

# Volume I

## Recommendations

### A Call to Action

The surface transportation system of the United States is at a crossroads. The future of our Nation's well-being, vitality, and global economic leadership is at stake. We must take significant, decisive action now to create and sustain the pre-eminent surface transportation system in the world.

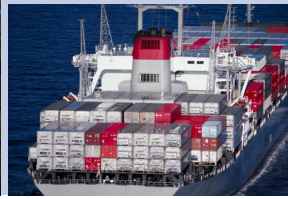
The first half of our Nation's history saw that economic development was directly tied to infrastructure development. The creation of roads for vehicles and the transcontinental railroad led to trade and prosperity across the vast continent. This in turn vaulted the Nation into a position of significance in the world. The second half of our history has been dominated by the move from an agrarian society, through the Industrial Revolution, into a largely urban society and the world's primary economic and military superpower. All of this was facilitated by the foresight of private and public sector leaders who further developed the country's infrastructure including the Interstate highway system, the Nation's freight rail system, and urban mass transit. Now we have outgrown this system and it is time for new leadership to step up with a vision for the next 50 years that will ensure U.S. prosperity and global preeminence for generations to come.

The U.S. now has incredible economic potential and significant transportation needs. We need to invest at least \$225 billion annually from all sources for the next 50 years to upgrade our existing system to a state of good repair and create a more advanced surface transportation

system to sustain and ensure strong economic growth for our families. We are spending less than 40 percent of this amount today.

A significant increase in public funding is needed to keep America competitive. Additional private investment in our system is also needed. We will need to price for the use of our system. More tolling will need to be implemented and new and innovative ways of funding our future system will need to be employed. Maintenance and expansion of our freight system will require a set of policy tools that encourage more private investment and direct public funds toward projects which alleviate capacity constraints and allow for more traffic to flow across an efficient, sustainable, intermodal freight network. Chokepoints at our major gateways and trade corridors don't just represent congestion and environmental hot spots; they are a potential trade barrier as well. Trucks and rail will have to work even more closely in the coming years in order to deliver the commerce the Nation produces, imports, and exports.

Our Nation will need to put more emphasis on transit and intercity passenger rail and make them a priority for our country. A cultural shift will need to take place across America to encourage our citizens to take transit or passenger rail when the option is given. It is also important to increase the market share for freight rail, and to make significant increases in highway investment as part of developing a robust surface transportation network.



In addition to putting more money into the system, we also must create a system where investment is subject to benefit-cost analysis and performance-based outcomes. We need a system that ensures each project is designed, approved, and completed quickly; one that provides a fully integrated mobility system that is the best in the world; one that emphasizes modal balance and mobility options; one that dramatically reduces fatalities and injuries; one that is environmentally sensitive and safe; one that minimizes use of our scarce energy resources; one that erases wasteful delays; one that supports just-in-time delivery; and one that allows economic development and output more significant than ever seen before in history.

The good news is that we can do it. Our people need such a system and they deserve it.

We cannot sit back and wait for the next generation to address these ever-increasing needs. The crisis is now and we have a responsibility and obligation to create a safer, more secure, and ever more productive system. We need to create and sustain the pre-eminent surface transportation system in the world. Now.

## Introduction

President Dwight D. Eisenhower had the foresight to understand how a system of Interstate highways would transform the Nation. If there was ever a time to take a similarly daring look at a broadened surface transportation network, it is now! The Nation faces challenges similar to those of the Eisenhower era. However, the imperative for change due to the global economy is even stronger.

Transportation is a critical engine of the Nation's economy. Investments in the national transportation network over the Nation's history, and especially the Interstate Highway System during the last half-century, have

“Our unity as a nation is sustained by free communication of thought and by easy transportation of people and goods... Together the unifying forces of our communication and transportation systems are dynamic elements in the very name we bear — United States. Without them, we would be a mere alliance of many separate parts.”

*President Dwight D. Eisenhower, 1955*

been instrumental in developing the world's largest economy and most mobile society. Transportation is the thread that knits the country together, providing the mobility that is such an important part of overall quality of life and is so deeply embedded in our culture and history. Highways, transit, rail, and water systems provide unprecedented access to jobs, recreation, education, health care, and the many other activities that sustain and enrich the lives of American families.

By 2050, the total U.S. population is projected to reach 420 million, a 50 percent increase over 50 years. This growing society will demand higher levels of goods and services, and will rely on the transportation system to access them. In turn, this will cause travel to grow at an even greater rate than the population. As part of an increasingly integrated global economy, the U.S. will see greater pressures on its international gateways and







domestic freight distribution network to deliver products and materials to where they are needed. The Nation is faced with a massive increase in passenger and freight travel.

The Nation's surface transportation program has reached a crossroads. Will it continue to function as it has since the completion of the Interstate system, pursuing no discernible national interests other than the political imperatives of "donor State" rights and congressional earmarking? Or will it advance concerted actions to confront the transportation challenges facing the Nation that have reached crisis proportions—the deferred maintenance of its basic infrastructure; the burgeoning international trade and its impact on our road and rail networks; the traffic congestion that is crippling metropolitan America; the continued carnage on the Nation's highways; and powering cars and trucks with fossil fuels, much of which is imported from foreign countries?

### ***The Consequences of Inaction***

Applying patches to our surface transportation system is no longer acceptable. The Nation's leaders must make a renewed commitment to serving the American people's need for a system that ensures unparalleled mobility, access, and safety. America must have the pre-eminent transportation system in the world. The demand for more and better transportation resulting from a growing population within an increasingly global economy will continue to strain the U.S. surface transportation

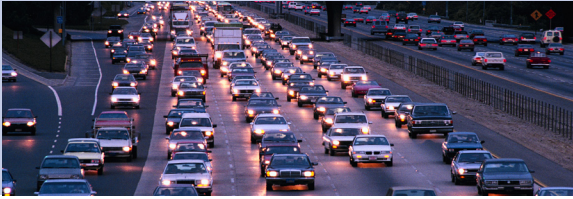


system. We can predict, with some certainty, the consequences of failing to take bold action:

- **The Nation's transportation system assets will further deteriorate.** Too many of the Nation's highways, bridges, and transit systems are already in disrepair. Our transportation system is aging, requiring increasing investment just to maintain its current condition, much less improve it.
- **Automobile casualties will increase, adding to the 3.3 million lives lost to traffic crashes in the last 100 years.** In 2006 alone, almost 43,000 people died on U.S. roads and almost 2.6 million were injured. If safety goals are not pursued more aggressively, far too many Americans will continue to lose their lives, their health, and their family stability in crashes that could be avoided.

*"To save lives, we need funding and flexibility, we need partnerships and persistence, we need Federal, State, and local agencies to commit to the goal and continue their efforts. Anything less will prevent us from moving toward zero deaths." – Kathy Swanson, Director, Office of Traffic Safety, Minnesota Department of Public Safety, at the Commission's Minneapolis field hearing.*





- **Congestion will continue to affect every mode of surface transportation for ever-lengthening periods each day, as a result of the mismatch between demand and supply of limited capacity.** Congestion is not just a big city problem any more. It is disrupting household and business activities from coast to coast, and exacting a large and expanding penalty on business productivity and the quality of life of American families.
- **Underinvestment in all modes will continue.** The Nation is underinvesting in all modes of transportation. Unless the relative market share for other modes—including rail, bus, and water—grows, even significant increases in highway capacity cannot meet the scale of future projected demand.
- **America’s economic leadership in the world will be jeopardized when we cannot reliably and efficiently move our goods.** The declining performance of the surface transportation network—as a result of both inadequate capacity and inefficient management—will choke economic progress, preventing the U.S. economy from growing to its full potential. It is not an overstatement to say that the Nation’s potential for the creation of wealth will depend in great part on the success of its freight efficiency. Without

“Many municipalities have...shipping at night, commuting, having trucks and trailers and containers move up and down the system during non-peak hours. But in many cases...non-peak hours almost don’t exist any more.” – *Jerry Tidwell, Senior Vice President, Supply Operations, Safeway Corporation, at the Commission’s Los Angeles field hearing.*

changes, countries such as China and India, with more dynamic policies for transportation and economic growth, will challenge the U.S. in economic power and world influence.

- **Excessive delays in making investments will continue to waste public and private funds.** Federal funds are currently distributed to State and local transportation agencies along with many “procedural strings” that lead to excessive delays. Particularly for larger projects, the complex process of planning, evaluating environmental impacts, and arranging project funding can take as long as 15 years—an unacceptably long time in the face of immediate and growing transportation problems and in contrast to the ever-shortening cycle of private sector and entrepreneurial decision making. These delays lead to unnecessary cost increases that waste taxpayer funds. The same is true for the construction and expansion of private sector transportation facilities, such as rail lines and intermodal terminals, when such facilities require public approval.
- **Transportation policies will remain in conflict with other national policy goals.** Despite good intentions, the Nation’s government programs don’t always fit together very neatly. Current transportation and land use policies are not well coordinated. This, in turn, undermines national security, energy, and environmental goals by contributing to greater reliance on foreign petroleum, higher greenhouse gas emissions, and adverse public health impacts.
- **Transportation financing will continue to be politicized.** The political process is important in ensuring that the needs of various constituencies are met. In recent years, for example, that process helped to greatly increase the overall Federal investment in highways and transit. Sometimes, however, politics can get in the way of good





The National Surface Transportation Policy and Revenue Study Commission was established in the Safe, Accountable, Flexible, and Efficient Transportation Equity Act—A Legacy for Users (SAFETEA-LU). This language requires the Commission, among other things, to:

- (A) Conduct a comprehensive study of—
  - (I) the current condition and future needs of the surface transportation system;
  - (II) short-term sources of Highway Trust Fund revenues;
  - (III) long-term alternatives to replace or supplement the fuel tax as the principal revenue source to support the Highway Trust Fund, including new or alternate sources of revenue;
  - (IV) revenue sources to fund the needs of the surface transportation system over at least the 30-year period beginning on the date of enactment of this Act, including new or alternate sources of revenue;

(V) revenues flowing into the Highway Trust Fund under laws in existence on the date of enactment of this Act, including individual components of the overall flow of the revenues; and

(VI) whether the amount of revenues (are) likely to increase, decrease, or remain constant absent any change in law, taking into consideration the impact of possible changes in public vehicular choice, fuel use, and travel alternatives that could be expected to reduce or increase revenues into the Highway Trust Fund;

- (B) Develop a conceptual plan, with alternative approaches, to ensure that the surface transportation system will continue to serve the needs of the United States, including specific recommendations regarding design and operational standards, Federal policies, and legislative changes.

decision making. Congressional earmarking has increased from 10 projects in 1982 to more than 6,300 projects in SAFETEA-LU (2005). In addition, the lack of transparent analyses of costs and benefits of alternative investments makes achieving the best portfolio of investments unlikely. The American public will have little confidence in infrastructure investment decisions that are the result of highly politicized public and private sector deals.

### **Future Surface Transportation Investment Requirements**

At the public hearings and in other testimony, perhaps the most common theme the Commission heard was the large investment required in all modes to maintain the condition of the Nation’s existing infrastructure, relieve congestion, and improve essential services. Recognizing the uncertainties in how transportation services

might be improved, especially 30 and 50 years in the future, the Commission developed a range of potential investment requirements based on differing assumptions. Among the assumptions were (1) the extent to which operational strategies are deployed; (2) the extent to which State and local agencies use pricing to relieve congestion; (3) the extent to which advanced technologies such as Vehicle Infrastructure Integration (VII) are implemented; (4) the extent of physical capacity expansion pursued; and (5) the level of performance wanted from the system.

The table below summarizes ranges of potential investment levels for different modes for the time periods 2005 to 2020, 2020 to 2035, and 2035 to 2055. See Chapter 4 of Volume II for a complete discussion of these analyses and findings.

The “High Capital Investment” levels shown in the table represent the amount of funding estimated to be adequate to improve key condition and performance measures for each mode in the



**Summary of range of “high” average annual capital investment levels analyzed for all modes**

**Range of “high” capital investment levels analyzed (billions of constant dollars)**

	Currently Sustainable <sup>1</sup>	Range Through 2020		Range Through 2035		Range Through 2055	
		From	To	From	To	From	To
Highway	\$68	\$207	\$240	\$182	\$250	\$185	\$276
Transit	\$13	\$21	\$32	\$23	\$34	\$26	\$46
Freight Rail	\$4	\$5	\$7	\$5	\$7	\$6	\$8
Passenger Rail	\$1	\$7	\$7	\$9	\$9	\$8	\$8
<b>All Modes Combined<sup>2</sup></b>	<b>\$86</b>	<b>\$241</b>	<b>\$286</b>	<b>\$220</b>	<b>\$301</b>	<b>\$225</b>	<b>\$338</b>

**“Gap” between high capital investment levels and currently sustainable revenue (billions of constant dollars)<sup>3</sup>**

	Currently Sustainable	Range Through 2020		Range Through 2035		Range Through 2055	
		From	To	From	To	From	To
Highway		\$139	\$172	\$115	\$182	\$117	\$208
Transit		\$8	\$19	\$10	\$21	\$13	\$33
Freight Rail		\$1	\$3	\$1	\$3	\$2	\$4
Passenger Rail		\$6	\$6	\$8	\$8	\$7	\$7
<b>All Modes Combined</b>		<b>\$155</b>	<b>\$200</b>	<b>\$134</b>	<b>\$215</b>	<b>\$140</b>	<b>\$252</b>

**Investment “gaps” stated in constant cents per gallon of highway motor fuel<sup>4</sup>**

	Currently Sustainable	Range Through 2020		Range Through 2035		Range Through 2055	
		From	To	From	To	From	To
Highway		\$0.71	\$0.88	\$0.54	\$0.85	\$0.49	\$0.85
Transit		\$0.04	\$0.10	\$0.05	\$0.10	\$0.06	\$0.13
Freight Rail		\$0.01	\$0.02	\$0.01	\$0.01	\$0.01	\$0.02
Passenger Rail		\$0.03	\$0.03	\$0.04	\$0.04	\$0.03	\$0.03
<b>All Modes Combined</b>		<b>\$0.79</b>	<b>\$1.02</b>	<b>\$0.63</b>	<b>\$1.00</b>	<b>\$0.59</b>	<b>\$1.03</b>

<sup>1</sup> The estimated “Currently Sustainable” funding for highways and transit is based on short-term Federal Highway Trust Fund revenue projections and assumes State, local, and private funding remains steady in constant dollar terms (i.e., growth equals inflation), while the estimate for freight rail assumes that private freight rail capital investment keeps pace with revenue growth. The amount shown for intercity passenger rail assumes estimated current capital investment by Amtrak and State governments remains steady in constant dollar terms.

<sup>2</sup> The combined figures do not account for cross-modal impacts.

<sup>3</sup> “Gaps” reflect the difference between the “High” and “Currently Sustainable” capital investment levels.

<sup>4</sup> The implied cents per gallon for the lower and upper ends of the range for each time period are based on the estimated fuel consumption derived from the highway scenario consistent with the highway funding level in each column.

**This table shows the range of potential annual investment levels in highways, transit, freight rail, and passenger rail and the equivalent fuel tax increase that would be required to fill the gap between current sustainable investment levels and the high investment levels shown in the table. Each range represents average annual amounts from the current year through the date shown.**

Source: Commission staff analysis.





future relative to their current levels. Where available data and analytical tools permitted a more refined analysis, investment levels were set at the maximum level for which potentially cost-beneficial investments could be identified. These provisional estimates were developed to support an informed discussion of alternative financing options, but ultimately would be supplanted by the amounts generated by the capital investment plans the Commission is recommending, which would be based on a more rigorous analysis for all components of the transportation system.

For highways and, to a lesser degree, transit, the staff was able to modify existing analytical tools to develop independent estimates of future investment requirements. For other modes such as freight and passenger rail, for which the available data and analytical tools were insufficient to conduct such analyses, the Commission reached out to industry experts to develop estimates.

Expressing investment requirements in terms of cents per gallon of fuel tax should not be construed to mean that the Commission believes the fuel tax should necessarily be the only source for all surface transportation funding. A number of State and local transportation agencies have been using other sources of funds because voters have been unwilling to approve fuel tax increases. Among those other funding sources are tolls, sales taxes, property taxes, and private sector financing.

## A New Beginning

The Commission believes that it is critical to America's future to:

*Create and sustain the preeminent surface transportation system in the world.*

This new transportation vision is fundamental to any significant effort to identify and rectify the shortcomings of the current national surface transportation system. Achieving this vision is within the means of the wealthiest country on Earth assuming leaders at all levels of government and the private sector will take ownership and act on it accordingly and expeditiously. The American people can no longer tolerate more “business as usual” in the surface transportation arena.

The Commission's vision is rooted in an understanding of the longstanding and increasing importance of transportation to the Nation in a global economy. Our families and firms can no longer tolerate excessive transportation constraints that waste our collective resources—time, money, fuel, clean air, and our competitive edge. Concern for the system goes beyond the tangible pieces of infrastructure that can be plotted on a map. Although that engineering perspective was effective in the early days of building our rail, highway, transit, and port systems, it focuses on only the infrastructure side of a complex and sophisticated network essential to moving people and goods reliably and efficiently. By updating our focus to include the performance that this system provides, we can identify current and future failures that will come, for example, with insufficient capacity, inadequate intermodal linkages, and poor system operation.

*The Commission believes the National Interest in quality transportation is best served when:*

- **FACILITIES ARE WELL MAINTAINED.** The infrastructure that serves as the backbone of national surface transportation systems is in at least good condition—Federal-aid highways (including the Eisenhower System of Interstate and Defense Highways and the

National Highway System), transit assets, intercity passenger and freight rail lines, and network connectors between our modes that complete the overall system.

■ **MOBILITY WITHIN AND BETWEEN METROPOLITAN AREAS IS RELIABLE.**

Chokepoints that consistently impede national and regional movements of people and goods across the current passenger and freight systems are eliminated. Highway, transit, and rail systems are expanded and managed to meet future growth.

■ **TRANSPORTATION SYSTEMS ARE APPROPRIATELY PRICED.**

To avoid imbalances between the transportation capacity available at any particular time and the demand for it, pricing can help provide a guide for the most efficient use of scarce investment dollars.

■ **MODES ARE REBALANCED AND TRAVEL OPTIONS ARE PLENTIFUL.**

Passengers and shippers should have options to travel within and between regions by road, rail, and water, helping to reduce congestion and accommodating future growth on the highways and in the air. Public transportation and intercity passenger rail will play a significantly larger role in Americans' mobility; Federal, State, and local transportation policies should not only accommodate, but encourage its development. Shares of these modes will grow as part of a robust surface transportation system that includes increased investment in highways, transit, and intercity passenger and freight rail infrastructure capacity.



