

2007

Colorado Department of Transportation

Fiscal Year 2007  
Annual Performance Report



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## Executive Summary

**Each year, the Colorado Department of Transportation (CDOT) is provided with tax dollars that it must invest wisely to deliver positive results for Colorado's drivers and communities.**

Since 1998, CDOT has prepared an Annual Performance Report to communicate the results of our efforts. As in past reports, performance is reported in the four categories where CDOT invests taxpayer dollars – Safety, System Quality, Mobility and Program Delivery. An update on the status of the 28 high priority projects approved by the Colorado General Assembly in 1999 is also included.

For the first time, “traffic lights” have been added to the report. These traffic lights indicate how the department rates our performance in relation to objectives we established for ourselves. Objectives were established for primary and secondary measures. Green lights indicate that an objective has been achieved or exceeded. Yellow lights indicate that progress toward an objective has been made, but ultimate performance fell short. Red lights indicate a failure to achieve a performance objective. This format provides a concise way of reporting our results, but red, yellow or green light only begin to tell the story of how the department is performing. Special attention has been paid to discussing where performance fell short and how the department is working to improve performance.

This report is focused on answering the question, is CDOT making the best use of the resources that have been made available to it? In general, the answer is yes. As is documented in the pages of this report, CDOT continually strives to improve its performance. In addition to reporting our performance, text boxes discuss how the department is engineering safer roads, stands as a national leader in the condition of our bridges, manages our maintenance program and partners with other agencies to reduce drunk driving and increase transit ridership.



Colorado relies on CDOT to provide a safe and efficient state highway system that supports economic prosperity, while protecting the state’s environment and natural beauty.

The Annual Performance Report does not attempt to answer the question: is CDOT delivering the transportation system Colorado needs to thrive in the 21st century? That is not the report’s mission, but it is worth commenting on given the attention that new funding proposals for transportation are receiving. As Colorado’s population continues to grow the demands placed on our aging infrastructure of roads and bridges also grows. Approximately 65 percent of CDOT’s revenue comes from State and Federal gasoline taxes. The state gas tax of \$0.22/gallon has not changed since 1991 and the federal gas tax of \$0.18/gallon has not changed since 1993. In contrast, the costs of asphalt, concrete and steel have reached record levels in recent years and the labor market has demanded that wages increase with inflation. The latest data suggest that years of underinvestment are about to catch up with Colorado’s transportation system. Just eight years from now there will be:

- triple the percent of bridges in poor condition,
- double the amount of delay in congested corridors,
- 20 percent more pavement in need of total reconstruction and an
- F grade for maintenance, down from a B-.

The decline has already begun with increases in poor pavement and poor bridge condition in the past year.

As Governor Ritter’s Panel on Transportation Finance and Implementation recently observed, “Colorado’s transportation system faces a quiet crisis. Colorado must address the deterioration of our transportation infrastructure and the continued erosion of mobility that looms in the near future.” Without additional resources Coloradoans should expect the condition of their transportation system to deteriorate, even as CDOT improves its organizational performance.

**The good news is that given sufficient resources, CDOT is capable of providing Colorado with the transportation system it needs to thrive in the 21st century.**

**Estimated 2035 State Highway System Performance Outcomes**

	INVESTMENT SCENARIO	Forecast Revenue	Cost to Sustain Current Performance	Cost to Accomplish Vision
	<b>TOTAL INVESTMENT</b> (2008 Dollars in Billions) CDOT Highway Funds Only	<b>\$28B</b>	<b>\$64B</b>	<b>\$107B</b>
<b>PERFORMANCE MEASURE</b>	<b>Congestion*</b> (Average minutes of daily delay per traveler in congested corridors)	<b>70</b>	<b>22</b>	Corridor Vision Improvements / Modal Choices <b>&lt;22</b>
	<b>Maintenance Grade</b>	<b>F</b>	<b>B</b>	<b>B</b>
	<b>Pavement Condition</b>	25% Good / Fair	60% Good / Fair	75% Good / Fair
	<b>Bridge Condition</b>	60% Good / Fair	95% Good / Fair	100% Good / Fair
	<b>Safety</b> (Fatality rate per 100M vehicle miles traveled)	<b>1.26</b>	<b>1.10</b>	<b>1.00**</b>

\* Congestion is one component of the mobility investment category \*\* Fatality rate may decrease with the passage of a primary seat belt law

## SECTION 1 | Paying for Performance – Achieving Results

**The Colorado Department of Transportation (CDOT) is primarily responsible for the development and maintenance of the more than 23,000 lane miles of state and interstate highways in Colorado.**

The department also conducts statewide planning studies for all modes of transportation and administers state and federal transit funding. Like any organization, public or private, CDOT requires financial and human resources to deliver results.

In the pages that follow, the department reports on the results of its efforts in Fiscal Year 2007 (July 2006 through June 2007). Fiscal Year 2007 is the most recent year for which the department has complete performance data. [Section One](#) provides an overview of department finances and investment strategy; [Section Two](#) summarizes key performance indicators; [Section Three](#) details the department's performance and [Section Four](#) offers perspectives on future performance.

### Who pays for CDOT's Operations?

If you've purchased gas or registered a vehicle in Colorado, you have.

In Fiscal Year 2007 the department collected \$1.5 billion in revenues. \$1 billion of funding was supplied from the Colorado Highway Users Trust Fund and the Federal Highway Administration. Both of these sources are primarily funded by state and federal gas taxes. These funds were spent on a combination of maintenance and construction. Colorado drivers and transit riders benefited from an unusually large transfer of \$500 million of sales and income tax revenues to the department. This occurred as result of a strong economy and the passage of Referendum C in 2005. These revenues were spent on highway construction and transit projects across the state.

### How does CDOT invest tax dollars?

The department's governing board, the Colorado Transportation Commission, has developed investment categories to apply the department's resources effectively and efficiently. The department exists to provide for safe and convenient travel throughout Colorado, to preserve the public's multi-billion dollar investment in its transportation infrastructure, and to responsibly spend the resources made available by tax payers. These functions – safety, mobility, system quality and program delivery – serve as the department's investment categories. Each investment category has specific performance objectives. Performance measures provide a quantitative foundation for discussion on how to best invest tax payer dollars. Each category is described briefly below:

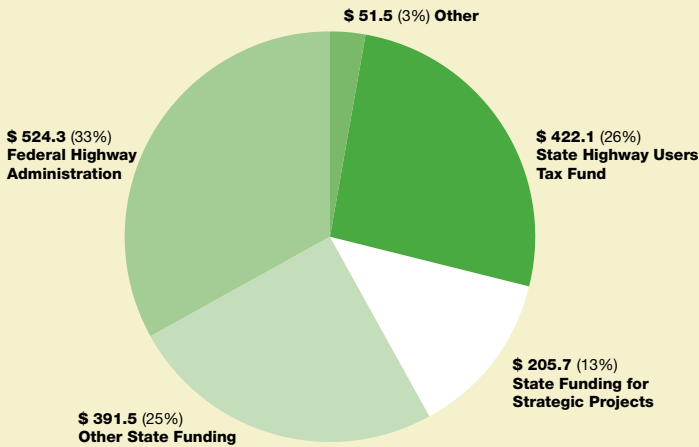
- **Safety** – Services, programs and projects that reduce fatalities, injuries and property damage for all users and providers of the system.
- **System Quality** – Activities, programs and projects that maintain the physical (integrity/condition) function and aesthetics of the existing transportation infrastructure.
- **Mobility** – Programs, services and projects that enhance the movement of people, goods and information.
- **Program Delivery** – Functions that enable the successful delivery of CDOT's programs, projects and services.



