

# Research

## **Context Sensitive Solutions Performance Measures Literature Review**

Report NM05DSG-01

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CONTEXT SENSITIVE SOLUTIONS PERFORMANCE  
MEASURES LITERATURE REVIEW

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## **PREFACE**

The research reported is a review of New Mexico Department of Transportation's (NMDOT) performance measures by examining current context sensitive solutions literature and practices of other state Departments of Transportation.

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## **DISCLAIMER**

This report presents the results of research conducted by the author(s) and does not necessarily reflect the views of the New Mexico Department of Transportation. This report does not constitute a standard or specification.

## **ABSTRACT**

At the November 2005 Context Sensitive Solutions Research Advisory Committee meeting, the recommendation was made to review the New Mexico Department of Transportation context sensitive solutions performance measures. Current literature indicates that state DOTs are placing more focus on utilizing system-wide, multimodal performance measures in addition to project level indicators. Examining other state DOTs' performance measurement frameworks and procedures provide a perspective for context sensitive solutions performance measure practices.

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**TABLE OF CONTENTS**

BACKGROUND..... 1  
APPROACH TO REVIEW..... 2  
OVERVIEW OF PERFORMANCE MEASURES ..... 5  
CONTEXT SENSITIVE SOLUTIONS AND PERFORMANCE MEASURES ..... 8  
RECOMMENDATIONS ..... 16

## LIST OF FIGURES, TABLES AND APPENDICES

### FIGURES

Figure 1; Context Sensitive Solutions Measurement Framework .....	9
---	---

### TABLES

Table 1: State DOTs Examined in Performance Measures Critique .....	4
---	---

Table 2: Context Sensitive Solutions Performance Measures .....	10
---	----

### APPENDICES

Appendix A: Summary of Literature Survey Sources for Selected Focus Areas .....	19
---	----

Appendix B: State Departments of Transportation, Mission, Vision, Values, Principles .....	21
---	----

Appendix C: State Departments of Transportation Performance Measures .....	26
--	----

Appendix D: State DOT Examples: Long Range Planning and Performance Measures .....	43
---	----

Appendix E: State DOT Performance Measures: User Friendly and Easily Accessible .....	49
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Appendix F: State DOT Examples: Brochures .....	66
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## **BACKGROUND**

The New Mexico Department of Transportation (NMDOT) Research Bureau entered into an Action Plan (NM05DSG-01) with the ATR Institute (ATRI) to develop a context sensitive solutions (CSS) guide for NMDOT transportation decision-making processes. These CSS procedures and guidelines are intended to assist NMDOT as it incorporates CSS into current and future transportation projects commencing with the planning process. Secretary Faught signed a *CSS Directive* in 2006 mandating that all NMDOT transportation projects include CSS processes. The Research Advisory Committee (RAC) in its deliberations recommended that a review of context sensitive solution performance measures be added to the Action Plan products.

## **APPROACH TO THE REVIEW**

Information from previous Action Plan products—the *Annotated Bibliography*, *Literature Survey*, and the *Guide to CSS*—were reviewed as the foundation for additional research into state Departments of Transportation (DOT) practices in CSS long-range planning, performance measures, and attainment reporting. State DOT, FHWA, Transportation Research Board (TRB) Web sites and reports were used extensively. In all, information from 33 state DOTs were used of which 46 resources were in planning and 40 in performance measures. A breakdown of the 33 state DOTs used in this review can be found in Appendix A.

Current practice and literature shows that an increasing number of state DOTs are developing a systems approach to performance measures. Most often, a DOT's mission, vision, values, and/or guiding principles is the foundation for its long-range plan. The DOT's long-range plan goals then cascade into the DOT's strategic plan or business plans. At each level, there is uniformity as well as performance measures.

Some state DOTs have attainment reports which are used to inform decision-makers, the public, stakeholders, and staff of progress being made in achieving goals. Some innovative approaches to performance reporting include: dashboards, watch lists, Web sites, and report cards. Attainment reporting in state DOTs varied from quarterly, bi-annually, to annually. Many state DOTs still use a silo approach to transportation which focuses on individual modes while others are working towards performance measures for multimodal transportation that views transportation in a systematic manner.

State DOTs that were used in this review were randomly selected primarily related to the ability to locate long-range plans and performance measures on state DOT Web sites and/or have been identified in the literature as exhibiting best practices in specified areas. Four of the states

(Florida, Maryland, Minnesota, and Washington State) were part of the initial FHWA CSS demonstration states. Each of those DOTs have integrated CSS principles into their planning and project development activities.

More detailed information on performance measures was gathered from fourteen state DOTs (Table 1). Appendix C contains individual state DOTs Mission, Vision, Values, and/or Management Guiding Principles/Goals. This Appendix provides philosophical underpinnings and frameworks for individual state DOT's long-range plans and strategic directions. Selected state DOT performance measures are listed in Appendix D. Most DOTs that were studied do not have performance measures integrated into its long-range plan. Consequently, other source documents such as business plans and strategic plans were used to identify performance measures. Very few states have performance measures as well as performance targets integrated into its long range plan (Florida, Pennsylvania, Minnesota, and Maryland).

**TABLE 1 State DOTs Examined in Performance Measures Critique**

State DOT	Mission	Vision	Values	Goals*	Measures**
Alaska	*			*	*
Arizona	*	*	*	*	*
California	*			*	*
Florida	*	*	*	*	*
Maryland	*	*		*	*
Minnesota	*	*		*	*
Nebraska	*	*		*	*
New Mexico	*			*	*
New York	*	*	*	*	*
Oregon	*		*	*	*
Pennsylvania	*	*	*	*	*
Utah	*			*	*
Virginia	*	*	*		*
Washington	*		*	*	*

\*Management/Guiding Principles/Goals

\*\*Performance Measures

## OVERVIEW OF PERFORMANCE MEASURES

Performance measures enable a state DOT to track progress towards its targets and goals as well as to plan, program investments, and manage operations. Reasons for adopting performance measures include accountability, efficiency of project delivery, communication of progress toward specifically defined goals and objectives, and documentation of accomplishments. The FHWA's Office of Operations defines performance measurements and their elements as follows:

### ◆ **Definition of Performance Measure**

- ◆ Defined Goal or Department Objective
- ◆ Evidence of Actual Facts:
  - ▶ Outputs: Efficiency Measures and Information (Goods and Services)  
Quality – How Well Goods and Services Delivered
  - ▶ Outcomes: Results of Department Activity Compared to Intended Purpose  
Program Operations Compared to Program Objectives
- ◆ Measurement of Customer Perceptions

### ◆ **Elements/Criteria for Setting up Performance Measure**

- ◆ Defined Goal or Department Objective
- ◆ Definition of Key Terms
- ◆ Data Collection Process
  - ▶ Population Measured/Characteristics of the Data
  - ▶ Description of the Metric
  - ▶ Data Source
  - ▶ Length of Time
- ◆ Charts and Graphs

- ▶ Frequency of Reports
- ▶ Type of Comparison
- ▶ Calculation Methods
- ◆ Cost Effectiveness of Data Collection
- ◆ Reports

With these elements, a DOT's performance measurement system can be acceptable and meaningful to the end user because it:

- ◆ Supports the organization's long-range plan, strategic priorities, and values as well as the relationship the DOT has with its citizens, decision makers, policy makers, and transportation professionals;
- ◆ Comprises a balanced set of a limited vital few measures and should gauge progress towards achieving specific goals and objectives and on improvement measured against established benchmarks;
- ◆ Produces timely and useful reports at a reasonable cost; and
- ◆ Displays and makes readily available information that is shared, understood, and used by an organization and matches reports to the needs of intended users.

DOT performance measures can be generally categorized as infrastructure conditions, deficiency measures, mobility measures, safety measures, and customer service measures. Some performance measures are modal-specific which challenges DOTs to develop and apply the performance of all modes as part of an integrated system. Other trends include using performance measures in its asset management process (Utah) or sustainability goals (California and Oregon).

A good source of information is the FHWA's Performance Measurement Fundamentals Web site ([ops.fhwa.dot.gov/perf\\_measurement/fundamentals.htm](https://ops.fhwa.dot.gov/perf_measurement/fundamentals.htm)). TRB Performance Measurement Exchange Web site which is sponsored by FHWA is also a helpful resource ([knowledge.fhwa.dot.gov/cops/pm.nsf/home](https://knowledge.fhwa.dot.gov/cops/pm.nsf/home)).

## CONTEXT SENSITIVE SOLUTIONS AND PERFORMANCE MEASURES

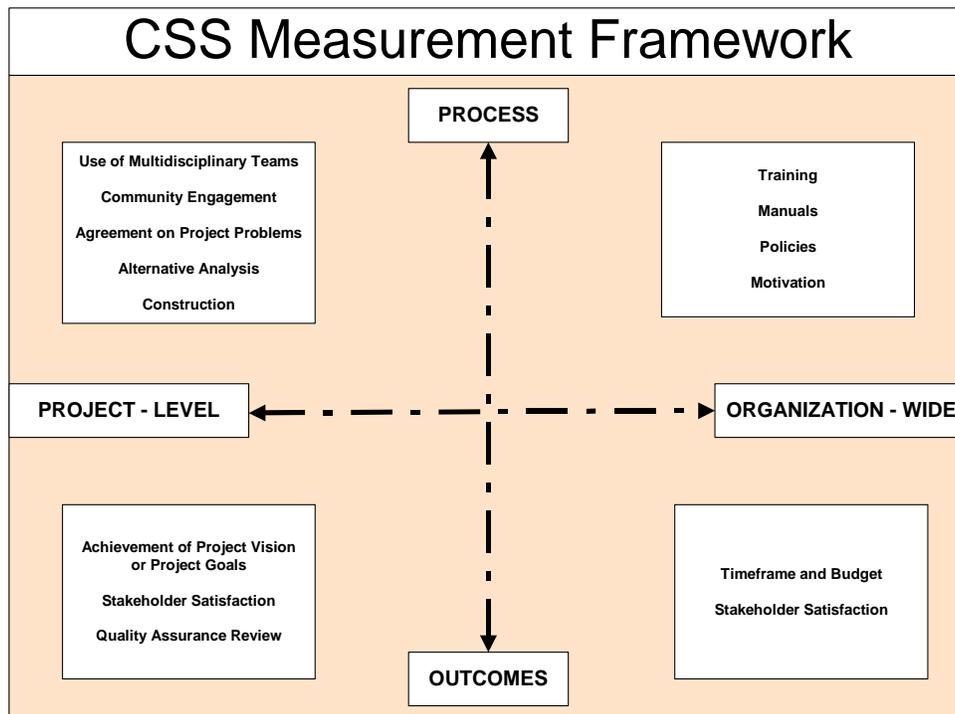
Currently, the NMDOT is implementing the *CSS Directive* into its business practices. On a national level, the CSS “Qualities that Characterize Excellence in Transportation Design” were developed at the “Thinking Beyond the Pavement Workshop” in 1998. These CSS goals have remained largely unchanged. These CSS considerations should be incorporated into a performance measurement system:

- ◆ The project is a safe facility for both the user and the community.
- ◆ The project is in harmony with the community, and it preserves environmental, scenic, aesthetic, historic, and natural resource values of the area, i.e., exhibits context sensitive design.
- ◆ The project exceeds the expectations of both designers and stakeholders and achieves a level of excellence in people’s minds.
- ◆ The project involves efficient and effective use of the resources (time, budget, community) of all involved parties.
- ◆ The project is designed and built with minimal disruption to the community.
- ◆ The project is seen as having added lasting value to the community.

As state DOTs have implemented and integrated CSS goals in their operations, the concept has expanded to include planning, construction, and maintenance. A few state DOTs have adopted CSS evaluation tools (New York and Connecticut) but not performance measures for projects. State DOTs that have included CSS in its long range plans include Michigan, Oregon, Pennsylvania, and Utah.

The evaluation of CSS projects requires a new approach in developing performance measures. *Performance Measures for Context Sensitive Solutions – A Guidebook for State DOTs*

(NCHRP Document 69 (Project 20-24(30) provides a measurement framework for CSS that are indicators of project and organization-wide performance. The framework for CSS performance measures includes processes and outcomes at both the project level (micro) and organization wide (macro). This basic framework and its elements are illustrated in Figure 1:



**FIGURE 1 CSS Measurement Framework.** Source: *Performance Measures for Context Sensitive Solutions – A Guidebook for State DOTs* (NCHRP Document 69 (Project 20-24(30))

At the project level, some measures may apply across many projects, while others may be scaled to be used on an individual project. On the other hand, organization-wide measures provide a complement to tailored project measures. They offer insights on organization-wide trends that cannot be captured through micro-level measures on individual projects. Another dynamic in CSS measures is balancing between process and outcome measures. Generally, organization measures are broader in scope and are fewer in number than project-level measures. Table 2 lists suggestions for CSS performance measures.

**TABLE 2: CSS Performance Measures \***

Framework	Focus Area	Suggestions for Measuring			
		Process-Related		Outcome-Related Focus Areas	
		Project Specific	Outcomes	Process	Organization
Process-Related	Use of multi-Disciplinary Teams	Right people on team?			
		Team function Effectively?			
		Focus on CSS principles from start?			
	Public Engagement	Public involvement plan created?			
		Techniques chosen strategically?			
		Consensus on key project elements?			
		Were external champions created?			
		Public input at key decision points?			
		Adequacy of DOT expertise and resources?			
		Quality of public involvement strategy?			
	Project Problems, Opportunities and Needs	Support for statement of problems, opportunities and needs			
		Linkage of problems, opportunities and needs to alternatives evaluation			
	Project Vision or Goals	Consistency with local plans?			
		Consensus on project vision and goals?			
		Achievement of project vision or goals?			
		Supportiveness of community needs?			
	Alternatives Analysis	Adequacy of range of alternatives developed?			
		Existence of criteria for evaluation of alternatives?			
		Design considerations: design speed			
		Design considerations: level of service			
		Design considerations: safety			
		Need for redesign			
		Multimodal considerations?			

Framework	Focus Area	Suggestions for Measuring			
		Process-Related		Outcome-Related Focus Areas	
		Project Specific	Outcomes	Process	Organization
	Construction and Maintenance	CSS related construction issues considered during project development			
		CSS related maintenance issues considered during project development			
Outcome-Related Focus Areas	Achievement of project vision/goals		Match problems, opportunities, and needs with final project?		
			Tracking and adherence to project commitments?		
			Were project vision/goals met?		
			Project supports community values?		
			Environmental resources preserved or enhance?		
			Did project leverage other resources?		
	Stakeholder satisfaction		Tailored surveys of key stakeholders		
			Achievement of consensus during project?		
			Impacts of construction?		
	Quality assurance review		Evaluation charette		
			Peer review of project		
			Post project review		
Process Related Focus Areas	CSS Training				Quantity of training?
					Focus of training?
					Quality of training?
	Manuals				CSS changes in manuals?
					Effectiveness of manual changes?

Framework	Focus Area	Suggestions for Measuring			
		Process-Related		Outcome-Related Focus Areas	
		Project Specific	Outcomes	Process	Organization
	Policies				CSS changes in policies
					Effectiveness of policy changes?
	Staff motivation strategies				CSS awards?
					CSS in staff performance reviews
Outcome-Related Focus Areas	Timeframe and budget			Timeframe	
				Budget	
	Stakeholder satisfaction			Tailored surveys of key stakeholders	
				Achievement of consensus during project?	
			Impacts of construction?		

Source: *Performance Measures for Context Sensitive Solutions - A Guidebook for State DOTs* (NCHRP 69 (Project 20-24(30)))

## REVIEW OF NMDOT PERFORMANCE REPORTS

The NMDOT use of performance measures has evolved since it became a multimodal organization in 2003 and the development of the *Good to Great Report* which replaced the COMPASS. This analysis focuses on the NMDOT long-range plan, CSS, and performance measures. In preparing this review, the following source documents were used:

- ◆ *NMDOT Guiding Principles and Commitment to Energy and the Environment;*
- ◆ *New Mexico 2025 Statewide Multimodal Transportation Plan;*
- ◆ *Legislative Finance Committee Report on New Mexico Department of Transportation Road Planning and Financing Report (January 17, 2005); and*
- ◆ *New Mexico Department of Finance Administration (DFA) FY 2005 End-of-Year Performance Report.*

In an organization-wide approach to performance measures, there should be linkages between the NMDOT multimodal long-range plan and its strategic/business plan as well as performance measures and targets. The *2025 Multimodal Plan* “was developed as a tool for establishing transportation objectives and implementation strategies to achieve the goals associated with the NMDOT’s *Guiding Principles*.” These overarching *Guiding Principles* for NMDOT business practices include:

- ◆ Multimodal Transportation
- ◆ Partnership with Tribal Governments
- ◆ Environmental Responsibility
- ◆ Partnership with Local Governments
- ◆ Safety and Security
- ◆ Efficient Use of Public Resources
- ◆ Economic Vitality

For each principle, the *2025 Multimodal Plan* includes long range objectives and implementation strategies. While many objectives and strategies lend themselves to CSS-related performance measures, the *2025 Multimodal Plan* does not include any quantifiable performance measures or targets. The linkages between *Guiding Principles* and *2025 Multimodal Plan* program areas should be clearly delineated. In the *2025 Multimodal Plan*, there are seven guiding principles plus five other program areas (aviation, non-motorized transportation, commercial trucks, personal vehicles, rail freight, and rail public transit).

The *2025 Multimodal Plan* contains three references to CSS but do not seem to lend themselves to performance measures. The references are:

- ◆ Partnership with Local Governments Implementation Strategy: Implement Context Sensitive Design that rely on local partners for design guidance.
- ◆ Environmental Responsibility Implementation Strategies: Update the Corridor Location Procedures Manual to include environmental concerns at all planning stages, particularly with regard to context sensitive considerations.
- ◆ Pedestrian Transportation Implementation Strategies: Ensure that context sensitive design considers equestrian needs when appropriate.

