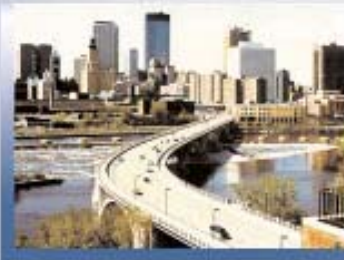


**Federal Highway Administration**

**Fiscal Year**

**2003**

**Performance Plan**



U.S. Department of Transportation  
**Federal Highway Administration**



U.S. Department of Transportation  
**Federal Highway Administration**

FEDERAL HIGHWAY ADMINISTRATION

FISCAL YEAR 2003 PERFORMANCE PLAN

September 2002

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## **PREFACE**

The Federal Highway Administration's (FHWA) priority initiatives for Fiscal Year (FY) 2003 are presented in this performance plan. The annual FHWA performance plan and report supports the new vision, mission, and roles of the FHWA, and the achievement of the multiyear goals in the FHWA and U.S. Department of Transportation (USDOT) strategic plans.

### **Strategic Direction**

The FHWA Vision is Improving Transportation for a Strong America.

Addressing highway improvements continues to be a cornerstone in our efforts, but we will focus more in the future on improvements to the entire transportation system in order to sustain the Nation's economy, security, and quality of life. This vision includes a role for other Federal, State and local agencies, public and private sector organizations, universities and research institutes working with us in a collaborative partnership.

The FHWA Mission is Enhancing Mobility Through Innovation, Leadership,  
and Public Service.

The continuing challenge that we face is enhancing the movement of people and goods from one place to another, while also ensuring the safety of the traveling public, promoting the efficiency of the transportation system, and protecting the environment.

We will add value to the transportation community and ensure our Nation's prosperity by serving as innovators, leaders, and stewards.

As Innovators for a Better Future, we will:

- Invest in and conduct transportation research on behalf of partners and stakeholders;
- Create an environment for and deliver innovation in the transportation community through the development of tools, technology transfer, training, and technical assistance; and
- Continually reevaluate and improve the effectiveness and efficiency of our business processes.

As Leaders for National Mobility, we will:

- Provide leadership in defining a future transportation system;
- Advocate highway system excellence;
- Lead the formulation of national program policy and content; and
- Develop perspective and expertise to support and measure system performance.

As Stewards for National Highway Programs, we will:

- Raise the bar on performance of the highway and transportation system;
- Ensure financial accountability;
- Anticipate and meet national security needs; and
- Deliver Federal-aid and Federal Lands Programs.

## **The Vital Few**

Our Vital Few priorities are featured in this performance plan. Our performance in these areas will define success for our Agency and affirm the need for a Federal role in highway transportation.

- Safety
- Congestion Mitigation
- Environmental Stewardship and Streamlining

Achievement of the Vital Few priorities is what we want to be known for in the coming 3 to 5 years. During FY 2003, we will undertake a concerted effort with our partners to accelerate the implementation of specific actions in States and localities where major improvements in these priority areas are needed.

## **Goals and Objectives**

Five strategic goals—safety, mobility and productivity, environment, national security, and organizational excellence—are addressed in the FY 2003 performance plan. Our focus continues to be on achieving the anticipated national outcomes, as we have stated in previous years. In FY 2003, there is an added emphasis on directly accounting for our progress in meeting the following national performance objectives.

### **Safety**

- Reduce fatalities involving roadway departure (run-off-the-road and head-on) crashes.
- Reduce intersection-related fatalities.
- Reduce pedestrian-related fatalities.
- Support national safety strategies, including an increase in seat belt use.

### **Mobility and Productivity**

- Further deploy Intelligent Transportation Systems (ITS) infrastructure and sustain improvements to system operating practices.
- Mitigate overall impacts of congestion through effective local partnerships.
- Reduce work zone delay by ensuring that all States, the District of Columbia, Puerto Rico, and Federal Lands offices are engaged in aggressively anticipating and mitigating congestion caused by highway work zones.
- Reduce traffic incident delay by ensuring that all States, the District of Columbia, Puerto Rico, and Federal Lands offices are engaged in aggressively anticipating and mitigating congestion caused by traffic incidents.
- Improve and expand the National Highway System (NHS) to increase system efficiency and return on investment.

### **Environment**

- Provide training and technical assistance to our partners to minimize the potential adverse environmental impacts of Federal-aid and Federal Lands projects.
- Enhance knowledge of FHWA staff in ecosystem and habitat conservation, and showcase existing exemplary initiatives.
- Achieve reductions in on-road mobile source emissions.

#### National Security

- Identify critical highway infrastructure, evaluate its risk and vulnerability, and develop measures to reduce vulnerability.
- Ensure preparedness for response to, and recovery from, malevolent attacks on highway infrastructure.
- Facilitate military deployment from forts to ports.
- Initiate research, technology development, and deployment activities in support of a more secure highway system.

#### Organizational Excellence

- Provide stewardship of funds and coordinate efforts to ensure that our partners maintain good accountability for expenditures.
- Establish timeframes for all current projects requiring Environmental Impact Statements (EIS) or Environmental Assessments (EA). Continue to reduce the environmental processing time for all EIS and EA projects.
- Develop and implement the FHWA Human Capital Plan and the Restructuring Assessment Task Force recommendations for Professional Development and Training.
- Establish, implement, and monitor a system of customer surveys, and Agency response to the feedback, to improve customer service and satisfaction.
- Lead and coordinate efforts to effectively perform the role of Innovator for a Better Future, and increase the effectiveness of all FHWA units, as well as our partners and stakeholders, in determining priorities and deploying technologies and innovation.

The national performance objectives are aligned to our multiyear strategic goals and objectives in this plan. Performance measures and FY 2003 targets are identified for each national objective. This information is summarized for the goals in the FY 2003 Performance Plan in Attachment A. A description of the national strategies we will adopt to achieve these national objectives is provided. The strategies that support the achievement of the Vital Few are also highlighted in the discussion under each strategic goal.

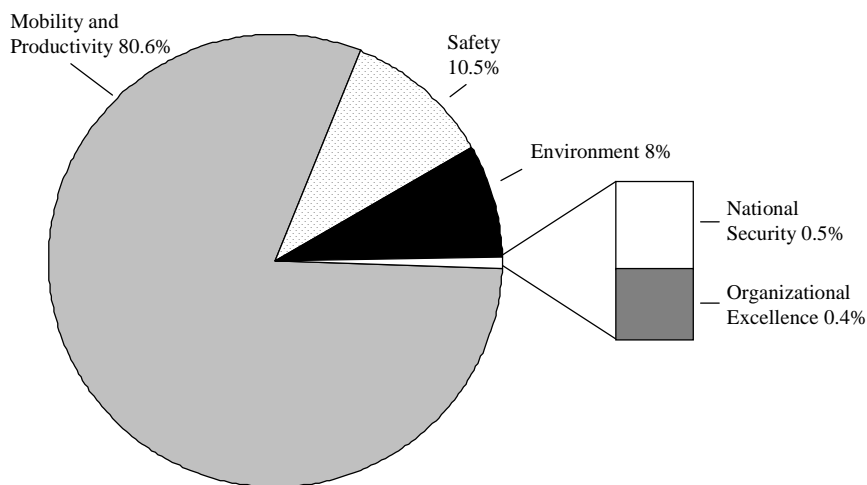
A comparison between the national goals and objectives in the FY 2002 and FY 2003 Performance Plans is provided as Attachment B. The changes in the plan framework, when compared to previous years, reflect an important reorientation that will allow us to better align and account for our work.

More detailed information about the performance measures, including the sources of data and methods of analysis, is provided in Attachment C.

## Relationship of Funding to Goals

Funding for FHWA programs and activities in FY 2003 totals an estimated obligation level of \$24.2 billion, which includes \$360 million for Transportation Research and \$318 million for Salaries and Administrative Expenses. Federal-aid funds are used to support the achievement of all of the Agency strategic goals. As illustrated in Figure 1, a preliminary analysis of the planned use of budgeted funds in FY 2003 reveals that approximately 80 percent, or \$19.5 billion, will be used for infrastructure improvements and congestion mitigation under the Mobility and Productivity goal. Approximately 10.5 percent, or \$2.5 billion, will be used to improve highway safety, and 8 percent, or \$1.9 billion, will be used to promote Environmental Stewardship initiatives. The additional funds will be used to address the National Security and Organizational Excellence goal objectives.

While this preliminary analysis does not account for the fact that most Federal-aid programs and projects address multiple national objectives, it represents an initial attempt to identify how Federal-aid funds are being distributed to achieve the desired national results. Under each goal discussion in the plan after the discussion of Strategic Initiatives, an initial attempt has been made to assign budget accounts and activities to the national objectives.



**Note:** Highway safety and environmental benefits are associated with many Federal-aid highway projects funded through National Highway System and Surface Transportation obligations. In Figure 1, most of these obligations were assumed to contribute to the Mobility and Productivity goal, at the expense of the Safety and Environment goal. As a result, the estimated level of Federal investment in improving highway safety and the environment may be less than the actual amount.

Figure 1.  
Percentage  
Distribution of FY  
2003  
Federal-aid Funds  
by  
Strategic  
Goal.

## **President's Management Reforms and Challenges**

The FHWA is committed to implementing the President's Management Agenda. A brief summary of efforts currently planned for FY 2003 is provided here.

Budget and Performance Integration. The FY 2003 performance plan reflects the priority objectives of the FHWA Administrator and Transportation Secretary. As part of its efforts to achieve greater performance and budget integration, FHWA will undertake studies in FY 2003 to identify how funds are allocated to these objectives, ensure that activities and resources contribute to improved performance in priority areas, and continue to develop performance measures that reflect the direct value of Agency programs and initiatives.

Strategic Management of Human Capital. The knowledge and experience of Agency staff is a critical factor to its success. Nearly one half of FHWA's current employees will be eligible to retire within 10 years. Coupled with the task of replacing expertise that may be lost due to retirement, a changing operating environment calls for the continuing evolution of the Agency's workforce in this decade. In FY 2001, an internal Workforce Planning and Professional Development Task Force released a set of recommendations, which are the impetus for all workforce planning efforts currently underway throughout the Agency. To meet the intent of the Management Agenda, we will develop and deploy a Human Capital Plan in FY 2003 that builds on recent successes in this area.

Financial Management. In FY 2003, FHWA is converting to a new accounting system that will allow FHWA to provide timely financial statements and reports to the Office of Financial Management, the Office of Management and Budget (OMB), and the U.S. Treasury Department, and also comply with Federal Financial Manager's Integrity Act guidelines for accounting structure. We will have the capability to perform cost accounting, provide an automated procurement interface, and significantly improve our ability to qualify for clean audit reports. Sound financial management is key to delivering the Federal-aid program. Payments to the States constitute approximately 96 percent of all financial transactions managed by the FHWA.

Competitive Sourcing. In FY 2000, 35 Field Computer Specialist positions in FHWA were included on its inventory of Federal employees performing commercial activities, which was developed as required by the OMB Circular A-76 and the Federal Activities Inventory Reform Act of 1998. The OMB has begun a phased approach to meeting the President's 50 percent goal for this initiative by assigning a 15 percent competition goal in FY 2003, based on the FY 2000 inventory. By the end of FY 2003, six Field Computer Specialist positions in FHWA will be competed or directly converted to contract.

Expanding E-Government. FHWA is leading a Departmental E-Government committee working on crosscutting initiatives. In FY 2003, the FHWA will develop and adopt a strategy for implementing E-Gov initiatives that is comprised of enterprise architecture; program management; security; sharing FHWA systems with governments, citizens, businesses, and employees; and information technology capital planning.

## **Information Technology Capital Planning**

In FY 2003, the FHWA is implementing an information technology (IT) capital planning process in order to organize and set priorities for IT investment decisions, as well as ensure alignment with the priority national goals and strategies, architecture planning and standards, and security requirements. This effort also supports the purposes of

E-government reform outlined in the President's Management Agenda. While the need for IT capital planning stems from Federal legislation and OMB guidance, FHWA is also adopting this approach



because it is a recognized best business practice. The planning process aids in the identification, selection, control, and evaluation of major IT investments.

By the end of FY 2003, all major system investments will have a business case that demonstrates its strategic value, as defined by the OMB. In addition, all major IT projects will operate within 90 percent of the cost, schedule, and performance targets that are identified. This approach will simplify and integrate processes across redundant or duplicative programs; ensure sound security of government information systems and appropriate protection of information held in those systems; eliminate redundant or non-productive IT investments; bring successful electronic practices to Government administrative operations, including web-enabled architectures; and make appropriate use of technology components identified through the component-based architecture work of the FHWA, USDOT, OMB, and Chief Information Officers Council.

## **NATIONAL NEED FOR A HIGHWAY PROGRAM**

Following the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, the focus of FHWA shifted from the completion of the Interstate Highway System to meeting a broader set of national highway transportation needs. The legislation authorized the National Highway System (NHS), which consists of the Interstate highway system and other important roads and connections to intermodal facilities; created new areas of program emphasis such as Intelligent Transportation Systems; placed a new emphasis on protecting the environment; improved public access to national parks, national forests, and other Federal lands; and supported national defense mobility and emergency preparedness. The ISTEA reorganized the Federal-aid Highway program to give State and local officials greater flexibility in using Federal funds—highways, transit, bicycling, or walking—that would best meet their unique transportation needs.

In 1998, the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) reauthorized the programs created by the ISTEA. The legislation authorized an increase in funding for the Federal-aid and Federal Lands Highway programs, and formally established FHWA's Research and Technology program. The FHWA will continue to administer these programs in FY 2003, the final year of authorization under TEA-21. In addition, FHWA staff and their partners continue to provide national leadership and program expertise, conduct and support research, technology deployment, and technology transfer activities, deliver professional training, provide educational and outreach materials, and develop technical guidance and regulations—all in an effort to help achieve National, State, and local goals.

Highways, particularly the 163,000-mile road network known as the NHS, and intermodal connectors form the backbone of America's surface transportation system. While the NHS represents only about 4 percent of total highway miles in the United States, approximately 43 percent of all vehicle miles traveled and 70 percent of all freight travel occur on this network that serves major population centers, international border crossings, intermodal transportation facilities, and major travel destinations. Using this system, Americans attain greater mobility and access, enjoy opportunities such as employment and recreation, and retain routes for national defense and emergency evacuation.

### **Travel Demand**

The prosperity and economic growth experienced in the United States during the 1990s contributed to an increase in demand for many modes of surface travel. The annual amount of vehicle miles of travel (VMT) on the Nation's highways increased from 2,247 to 2.749 billion miles between 1992 and 2000 (see Figure 2). The increase was 22 percent during this period, or an average annual increase of more than two percent. By 2000, the majority of highway travel, slightly above 60 percent as measured by VMT, was on urban highways in metropolitan communities. Transit ridership also increased at a significant rate during the past decade. The amount of passenger miles traveled by transit increased from 38 billion to more than 45 billion miles between 1995 and 2000. This represents an increase of greater than 19 percent during this period, or an average annual increase of 3.8 percent.

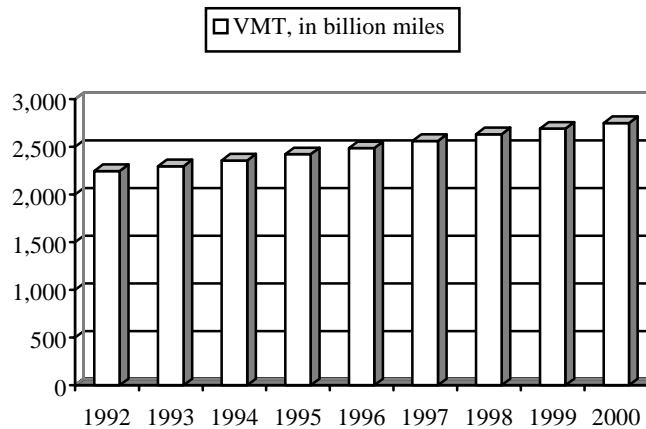


Figure 2. Annual Vehicle Miles of Highway Travel.