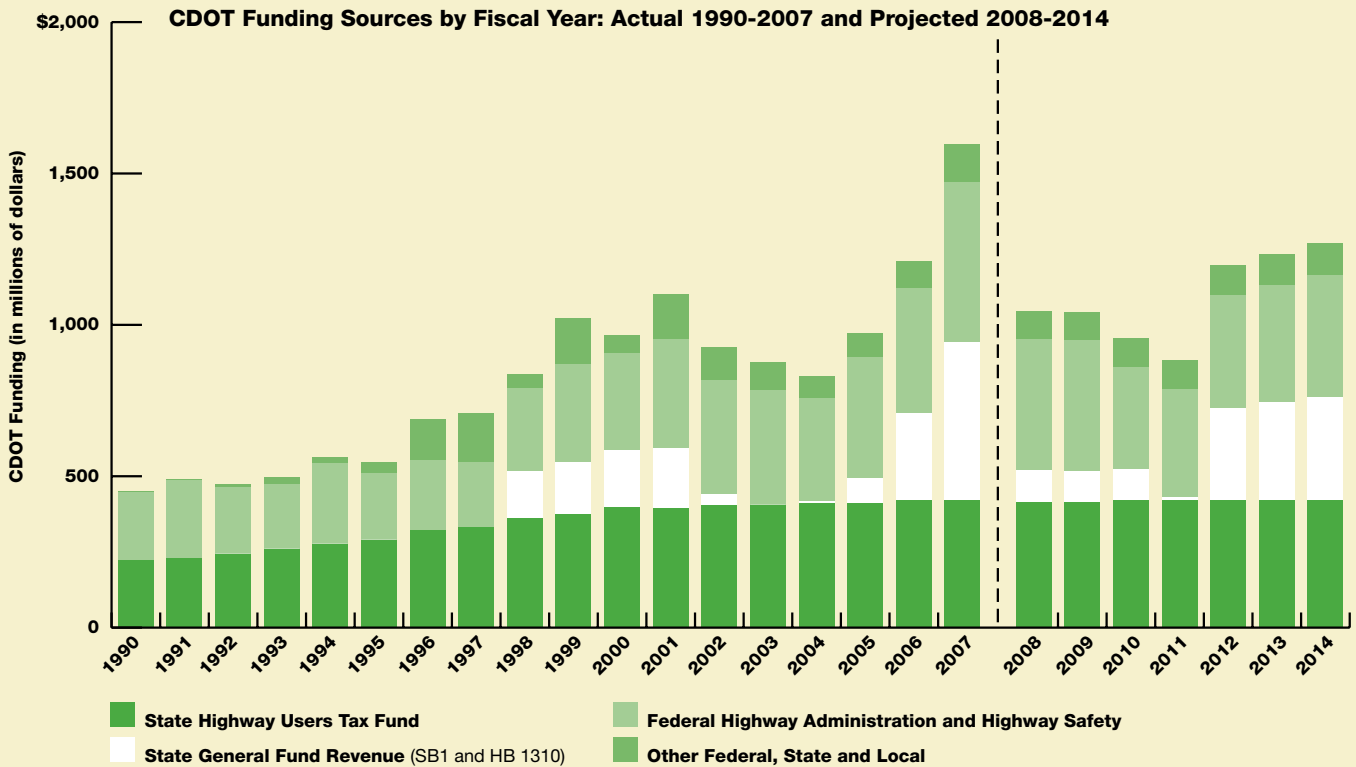
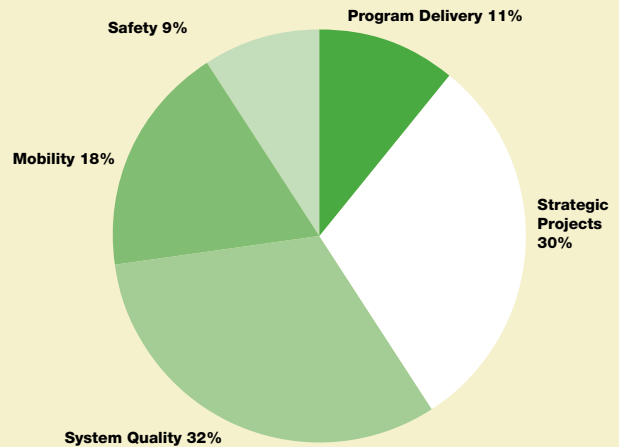


The department exists to provide for the safe and convenient movement of people, goods and freight throughout Colorado; to preserve the public's multi-billion dollar investment in its transportation infrastructure; and to responsibly spend the resources made available by tax payers.

**CDOT Funding Sources FY 2007**



**CDOT Investments by Category FY2007**



## SECTION 2 | 2007 Performance Results Overview

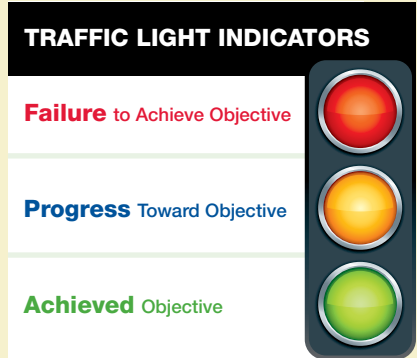
### How and why does CDOT report its performance?

**Performance measurement and reporting is a foundation of good management and public accountability.**

Divisions throughout CDOT have established primary and supporting performance measures for each investment category – safety, mobility, system quality and program delivery. Performance is generally measured in relation to objectives that are ambitious and achievable with the resources made available to the department.

For more than a decade, CDOT has measured and reported on its performance. For the first time, the 2007 Annual Performance Report summarizes the department's performance using traffic light signals. Green lights indicate that an objective has been achieved or exceeded. Yellow lights indicate that progress toward an objective has been made, but ultimate performance fell short. Red lights indicate a failure to achieve a performance objective.

The traffic light system does not explain performance. Whether a green light or a red light, public accountability and performance improvement demand unbundling the results. Section Three includes a full discussion of the department's performance results.



*The I-25 Northbound Express Lane provides reliable travel times for buses, car pools and single drivers willing to pay a toll.*

## SECTION 2 | 2007 Performance Summary

Measure	2007 Objective BASED on AVAILABLE REVENUE	2007 Actual	
<b>SAFETY</b>			
<b>Total Crashes per 100 Million Vehicle Miles Traveled</b>	283.7	283.7	●
Fatal Crashes per 100 Million Vehicle Miles Traveled	1.0	1.0	●
Injury Crashes per 100 Million Vehicle Miles Traveled	73.0	69.3	●
Percent of Drivers and Occupants Using Seatbelts	78.3	80.3	●
Alcohol-related Fatal Crashes as Percent of all Fatal Crashes	31.8	41.2	●
Number of CDOT Vehicle Accidents	251	294	●
Number of Workers' Compensation Claims	415	461	●
Dollar Amount of Workers' Compensation Claims	\$3,635,125	\$5,715,745	●
Striping, Signs, Signals and Guardrail Maintenance	B	C+	●
<b>SYSTEM QUALITY</b>			
<b>Percent Bridge Deck Area in Good and Fair Condition</b>	96.7	94.8	●
<b>Percent Pavement in Good and Fair Condition</b>	60	59	●
<b>Overall Maintenance Level of Service</b>	B	B-	●
Roadway Surface Maintenance	B+	B+	●
Bridge Maintenance	C-	C	●
Roadside Maintenance	B	B	●
Equipment, Buildings and Grounds Maintenance	B	C+	●
Planning and Training Maintenance Workers	B	B	●
Roadside Landscape Maintenance	B	C+	●
Tunnel Maintenance	B	B-	●
<b>MOBILITY</b>			
<b>Minutes of Delay per traveler in Congested State Highway Segments</b>	22	18	●
Snow and Ice Control	B	B-	●
On-time Performance for Buses on the I-25 HOT Lanes (as percent)		99	●
<b>PROGRAM DELIVERY</b>			
<b>Percent of Design Projects Meeting Established Schedule</b>	>70.2	71.4	●
Percent of Environmental Clearances Completed On Time	90	98.7	●
Percent of Annual Employee Turnover	8-10	12.1	●
Percent of Disadvantaged Business Enterprise (DBE) Participation	13.8	11.9	●