Another source of information for this review was the *Legislative Finance Committee (LFC) Report on New Mexico Department of Transportation Road Planning and Financing Report (January 17, 2005)*. This report was focused on NMDOT's state transportation improvement plan (STIP), Governor Richardson Investment Partnership (GRIP), and Design-Build activities. However, many of the *Report* recommendations are relevant to the adoption of written standards and procedures for the documentation and analysis of performance data. A review of NMDOT

documents does not appear to address these recommendations which may be impacting NMDOT's ability to establish an effective and meaningful performance measurement system.

*The New Mexico Department of Finance Administration's FY 2005 End-of-Year Performance Report for its Performance Based Budgeting System for the NMDOT* was also studied. Each performance measure included a FY 2004 target level as well as an end result for FY 2004. This DFA reporting covers five program areas which are: Traffic Safety Program (four performance measures); Construction Program (six measures); Maintenance Program (six measures); Program Support (five measures); Aviation (three measures); and Public Transportation (four measures). None of these performance measures relate to CSS.

A search for "performance measures" was conducted on the NMDOT Web site and "Performance-Based Budgeting" in the Quality Management Web site was the result. Currently the Quality Management Office oversees reporting and updating performance measures. However, the information on this Web site mainly related to internal procurement issues and not NMDOT transportation programs.

## RECOMMENDATIONS

- ◆ There are no CSS performance measures in the *2025 Multimodal Plan*. Consistent and uniform CSS performance measures that are also in accordance with LFC recommendations need to be developed.
- ◆ Need uniformity consisting of data analysis between the *2025 Multimodal Plan* and reports to the DFA and LFC.
- ◆ Establish CSS benchmarks, standards, and/or targets (see Appendix D for state DOT examples).
- ◆ A logical progression and a hierarchy of performance measures should be evident and be systematically integrated into NMDOT's long-range plans, strategic priorities, and attainment reports. Selected measures should be identified which support the fundamental roles of the NMDOT. Good examples are Arizona DOT, Minnesota DOT, and Pennsylvania DOT.
- ◆ Integrate principles in the NMDOT *CSS Directive* and performance measures in the *2025 Multimodal Plan* to promote NMDOT's new vision of conducting the transportation planning and project delivery processes.
- ◆ Involve NMDOT customers and stakeholders in the development of performance measures.
- ◆ NMDOT should conduct CSS training to help integrate and implement the NMDOT *CSS Directive* in its operations.
- ◆ CSS marketing should be done to communicate information to the general public. Marketing would include information about NMDOT's new way of doing business through CSS, summary information about the NMDOT planning processes, and performance reporting.

- ◆ Present information in an easily understandable, clear format which can be accessible on the NMDOT Web site. Dashboards should be considered as a method for graphic presentation of performance measures and data mining. Brief performance “report cards” could provide easily-accessible, selective and most important measurements and information for the public and other stakeholders. Washington State DOT’s *Charting the Gray Notebook Way*, presented at the 2004 TRB Committee on Performance Measurement Conference, is an excellent resource for effective data and graphic presentations ([www.trb-performancemeasurement.org/Charting\\_the\\_GNB\\_Way.PDF](http://www.trb-performancemeasurement.org/Charting_the_GNB_Way.PDF)). See Appendix E for examples of performance measurement presentations from other DOTs.
- ◆ There is no summary document or brochure on the CSS, long-range transportation plans, or strategic directions. This would provide a framework for NMDOT performance measures as the audience could more readily understand the context of the information. Good state DOT brochure examples are found in Appendix F.
- ◆ Performance measures should be considered for congestion management, environmental programs, rail crossing safety, freight and truck, progress in implementing GRIP, and multimodal activities including non-motorists and commuter rail.

# **APPENDICES**

# **APPENDIX A**

## **SUMMARY OF LITERATURE SURVEY SOURCES FOR SELECTED FOCUS AREAS**

## Appendix A Summary of Literature Survey Sources for Selected Focus Award

Organization	Performance Measures	Planning
Alaska DOT	1	
Arizona DOT	4	
California DOT	4	1
Colorado DOT		1
Connecticut DOT		1
Delaware DOT		
Florida DOT	2	1
Idaho DOT	1	
Illinois DOT	1	
Kansas DOT		1
Kentucky Transportation Cabinet	1	
Louisiana DOT		1
Maine DOT		
Maryland State Highway Administration	2	2
Michigan DOT	2	1
Minnesota DOT		
Missouri DOT	2	
Montana DOT		1
Nebraska Dept of Roads	1	
Nevada DOT		1
New Hampshire DOT		2
New Jersey DOT		1
New Mexico DOT	2	2
New York State DOT	2	
North Carolina DOT	2	3
Ohio DOT		1
Oregon DOT	1	3
Pennsylvania DOT		3
Tennessee DOT	3	
Utah DOT	2	
Virginia DOT	3	5
Washington State DOT	7	1
Wisconsin DOT	1	
AASHTO	0	2
FHWA/Public Roads	8	4
Transportation Research Board/TR News	12	1
Other Sources	30	7
<b>Total</b>	<b>70</b>	<b>53</b>

## APPENDIX B

### STATE DEPARTMENTS OF TRANSPORTATION MISSION, VISION, VALUES, PRINCIPLES

ALASKA DOT  
ARIZONA DOT  
CALIFORNIA DOT  
FLORIDA DOT  
MARYLAND STATE HIGHWAY ADMINISTRATION  
MINNESOTA DOT  
NEBRASKA DEPARTMENT OF ROADS  
NEW MEXICO DOT  
NEW YORK STATE DOT  
NORTH CAROLINA DOT  
OREGON DOT  
PENNSYLVANIA DOT  
TENNESSEE DOT  
UTAH DOT  
VIRGINIA DOT  
WASHINGTON STATE DOT

## Appendix B State Departments of Transportation Mission, Vision, Values, Principles

State	Mission	Vision	Values	Management/Guiding Principles/Goals
Alaska DOT	Provide for the movement of people and goods and the delivery of state services.			
Arizona DOT	To provide mobility to Arizona's residents and visitors, while promoting economic prosperity through its linkage to the global economy, and demonstrating respect for the environment and quality of life. The safe, efficient, and cost-effective movement of people and products throughout our State is contingent on performing our jobs both prudently and well.	The standard of excellence for transportation systems and services.	Integrity, respect, accountable, customer service, safety, partnership, teamwork, excellence, communication, empowerment, leadership	
California DOT	Caltrans improves mobility across California.			Safety, mobility, delivery, flexibility, stewardship
Florida DOT	The department will provide a safe transportation system that ensures the mobility of people and goods, enhances economic prosperity and preserves the quality of our environment and communities	Our vision of DOT...dedicated to making travel in Florida safer and more efficient.	Integrity; respect; excellence; teamwork	
Maryland State Highway Administration	To facilitate the safe and efficient movement of people and goods across all transportation modes.	To provide a transportation system that works for people.		Efficiency, mobility, safety and security, productivity and quality

State	Mission	Vision	Values	Management/Guiding Principles/Goals
Minnesota DOT	Improve access to markets, jobs, goods and services and improve mobility by focusing on priority transportation improvements and investments that help Minnesotans travel safer, smarter and more efficiently.	MNDOT's vision affirms what citizens want for Minnesota's transportation: a coordinated transportation network that meets the needs of Minnesota's citizens and businesses for safe, timely and predictable travel		Commitment to mission, focus on customers, simplify government, manage for results, improvement by innovation
Nebraska Department of Roads	To provide and maintain, in cooperation with public and private organizations, a safe, efficient, affordable and coordinated statewide transportation system for the movement of people and goods.	Building a better system for Nebraska future.		
New Mexico DOT	The primary responsibility of the agency is to plan, build, and maintain a quality state-wide transportation network which will serve the social and economic interests of our citizens in a productive, cost-effective innovative manner.			Multimodal transportation, partnership with tribal governments, environmental responsibility, partnership with local governments, safety and security, efficient use of public resources, economic vitality
New York State DOT	It is the mission of the NYSDOT to ensure our customers—those who live, work and travel in New York State—have a safe, efficient, balanced, and environmental sound transportation system.	Integrity; customer service; partnership; teamwork; people; excellence	Serve customers and earn their trust; Chain of Value; clarity of expectations and feedback make the chain strong and effective; organization's chain of command supplies leadership and guidance	

State	Mission	Vision	Values	Management/Guiding Principles/Goals
North Carolina DOT	Provide and support an integrated transportation system and related services that enhance the state's well-being		Balance, choices, customer focus, effective decision making, integrity, open communication, partnership, performance excellence, safety, stewardship	
Oregon DOT	To provide a safe, efficient transportation system that supports economic opportunity and livable communities for Oregonians.		Safety, customer focus, efficiency, accountability, problem solving, accountability, positive workplace, environment	Provide outstanding customer service; use innovative program design and technologies; improve the return on investment; attract, retain and develop an outstanding ODT workforce; Engage the public, other state agencies, local governments, business and community leaders in solving transportation problems and planning; increase intermodal linkages; communicate, educate and inform the public.
Pennsylvania DOT	Through the active involvement of customers, employees and partners; PennDOT provides services and a safe intermodal transportation system that attracts businesses and residents and stimulate Pennsylvania's economy.	Customer driven, intermodal transportation system, and services that enhance the quality of life in Pennsylvania.	Customers, integrity, people, performance relationships	System preservation, quality of life, management and productivity, mobility, safety

State	Mission	Vision	Values	Management/Guiding Principles/Goals
Tennessee DOT	The mission of the Tennessee Department of Transportation is to plan, implement, maintain, and manage an integrated transportation system for the movement of people and products, with emphasis on quality, safety, efficiency and the environment.		Communication, accountability, consistency, integrity	Develop and implement a transportation system vision; increase stakeholder involvement and communication; address transportation system safety; protect and preserve the environment; manage the department through a clear strategic plan; cultivate partnerships.
Utah DOT	Quality transportation today, better transportation tomorrow, we work to connect communities.			<ul style="list-style-type: none"> <li>- Take care of what we have</li> <li>- Make it work better</li> <li>- Improve safety</li> <li>- Increase capacity</li> </ul>
Virginia DOT	VDOT will plan, develop, deliver, and maintain, on time and on budget, the best possible transportation system for the traveling public.	Safe; seamless; secure	Safety and security; truth, trust and teamwork; environmental excellence; action and accountability; results and respect	
Washington State DOT	Our mission is to keep people and business moving by operating and improving the state's transportation systems vital to our taxpayers and communities.		Delivery, accountability, business practices, environmental responsibility, safety, excellence and integrity, communications	Leadership, delivery and accountability, business practices, safety, environmental responsibility, excellence and integrity, communications

# APPENDIX C

## STATE DEPARTMENTS OF TRANSPORTATION PERFORMANCE MEASURES

ALASKA DOT  
ARIZONA DOT  
CALIFORNIA DOT  
FLORIDA DOT  
MARYLAND STATE HIGHWAY ADMINISTRATION  
MINNESOTA DOT  
NEBRASKA DEPARTMENT OF ROADS  
NEVADA DOT  
NEW MEXICO DOT  
NEW YORK STATE DOT  
OREGON DOT  
PENNSYLVANIA DOT  
UTAH DOT  
VIRGINIA DOT  
WASHINGTON STATE DOT

## Appendix C State Departments of Transportation Performance Measures

State	Long Range Plan	Initiative	Performance Factors/ Strategic Goals	Performance Measures
Alaska DOT		Missions and Measures	Reduce injuries, fatalities and property damage: build	<ul style="list-style-type: none"> <li>▶ Road related fatalities on state roads per 100 million vehicle miles (MVM) traveled</li> <li>▶ % of NHS routes meeting current department standards</li> <li>▶ # of bridges that are considered deficient by FHWA standards</li> <li>▶ % change in the LOS at signalized intersections</li> <li>▶ % of highway and aviation construction funding advertised by a given date</li> <li>▶ % of administrative and engineering cost compared to total project cost</li> </ul>
			Carry out safe DOT operations	<ul style="list-style-type: none"> <li>▶ % change in annual injury rate per 100 department employees working one year.</li> <li>▶ % change in employees successfully completing required safety training.</li> </ul>
			Improved mobility of people and goods	<ul style="list-style-type: none"> <li>▶ Change in customer satisfaction based on survey of customers</li> </ul>
			Provide the assets and facilities to enable delivery of state services	<ul style="list-style-type: none"> <li>▶ Change in satisfaction based on survey of government sector customers</li> <li>▶ Dollar value of differed maintenance needed.</li> </ul>

State	Long Range Plan	Initiative	Performance Factors/ Strategic Goals	Performance Measures
Arizona DOT	<i>MoveAZ</i>		Mobility and economic competitiveness	<ul style="list-style-type: none"> <li>▶ % of Person-miles Traveled (PMT) by LOS</li> <li>▶ Average delay per trip</li> </ul>
			Connectivity	<ul style="list-style-type: none"> <li>▶ Ability to pass in major 2-lane corridors</li> <li>▶ Intercity travel time connectivity</li> </ul>
			Preservation	<ul style="list-style-type: none"> <li>▶ % state highway lane miles by pavement condition</li> <li>▶ % VAT on state highways by pavement condition</li> <li>▶ % Deficient bridges on State routes</li> <li>▶ Vehicle trips by bridge condition</li> </ul>
			Reliability	Incident-related non-recurring delay per VMT
			Safety	Reduction in fatalities and injuries by 100 million VMT
			Accessibility	<ul style="list-style-type: none"> <li>▶ # of Park-and-Ride spaces</li> <li>▶ Added Transit or School Bus Turnouts</li> <li>▶ % of state routes or state route miles that are more bike suitable</li> </ul>
			Resource conservation	<ul style="list-style-type: none"> <li>▶ Reduction in mobile source emissions (tons)</li> <li>▶ % of air quality improvement projects</li> <li>▶ Added sound walls</li> <li>▶ Project consistency with local plans</li> <li>▶ # of gallons of fuel consumed by ADOT fleet</li> </ul>

State	Long Range Plan	Initiative	Performance Factors/ Strategic Goals	Performance Measures
California DOT	<i>California Transportation Plan</i>		Enhance public safety and security	<ul style="list-style-type: none"> <li>▶ Accident rates</li> <li>▶ Crime Rates</li> <li>▶ Security levels</li> </ul>
			Preserve the transportation system	<ul style="list-style-type: none"> <li>▶ Asset Condition</li> <li>▶ Fleet Down-time Rate</li> <li>▶ Fleet Age</li> <li>▶ Cost to Maintain</li> </ul>
			Improve mobility and accessibility	<ul style="list-style-type: none"> <li>▶ Travel time</li> <li>▶ Travel Delay</li> <li>▶ Access to Desired Locations</li> <li>▶ Access to Modes (flexibility)</li> </ul>
			Support the economy	<ul style="list-style-type: none"> <li>▶ Final demand (value of transportation to economy)</li> <li>▶ Benefit-cost ratio</li> </ul>
			Enhance the environment	<ul style="list-style-type: none"> <li>▶ Days exceeding pollutant thresholds</li> <li>▶ Emissions</li> <li>▶ Noise levels</li> <li>▶ Impacts/improvements to species, habitats and wetlands</li> </ul>
			Reflect community values	<ul style="list-style-type: none"> <li>▶ Commute time</li> <li>▶ Walk time to transit</li> <li>▶ Safety by mode</li> <li>▶ Neighborhood cohesion</li> </ul>

State	Long Range Plan	Initiative	Performance Factors/ Strategic Goals	Performance Measures
Florida DOT	<i>2020 Florida Transportation Plan</i>		System Preservation	<ul style="list-style-type: none"> <li>▶ Through 2011, ensure that 80 percent of pavement on the State Highway System meets Department standards.</li> <li>▶ Through 2011, ensure that 90 percent of FDOT-maintained bridges meet Department standards while keeping all FDOT-maintained bridges open to the public safe.</li> <li>▶ Through 2011, achieve 100 percent of the acceptable maintenance standard on the State Highway System.</li> </ul>
			System Efficiency	<ul style="list-style-type: none"> <li>▶ By 2011, improve system efficiency by deploying Intelligent Transportation System Technology on critical state corridors.</li> <li>▶ By 2011, improve safety and traffic flow by reducing the number of commercial vehicle crashes on the State Highway System to or below 7.7 per 100 million vehicle miles traveled.</li> </ul>
			Mobility/ Economic Competitiveness	<ul style="list-style-type: none"> <li>▶ Through 2007, at a minimum, maintain the rate of change in person hours of delay on the Florida Intrastate Highway System (FIHS).</li> <li>▶ Through 2011, commit approximately 50 percent of the highway capacity improvement program for capacity improvements on the FIHS.</li> <li>▶ Through 2011, increase transit ridership at twice the average rate of population growth.</li> </ul>
			Safety	<ul style="list-style-type: none"> <li>▶ By 2006, reduce the highway fatality rate on all public roads to or below 1.75 fatalities per 100 million vehicle miles traveled.</li> <li>▶ By 2006, reduce the fatality rate on the State Highway System to or below 1.54 fatalities per 100 million vehicle miles traveled.</li> <li>▶ By 2011, reduce the bicycle fatality rate to or below 0.19 fatalities per 100,000 population.</li> <li>▶ By 2011, reduce the pedestrian fatality rate to or below 2.35 fatalities per 100,000 population.</li> </ul>

