINATIONS-ALUMINUM-HIGHWAY TUNNEL

ALL of the work types describing bicycle or pedestrian facilities:

- Y044 INCIDENTAL PEDESTRIAN FACILITY
- Y045 INCIDENTAL BICYCLE FACILITY
- Y046 INCIDENTAL BICYCLE AND PEDESTRIAN FACILITY
- Y047 INDEPENDENT BICYCLE AND PEDESTRIAN FACILITY
- Y050 INDEPENDENT PEDESTRIAN WALKWAYS
- Y052 INDEPENDENT BICYCLE FACILITIES

CHAPTER FIVE

How the States Are Doing

This chapter takes a broad look at how the states have performed overall in using their federal dollars to provide choice, fix the roads, and enhance safety and the environment. (Because of a lack of credible data, we were not able to rate the states on accountability to their citizens.) The states are grouped using the findings from chapters one through three to identify common trends.

These categories are a measure of how far states have come, not whether they have arrived. It is much too early to say that any state has either failed or succeeded. Instead, we asked which states have gotten off to a good start in laying the groundwork for the future and which have not. Frankly, the bar is set pretty low. All states could do far more to invest in transportation choice, and find creative ways to use federal money to improve their communities. But a ranking based on some ideal would be meaningless, since so few states come close. The categories presented below compare the states not to some ideal, but to each other.

All categorizations are based on spending of federal dollars, which in most states represent only a portion of all money spent on transportation. While federal spending data doesn't represent the whole picture, it serves as a revealing sample of state spending decisions. The flexibility of so much federal transportation money — the option to use it on any kind of transportation project — makes it a good barometer of what kind of transportation states are intent on building.

Behind the Times

- Arizona
- Idaho
- South Carolina
- Arkansas
- Iowa
- Tennessee
- Colorado
- Louisiana
- Texas
- Georgia
- Mississippi
- Wisconsin
- Hawaii
- Nevada

The states in this category fall short in most areas we measured, from safety to road repair to providing choice. They don't seem to be trying very hard to achieve these goals.

These states show a pattern of spending their federal transportation dollars in the same old ways. They spent low amounts in five out of seven measures of innovation. This indicates that they lag behind other states in embracing a diversified and forward-looking transportation policy. Their spending on alternative modes and safety is generally low and they have failed to direct 'flexible' money toward alternatives to highways. They generally are failing to effectively use some of the new programs to enhance the community and the environment, by not investing in CMAQ and Enhancements projects. They are also not taking advantage of the CMAQ program's full potential to bring long-term air quality benefits, and their spending on road repair and safety also generally lags behind other states. In other words, these states are generally acting as if the Department of Transportation is still the Highway Department, and are failing to step creatively into the future.

Offering Few Options

- Alabama
- Michigan
- Oklahoma
- Delaware
- Montana
- South Dakota
- Indiana
- Nebraska
- West Virginia
- Kansas
- North Carolina
- Wyoming
- Kentucky
- North Dakota

These states performed slightly better than those listed above, but still failed to use federal funds to provide their citizens with many travel options.

Most of these states did better on basic road repair than those listed above, but failed to do much to provide transportation choices to their residents. These states spent low amounts per capita on transit, bicycling facilities, and other alternative modes; most spent less than \$10 per capita. They also used little or none of their flexible transportation dollars for anything other than roads. While these states generally did better using new federal programs such as Transportation Enhancements and CMAQ, their failure to use federal money to diversify their transportation systems leaves their residents with fewer options.