### OVERVIEW

**A transportation system that is safe for drivers, cyclists, pedestrians, CDOT employees and contractors is a cornerstone of a successful transportation system. The section reports on both driver safety and employee safety.**

### Driver Safety

Providing a safe and secure transportation system to the traveling public is among CDOT's highest priorities. The mission of CDOT's Safety and Traffic Engineering programs is to reduce the incidence and severity of motor vehicle crashes and the associated human and economic loss. Colorado is a national leader in reducing traffic deaths and injuries. From 2005 to 2006, Colorado's motor vehicle fatalities dropped 11.7 percent, outpaced only by New Hampshire, Missouri, and the District of Columbia. This success is attributable to the engineering of safer highways, education of the driving public, and enforcement of the state's driving laws. Despite improvement, traffic crashes remain the leading cause of death and injury in Colorado.

The department promotes safety through traditional roadway safety improvements such as better signing and freshly painted road stripes, new acceleration and deceleration lanes, and identifying and correcting "Hot Spots." In addition to making physical improvements, CDOT also supports and coordinates driver behavior programs, such as the "Heat is On" and "Click it or Ticket," to raise driver awareness and discourage irresponsible behavior. These programs also have a positive affect on increasing the safety of all drivers on Colorado's roads.

The primary measure for gauging our effectiveness in increasing safety for users of the state highway system is the Statewide Total Crash Rate, the number of crashes per 100 million vehicle miles traveled on Colorado highways. In 2004, we achieved our objective of 283.7 or less. The Colorado Department of Revenue is the home of vehicle crash data. Software upgrades are being implemented to allow CDOT access to vehicle crash data for time periods after 2004. Data on fatal accidents is provided by the Fatality Analysis Reporting System and is updated through 2006.

### **A Higher Standard for Safety:**

The National Highway Traffic Safety Administration (NHTSA) has established a national safety goal based on total fatalities, not just fatal accidents. For instance if two people are killed in an accident that is one fatal accident but two fatalities. The NHTSA goal is a fatality rate 1.00 by 2008. In 2006, Colorado's fatality rate was 1.10 with a goal of 1.00 for 2008.



The mission of CDOT's Safety and Traffic Engineering programs is to reduce the incidence and severity of motor vehicle crashes and the associated human and economic loss. Colorado is a national leader in reducing traffic deaths and injuries.

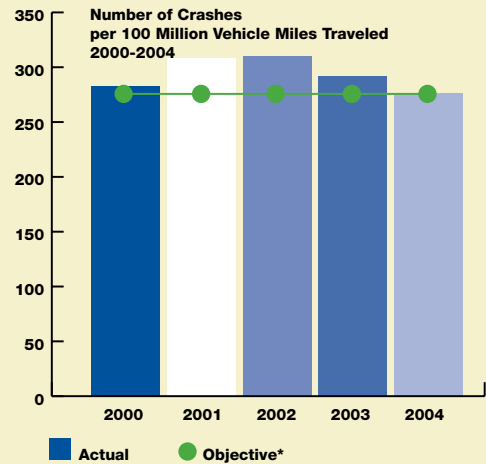


**PRIMARY MEASURE:**

**Total Crash Rate, Number of Crashes per 100 Million VMT**

FY 2007 Roadway Safety Budget: \$107.6M  
 Objective: 283.7\*  
 Actual: 283.7

Although crashes are trending downward, vehicle conveniences such as cell phones, CD changers, and on-board information systems add to the distractions that affect driver attention. Roadway improvements such as providing wider lanes and shoulders, eliminating roadside obstacles, and improving intersections; plus training and driver awareness programs and law enforcement all help to reduce the occurrence and severity of crashes. Enhanced vehicle safety features, such as side impact airbags and vehicle stability control continue to provide better protection to vehicle occupants.

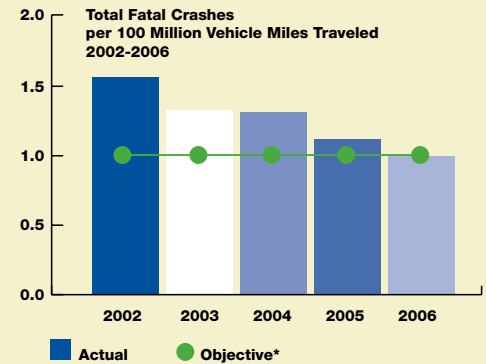


**SUPPORTING MEASURE:**

**Statewide Fatal Crash Rate, Number of Fatal Crashes per 100 Million VMT**

FY 2007 Roadway Safety Budget: \$107.6M  
 Objective: 1.0\*  
 Actual: 1.0

The emotional and economic costs of fatal accidents are staggering. The National Highway Traffic Safety Administration estimates each fatality results in a cost of nearly \$1 million.



\* Based on available revenue

In 2006, the state achieved the objective of having no more than one fatal crash per 100 million vehicle miles traveled.



# 3 | SECTION 3 | 2007 Performance Results Detail / SAFETY



## SUPPORTING MEASURE:

### Statewide Injury Crash Rate, Number of Injury Crashes per 100 Million VMT

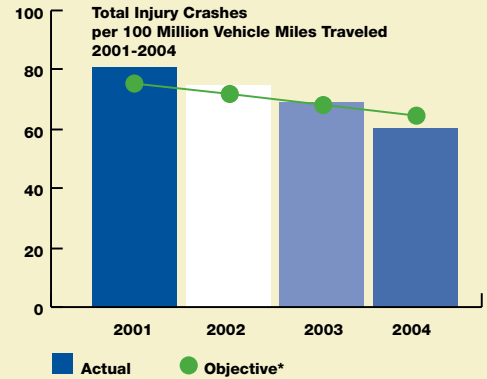
FY 2007 Roadway Safety Budget: \$107.6M

Objective: 73.0\*

Actual: 69.3

The monetary cost of an injury sustained in an automobile crash is between \$10,000 and \$60,000 depending on the severity of the injuries sustained. Monetary costs include emergency services, traffic delays, property damage, victim work loss and employer costs for the added and unexpected extra workload that must be absorbed in the employee's absence. Adding costs for loss of quality of life means a total cost of \$30,000 to \$180,000 for a traffic related injury.

To make accurate comparisons of crashes between years, the crash rate is calculated. The crash rate is the actual number of crashes in a year divided by the total miles driven in that same year. Data at right reflects the absolute numbers of total, fatal and injury crashes.