State	Long Range Plan	Initiative	Performance Factors/ Strategic Goals	Performance Measures
Maryland SHA		<i>Annual Attainment Report on Transportation System Performance</i>	Mobility	<ul style="list-style-type: none"> <li>▶ % of vehicle trips on toll facilities using E-Zpass</li> <li>▶ Annual vehicle revenue miles of MTA service provided</li> <li>▶ % of lane miles with average annual volumes below congested levels</li> <li>▶ Peak period congestion on freeways in Baltimore/Washington regions</li> </ul>
			Productivity	<ul style="list-style-type: none"> <li>▶ Transportation related emissions by Region</li> <li>▶ Customer satisfaction with MTS</li> <li>▶ MTA operating cost per passenger</li> <li>▶ MTA operating cost per passenger mile</li> <li>▶ % of respondents rating their overall SHA experience (survey every 3-4 years)</li> <li>▶ Maintenance expenditures per lane mile</li> </ul>
			Safety	<ul style="list-style-type: none"> <li>▶ Customer perceptions of MTA safety</li> <li>▶ # and rate of injuries on MTA transit</li> <li>▶ # &amp; rate of injury accidents on SHA facilities</li> <li>▶ # &amp; rate of fatalities on SHA facilities</li> </ul>
			Efficiency	<ul style="list-style-type: none"> <li>▶ % of MTA service provided on time</li> <li>▶ % of MTA bus routes with “successful” or acceptable performance</li> <li>▶ % of SHA-maintained roads with acceptable ride quality</li> <li>▶ Reduction in incident congestion delay</li> <li>▶ % NHS bridges meeting federal standards</li> </ul>

State	Long Range Plan	Initiative	Performance Factors/ Strategic Goals	Performance Measures
Minnesota DOT		Strategic Directions	Safeguard what exists	<ul style="list-style-type: none"> <li>▶ Clearance times for incident, accidents or Hazmats (metro)</li> <li>▶ % of miles that meet good and poor ride quality</li> <li>▶ Remaining service life of pavement</li> <li>▶ % bridges that meet good and poor structural condition</li> <li>▶ Snow and ice removal clearance time</li> </ul>
			Make the transportation network operate better	<ul style="list-style-type: none"> <li>▶ Travel times for people &amp; freight between Regional Trade Centers</li> <li>▶ Travel times for people &amp; freight within major Regional Trade Centers</li> <li>▶ Peak period travel time reliability</li> </ul>
			Increase safety and security of transportation system	<ul style="list-style-type: none"> <li>▶ Crash rate (3 year average)</li> <li>▶ Fatalities per year (3 year average)</li> </ul>
			Make Mn/DOT work better	<ul style="list-style-type: none"> <li>▶ Transportation projects completion versus original schedule</li> <li>▶ General administrative expenditures as % of total expenditures</li> <li>▶ % customers satisfied with the reliability of MnDOT communications-</li> <li>▶ % of MnDOT fuel consumption defined as cleaner fuels</li> <li>▶ # of acres replanted with native species</li> <li>▶ # of undeveloped acres converted to another land use</li> <li>▶ Time to complete EIS, Environmental Assessment per project</li> </ul>

State	Long Range Plan	Initiative	Performance Factors/ Strategic Goals	Performance Measures
Nebraska Dept of Roads		NDOR Performance Measures	Transportation System Safety & Performance	<ul style="list-style-type: none"> <li>▶ Fatalities on Nebraska roads</li> <li>▶ Motor vehicle crashes on Nebraska roadways</li> <li>▶ Motor vehicle accidents in construction work zones</li> <li>▶ Pavement conditions on Nebraska highways</li> <li>▶ Smoother roads</li> <li>▶ # of structurally sound &amp; functionally adequate bridges</li> <li>▶ Railroads grade crossing closures</li> <li>▶ External customer/partner satisfaction</li> </ul>
			Surface Transportation Program Delivery	<ul style="list-style-type: none"> <li>▶ % of Project in 1 year program let to contract</li> <li>▶ % of Project awarded</li> <li>▶ Accuracy of project estimates in 1 year program</li> <li>▶ % of construction completed within days allowed</li> <li>▶ % of Construction projects final within 60 days</li> <li>▶ % of Project in 5 year program let to contract</li> <li>▶ Accuracy of state highway user revenue projections</li> <li>▶ Cash balance</li> </ul>
			Employee Health, Welfare, and Morale	<ul style="list-style-type: none"> <li>▶ Motor vehicle accident frequency rate</li> <li>▶ Lost work days due to job-related injuries</li> <li>▶ Employee satisfaction</li> <li>▶ No loss of wetland acres</li> <li>▶ Wetland acres for future needs</li> </ul>

State	Long Range Plan	Initiative	Performance Factors/ Strategic Goals	Performance Measures
Nevada DOT	<i>NevPlan</i>		To provide a statewide transportation system that adequately meets present and future accessibility and mobility needs.	<ul style="list-style-type: none"> <li>▶ % congested roadways</li> <li>▶ Miles congested roadways</li> </ul>
			To assure the safety of the users of the statewide transportation system.	<ul style="list-style-type: none"> <li>▶ Total crashes</li> <li>▶ Property damage crashes</li> <li>▶ Injury crashes</li> <li>▶ Total injuries</li> <li>▶ Fatalities</li> </ul>
			To protect or enhance the environment that is affected by the transportation system; to minimize and mitigate harmful impacts.	<ul style="list-style-type: none"> <li>▶ Carbon monoxide state standard</li> <li>▶ Particulate matter state standard</li> </ul>
			To provide a statewide transportation system that is efficient and effective in the movement of people and goods.	<ul style="list-style-type: none"> <li>▶ Maintained pavement condition index</li> <li>▶ Truck miles of travel</li> <li>▶ Vehicle miles of travel</li> </ul>
			Enhance the efficiency of the statewide system when appropriate, with the application of new technology.	<ul style="list-style-type: none"> <li>▶ Urban highway congestion</li> </ul>
			To implement an effectively planned transportation system that recognizes the opportunity to increase tourism, economic development, and diversification.	<ul style="list-style-type: none"> <li>▶ Enplanement index</li> <li>▶ Rural traffic counts</li> </ul>

State	Long Range Plan	Initiative	Performance Factors/ Strategic Goals	Performance Measures
New Mexico DOT		<i>Good to Great Strategic Plan</i>	Deliver safe and secure multimodal programs and transportation infrastructure	<ul style="list-style-type: none"> <li>▶ Aviation division revenue sources</li> <li>▶ FY2005 Discretionary Total for FAA Southwestern Region</li> <li>▶ # of projects at New Mexico airports</li> <li>▶ Local, state, and federal contribution for airport improvement projects</li> <li>▶ Actual funding compared to planned airport improvement projects</li> <li>▶ Aviation Division Expenditure budget FY 2006 operating budget</li> <li>▶ Rural Public Transportation 5311 annual ridership</li> <li>▶ Welfare-to-work transportation 3037 annual ridership</li> <li>▶ Disabled and elderly transportation program (5310) annual ridership</li> <li>▶ Park and Ride annual passenger trip by route</li> <li>▶ Park and Ride passenger trip and average daily ridership</li> <li>▶ SECA routes, vans and number of riders</li> <li>▶ Memorandum of Understanding completed with NM pueblos</li> <li>▶ RPO attendance</li> <li>▶ Fatalities per million vehicle miles: New Mexico and nationally</li> <li>▶ Seatbelt usage of outboard front seat occupants</li> <li>▶ Alcohol-involved fatalities per 100 MVM</li> <li>▶ Crash statistics by District</li> <li>▶ Statewide traffic fatalities</li> <li>▶ Seven counties with highest pedestrian death rates</li> <li>▶ Seven counties with highest crash rates involving heavy trucks</li> <li>▶ New Mexico's highest crash rate by rural highway segments</li> <li>▶ Alcohol-involved crashes by severity by District</li> <li>▶ Fatalities per 100 MVM per District</li> <li>▶ Environment criteria averages</li> </ul>

State	Long Range Plan	Initiative	Performance Factors/ Strategic Goals	Performance Measures
New Mexico DOT		<i>Good to Great Strategic Plan</i>	Deliver safe and secure multimodal programs and transportation infrastructure	<ul style="list-style-type: none"> <li>▶ Performance of projects in meeting environmental responsibility</li> <li>▶ Protect wildlife crossing created</li> <li>▶ Compost use by NMDOT, compost socks, berms installed by NMDOT</li> <li>▶ Discarded tires reused by NMDOT</li> <li>▶ Wetland creation projects by NMDOT</li> <li>▶ Engineers' estimates vs. awarded bids statewide, by District</li> <li>▶ % of projects let to bid within target period</li> <li>▶ Let cost/programmed amount</li> <li>▶ % of projects let within programmed year</li> </ul>
			Expand and maintain a safe highway and transportation system	<ul style="list-style-type: none"> <li>▶ % of non-NHS, interstate, non-interstate, &amp; NHS surface miles meeting minimum level of performance</li> <li>▶ Rest area statewide satisfaction results, by District</li> <li>▶ State owned structurally deficient bridges number rating 4 &amp; below</li> <li>▶ State owned structurally deficient bridges square footage of ration 4 &amp; below</li> <li>▶ Maintenance expenditures per centerline miles by roadway type statewide, by District</li> <li>▶ Statewide improved surface lane miles</li> <li>▶ % over bid price statewide, by District</li> <li>▶ Days to final statewide, by District</li> <li>▶ # of increased clean-ups per year</li> <li>▶ # of tons of litter removed from roads statewide, by District</li> <li>▶ # of volunteers involved in litter control</li> <li>▶ \$ spent on litter removal</li> <li>▶ Fiscal year summary all construction projects by District</li> <li>▶ Construction contract totals, cumulative &amp; monthly payment, by District</li> </ul>

State	Long Range Plan	Initiative	Performance Factors/ Strategic Goals	Performance Measures
New Mexico DOT		<i>Good to Great Strategic Plan</i>	Expand and maintain a safe highway and transportation system	<ul style="list-style-type: none"> <li>▶ Construction project status report by District</li> <li>▶ # of lane miles of highways meeting minimum level of performance by District</li> <li>▶ Improved surface lane miles by District</li> <li>▶ Litter pickup accomplishment by District</li> </ul>
			Provide Efficient and Effective Management of Department Resources	<ul style="list-style-type: none"> <li>▶ Payment within 30 days</li> <li>▶ DOT State-Source revenue</li> <li>▶ NMDOT 20-year financial summary</li> <li>▶ NMDOT FY06 current operating budget status with budget request</li> <li>▶ Program and infrastructure FY 06 budget status with request</li> <li>▶ Transportation and highway operations FY budget status with request</li> <li>▶ Business/program support FY budget status with request</li> <li>▶ NMDOT vacancy average, % vacancy rates</li> <li>▶ NMDOT separations</li> <li>▶ NMDOT IT Project status</li> <li>▶ IT Help Desk calls</li> <li>▶ \$ value of contracts entered into by NMDOT</li> <li>▶ Types of contracts and agreements entered into by NMDOT</li> <li>▶ Price agreements executed in Quarter by District</li> <li>▶ NMDOT Worker's Compensation loss experience</li> <li>▶ Construction injury incidence rates national/NMDOT comparison</li> <li>▶ NMDOT fleet motor accident –cars, pickups, trucks</li> </ul>

State	Long Range Plan	Initiative	Performance Factors/ Strategic Goals	Performance Measures
New York State DOT		<i>21st Century Goals</i>	Bridges	<ul style="list-style-type: none"> <li>▶ Hierarchy-based bridge % non-deficient goals by functional classification</li> </ul>
			Pavement	<ul style="list-style-type: none"> <li>▶ % of preventive maintenance actions (paving/non-paving) to total actions</li> <li>▶ % of overall lane miles with surface ratings of 7 or greater</li> <li>▶ Average pavement treatment life</li> </ul>
			Safety	<ul style="list-style-type: none"> <li>▶ # of locations, # investigated recommendations implemented on Final Regional Work Program (FRWP)</li> <li>▶ # of severe and total accidents projected to be reduced as a result of safety capital projects</li> <li>▶ # of High Accident Locations (HAL)</li> <li>▶ # of severe and total accidents projected to be reduced as a result of HAL treated</li> </ul>
			Mobility	<ul style="list-style-type: none"> <li>▶ % growth of daily recurring person hours of delay per centerline mile</li> <li>▶ % growth of daily non-recurring person hours of delay per centerline mile</li> <li>▶ # of spot congested spot locations</li> <li>▶ # of dedicated network miles of coordinated facilities to improve traffic operations</li> <li>▶ # new miles of on-street bicycle facilities</li> <li>▶ Quantity of new of upgraded sidewalks and crosswalks</li> <li>▶ Miles of multi-use paths</li> <li>▶ # of bicycle/pedestrian accessible transit facilities and activity centers</li> <li>▶ # of corridors where arterials management techniques are used</li> </ul>
			Bridges	<ul style="list-style-type: none"> <li>▶ Accomplish 100% of qualifying cyclical preservation tasks</li> <li>▶ Improve average Bridge Condition Index, consistent with Hierarchy-Based Concept</li> <li>▶ Improve average Maintenance Condition Index</li> </ul>

State	Long Range Plan	Initiative	Performance Factors/ Strategic Goals	Performance Measures
Oregon DOT		<i>Context Sensitive and Sustainable Solutions</i>	Improve Travel Safety in Oregon	<ul style="list-style-type: none"> <li>▶ Traffic fatalities</li> <li>▶ Traffic injuries</li> <li>▶ Safe drivers</li> <li>▶ Impaired driving-related traffic fatalities</li> <li>▶ Use of safety belts</li> <li>▶ Rail crossing incidents</li> <li>▶ Derailment incidents</li> <li>▶ Satisfaction with transportation safety</li> </ul>
			Move People and Goods Efficiently	<ul style="list-style-type: none"> <li>▶ Transit annual rides by elderly and disabled Oregonians</li> <li>▶ Travel delay</li> <li>▶ Passenger rail ridership</li> <li>▶ Alternative to one-person commuting</li> <li>▶ Vehicle miles traveled per capita</li> <li>▶ Pavement condition</li> <li>▶ Bridge condition</li> </ul>
			Provide a Transportation System that Supports Livability and Economic Prosperity	<ul style="list-style-type: none"> <li>▶ Jobs from construction spending</li> <li>▶ Intercity passenger service</li> <li>▶ Bike lanes and sidewalks</li> </ul>
			Provide Excellent Customer Services	Customer satisfaction

State	Long Range Plan	Initiative	Performance Factors/ Strategic Goals	Performance Measures
Pennsylvania DOT	<i>PennPlan Moves</i>		Adhere to “maintenance first” policies	% of resources expended on maintenance programs and projects
			Reduce fatalities and crash severity	Reduce fatalities and injuries by category
			Implement statewide congestion management strategic plan	Identification of badly congested corridors & development of improvement strategies
			Consistently meet the requirements of the Clean Air Act	Number of conformity analyses performed on all non-attainment & maintenance areas
			Clear all strategic rail corridors for double stack capacity	100% double stack clearance on strategic corridors
			Improve pavement ride quality	% of miles rated poor
			Reduce # of posted & closed bridges	# of posted and closed bridges
			Increase rural & urban transit systems' ridership	% increase in transit ridership
			Reduce dependence on single-occupancy vehicles	Increase vehicle occupancy rate
			Eliminate at-grade strategic rail freight crossings on state roads	# of at-grade strategic rail freight crossings on state roads
			Reduce # of state-maintained roads	# turned-back miles

State	Long Range Plan	Initiative	Performance Factors/ Strategic Goals	Performance Measures
Utah DOT	<i>Utah Tomorrow</i>	Performance Measures: Final Four	Take care of what we have	<ul style="list-style-type: none"> <li>▶ Pavements in “Fair or Better” Condition</li> <li>▶ Bridge condition “fair to very good”</li> <li>▶ MMQA+ grade for snow and ice control</li> <li>▶ MMQA+ for signing and striping</li> </ul>
			Make the system work better	<ul style="list-style-type: none"> <li>▶ Incident management time to clear incidents</li> <li>▶ # of traveler information 511 calls</li> <li>▶ Traveler information CommuterLink Website hits</li> </ul>
		Final Four	Improve safety	<ul style="list-style-type: none"> <li>▶ Annual pedestrian fatalities</li> <li>▶ Annual fatalities (including pedestrians)</li> </ul>
			Increase capacity	Freeway travel times to downtown Salt Lake City

State	Long Range Plan	Initiative	Performance Factors/ Strategic Goals	Performance Measures
Virginia DOT	VTrans2025	Strategic Plan	Service Performance	% of construction contracts completed by original date
			Service Performance	% of construction contracts completed within 110% of contract award amount
			Service Performance	% of all maintenance construction completed by original specified completion date
			Service Performance	% of maintenance contracts completed within 110% of contract award amount

State	Long Range Plan	Initiative	Performance Factors/ Strategic Goals	Performance Measures
Washington State DOT		Strategic Initiative: Gray Notebook	Plan and build (deliver) capital projects for our transportation systems in accordance with the instructions of the legislature	<ul style="list-style-type: none"> <li>▶ Planned vs. actual results of scope, schedule and budget</li> <li>▶ Compare planned delivery milestone dates against completion dates</li> <li>▶ Planned vs. actual numbers of highway construction projects advertised</li> <li>▶ Planned vs. actual expenditures for preservation and improvement programs</li> <li>▶ % of final cost above or below award</li> <li>▶ % of pavement in good or poor condition (by type)</li> <li>▶ % of bridges in good, fair or port condition</li> </ul>
			Maintain and operate the transportation facilities and systems placed under the department's responsibility, making cost-effective use of the appropriations provided by the Legislature from citizens' taxes.	<ul style="list-style-type: none"> <li>▶ Rating for 22 highway maintenance activities</li> </ul>
			Optimize the operational efficiency and safety of the transportation systems and facilities committed to WSDOT's charge.	<ul style="list-style-type: none"> <li>▶ Fatality rates (bicyclist, pedestrian, vehicle)</li> <li>▶ Before and after collision analysis for safety projects</li> <li>▶ # of responses and overall average clearance time</li> <li>▶ % change in travel time performance for 20 Puget Sound routes</li> </ul>
			Report to the Transportation Commission, citizens, other officials and the legislature on achievements, shortcomings, and challenges in WSDOT's performance.	<ul style="list-style-type: none"> <li>▶ Gray Notebook, Web pages</li> <li>▶ Reporting on capital program delivery</li> <li>▶ Design, construction management, schedule and cost evaluation</li> </ul>
			Assure the capability and efficiency of WSDOT's workforce	<ul style="list-style-type: none"> <li>▶ Compliance ratings for 17 training courses</li> <li>▶ Recordable injuries per 100 workers per calendar year</li> </ul>

**APPENDIX D**  
STATE DOT EXAMPLES:  
LONG RANGE PLANNING AND  
PERFORMANCE MEASURES

MINNESOTA DOT  
NEVADA DOT  
PENNSYLVANIA DOT

# Minnesota DOT Performance Framework and Measures

Mn/DOT Performance Framework and Measures (continued)

	Policy	Performance Measure Categories	Internal Mn/DOT Performance Measure or Indicator
8	Continually Improve Mn/DOT's Internal Management and Program Delivery.	8.1 Construction Project Timeliness	8.1 Percent of Mn/DOT projects in the first year of the STIP that are let for construction in their planned year.
		8.2 Construction Project Cost	8.2 Preconstruction. Percent variation in major projects' cost from estimates when they enter the STIP to actual cost when let for construction.
		8.3 Cost Effective Administration	8.3 General administrative expenditures as a percent of total expenditures.
9	Inform, Involve and Educate All Potentially Affected Stakeholders in Transportation Plans and Investment Decision Processes.	9.1 Perceived Reliability of Mn/DOT Information	9.1 Percent of customers satisfied with the reliability of Mn/DOT communications.
10	Protect the Environment and Respect Community Values.	10.1 Air Quality	10.1AQ1 Federal Compliance Standards: Outdoor levels of ozone, nitrogen dioxide, carbon monoxide and particulate matter. 10.1AQ2 Estimated carbon dioxide emissions from motor vehicles in Minnesota. 10.1AQ3 Percent of Mn/DOT fuel consumption defined as cleaner fuels.
		10.2 Water Quality	10.2W1 Percent of NPDES permits that have violations. 10.2W2 Ratio of acres replaced by Mn/DOT to acres affected. 10.2W3 Percent of replaced wetlands where types are as planned.
		10.3 Land Management	10.3L1 Number of acres replanted with native species. 10.3L2 Number of undeveloped acres converted to another land use.
		10.4 Streamlining of Environmental Process	10.4ES Time to complete EIS, Environmental Assessment, and EAW per project.

