

FHWA Strategic Plan

 U.S. Department of Transportation
Federal Highway Administration



For more information or additional copies
of the Strategic Plan, please contact:

Office of Transportation Policy Studies

Federal Highway Administration

1200 New Jersey Avenue, S.E.

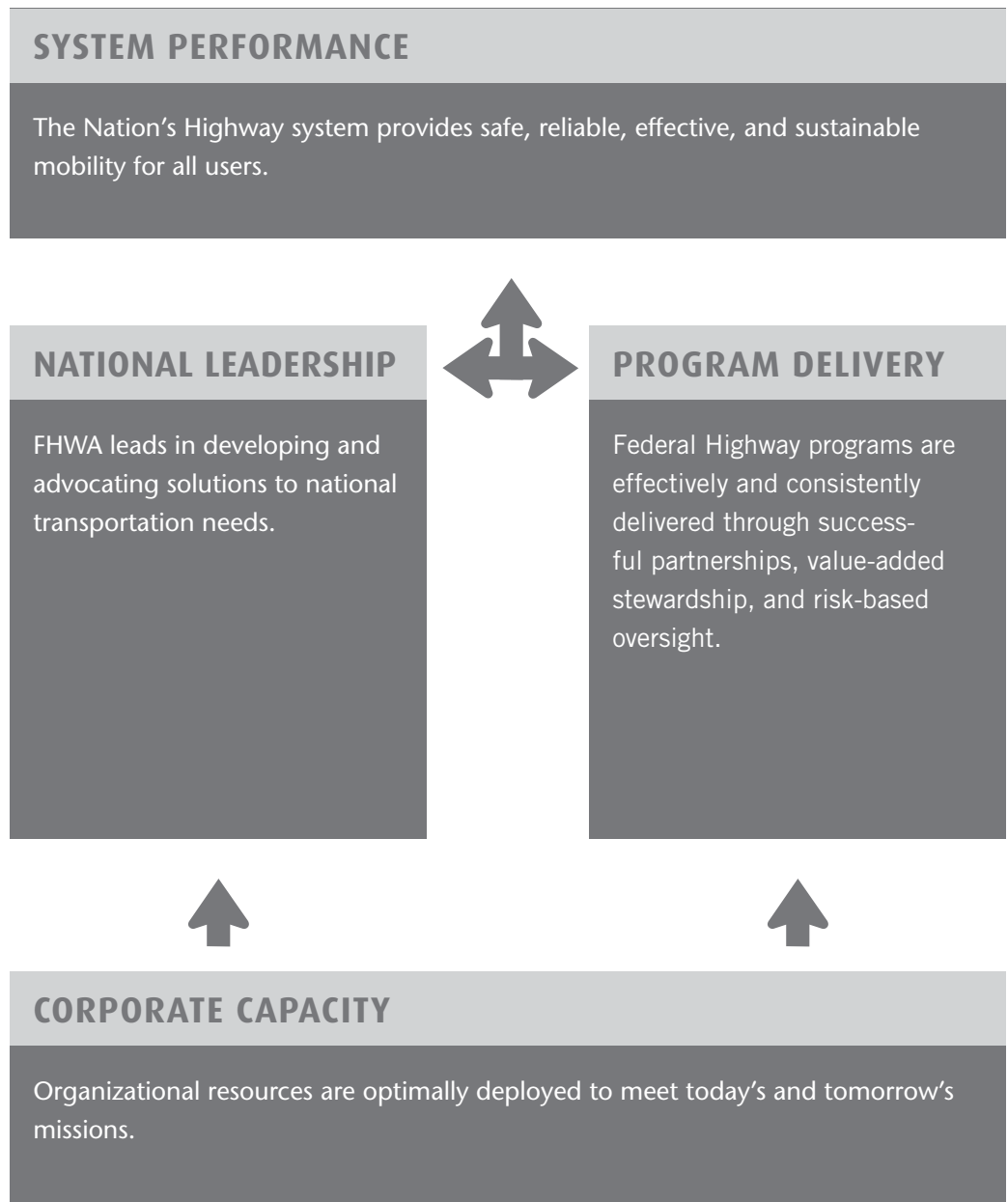
Washington, DC 20590

Telephone: (202) 366-9233

Contents

Introduction	1
FHWA's Future Operating Environment	2
Key Influencing Trends	2
Highway Transportation Trends	3
Highway Industry Trends	4
Strategic Issues	6
Vision, Mission and Core Values	8
Goals	9
National Leadership	9
Program Delivery	10
System Performance	11
Corporate Capacity	12
Measurement Plan	14