### Capacity Growth

During this period, growth in highway and mass transit systems in the United States did not expand at the same pace as the growth in travel demand. In the case of highways, total mileage in lane miles increased only 0.2 percent nationally during the entire period, from 8.11 million miles in 1992 to 8.25 million miles in 2000. As a result, travel per lane mile increased on all systems and, in particular, at faster rates on rural routes. While most travel now occurs in urban areas, approximately 77 percent of lane miles are on rural, local-owned highways.

### Highway Condition

Improving the condition of pavement and bridges is critical to the long-term structural integrity and cost effectiveness of the transportation system. The condition of the NHS affects wear-and-tear on vehicles, fuel consumption, travel time, congestion, and comfort, as well as public safety. Steady progress has been made over the past decade to improve pavement condition. The percent of travel, in VMT, on NHS pavement that meets acceptable ride standards increased to over 90 percent by 2000. Of the approximately 590,000 bridges in the National Bridge Inventory, 115,000 serve major population centers, international border crossings, intermodal transportation facilities, and major travel destinations, as part of the NHS. This subset of bridges is in better condition than the total bridge inventory, but approximately 31 percent were still rated deficient in 2000. These bridges are classified as either structurally deficient or functionally obsolete, in terms of dimensions, load, or other characteristics.

## Traffic Safety

In the past decade, more than three million people were injured each year in traffic-related crashes. An average of 41,256 people died annually as a result of their injuries. While the trend in the annual number of injuries and fatalities was relatively constant, the rate of fatalities declined to a historic low of 1.5 fatalities per hundred million VMT by 2000 (see Figure 3). The injury rate was also at a historic low of 116 injured persons per 100 million VMT by 2000 (see Figure 4).

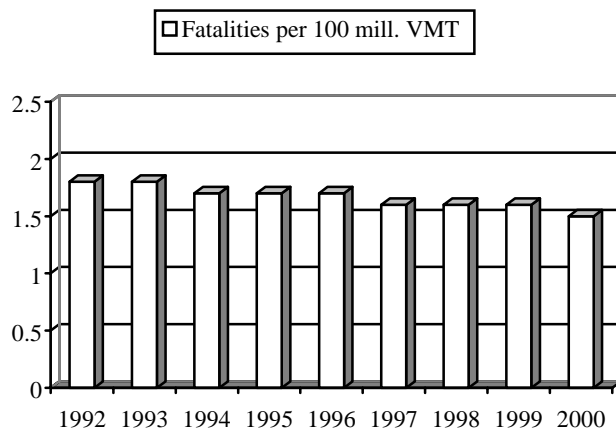


Figure 3. Annual Traffic-Related Fatality Rates.

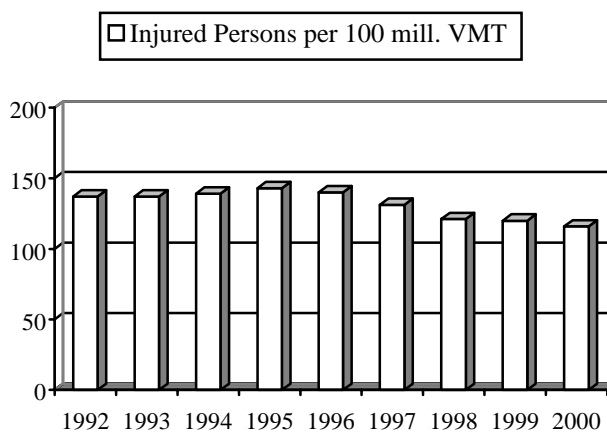


Figure 4. Annual Traffic-Related Injury Rates.

The FHWA and its partners are committed to reducing the rate of fatalities and injuries further, even though vehicle travel is expected to continue to grow and the population of more accident-prone groups, such as older drivers, will increase over this decade.

## Traffic Congestion

During the past decade, highway transportation congestion levels steadily worsened as population and travel continued to grow at a much faster rate than system capacity. Congestion is occurring on all transportation modes and is adversely affecting travel, business efficiencies, energy availability, and air quality. An increase in traffic congestion on the Nation's highways is evident from traffic statistics. A common measure of congestion is annual delay, or the annual person-hours of lost time due to travel delay. Between 1992 and 2000, the annual number of hours that users were delayed in metropolitan traffic increased 46 percent, from 21.9 to 31.9 person-hours (see Figure 5).

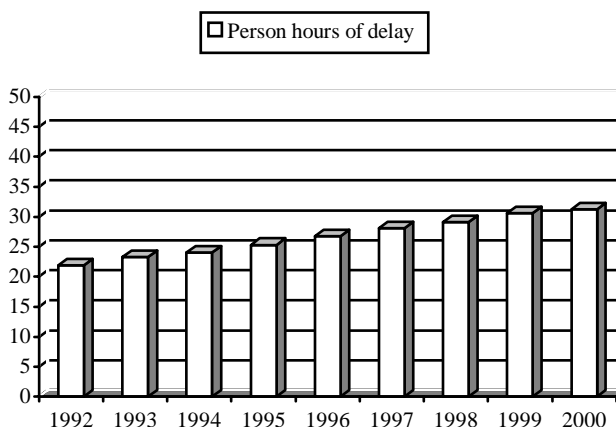


Figure 5. Annual Delay per Person.

In addition to the normal periods of heavy congestion, unexpected disruptions account for half of all congested travel. Roadway capacity is also lost to work zones and weather-related events. The impact of all of these delays is significant. Addressing congestion and improving system reliability requires a balanced and flexible approach. The Nation must continue to invest in new system capacity where possible, and optimize the use of the system that is already in place through more effective operations and improvements.

## Environmental Stewardship and Streamlining

The FHWA is committed to ensuring that highway improvement projects are delivered that preserve and enhance communities and protect the natural environment. Transportation plans and operations must address community concerns and the social impacts of transportation facilities. As part of the effort to serve as a steward of the environment, the FHWA is adopting a heightened focus on encouraging innovative mitigation strategies to address ecosystem and habitat conservation needs in areas where Federal-aid and Federal Lands projects are planned or underway. In addition, we work closely with the U.S. Environmental Protection Agency to reduce transportation-related emissions from on-road motor vehicles, which are a major source of ozone, carbon monoxide, and particulate matter.

Coinciding with social and environmental concerns is the need to expedite environmental reviews and clearances associated with transportation improvement projects. Over the past 30 years, the average length of time required for the completion of an Environmental Impact Statement (EIS) for a transportation project increased to more than 5 years. In recent years, this trend was reversed. From a peak of 66 months in 1999, the median time required to complete an EIS for all projects declined to 54 months in 2001. To continue to expedite environmental reviews, the roles, relationships, and

expectations of Federal resource agencies need to be better clarified and their commitment as full partners is needed.

### **Infrastructure Security**

The surface transportation system is vital to our Nation's economy, defense, and quality of life. The September 11 terrorist attacks provoked a new discussion about the relationship between transportation infrastructure and national security. There are heightened concerns about the vulnerability of transportation systems and supporting infrastructure to direct and indirect attacks. There are further questions about the requirements associated with restoring reliability to the transportation system through effective transportation operations in response to an attack. The FHWA is cooperating with other Federal, State, and local government agencies to address these immediate concerns.

### **Project Stewardship**

The Central Artery/Tunnel Project in Boston, Massachusetts is one of the most spectacular engineering challenges in the history of the Interstate System. Controversy has been a big part of the challenge, too, particularly because cost increases have made this project the most expensive Interstate project ever. Experience on this project as well as others prompted the USDOT to establish a task force on the Oversight of Large Transportation Infrastructure Projects. The FHWA is implementing the task force recommendations for Federal-aid Highway projects. We will ensure improved planning to meet the requirements in TEA-21 for annual financial plans for mega-projects over 1 billion. Although State transportation departments will continue to retain primary responsibility for managing projects, this stewardship responsibility extends to hundreds of improvement projects funded by the Federal-aid Highway program.

## PLANNED INITIATIVES AND ANTICIPATED RESULTS

### Safety

To continually improve highway safety, a strategic goal of the FHWA and the USDOT is to reduce the number of highway-related crashes, and the resulting fatalities and injuries associated with a crash. A key indicator of progress in this area is the number of highway-related fatalities and injuries per 100 million VMT. To meet the Department goal of reducing fatalities and injuries 20 percent by 2008, FHWA's target for FY 2003 is to reduce the rate of fatalities and injured persons to 1.4 and 107 per hundred million VMT, respectively. This is based on projected VMT and a target of reducing the number of fatalities and injured persons to 38,700 and 3.07 million, respectively. Recent trends and annual targets for these measures are illustrated in Figures 6 and 7.

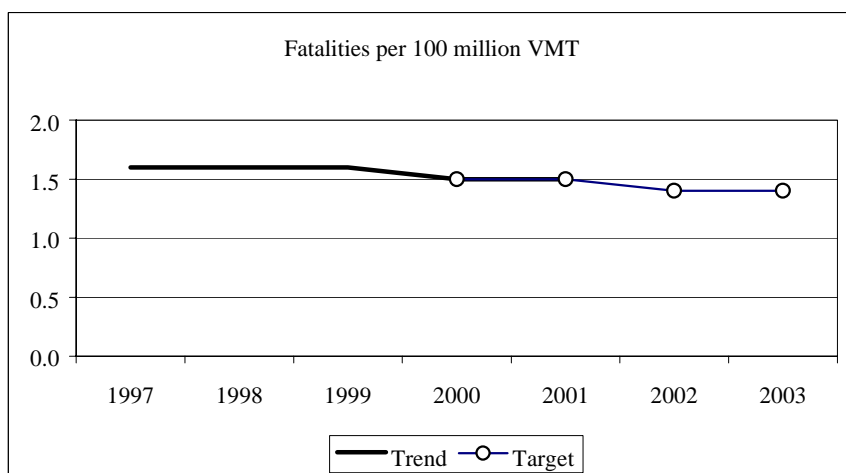


Figure 6. Annual Traffic-Related Fatality Rates.

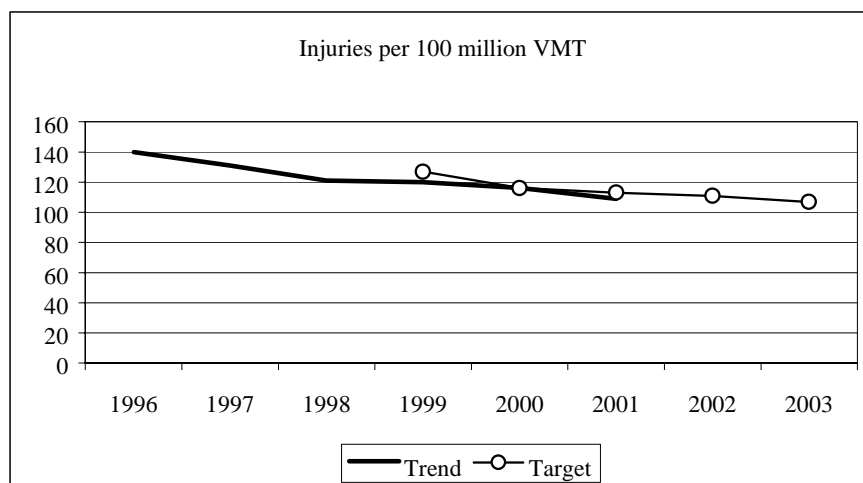


Figure 7. Annual Traffic-Related Injury Rates

Strategic Initiatives

Recognizing that State and local transportation agencies are the principal and operators of America’s roadway FHWA provides them with policy program expertise, and tools to improve performance of highway design and operations. In partnership with other modal administrations, we directly and facilitate increased awareness, and quality of highway safety engineering, enforcement, and programs in States and localities.

The FHWA will continue to intensify on reducing four types of crashes that the most fatalities and injuries nationwide: 38 percent of all fatal involve run-off-road situations, is a contributing factor in 30 percent of fatalities, 21 percent of fatal crashes intersections, and 13 percent of all are pedestrians and bicyclists involved collisions with vehicles.

Run-off-road (ROR) crashes. We will continue to address the dual challenge of keeping vehicles within the roadway travel lane and minimizing harmful effects when they leave the roadway. Some of the major initiatives to reduce ROR crashes include: the distribution and marketing of a two-lane rural road version of Interactive Highway System Design Model, and the development of four-lane model; the completion of a final rule on retroreflectivity; and the continued evaluation and development of crashworthy roadside hardware designs.

Intersection-related crashes. With our partners, we will implement the national intersection safety agenda and assist others to implement action plans for intersection safety. Other activities will include: organizing regional intersection safety workshops; developing a road safety audit program for intersections; marketing best practices and guidance for intersection safety; and continuing to support research programs including Intelligent Vehicle Initiative to improve intersection safety.

Speed-related crashes. We will develop and disseminate guides and implementation materials on the use of variable speed limits in work zones, rational speed zoning, the use of expert systems for setting speed limits, and improved guidelines for speed management workshops.

Pedestrian and bicyclist-related crashes. Working closely with the National Highway Traffic Safety Administration (NHTSA) and other government and private partners, we will attempt to integrate pedestrian and bicyclist safety issues into the planning and design of facilities, continue research and development of comprehensive countermeasures, and direct attention to appropriate tools, and technologies. The FHWA will also continue its efforts to provide engineering and ITS approaches to increase the safety of pedestrians and bicyclists, and accelerate the deployment of processes, tools, and technologies to State and local government.

Other Initiatives. In addition to the four priorities discussed above, some of the key initiatives that FHWA will undertake to improve overall safety design and management processes include:

Vital Few Strategies	
<ul style="list-style-type: none"> <li>• Increase the quality of strategic safety programs at State, MPO, and local levels; including the degree to which safety consciousness is a part of planning, project development, and operations.</li> <li>• Support NHTSA in efforts to raise seat belt use to 90 percent nationwide by 2008.</li> <li>• Enhance the ability of drivers to remain on the roadway by assuring greater visibility and providing effective warning systems, such as rumble strips.</li> <li>• Implement Statewide programs which reduce the consequences of roadway departure through removal or shielding of hazardous roadside conditions.</li> <li>• Conduct comprehensive intersection analysis program to determine safety problems and opportunities, and implement cost-effective countermeasures.</li> <li>• Foster comprehensive integrated pedestrian safety programs targeting major pedestrian crash concerns.</li> </ul>	

owners system, guidance, the safety  
USDOT influence adoption, education  
the focus result in  
crashes speeding traffic occur at fatalities in

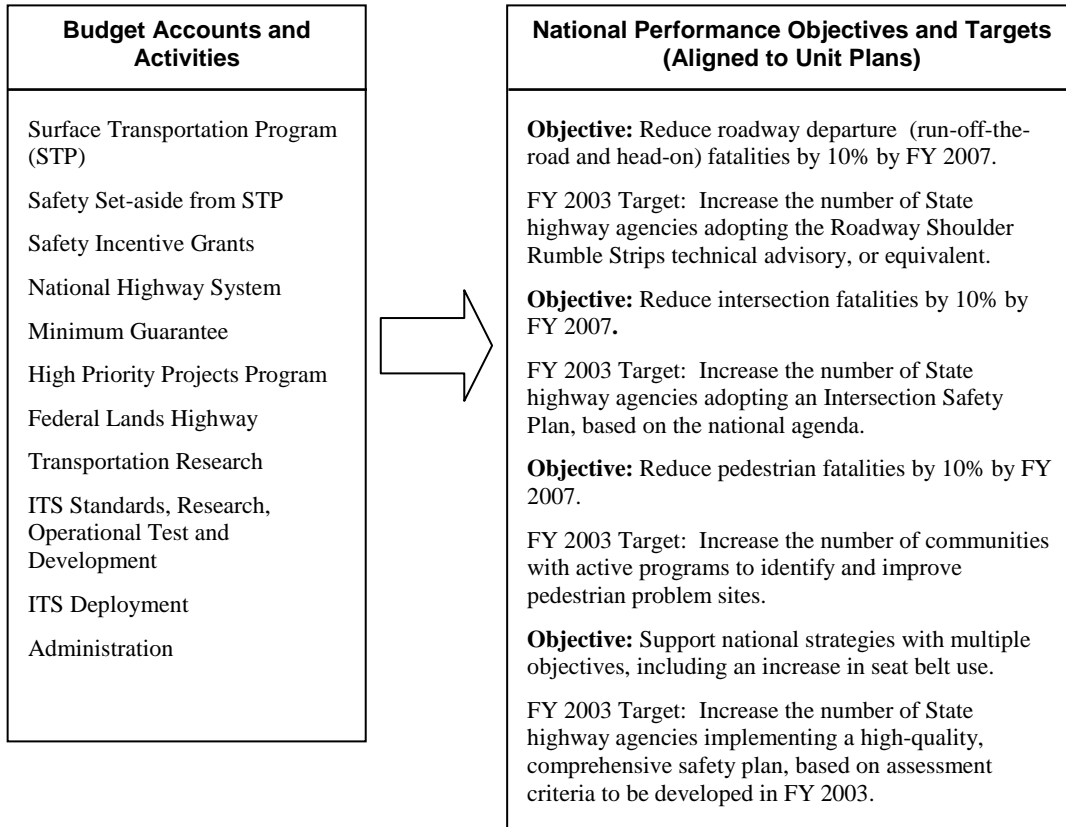


- support for the implementation of the American Association of State Highway and Transportation Officials (AASHTO) strategic highway safety plan;
- publication of an updated Highway-Rail Crossing handbook, and updated National Highway Institute (NHI) training course on the railroad-highway grade crossing improvement program;
- promotion of safety in State and local planning and programs;
- development of improved safety data and analysis systems for better identification of the causes of crashes and the implementation of high-payoff crash reduction programs; and
- continued efforts to foster effective partnerships to ensure a comprehensive approach to improve highway safety.