Source: Minnesota Department of Transportation.

[www.cts.umn.edu/research/rfp/documents/MnDOT-Performance-Measures.pdf](http://www.cts.umn.edu/research/rfp/documents/MnDOT-Performance-Measures.pdf)

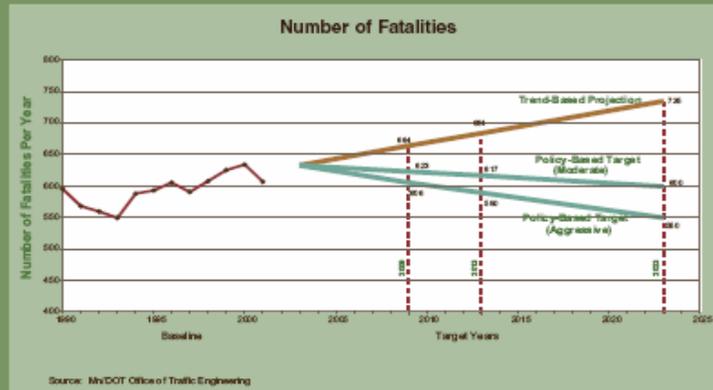
Utah Department of Transportation Strategic Directions and Performance Measures: Final Four.

**► Policy 7: Increase the Safety and Security of Transportation Systems and Users**

Mn/DOT is committed to reducing the number of correctable crashes, fatalities and personal injuries for all modes of transportation. This policy also reflects Mn/DOT's commitment to maintaining the security of travelers, freight and transportation systems.

This policy has five measures aimed at:

- Reducing the number of crashes per vehicle-mile traveled.
- Reducing the number of general aviation crashes.
- Reducing the number of crashes between cars and trains at railroad crossings.
- Reducing the total number of roadway fatalities.
- Reducing the total number of general aviation fatalities.



Example Measure and Targets: Reduce the growing number of fatalities from a projected 735 per year to 600 (moderate target) or 550 (aggressive target) by 2023.

Source: *Minnesota Statewide Transportation Plan: Moving People and Freight from 2003 to 2023*. Executive Summary. August 2003. Minnesota Department of Transportation. [www.oim.dot.state.mn.us/StatePlan/03STP\\_exec\\_summ\\_\(Web\).pdf](http://www.oim.dot.state.mn.us/StatePlan/03STP_exec_summ_(Web).pdf)

Figure III-1

NEVPLAN GOALS, PERFORMANCE MEASURES AND STRATEGIES

GOALS OF NEVPLAN

PERFORMANCE MEASURES

STRATEGIES

To provide a statewide transportation system that adequately meets present and future accessibility and mobility needs.

- Percent Congested Roadways
- Miles Congested Roadways

- Continue to implement the Silver State Management Programs
- Complete and implement the Nevada State Transit Plan
- Complete and implement the Statewide Bicycle and Pedestrian Plans
- Initiate and complete the Nevada State Rail Plan
- Initiate and complete the Statewide Aviation Plan
- Follow NDOT's Public Participation Plan
- Encourage closer intergration of transportation - land -use process

To assure the safety of the users of the statewide transportation system.

- Total Crashes
- Property Damage Crashes
- Injury Crashes
- Total Injuries
- Fatalities

- Planning and design improvements
- Support enforcement of safety laws and policies
- Support Transportation Public Safety Education Programs

To protect or enhance the environment that is affected by the transportation system; to minimize and mitigate harmful impacts.

- Carbon Monoxide State Standard
- Particulate Matter State Standard

- Support the application of Alternative Fuels
- Mitigate environmental impacts of transportation facilities
- Designate routes for hazardous materials transportation

To provide a statewide transportation system that is efficient and effective in the movement of people and goods.

- Maintained Pavement Condition Index
- Truck Miles of Travel
- Vehicle Miles of Travel

- Implement and construct those projects and programs in the STIP
- Encourage investments to maximize transportation modes.
- Improve the quality of the freight system
- Work with the RTC's to implement TDM Strategies

Enhance the efficiency of the statewide system when appropriate, with the application of new technology.

- Urban Highway Congestion

- Encourage and implement ITS applications at all levels of transportation modes
- Encourage and update real-time monitoring systems

To implement an effectively planned transportation system that recognize the opportunity to increase tourism, economic development and diversification.

- Enplanements Index
- Rural Traffic Counts

- Maintain Tourist Based Transportation Systems
- Focus on projects with the greatest return on investments
- Identify new transportation funding sources
- Encourage screening techniques along transportation systems

Source: *NevPlan Statewide Transportation Plan*. [Online]2005. Nevada Department of Transportation. [www.nevadadot.com/reports\\_pubs/NevPlan/pdfs/NevPlanSection3.pdf](http://www.nevadadot.com/reports_pubs/NevPlan/pdfs/NevPlanSection3.pdf).

# Pennsylvania DOT

PENNSYLVANIA STATEWIDE LONG RANGE TRANSPORTATION PLAN OBJECTIVES		
Objective	Performance Measure	Target
1. Adhere to "maintenance first" policies in the allocation of financial and other resources.	Percentage of PennDOT's resources expended on maintenance programs and projects.	80 percent.
2. Implement a statewide congestion management strategic plan.	<p>Completion of plan and biennial updates.</p> <p>Establishment of statewide operations center and regional traffic management centers, with field communications equipment brought on line.</p> <p>Identification of badly congested corridors and development of improvement strategies.</p> <p>Implementation of statewide incident management system encompassing all interstates, and implementation of incident management pilot initiatives.</p>	<p>Plan completed by June 30, 2001.</p> <p>Contract for design and construction of operations center in place by Dec. 31, 2000. Operations center and Philadelphia and Pittsburgh traffic management centers functional by Dec. 31, 2005. Field equipment deployed by Dec. 31, 2001.</p> <p>Congested corridors identified by June 30, 2001, and 3 corridors improved per year.</p> <p>50 percent of interstates covered by the incident management system by Dec. 31, 2003, 100 percent by Dec. 31, 2005. Pilot initiatives implemented in two regions per year.</p>
3. Implement the objectives identified in the updated Intelligent Transportation System (ITS) Strategic Plan.	Number of objectives implemented.	<p>100 percent of short-term objectives implemented by Dec. 31, 2001.</p> <p>100 percent of mid-term objectives implemented by Dec. 31, 2004.</p> <p>75 percent of long-term objectives implemented by Dec. 31, 2010.</p>

Table 5. PennPlan Objectives  (Continued)

53 PennPlan MOVES

Source: Pennsylvania Department of Transportation, *PennPlan Moves!*  
 Excerpted Objectives 1 to 7 with Performance Measures and Targets

*PennPlan Moves!* (continued)

PENNSYLVANIA STATEWIDE LONG RANGE TRANSPORTATION PLAN OBJECTIVES		
Objective	Performance Measure	Target
4. Reduce the number of fatalities and severity of crashes on the state's highways.	Number of: Injuries overall. Fatalities overall. Fatalities - of 16- and 17-year-old drivers/passengers. - of 65-and-older drivers/passengers. - related to drivers with revoked/suspended licenses. - related to heavy trucks. - related to buses. - involving alcohol. - related to failure to use seat belts. - involving pedestrians and bicyclists. - involving motorcyclists. - in collisions with fixed objects. - in head-on collisions. - at stop-controlled and signalized intersections. - on curves.	Fatalities reduced across all categories by:  2002: 10%  2004: 15%  2008: 20%  2020: 40%
5. Develop and implement a program to analyze environmental impact in conjunction with the PennPlan corridor analysis program.	Number of environmental impact analyses completed.	2 analyses completed per year.
6. Consistently meet the requirements of the Clean Air Act, and achieve compliance with all relevant environmental laws and regulations.	Number of conformity analyses completed.  Number of highway funding sanctions imposed.  Expansion of the Transportation Management Association (TMA) program.	Conformity analyses performed for all non-attainment and maintenance areas.  No sanctions imposed.  New TMAs established in Philadelphia and Pittsburgh by June 30, 2000.
7. Incorporate strategies identified under the Pennsylvania Greenways Partnership Commission (GPC) Action Plan and the 21 <sup>st</sup> Century Commission Report into the project development and design processes.	Strategies made part of the project design and development processes.  Development of working partnerships with local-regional governments to focus on land use impacts of transportation planning.	Strategies incorporated into design and development processes by 2002.

*(Continued)*

Source: Pennsylvania Department of Transportation. 2000. *PennPlan Moves!*  
<ftp.dot.state.pa.us/public/pdf/PennPlanMoves/statewidegoalsandobjectives.pdf>

**APPENDIX E**  
**STATE DOT PERFORMANCE MEASURES:**  
**USER FRIENDLY AND EASILY**  
**ACCESSIBLE**

MARYLAND STATE HIGHWAY ADMINISTRATION  
MISSOURI DOT  
NEBRASKA DEPARTMENT OF ROADS  
NEW YORK STATE DOT  
UTAH DOT  
VIRGINIA DOT  
WASHINGTON STATE DOT

## Maryland State Highway Administration

### Excerpt from *Annual Attainment Report on Transportation System Performance (2004)*

# Summary

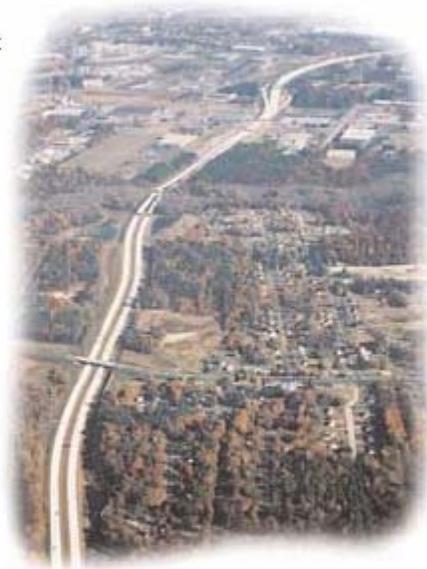
MDOT continues to face many challenges as it seeks to meet citizens' needs and the ever increasing demands for its transportation services and facilities. The information presented in this report illustrates many details of current performance of the Maryland transportation system. This section highlights some of the challenges of growth, the areas where MDOT is excelling, and areas that are of concern.

**THE CHALLENGE OF GROWTH** - Some highlights of recent growth in usage of Maryland's transportation system include:

- A 20 percent increase in vehicle miles of travel on state highways despite only a 4% increase in vehicle lane miles provided since 1995. Maryland's highways and roads now serve almost 54 billion vehicle miles annually.
- A 16 percent increase in public transportation ridership since 1995 (almost exclusively on WMATA).
- A 44 percent increase in passengers at BWI airport since 1995.

**POSITIVE AREAS OF PERFORMANCE** - Despite the challenges posed by such increases in customer demand, performance measures highlight MDOT's success in managing its transportation facilities and services. Across all four goal areas – efficiency, mobility, safety and security, and productivity and quality – there are highlights of good performance:

- Effective preservation and maintenance of the State's highways and bridges - more than 80 percent of state highway pavements are in good condition and less than four percent of Maryland's bridges on the National Highway System fail to meet Federal structural standards.
- Reduced delays on the Maryland Transit Administration's bus system, and steady on-time performance on the MARC commuter rail, MTA Metro Subway, and MTA light rail systems – supporting alternative means of travel.
- Continued high-quality port facilities that have helped maintain port activity in the State despite some periods of economic downturn.
- Limited delays in aircraft takeoffs and landings at BWI airport, despite strong growth in the number of passengers and flights.



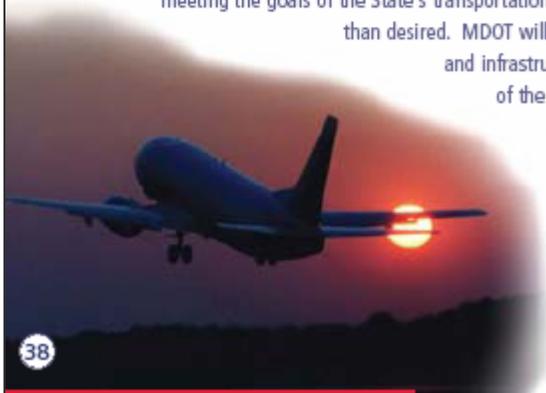
- Aggressive implementation of new technologies that reduce delay and save time:
  - Incident management programs at SHA are estimated to have reduced passenger vehicle delays by more than 25 million hours in 2000;
  - Almost 40 percent of MdTA's customers are now using automated toll collection technology - increasing capacity and reducing delays on toll facilities; and
  - Alternative service transactions (mail, Internet, phone) now account for almost 40 percent of MVA transactions, resulting in fewer trips on the State's roads and saving time for MVA customers.
- Successful compliance with new Federal security requirements at BWI and MPA's port facilities.
- Reductions in fatality and injury rates on the State's highways.
- Greater emphasis on cost-effective and efficient service delivery by MDOT's modal administrations:
  - SHA has reduced the cost of roadway maintenance;
  - MTA has maintained its operating costs per passenger and per passenger mile; and
  - MVA has reduced the operating cost per transaction.

For each of these positive results, there is a need to maintain continued investment and innovation to sustain or improve the current level of performance.

**PERFORMANCE AREAS OF CONCERN** - In some cases, however, the demand for services coupled with budgetary constraints are creating strains on the transportation system. The following performance measures reflect these realities:

- Decline in customer satisfaction levels at Motor Vehicle Administration facilities since 2000 because of an increase in wait times;
- Since 2000, severe weather events and enhanced security requirements have driven up BWI operating costs, resulting in an increase in the operating cost per enplaned passenger; and
- Congestion has persisted and grown on the State's freeways and arterials, and congestion levels are projected to continue to increase because of population and employment growth – MDOT seeks to slow the increase in the coverage, duration, and severity of congestion on heavily traveled highways.

Performance measures identified in this report evaluate MDOT's success in meeting the goals and objective outlined in the Maryland Transportation Plan. As outlined in this report, in many cases, MDOT is successfully meeting the goals of the State's transportation plan, while in some instances, performance is less than desired. MDOT will continue to proactively identify programs, policies and infrastructure investments that will enhance the performance of the State's transportation system. Future reports will provide the public with an opportunity to gauge MDOT's success.



Source: Maryland Department of Transportation. *Annual Attainment Report on Transportation System Performance*. 2004. [www.mdot.state.md.us/State%20Report%20on%20Transportation/Documents/Annual%20Attainment%20Reports/Final%202004%20Attainment%20Report.pdf](http://www.mdot.state.md.us/State%20Report%20on%20Transportation/Documents/Annual%20Attainment%20Reports/Final%202004%20Attainment%20Report.pdf)

## Environmentally Responsible

### *Percent of alternative fuel consumed*

**Result Driver:** Dave Nichols, Director of Program Delivery

**Measurement Driver:** Dave DeWitt, Deputy Administrative Officer

**Purpose of the Measure:**

This measure tracks the use of alternative fuels. It shows MoDOT's contribution toward environmental responsibility and conservation of resources.