The agency's strategic goals are stated below. The associated long-term objectives, followed by the strategies to achieve each objective, are described on pages 9–13.



Introduction

Our Nation's transportation community is entering an unprecedented era of change. The Federal Highway Administration (FHWA) is, and will continue to be, a leader in shaping the future of highway transportation in our country. As we look to the future, the FHWA will approach new opportunities with the same optimism and confidence that our organization demonstrated with the successful completion of the Eisenhower Interstate System.

In this dynamic time, we see the importance of developing a clear and strategic direction for the Agency. Based on an assessment of the Strengths, Weaknesses, Opportunities, and Threats (SWOT) in our organization's operating environment, the FHWA Leadership Team met in February 2008 to develop a new strategic plan framework. The conversation continued with the extended Leadership Team including all of our senior executives and division administrators at the annual FHWA Spring Business Meeting in April 2008. Our employees were asked to comment on the proposed strategic plan framework and their feedback was considered by Goal Teams, which consisted of FHWA executives and managers.

The resulting *FHWA Strategic Plan* provides a flexible framework with four goals that encompass the various dimensions of our organization's role and responsibilities:

- ➔ **NATIONAL LEADERSHIP**
- ➔ **PROGRAM DELIVERY**
- ➔ **SYSTEM PERFORMANCE**
- ➔ **CORPORATE CAPACITY**

As the core of FHWA's mission is to Improve Mobility on our Nation's Highways, a primary focus of the strategic plan framework is improving highway system performance – particularly its safety, reliability, effectiveness, and sustainability. To meet our legislative responsibilities, FHWA resources will be committed to developing and delivering existing and future Federal Highway Programs through successful partnerships, value-added stewardship, and risk-based oversight. FHWA must become a more central contributor and serve as a thought leader in the ongoing policy discussions that aim to address the future of the national transportation system. Underpinning this effort will be a renewed focus on enhancing organizational capacity, which translates into having a skilled workforce and supporting systems that are optimally positioned and equipped to deliver the FHWA's mission.

The FHWA Strategic Plan will be used to direct the development of the FHWA's annual Strategic Implementation Plan and influence Office-level Unit plans. The transition to the new plan framework begins in FY 2009.

FHWA's Future Operating Environment

A wide array of considerations and assumptions about current and emerging trends are strategically relevant to assessing FHWA's future operating environment over the next decade. During the past year, a comprehensive assessment of these trends was completed. The following is a summary of the findings from this effort.

KEY INFLUENCING TRENDS

- ➔ **Demographic Shifts.** The U.S. population is expected to expand from 301 million today to 363 million by 2030 and 420 million by 2050, with growth concentrated in the South and West. More than 70 percent of population growth, and 80 percent of economic growth, will occur in metropolitan areas. The Nation's mega-regions will be the operative regions when competing in the future global economy. A challenge is to determine how to foster greater efficiencies in these mega-regions by creating a stronger infrastructure and technology backbone in the Nation's surface transportation system.
- ➔ **Globalization of Economies.** The advent of a truly global economy means that goods and services are being shipped over longer distances. This is fueling strong growth in freight movement and increasing the link between transportation and economic competitiveness. Due in part to increased trade between the United States and its North American Free Trade Agreement partners for example, surface transportation use increased dramatically in the past ten years—nearly 90 percent from 1997 to 2007.
- ➔ **Economic Competitiveness and Productivity.** Marginal reductions in transportation costs for goods movement are critical to the economic vitality of our Nation. In addition to direct user benefits, highways must be recognized as an important contributor to industry productivity and competitiveness. Since the inception of the Interstate system, U.S. industries have realized production cost savings averaging 18 cents annually for every dollar invested in the road network.