#### Other Federal Programs With Common Outcomes

The FHWA works closely with NHTSA and the Federal Motor Carrier Safety Administration toward shared traffic safety objectives. To support these objectives and carry out highway safety efforts throughout the government, we also coordinate with a number of other Federal agencies including the National Academy of Sciences, primarily through the Transportation Research Board, by using expert panels and committees that offer essential perspective and advice; the National Transportation Safety Board, to identify infrastructure enhancements for improve highway safety and provide recommendations on program improvements; and the National Park Service and Bureau of Indian Affairs in the U.S. Department of the Interior, to identify safety improvements to National Park and Native American Government roadway systems.

Safety - Activities and Associated Performance Objectives



## Mobility and Productivity

A primary concern of the FHWA and its partners is the need to slow the increase in traffic congestion nationwide. In FY 2003, success will be measured by our progress towards limiting the percent of travel under congested conditions to 34 percent, from a projected increase of 34.2 percent. Recent trends and annual targets are illustrated in Figure 8. Increasing system reliability is another critical objective. To measure our progress, we will continue in FY 2003 to develop the buffer index as an indicator of performance, by increasing the number of data collection sites and identifying out-year projections and targets. The buffer index reflects the percent of extra time travelers allow for congestion in order to arrive at a location, on time.

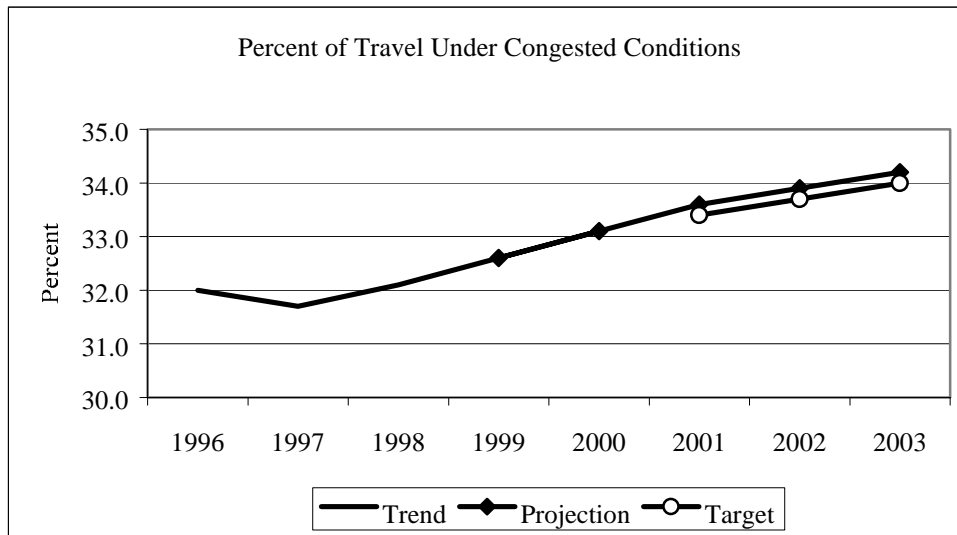


Figure 8. Percent of Travel Under Congested Conditions

### Strategic Initiatives

Increasing roadway capacity is one approach to reducing traffic congestion. However, there are limits as to how much system capacity can be increased. To have more of an impact on traffic congestion, transportation planners and officials must consider multiple approaches that include:

- increasing roadway throughput by adding system capacity, either as new roadways or transit routes, added traffic lanes, additional buses, or other forms of mass transit;
- managing traffic demand by various means including promoting flex-time work schedules, making transit more attractive, or introducing congestion pricing policies;
- improving the performance of the existing system through effective systems management and operations;
- reducing delay associated with incidents through improved incident clearance and scene control practices;
- providing better information to travelers, allowing them to choose departure times, modes, and routes that suit their needs; and,

- minimizing interference with traffic flow by better managing work zones from construction and maintenance projects.

In FY 2003, we will encourage the use of all approaches by our partners and actively the critical initiatives that are discussed

Deploy ITS Infrastructure. We will continue ITS Infrastructure to support Mobility, Productivity, Safety and Security goals. initiatives for 2003 implementation include requirements and initiating testing of a *Infostructure*, conducting 40 courses on ITS Architecture and Systems Engineering, workshops on ITS standards suites and applications, and executing awards for 80 integration projects, and supporting target to complete a Level 1 Deployment of Commercial Vehicle Information Systems Networks (CVISN).

<b>Vital Few Strategies</b>
<ul style="list-style-type: none"> <li>• FHWA units will proactively assert leadership with transportation stakeholders to establish, enhance, and nurture collaborative local partnerships that champion implementation of strategies to mitigate the impacts of congestion.</li> </ul>
<ul style="list-style-type: none"> <li>• FHWA units will proactively assert their leadership with transportation stakeholders to champion implementation of innovative solutions to reduce work zone delays.</li> </ul>
<ul style="list-style-type: none"> <li>• FHWA units will proactively assert their leadership with transportation stakeholders to champion implementation of innovative solutions to reduce incident delays, including establishment of effective regional traffic incident management programs.</li> </ul>

of these promote below.

to deploy

Key finalizing National

leading 30 standards ITS FMCSA's

and

Institutionalize Operations. Through research, analysis, and outreach, we will work with the transportation community to institutionalize Operations as one of the core missions of transportation agencies. Key initiatives we will undertake include disseminating guidelines and training on regional planning for Operations; sponsoring regional forums and information materials to explore actions that metropolitan areas might pursue to improve transportation system operations; and creating a forum for stakeholders in the incident management and ITS public safety arenas to communicate and coordinate issues with their peers.

Elevate the state-of-the-practice. We will strive to elevate the state-of-the-practice by raising the levels of acceptable performance and increasing the implementation of proven state-of-the-art technologies advances through education, outreach, technical assistance, best practices, operational assessments, and peer programs. Key initiatives we will undertake include expanding the number of sites collecting performance measurement data on reliability; developing additional guidance on transportation management in small communities, implementation of adaptive control strategies on signalized arterials, freeway system performance monitoring and evaluation procedures, traveler information, and travel demand management strategies; tracking changes in traveler information business models and identifying their impact on the sharing of information among public and private entities.

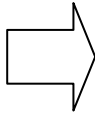
Accelerate the state-of-the-art. A significant portion of the research budget will focus on identifying and developing advanced technologies and strategies in communications, monitoring, systems control and information to foster the next generation of operations. Key initiatives we will undertake include initiating an operational test of Adaptive Control Systems Lite; developing ITS Work Zone Implementation Guide and Case Studies; developing analysis tools to support evacuation decisionmaking; and begin field testing to enable data interoperability between public safety dispatch centers and transportation traffic management centers.

Develop Freight Analytical Framework. We will develop and disseminate intermodal freight data and analytical tools to assist State and local transportation agencies, and provide training to partners and stakeholders on available freight data and analysis. In addition, FHWA will initiate a multiyear effort to develop the analytical capability of its partners to plan and implement freight improvements.

Develop Institutional and Policy Underpinning for Freight Planning. We will continue to develop an institutional and policy underpinning for freight planning by conducting a scan of U.S. and Latin American freight logistics; and by disseminating benefit-to-cost tools to State, metropolitan planning organizations, and multi-jurisdictional partners and stakeholders for application in intermodal freight transportation planning and decisionmaking. In addition, FHWA will continue support of multi-state coalitions and their efforts to bring a regional perspective and solutions to freight transportation planning and decisionmaking.

Mobility and Productivity (Congestion) - Activities and Associated Performance Objectives

<b>Budget Accounts &amp; Activities</b>
Metropolitan Planning
National Corridor Planning & Border Programs
State Border Infrastructure
ITS Standards, Research, Operational Test and Development
ITS Deployment
Transportation Research
Value Pricing Pilot Program
Administration



<b>National Performance Objectives and Targets (Aligned to Unit Plans)</b>
<p><b>Objective:</b> Work with the States to further deploy Intelligent Transportation Systems (ITS) infrastructure and sustain improvements to system operating practices</p> <p>FY 2003 Target(s): Increase the number of regional ITS architectures deployed to 130. Increase the number of metropolitan areas deploying an integrated ITS infrastructure to 64. Increase the share of the nation's population with access to 511 traffic information to 30 percent.</p>
<p><b>Objective:</b> Mitigate overall impacts of congestion through effective local partnerships.</p> <p>FY 2003 Target: Increase the number of local and regional partnerships focusing on congestion mitigation strategies.</p>
<p><b>Objective:</b> Reduce work zone delay by ensuring that all States, the District of Columbia, Puerto Rico, and Federal Lands offices are engaged in aggressively anticipating and mitigating congestion caused by highway work zones.</p> <p>FY 2003 Target: States will complete the Work Zone Self-assessment to identify a baseline figure, and establish out-year targets for improvement. (Note: The self-assessment is scheduled for completion and release by October 2002.)</p>
<p><b>Objective:</b> Reduce traffic incident delay by ensuring that all States, the District of Columbia, Puerto Rico, and Federal Lands offices are engaged in aggressively anticipating and mitigating congestion caused by traffic incidents.</p> <p>FY 2003 Target: An Incident Management Self-assessment Tool will be used by States and metropolitan areas to identify a baseline figure and establish out-year targets for improvement. (Note: The self-assessment is scheduled for completion and release by October 2002.)</p>

## Mobility and Productivity (continued)

Preserving the infrastructure of Federal-aid highways, particularly the National Highway System (NHS), is another key area of focus. If repairs and reconstruction occur less frequently and can be performed more quickly, traffic congestion and work zone safety will be improved. The FHWA is encouraging this approach through the development and deployment of longer lasting and innovative pavement and bridge materials in the system.

Pavement and bridge condition in the NHS are used as indicators of system performance. In FY 2003, FHWA seeks to increase the percent of VMT on NHS pavements with acceptable ride quality to 92.5 percent, and decrease the percent of deficient bridge deck area, adjusted for average daily traffic, to 27.5 and 29.7 percent on NHS and non-NHS bridges, respectively. Recent trends and annual targets are illustrated in Figures 9, 10, and 11. In addition, we will continue to monitor the per-mile cost of highway freight transportation, which is a key indicator of goods movement throughout the system, and undertake initiatives that influence the factors determining freight operating costs.

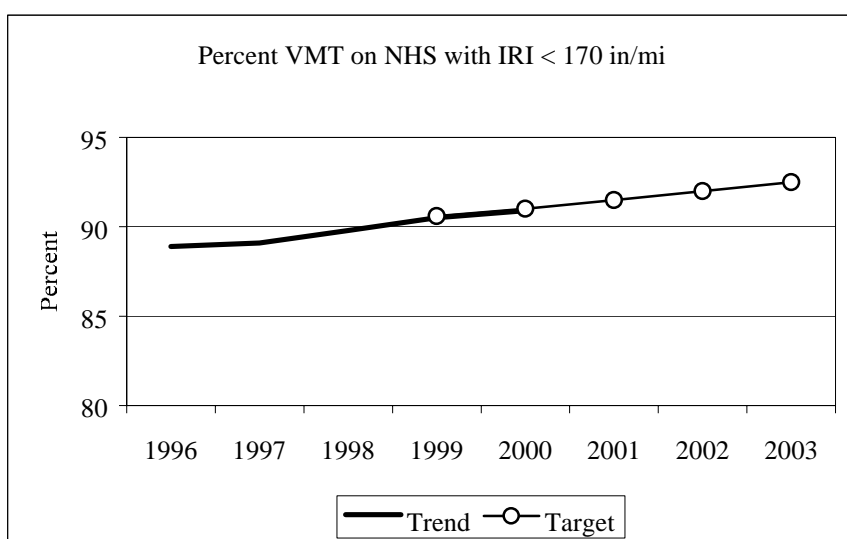


Figure 9. Percent of Vehicle Miles Traveled on the NHS with Acceptable Pavement Smoothness.  
[Note: IRI is the International Roughness Index.]

Figure 10. Percent of Deck Area on Deficient Bridges, NHS

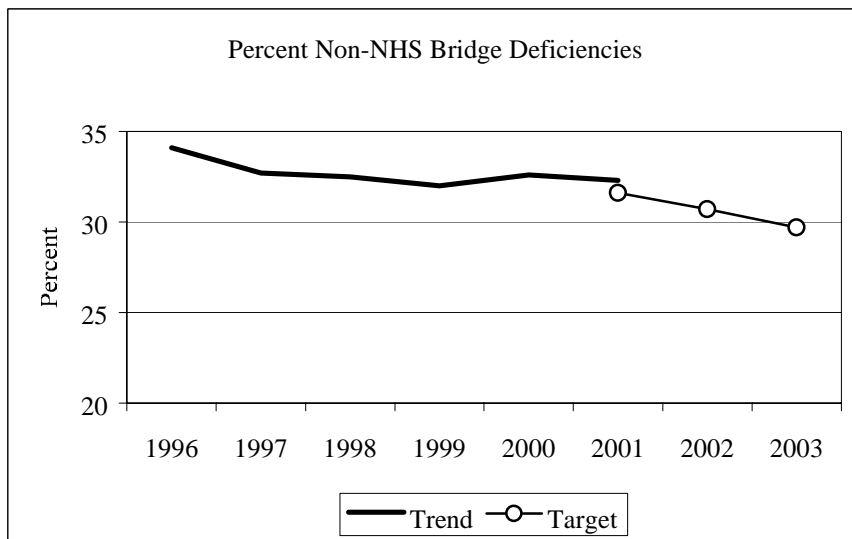
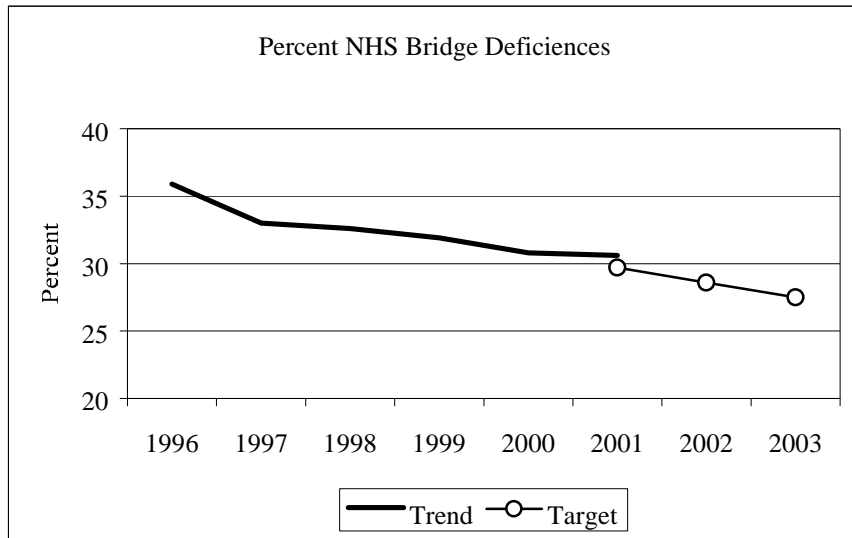


Figure 11. Percent Deck Area on Deficient Bridges, Non-NHS.