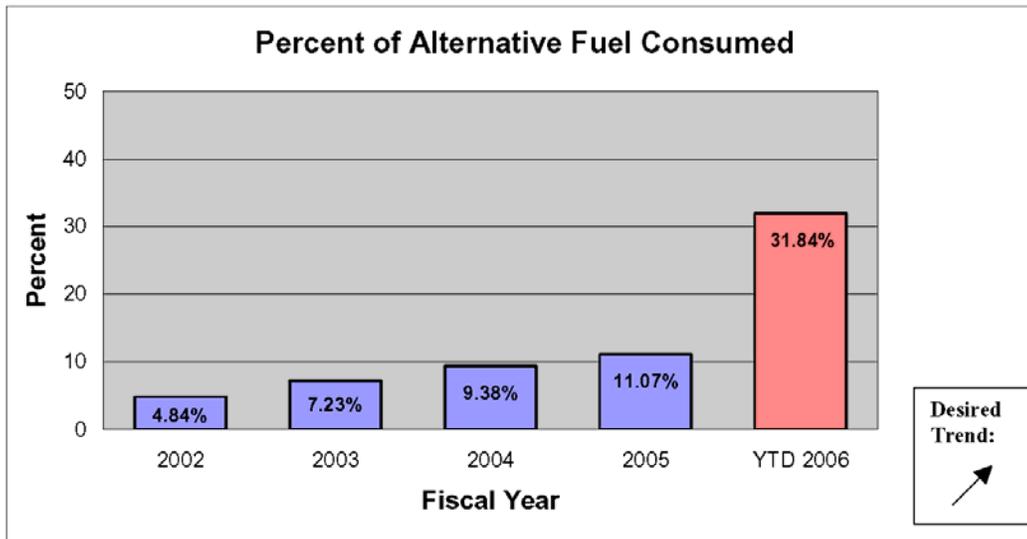
**Measurement and Data Collection:**

Alternative fuel is E-85 and biodiesel. When a user pumps fuel into a MoDOT vehicle or piece of equipment, that usage by gallon and by fuel type is captured in the SAM II system. Reports are generated to extract the number of gallons used from that system.

**Improvement Status:**

There was a significant increase in the usage of alternative fuels from 2005 to YTD 2006. However, the current year to date usage decreased from 43.45% in the second quarter to 31.84% in the third quarter. The decrease is a result of discontinuing the use of biodiesel during the winter months. This was done to ensure there wouldn't be equipment operational issues due to fuel quality. Where available, all districts resumed purchasing biodiesel on April 1, 2006. A quality assurance program has been implemented to minimize the fuel quality issues. The biodiesel bid specification has been modified, and testing equipment has been purchased for the districts. The equipment will obtain fuel samples at different levels within a tank and measure cloud point. Staff from Construction and Materials and General Services have been meeting with district staff to provide instruction on using the testing equipment and provide updates on the bid specification.

Currently the department operates two E-85 bulk fuel stations and is planning to install others in District 4 and District 7 in FY 07.



## Environmentally Responsible

### *Number of tons of recycled/waste materials used in construction projects*

**Result Driver:** Dave Nichols, Director of Program Delivery

**Measurement Driver:** Joe Schroer, Field Materials Engineer

**Purpose of the Measure:**

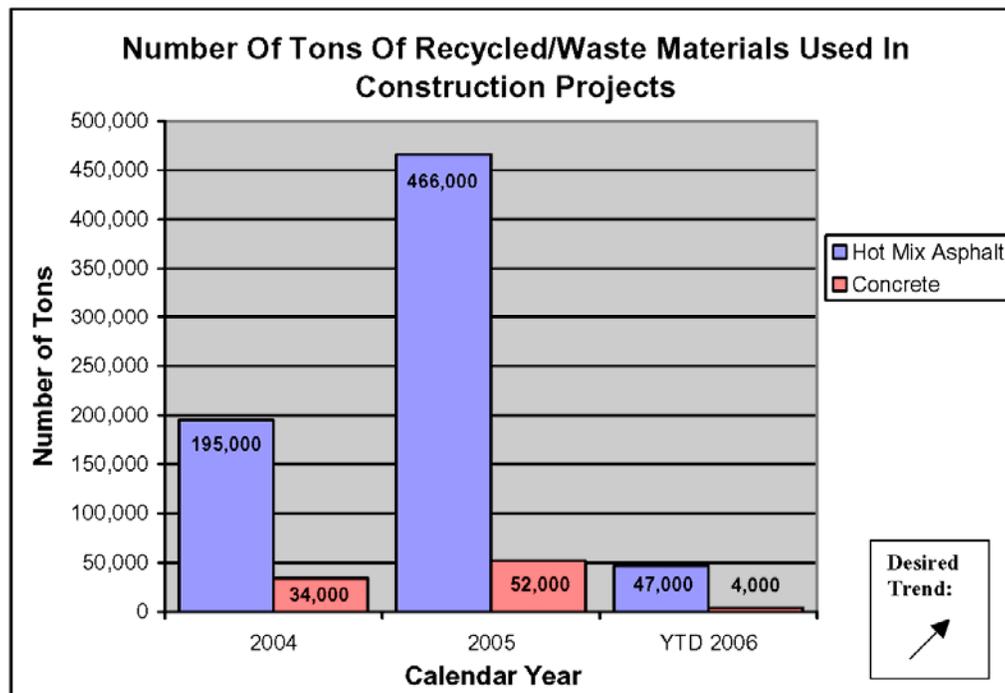
This measure tracks MoDOT's efforts to be environmentally conscious while being fiscally responsible through the use of recycled/waste material when applicable.

**Measurement and Data Collection:**

The number of tons of recycled/waste material used in construction projects is measured through MoDOT's construction management database which tracks material incorporated into projects. Data is collected on an annual basis due to the seasonal nature of the construction.

**Improvement Status:**

The dramatic increase observed between 2004 and 2005 is due to specification changes coupled with the Smooth Road Initiative (SRI). In 2006, an increase in usage is anticipated as contractors become more comfortable with using recycled products. Delivering the SRI program on top of the STIP for construction projects in 2006 has stretched aggregate suppliers beyond their limits. Reuse of aggregates and asphalt in asphalt mixtures has become cost effective for contractors by supplanting virgin material and offsetting the escalating cost of asphalt binders. Promoting contractor successes with these materials over the winter seems to have paid off by additional contractors submitting mix designs incorporating recycled/waste materials this spring.



April 2006 TRACKER – Page 10h

Source: *Tracker: Measures of Department Performance*. January 2006. Missouri Department of Transportation. [www.modot.org/about/general\\_info/documents/completereduced.pdf](http://www.modot.org/about/general_info/documents/completereduced.pdf)

# Nebraska Department of Roads

## Index

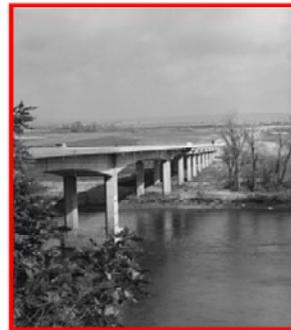
These are revised throughout the year - please check back

Transportation System Safety & Performance	Surface Transportation Program Delivery	Employee Health, Welfare & Morale
<a href="#">Fatalities on Nebraska Roadways</a>	<a href="#">% of Projects in 1 yr. Program Let to Contract</a>	<a href="#">Motor Vehicle Accident Frequency Rate</a>
<a href="#">Motor Vehicle Crashes on Nebraska Roadways</a>	<a href="#">% of Projects Awarded</a>	<a href="#">Lost Work Days Due to Job Related Injuries</a>
<a href="#">Motor Vehicle Accidents in Construction Work Zones</a>	<a href="#">Accuracy of Project Estimates in 1 Year Program</a>	<a href="#">Employee Satisfaction</a>
<a href="#">Pavement Condition of NE Highways</a>	<a href="#">% of Construction Projects Completed Within Days Allowed</a>	
<a href="#">Smoother Roads</a>	<a href="#">% of Construction Projects Finaled Within 60 Days</a>	
<a href="#">% of Structurally Sound &amp; Functionally Adequate Bridges</a>	<a href="#">% of Projects in 5 yr. Program Let to Contract</a>	
<a href="#">Railroad Grade Crossing Closures</a>	<a href="#">Accuracy of State Highway User Revenue Projections</a>	
<a href="#">External Customer/Partner Satisfaction</a>	<a href="#">Cash Balance</a>	
	<a href="#">No Loss of Wetland Acres</a>	
	<a href="#">Wetland Acres for Future Needs</a>	

Source: Nebraska Department of Roads: [www.dor.state.ne.us/performance/index.htm](http://www.dor.state.ne.us/performance/index.htm)

## P4 : Percentage of Structurally Sound and Functionally Adequate Bridges <sup>1</sup>

Activity Drivers: District Engineers  
 Data Owner & Collector: Lyman Freeman : Bridge Engineer  
 Category : Transportation System Safety and Performance



**Description:**  
 Measurement of the progress towards having all bridges (*state-owned*) structurally sound and functionally adequate.

**Purpose:**  
 Annual bridge inspections and ratings are published in the Nebraska Bridge Management System Report. This report provides recommendations to District Engineers for major structural improvements and necessary maintenance. Through project programming and district maintenance, we increase the percentage of structurally sound and functionally adequate bridges.

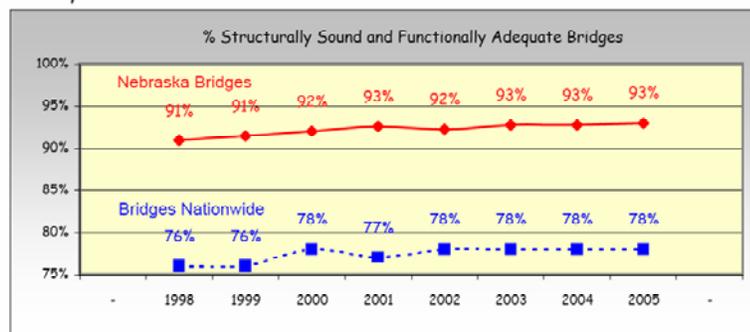
**Goal:**  
 To have 95% of Nebraska state-owned bridges structurally sound and functionally adequate.

**Frequency of Reporting:**  
 Annually per fiscal year.

**Revised Date:**  
 January 17, 2006

Performance Data <sup>2</sup>

State Fiscal Year	Number of State Bridges	Number of Bridges Sound & Adequate	Number of Sub-Standard Bridges	% of Bridges Sound & Adequate	% of Bridges Nationwide Sound & Adequate <sup>3</sup>
1998	3,473	3,158	315	91%	76%
1999	3,488	3,190	298	91%	76%
2000	3,494	3,214	280	92%	78%
2001	3,507	3,247	260	93%	77%
2002	3,509	3,236	273	92%	78%
2003	3,501	3,247	254	93%	78%
2004	3,506	3,251	255	93%	78%
2005	3,495	3,266	229	93%	78%



<sup>1</sup> A structure including supports erected over a depression or an obstruction, such as water, highway, or railway, and having a track or passageway for carrying traffic or other moving loads, and having an open measured along the center of the roadway of more than 20 feet between undercoings of abutments or spring lines of arches, or extreme ends of openings for multiple boxes; it may also include multiple pipes, where the clear distance between openings is less than half of the smaller contiguous opening (AASHTO - NBIS, 23CFR650.3)

<sup>2</sup> Data from the Bridge Division's National Bridge Inspection System (NBIS) data base.

<sup>3</sup> Data from the *Better Roads* magazine (Website: <http://www.betterroads.com>).

## P6 : Accuracy of Project Estimates Contained in the 1-Year Program

Activity Drivers: Construction Engineer, Roadway Design Engineer, Bridge Engineer, Traffic Engineer, Materials & Tests Engineer, Project Development Engineer, and the Right of Way Manager

Data Owner & Collector: Khalil Jaber Project Scheduling & Program Management Engineer

Category : Surface Transportation Program Delivery

### Description:

Measurement of the ability to accurately estimate the dollar amount of projects contained in the 1-Year Program.<sup>1</sup>

### Purpose:

Accurate estimates are necessary for the budgeting and funding of the projects identified in the 1-Year Program.

### Goal:

To be within 5% of the total estimated cost of the published program as reported in the 1-Year Program.

### Frequency of Reporting:

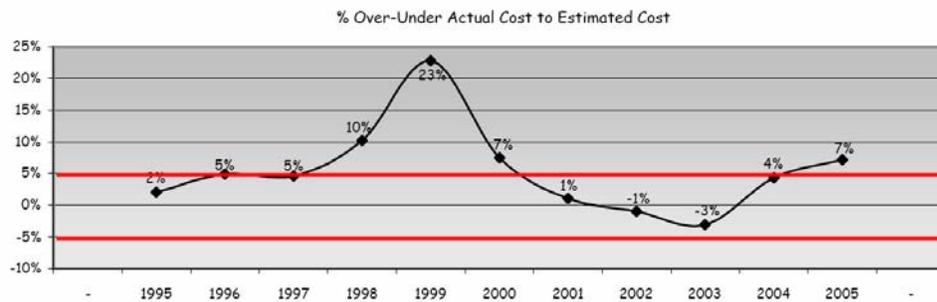
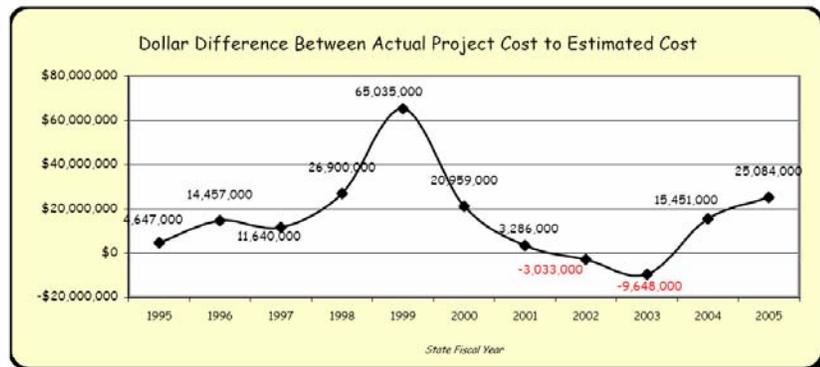
Annually, per State Fiscal Year.

### Revised Date:

July 1, 2005

Performance Data<sup>2</sup>

State Fiscal Year	Number of Projects in the 1-Year Program	Total 1-Year Program Estimate	Total Project Cost <sup>3</sup>	Total Project Cost over/under Program Estimate	%-age of Over-Under Program Estimate
1995	153	227,552,000	232,199,000	4,647,000	2%
1996	155	294,525,000	308,982,000	14,457,000	5%
1997	160	252,573,000	264,213,000	11,640,000	5%
1998	202	263,055,000	289,955,000	26,900,000	10%
1999	194	285,099,000	350,134,000	65,035,000	23%
2000	167	279,777,000	300,736,000	20,959,000	7%
2001	164	298,641,000	301,927,000	3,286,000	1%
2002	161	311,691,000	308,658,000	-3,033,000	-1%
2003	157	313,820,000	304,172,000	-9,648,000	-3%
2004	175	356,065,000	371,516,000	15,451,000	4%
2005	109	346,826,000	371,910,000	25,084,000	7%



<sup>1</sup> 1-Year Program: Department's one-year schedule of highway improvement projects.

<sup>2</sup> Data from the Project Scheduling Section's records and reports.

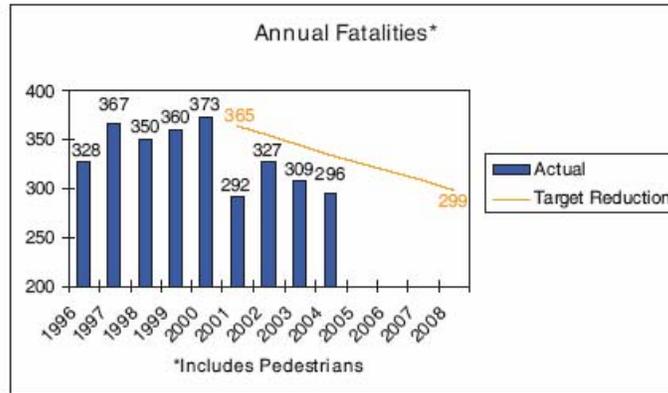
<sup>3</sup> Total project cost at the end of the fiscal year.

## Improve Safety

### Focus Areas and Results

**Reduce Fatalities:** Safety improvements made to the state highway system can help reduce the number of traffic related deaths.

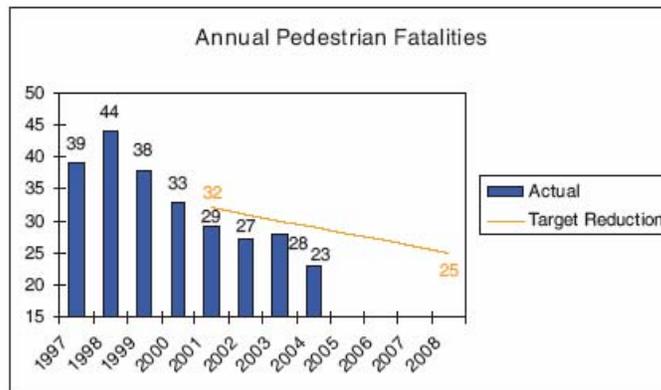
**Performance Target:** The department is committed to an ultimate goal of eliminating traffic related deaths by reducing the amount of fatalities on Utah highways by 2 percent each year. The target reduction is calculated from a baseline of 373 fatalities in the year 2000.