Definitions

Behind the Times

States in this category meet five of the following seven criteria

- Spent less than \$15 per capita per year on alternative modes
- Obligated Enhancements funds at less than 65 percent
- Obligated CMAQ funds at less than 75 percent
- Spent less than \$2.50 per capita per year on safety
- Spent less than five percent of all flexible funds on alternative modes
- Spent less than 60 percent of highway funds on highway maintenance
- Spent less than 25 percent of CMAQ funds on long-term solutions

Offering Few Options

States in this category meet three of the following four criteria

- Spent less than \$15 per capita per year on alternative modes
- Obligated Enhancements funds at less than 65 percent
- Spent less than five percent of all flexible funds on alternative modes
- Spent less than 25 percent of CMAQ funds on long-term solutions

Middle of the Road

• Highly variable spending patterns meant that these states could not be classified as “Behind the Times,” “Offering Few Options,” or “Open to Change”

Open to Change

States in this category meet five of the following seven criteria

- Spent more than \$15 per capita per year on alternative modes
- Obligated Enhancements at more than 65 percent
- Obligated CMAQ at more than 75 percent
- Spent more than \$2.50 per capita per year on safety
- Spent more than five percent of all flexible funds on alternative modes
- Spent more than 60 percent of highway funds on highway maintenance
- Spent more than 35 percent of CMAQ funds on long-term solutions

Middle of the Road

- Florida
- Maine
- Maryland
- Massachusetts
- Minnesota
- Missouri
- New Hampshire
- New Mexico
- Ohio
- Oregon
- Pennsylvania
- Utah
- Virginia

These states show a mixed record: generally they do well in one major category, such as spending on alternative modes, but do poorly in others, such as spending on road repair.

While it is difficult to find a single pattern among these states, a few trends are apparent. They seem to devote more spending to either alternative modes or road repair, but not both. About half spent less than \$15 per capita on alternative modes, and about half spent below 60% on maintenance. Florida and Virginia spent low amounts in both categories. Among these states, all but two, Utah and Maryland, spent less than 25% of their CMAQ funds on long-term solutions. Eight states spent low amounts on safety projects.

Open to Change

- Alaska
- California
- Connecticut
- Illinois
- New Jersey
- New York
- Rhode Island
- Vermont
- Washington

These states show signs of using federal transportation dollars to provide new transportation solutions to their residents.

These states have gone the farthest to use their federal transportation dollars to provide choice and meet the other goals of ISTEA and TEA-21. Generally, they have used a higher portion of their federal dollars to fix their roads than other states, and have directed more than one-third of CMAQ money to projects that will bring long-term air quality benefits. They have moved at least some funds from traditional highway programs into providing more travel options, and their per-capita spending on transit is generally high. They have also taken advantage of the money set aside for Transportation Enhancements and environmental protection, using these programs to improve their communities. But even among these states, the move toward progress is modest. Transit, walking, and

bicycling still face fierce competition for funding from expensive road projects.

In most of these states, citizen involvement and progressive local officials have helped move money toward more innovative uses. Most of the states (but not all) in this category are home to large cities with metropolitan planning organizations (MPOs) that have been given control over a significant portion of the federal dollars flowing into the state. MPOs serve as the regional authority in charge of planning metropolitan transportation spending, and generally achieve a higher level of public involvement than most state Departments of Transportation. These agencies are often more responsive to the need for innovation and have sometimes been the leaders in pushing change.

Backsliding

The national figures indicate that there may be a trend back toward road building, and away from funding transportation alternatives or road repair. On the state level, we found 29 states that are falling off in spending on either alternative modes or road repair, or both. These states are listed below.

Backsliding on Alternative Modes

- Iowa
- Maine
- Maryland
- Nevada
- New Jersey
- New York
- Oregon
- Pennsylvania
- Texas

Backsliding on Road and Bridge Repair

- Alaska
- Arizona
- California
- Colorado
- Florida
- Indiana
- Iowa
- Kentucky
- Maine
- Missouri
- Montana
- Nebraska
- New Mexico
- Oklahoma
- Rhode Island
- South Carolina
- Tennessee
- Texas
- Utah
- Wisconsin

Most Improved

Two states deserve special recognition for changing the way they spend transportation dollars: Hawaii and Delaware increased spending on both alternative modes and road repair by more than 80% over the decade. While both states still get low to moderate rankings for overall spending patterns, continuing change at this pace should improve the transportation picture for state residents.