	Total Crashes	Fatal Crashes	Injury Crashes	Miles Traveled	Year
	129,845	485	31,721	457.7 Million	2004
				486.4 Million	2006
				457.7 Million	2004



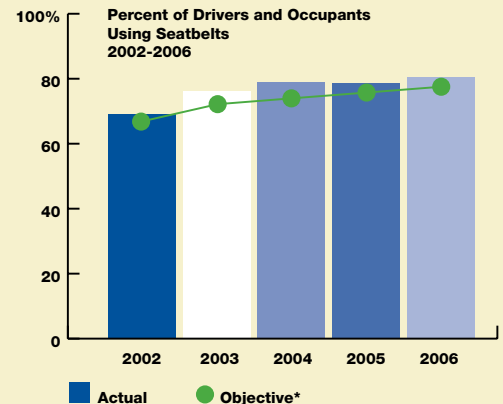
## SUPPORTING MEASURE: Statewide Seatbelt Usage

FY 2007 Driver Behavior Safety Budget: \$6.8M

Objective: 78.3\*

Actual: 80.3

Failure to wear a seat belt contributes to more fatalities than any other single traffic safety-related behavior. In 2006, 63.8 percent of the drivers and occupants killed in crashes were not buckled up. If everyone had buckled up, it is estimated half of these victims would be alive today. Americans pay \$14.3 billion per year in injury-related costs for people who don't wear seat belts.



Since the Click It or Ticket seat belt enforcement program began six years ago, seat belt use in Colorado has increased from 72 percent to 81 percent. Roughly 270,000 more Coloradans are buckling up. Teens are particularly at risk. In 2006, 72 young drivers and passengers, ages 16 to 20, died on Colorado highways, and 68 percent of these victims were not using seat belts. The 2005 seat belt usage rate for ages 16 to 20 was 70 percent, about 10 percent lower than the overall usage rate for Colorado. CDOT is involved in administering several educational programs around the state to help educate teen drivers on the benefits of buckling up.

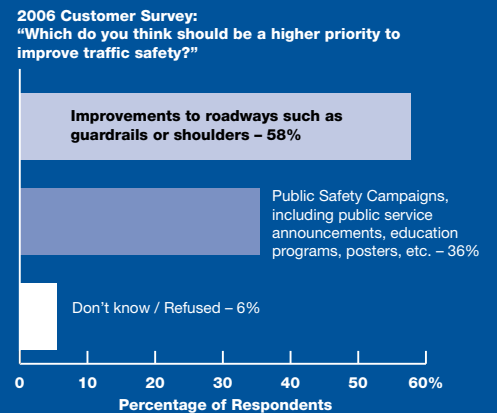
In 2006, 80.3 percent of Coloradans buckled up. This performance exceeded the objective of 78.3 percent. It is hoped that continuing educational efforts will result in at least 82.5 percent of all Coloradans wearing seat belts by 2008.

\* Based on available revenue



### Public Perspective of Safety Investment:

The department conducts periodic statistically valid public surveys. In 2006, survey participants chose roadway improvements such as guardrails or shoulders over public safety campaigns. CDOT spends on both programs, but appropriately, a larger portion of funding goes towards roadway improvement projects, which are more costly than public safety campaigns. These projects are selected with an emphasis on providing safe shoulders along roadways for cars to pull onto in an emergency, when experiencing mechanical problems or when needing to pass an extra-wide-load vehicle on a rural highway.



### Engineering Safer Roads:

The traffic safety group at CDOT provides input on new projects and also identifies sections of existing roadway and specific locations where correctable accident patterns are occurring. Analysis is done on these sections and locations to pinpoint the causes of the accidents and take action to resolve the issues. These relatively new recognition and diagnostic tools have helped Colorado reduce the total number of fatal crashes from 677 in 2002 to 485 in 2006 – a 28 percent decline in fatal crashes.

# 3 | SECTION 3 | 2007 Performance Results Detail / SAFETY



**SUPPORTING MEASURE:**

**Statewide Alcohol-related Fatal Crashes,  
Alcohol-related Fatal Crashes as a Percent of All Fatal Crashes**  
FY 2007 Driver Behavior Safety Budget: \$6.8M

Objective: 31.8\*  
Actual: 41.2

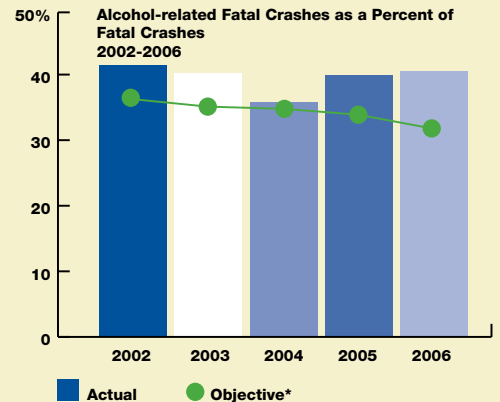
Alcohol and automobiles are a lethal combination. In the U.S., every 30 minutes someone dies in an alcohol-related crash. Alcohol-related motor vehicle crashes killed nearly 18,000 people in 2006 in the United States. Alcohol is a factor in 6 percent of all traffic crashes, and over 40 percent of all fatal crashes.<sup>2</sup>

Driving under the influence is ultimately an individual choice that can not be controlled by the department. However, the department strives to reduce drunk driving through public awareness campaigns and collaboration with groups including Mothers Against Drunk Driving and Students Against Destructive Decisions. Increased law enforcement efforts to enforce DUI laws on sections of roadway with high incidence of alcohol related fatalities and public information campaigns like “The Heat is On” have a positive effect on reducing the number of alcohol-related fatalities.

Progress in reducing alcohol related crashes is measured comparing alcohol related fatal crashes as a percent of all fatal crashes. Significant progress has been made since 1981 when 54 percent of all motor vehicle fatalities in Colorado were alcohol related. In 2006, 41.2 percent of all fatal crashes in Colorado were alcohol related, almost 10 percent higher than the objective of 31.8 percent.

<sup>2</sup> National Highway Transportation Safety Administration

\* Based on available revenue



**Partnering for Progress:**

Since 1995, CDOT has partnered with the Colorado State Patrol, Colorado State Parks and local law enforcement to increase enforcement of impaired driving laws. These partnerships have led to more than 50,000 arrests for impaired driving.

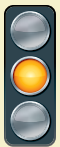




## Employee Safety

The department values the safety of its employees as much as it values the safety of the traveling public. Considering only 10 percent of workplace injuries are caused by faulty equipment, it is important that employees realize safety is their responsibility. The safety group at CDOT manages education and training programs to help department employees be safe and minimize the number of accidents occurring on the job. Programs like the 100 Safe Days of Summer reduce employee accidents on and off the job. In its first year as a pilot program, employee accidents declined 60 percent from the same 100 days in the prior year. Employees are encouraged to report “close calls” so that learning and changes in process can be made to help minimize accidents in the future.

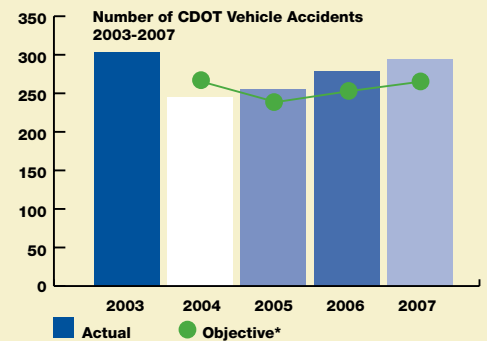
We measure our progress in employee safety by measuring the number of CDOT vehicle accidents and the number of and dollar value of workers compensation claims each year.



### SUPPORTING MEASURE: Number of CDOT Vehicle Accidents

Objective: 251\* (10% reduction from previous year results)  
Actual: 294

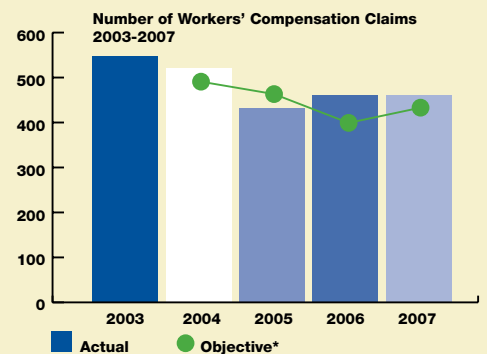
Almost half of all CDOT vehicle accidents are caused when the vehicle is going straight as opposed to backing, parking or turning. The data analysis revealed that employees' following distances are too close, so workers are being retrained on safe following distances and the importance of maintaining a safe buffer zone.