- ➔ **Role of Trade.** Trade as a percentage of U.S. Gross Domestic Product increased from 13 percent in 1990 to 26 percent in 2000, and is expected to reach 35 percent by 2020. This growth in trade will increase both shipping container volumes as well as truck freight. U.S. container traffic increased from 8 million units in 1980 to 42 million units in 2005, and is expected to hit 110 million units by 2020. The average length of haul for trucks has increased 80 percent from 263 miles in 1970 to 473 miles in 2000.
- ➔ **Future Funding Needs.** The future cost to maintain and improve the Nation's surface transportation systems will exceed current funding at all levels of government. Current federal tax receipts will not be sufficient to sustain funding levels authorized in the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users*. Between 2004 and 2024, the total annual investment needed to maintain the condition of highways and bridges over a 20-year period is estimated to be approximately \$79 billion (in 2004 dollars). Motor fuels taxes currently fund 86 percent of the Federal Highway Trust Fund and likely will remain a critical funding source in the near term, but may become less viable as people and businesses shift to using more efficient and alternative fueled vehicles. Any substantial increases in future funding will likely come from a combination of revenue mechanisms and the use of a mileage-based user fee on miles traveled as a replacement or supplement to motor fuels taxes. The future will also bring greater use of tolling to fund new projects in a variety of ways, including

the application of variable pricing (i.e., congestion pricing). In addition, some States and local governments will likely make greater use of public-private partnerships to finance and operate needed infrastructure.

- ➔ **Public View of Transportation.** The 2005 FHWA *Traveler Opinion and Perception Survey* found that 69 percent of travelers are satisfied with the transportation system, up from 50 percent in 1995. Like other polls, the survey found strong support for future transportation projects. In the 2007 Growth and Transportation Survey sponsored by the National Association of Realtors and Smart Growth America, a large majority emphasized the need to improve public transportation and build pedestrian-friendly communities; and only 21 percent believe that building new roads provide the best solutions. The seemingly contradictory results from these two surveys suggests that the public perception of transportation is likely to be more volatile and driven by events such as rising gasoline prices in coming years, particularly since transportation costs are a major expense in households.
- ➔ **Climate Change.** The transportation sector is the largest end-use producer of carbon dioxide emissions in the United States. Furthermore, carbon dioxide emissions from the transportation sector increased by 25 percent between 1990 and 2006, and will continue to increase, though at a declining rate. There is growing recognition that new solutions to minimize the impacts of climate change will be needed in order to reduce transportation's contribution.

THE CHALLENGE AT ALL LEVELS OF GOVERNMENT IS HOW BEST TO ACCOMMODATE AND FACILITATE FREIGHT GROWTH TO ENSURE THE ONGOING HEALTH OF THE NATIONAL ECONOMY AND U.S. GLOBAL COMPETITIVENESS.

HIGHWAY TRANSPORTATION TRENDS

- ➔ **Highway System Performance.** Total vehicle miles traveled (VMT) on all U.S. public roads, which is a direct measure of demand and use of transportation facilities, increased from about 1.5 trillion miles in 1980 to more than 3 trillion miles in 2006. During that same period, truck travel increased by 105 percent, while passenger car miles increased 95 percent. Based on historical trends, traffic congestion in metropolitan areas will continue to worsen, primarily in expanding metropolitan areas, due to population growth, urbanization, increasing freight traffic, and roadway maintenance activities.

AS THE AVERAGE PRICE OF GASOLINE APPROACHED \$4 PER GALLON NATIONWIDE EARLIER THIS YEAR, THE DOT ANNOUNCED THAT AMERICANS ARE DRIVING LESS. IF THIS TREND CONTINUES, 2008 WILL BE THE SECOND YEAR IN A ROW THAT VMT HAS DECLINED. THE REVERSAL IN RECENT TRAVEL GROWTH TRENDS IS CREATING SHORT TERM HIGHWAY FUNDING ISSUES. TRAVEL GROWTH IS EXPECTED TO RESUME IN THE LONG TERM, BUT HIGHWAY FUNDING CHALLENGES WILL CONTINUE.