The Nation's surface transportation network is part of a broader network that also includes aviation. Although beyond the scope of this study, the interaction between surface and air has not been ignored. Airborne freight ultimately makes its way to trucks. With 517 primary and non-primary commercial airports across the United States, connections between airports and surface transportation modes such as highways and transit are critical for moving millions of passengers. In places like the Northeastern United States, intercity passenger rail is an option for people who do not want to use regional air transportation.

■ **FREIGHT MOVEMENT IS EXPLICITLY VALUED.**

Operation of private and public sector freight systems (including rail, trucking, waterways, and ports) that fully serve the needs of the Nation's economy is a priority.

■ **SAFETY IS ASSURED.**

Users of our surface transportation systems must not be at risk of death or injury due to unsafe facilities or operations.

■ **TRANSPORTATION DECISIONS AND RESOURCE IMPACTS ARE INTEGRATED.**

The Nation's population is expected to swell to 420 million residents by 2050. Given the immensity of this increase, it is essential that the surface transportation system be transitioned away from fossil fuels, and that planners incorporate transportation into thoughtfully planned, efficient, and environmentally sustainable communities.

■ **RATIONAL REGULATORY POLICY PREVAILS.**

Ensuring the necessary free flow of capital into the rail industry and other private sector providers of transportation requires that regulatory policies promote efficient operations and encourage investment. National networks require uniform and national regulatory structures to further the Nation's commerce.





The United States is not the only major industrialized Nation reviewing the state of its surface transportation infrastructure. In December 2006, Sir Rod Eddington presented a long-awaited report to the government of Great Britain that outlined major recommendations for its transportation system.

Eddington recommended that, over the next 20 years, the British government focus on congestion relief, key corridors between Britain's largest cities, and international gateways that are showing signs of increasing congestion and unreliability. "The policy process needs to be rigorous and systematic," the report concluded. "Start with the three strategic economic priorities, define the problems, consider the full range of modal options using appraisal techniques that include full environmental and social costs and benefits, and ensure that spending is focused on the best policies." To expedite major transportation initiatives, the report endorsed creation of a new Independent Planning Commission.

The report noted that widespread road pricing could deliver significant economic and environmental benefits, and that pricing could substantially reduce the amount of additional roads needed to alleviate congestion.

***The Commission believes that to meet 21<sup>st</sup> Century transportation needs, it is necessary for Congress to establish a new Federal Compact with the American people.***

The key elements of that "compact" are:

- A strong Federal role in surface transportation that will evolve to meet the national interest;
- Increased expenditures from all levels of government and the private sector to compensate for past investment failures while addressing significant increases in future demand;
- A commitment to make more effective use of taxpayers' funds for the national interest;

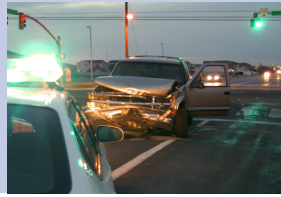
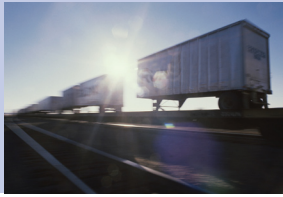
- Federal funding that is performance-based and focused on cost-beneficial outcomes with accountability for the full range of economic, environmental, and social costs and benefits of investments; and
- Far-reaching program reform to eliminate waste and delays in Federally funded program delivery.

## Recommendations to Reform Institutions and Programs

***We propose the new Compact with the American people be fulfilled through a performance-based approach that identifies and establishes priorities, and avoids parochial and wasteful spending.***

The Commission concludes that the current Federal surface transportation programs should not be "re-authorized" in their current form. We must begin anew. This New Beginning is the dawn of the third era in the modern history of the Federal surface transportation program. The first era began 50 years ago with construction of the Interstate highway system, which served as the unifying principle of Federal effort for three decades. While it was an immense undertaking, the basic purpose of the Interstate enterprise was to convert lines on a highway map into miles of concrete, asphalt, and steel. The completed system connected the Nation as President Eisenhower





envisioned, and it still stands as one of the engineering marvels of the world.

The second era was ushered in with the passage of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). The “TEA” era has been characterized by the unprecedented flexibility afforded to State and local officials to invest Federal highway dollars in new modes and approaches. Overall, State and local transportation officials invested heavily in their systems, matching Federal funds with State and local funds. However, without easy-to-understand, system-wide performance targets, it is difficult to assure the public that the over \$650 billion in transportation investments improved the national system and thereby met the Federal interest. Ultimately, the TEA era may be viewed as a transition from the Interstate program to a third era of renewed Federal purpose that we seek to inaugurate with this report.

This third era will not be dominated by a single transportation mode, as was the Interstate program. While funding flexibility will continue to have its place, it must be used to meet specific and measurable objectives to improve the Nation’s highway, rail, and public transportation networks. **In brief, the new user-financed Federal surface transportation program the Commission proposes will be performance-driven, outcome-based, generally mode-neutral, and refocused to pursue activities of genuine national interest, as outlined below.**

“It’s our belief that no single mode...can hope to meet the needs of a growing and vital American economy and people...it’s going to be necessary to provide solutions that deal in a multimodal context.”

– Bill Millar, President of American Public Transportation Association, at the Commission’s Dallas field hearing.

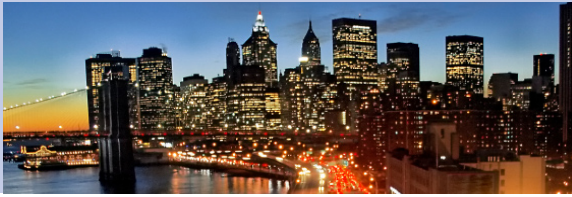
## Overview

To make the vision of a New Beginning a reality, Federal leadership and Federal surface transportation investments must be carefully aligned with the “National Interest” as defined above. The Commission believes that several new structural features will be key to the successful program reform necessary to achieve the Commission’s vision.

- Developing a comprehensive, performance-based approach.
- Reforming program and project development processes to reduce the excessive time required to move projects from initiation to completion, improving overall project decisions, reducing project and overall program costs, and realizing project benefits sooner.
- Concentrating Federal surface transportation investment in 10 program areas:
  - Rebuilding America: A National Asset Management Program
  - Freight Transportation: A Program to Enhance U.S. Global Competitiveness
  - Congestion Relief: A Program for Improved Metropolitan Mobility
  - Saving Lives: A National Safe Mobility Program
  - Connecting America: A National Access Program for Smaller Cities and Rural Areas







- Intercity Passenger Rail: A Program to Serve High-Growth Corridors by Rail
- Environmental Stewardship: Transportation Investment Program to Support a Healthy Environment
- Energy Security: A Program to Accelerate the Development of Environmentally-Friendly Replacement Fuels
- Federal Lands: A Program for Providing Public Access
- Research, Development, & Technology: A Coherent Transportation Research Program for the Nation.
- Harnessing the technical strengths of the USDOT and the surface transportation industry, developing a national strategic plan to guide public sector investment in these programs that will serve a growing and vibrant population and economy.
- Based on a Congressional charter, establishing an independent and permanent National Surface Transportation Commission (NASTRAC) that would use the national strategic plan to recommend appropriate authorization and revenue levels to Congress.

The analyses that resulted in the Commission's recommendations are explained in further detail in Chapter 6 of Volume II. In synopsis, the planning process would begin with the USDOT, working collaboratively with its partners and stakeholders, by establishing the appropriate performance standards critical to serve the national interest under the targeted new



program structured described below. National transportation targets would be set for the long run to advance critical national goals for condition of transportation infrastructure, efficiency and mobility, safety, rural accessibility, environmental quality, energy conservation, access to Federal lands, and research.

### ***Speeding Project Delivery***

Efforts to mitigate the environmental impacts of transportation projects through the National Environmental Policy Act often become bogged down in procedures and challenges, crippling the ability of State and local governments to respond promptly to inefficiencies in our surface transportation system. These transportation inefficiencies hurt the economy in many ways, reducing business growth, employment prospects, mobility, and the leisure time of many Americans.

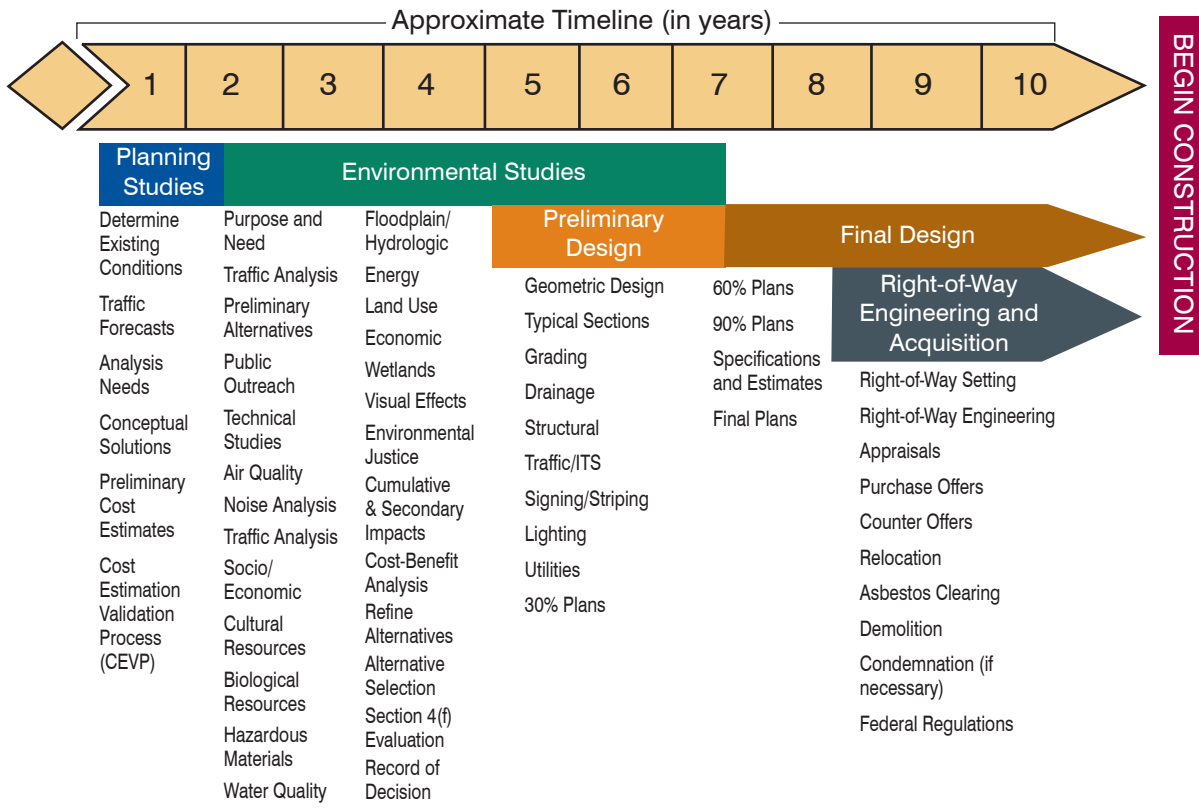
**Simply put, the Commission believes that it takes too long and costs too much to deliver transportation projects, and that waste due to delay in the form of administrative and planning costs, inflation, and lost opportunities for alternative use of the capital hinder us from achieving the very goals our communities set.**

Information compiled by the Federal Highway Administration (FHWA) indicates that major highway projects take approximately 13 years to advance from project initiation to completion. A large part of this time is associated with the environmental review process. In recent years the median time to complete environmental impact statements (EISs) for highway projects has varied from 54 to 80 months. FHWA has set a 2007 target of 36 months to complete EISs.

The rapidly eroding purchasing power of the dollar for transportation construction in recent years has called particular attention to the costs of what many experts consider to be the excessively



### Typical transportation project development process



Source: Nevada DOT.

long time that it takes to bring a transportation project from concept to reality. For some major projects, the time needed to complete planning, environmental, and construction activities can be 14 years or longer. During this period, a project initially estimated to cost one amount can increase sharply in cost, undermining finance plans and construction schedules.

The table at right illustrates the impact of delay and inflation on a transportation project initially estimated to cost \$500 million if construction begins at the start of 2008. The project is estimated to take 4 years to construct. Three cases

Impacts of project delays on construction costs	
Project Completion Year	Current Dollar Cost (inflated by the Bid Price Index)
2011	\$500,000,000
2014	\$616,000,000
2021	\$1,002,000,000

**This table illustrates the potential financial impact of project delays.**

Source: Commission Staff analysis.



are considered: construction begins immediately in 2008 and ends in 2011; construction begins in 2011 and ends in 2014; and construction begins in 2018 and ends in 2021. The rate of inflation in highway construction costs in this illustration is assumed to be 7.2 percent a year (representing the average rate of cost increase for highway projects from 2000 to 2006 as measured by the FHWA's Price Trends for Federal-Aid Highway Construction (or Bid Price Index [BPI])).

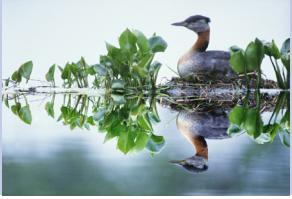
As is evident, the high rate of escalation in construction costs would cause the completed cost of the project at the end of 2021 to cost half a billion dollars more than had it been completed 10 years earlier. Allowing for 3 years of planning and environmental review beginning in 2008, the project would cost \$616 million if construction starts in 2011 and completes in 2014. This latter case represents a 23 percent cost increase over the 2011 project completion date, but is still almost \$400 million less than were its completion delayed until the end of 2021.

Project development activities under Federal Transit Administration's (FTA) New Starts program experience similar delays. From 2002 to 2005, the average project development time was more than 10 years, although it fell somewhat in 2006. In light of the rapid increase in construction costs over the past several years, delays in completing projects have become very expensive. Using the average increase in highway and bridge construction costs since 1997, if the average project development time for highway projects could be reduced from 13 years to 6 years, the cost of the project could be reduced by almost 40 percent. This savings could then be applied to other projects, substantially reducing overall funding needed for highway construction programs. The same would be true for other modes as well.

**To reduce overall project delivery times for major transportation projects, the time to complete environmental reviews must be shortened, in conjunction with other measures that address conventional strategies for implementing projects once they clear environmental review.** Many fear that reducing the time devoted to the environmental review process or other aspects of project development will ultimately lead to projects that do not adequately address environmental and other community impacts. Several things can be done to reduce the time required for the environmental review process without adversely affecting the quality of that process. Two sources of delay can and should be addressed in the short term:

- **Redundancies in the National Environmental Policy Act (NEPA) Process.** Draft EISs represent the culmination of several years of planning, public involvement, and coordination and collaboration with resource agencies, some of which could be done prior to formally beginning the NEPA process to ensure it is fully recognized. The current process can create numerous redundancies, including the need to backtrack to revisit alternatives that were previously rejected, or to duplicate environmental analyses that were previously endorsed during planning or scoping but may not have been formally recognized by other agencies when done outside the formal NEPA process. Another frequent byproduct is that repetitive additional analyses and studies must be prepared for issues that already have been adequately addressed prior to the start of the NEPA process.
- **Permit Process Can Add Significant Time.** In addition to the delays associated with NEPA compliance, projects often are held up pending permit approvals from Federal agencies such as the U.S. Fish and Wildlife Service and the Army Corps of Engineers.





Permit applications often languish for months, and it is not uncommon for Federal agencies to disagree with one another in exercising their independent oversight responsibilities.

“Time is money, and our customers deserve the courtesy of us moving forward and making decisions...we consider federal agencies to be our partners.

We want them to be in the roles of interpreting regulations to help us meet our goals with project delivery. But we also want them to interpret the laws to facilitate, to help us and not to hinder.”

– *Susan Martinovich, Director, Nevada Department of Transportation, at the Commission’s Las Vegas field hearing.*

**The Commission recommends that a series of reforms be advanced to address problems with the project development process.** These issues can be addressed through statutory or regulatory approaches. Changes in the current legal and regulatory framework for environmental reviews would be needed before any significant time-savings could be realized. Specifically, the Congress and USDOT should consider changes in the following areas:

- Legislatively provide for a simplified NEPA process that offers the equivalent of a 1040 EZ tax return for projects with few significant impacts.
- Revise Council on Environmental Quality (CEQ) regulations to allow additional factors to narrow the number of alternatives considered as “reasonable alternatives”:
  - Alternatives should be appropriate for project-level (rather than planning-level) decisions
  - Alternatives should reflect community values
  - Alternatives should reflect funding realities
- Revise CEQ regulations for implementing NEPA to allow for a single EIS rather than the current requirement for a draft and final EIS, while preserving adequate opportunities for public comment and review.
- In parallel with revisions to CEQ regulations, FHWA would set minimum conditions for what must occur during a “robust scoping period” before publishing the Notice of Intent and formally beginning NEPA. Some requirements could include:
  - Determination of general project location
  - Determination of modal choice
  - Development of a risk management plan
- Handle impacts identification and mitigation issues early by considering them in an integrated fashion, looking at overall resources rather than in a sequential, project-by-project basis. This might involve addressing these issues at the programmatic level earlier in the planning process.
- Standardize the “risk design” approach under Federal regulations so that project sponsors can proceed with design activities at risk during the EIS process. The USDOT recently issued similar guidance for bridge projects in wake of the Minneapolis bridge collapse.
- Require greater coordination among Federal agencies reviewing transportation project permits, including:
  - Setting time limits for review
  - Using Federal transportation funds to pay for regulatory staff to speed reviews and comply with time limits
  - Establishing a Cabinet-level appeal process where USDOT can seek redress for adverse decisions.



## Advancing the Federal Interest: 10 Programs

The 10 programs described below represent the key areas identified by the Commission for Federal participation and funding. Each description explains why a Federal role is appropriate, how performance measures and standards would be set, potential strategies for meeting performance standards, and proposed Federal funding shares for qualifying projects. These 10 new programs are intended to replace the dozens of separate highway and transit funding categories in SAFETEA-LU.

An important element of many programs would be the development of national plans to accomplish key national program goals. These plans would also serve as the basis for apportioning funds to the States on a cost-to-complete basis, much as was done for initial construction of the Interstate System. National plans would be

developed for the Rebuilding America; Freight Transportation; Metropolitan Mobility; Safe Mobility; Connecting America; Intercity Passenger Rail; Federal Lands; and Research, Development, and Technology programs. These plans would then be consolidated into a national strategic plan for Federal investment by the USDOT.