### SUPPORTING MEASURE: Number of Workers' Compensation Claims

Objective: 415\* (10% reduction from previous year results)  
Actual: 461

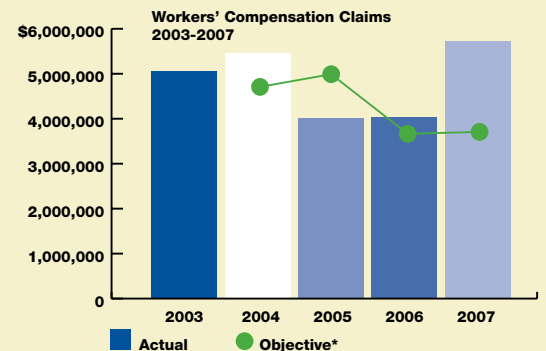
Some improvement in reported accident rates has been achieved at CDOT in the last few years, but CDOT's worker safety performance still has a lot of room for improvement. Approximately 14 percent of the department's work force is injured every year. 68 percent of all worker injuries occur in the maintenance worker positions. Sprains, strains and contusions are the cause of most maintenance workers injuries. A continued training emphasis in proper lifting techniques and body mechanics is making progress in reducing these kinds of injuries.



### SUPPORTING MEASURE: \$ Amount Workers' Compensation Claims

Objective: \$3,635,125\*  
Actual: \$5,715,745

Maintenance personnel suffered several serious lower back and shoulder injuries during the year. Some of these injuries required ongoing treatment which caused the value of large claims (those over \$75,000) to increase 68% from 2006. In an effort to reduce the number of maintenance workers who are injured a safety innovation program has been established. Employees who address a safety issue in the field like a safe and efficient way to pull broken delineator posts, or create a tool or improve a process, are nominated by a supervisor to receive a non-salary based incentive award.



\* Based on available revenue



# 3 | SECTION 3 | 2007 Performance Results Detail / SYSTEM QUALITY

## OVERVIEW

Over many decades Coloradoans made a multi-billion dollar investment in transportation infrastructure. These investments constitute Colorado's transportation assets. The department serves as the steward of state owned bridges and pavement. Each year, the department reports on the physical condition of these assets as well as the efforts made by our maintenance forces to perform on-going maintenance. Objectives are set relative to the funds available to support these activities. With additional funding the objectives would be higher.

### Bridge Condition



#### PRIMARY MEASURE:

#### Percent of Bridge Deck Area in Good and Fair Condition

FY 2007 Budget: \$33.5M

Objective: 96.7%\*

Actual: 94.8%

Colorado's 3,775 state highway bridges are a critical component of the state's roadway infrastructure. The temporary closing of these structures reduces capacity, can shut down corridors, push traffic onto other roadways less capable of handling the traffic and increase travel time for drivers.

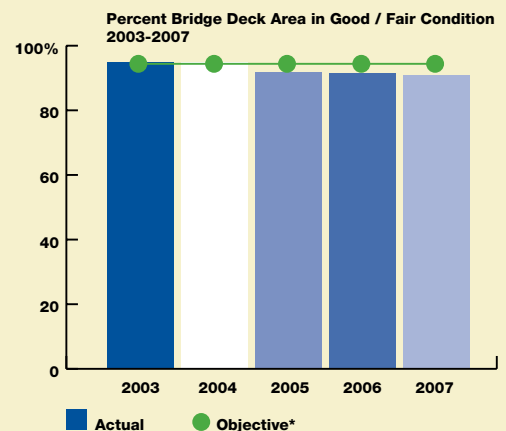
The department is committed to keeping the bridges on Colorado's highways in good, safe condition.

National standards established by the Federal Highway Administration are used to inventory and classify the condition of the State's bridges. The majority of bridges are inspected every two years and assigned a sufficiency rating of 0-100. Bridges with a sufficiency rating of less than 50 are considered in poor condition, those with a rating of 50-80 are considered in fair condition and those over 80 are considered in good condition.

Bridges can also be classified as structurally deficient or functionally obsolete. Bridges are structurally deficient if they are restricted to light vehicles, require immediate rehabilitation to remain open or are closed. A deficient bridge may or may not be dangerous, but it does require significant maintenance, rehabilitation or replacement. Bridges are considered functionally obsolete if they have deck geometry, load carrying capacity, clearance, or approach roadway alignment that no longer meets national standards. For a bridge to be classified as in good condition it cannot be either structurally deficient or functionally obsolete. Bridges in the fair and poor categories must be either structurally deficient or functionally obsolete.

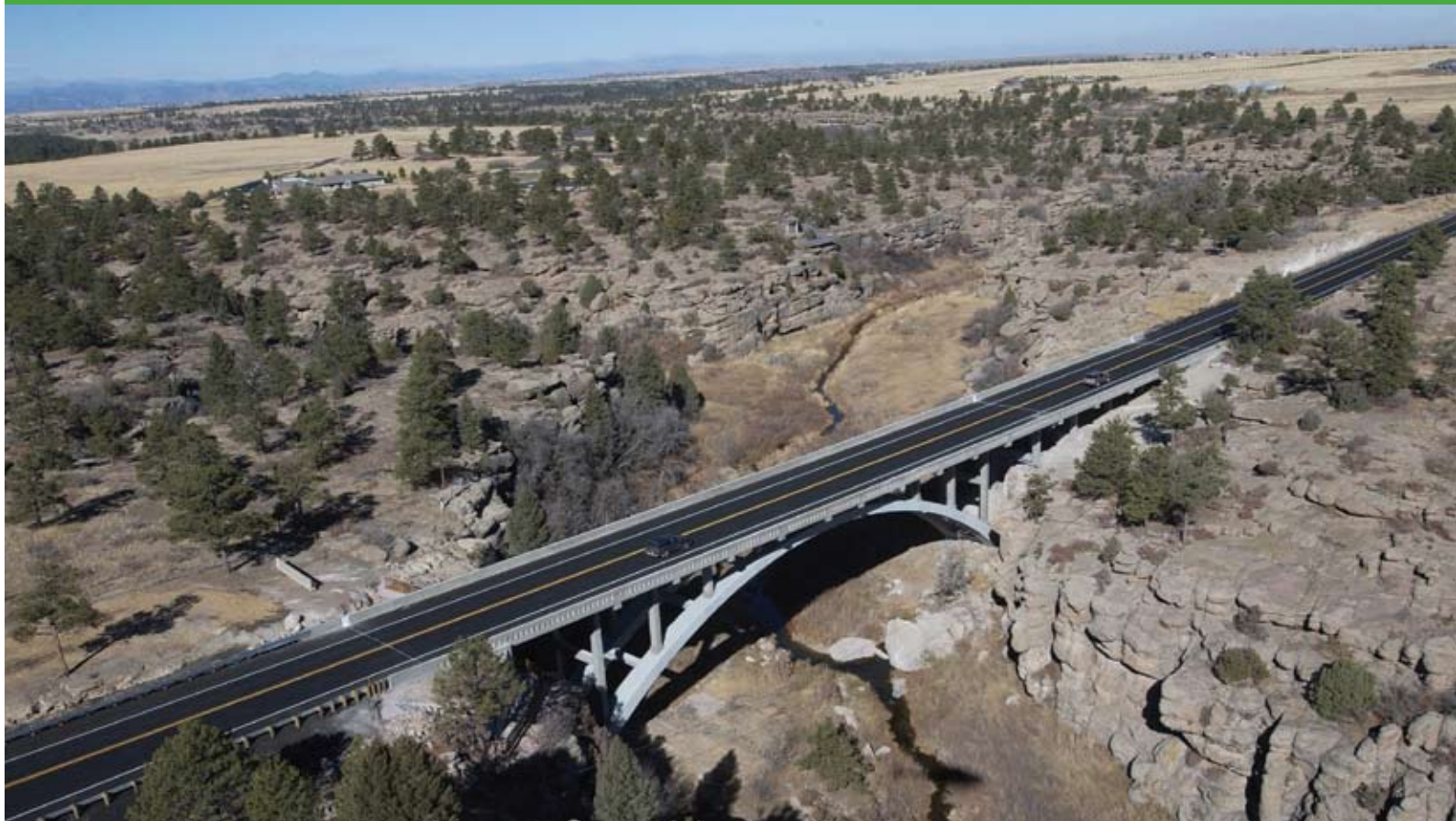
To make equivalent comparisons between years, the department reports the condition of bridges by the percent of bridge deck area in good or fair condition. Currently, 94.8 percent of the bridge deck area statewide is in good or fair condition short of the department objective of 96.7 percent. We fell below our objective in 2006 as a result of the more than one mile long I-70 viaduct in Denver falling into the poor category. In 2007, 116 of 3,775 bridges were in the poor category. \$1.3 billion is needed to replace the bridges currently in poor condition including \$800 million alone for the I-70 viaduct.