Methodology

The vast majority of charts, tables and figures in this report are derived from STPP's analysis of ten years of federal transportation funding data. This data is maintained in an immense U.S. Department of Transportation database known as the Fiscal Management Information System, or FMIS for short. The FMIS contains detailed information on every single transportation project receiving funds from the Federal Highway Administration. In the last ten years, this comes to approximately 360,000 projects. STPP obtained a copy of this database through the generous assistance of the Federal Highway Administration's FMIS Team.

A second primary source of data used in this report was the annual series of the Federal Transit Administration's Nationwide Transit Statistics Annual Report. These reports contained both state and national level data on transit obligations, and obligations of flexible funds to transit.

Dollar amounts represent the federal funds *awarded* to a given project during the Federal Highway Administration's fiscal year (October 1 to September 30). These should not be confused with "obligations" which can be extracted from the FMIS database only through a special program administered by FHWA's FMIS team, or with disbursements of funds to the states. For this reason, obligation rates (Table 5) were calculated using printed reports of Obligations and Apportionments from the Federal Highway Administration.

STPP performed its modal analysis (where federal funds are grouped by bicycle and pedestrian, bridge and highway, ITS, etc.), by grouping projects based on their "Work Type." The FMIS database contains approximately 1,100 work types, though the vast majority describe some configuration of bridge. Where bridges and highways are identified as repair or new capacity projects, we used a second reporting code, "Improvement Type," to identify projects which added new capacity versus those that can be called system preservation.

Figures and charts showing the use of "Flexible" funds (Tables 3 and 4), were created by querying the FMIS data by Appropriation Code. Flexible appropriation programs included were: Donor State Bonus; Minimum Allocation; Minimum Guarantee; sub-programs of the Funding Restoration program; and, the Surface Transportation Program, with the exception of sub-programs such as

Transportation Enhancements and Hazard Elimination.

In our calculation of safety spending (See Table 10), STPP defined safety projects by the type of improvement, the safety code, and the work type. Where a project had a type of improvement of Safety/Traffic, and reported a value in the safety code, that project was considered to be a safety project. We also included projects which had a work type of SFTY (Safety related work), though these could not be classified as to whether they were bicycle/ pedestrian-, or motorist-related.

For the calculation of spending per roadway death (See Figure 8), safety projects were then further analyzed based on their work type. For example, a project with an improvement type of Safety/Traffic, a value in the safety code field, and a work type of Bicycle and Pedestrian Facility was considered a bicycle or pedestrian safety project. Projects which were not classified as bicycle or pedestrian, or highway-related, were excluded.

For STPP's analysis of CMAQ spending (Table 11 and Figure 9), we first queried the FMIS database by appropriation code to identify all of the projects receiving CMAQ funds. Using work type classifications, we further divided CMAQ projects by long-term benefits, short-term benefits, and projects which actually degrade air quality. Bicycle and pedestrian projects, aspects of highway projects that dealt specifically with the environment, transportation demand management projects, and transit projects fell into the long-term air quality benefits group. Construction of new roadway capacity was deemed to degrade air quality. Administrative and planning, recreational bicycle and pedestrian facilities, some highway projects, including High Occupancy Vehicle lanes, Intelligent Transportation Systems, Inspection and Maintenance programs, and safety projects were classified as having short-term benefits.

Other data sources include: the U.S. Bureau of the Census yearly estimates of states' populations; the American Public Transportation Association's transit ridership estimates; the Federal Highway Administration's *Highway Statistics Series*, from which we obtained roadway condition data; and the National Highway Traffic Safety Administration's reporting of traffic fatalities.