- ➔ **Highway and Bridge Conditions.** A comparison between road conditions in 1990 and 2006 indicates that while Interstates and other higher-order systems have improved, conditions on lower-order systems have generally stayed the same or declined, particularly in urban areas. In 2006,



KEVIN STILLMAN/TEXAS DEPARTMENT OF TRANSPORTATION

more than 12 percent of the Nation's bridges were structurally deficient and 15 percent were functionally obsolete. If relatively similar levels of capital investment continue, road conditions will improve by about 5 percent by 2024. At similar levels of investment, there would still be a \$34.5 billion backlog of bridge improvements by 2024.

- ➔ **Traffic Safety.** The Nation continues to suffer tremendous loss of life on our highways in spite of gains in seat belt usage, air bags, and other safety equipment in vehicles, as well as complementary improvements in roadway and roadside design. More than 41,000 people died in 2007 due to traffic related crashes with more than 5,700 of these, or 14 percent, being attributed to cyclists and non-motorist deaths. Young drivers continue to die at higher rates than any other age group, with nearly 30 percent of these deaths being people younger than 25 years old. Our Nation expends \$230 billion per year on crash related costs.

HIGHWAY INDUSTRY TRENDS

- ➔ **Construction Cost Inflation.** Construction costs have escalated greatly in recent years due to the supply and demand of raw materials and shipping. Construction inputs could continue to increase on the order of 6 to 8 percent per year from 2008 to 2012. Much of this inflation is attributed to strong demand due to growth in rapidly developing countries.
- ➔ **Changing Construction Processes and Methodologies.** New construction techniques, such as broader use of prefabricated bridges, are creating the need for changes in project development processes. These new techniques offer opportunities for minimizing traffic disruption and congestion, improving work zone safety, and lowering costs.
- ➔ **Project Cost and Complexity.** Transportation projects continue to grow in complexity, which is requiring State transportation agencies to perform a broader range of activities than they have in the past. States will likely continue to develop new in-house capabilities, outsource more to new partners, look at new organizational structures and project management approaches, and explore options for mitigating and sharing project risk.
- ➔ **New Contracting Approaches and Outsourcing.** The highway industry has begun to explore a wide range of alternative procurement approaches, including quality-based awards, contract incentives, design-build, best value awards, and unique forms of public-private partnerships such as design-build-manage schemes. In addition, agencies are using the private sector to perform a growing number of activities that range from non-core functions to system-wide maintenance and turnkey management of large-scale construction programs.
- ➔ **Program Delivery.** Priority-setting practices in State transportation agencies continue to evolve and are becoming more transparent, participatory, interrelated, and complex. Performance measures are being widely used to provide greater accountability for how public funds are being spent across an ever growing number of programs, activities, and disciplines.
- ➔ **Workforce Attrition and Employee Shortages.** Transportation agencies at all levels are continuing to lose much of their senior and experienced personnel due to retirements and job changes. Along with these retirements comes a loss in institutional knowledge, expertise, and experience. Over the next ten years, 40 to 50 percent of the transportation workforce will retire. State agencies are already experiencing staffing shortages in both technical and non-technical areas.

NEW CONSTRUCTION TECHNIQUES ARE CREATING THE NEED FOR CHANGES IN PROJECT DEVELOPMENT PROCESSES AND OFFER OPPORTUNITIES FOR MINIMIZING TRAFFIC DISRUPTION AND CONGESTION, IMPROVING WORK ZONE SAFETY, AND LOWERING UP FRONT AND LIFE-CYCLE COSTS.

Strategic Issues

The FHWA Leadership Team identified four primary issues that were deemed as critical challenges in the future.

These deliberations, which are summarized below, had an important influence over the development of the new strategic plan framework.