Bridges in poor condition are a major concern in the long term. A one percent increase in "poor" deck area results in a \$150 million liability for the department to rehabilitate or reconstruct that bridge area.



\* Based on available revenue

In 2007, 116 of 3,775 bridges were in the poor category. \$1.3 billion is needed to replace the bridges currently in poor condition, including \$800 million alone for the I-70 viaduct.



**Best Bridges: Colorado a National Leader:**

Even though the number of poor bridges has increased, the overall condition of Colorado bridges is generally better than that of other states. 17 percent of Colorado's bridges are structurally deficient or obsolete, compared to 25 percent nationally. The average age of CDOT's bridges is just over 30 years versus a national average age of 44 years.

**Top 10 States with the Lowest Percentage of Deficient / Obsolete Bridges:**

1. Arizona
2. Nevada
3. Minnesota
4. Wisconsin
5. Delaware
6. Illinois
- 7. COLORADO**
8. Utah
9. Florida
10. New Mexico

*(Source Federal Highway Administration, 2006)*



# 3 | 2007 Performance Results Detail / **SYSTEM QUALITY**



State Highway 7 – Peak to Peak Byway



State Highway 1 – North Ft. Collins

## Pavement Condition



### PRIMARY MEASURE:

#### Percent of Pavement in Good and Fair Condition

FY 2007 Budget: \$138.6M

Objective: 60.0%\*

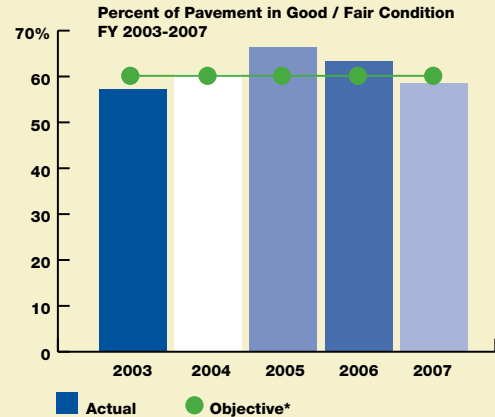
Actual: 59.0%

When roadway surfaces are not maintained, the roadway must be rebuilt – literally – from the ground up. The cost to resurface a mile of road averages \$120,000. The cost to reconstruct a mile averages \$2.6 million. It is more economical to systematically maintain our roadways than to rebuild them later. Maintaining existing infrastructure first is a top priority.

The primary measure of pavement quality is the percent of pavement statewide that is in good or fair condition. The department evaluates the condition of highway pavement based on how many years remain before reconstruction is necessary. A good condition rating means there is a remaining service life of more than 11 years; a fair rating indicates a remaining service life of 6 to 10 years; and, a poor evaluation represents a remaining service life of less than 6 years.

The Colorado Transportation Commission set an objective of maintaining the state's highway system pavement at a minimum of 60 percent in good or fair condition in 2007. The department fell one percent short of the objective. The winter of 2006/2007 was especially extreme and contributed to an increased deterioration rate. Also, the continued increase in construction costs has decreased the purchasing power of the department and the number of lane miles that can be improved each year. In 2003 the department paid \$38.23 per ton for asphalt pavement. By 2007, the average was \$66.58 per ton.

Monitoring pavement conditions during the next several years is critical as conditions will continue to decline at current funding levels. Based on revenue forecasts, the overall good/fair condition statewide is projected to drop to 40 percent by 2016. While interstates and other



major state highways comprise 50 percent of Colorado's lane miles, these roads carry 85% of the vehicle miles traveled. Prioritizing preservation of pavement quality on these heavily traveled routes helps promote a strong economy and provide the greatest safety benefit for the traveling public. Unfortunately, this difficult trade-off may result in deteriorating conditions on some less traveled roads.

### Good Road – Poor Road

While pavement engineers use extensive data to model the condition of Colorado's roads, customers often wonder, "What does a good road look like? What does a poor road look like?" The pictures to the left illustrate the typical condition of good and poor pavement.

\* Based on available revenue

## Ouch!

In 2003 the department paid \$38.23 per ton for asphalt pavement. By 2007, the average was \$66.58 per ton.

# 3 SECTION 3 | 2007 Performance Results Detail / SYSTEM QUALITY

## Maintenance



### PRIMARY MEASURE:

#### Statewide Overall Maintenance Levels of Service

Objective: B\*      Planned: \$216.7M  
 Actual: B-      Spent: \$220.5M

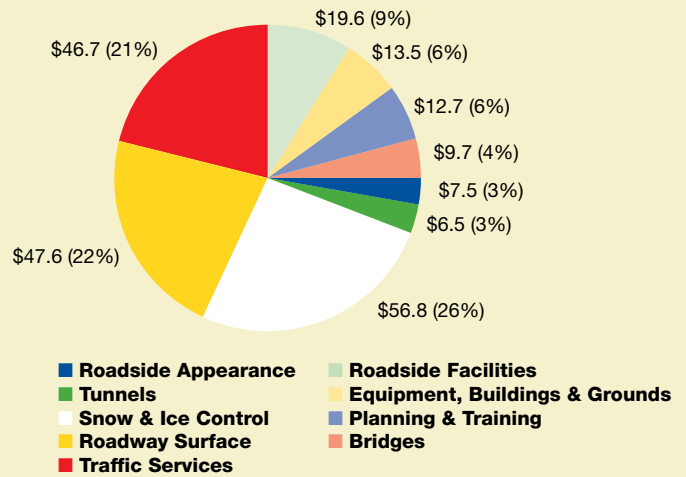
Patching pot holes in the summer, plowing snow in the winter and ensuring safe travel all year long, CDOT's trucks and maintenance workers are a common site on Colorado's state highways. Nearly 70 percent of all maintenance funding goes toward maintaining the roadway, snow and ice control, painting stripes and hanging signs. The department measures the performance of maintenance service with a school report card style grading system that estimates the achievable grade with available budget.