Except for the Federal Lands and Research, Development, and Technology programs, national program plans would be based on individual plans developed by each State and major metropolitan area. The USDOT, in cooperation with State and local governments, multi-State coalitions, transportation system users, and the full range of public and private stakeholders, would develop national performance standards for each applicable program area. Those standards would be closely coordinated with key environmental and energy objectives. The USDOT would then work with each State and major metropolitan area to develop

### Refocusing the Federal Program structure

Current Federal Surface Transportation Programs	
Federal Highway Administration	62 Programs
Federal Transit Administration	20 Programs
Federal Railroad Administration	6 Programs
National Highway Traffic Safety Administration	12 Programs
Federal Motor Carrier Safety Administration	8 Programs
<b>Total</b>	<b>108 Programs</b>



### Proposed Federal Surface Transportation Programs

1. Rebuilding America: A National Asset Management Program
2. Freight Transportation: A Program to Enhance U.S. Global Competitiveness
3. Congestion Relief: A Program to Improve Metropolitan Mobility
4. Saving Lives: A National Safe Mobility Program
5. Connecting America: A National Access Program for Smaller Cities and Rural Areas
6. Intercity Passenger Rail: A Program to Serve High-Growth Corridors by Rail
7. Environmental Stewardship: A Transportation Investment Program to Support a Healthy Environment
8. Energy Security: A Program to Accelerate the Development of Environmentally-Friendly Replacement Fuels
9. Federal Lands: A Program for Providing Public Access
10. Research, Development, and Technology: A Coherent Transportation Research Program for the Nation

performance standards for their programs. The time frames for meeting national standards could vary for individual areas depending on local circumstances, but eventually each State and metropolitan area would be expected to meet national standards.

State and local performance standards would form the basis for State and metropolitan plans. These plans would replace the long-range and short-range plans that currently are required, but would be expected to include many of the same elements. Major differences between current plans and the plans under the new program are that major projects under the new plans would have to be shown to be cost-beneficial and plans would have to be developed to meet specific performance standards. Progress toward meeting performance standards would be measured.

The Federal government should be a full partner with the State and local governments and the private sector in meeting the significant investment requirements of this new approach. Since the plans would be the basis for apportioning funds among the States, a high degree of uniformity would be required. Only projects in the plans would be eligible for Federal funds, so plans would have to be comprehensive, especially for the near term. Since transportation needs are dynamic, plans would have to be updated, especially prior to each surface transportation reauthorization. Also, because there are overlaps among programs, plans



The collapse of Minnesota's Interstate 35W bridge on August 1, 2007, illustrated the fragile nature of the Nation's surface transportation system. "The country's new and long overdue look at underinvestment in bridges, roads and transit should illustrate that government can't build and maintain infrastructure overnight," noted Minneapolis Mayor R.T. Rybak. "It takes long term, consistent investment, even when there isn't a constituency lobbying for more money."

developed for one program must be consistent with plans developed for other programs.

**(1) REBUILDING AMERICA: A National Asset Management Program.** Our economic and social wellbeing depends on the multi-trillion dollar investment we have made over the course of the Nation's history on transportation infrastructure and services. All levels of government and the private sector have contributed to this inheritance. Accordingly, it is clearly in the interest of all parties, starting with the Federal government and its own immense investment in this system, that we not squander this legacy through underinvestment in its preservation and maintenance. **Therefore, the first of the 10 programs proposed by the Commission would**



Louisiana Hurricane Katrina U.S. 90 Ocean Springs



Texas I-20 West of Pecos





**put and keep the Nation's infrastructure in a state of good repair in the most efficient and cost-effective manner possible.** More specifically, this program would address the portions of the surface transportation network in which there is a strong Federal interest: Federal-aid Highways, including the Eisenhower System of Interstate and Defense Highways and the National Highway System, major transit assets, intercity passenger and freight rail lines, and network connectors between our modes that complete the overall system.

This program underlies all of the other recommended programs, and would need to be closely coordinated with them. The USDOT would define appropriate performance standards for each facility type, in conjunction with States and stakeholders. The full range of stakeholders (including system owners, operators, and users) would be convened by each State Department of Transportation and public transit operator. This group would use its participants' plans based on information that inventories shortcomings in the physical infrastructure in order to develop estimates of the cost to restore these facilities, putting into place best practices of capital budgeting with full consideration of life-cycle costs. These estimates would include the costs of technological and safety upgrades to be made in conjunction with these rebuilding and preservation projects, to improve the operational and safety performance of existing facilities. States would be able to use Transportation Asset Management methods and tools (such as pavement management systems) to establish that the projects contained in their plans are the most cost-effective actions.

**To assure the maximum effectiveness of Federal capital investment support, States, local governments, and other entities accepting Federal capital support must develop, fund, and implement a program of asset maintenance and support over the useful life of the asset**

**that conforms to nationally accepted standards and that is independently audited.** The Federal contribution to funding each of the eligible projects would be established at 80 percent of the project costs.

## **(2) FREIGHT TRANSPORTATION: A Program to Enhance U.S. Global**

**Competitiveness.** Interstate commerce is the historic cornerstone defining the Federal role in transportation. The Federal interest in promoting efficient interstate and international flows of goods and services has motivated the Federal government to support road, canal, and railroad building since the early days of the Nation. Over the last several decades, however, the investment has not kept pace with the demands of modern, trade-driven supply chains that stretch from the United States to virtually everywhere in the world. Growing volumes of freight that now move along our roads, rails, and waterways are increasingly choked by a lack of adequate capacity. These chokepoints at major gateways and trade corridors are a potential trade barrier as threatening as tariffs, and often represent environmental hot spots. Economic forecasts indicate that by 2020, freight volumes will be 70 percent greater than they were in 1998. Without improvements to the surface transportation network (especially key freight transportation corridors), freight transportation will become less efficient and reliable, hampering the ability of American businesses to compete in the global marketplace.

*“We don't need hurricanes and national disasters to show us that freight transportation is important.” – Larry L. (Butch) Brown, Sr., Executive Director, Mississippi Department of Transportation, at the Commission's Atlanta field hearing.*



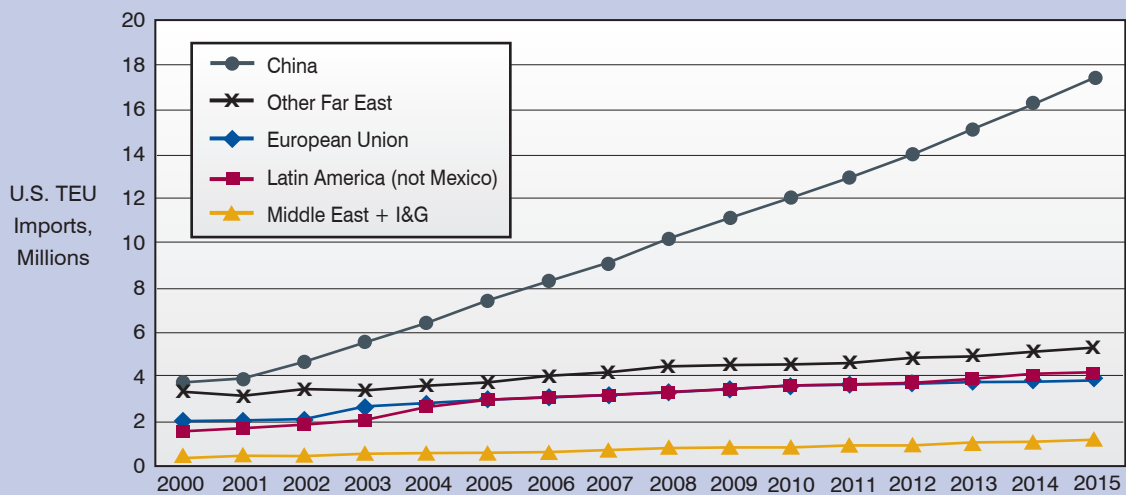
**The Commission believes that the Federal government must return to its historic role of ensuring that the transportation needs of interstate commerce are met. The Commission supports the creation and funding of a national freight transportation program that would, in conjunction with States and metropolitan areas and consistent with a National Freight Transportation Plan, implement highway, rail, and other improvements that eliminate chokepoints and increase throughput.**

The program would provide public investment in crucial, high-cost transportation infrastructure. This would include projects to increase capacity on the Federal-aid highway system (predominantly the Interstate System and portions of the National Highway System) significantly impacted by national and regional freight movements. It would also include public-private projects that have potential national and regional benefits, including facilitating international trade and

relieving congestion. Such projects would include intermodal connectors—roads that link intermodal facilities with an interstate highway—and key sections of interstate highways, such as those near port facilities, where congestion increases air pollution from mobile sources and adds time and costs to the supply chain. Eligible projects could also include assistance for strategic national rail bridges where cost of construction exceeds return on private invested capital, implementation of train control technology, and assistance in corridor development. In addition, eligibility would include development of “green” intermodal facilities and operations, and on/near dock facilities. These projects can reduce vehicular congestion, emissions, and noise—and can improve safety.

The USDOT would take a strong role in formulating the National Freight Transportation Plan by establishing a set of performance standards related to efficient management of

**Projected growth in container imports to the U.S. merchandise trade by export region, 2000–2015**



**This chart shows that containerized imports have grown dramatically in recent years, particularly from China. The growing dominance of China in the containerized trade is expected to continue in the future.**

Sources: Global Insight World Trade Service



One of the earliest examples of one type of freight project envisioned by this program is the Alameda Corridor—a 20-mile-long rail corridor near downtown Los Angeles that consists of a series of bridges, underpasses, overpasses, and street improvements that separate freight trains from street traffic and passenger trains, facilitating a more efficient transportation network. Another is the CREATE project in Chicago, a partnership between the State of Illinois, City of Chicago, Metra (the Chicago commuter rail agency), and the nation’s freight railroads in which separation of passenger and freight train tracks; grade separation and grade crossing improvements; and upgrades to tracks, switches, and signal systems will reduce train delays and congestion throughout the Chicago area. To date, these kinds of freight-related projects have been excluded from formal programmatic Federal support. The freight program proposed by the Commission will address critical freight projects at national freight origins and destinations, and within the corridors that connect them.

increasing freight volumes. The development and accomplishment of the State plans would in most cases require multi-State cooperation. Multi-State and State freight planning groups would use stakeholder-provided information to develop a consensus on future investments in major highways, freight rail facilities, waterways, ports, and intermodal facilities. States would be required to evaluate the projects in their plans using benefit-cost analysis from the point of view of the public benefit, looking at the full range of potential solutions to freight chokepoints to find the best value for society. Project funding should be merit-based and grantees should be accountable for meeting freight mobility performance standards, and consistent with national environmental and energy goals.

It will be important to standardize public benefit methodology for evaluating and negotiating partnerships between private entities (such as railroads), States, and local and Federal interests. This will ensure that private entities are not subsidized and, concomitantly, that they are not required to pay for public benefits. Government support for infrastructure projects could actually result in a net reduction of overall needed capacity expansion if private investment is diverted to projects with primarily public benefits. Similarly, publicly funded projects should not require non-economic private investment or service, or supplant or diminish private investment.

Federal participation in individual projects would be 80 percent, with higher participation levels justified based on their national benefits, particularly when benefits fall primarily outside of the region. Apart from demonstrating that proposed projects under this plan are cost-effective and justified, additional Federal requirements would be kept to a minimum.

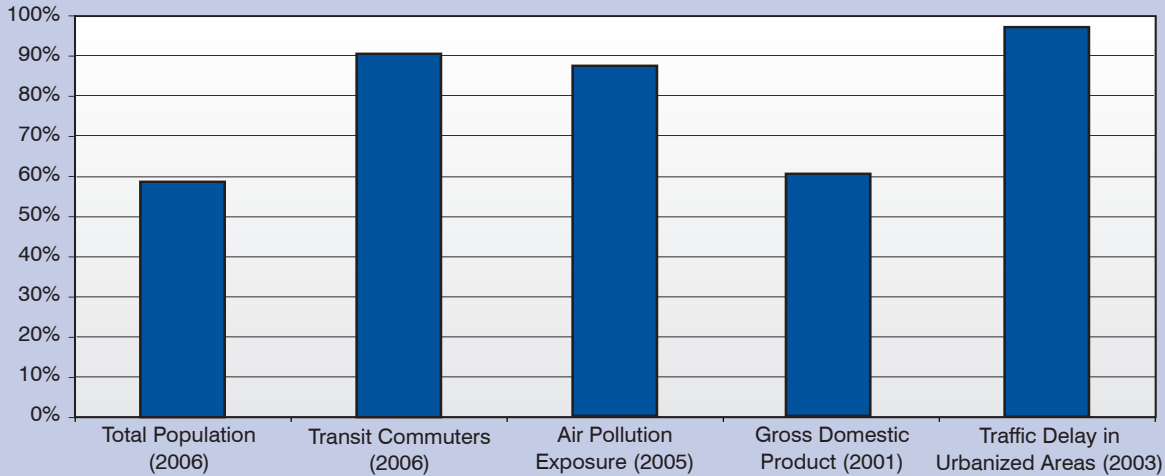
**(3) CONGESTION RELIEF: A Program for Improved Metropolitan Mobility.** The Nation’s urban areas generate 60 percent of the value of U.S. goods and services. The efficient movement of citizens and goods within these areas is critical to their productivity, and by extension, to the economic productivity of the Nation itself. Clearly, the Nation has a vital interest in guaranteeing efficient metropolitan mobility. **Therefore, the Commission recommends that a distinct program be established to fund projects that reduce congestion in our largest metropolitan areas (of 1 million or more in population).**







**Metropolitan areas over 1 million in population share of U.S. totals for selected characteristics**



**Large metropolitan areas account for a large share of the total population, economic output, transit commuters, air pollution exposure to people, and traffic delay in the United States.**

Source: Metropolitan Transportation Commission

Analyses conducted by the Commission indicate that a 20 percent reduction in per-vehicle delay on major urban highways is possible by 2025. The analyses show, however, that this goal cannot be met without a comprehensive set of strategies to manage demand, improve operations, significantly increase transit capacity and ridership, and significantly expand highway capacity. Many of these strategies, especially expanded transit systems and additional highway capacity, will involve substantial capital investment.

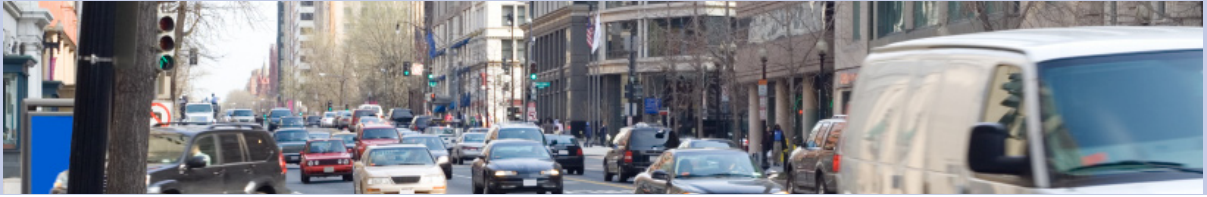
Meeting this goal will require broad coordination among agencies at multiple levels of government. The USDOT would set mobility goals for large metropolitan areas by first establishing standardized measures of mobility (e.g., hours of delay per 1000 vehicle miles traveled [VMT]). It would then specify national mobility standards for metropolitan areas. The full range of public and private stakeholders (including system owners, operators, and users) involved in the planning, construction, and operation of regional

transportation in such metropolitan areas would be convened to assure consideration of the urban interests in defining national standards. This would help integrate transportation planning into other urban planning activities.

The Commission expects that the Metropolitan Mobility plans in most metropolitan areas will include an increasing emphasis on public

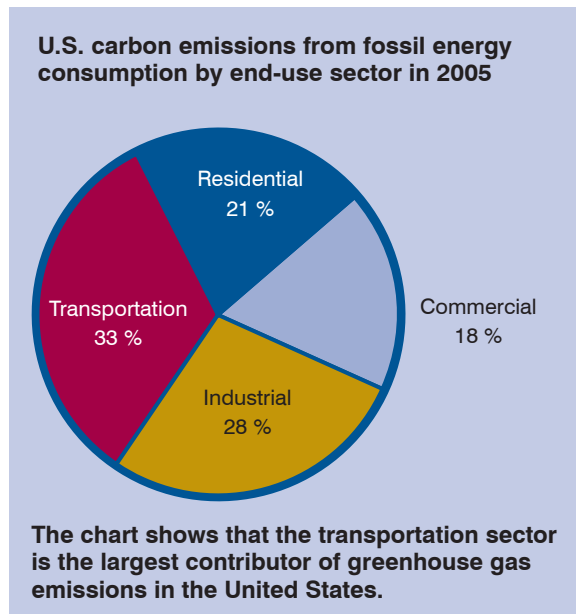
*“Our revenue expenditure system is focused on road construction, which is a process, as opposed to reducing congestion, improving air quality, or transferring the movement of hazardous materials away from our urban centers.”*

*– Rich Williamson, Chairman of the Texas Transportation Commission, at the Commission’s Dallas field hearing.*



transportation, especially electrified railways. Federal transportation policy must more effectively support and encourage the use of public transportation as part of a balanced approach to metropolitan mobility. Traditional bus and rail transit and, where appropriate, intercity passenger rail must be an increasingly important component of metropolitan mobility strategies due to their ability to move large volumes of people into and out of areas that cannot handle more automobiles. Not only is transit an important element of congestion relief strategies, it supports policies to reduce transportation energy consumption, greenhouse gas emissions, and air pollution if sufficient use is demonstrated. The Commission believes that public transportation is essential to meeting our future mobility needs in metropolitan areas. But even with transit playing a much bigger role in the future, the Commission believes that many of the plans will also include significant increases in highway capacity as part of a robust nationwide surface transportation system.

The Commission recognizes that road pricing has great potential to reduce congestion and improve system efficiency because of its ability to better utilize the Nation's existing infrastructure. Congestion pricing provides an incentive for personal travelers to drive during off-peak hours, or to change their mode of transportation for time-sensitive journeys. Such fees are higher in times or places with heavy traffic, and lower in other times and places with light traffic. They are already used at a variety of highways, bridges, and tunnels throughout the U.S. Such fees promote the efficient use of existing infrastructure. To the extent that some drivers choose other modes or routes or to travel at less congested times of day rather than pay the fee, congestion is reduced. Congestion fees have a further critical benefit in that they send price signals about the need to add capacity, thus promoting the efficient use of investment dollars in the long run. Mobility goals also should reflect the fact that high traffic urban highways can generate significant revenues from congestion pricing, requiring less tax-based funding. Metropolitan areas of 1 million or more in population would use these performance standards and national goals to develop their own performance standards, developing Metropolitan Mobility plans to meet these standards in a cost-beneficial manner. The Commission also expects that the major metropolitan areas will be guided



Source: Energy Information Administration



by these standards in their accommodation of new economic and population growth.