**Results:** In 2004, 296 people lost their lives on Utah roads, a reduction of 4 percent from the previous year.

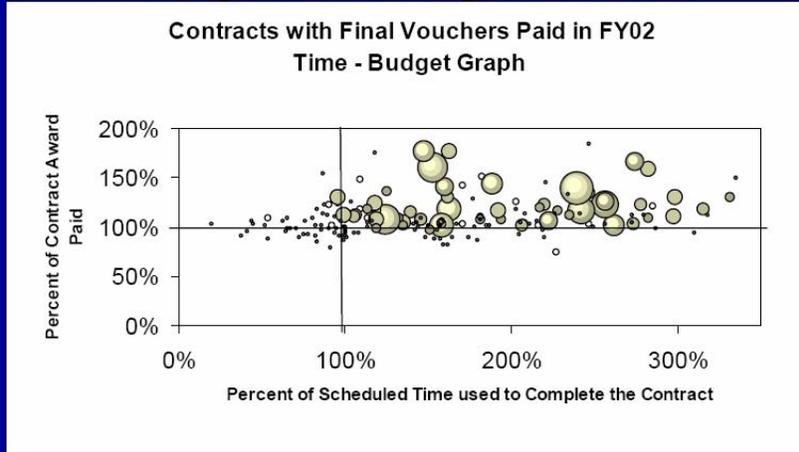
**Reduce Pedestrian Fatalities:** Through public awareness and education, school zone safety programs, trail enhancements and signal improvements, UDOT is making the state safer for pedestrians and bicyclists.

**Performance Target:** UDOT is committed to eliminating pedestrian fatalities by reducing the amount of deaths by 2 percent each year. The target reduction is calculated from a baseline of 33 fatalities in the year 2000.



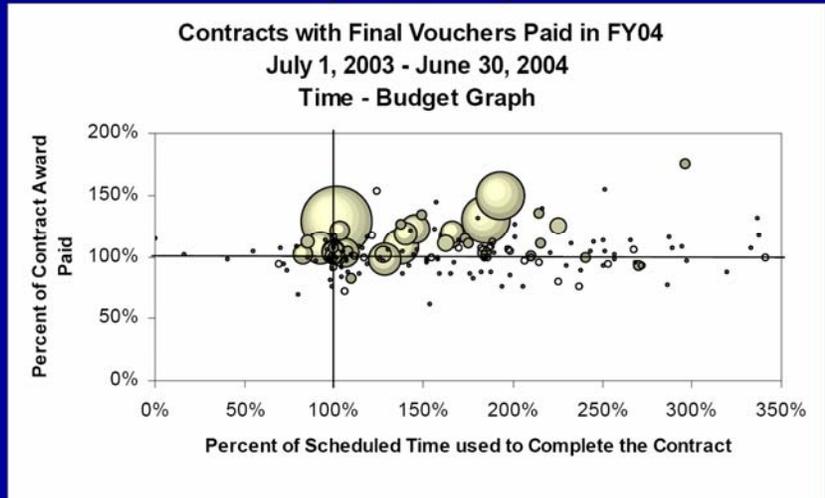
**Results:** In 2004, 23 pedestrians lost their lives, a reduction of 18 percent from the previous year.

## Each Bubble Represents a Completed Project FY02



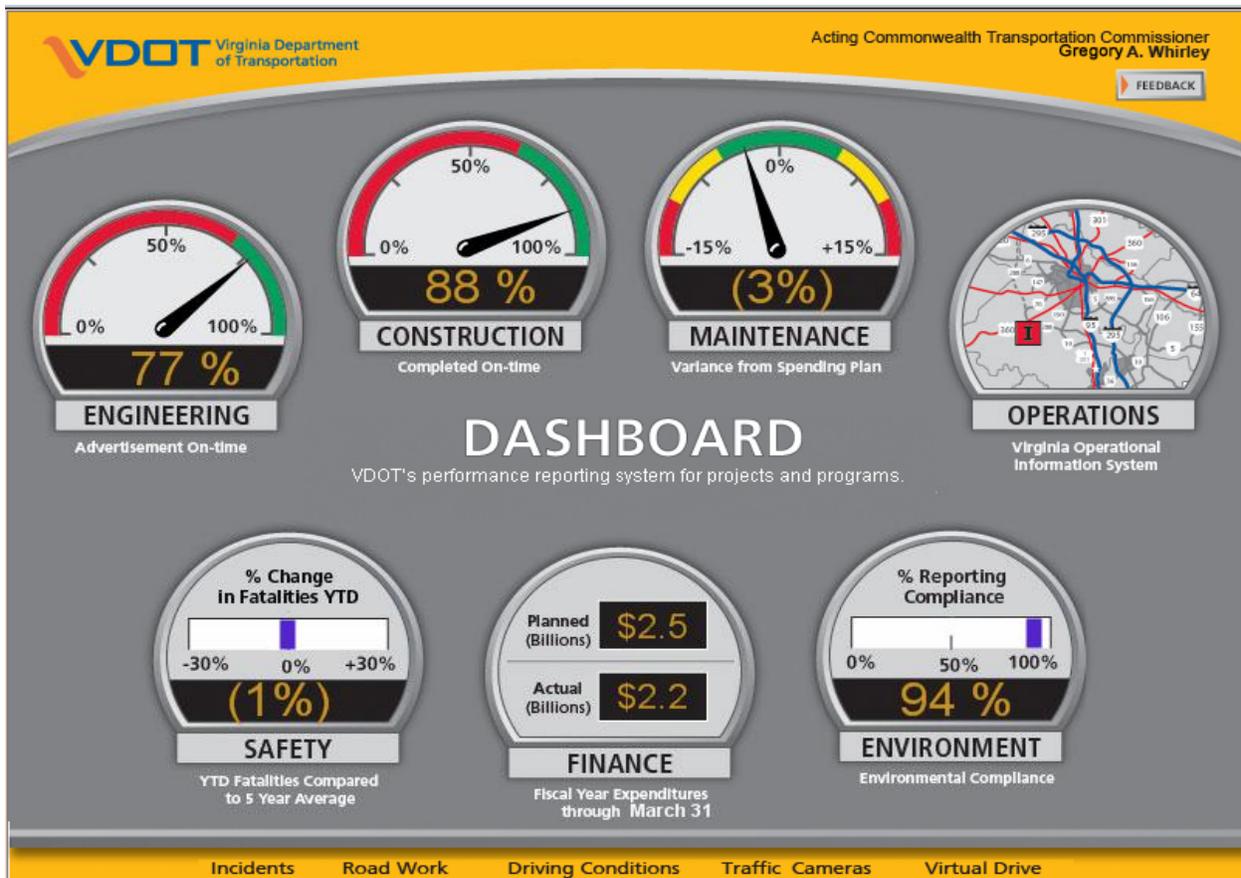
18

## Projects Completed, FY04 (Note Shift)



20

Source: Performance-Based Decision Making in Transportation: Ideal and Real Approaches. 2004.  
Virginia Department of Transportation.  
[www.trb-performancemeasurement.org/Jeff%20price%20Sun%20AM%20Workshop%201.PDF](http://www.trb-performancemeasurement.org/Jeff%20price%20Sun%20AM%20Workshop%201.PDF)



Source: Dashboard: Virginia Department of Transportation, Performance Reporting System for Projects and Programs, [dashboard.virginiadot.org/default.aspx](http://dashboard.virginiadot.org/default.aspx)

# REPORT CARD

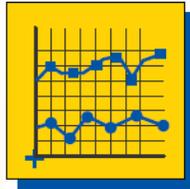
Commonwealth Transportation Board Meeting

Second Quarter FY04

January 14, 2004

## OVERVIEW

From Virginia's Transportation Commissioner Philip Shucet



### Financial Report FY04

Period Ending  
November 30, 2003

#### Cash Balances

- Highway Maintenance Fund
- \$69 million
- Transportation Trust Fund
- \$348 million
- VTA, Toll, Bond and Debt Service Funds
- \$800 million

#### YTD Revenues

- Forecasted
- \$1.16 billion
- Actual
- \$1.15 billion

#### YTD Expenditures

- Forecasted
- \$1.23 billion
- Actual
- \$1.28 billion

Last quarter, VDOT addressed the \$100 million budget shortfall Hurricane Isabel caused by increasing its \$3.7 billion FY04 budget by \$32 million and reducing administration costs and deferring some maintenance activities. Also, through strong financial management we received \$76 million in additional reimbursements from the Federal Highway Administration in October and November. Currently, cash balances are healthy, and our construction and maintenance programs are active with 405 contracts scheduled for completion this fiscal year.

In the second quarter, 29 percent of construction contracts scheduled for completion this fiscal year were on time. That's an improvement from 22 percent in the first quarter but well off the 40 percent target. The agency fell similarly short with maintenance contracts (see charts on page 2). Our improvement in managing deadlines

for work under way (below) has flattened out after steady improvement last year.

We obviously have more work to do to turn around our performance meeting deadlines. I do want to remind you that we are currently defining "on time" in the narrowest sense: original contract completion date, with no exceptions.

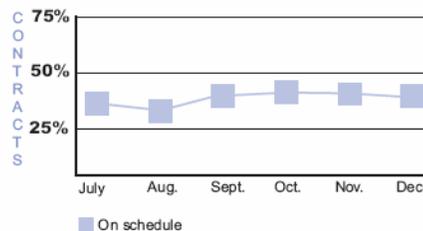
We continue to make progress in improving our budget estimates (bottom half of page 2). The successes there are a result of very specific program actions taken across the agency to improve cost estimating and cost management.

In the Notes section of page 2, you can see that VDOT is accomplishing real reform and working to hone its talents and improve its processes.

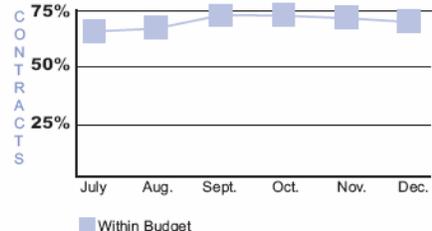
*Philip Shucet*

## STATUS FOR WORK UNDER WAY AS SHOWN ON DASHBOARD

Meeting Contract Deadlines  
Dashboard through December



Within Contract Budgets  
Dashboard through December



# How VDOT is Measuring Up

## Second Quarter Notes

In November, the CTB adopted a FRAN debt management policy that, along with other tighter policy parameters, limits debt service to no more than 25 percent of federal reimbursements and caps total outstanding principal at \$1.2 billion. In December, the Governor's Debt Capacity Advisory Committee endorsed this policy.

VDOT initiated a series of workshops with municipalities interested in managing their own transportation construction programs. Agreements to transfer program responsibility are expected to be signed in 2004 with the cities of Richmond, Virginia Beach, Hampton and Newport News.

VDOT was named an "Employer of Choice" by the American Council on Education because of its effective adult education programs.

Constructability reviews are now required for all VDOT construction projects. This requires that plans and specifications must be both biddable and buildable. Constructability reviews will be conducted early in the design process and at milestones throughout construction.

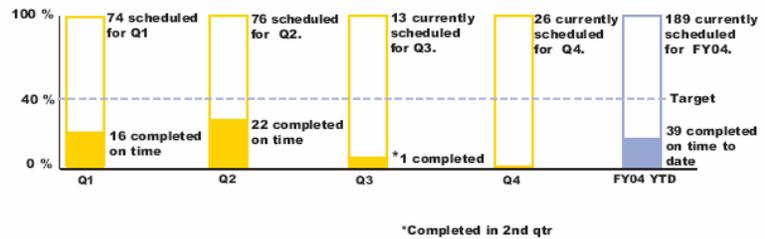
VDOT and the Federal Highway Administration signed a precedent-setting agreement on how the federally required environmental review process will be carried out for the I-81 corridor in Virginia. The Process Streamlining Agreement outlines a process to ensure that environmental issues are fully addressed in a specific, timely manner.

In the past three years the number of Automotive Service Excellence Blue Seal maintenance facilities at VDOT increased from 3 to 26. Across Virginia, that represents 35 percent of all certified shops – public and commercial.

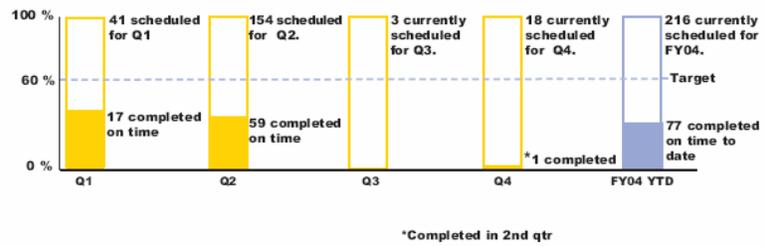
The Smart Road Bridge near Blacksburg and the Vietnam Veterans Memorial Bridge on the Pocahontas Parkway near Richmond both won national Awards of Excellence from the American Segmental Bridge Institute.



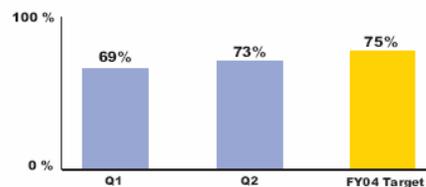
### FY04 CONSTRUCTION CONTRACTS: SCHEDULED VS. COMPLETED



### FY04 MAINTENANCE CONTRACTS: SCHEDULED VS. COMPLETED

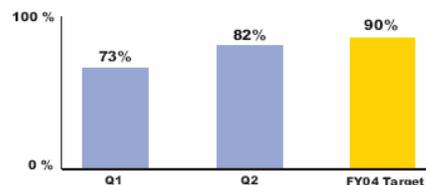


### CONSTRUCTION CONTRACTS COMPLETED WITHIN BUDGET



For the second quarter, 49 (73%) construction contracts were completed within budget, and 18 (27%) were over.

### MAINTENANCE CONTRACTS COMPLETED WITHIN BUDGET



For the second quarter 64 (82%) of maintenance contracts were completed within budget, and 14 (18%) were over.

## Cross-Cutting Management Issues

### Construction Employment Information

#### How Many Construction Workers Work on Active 2003 Transportation Funding Package Projects?

WSDOT has asked construction contractors working on the 2003 Transportation Funding Package projects to provide WSDOT with a “snapshot” estimate of the “average” direct jobsite employment on each Nickel job over the course of the quarter. The following table shows the prime contractors’ responses for their work and their on-site subcontractors on the projects that have gone to construction.



Bradley Hoffman and Robert Arnold of Totem Electric at a work site on SR 161 in Pierce County.

#### Average Number of Workers Employed by Prime and Subcontractors For Active Nickel Projects: Project/Contractor

	July - Sept 2005	Sept - Dec 2005
I-5/Salmon Creek to SR 205 (Hamilton Construction & its 67 Subcontractors)	48	37
I-90/Argonne Rd. to Sullivan Rd. (Scarsella Bros. & its 31 Subcontractors)	37	13
SR 527, 132nd St. SE to 112th St. SE (KLB Construction & its 42 Subcontractors)	33	34
SR 161/234th St E to 204th St. E (Scarsella Bros. & its 23 Subcontractors)	11	6
SR 203, NE 124th/Novelty Rd. Vic. Roundabout (Wilder Construction & its 29 Subcontractors)	2	2
I-5/Federal Way - S 317th St. HOV (Icon Materials & its 48 Subcontractors)	29	30
I-5, 2nd St. Bridge Replacement (Mowat Construction & its 30 Subcontractors)	26	16
SR 18, Covington Way to Maple Valley (Terra Dynamics & its 4 Subcontractors)	6	No Work
SR 18/Maple Valley to Issaquah/Hobart Rd. (Guy F. Atkinson & its 40 Subcontractors)	39	51
SR 31, Metaline Falls to International Border (M.A. Deatley Construction & its 18 Subcontractors)	34	12
SR 161, Jovita Blvd. to S 360th St. (Tri-State Construction & its 25 Subcontractors)	54	50
U.S. 12, SR 124 to McNary Pool (Steelman-Duff, Inc. & its 15 Subcontractors)	14	4
I-5, NE 175th St. to NE 205th St. (Pacific Road & Bridge & its 18 Subcontractors)	16	11
SR 161, 204th St. E to 176th St. E (Scarsella Brothers & its 16 Subcontractors)	30	12
SR 16, 36th St. to Olympic Drive NW (Woodworth & Company & its 14 Subcontractors)	10	7
SR 7, SR 507 To SR 512 Safety (Scarsell Bros., Inc. & its 9 Contractors)	No work	3
I-5, Roanoke Vicinity Noise Wall - Stage 2 (Wilder Construction Co. & its 11 Subcontractors)	12	4
SR 16 / Union Avenue to Jackson - HOV (Tri-State Construction & its 64 Subcontractors)	111	85
U.S. 395, NSC - Gerlach to Windermere (KLB Construction & its 22 Subcontractors)	27	27
I-5, Pierce Co. Line to Tukwila HOV - Stage 4 (Icon Materials & its 25 Subcontractors)	66	30
SR 240, I-182 to Columbia Center (Icon Materials & its 60 Subcontractors)	70	47
SR 24, I-82 to Keys Road (Max J. Kuney Company & its 37 Subcontractors)	41	47
SR 106, Skobob Creek Fish Passage (Quigg Bros., Inc. & its 13 Subcontractors)	7	7
SR 99, G. Washington Memorial - Aurora Ave. Bridge (Mowat Construction Co. & its 5 Subs)	8	3
U.S. 12, Jantz Road - Construct Frontage Rd. (Inl& Asphalt Co. & its 6 Subcontractors)	2	No Work
I-405 Totem Lake/NE 128th St. HOV Dir. Access/Freeway Station (Max J. Kuney & its 40 Subs)	52	67
I-5/48TH to Pacific Avenue - Core HOV (Kiewit Pacific Co. & its 49 Subcontractors)	8	26
I-5/SR 526 to Marine View Drive (Atkinson-CH2M Hill A Joint Venture & its 23 Subcontractors)	96	174
SR 9/SR 522 to 212th St SE Widening (Wilder Construction Co. & its 19 Subcontractors)	2	3
<b>TOTAL</b>	<b>891</b>	<b>808</b>

Source: “Measures, Markers and Mileposts.” 2005. Washington State Department of Transportation. [www.wsdot.wa.gov/Accountability/GrayNotebook.pdf](http://www.wsdot.wa.gov/Accountability/GrayNotebook.pdf)

# Travel Information: Quarterly Update



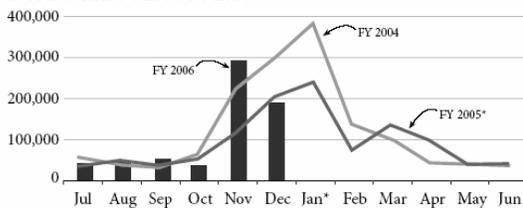
The 5-1-1 Travel Information hotline received a total of 521,833 calls the fourth quarter of 2005, with November call-volumes being the largest (i.e., seen as a sharp spike in the bar chart below). As shown in the charts below, the large increase in November was partly due to a rock slide at Snoqualmie Pass, where a catastrophic rock slide occurred earlier in September. The increase is also credited to calls for mountain pass information at the beginning of the winter season.