The overall statewide Maintenance Levels of Service grade is a B-. The primary factor in not meeting the objective grade of B was exceptional weather. Colorado experienced an extreme winter with major storm systems creating blizzard conditions in December of 2006. Denver reported nearly 73 inches of snow for the season, compared with 30 inches the previous winter and an average snowfall of 62 inches.<sup>1</sup> CDOT crews set an all time record of 7.2 million snow plow miles in fiscal year 2007, which is the equivalent of 15 round trip journeys to the moon.

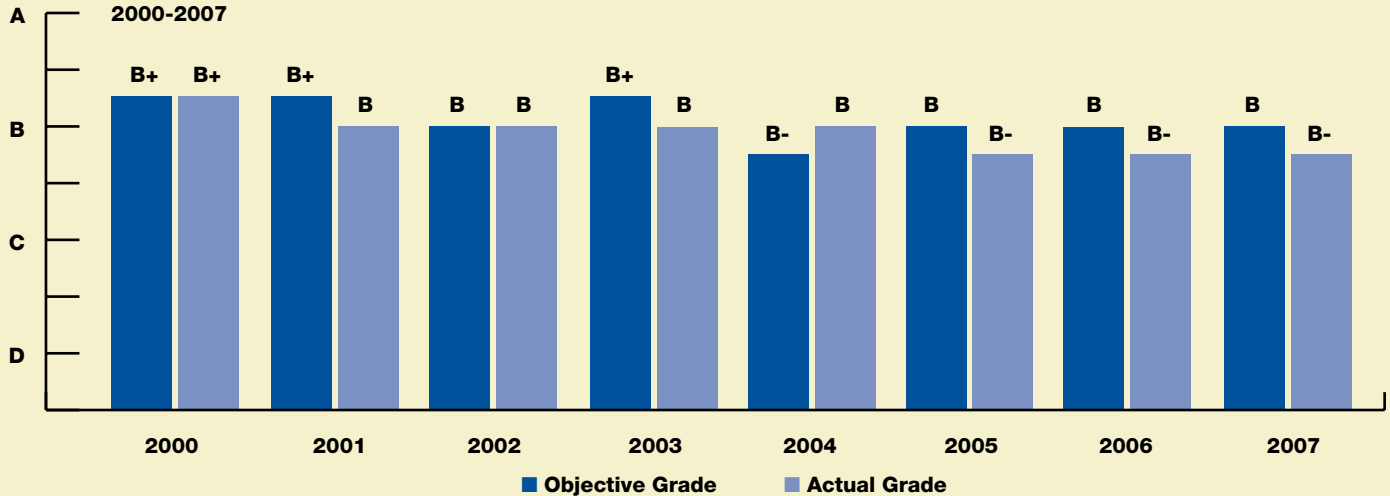
The statewide overall maintenance objective and actual grades over a seven year period range from a B- to a B+. The steady grades reflect a carefully administered maintenance management system. The overall grade is expected to decrease in coming years; budgeted dollars are not enough to keep up with the rising costs of fuel and materials, inflation and increasing needs for bridge maintenance activities. The overall Maintenance Levels of Service grade is separated into nine maintenance program areas.

\* Based on available revenue

Spending by Maintenance Area  
 FY 2007 in millions



Statewide MLOS Grades  
 2000-2007



<sup>1</sup> NOAA's National Weather Service web site: [http://www.crh.noaa.gov/bou/?n=denver\\_snowfall](http://www.crh.noaa.gov/bou/?n=denver_snowfall)





### Maintaining Roadway Surface

Objective:	B+*	Planned:	\$50.1M
Actual:	B+	Spent:	\$47.6M

CDOT reports strong performance in maintaining the roadway surface, even with extreme winter weather. Activities include patching and sealing road surfaces and fixing potholes. Preserving our system of roadways is a major strategic focus, and these maintenance activities are a high priority.



### Snow and Ice Control

Objective:	B*	Planned:	\$40.6M
Actual:	B-	Spent:	\$56.8M

Snow and ice control required much more labor and materials than planned because of the extreme weather. In order to receive a rating that would lead to a green light in 2007, mountain passes had to all be cleared within 24 hours of a storm, and roads in major metropolitan areas had to have bare pavement within one hour. The blizzards of the 2006/2007 season resulted in some roads being closed for several days, adversely affecting the grade.



### Striping, Signs, Signals and Guardrail (Traffic Services Maintenance Program Area)

Objective:	B*	Planned:	\$60.2M
Actual:	C+	Spent:	\$46.7M

Colorado's harsh winters take a serious toll on the paint that stripes the state highway system, the signs that keep drivers informed and guardrail that keeps vehicles on the road. Well marked lanes, clear signs and functioning guardrail make for a safer and more pleasant driving experience. Other activities in this area include maintaining Intelligent Transportation Systems and Courtesy Patrol activities. These activities help achieve mobility and safety objectives and are discussed later in the report.

Striping, signs, signals and guardrail received a low rating because engineers were not able to spend the planned dollars due to an issue with implementing new financial management software. The system gave information that the budgets were overspent, when in fact there were funds waiting to be spent. Once the problem was corrected, the fiscal year was almost over. It is expected that these activities will be on target in Fiscal Year 2008.

\* Based on available revenue

## Managing Maintenance:

Maintenance is vital in preserving Colorado's transportation system assets. Since 2000, CDOT has used an extensive Maintenance Levels of Service (MLOS) tracking system to manage and assess all maintenance activities, from the local maintenance patrol to the statewide level. In support of regional maintenance superintendents, CDOT's Staff Maintenance Branch collects and processes data, tracks expenditures and helps to set objective letter grades and recommended spending levels for the nine categories of maintenance activities, called Maintenance Program Areas (MPAs).

The process has two main functions. First, the objective levels of service and planned spending levels are determined. Then, at the end of the fiscal year, the levels of service are graded. These grades help with analyzing how to best utilize funding for the next fiscal year.

In order to make the most of limited resources, the objectives set for each of the nine MPAs are closely tied to budgeted dollars. While achieving at least a B letter grade in every MPA is desirable, this is not realistic with funding restrictions. CDOT's Staff Maintenance Branch must strategize to plan the best distribution of funds, and the objective letter grades follow from these planned allocations. It's a situation of trade-offs, and the MLOS system is a valuable tool in managing these often tough decisions.

Grading is done by compiling data from a series of surveys conducted for each area. The highway surveys are executed by randomly selected sections of highway throughout the entire CDOT system for detailed grading. The process ensures comprehensive and meaningful data which can yield statistically significant conclusions.

# 3 | SECTION 3 | 2007 Performance Results Detail / SYSTEM QUALITY



## Maintaining Bridges (Structure Maintenance MPA)

Objective: C-\*    Planned: \$10.8M  
Actual: C    Spent: \$9.7M

The department's maintenance forces help to preserve bridge assets with both preventative and reactionary maintenance. This grade reflects only an assessment of maintenance activities and is not the same as the condition of the bridge. Bridge condition is discussed on page 14.

The objective grade level for bridge maintenance is set relatively low because budget constraints do not support a higher objective. Although the objective letter grade is set low when compared to other maintenance activities, investment in bridge maintenance has actually increased significantly over the past six years. The green light rating reflects the achievements made possible by this spending. Investments in this category will continue to increase until a B level of service is achieved, and other areas will most likely experience cut-backs. This will contribute to a reduction of the overall statewide grade in future years, but reflects a priority of keeping Colorado's bridges safe and open to traffic.