Strategic Initiatives

Improve pavement condition. We will continue to work with the States and other authorities to promote infrastructure development and improvements using Surface Transportation Research program funding, grants, and technical assistance and advances in technology. Through the Pavement Smoothness Team, FHWA will partner with AASHTO to develop and deliver technology transfer and training programs to promote the implementation of pavement smoothness technologies. We will provide technical assistance, best practice workshops, and training to State Departments of Transportation to implement these new technologies. In cooperation with the States and industry, the Agency will also continue to promote and publicize the results of the Pavement Smoothness Initiative. We will encourage equipment upgrade and adoption of recommended protocols, and work

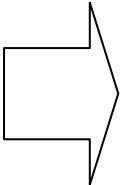
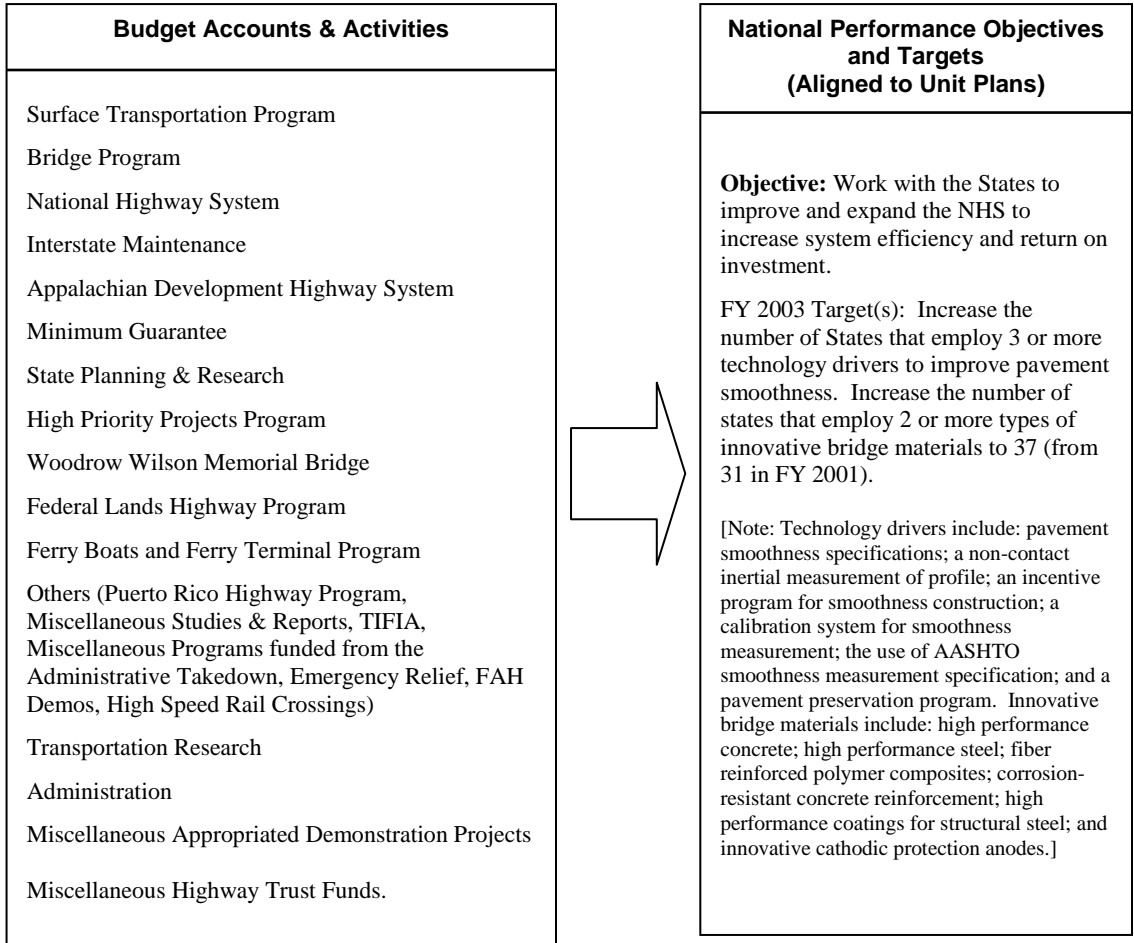


with profile measuring equipment manufacturers to offer equipment for measuring pavement smoothness.

Improve bridge condition. We will provide technical assistance and share best practices to increase the number of States that achieve a medium or high rating for implementing high performance bridge materials. Utilizing Technology Deployment and Partnership Program funds, we will support the deployment of innovative materials that are more durable and resistant to traffic loads and corrosive attack and result in less maintenance and traffic restriction. The FHWA will continue to provide technical assistance and training to the States and local governments in the use of high performance materials, new design techniques, and cost effective details for bridges.

Improve investment decisions. We will continue to work to promote economic analysis techniques such as benefit-cost and life cycle cost analyses. Key initiatives will include the development and delivery of an executive-level seminar for FHWA and State DOT managers. We will initiate a dialogue with key State executives to assess current practice and promote the use of economic analysis concepts, principles, and tools. In addition, we will develop educational materials for practitioners such as an economic analysis and user cost primer. Key software products, including the State version of the Highway Economic Requirements System (HERS) and Life Cycle Cost Analysis, will be enhanced based on feedback from our State partners. Also, training and support in the use of these products will be provided.

Mobility and Productivity (Pavement and Bridge Condition) - Activities and Associated Performance Objectives



## Environment

To increase ecosystem and habitat conservation, FHWA will encourage the implementation of exemplary project initiatives that are either unique in geographic scope, in the application of innovative scientific and technological practices, that attain a high level environmental standard or achieve a high level of results, or are recognized as particularly valuable from an environmental perspective. Examples of such initiatives include mitigation projects that address wildlife movement and habitat connectivity, the development of watershed-based environmental assessment and mitigation approaches, the use of wetland banking, or the use of special measures to prevent invasive species along highway rights-of-way. In FY 2003, FHWA will increase the number of exemplary initiatives from 5 to 8 towards the long-term goal of 30 initiatives in at least 20 States or Federal Lands Divisions by FY 2007. In addition, FHWA will continue to replace, at a minimum, a program-wide average of 1.5 acres of wetlands per acre directly affected by Federal Aid highway projects. Recent trends in wetlands replacement are illustrated in Figure 12.

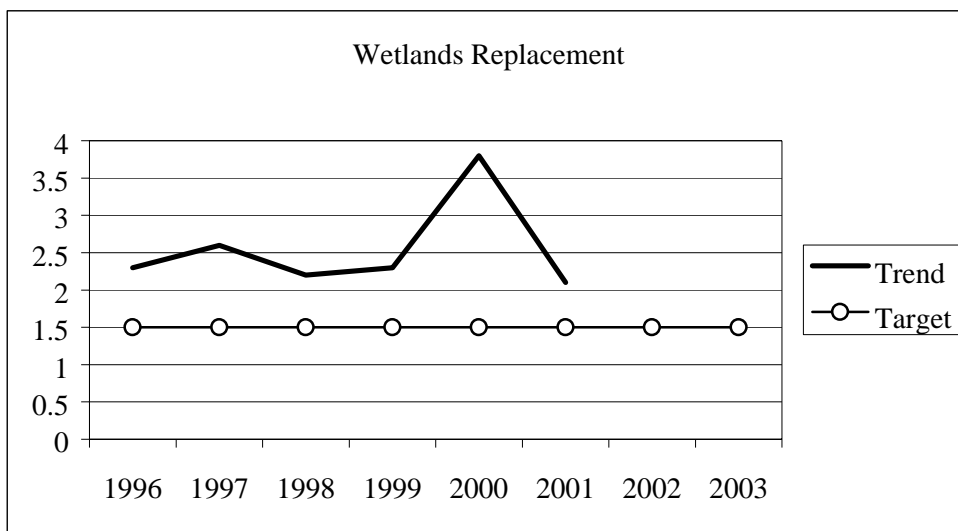


Figure 12. Ratio of wetland replacement resulting from Federal-aid highway projects.

The FHWA seeks to improve the quality of transportation decisionmaking by promoting strategies that establish a better link between transportation planning and environmental review processes at the systems planning level as well as the project level. Integrated planning approaches are recognized by good working relationships with resource agencies built upon partnership agreements, more meaningful consideration of environmental and community issues in planning decisions, the adoption of regional approaches to mitigation, and the identification of pre-mitigation and dual-purpose project opportunities. In FY 2003, we will establish a baseline of best practices for integrated planning and encourage 8 States to adopt Context Sensitive Solutions (CSS), and encourage the adoption of Context Sensitive Designs (CSD). Longer-term success will be measured by the adoption of integrated approaches and CSS in all 50 States, the District of Columbia, Puerto Rico, and the Federal Lands Highway Divisions by FY 2007.

Strategic Initiatives

The FHWA will promote the design, construction, maintenance, and use of transportation projects that conform to environmental legislation and regulations through research, new technologies, analytical models, management training, and the technology. We will continue to promote that protect and enhance ecosystems, the use of inventories, partnerships with agencies, best practices, tools, and reports *Wildlife Ecology and Transportation Issues* jointly sponsored by the FHWA and AASHTO. These initiatives will be implemented through interagency activities, conference presentations and demonstrations, and a wetlands training course. We will also support additional research and

<p style="text-align: center;"><b>Vital Few Strategies</b></p> <ul style="list-style-type: none"><li>• Build FHWA staff capacity (awareness, knowledge, skills) to encourage and facilitate the development and implementation of exemplary initiatives.</li><li>• Involve resource agencies at national and local levels.</li><li>• Identify projects as candidates for exemplary initiatives and direct national focus and resources to them.</li><li>• Provide guidance, information, and training to States on “integrating the planning and environmental processes” and “CSS/CSD.”</li><li>• Emphasize safety as a component of CSS and CSD.</li></ul>
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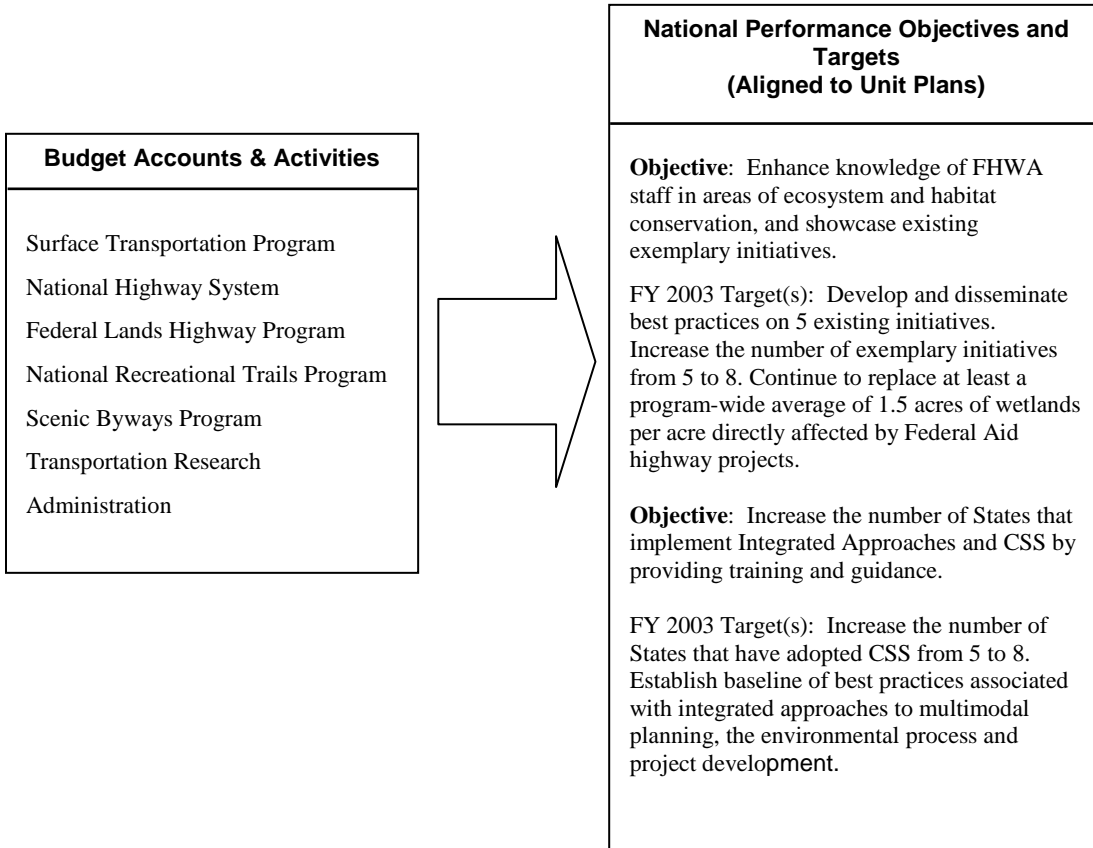
Federal primarily tical transfer of initiatives including resource such as *in Europe*, course.

development on wetland protection and enhancement, practical techniques of habitat restoration, and ecosystem analyses and characterization. This includes research on ecosystem analyses and methodologies, water quality course development, stormwater management practices, functional evaluation of wetlands, and public information measures.

Other Federal Programs With Common Outcomes

We continue to coordinate wetlands programs and research initiatives with the EPA, the Departments of Interior, Commerce, and Agriculture, and the U.S. Army Corps of Engineers aimed at improving wetlands policies and ensuring a net gain nationwide in wetlands acreage. The FHWA meets regularly with other Federal agencies as a member of several interagency groups addressing wetlands and related topics, including threatened and endangered species, environmental streamlining, ecosystem management, the control of invasive species, and watershed protection. We also participate in joint research with other Federal agencies for studies on wetland evaluation and mitigation.

Environment (Ecosystems) - Activities and Associated Performance Objectives



## Environment (continued)

In FY 2003, we will continue to work closely with EPA towards the reduction of on-road mobile source emissions to 61.8 million tons. In addition, we will seek to influence factors that increase the percentage of nonattainment and maintenance areas meeting their mobile source emissions budget goals for ozone, carbon monoxide, and particulate matter. Recent trends and targets are illustrated in Figures 13 and 14.

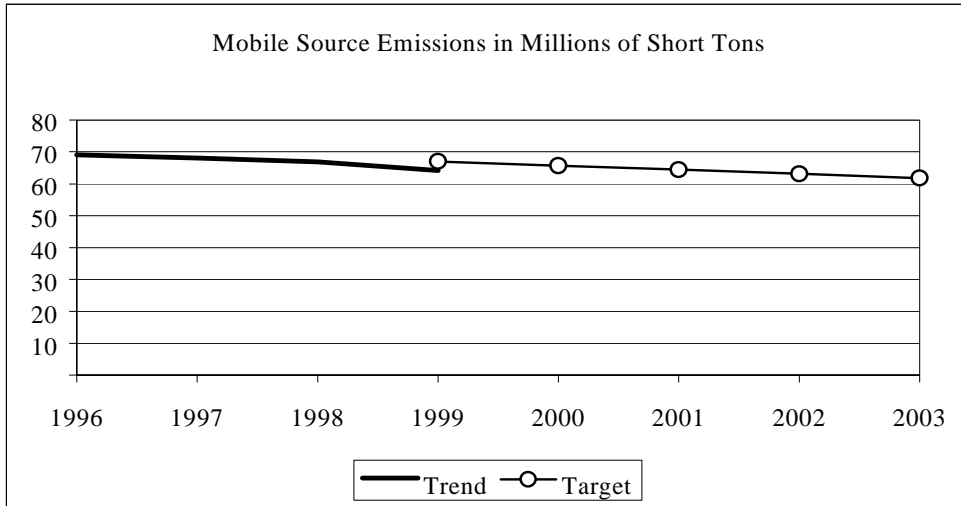


Figure 13. Mobile-source emissions in millions of short tons.