## System Enhancement to 5-1-1

In late December, technicians made major system enhancements to the 5-1-1 Travel Information System. WSDOT continues to work to improve the 5-1-1 Travel Information phone line. The most recent changes include:

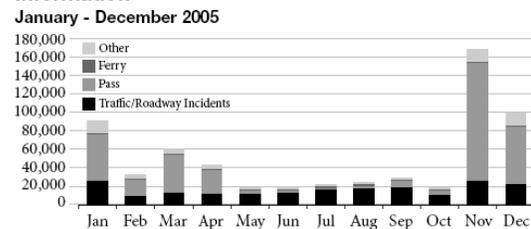
- Replacement of the voice-recognition and text-to-speech software, and added personalization on the voice-activated side of the 5-1-1 system
- Increased peak call capacity to 96 simultaneous phone lines

## Total Calls to Travel Information\* (5-1-1, 1-800-695-ROAD, 206-DOT-HWY) 3-Year Trend: FY 2004-FY 2006



Source: 511 CFR Summary Report.  
\* Starting January 2005, 1-800-ROAD and 206-DOT-HWY numbers connect directly to 5-1-1, and the call counts are reported in 5-1-1 call total.

## Types of Information Requested to 5-1-1 Travel Information\* January - December 2005



Source: 511 CFR Summary Report.  
\* Total number of information types will not add up to the total number of calls to 511 because more than one type of information may be requested in one call. Starting January 2005, 1-800-ROAD and 206-DOT-HWY numbers connect directly to 5-1-1, and the call counts are reported in 5-1-1 call total.

## On the WEB

WSDOT's travel information website provides real-time road and weather information to the traveling public. On-line information that the public can access includes roadway incidents, construction event updates, mountain pass information, and weather information.

## Web Usage Up

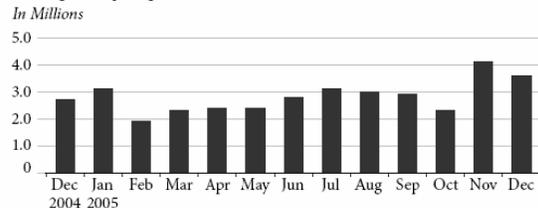
This quarter saw an increase of 47% over the same quarter last year. The main reason for this large increase was the occurrences of two rock slides on I-90, and an early snowfall that saw ski resorts opening before Thanksgiving. Because of the snowfall, November and December were WSDOT's busiest months ever with 4.1 and 3.6 million page views per day, respectively.

Average site usage in 2005 has grown by 47% over the previous year, and 108% over 2003. This magnitude of growth may continue as travel information services expand to new areas of the state.

Users of the transportation system are discovering the wealth of information available, and the timeliness of updates regarding traffic and travel. They are returning to the site, viewing more content, and staying on longer. A recent example of this success is a special site that was created while I-90 was closed due to a rock slide. Because this site was updated several times a day, it proved to be a well received resource for travelers.

## Website Usage

### Average Daily Page Views: December 2004 to December 2005



# Incident Response: Quarterly Update

## Program Trends

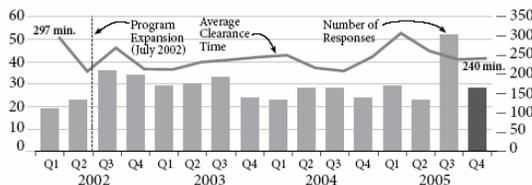
During the fourth quarter of 2005 (October - December), WSDOT Incident Response team members responded to 13,705 incidents. This was down 14% from last quarter's summertime peak of 15,881 responses. However, when compared with the same period in 2004, the number of incidents continues to increase consistent with a steady upward trend since program expansion in 2002 (as shown in the bar chart below). The average clearance time for all responses to incidents was 18 minutes. An incident also tends to invite rubbernecking /gawking which could suddenly slow traffic down, and may result in a secondary incident occurring. Please read the "Special Feature" article in this report describes a pilot project in Spokane to put up screens around the incident site.

### Type of Responses

All response types, except non-injury collisions, decreased in the overall number of responses to an off-peak season level. Responses to non-injury collisions increased moderately by 10%.

The large increase of responses to fatality collisions experienced during the third quarter of 2005, went down to a normally expected level (46% decrease) in the fourth quarter. The reason for the sharp increase in the responses to fatality collisions in the third quarter is being investigated. Incident Response is working to identify causes for this increase. The findings will be made available in a future issue of the *Gray Notebook*.

### Responses to Fatality Collisions January 2002 - December 2005



Source: WSDOT Incident Response Tracking System

### Incident Response Types

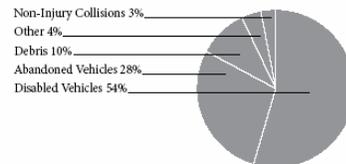
Primary Reason	October	November	December
Fatality Collisions	8	13	7
Injury Collisions	112	137	129
Non-injury Collisions	472	459	444
Disabled Vehicles	2,533	2,298	2,335
Abandoned Vehicles	874	754	816
Debris	399	331	257
Other	186	144	131
Supplemental Reason <sup>1</sup>	October	November	December
Fire	25	19	12
Hazardous Materials	7	8	7
Other Contacts	179	142	131

<sup>1</sup>Supplemental Reasons are in addition to or as a result of Primary Incident Types.

### Primary Response Reasons by Clearance Time

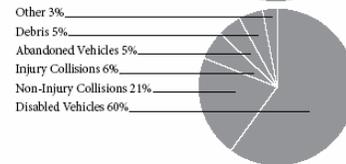
#### Incidents Lasting Less Than 15 Minutes (7,668)

There were 6 Fires and 2 Hazardous Materials involved incidents in addition to or as a result of above incidents.



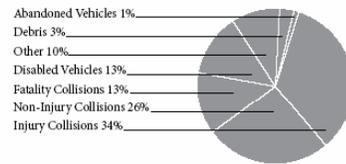
#### Incidents Lasting 15 to 90 Minutes (4,958)

There were 44 Fires and 8 Hazardous Materials involved incidents in addition to or as a result of above incidents.

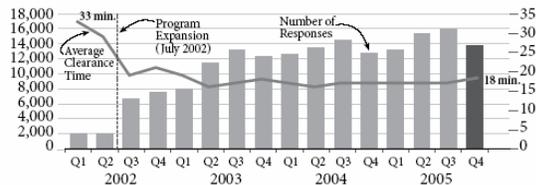


#### Incidents Lasting 90 Minutes and Longer (213)

There were 8 Fires and 12 Hazardous Materials involved incidents in addition to or as a result of above incidents.



### Number of Responses and Overall Average Clearance Time January 2002 - December 2005



Source: WSDOT Incident Response Tracking System

Note: Program-wide data is available since January 2002. Prior to Q3 of 2003, number of responses by IRT are shown. From Q3-2003, responses by Registered Tow Truck Operators and WSP Cadets have been reported in the total.

### Service Actions Taken for Non-Collision

	October	November	December
Traffic Control	456	472	486
Provided Fuel	404	390	334
Changed Flat Tire	284	255	241
Minor Repair	205	192	207
Pushed Vehicle	193	221	234
Towed Vehicle	55	54	72
Cleared Debris	373	297	229
Other Actions	1,488	1,295	1,328

Source: WSDOT Incident Response Tracking System

# Environmental Programs: Annual Update

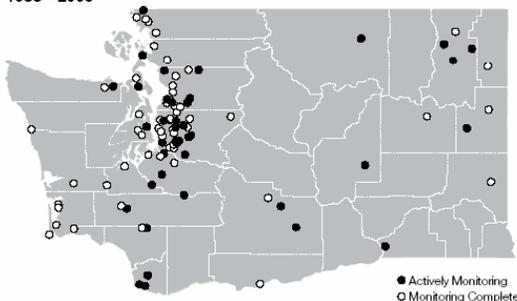
## Monitoring Replacement Wetlands

WSDOT replaces wetlands to address the state's Executive Order 89-10, which mandates that the actions of state agencies will result in no net loss of wetlands.

### Types of Mitigation

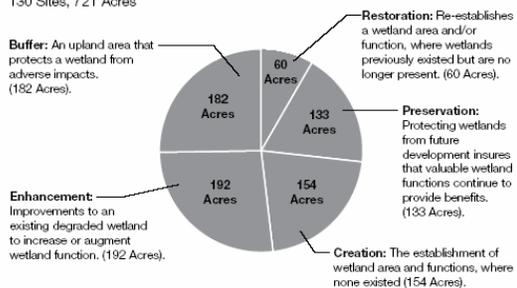
When transportation projects create unavoidable wetland impacts, wetlands are enhanced, restored, created, or preserved to achieve the no net loss policy. WSDOT has a total of 130 replacement wetland sites (721 acres). It can take years for a site to develop, so these sites undergo monitoring to evaluate success. Monitoring was initiated on two new replacement wetlands site in 2005. These two sites combined add 1.17 acres of created wetland, 1.31 acres of enhanced wetland, 0.42 acres of buffer, and 0.25 acres of preservation to WSDOT's inventory of replacement acreage.

### WSDOT Replacement Wetlands 1988 - 2005



### WSDOT Replacement Wetlands, 1988-2005<sup>1</sup>

**Total Acreage of Wetland Projects**  
130 Sites, 721 Acres



<sup>1</sup> Pie Chart: This also includes seven established sites in the Eastern Region that have not been included in previous *Gray Notebook* reports. These sites add 1.78 acres of wetland creation, 1.3 acres of wetland enhancement, and 6.2 acres of preservation.

Source: WSDOT Environmental Services Office

### New Replacement Wetland Sites

- U.S. 2 Winton Road Wetland Mitigation (Enhancement, Creation, Preservation)
- SR 20 Whiskey Creek Wetland Mitigation (Enhancement, Creation)

### Completed Replacement Wetlands

Successful sites have achieved reasonable ecological performance, and no longer need monitoring. Unsuccessful sites have not met requirements or achieved reasonable performance. Eleven more sites in 2005 achieved reasonable ecological success, bringing the total number of completed sites since 1988 to 70. The total sites judged successful in this group are 66 (313 acres). The four unsuccessful sites failed due to unpredicted or changed hydrology, the most important parameter of wetland success.

For additional detail on monitoring replacement wetlands and pictures of the different types of projects, see the *Gray Notebook* subject index at [www.wsdot.wa.gov/accountability/GrayNotebook.pdf](http://www.wsdot.wa.gov/accountability/GrayNotebook.pdf) and click on Wetland Mitigation and Monitoring. Annual wetland replacement monitoring reports can be read at [www.wsdot.wa.gov/environment/wetmon/MonitorRpts.htm](http://www.wsdot.wa.gov/environment/wetmon/MonitorRpts.htm)

### Replacement Wetlands Completed since 1988 (70 sites)

Years	Percent Successful
1988-2001	88%
1988-2002	91%
1988-2003	92%
1988-2004	93%
1988-2005	94%

Source: WSDOT Environmental Services Office

### Development of a Site Completion Process

Historically, federal and state permitting agencies did not have a defined process to close out a successful mitigation site. Recently, the Army Corps of Engineers (USACE) has begun to take steps intended to determine mitigation site permit compliance, and to close out sites as appropriate. Also, the draft guidance Wetland Mitigation in Washington State (available at [www.ecy.wa.gov/programs/sea/wet-updatedocs.htm](http://www.ecy.wa.gov/programs/sea/wet-updatedocs.htm)) contains proposed language regarding close outs of mitigation sites. In partnership with USACE, WSDOT has provided 19 site reports that will be used to develop a close out process for mitigation sites. More information on this process will be reported in subsequent editions of the *Gray Notebook*.

Source: "Measures, Markers and Mileposts." 2005. Washington State Department of Transportation. [www.wsdot.wa.gov/Accountability/GrayNotebook.pdf](http://www.wsdot.wa.gov/Accountability/GrayNotebook.pdf)

**APPENDIX F**  
STATE DOT EXAMPLES:  
BROCHURES

MINNESOTA DOT  
NORTH CAROLINA DOT  
MONTANA DOT

# Minnesota Department of Transportation

## Vision

Mn/DOT's vision affirms what citizens want for Minnesota's transportation:

- A coordinated transportation network that meets the needs of Minnesota's citizens and businesses for safe, timely and predictable travel.

## Mission

Mn/DOT's mission is to:

- Improve access to markets, jobs, goods and services and improve mobility by focusing on priority transportation improvements and investments that help Minnesotans travel safer, smarter and more efficiently.



## Investment Objectives

### Building More

- Address congestion, add highway capacity and increase statewide mobility through investments to remove bottlenecks and improve the performance of interregional highway corridors.
- Support cost-effective investments in transit systems and in highway transit advantage projects.
- Pursue long-range transportation funding policies and strategies that will reduce the state's significant backlog of critical highway and bridge construction and reconstruction projects, including "mega projects."

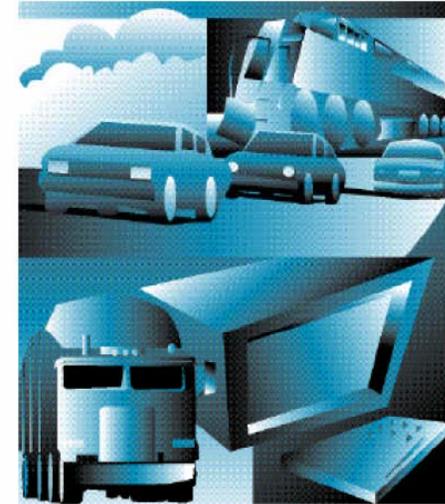
### Building Faster

- Accelerate construction of critical, long-delayed state highway and bridge projects when funding is made available.
- Shorten the duration of highway and bridge construction and reconstruction projects through innovative project development, delivery, construction and financing strategies, along with streamlining government review, permitting and other processes.
- Accelerate funding for highway transit advantage capital improvements that will support and encourage transit use in congested highway corridors.

### Moving Better

- Focus the state's limited financial resources on investments that improve travelers' safety, reduce traffic congestion, improve mobility in interregional corridors.
- Strengthen cost-effective locally supported transit options.
- Invest in major highway and transit projects that move the most people and goods in the most cost-effective manner to the destinations of choice.

## Strategic Plan 2003



**Helping Minnesotans Travel  
Safer, Smarter and  
More Efficiently**



MINNESOTA DEPARTMENT OF TRANSPORTATION

## Principles

Meeting Minnesota's transportation needs, now and in the future, is one of the top policy goals of the Pawlenty-Molnau Administration. Mn/DOT's work will be guided by the administration's governing principles:

- **Commitment to mission** – We will focus on what is important and do it well.
- **Focus on customers** – Our customers will be the center of every decision we make and every service we provide.
- **Simplify government** – Government will be reformed. Services will be improved. Government will become more accountable.
- **Manage for results** – Develop challenging indicators and benchmarks for all levels of government, measure results and use the outcomes to guide decisions and direct our work.
- **Improvement by innovation** – We will encourage competition, collaboration, privatization, out-sourcing and the increased use of technology and e-government services to improve the work we do.

Mn/DOT will implement these principles by following its Strategic Plan. Mn/DOT's vision, mission, strategic directions and investment objectives describe the agency's purpose and priorities.



## Strategic Directions

### Safeguard what exists

Mn/DOT's most important priority is to operate, maintain and preserve Minnesota's existing transportation systems and infrastructure by:

- Maintaining the state's physical transportation assets – highways, bridges, airports, water ports, bikeways and freight, bus, rail and intermodal facilities – in sound and safe condition.
- Protecting system performance through effective design, access management, financial support and coordination with local transportation partners.
- Minimizing system downtime due to incidents, construction activities and other disruptions.
- Safeguarding the security of Minnesota's transportation infrastructure.



### Make the transportation network operate better

Mn/DOT will implement a balanced cost-effective statewide strategy to make transportation systems operate better by:

- Advancing investments that improve the safety of the traveling public.
- Investing in and improving the system of interregional highway corridors that connect the state's regional trade centers.
- Addressing traffic congestion by improving bottlenecks on the trunk highway system in the Twin Cities metro area or Greater Minnesota.
- Improving mobility within highly traveled corridors through investments in transit advantages on trunk highways, incident management and intelligent transportation systems technology.
- Expanding innovative partnerships in the construction, delivery and operation of transportation infrastructure and services.

### Make Mn/DOT work better

Mn/DOT will continuously improve service and efficiency in order to give citizens the best value for their tax dollars by:

- Encouraging innovation, competition, privatization, out-sourcing, e-government services and other creative, cost-saving solutions.
- Listening well and being responsive to customers, stakeholders and employees.
- Managing for results and being accountable for our decisions and actions. Investments will be driven by current priorities.
- Recognizing and celebrating innovation, responsible risk-taking and measurable success.
- Streamlining decision making and right-sizing the organization.



For more information:  
[www.dot.state.mn.us](http://www.dot.state.mn.us)

Source: Minnesota Department of Transportation. [www.dot.state.mn.us/information/statplan00/strategicplan.pdf](http://www.dot.state.mn.us/information/statplan00/strategicplan.pdf)

# North Carolina Department of Transportation

## Strategic Plan for Transportation

### System Vision (External)

The Transportation System in North Carolina will provide safe, affordable choices for the movement of all people and products. The system will support and sustain economic opportunities throughout the state. It will be a well-maintained, reliable, multi-modal and connected system that is considerate of local land-use plans, natural resources and the environment. This system will be planned and operated in partnership with communities, local, regional, state and federal agencies, and private entities.