Leadership — The FHWA is in a unique position to frame the discussion and define the debate on major issues that impact the transportation community nationwide. FHWA can be an agent of change by proactively identifying emerging transportation needs and issues, leading the way in developing and implementing sound national transportation policy, and advancing and promoting the use of innovative approaches to solve those problems that impact the country's mobility. This approach includes collecting meaningful data, undertaking sound analysis, developing strategic approaches with our transportation partners, and working with decision-makers to implement those approaches. National leadership includes guiding and sustaining an ethical agency focused on innovation, customer service, and business results.

Program Delivery Role — FHWA strives to improve our Nation's transportation system by continuously improving the delivery of Federal Highway Programs. In today's business environment, FHWA and our transportation partners are increasingly challenged to deliver transportation projects faster and more efficiently to meet ever increasing transportation needs. FHWA must improve the effectiveness of the delivery of the Federal Highway Programs through risk-based oversight and value-added stewardship. The foundation of this approach is successful partnerships, innovative program delivery, risk management, and performance measurement. Federal Highway Programs encompass all FHWA funded programs, including the Federal-aid and Federal Lands programs.



U.S. DEPARTMENT OF TRANSPORTATION

System Performance — FHWA is committed to improving the performance of the highway system – as part of a fully integrated, multimodal transportation system – to levels needed to help achieve national economic, security, energy, and other goals. This commitment will require us to invest more in collection, analysis, and evaluation of performance information, as well as better understand the link between highway system performance and the achievement of national goals so that appropriate targets can be set. We will also need to define and work with our partners to implement the strategies necessary to achieve national performance objectives. The primary emphasis in this goal area will be on the national priorities including reducing traffic congestion on the higher order elements of the highway system such as the National Highway System (NHS), Strategic Highway Network, and other major arterials and intermodal connectors.

Corporate Capacity — FHWA will emphasize the importance of effectively and efficiently using all resources available to meet current and future missions. The goal emphasizes strengthening our workforce, financial systems, and environmentally friendly business systems and practices. These resources serve as the agency's foundation and provide the support needed to achieve success.

Vision, Mission & Core Values

FHWA VISION

Our agency and our transportation system are the best in the world.

FHWA MISSION

To improve mobility on our Nation's highways through national leadership, innovation, and program delivery.

These are our **core values** that help us define our purpose and our mission.

PUBLIC SERVICE

We are committed to the pursuit of professional excellence motivated by serving the public interest and providing high quality products and timely services.

INTEGRITY

Ethics, fairness, and honesty define the way we do our work and conduct ourselves. We have the courage to be both innovative and make tough decisions.

RESPECT

We value individual diversity and the unique strengths, skills, expertise, and background of our employees. We treat others in a polite and courteous manner.

FAMILY

We support, care about, listen to, and respond to employees and their family needs.

COLLABORATION

We maximize our collective talents through teamwork and partnerships based on mutual trust, respect, support, cooperation, and communication.

PERSONAL DEVELOPMENT

Through a wide variety of learning opportunities, we nurture the development and use of leadership, technical, and professional skills in all of our employees.

Goals

The agency's strategic goals and the associated long-term objectives, followed by the strategies to achieve each objective, are described below:

NATIONAL LEADERSHIP

FHWA leads in developing and advocating solutions to national transportation needs.

Objective 1 – Advance Innovation: FHWA is recognized as a leader in the development and promotion of innovative solutions that address current and emerging transportation issues.

1.1 Systematically identify emerging issues and needs that could impact transportation.

1.2 Identify, develop, promote, and rapidly implement new and proven technologies and innovative solutions to improve system performance.

THERE IS AN OPPORTUNITY FOR THE FHWA TO PROVIDE GREATER STRATEGIC LEADERSHIP FOR THE HIGHWAY COMMUNITY.

Objective 2 – Policy Leadership: Develop and promote effective transportation policy that supports national priorities.

2.1 Provide leadership in the collaborative development and implementation of national transportation legislation, regulations, and policies.