	Ozone	Ozone Target	PM-10	PM-10 Target	Carbon Monoxide	CO Target
1996	96.7%		68.2%		92.6%	
1997	98.0%	98.0%	86.4%	86.0%	96.2%	96.0%
1998	90.3%	98.0%	96.0%	86.0%	96.4%	96.0%
1999	93.0%	98.0%	100.0%	86.0%	96.2%	96.0%
2000	97.8%	98.0%	100.0%	86.0%	95.7%	96.0%
2001	97.0%	98.0%	94.4%	86.0%	100.0%	96.0%
2002		98.0%		86.0%		96.0%
2003		98.0%		86.0%		96.0%
2004		98.0%		86.0%		96.0%

Figure 14. Percent of nonattainment and maintenance areas meeting their mobile source emissions budget goals

To ensure progress in achieving these targets, we will also seek to minimize the number of area transportation conformity lapses that occur during FY 2003. Through improved integrated transportation and air quality planning, the transportation conformity process is designed to ensure that emissions from an area transportation system are consistent with Clean Air Act goals. While there are multiple causes for a lapse, we will monitor the number of lapses as an early indicator of our success in achieving the national targets for emissions reductions.

### Strategic Initiatives

The FHWA will continue to encourage the use of less polluting modes of transportation, the design of infrastructure that reduces congestion and emissions, and research and modeling of the emissions impacts of investment choices. Through research, new technologies, and model development, FHWA promotes the design, construction, maintenance, and use of highways that are compatible with the national environmental goals. In partnership with our stakeholders, we support the development of environmental analytical models to assist decisionmakers. We also provide resources, guidance, and technical assistance for States and local agencies to ensure compliance with the National Ambient Air Quality Standards, especially reducing transportation-related emissions. Key initiatives that we will undertake include:

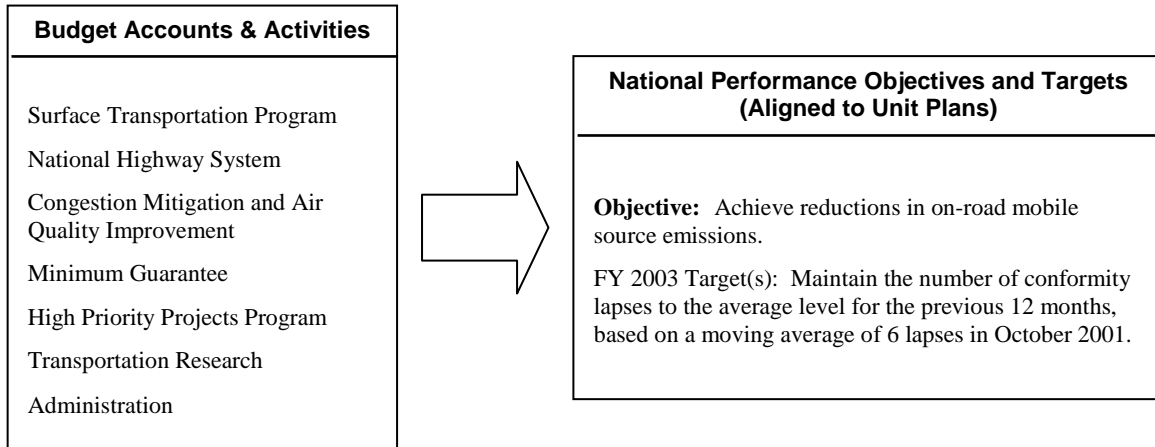
- Providing funding to reduce emissions through the Congestion Mitigation and Air Quality Improvement (CMAQ) program.
- Identifying challenges in implementing amended conformity regulations for clean air by issuing guidance and providing technical assistance.
- Providing guidance and technical assistance to State and local partners in the implementation of the transportation conformity regulation in new nonattainment areas, and studying rural air quality issues and developing approaches to demonstrate conformity in rural nonattainment areas.
- Expanding the transportation and air quality public education effort including the Alliance for Clean Air and Transportation.

Through continued research, we will develop approaches to improve air quality and to evaluate emissions impacts and cost-effectiveness of transportation strategies. Our activities include research on air toxics and a 2.5-micron particulate matter emission model to support new National Ambient Air Quality Standards. We will also continue to participate in the activities of the DOT Center for Climate Change and Environmental Forecasting to fund research that examines the relationship between transportation, energy use, and greenhouse gas emissions.

### Other Federal Programs With Common Outcomes

To achieve the national clean air goals, we work closely with the EPA to implement a number of initiatives including the Transportation and Air Quality public education initiative, the transportation conformity regulation, and the CMAQ program. The USDOT and EPA have jointly funded a number of research efforts that target the reduction of mobile source emissions.

Environment (Air Quality) - Activities and Associated Performance Objectives





## National Security

Before the September 11 terrorist attack, the primary national security goal of FHWA was to support the deployment requirements of the Department of Defense (DOD) by improving access between key military installations, including power projection and power support platforms, and the airport or seaport of embarkation. Since the events of September 11, a paramount objective is to increase the preparedness of our Nation's transportation system in the event of another terrorist attack. Our success will be measured not only by increasing military deployment support, but also by an improved ability by State and local department of transportations (DOTs) nationwide to develop countermeasures for securing their more critical highway infrastructure, by an increased ability of State and local DOTs and other first responders to respond effectively and efficiently to any emergency event (natural or manmade), by better collaboration between military and civilian authorities to improve the timeliness and effectiveness of military deployments, and by the development of new security countermeasures technology based on an effective research program.

### Strategic Initiatives

The FHWA will continue to work with a number of USDOT and other partner organizations to improve highway-related security. Primary organizations include the USDOT Office of Intelligence and Security, FMCSA, Federal Transit Administration, Federal Rail Administration, Research and Special Projects Administration, the Transportation Security Administration (TSA), the Office of Homeland Security (OHS), and the AASHTO Security Task Force. A continuing effort will be improving the security knowledge of our entire workforce. In FY 2003, the FHWA's highway security efforts will focus on:

Vulnerability assessment. Assisting owners/operators of highway infrastructure nationwide to determine their most critical infrastructure, evaluate its vulnerability, and institute effective countermeasures to reduce vulnerability. This goal will be achieved through developing and distributing best practices and facilitating workshops.

Emergency preparedness. Ensuring preparedness for—and the ability to respond to—malevolent attacks, including those that could force evacuation of FHWA offices and those that could significantly impact highway and other infrastructure. These goals will be achieved through emergency planning activities, developing and distributing best practices, and conducting workshops.

Military readiness. Improving the readiness of military and civilian authorities to support military deployments during times of national emergency. Activities will focus on the more significant military installations throughout the country and will consist of “table-top” exercises with both military and civilian authorities. The FHWA is also developing a *Military Deployment Procedures Guide for State Agencies* to assist States in developing or updating their own procedures.

Security research. Security-related research needs will be identified and studies will be initiated for the highest priority needs. A workshop will be held to define the FHWA research needs that, along with AASHTO identified needs, will be used to direct a transportation security research program. The FHWA will lead a pooled fund study to synthesize effective technologies for bridge surveillance during FY 2003.

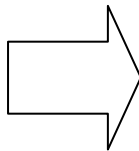
In addition to these four primary security focus areas, FHWA will continue: working to improve the physical and operational quality of the Strategic Highway Network, with a focus on port to port connectors; coordinating with USDOT, other USDOT modes, and private industry to improve freight movement security; and improving both effectiveness and security at the Canadian and Mexican borders.

### Other Federal Programs with Common Outcomes

We are working closely with the TSA and other USDOT modal administrations, Federal agencies including the DOD and the MTMC, the OHS, and State and local governmental agencies responsible for highway planning and emergency management to achieve the national security goals.

National Security - Activities and Associated Performance Objectives

Budget Accounts & Activities
Surface Transportation Program
National Highway System
Minimum Guarantee
High Priority Projects Program
Federal Lands Highway Program
Transportation Research
ITS Standards, Research, Operational Test and Development
ITS Deployment
Administration



National Performance Objectives and Targets (Aligned to Unit Plans)
<p><b>Objective:</b> Identify critical highway infrastructure, evaluate its risk and vulnerability, and develop measures to reduce vulnerability.</p> <p>FY 2003 Target(s): Facilitate four AASHTO Regional Physical Infrastructure Vulnerability Assessment Workshops; develop strategies for increasing bridge and tunnel security; and schedule three training workshops for FHWA and other government engineers in structural response to malevolent actions.</p> <p><b>Objective:</b> Ensure preparedness for response to, and recovery from, attacks on highway infrastructure.</p> <p>FY 2003 Target(s): Evaluate the FHWA Continuity of Operations Plan (COOP) through a table-top exercise, and improvements implemented – three (3) training sessions will be held for Division office emergency coordinators; and facilitate 10 additional emergency preparedness/response workshops.</p> <p><b>Objective:</b> Facilitate military deployment from forts to ports; and</p> <p>FY 2003 Target(s): Facilitate additional military/civilian table-top exercises at major military installations in 11 States to improve military deployment during a national security emergency.</p> <p><b>Objective:</b> Initiate research, technology development, and deployment activities in support of a more secure highway system.</p> <p>FY 2003 Target(s): Identify a long-range security research program and initiate several security research studies during FY 2003.</p>

## **Organizational Excellence**

A goal of the FHWA is to improve our ability to manage for results. In FY 2003, the FHWA will define this goal in terms of our ability to oversee transportation projects and efficiently manage Federal-aid Highway funds, streamline the environmental review and permitting processes for projects, and improve employee satisfaction and effectiveness. We believe that achieving these three objectives, combined with continued progress in meeting our program-related goals, should also improve satisfaction among our partners and customers.

### Project Oversight

Even as TEA-21 legislation directed us to delegate many project level authorities to the States, the responsibility for program oversight remains with FHWA to ensure the effective delivery of all programs. Our objective is to improve project oversight and stewardship so as to realize more cost efficient Federal-aid funds administration and project management and more effective use of funds in terms of the return on investment.

### Strategic Initiatives

In FY 2003, we will place more emphasis upon the efficient use and management of Federal funds by promoting best practices, innovative financing, and better project funds management. We can promote best practices by assisting Federal, State, and local governments in the planning phase to identify projects that are ready for advancement; streamlining the environmental review and permitting process; using innovative contracting techniques; applying innovative finance techniques such as advance construction, Grant Anticipation Revenue Vehicle bonds, State infrastructure banks, or tapered match; and encouraging better project funds management through the early release of excess obligations. We will assist State and local governments in the use of techniques that help to expedite projects, such as innovative financing and contracting. We will also provide technical assistance and conduct training sessions relating to these innovative techniques. The FHWA will participate with the States in an annual review of projects to determine if any funds committed to the projects can be released for use on other projects.

## Organizational Excellence (continued)

By promoting environmental stewardship practices, FHWA will facilitate the goal of streamlining environmental review and permitting processes for projects. Our objective is to introduce innovative management practices that: demonstrate stewardship and result in timely project delivery; use our administrative authority to exercise innovative program agreements among States and Federal agencies to improve the review and approval process used in the majority of States; lead efforts to achieve widespread implementation of environmental stewardship during project development as demonstrated through context sensitive design solutions; introduce more innovative reinvention processes that integrate environment and transportation decisionmaking in more States; and ensure that environmental reviews are carried out in a more timely way based on effective decisionmaking.

Our indicators of success are the median time required for all projects to complete an Environmental Impact Statement (EIS) or Environmental Assessment (EA), as well as success in meeting agreed-upon project schedules for EIS and EA completion. In FY 2003, our target is to decrease the median completion time for all EIS and EA projects to 51 and 17 months, respectively. Recent trends and targets for the completion of an EIS are illustrated in Figure 15. The median time to complete an EIS, rather than the average time, is more representative of the actual length of time required in reviewing all projects underway, since one or two projects may take an exceptionally long time to complete. We will also agree upon schedules for all projects under consideration to establish a basis for future comparisons. The longer-term targets are to reduce the median time to complete an EIS and EA to 36 and 12 months, respectively, and to meet the project schedules for 90 percent of all projects by FY 2007.

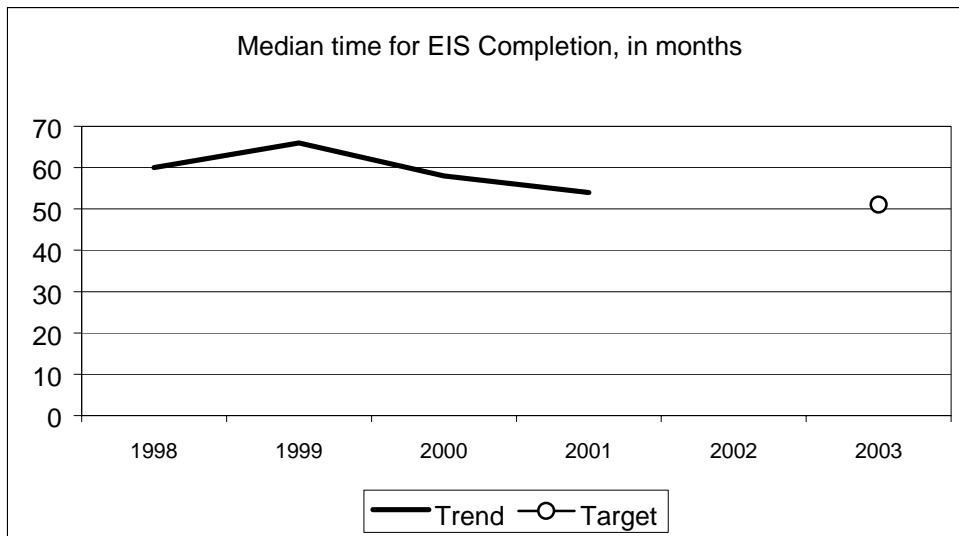


Figure 15. Median time, in months, to complete an Environmental Impact Statement (EIS) for all Federal-aid projects. [Note: This measure was developed for the FY 2002 Plan and refined for FY 2003. A target was not set for FY 2002.]

Strategic Initiatives. To enable States to advance environmentally sound more expeditiously, we are working partners to streamline transportation making. By enhancing tracking measuring project development time projects will be expedited through the and review process. Process improvements will provide closer between project development under Environmental Policy Act (NEPA) transportation planning under Titles

We will conduct a process review of of implementing the environmental commitments made in NEPA and permits and strengthen the link transportation planning and the NEPA

by identifying practices and procedures that allow MPOs and States to assist sponsoring agencies in performing more effective planning analyses. We will also support the Center for Environmental Excellence in their partnership with AASHTO to provide environmental stewardship demonstration projects. We will continue to provide technical assistance, guidance and the deployment of national and local initiatives through the use of environmental streamlining funds.

**Vital Few Strategies**

Partner with State transportation agency and State and Federal resource agencies to establish ambitious yet realistic project specific timeframes for completion of an EIS and EA.

Provide guidance and training in NEPA and Environmental Streamlining including the establishment of project timeframes.

Implement the Environmental Document Tracking System (EDTS).

Establish local and regional programmatic agreements. Possible areas for programmatic agreements including but not limited to: Categorical Exclusions, Tribal Consultation, Section 4(f) of the DOT Act, Section 106 of the National Historic Preservation Act, Section 7 of the Endangered Species Act, Section 404 of the Clean Water Act.

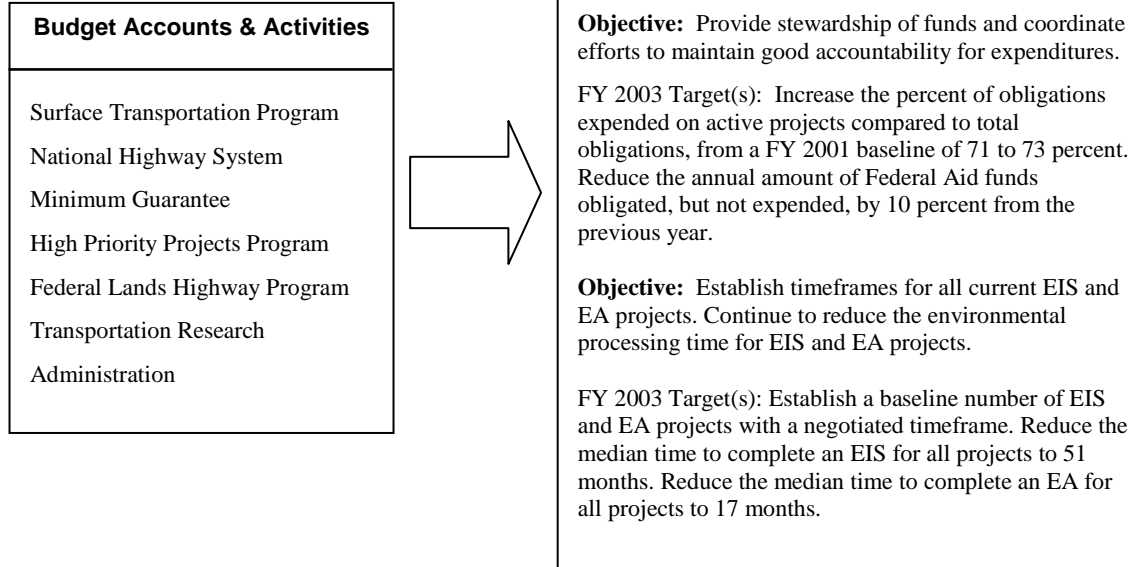
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Organizational Excellence (Project Oversight and Environmental Streamlining) -Activities and Associated Performance Objectives



## Organizational Excellence (continued)

A strategic objective of the FHWA is to improve employee satisfaction and effectiveness on the job. Job satisfaction is measured using an internal employee survey. Our target in FY 2003 is to increase employee job satisfaction, defined as satisfied and very satisfied, to 80 percent of all survey participants. Recent trends are illustrated in Figure 16.