Funds authorized under the Metropolitan Mobility program would be reserved for urban areas of 1 million or more in population. Although these major metropolitan areas comprise about 60 percent of total U.S. population, they capture over 85 percent of national market share for three critical transportation indicators: traffic congestion, transit ridership, and population exposure to auto-related air pollution.

Planning and project selection authority in the Metropolitan Mobility program would be vested in a transportation agency designated by the Governor and leading local elected officials from the metropolitan area. This could be the Metropolitan Planning Organization (MPO), another regional transportation agency, or the State department of transportation. In multi-State metropolitan areas, authority could be vested in a consortium of agencies through interstate compact. The Federal funding share of Metropolitan Mobility projects would be 80 percent of project cost.

*“And if America is to compete internationally it has to make...dramatic investments in its metropolitan infrastructure systems to keep pace.”*  
– *Bob Yaro, President of the Regional Plan Association, at the Commission’s New York field hearing.*

We urge Congress to broadly define “metropolitan area” for the purposes of the program, such as employing the concept of combined statistical areas defined by the Office of Management and Budget.

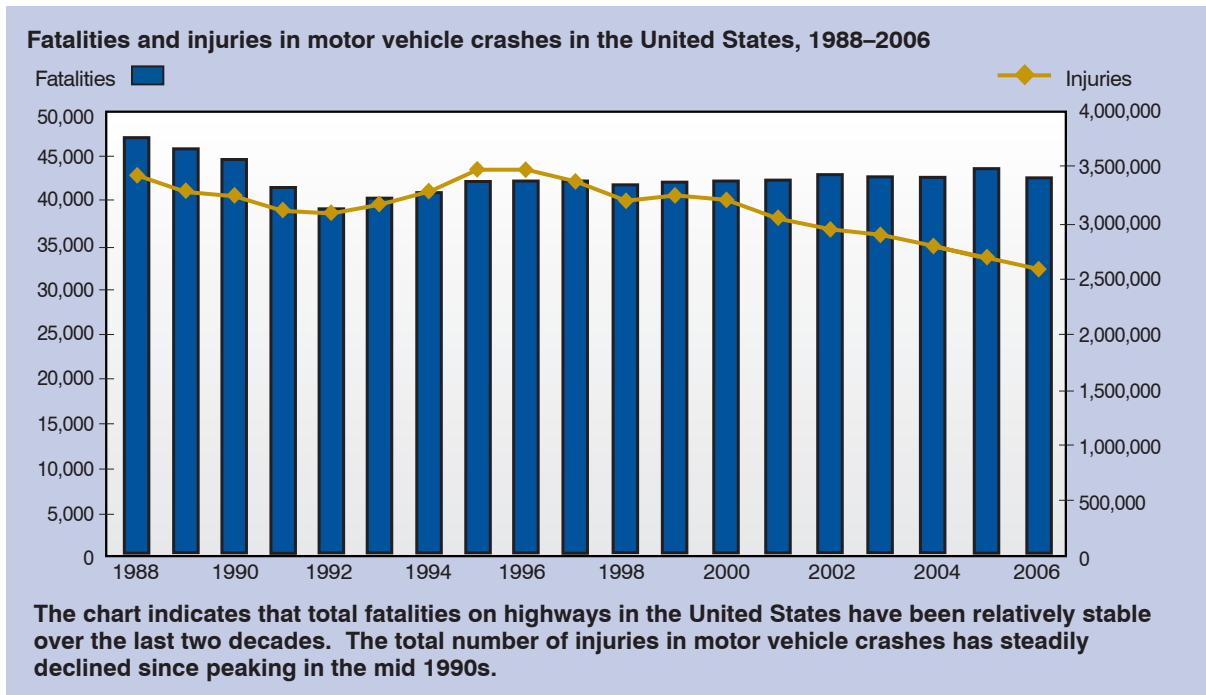


The scale of human life extinguished by crashes on our Nation’s highways every year is enormous. It is equivalent to every resident of a small city of almost 43,000 people being killed every year, or 90 percent of the population of Chicago being injured. The equivalent of the combined population of Houston, Philadelphia, Phoenix, and San Antonio is involved in police-reported crashes, and this does not include the increasing number of unreported traffic crashes (now estimated to be twice that of the police-reported number).

**(4) SAVING LIVES: A National Safe Mobility Program.** Travelers on the Nation’s surface transportation system have a right to expect safe and uniform transportation conditions from coast to coast. The Federal role in establishing safe conditions for travel is well established through agencies such as the National Transportation Safety Board, the Federal Motor Carrier Safety Administration, and the National Highway Traffic Safety Administration, and through Federal safety regulation of air, land, and sea travel. It is, therefore, the Commission’s recommendation that a national plan for safety be developed that both informs investments in all other transportation programs and leads to transportation investments undertaken purely for safety purposes.

Currently, highway travel accounts for 94 percent of the fatalities and 99 percent of the injuries on the Nation’s surface transportation system. In 2006, 42,642 persons were killed and approximately 2,575,000 were injured in highway crashes. Significant progress has been made over the last 50 years in improving highway safety. Fatality rates dropped from 5.3 fatalities per 100 million VMT in 1965 to 1.42 fatalities per 100 million VMT as of 2006. However,





Source: National Highway Traffic Safety Administration

compared with other developed countries, a few of which have fatality rates at or below 1.0 fatalities per 100 million VMT, it is clear that the U.S. still has much room to improve its highway safety. Were we presently at a rate of 1.0 fatalities per 100 million VMT, total highway fatalities would be at just over 30,000 per year—still much too high but some 12,600 fewer than we currently sustain as a Nation, year after year.

The USDOT would define safety performance metrics (e.g., fatalities and serious injuries per 100 million VMT) to be used by all Federal, State, and local agencies to measure progress. **The Commission recommends that the USDOT establish national safety standards, beginning with an ambitious but reachable goal to cut surface transportation fatalities in half from current levels by 2025.** Specific standards for individual States and metropolitan areas would

be established through consultations with safety interests including State and local departments of transportation and other governmental units. States and metropolitan areas would then develop strategies for reaching their specific safety goals, both by incorporating safety projects within the Safety plan and by including safety features into projects listed in the various Freight Transportation, Metropolitan Mobility, and Rebuilding America plans proposed by the Commission. Reflecting the importance the Commission assigns to improved safety, it recommends that the Federal share of the funding of qualifying safety projects be 90 percent of the project cost.

Because the users of every transportation mode are affected by injuries and fatalities, the solutions to improving the overall level of transportation safety must be broad and multifaceted. The following

strategies should be considered in State and local plans:

- Highway improvements to reduce roadway departures, create a safer environment for pedestrians and bicyclists, and reduce intersection crashes
- Stronger enforcement of safety laws including speed limits, seat belt laws, and impaired driving laws, making the maximum use of technology to do so
- Enhanced adjudication of highway safety laws to impose penalties commensurate with the seriousness of the offenses
- Enhanced motor carrier safety programs to reduce crashes caused by driver fatigue, unsafe operators, and automobile drivers who do not know how to share the road with large trucks
- Stronger licensing requirements that take into account age and experience
- Highly visible public education campaigns to make everyone aware of the severity of highway safety problems
- Low-cost safety enhancements such as guardrails and striping
- Enhanced efforts to deploy technology, equipment and grade separate rights-of-way to reduce rail-highway grade crossing accidents and reduce trespass incidents, which are the fastest-growing aspect of rail-related accidents and incidents
- Research and deployment of new technologies that hold the promise of substantially reducing highway fatalities, such as improvements in vehicle safety features, ignition interlocks to prevent persons whose blood alcohol content is too high from starting vehicles, and Vehicle Infrastructure Integration (VII) that could help avoid unsafe movements in traffic while improving traffic flow.



Safety advocates and public officials believe the “three Es” are critical to reducing the number of crashes on the Nation’s surface transportation network: engineering, enforcement, and education. The concept is widely attributed to Julian Harvey, an insurance manager who expressed it at a Kansas City Safety Council meeting in 1915. Crashes can be reduced through a multidisciplinary approach that makes the transportation network physically safer, penalizes unsafe driving, and raises awareness of the need to be careful on the Nation’s network.

**(5) CONNECTING AMERICA: A National Access Program for Smaller Cities and Rural Areas.** Virtually all of the Nation’s natural wealth and basic food production—the abundance found in its farms, forests, mines, and other resources—is located outside of the major metropolitan areas. The Nation has an enormous interest in providing efficient transportation connections to these industries, allowing capital and labor to reach them and products to flow out from them to U.S. and foreign markets and consumers. Over time, vast economic and demographic changes have occurred throughout the Nation that have led to the emergence of new cities, suburbs, and exurban centers. **Updating the basic backbone of the surface transportation**

“County roads are a vital component of this country’s transportation system.

Every trip begins or ends on a local road.” – *Sue Miller, Secretary Treasurer, National Association of County Engineers and Freeborn County Engineer, at the Commission’s Minneapolis field hearing.*



**system must take into account those urban and rural communities, especially those that were not developed when the initial highway and rail infrastructure networks were created.** High-performing connections for the movement of freight and people are necessary to link the Nation's population and economic centers that currently do not have such connections. Efficient transportation is important for those industries and for people who depend on those industries as well as for the many Americans who live in these areas or travel through them.

The Commission concludes that there are inadequate highway connections to fully develop the Nation's heartland communities. The Commission also concludes that public transportation in rural and urban areas is vital to providing access to essential human services for those who do not have access to automobiles. For instance, over 1,200 transit operators provide service in rural areas, and these systems are often the only means of transportation available to older and disabled citizens by which to access critical medical and social services. Many rural areas lack public transportation services entirely. This leaves individuals without access to automobiles with very limited mobility options. It also creates hardships for those unable to drive, such as older adults and persons with disabilities.



In establishing criteria for this plan, the USDOT should develop population thresholds that would be suitable for various forms of public transportation. The USDOT would establish standardized measures of access (e.g., all weather access to agricultural and industrial sites by large trucks, or mobility by at least one transportation mode available to all citizens), as well as national accessibility goals. The full range of public and private stakeholders (including system owners, operators, and users) involved in the planning, construction, and operation of regional transportation systems would be involved in developing these standards and measures. There will be many small metropolitan areas within the heartland areas that will already have benefited from the metropolitan planning done under the provisions of previous Federal transportation legislation. The Commission recommends that the metropolitan planning requirements be retained and that these smaller areas continuously measure themselves against the national mobility standards and accommodate their economic and demographic growth with those performance standards in mind.

Each State would develop State-specific performance standards in terms of these performance measures and develop plans to meet these objectives in an economically justified manner. The Commission recommends that Federal funding of projects in approved plans cover 80 percent of project costs.

**(6) INTERCITY PASSENGER RAIL: A Program to Serve High-Growth Corridors by Rail.** The growing congestion of the air and highway transportation systems is an issue of major concern to the Nation. Amtrak and State-supported corridors have demonstrated that fast, frequent, and reliable rail service can offer competitive efficiencies in congested passenger travel markets that can significantly reduce pressure on the other modes.



**Passenger rail transportation is a key component of the Commission’s vision for the future, and the Nation should pursue the development of a fast and reliable rail passenger network.** The Commission believes that Intercity Passenger Rail is a critical missing link in the Nation’s surface transportation system. Over the past 50 years, passenger rail lines have shrunk dramatically in parts of the country, and some lines with the potential for passenger rail service are in need of investment. Intercity passenger rail investment would help meet important national energy and environmental goals by shifting travel to trains, which consume approximately 17 percent less energy per passenger mile than air carriers and 21 percent less energy per passenger mile than automobiles.

The Commission envisions an intercity passenger rail network that provides competitive, reliable, and frequent passenger service, comparable to world-class systems in other countries. This network would primarily connect regions and population centers within 500 miles of each other. To build the network, the States, in coordination with the USDOT, would develop an Intercity Passenger Rail Program consisting of State and regional passenger rail plans. These plans would be based on benefit-cost analyses that include both the user and non-user benefits of passenger rail. Track access for passenger rail service, and the cost of present and future capacity requirements, would be negotiated between freight and passenger rail interests.

The States’ rail plans would also include performance measures that address national performance criteria. Key performance measures for the rail system would include reliable on-time performance, congestion mitigation, safety and environmental benefits, improved transportation choices, mobility options for communities with limited options, and reduced energy use. Specific regional goals would be established through



The United Nations’ Intergovernmental Panel on Climate Change (IPCC) draft report dated November 2007 identified various transportation policies that could offset the growth of or reduce greenhouse gas emissions. One of the panel’s recommendations is for nations to “create modal shifts from road transport to rail and public transportation systems.”

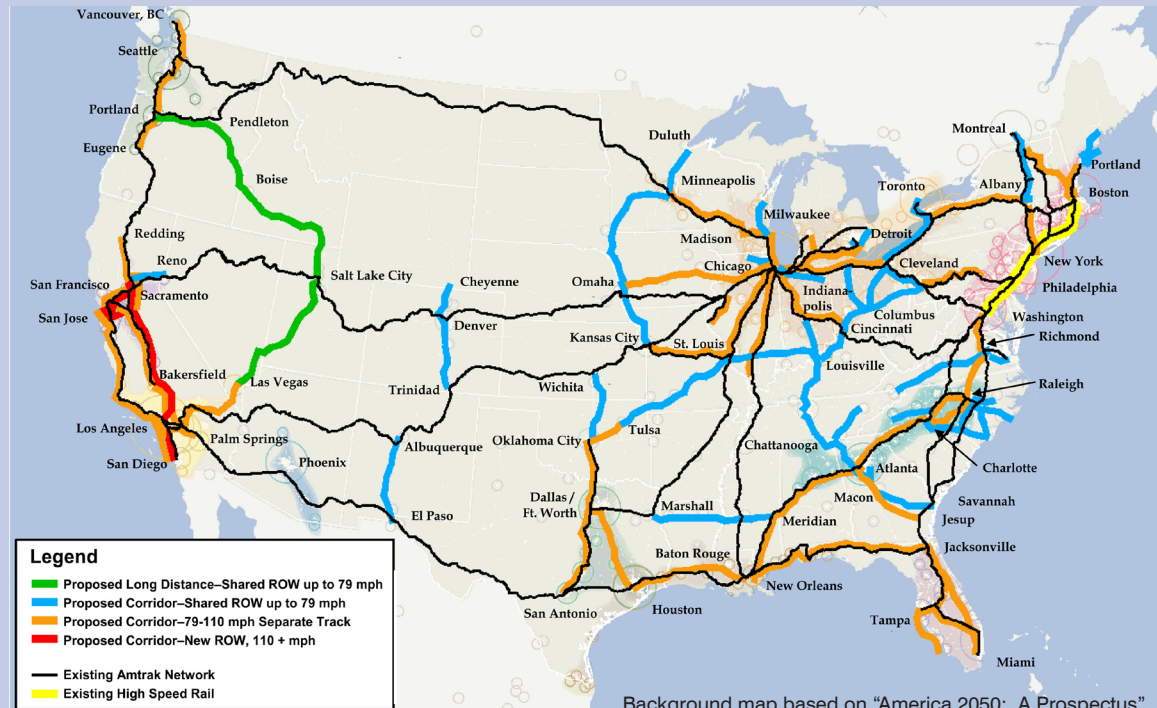
consultation among State and local governments, Amtrak, and the freight railroads, which own most of the rail infrastructure and rights-of-way over which the passenger trains would operate.

The Commission supports policy options that permit passenger trains to achieve their full potential concerning speed, frequency of service, and on-time performance and that assures that the freight rail industry can provide service required to meet its own growth in demand. Outside the Northeast Corridor, passenger rail depends on the freight system for access to track capacity, but freight rail capacity is limited and freight rail capacity needs are growing. Investment in a robust passenger rail system in the U.S. will need to be appropriately scoped to ensure that performance criteria on joint-use lines can be achieved, that passenger rail service providers pay for their capacity on freight rail lines, that investments to support capacity and performance requirements are made for both passenger and freight service, and that rights-of-way can be

“What is missing [is] a federal funding partner that recognizes that rail should be part of the national transportation system in spite of the privateness of the industry.”  
– David King, Triangle Transit Authority, at the Commission’s New York field hearing.



### PRWG proposed 2050 intercity passenger rail network



Background map based on "America 2050: A Prospectus".  
www.america2050.org. Regional Plan Association

This map identifies the passenger rail network that corresponds to the long-term capital costs and ridership projections identified in Exhibit 4-17. The PRWG describes this map as illustrative, as the exact routes that would be included in such a network could differ.

Source: *Vision for the future: U.S. intercity passenger rail network through 2050*, prepared for the Commission by the Passenger Rail Working Group.

developed or expanded to allow for separate passenger and freight operations as passenger and freight demands grow.

The first step in resolving the rail infrastructure capacity crunch is to address problems occurring in specific corridors. The public and private sectors must come together to create solutions. The USDOT would ensure that State and regional plans are coordinated and that they complement one another. The Intercity Passenger Rail Program should be funded on a cost-to-complete basis with an 80 percent Federal share, primarily for capital costs.

**(7) ENVIRONMENTAL STEWARDSHIP: A Transportation Investment Program to Support a Healthy Environment.** The relationship of transportation to the environment has been a source of national concern for more than a half-century. Roads and the vehicles that use them can have adverse effects on air and water quality, noise, undeveloped land, community structures, and other natural and human resources that influence our quality of life. These impacts usually fall on people and places that are beyond the boundaries of the transportation facility; they can even reach national and global communities, thus justifying a



Federal interest in their mitigation. It is important for the transportation sector to minimize its impacts on the natural environment.

“Develop a tangible set of outcomes tied to goals and purpose...carbon dioxide and energy reduction, increase in travel options for people and goods, safety and health.” – *Anne P. Canby, President of the Surface Transportation Policy Partnership, at the Commission’s Washington, D.C., field hearing.*

**The Commission believes that an Environmental Stewardship Program should be established and authorized at a level equivalent to 7 percent of the total funding for the Federal surface transportation program.** This percentage constitutes approximately a 2 percentage point increase over the current share of Federal funding devoted to these types of purposes, and is recommended because of the broader scope of activities that would be included in this program, as described below. This consolidated program would replace several existing environmental programs, providing more flexibility to States in their efforts to mitigate the environmental impacts of transportation.