2.2 Implement national policies, regulations, and guidance through consistent interpretation and application.

2.3 Lead collaborative discussions and actions on emerging issues for the development of national policy and program direction.



CHEYENNE METROPOLITAN PLANNING ORGANIZATION

PROGRAM DELIVERY

Federal Highway Programs are effectively and consistently delivered through successful partnerships, value-added stewardship, and risk-based oversight.

Objective 1 – Program Integrity: Continually improve program integrity through risk-based oversight.

- 1.1** Provide consistent interpretation and application of program requirements and regulations.
- 1.2** Ensure financial integrity through effective oversight and value-added services to our transportation partners.
- 1.3** Improve our transportation partners' awareness and ability to develop and manage fiscally constrained programs and plans.
- 1.4** Advance risk-based oversight, including programmatic approaches, to ensure accountability of the Federal Highway Programs.
- 1.5** Maximize the quality of documents, plans, projects, and programs and the value of every dollar invested.

Objective 2 – Program & Project Decision Making: Improve FHWA's ability to make operational and strategic decisions to maximize the effectiveness and efficiency of our programs.

- 2.1** Improve data sharing and decision linkages between program areas to create consistency and continuity of program initiatives and project actions.
- 2.2** Increase the use of decision support techniques and tools such as management systems, expert systems, and asset management.
- 2.3** Increase public involvement and stakeholder participation in all programs and project activities.
- 2.4** Improve alignment between national policy initiatives and projects being developed.

Objective 3 – Program Management: Continually improve the ability of FHWA and our partners to efficiently manage Federal Highway Programs through innovation, streamlining, and value-added stewardship.

- 3.1** Use incentives and resources to promote innovation and the adoption of innovative program management techniques to enhance program effectiveness.
- 3.2** Streamline project delivery at the various stages (i.e., planning, environment, design and construction) to maximize the return of Federal, State, and local investments and maintain our Nation's competitiveness in the global economy.

3.3 Implement a consistent level of effort approach for program management to advance consistency and improve stewardship.

3.4 Promote the use of innovative project delivery and use value-added stewardship and risk management to ensure effective program management.

3.5 Implement and refine the strategies, tools, and training designed to improve the effectiveness of our partners' program delivery efforts.

3.6 Create a business environment that endorses the promotion and adoption of new products and innovative technologies.

3.7 Develop and continually improve FHWA's ability to deliver our programs in a way that reduces impacts on the environment and maximizes opportunities for enhancement.

SYSTEM PERFORMANCE

The Nation's highway system provides safe, reliable, effective, and sustainable mobility for all users.

Objective 1 – Performance Indicators:
Develop and use a nationally recognized, credible, balanced, and readily digestible suite of national system performance indicators, focusing on the NHS, Strategic Highway Network, and other major arterials and intermodal connectors.

1.1 Develop a common, accepted set of national performance measures.



VIRGINIA DEPARTMENT OF TRANSPORTATION

1.2 Develop a robust system for collecting, analyzing, and integrating the data necessary to calculate, forecast, and display the selected performance indicators and identify critical performance gaps.

1.3 Develop methods for effectively communicating system performance information to partners, Congress, and the public.

1.4 Build the necessary professional capacity within FHWA, State transportation agencies, and other key partners to develop and effectively use system performance information to make investment decisions and tradeoffs.

1.5 Use system performance information to drive programmatic and legislative linkages between system performance and federal funding.

Objective 2 – Performance Improvements: Make significant improvements to critical aspects of highway system performance (safety, congestion, reliability, infrastructure condition, air quality, user satisfaction, and emergency response).

- 2.1** Implement comprehensive, integrated, and data-driven safety programs and countermeasures at the Federal, State, and local level.
- 2.2** Evaluate causes of congestion and develop deployable tools, options, and solutions that reduce congestion.
- 2.3** Improve professional capacity of FHWA, State transportation agencies, and Metropolitan Planning Organizations on freight movement issues.
- 2.4** Improve highway system reliability through operations, intermodal integration, and increased multi-jurisdictional institutional capacity and cooperation.
- 2.5** Develop a comprehensive process to regularly document the health of pavement and bridge infrastructure on the NHS and identify critical gaps that are jeopardizing the future health of the system and can be addressed by the FHWA.
- 2.6** Coordinate with States to develop and implement plans of action to reduce the number of bridges vulnerable to scour.