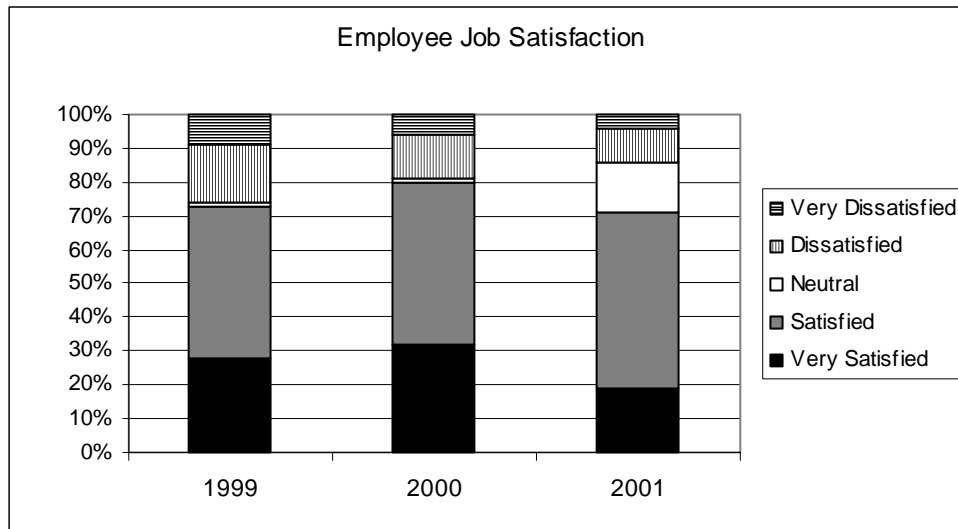


Figure 16. Employee Job Satisfaction

### Strategic Initiatives

The initiatives discussed below will be included as components of the FHWA Human Capital Plan currently under development and will be tailored to Agency needs that must be addressed in order to achieve the Vital Few goals.

Encourage Professional Development. We will implement the key recommendations of the internal Workforce Planning and Professional Development Task Force, which include expanding the development of leadership, business, and professional skills to all levels of the organization, including non-supervisory positions; expanding and providing earlier leadership development opportunities, including training to shape future executives; increasing academic study opportunities for non-technical employees; and increasing courses of study.

Improve Employee Recruitment, Selection, and Retention. We will identify and recruit individuals possessing the skills to meet emerging mission needs. Quickly identifying, evaluating, and selecting well-qualified replacements will address loss of expertise due to retirements and attrition. We will expand our use of paid advertising and the Internet to reach a broader applicant pool. To fill vacant positions more quickly, supervisors will develop workforce and succession plans that allow us to identify needs before they arise. Selecting officials will receive training in behavioral interview techniques to improve applicant selection and employee performance. The FHWA will also test an automated application and rating program to improve the timeliness of the recruitment and hiring process.

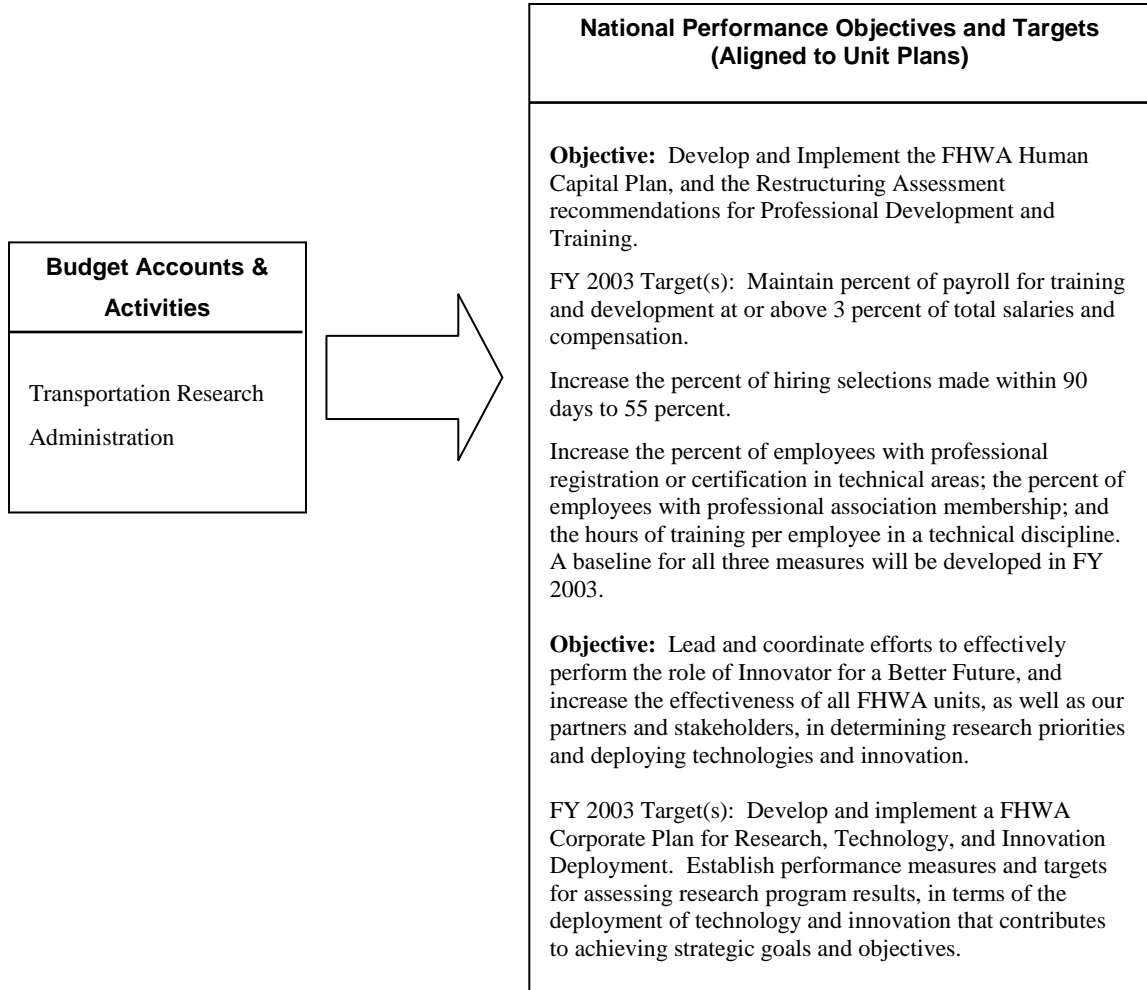
Mega-Project Oversight Managers. To address our oversight responsibilities, we will develop grade level and selection criteria for Major Project Oversight Manager positions, as well as a core competency framework and proficiency levels for these positions. We will provide individuals



recruited for these new positions with the necessary prerequisite training in project management and oversight.

Ensuring Progress. We will continue to conduct all-employee surveys and implement suggested improvement actions adopted by the FHWA management. We will track and measure the corporate funding amount that is targeted at accomplishing the identified training and development needs of the Agency. At the unit operating level, we will ensure that budgeted funds are obligated and that any additional opportunities for training and development are identified.

Organizational Excellence (Employee Satisfaction and Customer/Partner Satisfaction) - Activities and Associated Performance Objectives



## Organizational Excellence (continued)

Our partners and stakeholders are a diverse group of individuals in Federal, State and local government agencies, elected offices, nonprofit organizations, associations representing a variety of member interests, different types of engineering firms, many different manufacturing and service industries, university and research institutes, as well as private citizens. As a result, improving partner and stakeholder satisfaction can be a challenging and problematic undertaking. The FHWA took its first small step in this direction in FY 2001 by measuring satisfaction among its State DOT partners using the American Customer Satisfaction Index (ACSI). The ACSI is a nationally recognized survey instrument that rates the value of the services that participants receive by several dimensions, such as overall satisfaction, timeliness of decisions, usefulness of information, and competency of personnel. As illustrated in Figure 17, the FHWA rated at or near the Federal government-wide average for each of the dimensions.

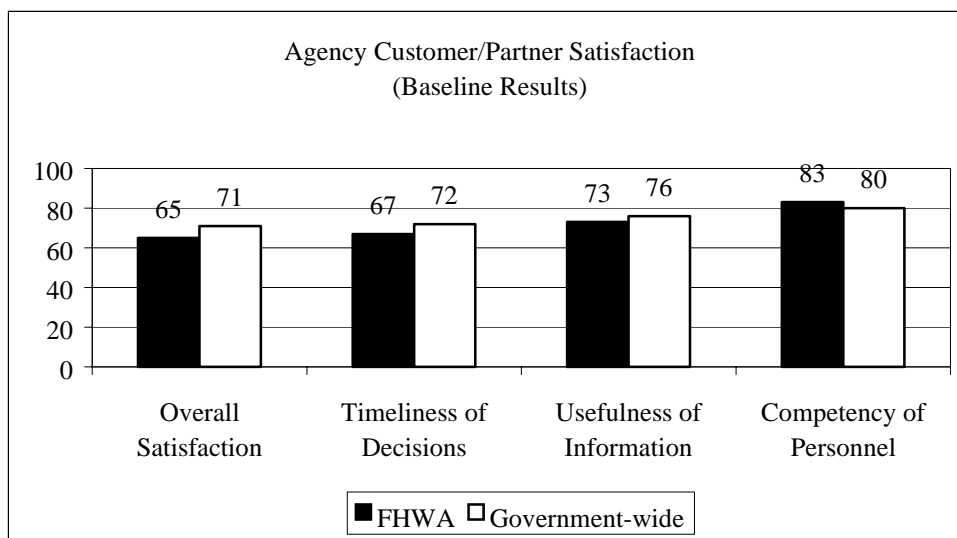


Figure 17. Customer and Partner Satisfaction (defined as satisfied and very satisfied.)

While the ACSI survey revealed important information about the satisfaction of one of our key partners with aspects of our work, other customer surveys directed at particular segments of our partner and stakeholders, at both the national and local unit level, have been conducted or are currently underway. The potential uses of these surveys, as well as the ACSI survey approach, are currently being reexamined from a corporate perspective. The purpose of the surveys is to identify aspects of our work that we are doing well and aspects that need improvement. In FY 2003, we will refine our measurement and customer relationship strategy from this perspective and make fundamental improvements where needed. This review may result in significant changes to our approach to data collection and the identification of targeted segments at all levels and might include the use of an alternate method to the ACSI survey instrument.

In our role as Innovator for a Better Future, a particular concern is how FHWA, on behalf of our partners and stakeholders, invests in our research program and encourages innovation in the transportation community. In addition to FHWA's Restructuring Assessment, the Transportation Research Board Special Report 261, *The Federal Role in Highway Research and Technology*, and a recent General Accounting Office Report, *Highway Research, Systematic Selection and Evaluation Processes Need for Research Program*, outlined the challenges the Agency faces. We must develop a more systematic approach that includes involving our external stakeholders in establishing our

research agenda, and deploying, tracking, and evaluating the results of research, technology, and innovation. In response to the recommendations in these reports, we will renew our commitment to highway research and technology and innovation deployment. Increased partner and stakeholder involvement in priority setting, project selection, and deployment will be a key part of our future measure of success.

#### Strategic Initiatives

In FY 2003, we will deploy an agency-wide strategy for obtaining customer feedback. A second customer and partner feedback survey regarding our products and services will be conducted using the ACSI instrument or an alternate instrument based on the proposed agency foundation surveys.

We will develop a Corporate Plan for Research, and Technology and Innovation Deployment that includes a focus on significant highway research gaps not addressed in other highway research programs, as well as emerging issues with national implications, including “advanced” research, the use of a systematic approach to obtain input from partners and stakeholders outside the Agency who can help define the research program agenda; and the use of a systematic process for evaluating significant ongoing and completed research. The plan will affirm a corporate commitment to technology and innovation deployment that is evident to employees, partners, and stakeholders, supports the allocation of resources by internal FHWA units, and reflects our research and technology and innovation deployment priorities. The plan will improve the tracking key projects, initiatives, and results through the use of performance measures.

**Attachment A. Framework of Goals, Objectives, and Measures in  
the FY 2003 Plan (Strategies and Actions are not included here)**

Strategic Goal	National Strategic Objective	Strategic Outcome	National Performance Objective (VF- denotes Vital Few Objective)	National Performance Measure
Safety	Reduce the number of highway-related crashes, and the resulting fatalities and injuries associated with a crash.	The number of highway related fatalities, actual and adjusted per 100 million vehicle miles traveled. The target is 1.4 per hundred million VMT in FY 2003. The number of highway related injuries, actual and adjusted per 100 million vehicle miles traveled. The target is 107 per hundred million VMT in FY 2003.	VF- Reduce fatalities involving roadway departure (run-off-the-road and head-on) crashes by 10% by FY 2007. [Note: The target for FY 2003 is to be determined.]	Increase the number of State highway agencies adopting the Roadway Shoulder Rumble Strips technical advisory, or equivalent.
			VF- Reduce intersection fatalities by 10% by FY 2007. [Note: The target for FY 2003 is to be determined.]	Increase the number of State highway agencies adopting an Intersection Safety Plan, based on the national agenda.
			VF- Reduce pedestrian fatalities by 10% by FY 2007. [Note: The target for FY 2003 is to be determined.]	Increase the number of communities with active programs to identify and improve pedestrian problem sites.
			VF- Implement national strategies supporting multiple objectives, including an increase in seat belt use.	Increase the number of State highway agencies implementing a high-quality, comprehensive safety plan, based on assessment criteria to be developed in early FY 2003.

Strategic Goal	National Strategic Objective	Strategic Outcome	National Performance Objective (VF- denotes Vital Few Objective)	National Performance Measure
Mobility and Productivity	Enhance the operation and efficiency of the existing highway system and intermodal connectors.	The FY 2003 target is to slow the growth of congested travel by 0.2% to 34% from a projected rate of 34.2%. (Note: The above is a national target based on approximately 400 metropolitan areas.)	VF- Mitigate overall impacts of congestion through effective local partnerships.	Number of local and regional partnerships focusing on congestion mitigation strategies.
			VF- Reduce work zone delay by ensuring that all States, the District of Columbia, Puerto Rico, and Federal Lands offices are engaged in aggressively anticipating and mitigating congestion caused by highway work zones.	States will complete the Work Zone Self-assessment to identify a baseline figure, and establish out-year targets for improvement. [Note: The self-assessment is scheduled for completion and release by October 2002.]
			VF- Reduce traffic incident delay by ensuring that all States, the District of Columbia, Puerto Rico, and Federal Lands offices are engaged in aggressively anticipating and mitigating congestion caused by traffic incidents.	States and metropolitan areas will use an Incident Management Self-assessment Tool to identify a baseline figure and establish out-year targets for improvement. [Note: The self-assessment is scheduled for completion and release by October 2002.]