These program funds would be distributed to the States on a per-capita basis and would be eligible for the following purposes, with a Federal share of up to 80 percent of project costs. At least 10 percent of the program funding by State would be required to be spent on each of the following four sets of purposes, leaving the remaining 60 percent for flexible State investment:

- **Air Quality:** Eligible projects would smooth traffic flow, mitigate vehicular congestion related to rail crossing, encourage use of

intermodal freight options, encourage alternative commute options such as carpooling and transit, scrap older vehicles, and encourage more energy-efficient construction and lighting materials in the transportation system, to reduce carbon dioxide and other greenhouse gas emissions.

- **Vehicle Retrofit:** Stimulate retrofitting of existing diesel vehicles and equipment (trucks, buses, and locomotives) as a means of reducing pollutants caused by older equipment, e.g., pre-1998 vehicles. Incentive models include the \$1 billion trade corridor mitigation program enacted as part of California’s 2006 transportation bond measure.
- **Transportation Enhancements:** Continue dedication of funding for actions that would mitigate the impact of transportation activities on communities. This would build on the existing Transportation Enhancement Program, with a tighter focus on transportation features.
- **Programmatic Mitigation:** In addition to specific enhancement projects, the Commission also recommends consideration of more programmatic approaches, such as banking both money and land to preserve endangered habitat and other open space. Models include an \$850 million program in San Diego County’s 2004 transportation sales tax measure.

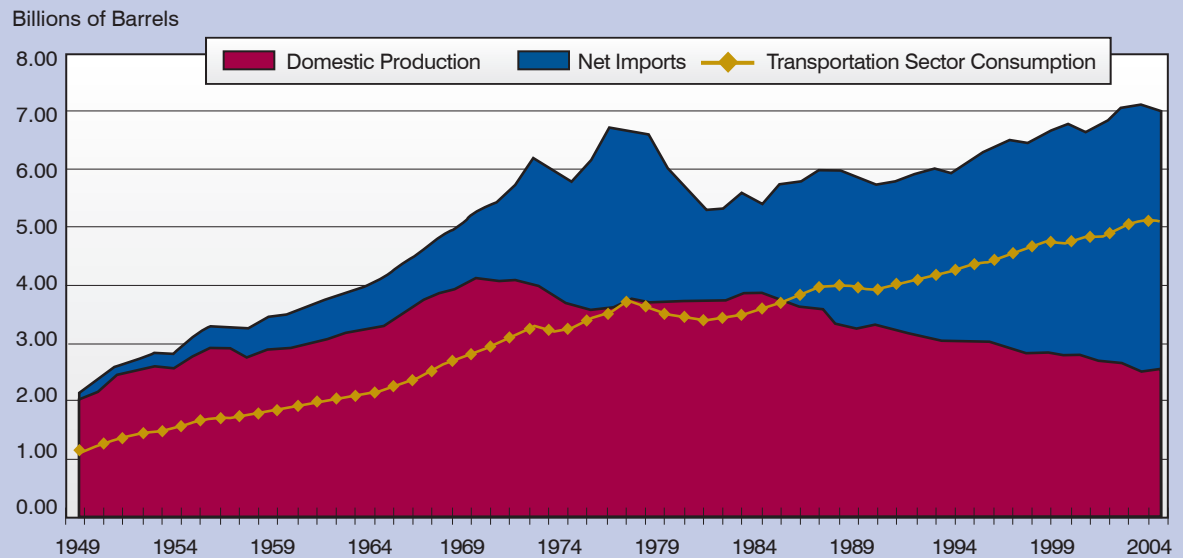
The Commission also supports Federal tax incentives for early deployment of next-generation, cleaner-burning and more fuel-efficient vehicles and locomotives.

**(8) ENERGY SECURITY: A Program to Accelerate the Development of Environmentally-Friendly Replacement Fuels.** Energy has become a critical transportation issue. The Nation’s mobility is largely dependent on gasoline





**Annual petroleum production, imports, and consumption in the United States, 1949–2006**



**The chart shows that U.S. petroleum imports have increased rapidly over the last 25 years, as domestic production has declined and consumption has increased, led by the transportation sector.**

Source: Energy Information Administration

and diesel fuel, with transportation accounting for two-thirds of U.S. petroleum use. Price increases in gasoline and diesel over the last several years have had major impacts on the budgets of American industries and families, inflation, and economic growth. Projections indicate that growing world demand for fuel and dwindling petroleum reserves only will exacerbate these problems. The U.S. dependence on unstable areas of the world for some of our petroleum supplies also introduces the risk of economically disruptive oil price shocks and constrains our ability to respond appropriately to national security concerns. The production and consumption of petroleum for transportation purposes is also a leading source of the Nation's output of greenhouse gas emissions. For these reasons, the Federal government has a vital interest in supporting initiatives that cost-effectively reduce the Nation's dependence on petroleum for transportation.

**The Commission recommends that a distinct transportation energy research and development program be authorized in conjunction with ongoing research programs of the U.S. Department of Energy to address these goals, at a level of \$200 million annually over the next decade.** For transportation to make a significant contribution to reducing energy consumption, policies to that end cannot be marginal, but instead must be basic to mobility. Therefore, the Commission recommends the development of a national research program and commitment to accomplish this end.

In its 2004 report, the National Commission on Energy Policy recommended a doubling of Federal funding for energy research and development between 2005 and 2010. According to that report, Federal spending on transportation-related energy research was \$178 million in 2004. In evaluating long-term alternatives to gasoline, the

panel identified hydrogen as a replacement by the year 2050, but cautioned that “efforts to speed deployment of a hydrogen transportation system should not displace other activities that can deliver significant results in the next twenty years.”

The Commission recognizes that the evolution of energy security for the U.S. transportation industry will require a true public-private partnership, one that provides incentives for the private sector to accelerate the development of widely distributed infrastructure for alternative fuels and for the incorporation of multi-use elements in new developments and land use planning. The Commission recommends that Congress establish an accelerated tax credit program and a revolving loan program to encourage early investment in such facilities and opportunities. Accelerated tax credits could also be made available to encourage the early transition of fleets and motor power away from dependence on petroleum-based fuels.

**(9) FEDERAL LANDS: A Program for Providing Public Access.** Of the 2.3 billion acres in the U.S., the Federal government has title to about 650 million acres (or about 30 percent of the total area of the U.S.). **The Commission believes the Federal government should continue to be responsible for transportation access to this Federal property.**

Although Federal lands are largely located in rural areas, urban growth is constantly expanding closer to these areas. This growth is placing new pressures on natural landscapes, including but not limited to increased demand for recreational activities and energy/alternative energy sources. The growth of domestic and international tourism is also contributing significantly to increased visitation rates on Federal lands. These demands place increasing emphasis on the need for adequate public transportation access. Providing such access requires cross-jurisdictional collaboration



The National Commission on Energy Policy, a 20-member panel funded through the William and Flora Hewlett Foundation and its partners, developed a blueprint for meeting the Nation’s long-term energy needs. *Ending the Energy Stalemate: A Bipartisan Strategy to Meet America’s Energy Challenges* was issued in December 2004, while public attention was being drawn to the instability of the world’s petroleum supply and the need to tackle global climate change. “In this context,” the report notes, “the old notion of energy security acquires new dimensions. Reliable access to the energy resources needed to support a healthy economy remains the core imperative, but energy security also means reducing the macroeconomic and terrorism vulnerabilities inherent in the current geopolitical distribution of oil supply and demand, as well as coming to grips with the environmental impacts of the current energy system.”

The Commission endorsed six broad recommendations:

- Enhance oil security by increasing the world’s supply of petroleum, reforming vehicle efficiency standards, and providing \$3 billion to produce efficient vehicles
- Reduce the risks of climate change through a mandatory tradable-permits program to limit greenhouse gas emissions
- Increase energy efficiency through new standards for appliances, equipment, and buildings
- Ensure affordable, reliable energy supplies through advancements in Natural Gas, Advanced Coal Technologies, and Nuclear Energy
- Strengthen essential energy systems by protecting from accidental failure and terrorist attacks
- Develop future energy technology, partly by doubling funding for research and development.



“The rural west also needs the Public Lands Highway Program and the Indian Reservation Roads Program because those lands cannot be used or taxed by the State to support the provision of transportation and other State services.” – *Judith Payne, Secretary, South Dakota Department of Transportation, at the Commission’s Minneapolis field hearing.*

and integrated planning with adjoining State and locally owned transportation infrastructure.

The existing Federal Lands Highway Program (FLHP) is administered through partnerships and interagency agreements between FHWA’s Office of Federal Lands Highway and Federal Land Management Agencies and Native American Tribal customers. FTA’s Alternative Transportation in Parks and Public Lands Program funds transit and non-motorized transportation serving Federal lands. Federal Land Management Agencies include the Bureau of Indian Affairs, U.S. Forest Service, National Park Service, Federal Wildlife Service, Bureau of Public Lands, Military Surface Deployment and Distribution Command, U.S. Army, U.S. Army Corps of Engineers, U.S. Navy, Tennessee Valley Authority, and the Bureau of Reclamation. NASTRAC would work closely with the FHWA and the Federal Land Management Agencies through the FLHP to develop appropriate performance standards and goals for transportation facilities on Federal lands.

Funding of improvements on Federal lands would be the responsibility of the Federal government and, as such, would be funded with no matching share. To bring the same degree of accountability and transparency to this new program, the

USDOT would establish standardized measures of performance, bringing into the process the full range of public and private stakeholders (including system owners, operators, and users) to develop these goals and measures.

**(10) RESEARCH, DEVELOPMENT, & TECHNOLOGY: A Coherent Transportation Research Program for the Nation.** Research plays an essential role in the development of technology and science. It has made possible much of the progress in transportation over the last century through the development of new materials, production methods, design and planning tools, and data management techniques. The Federal role in transportation research, development, and technology (RD&T) is particularly vital because the Federal government has the resources to undertake and sustain large-scale, high-risk, long-term research that is cost-prohibitive for small private and public sector organizations.

**The Federal government is best suited to monitor the vast scope of research activities underway across the Nation and the world, targeting funds to research gaps.** As Congress noted in Title 23 of the U.S. Code, “research and development are critical to developing and maintaining a transportation system that meets the goals of safety, mobility, economic vitality, efficiency, equity, and environmental protection.” As of the present, however, too much Federally sponsored surface transportation research is undertaken without clearly defined anticipated payoffs. The research efforts that are funded are sometimes redundant with other efforts and the research quality is inconsistent. In many cases, Federal research funds are distributed by political earmarking.

The Commission recommends that dedicated Federal funding of RD&T be provided, and that this funding be subject to careful planning and review by the transportation industry. The





“We need a strong Federal presence for transportation research in the new bill. It pays for itself time and time again.”

– *Colleen Landkamer, President, National Association of Counties and Commissioner, Blue Earth County, Minnesota, at the Commission’s Minneapolis field hearing*

USDOT should work with the modes, industries, and stakeholders in the Nation’s research community, such as the Transportation Research Board and institutions of higher learning, to establish performance measures and goals for a National RD&T plan. Given the fundamental importance of good performance data and modeling to all of the plans discussed in this report, the Commission recommends that an important goal for research under the National RD&T plan should be to improve the Nation’s ability to measure project performance data, including research into improved traffic, safety, environmental, and energy modeling. Improved tools for benefit-cost analysis and other forms of economic analysis for projects would also be another priority.

Data collection is necessary to support good transportation decision-making at all levels of government, and the Commission believes that there must be robust, predictable Federal investment in this area. In particular, developing the national strategic plan proposed by this Commission will require extensive data and analytical resources. Data on household travel behavior, freight movement, vehicle use, infrastructure condition, and operational performance will be particularly critical to identifying emerging trends, supporting transportation research, and evaluating the effectiveness of transportation programs, while

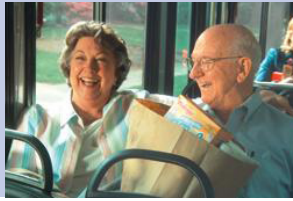
assuring that future decision makers have the information they need to respond and adapt to changing conditions.

As in the Federal Lands Program, these research activities are a Federal responsibility and would be funded with no matching share.

### **Interaction Among the Programs**

While the 10 programs identified above represent 10 distinct areas of Federal interest, individual projects may contribute to achieving goals in multiple areas, and thus the programs cannot be considered completely independent. The Commission believes that coordination among the planning activities required for each of the programs will be essential. Coordination should begin as plans are developed at the local, State, and regional level, but the USDOT will need to take an active role in consolidating these separate plans into a national strategic plan. Examples of interactions among programs would include the following:

- Federal policy should comprehensively support freight mitigation efforts not only through the proposed Freight Transportation program, but also through eligibility in the Metropolitan Mobility, Connecting America, Intercity Passenger Rail, Environmental Stewardship, and other programs. There should be broad eligibility across programs for activities that support the aims of each respective program, toward achieving the vision of the most efficient and sustainable transportation system possible.
- Robust State and metropolitan planning will be essential to the success of the national strategic planning process we envision. Accordingly, the Commission recommends continuing the practice of funding these planning activities as a percentage of the total



authorized funding for the Federal surface transportation program.

- While the Metropolitan Mobility program focuses on the largest metropolitan areas with populations greater than 1 million, it is expected that States would develop comparable mobility plans for smaller urbanized areas in cooperation with the MPOs of these areas. Funding for improving connectivity within smaller urbanized areas would be available through the Connecting America Program. States with metropolitan areas over 200,000 that are not encompassed within the definition of major metropolitan areas would be required to annually measure and report on the extent to which these areas comply with the performance standards developed for the major metropolitan areas. This would allow emerging patterns of congestion to be detected well before the areas grow beyond a population of 1 million.
- Improving safety performance would be an overarching goal for all the programs and would not be limited to the National Safe Mobility program. For example, the Metropolitan Mobility and Connecting America programs could improve the overall level of safety in different-sized communities. The National Freight Transportation Plan could address deployment of train control technology relevant to safety and capacity on critical corridors that carry passengers and hazardous materials.
- The projects identified under the Intercity Passenger Rail program would likely be a component of the Metropolitan Mobility plans for the areas they connect; they would also have a strong nexus to the Connecting America, Freight Transportation, and National Safe Mobility Plans.

- Although the Federal government will play a more direct role in the development of plans for the Federal Lands and RD&T programs, it is critical that State and local partners and other stakeholders be actively consulted in the projects identified under these programs.

### ***Role of an Independent Commission***

Our recommendations for reform of the Federal surface transportation program constitute three legs of a stool. The first leg is accelerating the lengthy process by which transportation projects are delivered, saving both time and money. The second leg is consolidating the numerous investment categories of current law into a more focused, performance-based set of transportation programs related to objectives of genuine national interest. **The third leg involves creating an independent National Surface Transportation Commission (or NASTRAC) to oversee development of a national strategic plan for transportation investment and to recommend appropriate revenue adjustments to the Congress to implement that plan.**

There are several models for such an independent commission at both Federal and State levels of government. At the Federal level, two notable examples are the Base Closure and Realignment



Commission (BRAC) and the Postal Regulatory Commission. These two commissions were created by Congress to de-politicize difficult policy actions—closing military bases and raising postal rates. The Commission heard compelling testimony from representatives of both bodies that these objectives have largely been achieved. At the State level, many States have created transportation commissions independent of the Legislature to oversee statewide transportation planning and project selection. A related State model is the public utility commission, which is typically empowered to regulate rates for electricity, heating, and telephone service independent of direct legislative action.

“One method that worked for...the postal raise increase is an independent Commission that makes recommendations based on research. If a model like this is applied to our road infrastructure, they could adjust the user fee associated with driving or identify new options that may be more appropriate for the nature of our transportation network.” – *Tim Waltze, President, The Griffith Company, at the Commission’s Los Angeles field hearing.*

The NASTRAC would build on the success of these other models. Its purpose would be to de-politicize how we make Federal transportation investment decisions, as well as how we choose to pay for them. For example, one explanation for the long periods of inaction in raising the Federal fuel tax during the past few decades is that Congress has not been presented with a clear mission for the Federal transportation program since completion of the Interstate Highway System. The Commission’s recommendation for



A venture is normally considered a public utility if it involves the operation of an infrastructure facility that sells its output or service directly to the mass consuming public. Electricity, natural gas, and water provision are typical examples of public utilities, and it can be useful to view public roads and highways as a public utility, too. Under a public utility approach, customers would pay for the use of transportation services through a per-unit price, just as electricity users pay for electricity per kilowatt hour consumed. Private investors fund much of the infrastructure in many utilities, and because public utilities typically have some degree of monopoly or market power, they are subject to the regulation of their rates to protect consumer welfare. A key element of policy toward public utilities is thus proper regulation; an increasingly popular approach is regulation that sets rate caps, because of its demonstrated effectiveness.

NASTRAC to oversee development of a national strategic plan to guide future Federal investment is intended to cure that deficiency. It is also intended to strengthen public confidence that our tax dollars are being wisely invested, and that those investments will produce not just good projects—but better performance—for our transportation network.

The proposed NASTRAC would have the following structure:

1. Composition—Ten members appointed by the President and confirmed by the Senate. Appointments should be based on technical qualifications, professional standing, and geographical representation. No more than six members should be from the same political party. Commissioners would serve on a part-time basis, meeting periodically, and would be





compensated for their time and expenses. The U.S. Secretary of Transportation should serve as one of the ten members.

2. Term—Six years, two-term limit, staggered terms.
3. Staff—This Commission would retain its own independent, full-time staff and would be able to hire outside consultants to discharge its duties.
4. Funding—This Commission would be funded from its own charge to system users. This charge, which could be adjusted periodically based on its operational needs, would be incorporated into its overall user fee recommendation to Congress. Congress could not adjust this charge except in so far as Congress would accept or reject the overall user fee rate recommendation. Congress would establish this Commission with an initial appropriation until charges could be implemented and self-sustaining funds could be collected.
5. Congressional Veto—This Commission’s revenue recommendations would be sent directly to Congress. The recommendations would then be subject to congressional veto by 2/3-recorded vote of both houses within 60 days of receiving them. If no actions were taken, the recommendations would become law. No amendments would be allowed.

The USDOT would lead the strategic planning process with policy oversight provided by NASTRAC. USDOT would consult with multiple stakeholders in this effort, including State departments of transportation, MPOs, and key private sector interests such as the freight railroads. The role of the NASTRAC in implementing the 10 performance-based investment programs described in the preceding section is as follows:

- Oversight of the USDOT-led process by which performance standards would be set on

a national basis for reducing traffic congestion, improving highway safety, and other performance indicators. The standards would be incorporated into Federal grants to require progress toward achieving those goals.