2.7 Implement advanced quality assurance tools at the State level and deliver quality assurance training to FHWA field personnel to more effectively manage construction and materials quality assurance programs.

2.8 Minimize the number of areas not meeting State Implementation Plan mobile source emissions budgets.

2.9 Conduct a biennial survey to measure user satisfaction and identify system performance concerns.

2.10 Facilitate communications between State, local, tribal, and regional highway and emergency management officials to ensure that transportation planning and highway design are responsive to national defense and homeland security requirements.

CORPORATE CAPACITY

Organizational resources are optimally deployed to meet today’s and tomorrow’s mission.

Objective 1 – Workforce: A workforce that quickly adjusts to change to achieve current and future Agency goals.

1.1 Hire and retain a diverse, multi-disciplined workforce from a wide range of technical, cultural, and ethnic backgrounds, at all ability levels and at all stages of their careers.

1.2 Expand the use of human resource flexibilities to acquire and retain the best talent and to create an environment for employees to conduct business to the maximum extent possible at any time anywhere.

1.3 Develop and implement a variety of workforce plans, including succession plans, to ensure that the workforce can achieve current, new, and emerging missions.

1.4 Develop and implement comprehensive support systems for employees in a variety of occupational disciplines, to educate, communicate, and provide employees throughout the disciplines with needed skills.

1.5 Proactively ensure that FHWA's diversity goals are met, employment and skills gaps are addressed, and employees are provided equitable access to developmental experiences and learning opportunities.

Objective 2 – Resource Management: All resources are used effectively to meet organizational missions.

2.1 Increase the use of financial reviews of obligations, expenses, State billings, and administrative programs to improve financial management and decision-making.

2.2 Optimize the use of scarce financial and personnel resources through the use of zero-based budgeting and other approaches.

2.3 Use cost-benefit analytical tools to determine optimal resource investment strategies.

Objective 3 – Integrated Systems: A suite of integrated business systems (e.g., financial, human resources, acquisition, information technology, and knowledge inventory) is in place to facilitate effective and timely decision making, create effective business processes, and optimize use of organizational resources.

3.1 Create an FHWA-wide architecture that identifies and links all business systems.

3.2 Design and implement innovative and cutting-edge business support systems.

3.3 Create an effective decision-making structure to support the use of integrated business systems.

3.4 Implement information technology systems that support FHWA staff working from any location at any time.

Objective 4 – Organizational Preparedness: All FHWA offices are prepared to perform mission critical functions and provide essential services during emergencies when normal operations are disrupted.

4.1 Maintain, exercise, and update plans to improve FHWA's capability to comply with Federal emergency preparedness strategies, policies, and plans.

Measurement Plan

The goals, performance objectives, and strategies outlined in this Strategic Plan collectively define the direction that FHWA is taking in the coming decade. The Agency will use the following 8 outcome measures to track and monitor progress in achieving these goals and objectives:

- Annual number of highway deaths
- Travel time reliability on Interstates and in metropolitan areas
- Pavement condition on the National Highway System
- Bridge condition on all public roads
- Median number of months to complete an Environmental Impact Statement (EIS)
- Degree of leveraging of Federal resources
- Use of decision support strategies to make program and investment decisions
- FHWA workforce vitality index

FHWA will report progress annually for these strategic outcomes as an overall benchmark of success in implementing the Strategic Plan. Some performance data are available for a few of these outcome measures including highway deaths, travel time reliability, pavement and bridge condition, and EIS processing time. In the coming year, baselines and targets for all 8 measures will be further defined based on a review of current and proposed methodologies as well as existing and future data sources. Additional national performance measures, which help Agency managers understand the causal relationships between Federal Highway Programs and the desired outcome measures, may be adopted during the annual planning cycle beginning in FY 2010.