Strategic Goal	National Strategic Objective	Strategic Outcome	National Performance Objective (VF- denotes Vital Few Objective)	National Performance Measure
			Work with the States to further deploy Intelligent Transportation Systems (ITS) and sustain improvements to operating practices	<ul style="list-style-type: none"> <li>-Increase the number of regional ITS architectures deployed to 130.</li> <li>- Increase the number of metropolitan areas deploying an integrated ITS infrastructure to 64.</li> <li>- Increase the share of the nation's population with access to the 511 traffic information telephone number to 30 percent.</li> <li>- Reduce delay at international border crossings through interagency partnerships.</li> <li>- Reduce travel time delay in freight significant corridors.</li> </ul>
Mobility and Productivity	Preserve, improve and expand the Nation's highway transportation system.	The FY 2003 target is to increase the percent of vehicle miles traveled on NHS pavements with acceptable ride quality to 92.5%, and the percent of deck area on bridges rated deficient for all Average Daily Travel (ADT) to 27.5% and 29.7% on NHS and non-NHS bridges, respectively.	Work with the States to improve and expand the NHS to increase system efficiency and return on investment.	<ul style="list-style-type: none"> <li>- Increase the number of States that employ 3 or more technology drivers to improve pavement smoothness.</li> <li>- Increase the number of States that employ 2 or more types of innovative bridge materials to 37 (from 31 in FY 2001).</li> </ul>

Strategic Goal	National Strategic Objective	Strategic Outcome	National Performance Objective (VF- denotes Vital Few Objective)	National Performance Measure
Environment	Demonstrate environmental stewardship by protecting and enhancing ecosystems.	<b>To increase ecosystem and habitat conservation:</b> <ul style="list-style-type: none"> <li>- Implement a minimum of 30 exemplary ecosystem initiatives in at least 20 States or Federal Lands Divisions by FY 2007; and</li> <li>- Replace at least a program wide average of 1.5 acres of wetlands per acre directly affected by Federal Aid highway projects.</li> </ul>	VF- Enhance knowledge of FHWA staff in areas of ecosystem and habitat conservation. Showcase existing exemplary initiatives.	<ul style="list-style-type: none"> <li>- Develop and disseminate best practices on 5 existing initiatives.</li> <li>- Increase number of exemplary initiatives from 5 to 8.</li> <li>- Continue to replace at least a program wide average of 1.5 acres of wetlands per acre directly affected by Federal Aid highway projects.</li> </ul>
Environment	Improve the environmental quality of transportation decisionmaking.	By FY 2007, all 50 States, the District of Columbia, Puerto Rico, and the Federal Lands Highway Divisions will use: <ul style="list-style-type: none"> <li>- Integrated approaches to multi-modal planning, the environmental process and project development at a systems level; and/or</li> <li>- Context sensitive solutions (CSS) at a project level.</li> </ul>	VF- Increase the number of States implementing Integrated Approaches and CSS by providing training and guidance.	<ul style="list-style-type: none"> <li>- Increase the number of States that have adopted CSS from 5 to 8.</li> <li>- Establish baseline of best practices associated with integrated approaches to multimodal planning, the environmental process, and project development.</li> </ul>
Environment	Improve the quality of the human and natural environment by reducing transportation-related pollution.	<ul style="list-style-type: none"> <li>- Increase the percent of nonattainment and maintenance areas meeting the on-road mobile source emissions budget goals for ozone, carbon monoxide, and particulate matter to 98.0, 96.0, and 86.0 percent, respectively.</li> <li>- Reduce on-road mobile source emissions to 61.8 million tons.</li> </ul>	Achieve reductions in on-road mobile source emissions.	<ul style="list-style-type: none"> <li>- Maintain the number of conformity lapses to the average level for the previous 12 months (moving average of 6 in October 2001).</li> </ul>



Strategic Goal	National Strategic Objective	Strategic Outcome	National Performance Objective (VF- denotes Vital Few Objective)	National Performance Measure
National Security	Reduce the vulnerability of critical U.S. transportation infrastructure and improve operational response capabilities.	<p><b>-Improved ability by State/Local DOTs nationwide to develop countermeasures for securing their more critical highway infrastructure.</b></p> <ul style="list-style-type: none"> <li>- Improved FHWA headquarters and field office preparation for Continuity of Operations during security events.</li> <li>- Increased ability of State and Local DOTs, and other first responders, to respond effectively and efficiently to any emergency event – natural or manmade.</li> <li>- Improved collaboration by military and civilian authorities to improve timeliness and effectiveness of military deployments.</li> <li>- Development of new security countermeasures technology through an effective security research program.</li> </ul>	<p>Identify critical highway infrastructure, evaluate its risk and vulnerability, and develop measures to reduce vulnerability.</p> <p>Ensure preparedness for response to, and recovery from, attacks on highway infrastructure.</p> <p>Facilitate military deployment from forts to ports.</p> <p>Initiate research, technology development and deployment activities in support of a more secure highway system.</p>	<p>Facilitate four AASHTO Regional Physical Infrastructure Vulnerability Assessment Workshops; develop strategies for increasing bridge and tunnel security by 2nd quarter of FY 2003; and schedule three training workshops for FHWA and other government engineers in structural response to malevolent actions.</p> <p>Evaluate the FHWA Continuity of Operations Plan (COOP) through a table-top exercise, and improvements implemented – three (3) training sessions will be held for Division office emergency coordinators; and facilitate 10 additional emergency preparedness/response workshops.</p> <p>Facilitate additional military/civilian table- top exercises at major military installations in 11 States to improve military deployment during a national security emergency.</p> <p>Identify a long-</p>

Strategic Goal	National Strategic Objective	Strategic Outcome	National Performance Objective (VF- denotes Vital Few Objective)	National Performance Measure
				range security research program and initiate several security research studies during FY 2003.
Organizational Excellence	Improve our ability to oversee transportation projects and efficiently manage Federal-aid Highway funds.	[Note: An outcome for project stewardship should be identified.]	Provide stewardship of funds and coordinate efforts to maintain good accountability for expenditures.	<ul style="list-style-type: none"> <li>- Increase the percent of obligations expended on active projects compared to total obligations, from a FY 2001 baseline of 71 to 73 percent.</li> <li>- Reduce the annual amount of Federal Aid funds obligated, but not expended, by 10 percent from the previous year.</li> </ul>
Organizational Excellence	Streamline the environmental review and permitting processes for projects.	<p>To improve the timeliness of the both the Federal Aid and FLHP environmental process:</p> <ul style="list-style-type: none"> <li>- Establish time frames and meet the schedules for 90 percent of projects with an EA or EIS by FY 2007;</li> <li>- Decrease the median time it takes to complete an EIS from 54 months to 36 months by FY 2007; and</li> <li>Decrease the median time to complete an EA from approximately 18 months to 12 months by FY 2007.</li> </ul>	VF- Establish timeframes for all current EIS and EA projects. Continue to reduce the environmental processing time for EIS and EA projects.	<ul style="list-style-type: none"> <li>- Establish a baseline number of EIS and EA projects with a negotiated timeframe.</li> <li>- Reduce the median time to complete an EIS for all projects to 51 months.</li> <li>- Reduce the median time to complete an EA for all projects to 17 months.</li> </ul>

Strategic Goal	National Strategic Objective	Strategic Outcome	National Performance Objective (VF- denotes Vital Few Objective)	National Performance Measure
Organizational Excellence	Increase employee satisfaction and effectiveness.	<b>The FY 2003 target is 80 percent of all Agency employees that are satisfied in their jobs.</b>	Develop and Implement the FHWA Human Capital Plan, and the Restructuring Assessment recommendations for Professional Development and Training.	<ul style="list-style-type: none"> <li>- Maintain percent of payroll for training and development at or above 3 percent of total salaries and compensation.</li> <li>- Increase the percent of hiring selections made within 90 days to 55 percent.</li> <li>- Increase the percent of employees with professional registration or certification in technical areas; percent of employees with professional association membership; and hours of training per employee in a technical discipline. Baselines for all three measures will be developed in FY 2003.</li> </ul>
Organizational Excellence	Increase partner and customer satisfaction.	<b>Improvement in overall customer satisfaction, based on aggregated results of foundation surveys.</b>	Establish, implement, and monitor a system of customer surveys, and Agency response to the feedback, to improve customer service and satisfaction.	Increase customer satisfaction, measured as the percent change from a baseline.

Strategic Goal	National Strategic Objective	Strategic Outcome	National Performance Objective (VF- denotes Vital Few Objective)	National Performance Measure
		Increased effectiveness of FHWA's research, technology, and innovation development, including increased involvement of external stakeholders.	<b>Lead and coordinate efforts to effectively perform the role of Innovator for a Better Future, and increase the effectiveness of all FHWA units, as well as our partners and stakeholders, in determining research priorities and deploying technologies and innovation.</b>	Develop and implement a FHWA Corporate Plan for Research, Technology, and Innovation Deployment. Establish performance measures and targets for assessing research program results, in terms of the deployment of technology and innovation that contributes to achieving strategic goals and objectives.

**Attachment B. Comparison of FY'02 National Performance Goals and FY'03 National Strategic and Performance Objectives.**

<u>Strategic Goal</u>	<u>FY02 National Performance Goal</u>	<u>FY03 National Strategic Objective/Outcome</u>	<u>FY03 National Performance Objective</u>
Safety	Reduce the rate and number of highway-related fatalities and injuries.	Reduce the number of highway-related crashes, and the resulting fatalities and injuries associated with a crash. The target is 1.4 per hundred million VMT in FY 2003. The number of highway related injuries, actual and adjusted per 100 million vehicle miles traveled. The target is 107 per hundred million VMT in FY 2003.	Reduce fatalities involving roadway departure (run-off-the-road and head-on) crashes by 10 % by FY 2007. Reduce intersection fatalities by 10% by FY 2007. Reduce pedestrian fatalities by 10% by FY 2007. Support National Strategies with multiple objectives, including an increase in seat belt use.
Mobility and Productivity	Slow the projected growth of congested travel.  Increase system reliability.	Enhance the operation and efficiency of the existing highway system and intermodal connectors. The FY 2003 target is to slow the growth of congested travel by 0.2% to 34% from a projected rate of 34.2%.	Mitigate overall impacts of congestion through effective local partnerships. <b>Reduce work zone delay by ensuring that all States, the District of Columbia, Puerto Rico, and Federal Lands offices are engaged in aggressively anticipating and mitigating congestion caused by highway work zones.</b> Reduce traffic incident delay by ensuring that all States, the District of Columbia, Puerto Rico, and Federal Lands offices are engaged in aggressively anticipating and mitigating congestion caused by traffic incidents. Work with the States to further deploy Intelligent Transportation Systems (ITS) and sustain improvements to operating practices.

<u>Strategic Goal</u>	<u>FY02 National Performance Goal</u>	<u>FY03 National Strategic Objective/Outcome</u>	<u>FY03 National Performance Objective</u>
Mobility and Productivity	<p>- In FY02, increase overall user satisfaction with the Nation's highway systems to 70 percent. Increase user satisfaction with the operation of the existing system (Included under the Mobility Goal).</p> <p>-Reduce the cost of highway freight per mile.            -Reduce the hours of delay per 1000 commercial vehicles processed at NHS border crossings            -Reduce travel time on key freight corridors            -Improve the efficiency of highway infrastructure investments by developing and promoting the use of engineering/economic analysis tools for decisionmaking (Included under the Productivity Goal).</p>		Not included in FY03 Plan.
Mobility and Productivity	<p>Improve the condition of the National Highway System, NHS, to increase the percent of vehicle miles traveled on NHS pavements with acceptable ride quality to 92 percent.</p> <p>Improve the condition of NHS and non-NHS bridges taking into account deck area and ADT.</p>	<p>Preserve, improve and expand the Nation's highway transportation system. The FY 2003 target is to increase the percent of vehicle miles traveled on NHS pavements with acceptable ride quality to 92.5%, and the percent of deck area on bridges rated deficient for all Average Daily Travel (ADT) to 27.5% and 29.7% on NHS and non-NHS bridges, respectively.</p>	<p>Work with the States to improve and expand the NHS to increase system efficiency and return on investment.</p>
Environment	<p>On a program-wide basis, replace at least an average of 1.5 acres of wetlands for every 1 acre directly affected by Federal-aid highway projects where impacts are unavoidable</p>	<p><b>Demonstrate environmental stewardship by protecting and enhancing ecosystems. To increase ecosystem and habitat conservation:</b></p> <ul style="list-style-type: none"> <li>- Implement a minimum of 30 exemplary ecosystem initiatives in at least 20 States or Federal Lands Divisions by FY 2007; and</li> <li>- Replace at least a program-wide average of 1.5 acres of wetlands per acre directly affected by Federal Aid highway projects.</li> </ul>	<p>Enhance knowledge of FHWA staff in areas of ecosystem and habitat conservation. Showcase existing exemplary initiatives.</p>

<u>Strategic Goal</u>	<u>FY02 National Performance Goal</u>	<u>FY03 National Strategic Objective/Outcome</u>	<u>FY03 National Performance Objective</u>
Environment		<p>Improve the environmental quality of transportation decisionmaking. By FY 2007, all 50 States, the District of Columbia, Puerto Rico, and the Federal Lands Highway Divisions will use:</p> <ul style="list-style-type: none"> <li>- Integrated approaches to multi-modal planning, the environmental process and project development at a systems level; and/or</li> <li>Context sensitive solutions (CSS) at a project level.</li> </ul>	Increase the number of States implementing Integrated Approaches and Context Sensitive Solutions (CSS) by providing training and guidance.
Environment	Increase public satisfaction with highway systems and highway projects as a beneficial part of their community by promoting responsive and well-targeted transportation programs		Not included in FY03 Plan.
Environment	Continue to work toward the reduction of on-road mobile source emissions to reach a target of 61.1 million tons. Increase the percentage of nonattainment and maintenance areas meeting their mobile-source emissions budget goals.	<p>Improve the quality of the human and natural environment by reducing transportation-related pollution.</p> <ul style="list-style-type: none"> <li>- Increase the percent of nonattainment and maintenance areas meeting the on-road mobile source emissions budget goals for ozone, carbon monoxide, and particulate matter to 98.0, 96.0, and 86.0 percent, respectively.</li> <li>- Reduce on-road mobile source emissions to 61.8 million tons.</li> </ul>	Achieve reductions in on-road mobile source emissions.
National Security	Improve access between key military installations and the air or seaport point of embarkation to support DOD deployment requirements.	Reduce the vulnerability of critical U.S. transportation infrastructure and improve operational response capabilities.	<p>Identify critical highway infrastructure, evaluate its risk and vulnerability, and develop measures to reduce vulnerability;</p> <p>Ensure preparedness for response to, and recovery from, attacks on highway infrastructure;</p> <p>Facilitate military deployment from forts to ports; and</p> <p>Initiate research, technology development and deployment activities in support of a more secure highway system.</p>
Organizational Excellence	Improve delivery of the Federal-aid and Federal Lands Highway Programs	Improve our ability to oversee transportation projects and efficiently manage Federal-aid Highway funds.	Provide stewardship of funds and coordinate efforts to maintain good accountability for expenditures.

<u>Strategic Goal</u>	<u>FY02 National Performance Goal</u>	<u>FY03 National Strategic Objective/Outcome</u>	<u>FY03 National Performance Objective</u>
Organizational Excellence		<p>Streamline the environmental review and permitting processes for projects. To improve the timeliness of the both the Federal Aid and FLHP environmental process: Establish time frames and meet the schedules for 90% of projects with an EA or EIS by FY 2007;</p> <p>Decrease the median time it takes to complete an EIS from 54 months to 36 months by FY 2007; and Decrease the median time to complete an EA from approximately 18 months to 12 months by FY 2007.</p>	Establish time frames for all current EIS and EA projects. Continue to reduce the environmental processing time for EIS and EA projects.
Organizational Excellence	<p>Increase employee job satisfaction</p> <p>Increase job-related training and professional development opportunities available to employees</p> <p>Increase the timeliness of the recruitment and selection process</p>	Increase employee satisfaction and effectiveness. The FY 2003 target is 80 percent of all Agency employees that are satisfied in their jobs.	Develop and implement the FHWA Human Capital Plan, and the restructuring assessment recommendations for professional development and training.
Organizational Excellence	Add value in the delivery of our products and services	<p><b>Increase partner and customer satisfaction.</b></p> <p>Improvement in overall customer satisfaction, based on aggregated results of foundation surveys.</p> <p>Increased effectiveness of FHWA's research, technology, and innovation development, including increased involvement of external stakeholders.</p>	<p>Establish, implement, and monitor a system of customer surveys, and Agency response to the feedback, to improve customer service satisfaction.</p> <p>Lead and coordinate efforts to effectively perform the role of Innovator for a Better Future, and increase the effectiveness of all FHWA units, as well as our partners and stakeholders, in determining research priorities and deploying technologies and innovation.</p>



Attachment C. Verification and Validation of Measures.