Endnotes

Chapter One

1. *Twin Cities Area Survey, 1998*; Hart Research, Washington state poll, 1999; St. Louis County Dept. of Planning poll, *ARC Attitude Research*, March, 1999; Michigan Department of Transportation Detroit survey, June, 1999, *Detroit Free Press*, August 25, 1999; "Public Involvement Update," *Atlanta Regional Commission*, October 1997; "Poll Says Suburbanites Aren't Hostile to MARTA," *Atlanta Journal-Constitution*, June 28, 1998.
2. "Straight Talk from Americans 2000," Pew Center for Civic Journalism, February 15, 2000.
3. The four cities surveyed were Denver, Philadelphia, San Francisco, and Tampa; The sample size for each city was 500 people.
4. "Over the six-year life of ISTEA (92-97) \$972 million of federal enhancement funds were programmed for bike projects, versus a mere \$41 million in federal funds for pedestrian and bike projects in the 20 prior years." John Pucher, Charles Komanoff, and Paul Schimek. "Bicycling Renaissance in North America? Recent Trends and Alternative Policies to Promote Bicycling," *Transportation Research*, Fall 1999.
5. *Quarterly Transit Ridership Report*, American Public Transportation Association, 2000. The number shown in Figure 3 for transit ridership in 1999 is an estimate based on 9 months of actual data.
6. David Lewis and Fred Laurence Williams, *Policy and Planning as Public Choice: Mass Transit in the United States*, Brookfield, VT: Ashgate Publishing Company, 1999.
7. David Gatton, Deputy Executive Director, USCM in memo to Paul Weinstein. December 14, 1999.
8. "Transportation Enhancements: Summary of Nationwide Spending," August 1999, p. 6.

Chapter Two

1. *Highway User Survey*, FHWA & National Quality Initiative, May 1996.
2. For accurate comparison between states, this analysis considered only funds administered by the FHWA, leaving out highly variable transit funding.
3. "Engler to Urge Road Expansion," *Detroit Free Press*, January 31, 2000.
4. *Highway Statistics, 1990-1998*, FHWA. Table HM-60; includes all roads except collectors and local roads.
5. "Why Are the Roads So Congested," Surface Transportation Policy Project, November, 1999.
6. Lewis Fulton. "Statistical Effects of Induced Travel in the US Mid-Atlantic Region," presentation to Transportation Research Board, January 2000; Robert Noland. "Analysis of Metropolitan Highway Capacity and the Growth of Vehicle Miles of Travel," presentation to Transportation Research Board, January 2000.
7. Alan Sipress. "More Lanes Often Mean More Traffic, Studies Find," *Washington Post*, January 13, 2000.
8. Martin Boarnet. "Highways and Economic Productivity: Interpreting Recent Evidence," *Journal of Planning Literature*. May 1997.
9. "Getting Where You Want to Be," EcoCity Cleveland, February 4, 2000.

Chapter Three

1. *Transportation and Air Quality: Selected Facts and Figures*, U.S. DOT, Federal Highway Administration, 1996, p. 13.
2. "The Emissions Reduction Potential of the CMAQ Program," EPA Office of Policy, Planning & Evaluation, May 1997.

Appendix

Federal Spending by Mode (1990 to 1999) (Millions of Dollars)