### Department Vision (Internal)

The North Carolina Department of Transportation will make decisions in an open and collaborative manner that is responsive to the needs of its customers and employees. The department will promote a safe, desirable working environment and will invest in the continuous improvement and development of the organization and its employees. Employees will be customer friendly, technically competent, fiscally responsible, and environmentally sensitive.

*For more information  
please contact us at:*

**NCDOT Strategic Plan**  
P.O. Box 25201  
Raleigh, NC 27611

W

**Phone:** 1-877-DOT-4YOU

**Email:** [Strategic Plan, Contact Us](#)

**Web:** [www.ncdot.org](http://www.ncdot.org)

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*Charting a Course for a New Century*

[www.ncdot.org/planning/strategicplan/SPBROCHURE.pdf](http://www.ncdot.org/planning/strategicplan/SPBROCHURE.pdf)

*The Strategic Plan is the Board of Transportation Policy Document that will guide the functions to be carried out by the North Carolina Department of Transportation*

### Mission

Provide and support an integrated transportation system and related services that enhance the state's well-being.

### Guiding Principles

- Balance
- Choices
- Customer Focus
- Effective Decision Making
- Integrity
- Open Communication
- Partnership
- Performance Excellence
- Safety
- Stewardship

**Goal** - Provide a safe and well-maintained interconnected transportation system that offers modal choices for the movement of all people and goods

#### Objectives

- Strive to meet transportation system needs for services, construction and maintenance
- Develop partnerships with other transportation providers
- Support the development of multi-modal transportation systems
- Ensure transportation safety through the enforcement of applicable state and federal laws
- Continuously monitor and update the department's long-range transportation plan

**Goal** - Provide quality customer service

#### Objectives

- Understand customer requirements
- Respond to customer needs in a timely manner
- Strive to meet customer expectations in a customer friendly manner
- Regularly assess the quality of customer service

**Goal** - Demonstrate responsible stewardship of resources

#### Objective

- Preserve and enhance natural, cultural and human resources while providing a safe and well-maintained interconnected transportation system

**Goal** - Develop efficient processes to provide quality transportation services

#### Objectives

- Move projects from conception to completion quickly and efficiently with regular progress completion assessments
- Apply technology to support efficient processes and effective decision-making
- Establish policies and procedures that are consistent with the mission, vision, and guiding principles
- Regularly assess progress toward goals and objectives
- Establish an interactive public communication process
- Continually search for innovative and flexible transportation solutions including Intelligent Transportation Systems (ITS)

**Goal** - Demonstrate responsible stewardship of fiscal resources

#### Objective

- Maximize the effective use of existing and potential financial resources

**Goal** - Support the development of sustainable, vibrant communities

#### Objectives

- Collaborate with communities in land-use planning that is consistent with community values and state goals
- Promote the integration of transportation and land-use planning

**Goal** - Maintain a quality workforce

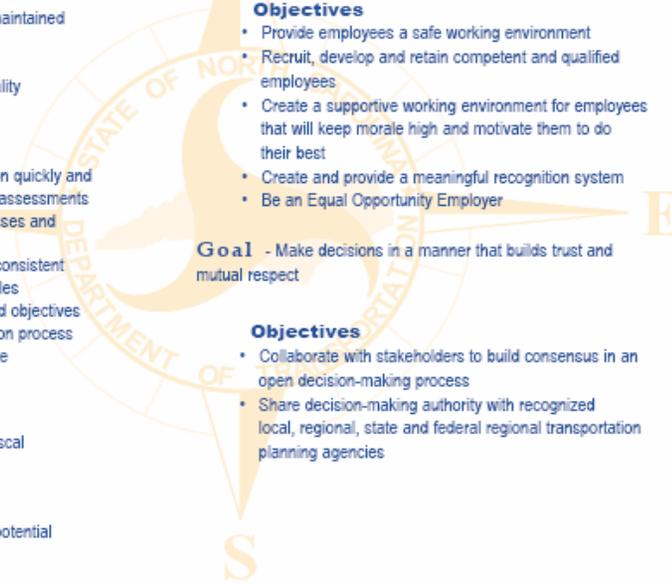
#### Objectives

- Provide employees a safe working environment
- Recruit, develop and retain competent and qualified employees
- Create a supportive working environment for employees that will keep morale high and motivate them to do their best
- Create and provide a meaningful recognition system
- Be an Equal Opportunity Employer

**Goal** - Make decisions in a manner that builds trust and mutual respect

#### Objectives

- Collaborate with stakeholders to build consensus in an open decision-making process
- Share decision-making authority with recognized local, regional, state and federal regional transportation planning agencies



# Montana Department of Transportation



## TranPlan 21

TranPlan 21, Montana's long-range transportation plan, is part of an ongoing process that regularly identifies transportation issues, evaluates public and stakeholder needs and priorities, and establishes and implements policy goals and actions. This process guides MDT in the development and management of a multimodal transportation system that connects Montana residents and communities to each other and the world.

MDT developed the original TranPlan 21 in 1994 and 1995. This brochure summarizes the policy goals and actions developed during the 2002 update of TranPlan 21. For a complete copy of TranPlan 21, visit MDT's website at [www.mdt.state.mt.us](http://www.mdt.state.mt.us) or call 800-714-7296.

MDT's Mission is to:

Serve the public by providing a transportation system and services that emphasize quality, safety, cost effectiveness, economic vitality and sensitivity to the environment.

IMAGE: BICYCLISTS ON HIGHWAY IMAGE COURTESY OF ADVENTURE CYCLING ASSOCIATION, PHOTO BY GREG SIPLE

### Roadway System Performance ceers

**POLICY GOAL C.** Improve the productivity of the roadway system.

- Action C.1. Include consideration of public transit needs in updates to the Geometric Design Standards and identify criteria and locations for transit supportive design.
- Action C.2. Identify and deploy cost-effective Intelligent Transportation Systems applications to improve safety and system productivity.
- Action C.3. Encourage the metropolitan planning organization areas to include enhanced traffic control and management systems in their long-range plans.
- Action C.4. Strengthen MDT's traffic operations capability to reduce delay and improve travel times through better traffic management.

### Public Transportation

**POLICY GOAL A.** Promote and support increased use of public transportation systems.

- Action A.1. Support local promotional/educational programs to publicize public transportation opportunities.
- Action A.2. Ensure highway improvements address public transportation needs.
- Action A.3. Continue to provide state-level funding support for transit by providing a fixed amount of funding for rural transit systems "off the top" of Surface Transportation Program funds, and transfer Urban Highway funds to transit at the request of local governments.
- Action A.4. Coordinate state planning, urban area and transit system development planning and management.
- Action A.5. Assist communities to establish transit systems to meet future travel demands.
- Action A.6. Monitor and report on transit system performance using the public transportation management system.

**POLICY GOAL B.** Preserve existing intercity public transportation service and encourage/facilitate the development of new services.

- Action B.1. Promote the use of and communicate the availability of Section 5311(f) funds for intercity passenger service.
- Action B.2. Support the provision of intercity bus service through TransAIDE.
- Action B.3. Work to improve intermodal passenger facilities.
- Action B.4. Coordinate with Amtrak, the Congressional delegation, and others to facilitate increased use of rail and preserve existing service levels.
- Action B.5. Ensure that Montana's interests in maintaining current and expanding passenger rail service are addressed in any national decision-making concerning increased Amtrak service.

**POLICY GOAL C.** Work to improve service to social service passengers and the transportation disadvantaged—the elderly, children at risk, low income, and persons with disabilities—through interagency coordination.

- Action C.1. Improve state agencies and local provider cooperation in funding coordination.
- Action C.2. Use TransAIDE funding as a medium for improved coordination.
- Action C.3. Work with the Public Service Commission to facilitate easier entry into passenger service provision (especially Medicaid transportation).

**POLICY GOAL D.** Identify and implement transportation demand management actions that will work in Montana.

- Action D.1. Continue to work with metropolitan planning organizations and urban areas to include demand-side strategies in their plans.
- Action D.2. Work with other state agencies to develop a transportation demand management program for state government.
- Action D.3. Support the implementation of rural ridesharing.



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## TranPlan 21 | 2002 Update



Montana's Multimodal  
Transportation Plan  
Policy Goals & Actions  
State of Montana  
Department of Transportation

[www.mdt.state.mt.us/publications/docs/brochures/tranplan21/tranplan21bro.pdf](http://www.mdt.state.mt.us/publications/docs/brochures/tranplan21/tranplan21bro.pdf)




## Adopted TranPlan 21 Policy Goals and Actions:

### Economic Development

**POLICY GOAL A.** Preserve the efficient functioning of the transportation system used by Montana's export-oriented ("basic") industries to access regional, national, and international markets.

- Action A.1. Work with Montana industry and shippers on a continuing basis to identify infrastructure, regulatory, and administrative barriers to their efficient use of the transportation system.
- Action A.2. Use input from A.1 and technical analysis to identify the freight mobility needs of Montana's basic industry on the segments of the state highway system where growth is forecast and specify strategies for addressing these needs.
- Action A.3. Continue to provide state-level leadership and pursue opportunities in regional initiatives to increase the productivity of the motor carrier industry.

**POLICY GOAL B.** Monitor and address capacity needs arising from Montana's economic growth trends.

- Action B.1. Specify strategic development transportation linkages based on emerging travel demands and findings from the Highway Reconfiguration Study.
- Action B.2. Identify and address deficiencies in the strategic transportation network.
- Action B.3. Consider economic development in the evaluation for prioritizing and scoping highway reconstruction projects.

**POLICY GOAL C.** Support state and local economic development initiatives to maximize new economic opportunities.

- Action C.1. Support business retention, recruiting, and other related activities of the Governor's Office of Economic Opportunity.
- Action C.2. Establish an economic opportunities program to help fund roadway projects that support business attraction and retention efforts.
- Action C.3. Coordinate with and provide support to local economic development initiatives.
- Action C.4. Identify airport improvements and statewide aviation strategies that will support economic development as part of Montana's continuous statewide aviation planning process.
- Action C.5. Provide state-level leadership to evaluate whether there are possibilities for reducing the cost and increasing the frequency and reliability for out-of-state air travel.
- Action C.6. Participate in multi-state and regional initiatives that facilitate international trade by identifying and addressing bottlenecks.

**GOAL SETTING AND ACTION DEVELOPMENT APPROACH**



The flowchart illustrates the process from identifying goals and issues to implementation. It starts with 'Goals/Issues and Action Development' in the center, which is influenced by 'Policies/Issues and Objectives of existing policy/action' and 'Policies/Issues and Objectives of new policy/action'. This central step leads to 'Implementation', which is supported by 'Policies/Issues and Objectives of existing policy/action' and 'Policies/Issues and Objectives of new policy/action'. The process is also informed by 'Accounts for Federal and State requirements' and 'Consideration of state and federal system conditions'. The final outcome is 'Evaluate system performance and determine actions'.

**POLICY GOAL D.** Support the tourism industry through promoting access to recreational, historical, cultural, and scenic destinations.

- Action D.1. Promote tourism through improved rest areas and co-location of travel information centers.
- Action D.2. Support state and local agencies to market tourist travel and tourist nodes.
- Action D.3. Coordinate with federal agencies, tribal governments, neighboring states, and Canadian provinces.

**POLICY GOAL E.** Develop MDT's organizational capacity to support economic development.

- Action E.1. Strengthen MDT's capability to support economic development.
- Action E.2. Communicate MDT's role in economic development opportunities for Montana firms to do business with MDT, economic development performance objectives, and associated accomplishments.
- Action E.3. Monitor and evaluate economic development-driven travel demands and assess the investments required to address them as part of the ongoing planning process.
- Action E.4. Conduct outreach to representatives of mining industries.
- Action E.5. Provide technical support and information so that economic development needs are considered in MPO planning, MDT corridor planning, and project development.
- Action E.6. Examine route signing and designation statewide to identify methods to support trade and economic development efforts.

### Traveler Safety

**POLICY GOAL A.** Reduce the number and severity of traffic crashes on Montana's roadways.

- Action A.1. Review and strengthen the procedures for identifying and defining safety deficiencies and needs at the project planning and development levels by establishing a "reconstruction with safety" improvements category.
- Action A.2. Conduct a highway safety management self-assessment and implement the recommendations.
- Action A.3. Implement the 1999 Access Management Project recommendations for approach permits as a priority and the other components of the recommended program.
- Action A.4. Consider results of the 2002 Montana Bicycle Safety Study in addressing bicycle safety issues.
- Action A.5. Conduct an assessment of the Safety Management System information collection and reporting needs to improve efforts to address traveler safety issues.

- Action A.6. Address safety requirements, including both driver fatigue and personal safety, in updates to the Rest Area Plan.
- Action A.7. Conduct a study of pedestrian safety conditions and needs.
- Action A.8. Continue to monitor and evaluate animal and vehicle crash mitigation research methods and projects in Montana.

**POLICY GOAL B.** Provide leadership and coordinate with other Montana agencies to improve traveler safety.

- Action B.1. Establish and maintain high-level statewide inter-agency coordination to improve traveler safety and develop an agenda for action.
- Action B.2. Provide leadership and support to implement the results of Action B.1.
- Action B.3. Continue providing ongoing leadership in air traveler safety.

### Access Management

**POLICY GOAL A.** Improve corridor level access management to preserve the highway system.

- Action A.1. Establish an MDT Access Management Manual.
- Action A.2. Develop and implement approach standards as identified in the 1999 Access Management Project final report.
- Action A.3. Establish an Access Management Plan that identifies and helps preserve priority corridors.
- Action A.4. Communicate the performance benefits arising from an access management policy.

### Land Use Planning

**POLICY GOAL A.** Provide technical support and leadership to encourage local jurisdictions to support transportation corridor preservation and management through their land use planning and development permitting authority.

- Action A.1. Work with local jurisdictions to create a "tool kit" of actions that they can take to support corridor preservation through their development review and land use planning authority.
- Action A.2. Work with local jurisdictions in the early identification of urban and rural corridors under development pressure.
- Action A.3. Continue to support local government transportation planning activities and ensure new urban areas have transportation plans to guide system development.
- Action A.4. Maintain MDT's capability to provide land use driven travel demand forecasting for MPOs.



**POLICY GOAL B.** Consistently apply MDT's Systems Impact Action Process to ensure developers equitably mitigate their impacts to the highway system.

- Action B.1. Provide technical support to local governments in developing funding partnerships to accelerate project development.
- Action B.2. Explore and develop tools to equitably distributed improvement costs on developing corridors regardless of sequencing of the developments.
- Action B.3. Provide training and support on application of access management and Systems Impact Action Process to local governments and MDT staff.

### Bicycle and Pedestrian Transportation

**POLICY GOAL A.** Institutionalize bicycle and pedestrian modes.

- Action A.1. Continue the MDT Bicycle and Pedestrian program.
- Action A.2. Work with the Department of Commerce to maintain bicycle-related tourist guides and information.
- Action A.3. Assist other units of government to provide transportation facilities that encourage or consider use by bicyclists and pedestrians.
- Action A.4. Prepare and disseminate public service announcements addressing bicycle and pedestrian safety.
- Action A.5. Consider results of the 2002 Montana Bicycle Safety Study in addressing bicycle safety issues.
- Action A.6. Develop an updated bicycle and pedestrian use baseline.

**POLICY GOAL B.** Target bicycle and pedestrian improvements to account for differences in current and future use.

- Action B.1. Identify the most significant bicycle routes designated through metropolitan planning organization and urban areas plans and selected rural "touring routes" with the greatest demand or potential demand as the basis for planning and system improvement decisions.
- Action B.2. Establish a consistent planning approach and design guidelines for incorporating bicycle and pedestrian facilities into highway improvement projects.
- Action B.3. Consider further bicycle and pedestrian improvements based upon proven use or expected future use.
- Action B.4. Improve bicycle and pedestrian facilities in Montana through incorporation in existing projects.

- Action B.5. Make selected bicycle and pedestrian improvements in urban areas as a congestion management and air quality improvement strategy.
- Action B.6. Maintain consistent bicycle and pedestrian friendly design and maintenance standards.

### Roadway System Performance

**POLICY GOAL A.** Establish explicit priorities for roadway improvements.

First Priority – Preservation of Montana's Existing Highway System  
Second Priority – Capacity Expansion and Mobility Improvement  
Third Priority – Other Improvements

- Action A.1. Enhance the Performance Programming Process (P<sup>2</sup>) to strengthen the link between policy and planning goals and project selection.
- Action A.2. Provide and disseminate transportation system performance information.
- Action A.3. Regularly update the cost allocation study to ensure equity in user fees and include analysis of Secondary Highway System use.
- Action A.4. Assist local jurisdictions to improve their pavement management practices and to support their use of pavement management systems.

**POLICY GOAL B.** Preserve mobility for people and industry in Montana.

- Action B.1. Establish criteria (goals and guidelines) to determine when to add capacity as part of reconstruction projects.
- Action B.2. Establish and prototype a process and guidelines for developing corridor-level strategies that address reconstruction needs.
- Action B.3. Establish and implement proactive corridor preservation in corridors forecast to have capacity constraints over the next twenty years.
- Action B.4. Inform local planning and development officials of the State's desire to preserve key transportation corridors, encourage and assist local jurisdictions to address right-of-way preservation in local land use plans, access management programs, and to support MDT objectives for these transportation corridors.
- Action B.5. Pursue advanced acquisition of right-of-way (fee simple or less than fee simple) on highways that are currently congested and forecasts indicate will be congested in the next twenty years.
- Action B.6. Develop a Context Sensitive Design tool kit to support project development.





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