SAFETY

Measure: Highway-related fatalities per 100 million vehicle miles traveled (VMT).

Data Source: Fatality data is obtained from the NHTSA's Fatality Analysis Reporting System (FARS), while VMT data is obtained from the FHWA Highway Performance Monitoring System (HPMS).

Scope of Data: The FARS data are a census of fatal traffic crashes within the 50 States, D.C., and Puerto Rico. To be included in FARS, a crash must result in the death of an occupant of a vehicle or a nonmotorist within 30 days of the crash. The FARS data are a count of fatal crashes collected from police crash reports and other sources. The FARS data cover all roadways open to the public, using the National Highway System classification of roads. Pedestrian and bicycle fatalities that occur on public highways, but do not involve a motor vehicle, are not recorded in FARS. The VMT data is derived by FHWA from State-reported estimates of travel based on various levels of sampling, which is dependent on road type.

Measurement Methodology: FARS data are collected in each State, translated into a standard format, and transmitted to the NHTSA. Data are collected from police crash reports, vehicle registration files, driver licensing files, highway agency records, vital statistics, death certificates, coroner and medical examiner reports, hospital medical reports, and emergency medical service reports. The HPMS is an integrated database that relies on the State highway agencies to annually report area wide data, universe data, standard sample data, donut area sample data, and linear reference geographic information system (GIS) data.

Data Issues: The FARS data elements are modified slightly each year to respond to emphasis areas, vehicle fleet changes, and other needs for improvement. The FARS is a census of all highway traffic fatalities, but does not include information on crashes that result in nonfatal injuries or only property damage.

Measure: Highway-related injuries per 100 million vehicle miles traveled.

Data Source: Injured persons data is obtained from the NHTSA's General Estimates System (GES), while the VMT data is obtained from the FHWA Highway Performance Monitoring System (HPMS).

Scope of Data: Injured persons data is derived from a representative sample that produces a national estimate of total nonfatal injury crashes, injured persons, and property damage only crashes. The GES data cover all roadways open to the public, using the National Highway System classification of roads. The VMT data is derived by FHWA from State-reported estimates of travel based on various levels of sampling dependent on road type.

Measurement Methodology: General information about the location of crashes is reported in the GES sample. The HPMS is an integrated database that relies on the State highway agencies to report area wide data, universe data, standard sample data, donut area sample data, and linear reference GIS data. The area-wide data consist of five statewide summaries. The summaries include data on travel and fatal and nonfatal crashes. This summary will be dropped from future HPMS.

Data Issues: The GES sample plan only allows estimates of national totals, not detailed analyses by State. Only general information is collected on the type of crash and highway

system involved. The GES sample is designed to analyze vehicle and occupant injury information, not the roadway elements. By restricting attention to police reported crashes, the GES concentrates on crashes of greatest concern to the highway safety community and the general public.

## MOBILITY AND PRODUCTIVITY

Measure: Percent of travel under congested conditions, percent of additional travel time, and number of hours of driver delay.

Data Source: Travel data obtained from the FHWA HPMS.

Scope of Data: HPMS data elements are reported from approximately 403 urbanized areas within the United States. Data is based upon daily travel on the freeways and on arterial streets.

Measurement Methodology: Methodology used to calculate performance measures was developed by the Texas Transportation Institute and is reported in the annual Mobility Study.

Data Issues: The percent of congested travel measure reflects recurring delay only, i.e., does not include accidents and incidents. Conversely, the percent of additional travel time and hours of driver delay measures include congested traffic volumes, crashes, and vehicle breakdowns.

Measure: Buffer index, or the percent of time that an individual traveler allows to arrive at a location on time, at least 95 percent of the time. (Measure currently under development)

Data Source: ITS data collected from at least 10 metropolitan sites throughout the United States.

Scope of Data: Data are collected primarily from major freeways in 10 metropolitan cities by Transportation Management Centers within the pilot city jurisdictions. The scope of roadways will expand to include both major freeways and side roads and additional cities will be added in FY 2003.

Measurement Methodology: The data are verified by FHWA and independent reviewers.

Data Issues: The sample is of a limited size.

Measure: Number of ITS integrated deployments in metropolitan areas

Data Source: The data are obtained for designated metropolitan areas identified in the Metropolitan ITS Deployment Tracking database.

Scope of Data: This indicator is meant to provide a basic, easy to understand, gauge of ITS integrated deployment. Before the final results are reported, the DOT Joint Program Office reviews the data and methodology, which is also distributed to FHWA staff and survey responders to confirm its accuracy and completeness. Independent experts review procedures for survey construction and data collection prior to each survey. A steering committee of government officials review and approve changes to methodology or indicators prior to their implementation.

**Measurement Methodology:** The level of integrated deployment is based on two factors: (1) How much ITS infrastructure is in place at each metropolitan area; and, (2) How much integration is going on at each area? The level of ITS component deployment in a metropolitan area is expressed as a ratio of actual deployment divided by the total possible, i.e., the number of freeway miles under electronic surveillance divided by the total freeway mileage. Components are considered deployed once the level of deployment attains a specified threshold level based on key indicators. Integration is defined as the sharing of data between agencies associated with the different jurisdictions responsible for ITS infrastructure. Jurisdictions include State DOTs responsible for management of freeways and incident management programs, city government agencies that manage most of the traffic signal systems, and public transit authorities that manage most bus and rail services. The level of integration is determined by the extent that these three organizations employ technology to share and use transportation data to increase system capacity. Metropolitan areas are rated as low, medium, or high separately for deployment and integration and then assigned an overall combined rating. An overall score of medium or high meets the goal for a metropolitan area.

**Data Issues:** This indicator does not reflect the full breadth of deployment or integration activities. For example, while it establishes the existence of basic integration of essential components, it does not confirm that all possible or desirable integration links exist in a metropolitan area. Similarly, the attainment of a deployment threshold only confirms a substantial commitment to the use of ITS technology but does not indicate that all needed deployment is complete.

**Measure:** Percent of vehicle miles traveled on the National Highway System (NHS) that meet pavement performance standards for acceptable ride quality (based on an International Roughness Index measure of less than or equal to 170 in/mi.)

**Data Source:** Data are obtained from the FHWA HPMS.

**Scope of Data:** Data include vehicle miles traveled on the HPMS reported NHS sections and pavement ride quality data reported using the International Roughness Index (IRI). IRI is a quantitative measure of the accumulated response of a quarter-car vehicle suspension experienced while traveling over a pavement.

**Measurement Methodology:** Data are collected by the States and reported to FHWA. They are obtained from measurement devices that meet industry standards. Recommended measurement procedures are included in the HPMS Field Manual.

**Data Issues:** IRI data for the approved NHS was reported beginning in 1995. Past data (1993 and 1994) were collected on the proposed, rather than the approved NHS. No NHS IRI data are available prior to 1993. The HPMS requires States to report IRI data every 2 years. In the HPMS Field Manual, FHWA refers to AASHTO Provisional Standards for measurement of pavement profile as the preferred method for equipment and data collection.

**Measure:** Percent of NHS and Non-NHS bridge deck area classified as deficient (e.g., structurally deficient or functionally obsolete) for all ADT.

**Data Source:** Data are obtained from the FHWA National Bridge Inventory System (NBIS).

**Scope of Data:** The FHWA requires the inspection of all bridges located on public roads and the submission of the collected bridge inventory and inspection data for inclusion in the

NBIS. Data for 590,066 highway bridges are maintained by the FHWA in the NBIS. The information in the NBIS contains 95 data items for each of the bridges as required by the *Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges*. Using the data provided, the FHWA monitors bridge condition, in order to identify bridges that are either functionally obsolete or structurally deficient.

Measurement Methodology: Bridge information is collected by the State DOTs and other bridge owners and is provided to the FHWA at least annually. As part of the FHWA's monitoring responsibilities in the management of the NBIS and Highway Bridge Replacement and Rehabilitation Program (HBRRP), the accuracy and reliability of the submitted NBI information is constantly evaluated through data checks and field reviews by FHWA personnel.

Data Issues: The NBIS is a comprehensive database of bridge information.

## ENVIRONMENT

Measure: Ratio of wetland replacement resulting from Federal-aid Highway projects.

Data Source: State DOT wetland mitigation databases.

Scope of Data: Annual data is available for FY 1996 through FY 2001. The summary data reflects the total acres of wetlands impacted versus total acres of mitigation that are provided.

Measurement Methodology: Data are compiled by the DOTs using local sources. A FHWA-sponsored national wetlands management database is under development.

Data Issues: The uniformity of the data is not guaranteed, since it is subject to interpretation by the state DOT. In particular, there is no uniform definition of what should be reported as acres mitigated. The FHWA has provided guidance to the States as to which mitigation activities are to be reported.

Measure: On-road mobile source emissions in short tons.

Data Source: Data are obtained from the EPA National Air Quality and Emissions Trends Report and the FHWA HPMS.

Scope of Data: Total mobile source emissions are the sum of on-road mobile source emissions of carbon monoxide, hydrocarbons, nitrogen oxides, and particulate matter less than 10 microns in diameter.

Measurement Methodology: The annual emissions level is the estimated total annual tonnage of on-road mobile source emissions of carbon monoxide, hydrocarbons, nitrogen oxides, and PM-10 as reported in the latest EPA Trends Report.

Data Issues: The Trends Report is available in October of each year. There is a 1-year time lag for the emissions data. For example, the March 2000 report contains 1998 data. The EPA's use of a mathematical model raises questions about the validity of the model. The annual variation in the estimates, as measured by the regression standard error, is 2.57. The HPMS data used as input to the model are subject to sampling and non-sampling errors.

Measure: Percent of nonattainment and maintenance areas meeting their mobile source emissions budget goals.

Data Source: The data are obtained from the FHWA division offices.

Scope of Data: Data are collected each year on July 1 in order to generate the trend data.

Measurement Methodology: Each FHWA office is requested to report the number of nonattainment and maintenance areas that meet their mobile source emissions budget by pollutant.

Data Issues: The makeup and severity of nonattainment areas will vary year to year. The data collected reflect only a status of the nonattainment and maintenance area. When an area does not meet the air quality standard for one of the criteria pollutants, it may be subject to the formal rulemaking process that designates it as a nonattainment area.

Measure: The average number and duration of area transportation conformity lapses.

Data Source: The data are obtained from the FHWA division offices.

Scope of Data: The FHWA and the FTA jointly make conformity determinations within air quality nonattainment and maintenance areas to ensure that Federal actions conform to the purpose of State Implementation Plans (SIP). The transportation conformity process is intended to ensure that transportation plans, programs, and projects will not create new violations of the National Ambient Air Quality Standards (NAAQS), increase the frequency or severity of existing NAAQS violations, or delay the attainment of the NAAQS in designated nonattainment (or maintenance) areas.

Measurement Methodology: The data is collected on a monthly basis. The average number of lapses monthly is calculated as a 12-month moving average.

Data Issues: If conformity cannot be determined within certain time frames after amending the SIP, or if 3 years has passed since the last conformity determination, a conformity lapse is deemed to exist. New non-exempt projects, both transit and highway, may not advance until a new determination for the plan and TIP is made.

## NATIONAL SECURITY

Performance measures are currently under development.

## ORGANIZATIONAL EXCELLENCE

Measure: The average number of months from Notice of Intent to approval of the Record of Decision for Environmental Impact Statements.

Data Source: Data is collected at Division level and aggregated at the national level by our Environmental office.

Scope of Data: Environmental Impact Statement (EIS) – A written assessment of the anticipated significant effects, both positive and negative, which a prospective Federal agency decision may have upon the quality of the human and natural environment.

Notice of Intent (NOI) – An official announcement in the Federal Register advising interested parties that an environmental impact statement will be prepared and circulated for a given agency action.

Record of Decision (ROD) – A final Federal decision-making document, relative to EISs, that presents the basis for selecting and approving a specific course of action, including identification of the alternatives considered, measures to minimize harm and an itemized list of commitments and mitigation measures.

Measurement Methodology: Information on development time from the NOI to: a) Draft EIS; b) Final EIS; c) ROD; d) EIS with 4(f); and e) EIS without 4(f) will be tracked.

Data Issues: This is a new measure. Data collection procedures are still being refined.

Measure: The average number of months from the start of the Environmental Assessment process to FHWA's issuance of the Finding of No Significant Impact (FONSI).

Data Source: Data is collected at Division level and aggregated at the national level by our Environmental office.

Scope of Data: Environmental Assessment (EA) – An exploratory report which is prepared when the potential for significant impacts, relative to Federal actions, is unclear.

Finding of No Significant Impact – An administrative determination by a Federal agency detailing that the finding of no significant impact relative to the Federal agency's action.

Measurement Methodology: Information on development time from the start of the EA to FHWA's issuance of the FONSI.

Data Issues: States vary in their definition of the start of the EA process. It can be: a) the date the applicant notified FHWA and other agencies that they have started the EA process; b) the date the authorization was issued if Federal funds were requested for the preparation of the EA; c) the date of the notice to proceed; or d) the date a project number was established. As long as a State remains consistent in its definition of the start time, FHWA can collect meaningful data.

Measure: Customer and partner rating of the timeliness of our decisions, usefulness of our information, and competency of our personnel.

Data Source: Customer and partner feedback thru American Customer Satisfaction Index (ACSI) survey instrument.

Scope of data: Timeliness of our decisions—The timeliness of receiving decisions from FHWA for program level activities such as issuance of regulations, reviews and authorizations for the State Transportation Improvement Program and safety plans, and for project delivery activities for individual highway improvements (as defined in 2001 survey).

Usefulness of our information—The usefulness of our “technical assistance” information in terms of being current, helpful, and relevant (as defined in 2001 survey).

Competency of our personnel—In terms of being knowledgeable and experienced, how capable are FHWA personnel in providing direct technical assistance (as defined in 2001 survey).

Measurement methodology: ACSI is a 0-to-100 scale, and is used by the private and public sectors to rate how customers perceive companies and organizations.

Data issues: Since this is a survey of perceptions, ratings are subjective.

Measure: Percent employee job satisfaction (percent positive responses).

Data Source: Employee feedback using the all employee survey instrument.

Scope of Data: Job satisfaction was determined to be the overarching measure for this category. Percent positive responses means either strongly agree or somewhat agree with the statement, I am satisfied with my job.

Measurement Methodology: The all-employee Survey administered in FY 2001 is a biennial survey. An Interim Survey comprised of ten core item statements was administered in FY 2000. The current strategy is to administer the full survey biennially and the interim survey in between years.

Data Issues: Since this is a survey of perceptions, ratings are subjective.

Measure: Percent of payroll for training and development.

Data Source: Departmental Accounting and Financial Information System.

Scope of Data: Percent of Payroll (salary plus benefits)—Percentages represent total investment in training including tuition, contract cost, participants travel and per diem and instructor travel for all training and career development courses and programs for FHWA employees.

Measurement Methodology: Amount of dollars spent on training and development divided by salary and benefits.

Measure: Percent of the selections are made within 90 days of the position becoming vacant.

Data Source: Human Resource Staffing Database.

Scope of Data: Start of 90 Days—is defined as the effective date on the departing employee’s SF-50 personnel action.

End of 90 Days—is defined as the date on the selection certificate once a selection is made.

Exceptions to the 90-Day Selection—Positions in several programs will be excluded from the 90-day requirement due to their unique processes. These positions include the SES, the Professional Development Program, and vacancies that fall under the Technical Career Track program. In addition, on a case-by-case basis, special consideration will be given when positions have unusual requirements or results, such as recruitment advertisements in professional journals.

Measurement Methodology: The date on the selection certificate minus the effective date on the departing employee’s SF-50 personnel action.

Measure: Percent of obligations expended on open (active) projects
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Data Source: Fiscal Management Information System (FMIS).

Scope of Data: The percentage is based on the total amount obligated on all Federal-aid and Federal Lands Highway projects (regardless of year authorized) that have not been final vouchered (FMIS report M79) as of September 30 each year.

Measurement Methodology: The amount described above is compared to the unpaid obligations (FMIS report M80) as of the same day. This provides the amount expended on all open (active) projects.

Data Issues: This measure does not reflect activity for a single fiscal year.



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