| Mode | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | Cumulative |
|------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|
| Administrative and Planning | \$257.3 | \$234.2 | \$434.8 | \$536.3 | \$515.8 | \$689.3 | \$624.5 | \$564.8 | \$693.6 | \$892.7 | \$5,343.4 |
| Highway and Bridge Repair | \$5,827.2 | \$6,917.8 | \$8,720.0 | \$10,261.1 | \$9,953.7 | \$9,765.5 | \$10,272.4 | \$10,629.5 | \$11,818.8 | \$15,977.5 | \$100,143.6 |
| New and Widened Roads and Bridges | \$5,149.1 | \$4,928.3 | \$6,017.4 | \$5,301.4 | \$5,199.3 | \$5,184.2 | \$5,247.0 | \$4,967.2 | \$5,833.6 | \$8,979.0 | \$56,806.4 |
| Transit | \$3,151.5 | \$3,157.9 | \$3,481.0 | \$4,350.0 | \$4,438.6 | \$6,368.4 | \$4,615.4 | \$4,597.5 | \$4,475.6 | \$5,577.3 | \$44,213.2 |
| Bicycle and Pedestrian | \$7.4 | \$2.0 | \$19.5 | \$35.0 | \$84.0 | \$145.0 | \$176.1 | \$215.2 | \$175.4 | \$222.2 | \$1,081.9 |
| Travel Demand Management | \$6.8 | \$4.8 | \$11.8 | \$36.2 | \$43.7 | \$78.7 | \$46.2 | \$22.4 | \$62.9 | \$36.1 | \$349.4 |
| All Alternative Modes* | \$3,165.7 | \$3,164.7 | \$3,512.3 | \$4,421.2 | \$4,566.3 | \$6,592.1 | \$4,837.7 | \$4,835.1 | \$4,713.9 | \$5,835.5 | \$45,644.4 |
| Intelligent Transportation Systems | \$15.6 | \$35.0 | \$42.1 | \$147.7 | \$155.0 | \$198.8 | \$155.3 | \$130.0 | \$181.1 | \$235.5 | \$1,296.2 |
| Safety | \$573.1 | \$608.8 | \$596.5 | \$788.1 | \$925.5 | \$705.3 | \$816.1 | \$732.9 | \$751.4 | \$942.3 | \$7,439.8 |
| Other | \$54.6 | \$48.6 | \$100.9 | \$700.3 | \$852.2 | \$520.1 | \$484.7 | \$663.5 | \$592.5 | \$775.6 | \$4,773.0 |
| Total | \$15,042.7 | \$15,937.4 | \$19,424.0 | \$22,156.0 | \$22,167.7 | \$23,555.3 | \$22,417.7 | \$22,523.0 | \$24,564.8 | \$33,638.1 | \$221,446.8 |

Modal Share of Federal Spending (1990 to 1999)

| Mode | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | Cumulative |
|------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Administrative and Planning | 1.7% | 1.5% | 2.2% | 2.4% | 2.3% | 2.5% | 2.8% | 2.5% | 2.9% | 2.7% | 2.4% |
| Highway and Bridge Repair | 38.7% | 43.4% | 44.9% | 46.3% | 44.9% | 41.5% | 45.8% | 47.2% | 49.0% | 47.5% | 45.3% |
| New and Widened Roads and Bridges | 34.2% | 30.9% | 31.0% | 23.9% | 23.5% | 22.0% | 23.4% | 22.1% | 24.2% | 26.7% | 25.7% |
| Transit | 21.0% | 19.8% | 17.9% | 19.6% | 20.0% | 27.0% | 20.6% | 20.4% | 18.5% | 16.6% | 20.0% |
| Bicycle and Pedestrian | 0.0% | 0.0% | 0.1% | 0.2% | 0.4% | 0.6% | 0.8% | 1.0% | 0.7% | 0.7% | 0.5% |
| Travel Demand Management | 0.0% | 0.0% | 0.1% | 0.2% | 0.2% | 0.3% | 0.2% | 0.1% | 0.3% | 0.1% | 0.2% |
| All Alternative Modes* | 21.0% | 19.9% | 18.1% | 20.0% | 20.6% | 28.0% | 21.6% | 21.5% | 21.7% | 17.3% | 20.9% |
| Intelligent Transportation Systems | 0.1% | 0.2% | 0.2% | 0.7% | 0.7% | 0.8% | 0.7% | 0.6% | 0.8% | 0.7% | 0.6% |
| Safety | 3.8% | 3.8% | 3.1% | 3.6% | 4.2% | 3.0% | 3.6% | 3.3% | 3.1% | 2.8% | 3.4% |
| Other | 0.4% | 0.3% | 0.5% | 3.2% | 3.8% | 2.2% | 2.0% | 2.9% | 2.4% | 2.3% | 2.1% |
| Total | 100.0% |

*Alternative Modes include Transit, Bicycle and Pedestrian, and Travel Demand Management