- Oversight of the USDOT-led process to adopt standards for demonstrating that only economically justified projects that accomplish plan objectives would be eligible for Federal funding.
- Approval of the USDOT-led effort to integrate the various programmatic plans for asset management, freight movement, and other functions into a national strategic plan for surface transportation.
- Recommendation to Congress of the user fee rates and adjustments necessary to fund the Federal share of the national strategic plan.
- Authority to adjust the Federal share for particular activities as an incentive, rewarding States and MPOs that demonstrate creativity and innovation. If States and MPOs exceeded performance objectives, Federal participation rates for future funding would be increased. Conversely, Federal participation rates would be reduced for grantees that fail to meet agreed-upon objectives.
- Adoption of maintenance of effort requirements. Even with increases in Federal funding, a commensurate increase in funding from other levels of government and sources is required and expected. Therefore, maintenance of effort checks would be built into the grants to mitigate the tendency to substitute Federal funds for State and local resources.

We acknowledge that creation of the NASTRAC is one of the most far-reaching of our recommended reforms to the Federal surface transportation program. This Commission is convinced,



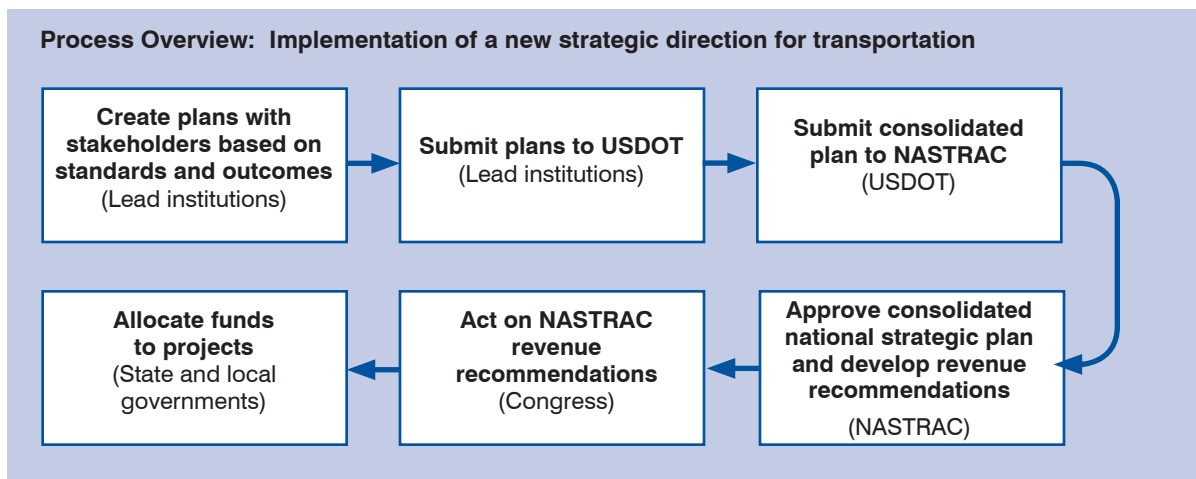
however, that the crisis confronting the customers of the Nation’s transportation system demands a bold departure from past practice. Businesses are frustrated at their inability to move goods efficiently. Commuters feel trapped by growing levels of traffic congestion. Many stakeholders are alarmed about transportation’s impact on the environment and community character. Congress itself is undoubtedly troubled by the impression that the Federal program has been overwhelmed by earmarking. The NASTRAC is intended – in addition to its explicit duties described above – to give a voice to these customers in improving the national transportation network on which they so heavily rely.

**Relationship to Performance and Accountability**

The Commission acknowledges that recommendations that entail performance standards represent a major departure from the current public project delivery processes. Federal programs have evolved into what is now essentially a block grant model, with little accountability for specific outcomes. While considerable work has been done on techniques

to measure performance, there are relatively few examples of using performance standards to build into grant relationships accountability for achieving improved levels of performance at the overall program level. **Developing performance standards and integrating them into a performance-driven regimen that would be applicable to all States and metropolitan areas will be a challenge since local conditions are so different, but the rewards will be worth the effort.**

“I would suggest that the responsibilities and outcomes of each level of government be clearly identified, and that the consequences of failure be directed to the responsible parties, and that the penalties...be proportionate to the consequences for failure to attain standards.” – *Alan Clark, Director of Transportation and Air Quality Planning, Houston-Galveston Area Council, at the Commission’s Dallas field hearing.*





Current programs rarely link project performance to funding, and the economic justification for projects is seldom fully evaluated either before or after projects are implemented. State and local agencies prepare metropolitan area transportation plans, and projects receiving Federal funds go through environmental and design reviews, but there is little or no accountability for meeting specific performance standards. Transparency in performance targets and achievement can be seen as threatening to governmental units who fear the inevitable ranking of various jurisdictions and believe that rating success by common benchmarks is simplistic and unfair. In addition to making better use of public monies to accomplish critical national objectives, and thus obtain better value for the Nation from existing transportation spending levels, the Commission's recommended approach of performance standards and economic justification would do much to restore public confidence in the transportation decision-making process. In such an environment, Congress and the public would be more amenable to agreeing to invest, whether through taxes or other user fees, to meet the Nation's transportation investment needs.

*“Funding should be predictable, dedicated, and sustained. It should be based on objective merit-based criteria with higher-cost projects subject to a more stringent evaluation than lower costs.” – Tony Grasso, San Bernardino Association of Governments, at the Commission's Las Vegas field hearing.*

**Federal organizational and grant administration changes.** Federal transportation programs have historically focused around modes (FHWA, FTA, the Federal Railroad Administration, etc.) rather than functional areas (e.g., freight, metropolitan

mobility, etc.). Such structures have strength because the agencies build upon the necessary technical competencies but present barriers to the problem-solving that should occur during both the system planning and implementation phases. Implementing agencies, when oriented along functional lines, are more likely to be outcome-oriented. The Commission endorses changes in the structure of the USDOT that would reinforce the functional orientation of the 10 new recommended programs rather than the current modal orientation.

### ***Transition to the New Programs***

This report proposes a major restructuring of the Federal surface transportation program. The institutional reforms that the Commission recommends will take some time to be realized, especially the reorganization of the USDOT. The Commission recognizes that performance-based planning would represent a significant departure from current planning processes. However, the Commission envisions the new processes as a substitute for current processes, rather than as an overlay on top of them. The Commission also expects that the design for the new process will build upon lessons learned under the current programs. In the long run, these reforms should greatly improve the delivery process and reduce the time it takes to complete projects, while still







respecting the need for thorough planning and public involvement. These programmatic reforms also involve consolidating the highway and transit titles in the U.S. Code, which have been separate for their entire existence.

**Given the scope and scale of these changes, the Commission urges Congress to pay particular attention to several transition issues that will need to be addressed in the early phases of implementing our recommendations.** These transition issues include:

- Dealing with projects in the development pipeline so these projects can continue to advance in a timely manner.
- Carrying out existing or pending Federal financial commitments under full funding grant agreements in the New Starts transit major capital investments program.
- Authorizing USDOT to obligate Federal funds to a limited number of new projects and activities that are clearly in the national interest, prior to completion of the performance-based planning process to be overseen by NASTRAC.

## Recommendations for Paying the Bill

Among the most controversial issues the Commission dealt with in its work was the issue of how future surface transportation programs should be financed. Most who offered testimony to the Commission favored continuing reliance on motor fuel taxes to finance highway programs in the short and medium terms. Many also recognized that States and local governments would need to employ a variety of financing mechanisms to meet the large future investment requirements.

The Commission studied the current patterns and sources for revenue for the surface modes including highways, transit, rail, ports, and waterways as well as the options that are open to the Congress. This information is presented in Chapter 5 of Volume II, with further background data in Volume III.

Different surface transportation financing issues require action over different timeframes. Immediate action is required to prevent Highway Trust Fund balances from going negative; action is required over the next 20 years to finance improvements needed to enhance surface transportation system conditions and performance; and actions will be required after 20 years to replace the fuel tax with a more sustainable revenue source.

*“It’s key to the integrity of long-term funding that the Highway Trust Fund be maintained and strengthened.” – Scott Bennett, Arkansas Department of Highways and Transportation, at the Commission’s Memphis field hearing.*

As articulated in the previous pages, the Commission recognizes that the financing question does not stand alone but is fundamentally tied to the underlying policy questions. Simply raising the Federal fuel tax and putting more money into the same programs will not be acceptable. The Commission strongly believes that, before Federal financial support for surface transportation is increased, the Nation’s surface transportation programs must be fundamentally reformed. As discussed above, those reforms include limiting the scope of programs eligible for Federal assistance to those having a true national interest, making



The Government Accountability Office (GAO) has identified a serious inefficiency in the use of Federal funds to increase national investment in transportation infrastructure. In particular, GAO found evidence that increased Federal Highway grants have influenced States and localities to substitute Federal funds they otherwise would have spent on highways (GAO-04-802, Federal Aid-Highways: Trends, Effect on State Spending, and Options for Future Program Design). Thus, a dollar increase in Federal funding will not necessarily lead to a dollar increase in national investment. GAO estimated that States used roughly half of the increases in Federal highway grants since 1982 to substitute for state and local highway funding, and that the rate of substitution increased during the 1990s. States are able to substitute because they typically spend much more in State and local funds than the amount required for Federal matching requirements.

Among the recommendations that would mitigate substitution of funding are the following:

- Inclusion of maintenance of effort requirements so that State and local recipients would be required at least to continue their current level of financial support if Federal funding were to increase.
- Adoption of performance standards for infrastructure investments and State accountability for meeting those standards. To receive Federal funds, States would need to develop performance based plans and demonstrate that the plan objectives are being met. A reduced funding effort by States would make it very difficult to meet plan objectives for which they are accountable.

State and local agencies receiving Federal funds accountable for meeting performance objectives, reducing unnecessary and wasteful project delivery requirements, and requiring that major projects be subject to benefit-cost analysis. Additionally, the Commission believes that requirements must be put in place to assure that State and local agencies do not reduce their level of financial support when Federal support is increased. It is imperative that all levels of government and the private sector contribute their appropriate share if the U.S. is to achieve its vision of having the pre-eminent surface transportation system in the world.

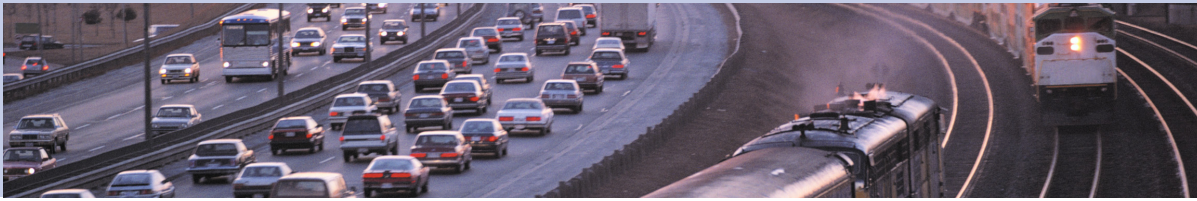
### ***Immediate Options for Keeping the Highway Trust Fund Solvent***

Balances in the Federal Highway Trust Fund (HTF) are rapidly declining, especially in the Highway Account. The latest projections by the U.S. Department of the Treasury and the

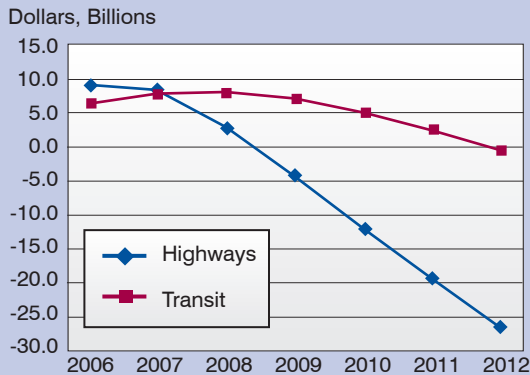
Congressional Budget Office indicate that, by the end of Federal Fiscal Year (FY) 2009, the Highway Account of the HTF will have a negative balance of between \$4 and \$5 billion if no corrective actions are taken. **The Commission recommends that legislation be passed in Federal FY 2008 to keep the Highway Account of the HTF solvent and prevent highway investment from falling below levels guaranteed in SAFETEA-LU.**

The following are several options that have been recognized as having the potential to address immediate shortfalls in the Highway Account of the HTF:

- Increasing one or more of the existing taxes that go into the HTF.
- Ensuring that the HTF receives the full amount of the taxes levied on highway use by shifting the cost of exemptions from and refunds of taxes for certain highway users to the General Fund of the Treasury.



### Projections of Highway and Transit Account Balances Through 2012



This exhibit shows projected balances in the Highway and Transit Accounts of the Highway Trust Fund through 2012 assuming no change in revenues or program levels.

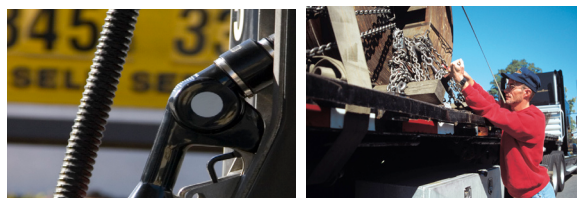
Source: U.S. Department of the Treasury projections.

- Retroactively reinstating the crediting of interest on the invested balances of the HTF. The crediting of interest ceased after Federal FY 1998 pursuant to section 9004(A) of TEA-21, P.L.105-178.
- Crediting the proceeds of the gas guzzler tax under section 4064 of the Internal Revenue Code to the Highway Account.
- Dedicating a portion of the revenue generated from transportation-related taxes, such as customs fees, to transportation purposes.
- Taking measures to reduce evasion of fuel and other highway user taxes.
- Crediting the Highway Account of the HTF with funding that has been provided for emergency purposes from the HTF, thus shifting that burden to the General Fund which has been the source for appropriations for these purposes in recent years.

### Surface Transportation Finance Through 2025: Increasing Federal Revenues

As noted above, the Commission believes that significant additional investment by all levels of government and the private sector will be required to serve a growing population and to support the Nation's economic growth and international competitiveness. We strongly support the principle of user financing that has been the backbone of transportation finance for the last 80 years. Personal and commercial travelers should pay for the transportation systems and services they use in proportion to the costs associated with their use.

Historically, the fuel tax has been an important component of the user financing system. At the Federal level, fuel taxes represent almost 90 percent of total HTF revenues. While there is a growing consensus that alternatives to the fuel tax may be necessary in about 20 years, the fuel tax should remain an important component of surface transportation finance until viable alternatives are found. Among the attributes that make fuel taxes particularly attractive sources of surface transportation revenues are their (1) low administrative and compliance costs, (2) ability to generate substantial amounts of revenue, (3) relative stability and predictability, and (4) ease of implementation. A limitation of the fuel tax is that it is not responsive to increasing construction costs when levied on a per gallon basis. That weakness can be remedied by indexing the tax to inflation, using either a broad measure (such as







the Consumer Price Index) or a more targeted measure (such as the Producer Price Index for Highway and Street Construction).

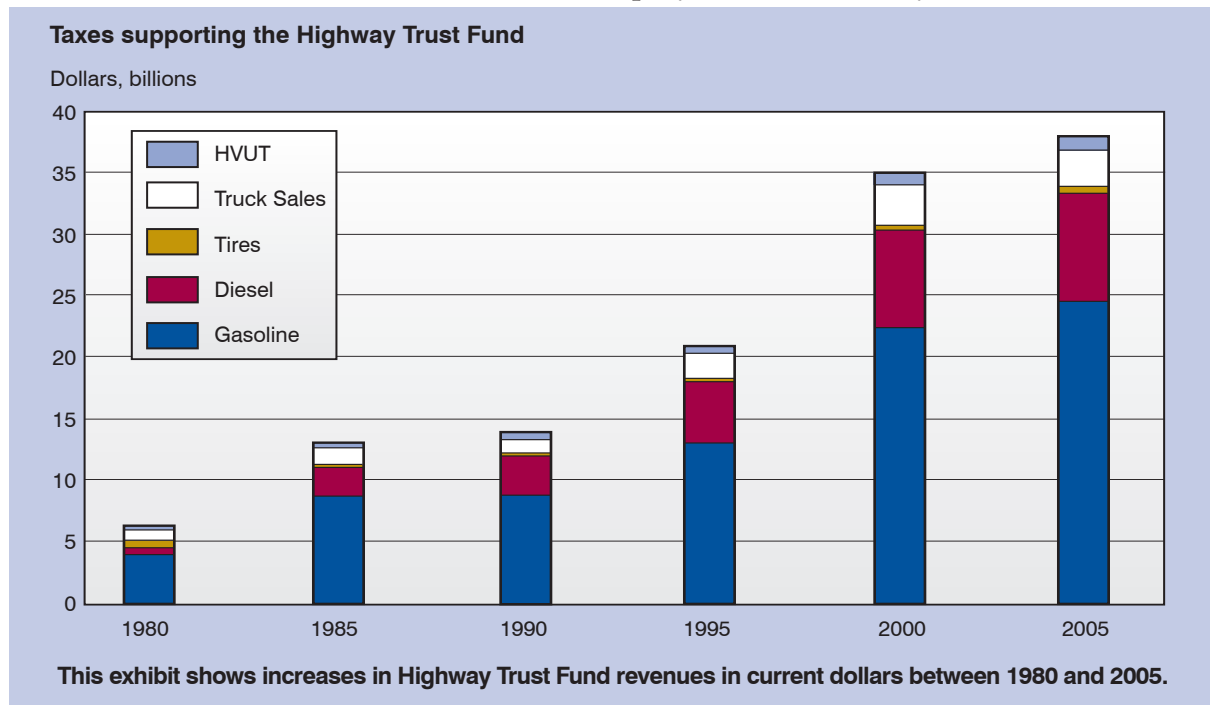
While the absolute level of Federal funding ultimately should be tied to what is necessary to achieve national goals, it is clear from our analysis that combined public and private investment must substantially increase to improve the conditions and performance of the transportation system.

“Indexing the Federal gas tax to inflation must be considered. It’s the only major existing user fee not presently indexed.”

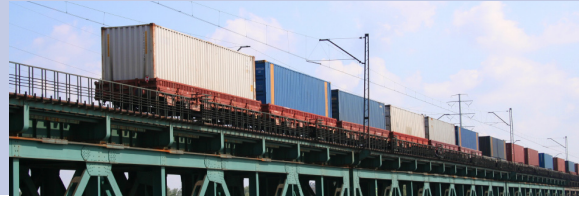
– Gerry Shaheen, Group President, Caterpillar, Inc., and Chairman of the Board for the U.S. Chamber of Commerce, at the Commission’s New York field hearing.

The Federal share of total transportation spending has varied over time. In the last decade, the annual Federal share of total highway capital investment has ranged from 37 to 46 percent, while the annual Federal share of transit capital investment has ranged from 39 percent to 54 percent. **The Commission recommends that, in the short term, the Federal government should contribute approximately 40 percent of total surface transportation capital outlay in line with the Federal share in recent years.**

As noted in the *Future Surface Transportation Investment Requirements* section above, the 2055 investment gap is estimated to range from \$0.59 to \$1.03 per gallon of fuel. Applying a 40 percent Federal share to this gap would be equivalent to a Federal fuel tax increase of approximately 25 to 40 cents per gallon. **The Commission recommends that the Federal fuel tax be increased from 5 to 8 cents per gallon per year over the next 5 years, after which it**



Source: 2005 Highway Statistics, Table FE-210.



**should indexed to inflation.** The exact tax rate required within this range would be confirmed by the strategic planning process and the new commission described above.

One tenet of highway taxation, dating back to the creation of the HTF, is that different vehicle classes should be charged in proportion to their contribution to highway investment requirements. The Federal government and many State governments have conducted highway cost allocation studies to assess the cost responsibility of different vehicle classes. Increasing the fuel tax without commensurate changes in truck taxes could exacerbate the current situation where heavy trucks pay less than their share of highway costs. **When adjusting Federal fuel tax rates, the Commission recommends that tax rates on existing Federal truck taxes be adjusted proportionately to maintain the current allocation of highway cost responsibility.**

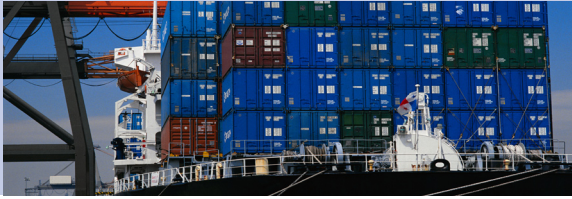
“The best solution...is to find some additional revenue, either through indexing of the motor fuel tax or some adjustment of the other taxes on heavy vehicles.”  
— *Arlee Reno, Cambridge Systematic, at the Commission’s Dallas field hearing.*

**Federal Funding for Transit.** Eighty percent of Federal funding for transit currently comes from the Highway Trust Fund and the remaining 20 percent comes from the Federal General Fund. The portion from the General Fund reflects transit’s role in providing basic mobility for those who do not have other travel options. The Commission believes this same split between Trust Fund and General Fund revenues should continue in the future. The maximum Federal share of transit project costs under any of the

new programs also should be 80 percent. The Commission believes that the “user pays” philosophy should extend to the transit program. **Therefore, the Commission recommends that a Federal ticket tax be levied on all transit trips to supplement revenues from the Federal fuel tax and General Fund.**

**Funding Dedicated for Freight-Related Transportation Improvements.** Given the strong Federal interest in freight movement, Congress will need to make available a variety of funding sources to meet the needs of the Freight Transportation program. At the Federal level these include increased gas tax revenues, tax credits, a portion of Customs duties revenues, and a Federal freight fee. It is also anticipated that highway tolling and public-private partnerships would play an important role. A full range of financing options will be needed.

Freight fees have been used previously to fund key projects that benefit freight users. For example, fees on all containers passing through the ports of Los Angeles and Long Beach are levied to help finance Alameda Corridor improvements. A freight fee such as a container charge, freight waybill surcharge, or other equitable fee could be used to fund projects that remediate chokepoints and increase throughput. **The Commission recommends that a Federal freight fee help finance freight-related improvements as part of an overall freight program.** Congress should create an accountable and transparent programmatic linkage between an assessed freight fee and the selection and funding of projects that facilitate increasing volumes of primarily trade-driven freight. The payers of such a fee must realize the benefit of improved freight flows resulting from projects funded by the freight program. Such a fee should be designed to ensure that commerce is not burdened by local and State proliferation of such fees; no mode of transportation or port of entry is disadvantaged; and the ultimate consumer bears the cost.



“We charge \$45 for every container that gets picked up and put on a railcar... That \$45...is not creating a huge burden on the users of our system, and as a result, that huge investment which we are making at risk, we believe is a sound one based on the fact that we have a reliable revenue stream associated with that.” – *Richard Larrabee, Director, Port Commerce Department, The Port Authority of New York and New Jersey, at the Commission’s New York field hearing.*

Another potential revenue source for funding freight-related improvements is a share of the Customs duties paid on all imports. Most Customs duties are deposited in the General Fund. If five percent of Customs duties were dedicated to freight transportation improvements, revenues would be approximately \$1.8 billion per year, which is equivalent to a fuel tax increase of about one cent per gallon. Because of the large transportation requirements associated with imported commodities, **the Commission recommends that a portion of Customs duties be dedicated to help pay the costs of freight-related improvements.** As with the new freight fees, Customs fees dedicated for freight transportation improvements would be deposited in the new Surface Transportation Trust Fund (STTF) described below.

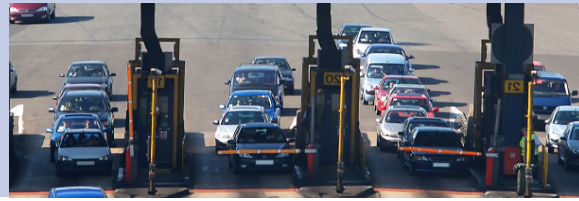
The railroads have indicated that anticipated future revenues will be inadequate to allow them to privately finance all capacity improvements required to maintain their current market share of freight traffic. Rail capacity expansion improvements may include intermodal facilities, terminals, ports, and freight gateways. To help

them make the capital investments that will be required to move the increasing volumes of goods, freight railroads have proposed that a 25 percent Federal tax credit be granted for investments to expand capacity. They have also proposed that they be allowed to expense capital expenditures since other modes can expense their Trust Fund payments. Although such tax incentives for freight rail capacity expansion would be credited against the General Fund, they would help bridge the funding gap between demand and available private funding in the coming years in a way that could offset the cost of the tax incentive. **The Commission recommends that a Federal Investment Tax Credit be granted to transportation facility owners for freight capacity expansion.**

**Funding Dedicated to Passenger Rail.** The Commission proposes three sources of Federal funding for intercity passenger rail service: (1) ticket surcharges, (2) highway user revenues, and (3) Federal general fund revenues as are used for some transit programs. To implement the new Intercity Passenger Rail Program, the Commission recommends initial Federal funding of \$5 billion per year for grants to States, Amtrak, or other competitive service providers. **The Commission recommends that a new Federal ticket tax be levied on users of the system to supplement funding from fuel taxes and general funds.** This ticket tax should not be imposed until new service begins in a corridor. As previously noted, funding should be provided on a cost-to-complete basis for intercity rail corridors that are shown to be cost-beneficial. The Federal share of capital costs should be up to 80 percent of capital. As with transit funding, 80 percent of funding should come from the new STTF described below, and 20 percent from general funds.

**Carbon Taxes or Trading.** In the near term, Congress may enact a tax on carbon or a “cap and trade” system to reduce greenhouse gas emissions.





To the extent that such a taxation or trading system encompasses transportation-related sources, Congress should ensure that transportation activities that reduce greenhouse gas emissions receive a proportionate share of any revenue generated by these new schemes.

### ***Surface Transportation Finance Through 2025: Remove the Barriers to Options for Increasing State and Local Revenues Over the Next 20 Years***

Based on the investment gap discussed at the beginning of this Volume and explained further in Chapter 4 of Volume II, the State and local share of additional investment requirements could range between the equivalent of 34 and 63 cents per gallon of fuel tax. This range could vary considerably among individual States depending on several factors, including their share of overall investment requirements and the extent to which they have the ability to use and choose to use other revenue sources. Overall, fuel taxes represent about 47 percent of total current highway revenues (excluding bond sales) for State transportation agencies, so States already rely on funding from sources other than the fuel tax to finance their highway programs.

**As we have mentioned previously, a significant increase in funding from all sources will be needed to upgrade our existing surface transportation system to a state of good repair and create a more advanced system. This means that significantly more investment will be needed from State and local governments, as well as from the private sector.**

**Increase State fuel taxes and other highway user fees.** As noted above, the gas tax has been a staple of highway finance at both the Federal and State levels for 80 years. Public acceptance of this mechanism, its ability to raise considerable

revenues, and its low administrative cost have been significant positive attributes. Raising the fuel tax could generate about \$1.9 billion nationally for each 1-cent increase. Indexing the fuel tax or converting to a gasoline sales tax would allow revenues to increase with rising highway construction costs. The Commission expects that States and local governments will have to raise additional revenues as part of the effort to increase investment in our surface transportation system.

**Provide new flexibility for tolling and pricing.** The Commission recommends that **Congress remove certain barriers to tolling and pricing. States and local governments should be given the flexibility to toll and/or implement congestion pricing. This will give States and local governments that wish to make greater use of tolls and congestion pricing the flexibility to do so.** While the use of these tools is discretionary with State and local governments, the Commission believes that increased tolling and pricing must be part of the overall solution if we are to indeed create and sustain the pre-eminent surface transportation system in the world.

*“I would hope this Commission might consider commending a further reduction of Federal restrictions on the use of tolling, including on existing toll-free roads.” – Ed Regan, Senior Vice President of Wilbur Smith Associates, at the Commission’s Dallas field hearing.*

Tolls currently account for about 5 percent of total highway-related revenues and 9 percent of current State highway revenues. This percentage has remained relatively stable for many years. It understates, however, the importance of tolls in funding highway capacity expansion. A



recent FHWA study reports that “during the last 10 years, an average of 50 to 75 miles a year of new access-controlled expressways has been constructed as toll roads out of an overall average of 150 to 175 miles of urban expressways opened annually. Toll roads, therefore, have been responsible for 30 to 40 percent of new “high end” road mileage over the past decade.” With some exceptions toll revenues historically have been used almost exclusively on the tolled facilities themselves. The direct connection between use of the facility and the toll charge has been one reason that economists have tended to favor tolls over the gas tax. If toll rates produce more revenues than are needed for the facility itself and the excess revenues are used for other purposes, the connection between facility use and toll charges is weakened and the toll takes on some characteristics of a tax rather than a direct user charge. By the same token, a toll road’s commercial vehicles should not be required to pay an additional tax for the use of the highway. It should be noted that administrative costs of tolling are higher than the costs of administering the fuel tax, but the move toward greater use of electronic toll collection should reduce those costs.

In our analyses of gaps in future investment levels, the lower estimates of highway investment in 2035 and 2055 assume widespread implementation of congestion pricing. While widespread pricing

reduced additional investment requirements by 30 percent, considerable investment in new capacity would still be required. In estimating the investment gap, no assumption was made that pricing revenues would be used to offset requirements for revenues from other sources. To the extent that pricing revenues were used for highway and transit purposes they would reduce requirements for revenues from other sources.

Most of the advantages and disadvantages of tolling in general also apply to congestion pricing. Pricing has been controversial and there are many unanswered questions about how it might be implemented. The major additional advantages of congestion pricing compared to tolls are that pricing manages demand on congested facilities thereby reducing congestion, and it can generate additional revenues that could be used to expand highway and transit capacity in the corridor to reduce congestion. An additional advantage is that congestion pricing encourages the use of other routes and other modes of travel, such as public transportation. The major disadvantage of pricing is that during peak periods, tolls are higher for those who cannot change their destination or time of travel. For some travelers this could impose a hardship.

It should be recognized that commercial trucks usually do not have the discretion to change either their routes or the times when they must



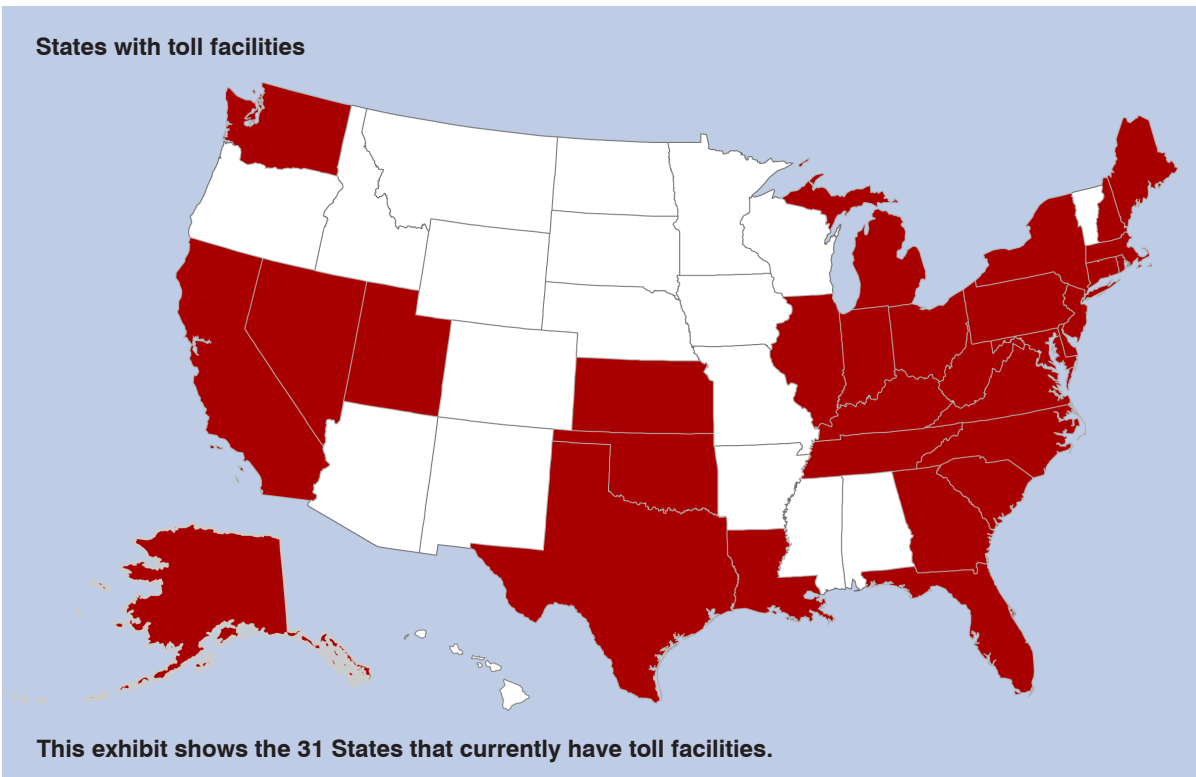


travel in response to tolls or congestion fees. Shippers determine pick-up and delivery times and trucking operators have little or no influence over these decisions. Because tolls are not easily passed directly by the carrier to the customer (e.g., how to allocate a toll payment among multiple customer shipments on one vehicle), there is little incentive for the shipper or receiver to adjust their schedules. Another concern for motor carriers dealing with a dynamically variable pricing scheme is determining the actual cost of a delivery and consequently the price quoted to the customer. Providing a direct incentive to shippers and receivers may be a more effective means of influencing trucking industry delivery schedules. Finally, the restrictions under driver Hours of Service rules maybe in conflict with congestion pricing designed for road use management. Truck drivers no longer have the option to “log-off”

during rest breaks. Consequently, truck drivers who otherwise might want to alter their driving schedule through a peak period congestion pricing scheme by taking a rest break, cannot do so without violating the Hours of Service restrictions. Therefore, it is recommended that an adjustment be made to the Hours of Service regulations to take into consideration the need for rest breaks to accommodate congested metropolitan areas.

It should be noted that not all States have the authority to toll. Thirty-one States have one or more toll facilities. Since 1991, 27 States have initiated toll projects. Federal law currently prohibits tolling Interstate Highways except under several pilot programs.

**The Commission recommends two basic changes to the Federal prohibition on tolling on the Interstate System.**



Source: *Highway Statistics 2005*, Tables SF-4B and LGF-4B.





**First, the Commission recommends that flexibility be given to use tolls to fund new capacity on the Interstate System, as well as the flexibility to price the new capacity to manage its performance.**

**And second, the Commission recommends that flexibility be given to implement congestion pricing on the Interstate System, on both new and existing capacity, in metropolitan areas with populations greater than 1 million.** As noted above, congestion pricing likely will be used more widely in coming years as metropolitan areas explore strategies to manage their ever-increasing congestion problems. Congestion pricing could come in the form of high-occupancy toll (HOT) lanes, express toll lanes, full facility pricing, or area-wide pricing. The amount of revenues that can be generated by pricing will vary depending on how widely it is applied and the severity of the congestion. It is expected that this strategy will be limited to heavily congested corridors in the Nation's major metropolitan areas. The Commission believes that demand management in the form of pricing will be necessary as part of the solution to addressing congestion in major metropolitan areas.

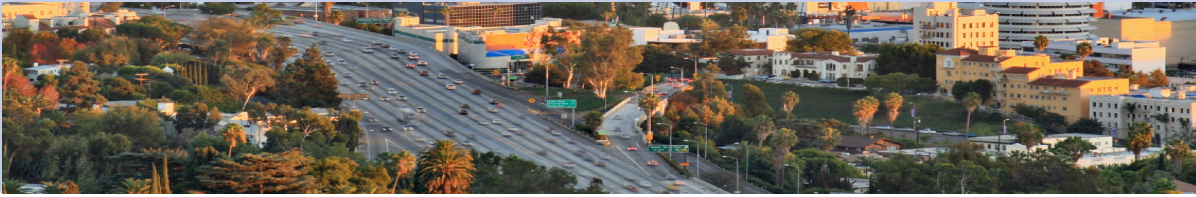
**In implementing the tolling or congestion pricing recommendations, the Commission believes that Congress should put into place an approval process with strict criteria for tolling or pricing routes that are on the Interstate System:**

- Revenues should not be used for non-transportation purposes or to subsidize transportation improvements in other parts of a State or metropolitan area, but rather should be used to improve and expand the tolled facilities and to expand capacity on transportation alternatives within the same corridor.
- The use of tolls or pricing should be consistent with, and reflected in, freight,

metropolitan mobility, and other plans developed in connection with the new surface transportation programs. The use of toll or pricing revenues should be transparent so that all know where the funds will be expended.

- Adequate facilities for the trucking industry, including access to food, fuel, and safe parking accommodations for long-term rest, should be ensured.
- Rates should be set so as to avoid discrimination against Interstate travelers or any other group of users. Restrictions, conditions, or fees that discourage use of the facility by classes of vehicles (e.g., motor carriers) or commodities (e.g., hazardous materials) should be prohibited.
- Tolls should be collected with technologies that do not interfere with traffic flow and that are compatible across regions and are transparent to users so that they can make informed choices as they are choosing travel routes.
- Decisions on whether to toll particular facilities or to increase tolls on existing toll roads and bridges should explicitly consider the potential diversion of motor carriers onto adjacent routes that could lead to congestion, safety problems, and infrastructure damage.





**The Commission also recommends that Congress promote the use of a nationwide, uniform system of electronic tolling so that toll collection does not become a burden on interstate travel and commerce.**

Tolls already are being collected electronically on high occupancy toll lanes in California, Colorado, Minnesota, Texas and Utah as well as the recently completed Westpark toll road in Houston and the new elevated express toll lanes on Tampa's cross-town expressway. Electronic toll collection is planned for several new toll roads in Texas and HOT lanes in northern Virginia, Miami, Dallas, and for existing toll roads operated by the North Texas Tollway Authority and the Miami-Dade Expressway Authority.

In the future, electronic toll collection is likely to replace toll booths on most if not all toll roads. The advantages of electronic toll collection are the virtual elimination of delays, crashes, and pollution caused by long lines of vehicles waiting at toll booths; reduced right-of-way requirements for toll booths; lower administrative and operations costs; and increased convenience for the user. In addition to transponders, other technologies also are being used for electronic toll collection systems including automatic license plate recognition systems.

An alternative to tollbooths, during the transition to full deployment of electronic payment, could be redirection of cash-paying drivers to toll booths off the main traveled lanes that would not impede the flow of traffic but provide a cash option. Early variations of this option are provided on many toll roads that have separate lanes for those with transponders who do not have to stop to pay a cash toll. The delays for drivers without transponders ultimately would be an incentive for them to purchase single use transponder devices if not multiple-use devices.

**Encourage the use of public-private partnerships, including concessions, for highways and other surface modes.** A wide variety of public-private partnership (PPP) arrangements have been used in connection with surface transportation improvements. Private sector participation is not simply about supplying revenues. PPPs also can (1) prioritize projects that generate the highest returns, (2) improve life cycle investing, and (3) provide incentives for more efficient operations and maintenance. Private sector financing has been widely used in Europe, South America, and Australia.

*“In a PPP, the public sector defines what’s required to meet the public’s needs. Ideally in the form of service outputs such as the private sector can contribute to defining precisely how these needs would be best delivered...therefore, in a PPP the government role changes from that of directing and managing infrastructure to one of contractual oversight with quality outcomes.” – David Peterson,  
Vice President, Royal Bank of Canada,  
at the Commission’s Atlanta field hearing.*

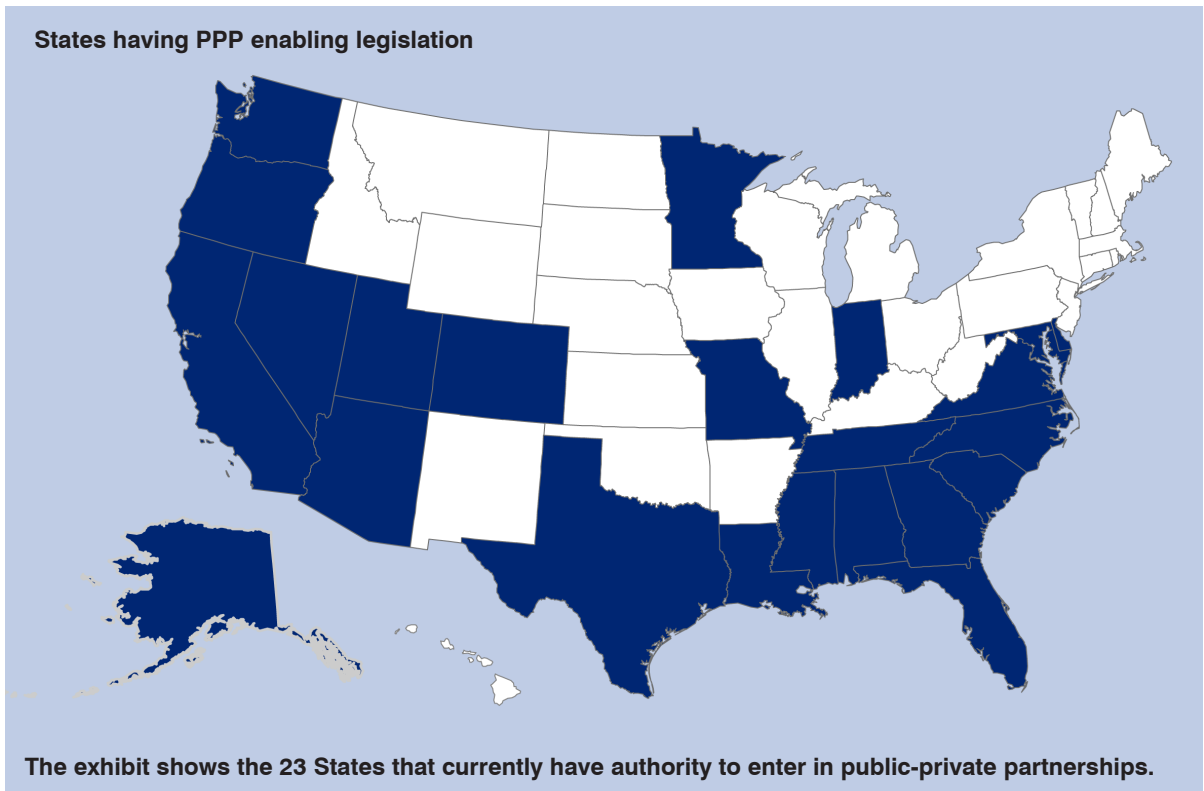




As public sector revenue sources have been stretched in the U.S., there has been increasing interest by some States in the private sector directly contributing to project financing. This has taken two general paths. One involves private sector participation in “greenfield” projects that involve the construction of new highways or the addition of new capacity to existing highways. The other major type of private sector financing involves the long-term leasing of existing toll facilities, so-called “brownfield” transactions. About 40 percent of the States have statutory authority to enter into public-private partnerships. Several of those States have only recently passed enabling legislation and several others have modified their legislation to expand their ability to enter into partnership agreements.

**The Commission believes that public-private partnerships should play an important role in financing and managing our national surface transportation system. It can be another important financing tool for State and local governments. Therefore, the Commission recommends that Congress encourage the use of PPPs where States or local governments are willing to use them.**

**With respect to the Interstate System, PPP arrangements that involve tolling or congestion pricing should be subject to the same limitations and conditions discussed in the previous section. In addition, in order to ensure that the public interest is protected, the Commission recommends that the following conditions also be met when States use PPPs**



Source: U.S. DOT Public Private Partnership Website: <http://www.fhwa.dot.gov/ppp/legislation.htm>.



**(including concession arrangements) on the Interstate System:**

- Transparency should be a key element in all aspects of the process and the arrangement, including all terms and conditions in the agreement.. There should be adequate public participation and all applicable planning and environmental requirements should be met. Confidentiality should be limited only to those instances where it is legally required.
- The terms of the agreement should include the following:
  - The condition and performance of the facility are adequately maintained over the life the concession agreement and that at the end of the agreement the facility is returned to the State in a state of good repair.
  - There are no non-compete clauses that prohibit the construction or improvement of adjacent facilities; however, provisions that require the public entity to compensate private operators for lost revenues when improvements are made to adjacent facilities would be acceptable.
  - Should the private partner enter into bankruptcy, become insolvent, or if the partner fails to meet all terms and conditions of the agreement, the facility will revert to the State.
  - Customers’ interests are protected by capping the rate of increase in tolls at the level of the Consumer Price Index minus an adjustment factor for productivity improvements.

Note: The Commission has explicitly rejected the use of rate-of-return regulation for public-private partnerships. The learning in regulatory economics has proven that rate-of-return regulation blunts



**Non-Compete Language in Indiana Toll Road Agreement:**

Section 14.1(e) of the Indiana Toll Road Lease Agreement contains language that might be considered a “non-compete clause.” This clause entitles the concessionaire to compensation from the State if the State opens any “competing highway” during the term of the lease agreement, which is 75 years. The compensation due from the State generally includes any loss in present or future toll revenue reasonably attributable to the opening of the competing highway as well as any incidental losses that may be incurred by the concessionaire, such as increased operating, capital, and maintenance costs. A “competing highway” generally includes only newly constructed “comparable highways” of at least 20 continuous miles in length that are located within 10 miles of the Indiana Toll Road. The term “competing highway” also includes one existing highway that is specified in the agreement to the extent that said highway is expanded or improved to become a “comparable highway” of at least 20 continuous miles in length, and located within 10 miles of the Indiana Toll Road. It is important to note that section 14.1(e) does not prohibit the State from constructing competing highways and does not prevent the reconstruction or improvement to any existing highways or other modes of transportation except for the one highway specified in the agreement.

incentives for efficiency, and that a price cap approach is superior. This is also true in transportation. Private sector entities should be allowed to keep any added profits they obtain due to enhanced efficiencies, subject to the price cap.

- Revenue sharing provisions should be included in the lease agreement to ensure the public sector shares in the rewards if toll revenues are higher than projected during the valuation process. Alternatively, the



lease agreement could include rebalancing provisions to bring the agreement terms back into the financial balance achieved in the original negotiation.

- Concession agreements should not exceed a reasonable term. Following the termination of a concession agreement, public input and review must be undertaken before any renewal of the agreement.
- Concessions or other payments to public entities should not be used for non-transportation purposes or to subsidize transportation improvements in other parts of the State or metropolitan area, but rather should be used to improve and expand the tolled facilities and to expand capacity on transportation alternatives within the same corridor.
- No conflicts of interest exist involving any parties to the agreement.
- The private sector financing provides better value for money than if the concession were financed using public funds (similar to the public sector “comparator” used in several European countries). This assessment must take into account the loss of Federal tax revenue from tax-exempt municipal bonds, as well as the tax consequences of depreciation and other features of the private sector option. The assessment should also consider the impact on alternative roads in the system.

### **Surface Transportation Finance Beyond 2025: Long-Term Federal and State Revenue Options**

As discussed above, over the next 20 years revenue needs can be addressed through significant increases to existing taxes and fees and through

greater use of tolling, pricing, and public-private partnerships. The Commission agrees with the findings of the Transportation Research Board (TRB) as they concluded in a 2006 report, *The Fuel Tax and Alternatives for Transportation Funding*: “A reduction on the order of 20 percent in average gallons of fuel consumed per vehicle mile by the light-duty vehicle fleet is possible by 2025 if fuel economy improvement is driven by new regulations or large and sustained fuel price increases. Offsetting the revenue effect of a gain of this size would not require fuel tax rate increases that were extraordinary by historical standards, although the willingness of legislatures to enact increases may be in question.” The Commission concludes that, considering its widespread acceptance and use at both the State and Federal levels, the fuel tax will continue to be one of the principal revenue sources for highway and transit programs for the next 15 to 20 years.

There is a developing consensus that alternatives to the fuel tax should be explored as long-term revenue sources to finance highway and transit programs, even though the fuel tax has served that purpose well for 80 years. Increasing disparities in vehicle fuel efficiency will gradually erode the equity of the fuel tax, and in the long run many vehicles may be operating on fuels such as electricity that are difficult to tax. Most believe that the current financing structure will be viable until at least 2025. After that date, uncertainties concerning the ability of the fuel tax to serve as the financial base for highway and transit programs are great enough that Federal and State transportation agencies should plan on moving to an alternative revenue source. Given the many uncertainties and complexities of moving to a new revenue source, States and the Federal government must begin developing a transition strategy immediately. In fact, as will be discussed later, several pilot projects have already been completed or are underway.



**Mileage-Based User Fees.** Recent studies by TRB, the American Association of State Highway and Transportation Officials (AASHTO), the National Cooperative Highway Research Program, the National Chamber Foundation, the University of Iowa, and the Oregon Road User Fee Task Force (among others) have concluded that a fee based on VMT would be the preferred long-term alternative to the current fuel tax. One advantage of a VMT fee is that it could equitably be applied to any vehicle, no matter what type of fuel it used or what its fuel efficiency. Another advantage is that rates could be adjusted to reflect congestion levels; to encourage use of more fuel efficient, less polluting vehicles; or to charge trucks based on factors contributing to infrastructure wear and tear. An important byproduct of such a system that was recognized by the Commission was the data that could be generated on system use, probing the system and providing important information for system management that, if privacy concerns could be addressed, would be very important to system operators.

Before a VMT fee could be implemented, several technical and institutional issues would need to be overcome. There currently is no consensus on the specific technologies that should be used to implement a VMT fee. Depending on the specific capabilities that might be included, different technologies might be used both to record mileage driven in different jurisdictions and to transmit that information to the public or private entity that would charge motorists for miles driven in each taxing jurisdiction and distribute revenues to those jurisdictions.

In addition to technological issues that must be resolved, the Commission suggests further exploration of several institutional issues associated with VMT charges, the most prominent of which is privacy. Many motorists are sensitive about government agencies knowing when and where they travel. Systems must be developed to minimize the amount of unnecessary information

that is sent to tax-collecting entities, while providing a way for motorists to verify that they have been charged correctly. Potential evasion is another significant issue that must be resolved. Equipment on the vehicle must be tamper-resistant and backup systems may also be necessary when critical equipment malfunctions.

Another institutional issue concerns how the tax would be collected. The Commission envisions that a VMT tax would be levied instead of current fuel taxes at both the Federal and State levels, and potentially by local jurisdictions as well. How might this be done most efficiently and seamlessly? Collection costs and other administrative costs associated with the implementation of different strategies could vary significantly and will be important considerations in how VMT fees might be collected. The Commission believes the collection system should be as comprehensive and simple as possible. Administration and collection of VMT fees should be transparent to users and consistent nationwide.

Another issue concerns how a VMT fee might capture not only the mileage traveled by particular vehicles, but also the effects of vehicle weight on infrastructure costs. Several studies have addressed this conceptually, but more information is needed on specific strategies to reflect vehicle weight, and axle configuration impacts on wear and tear, in a mileage-based fee.

Several demonstration projects are underway or have recently been completed that will help address these concerns. Pilot studies in both Oregon and Washington State were recently completed. Preliminary findings from both studies are encouraging in terms of the technology







for mileage-based charging, but both concluded that more work is necessary before the fees could actually be implemented. A larger-scale demonstration called for in SAFETEA-LU is just getting underway through the University of Iowa. That study will assess technological, institutional, and public acceptance issues with VMT taxes in six locations across the country.

If the Nation is to transition to a VMT fee or some other alternative to the fuel tax by 2025, it is crucial to go beyond the very limited pilot projects that have been undertaken to date. A broader consensus must be developed on the basic architecture of a VMT fee. To the maximum extent possible the technology should build upon technologies that will be implemented in connection with VII and other initiatives. Strategies must be explored to reduce risks of evasion, protect privacy, and keep administrative costs as low as possible. **The Commission recommends that the next surface transportation authorization act require a major national study to develop the specific mechanisms and strategies for transitioning to an alternative to the fuel tax to fund surface transportation programs:**

- A Phase I study should be conducted through the National Academy of Sciences in coordination with the Federal Highway Administration, the Internal Revenue Service of the U.S. Department of the Treasury, State highway and revenue agencies, and affected stakeholder groups to address the technological and institutional barriers that would need to be overcome to implement a VMT fee. These would include evasion, privacy, the relationship to wear and tear of the highways, and administrative costs. The study should draw upon findings from VMT fee demonstration projects in this country and mileage-based user charge systems that are in place in other countries. The role of VII infrastructure and services in implementing a

VMT fee should be assessed. An important goal of this study would be to confirm that a VMT fee is feasible and, if so, to agree upon a system architecture for implementing such a fee.

- While the issues related to implementing a VMT fee are being addressed, the Phase I study should also examine other potential long-term surface transportation revenue options. This analysis should build on the work that has already been done in this area and focus on alternatives to a VMT fee, including ways to equitably tax alternative fuels that cannot be taxed in the same way as current motor fuels, annual registration fees for motor vehicles, and other options that were judged to be promising. Results of the Phase I study should be provided within 2 years of project initiation and should include recommendations concerning which alternative(s) should be explored in greater detail in Phase II.
- If a VMT fee is judged to be feasible in Phase I, a Phase II study involving the same organizations should be conducted to develop a specific plan and timetable for implementing a Federal VMT fee and for coordinating that fee with VMT fees levied at the State and local levels. An important part of this Phase II study will be to conduct several large-scale pilot programs to test alternative mechanisms for levying a VMT fee. These pilot programs should include both passenger and freight vehicles and should evaluate the full range of potential issues that might arise in the implementation of a VMT fee. The study should also assess necessary standards that must be set, the roles of public and private sector organizations in implementing the tax, transitional techniques such as incentives for rental and leased fleets, and other key elements of a transition strategy. Results should be mandated within 3 years. If



questions still remain about the feasibility of a VMT fee, the Phase II study should develop transition strategies for implementing other recommended alternatives.

### **Surface Transportation Trust Fund**

In light of the recommendation to restructure future Federal surface transportation programs around functional lines rather than individual modes, the Commission recommends that the Federal Highway Trust Fund be restructured to be compatible with the new program structure. To emphasize the multimodal nature of future programs, **we recommend that the name of the Highway Trust Fund be changed to the Surface Transportation Trust Fund (STTF).**

The Commission recommends that many of the features of the current HTF be retained. Funds deposited to the Surface Transportation Trust Fund should continue to be dedicated to surface transportation purposes, budgetary firewalls should continue to guarantee annual spending levels from the STTF, and a mechanism should be retained similar to Revenue Aligned Budget Authority (RABA) to adjust spending levels based on the latest estimates of available revenues.

The STTF would continue the user fee principles of the HTF and extend those principles to other modes and other Federal revenue sources recommended below. Under the Commission's recommendations, the mix of highway and transit investments would be driven by the capital costs for the particular projects included in the plans developed under each program. Thus, there would be no need to direct fuel tax revenues into specific subaccounts, as is done today.



As outlined above, the Commission recommends extending the user fee principle to several areas such as freight and passenger rail. Congress should consider whether it is necessary to establish new subaccounts to which these new revenue streams would be directed.

## Conclusion

The concept of mobility is so fundamental to the American Dream, integral to our national character, and necessary to our economic well-being, that it is imperative that our surface transportation system, in all its varied modes, be the best in the world. The American people need it, demand it, and deserve it. The Commission believes that the Nation's leaders must provide it for them—free of parochial interests, cognizant of energy sustainability and environmental impacts, and providing for the needs of all who use it and depend upon it.

This will require a sea change in the way surface transportation is planned, funded, and delivered. It will require courageous decision making, financial innovation, and unity of purpose. Most importantly, it will require a return to a national vision of a system that is integrated in its network, varied in its modes, and dedicated to providing safe, efficient, and congestion-free movement of people and goods. The United States of America should do no less.

*“We must create and sustain  
the pre-eminent surface  
transportation system in the world.”*