## Keeping Roadways and Shoulders Clear (Roadside Facilities MPA)

Objective: B\*    Planned: \$20.1M  
Actual: B    Spent: \$19.6M

A driver never wants to see standing water, a landslide, or trash on the road. These obstacles are dangerous, can delay traffic and are an eyesore. The department's maintenance forces achieved this objective while spending half a million dollars less than anticipated.



## Maintaining Equipment, Buildings & Grounds (Equipment, Buildings and Grounds MPA)

Objective: B\*    Planned: \$12.1M  
Actual: C+    Spent: \$13.5M

The upkeep of equipment, buildings, grounds and rest areas is a component of the department's maintenance activities. The most recent data available for this measure is from 2006.



## Planning & Training (Planning & Scheduling MPA)

Objective: B\*    Planned: \$9.0M  
Actual: B    Spent: \$12.7M

The efficient delivery of maintenance services demands planning and training of maintenance workers. Planning and training represents four percent of the overall maintenance budget. Planning and reporting activities are necessary for running CDOT's maintenance management program, which assists CDOT in using resources as efficiently and effectively as possible. The department was required to overspend in order to achieve the objective. The department provided 30-40 unanticipated hours of training per employee in order to integrate new financial management software system into daily activities.



## Maintaining Roadside Landscape (Roadside Appearance MPA)

Objective: B\*    Planned: \$7.6M  
Actual: C+    Spent: \$7.5M

When there is a high level of winter moisture, as there was during this fiscal year, there is a high growth of springtime weeds. Early in the summer, when roadside landscape was rated, the priority of maintenance crews was maintaining the pavement surface and repairing snow-related damage. Later in the summer, focus is placed on maintaining a safe swath of roadside landscape on rural highways, usually at least 20 feet on each side of the roadway, to prepare for winter.

In general, the mowing activities in and near cities perform more of an aesthetic purpose, while mowing on rural highways, particularly in the eastern plains, is done primarily for safety. High roadside weeds on the plains can be dangerous during snowstorms since the snow will settle on the tops of the weeds and drift onto the roadway. At any time of year, high weeds can be unsafe if they hide animals that may unexpectedly come out onto the roadway.

*\* Based on available revenue*

Keeping Colorado on the move is a fundamental function of the department. Colorado's economic vitality depends on the ability of people and goods to move freely and efficiently.



#### Maintaining Tunnels (Tunnel Activities MPA)

Objective: B\*      Planned: \$6.3M  
Actual: B-      Spent: \$6.5M

The Eisenhower-Johnson and Hanging Lake tunnels are critical connections between the Western Slope and the Front Range. The tunnels require monitoring, washing, structural maintenance and repair, emergency response, snow removal and sanding.

Though tunnel maintenance improved a full letter grade over the previous year with similar funding, this area received a B- rather than the objective B grade. Weather again plays a major role, increasing efforts needed to control snow and ice at the tunnels. In addition, the Hanging Lake Tunnel crew faced staffing and equipment challenges and needed to repair a crack in the tunnel.

*\* Based on available revenue*



# 3 | SECTION 3 | 2007 Performance Results Detail / MOBILITY

## Mobility

Keeping Colorado on the move is a fundamental function of the department. Colorado's economic vitality depends on the ability of people and goods to move freely and efficiently. Mobility funding represented approximately 20 percent of the department's budget. These funds are invested in adding new lanes to highways, improving intersections, plowing snow, providing courtesy tow service in congested areas, informing travelers of road conditions, and completing projects that are expected to reduce air pollution.



### PRIMARY MEASURE:

#### Minutes of Delay per Traveler in Congested State Highway Segments

Objective: 22 minutes\*

Actual: 18 minutes

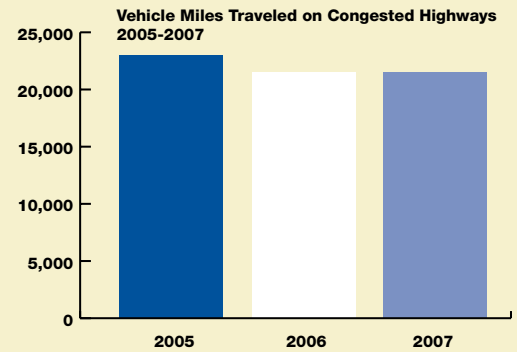
The department's primary measure of mobility is minutes of delay per traveler in congested state highway segments. Travel time delay is the difference between the travel time on highways at the free flow speed and the time it takes to travel with heavy traffic.

A highway is congested when the traffic is at or over 85 percent of what the highway was designed to handle. A highway with no vehicles is like an empty glass. When the glass is empty, you can pour water quickly into it. Once it gets about two-thirds full, you have to pour more slowly, tapering off until the glass is full. At that point, no additional water can be added until some of the liquid is poured out.

In 2007, the average travel time delay was calculated to be 18 minutes per person. This decrease from 22 minutes calculated in 2005 is due mainly to additional lanes added as a result of expansion projects (TREX in Denver and COSMIX in Colorado Springs). The additional capacity eases congestion only in the short term; the benefit of having new lanes erodes as traffic fills up the additional highway capacity. Delay is projected to be 70 minutes per traveler in 2035 (from 22 minutes in 2005) with no additional highway capacity improvements. The TREX project was designed to accommodate future growth by incorporating light rail and bus transit as well as encouraging pedestrian and bicycle travel to the light rail stations.

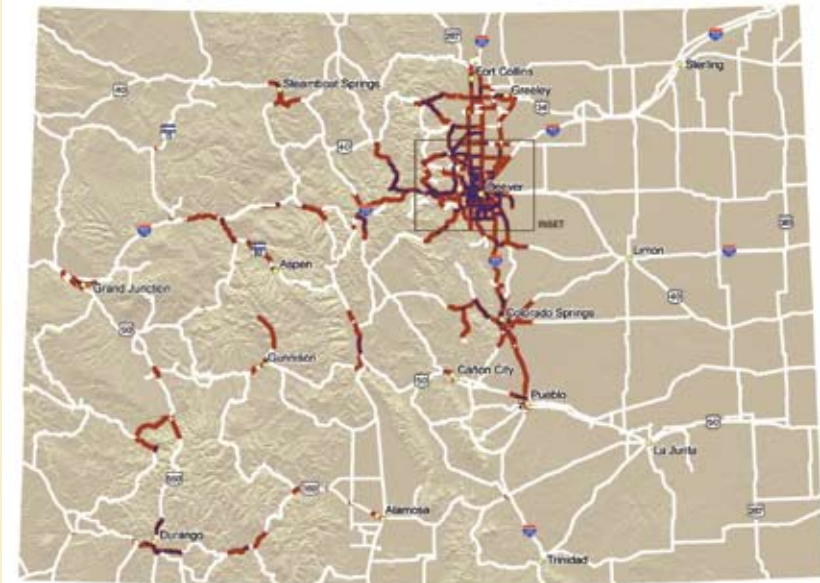
Over 90 percent of total congestion delay occurs on urban highways during the weekday commute, and the remainder occurs on highways in recreational travel corridors during peak weekend traffic. In 2007, approximately eight percent of Colorado's state highway lane miles were congested. As expected, most congestion occurs in and around major metropolitan areas: Denver, Colorado Springs and Fort Collins. Congested recreational highways are located on part of I-70 West and near Estes Park, Winter Park, Breckenridge and Durango.

\* Based on available revenue



This data is also tracked at the CDOT regional level, and the Transportation Commission currently uses congested VMT as criteria for allocating resources.

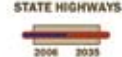




INSET: DENVER METROPOLITAN AREA

STATE HIGHWAYS

CONGESTED STATE HIGHWAYS



Congestion is defined as volume that exceeds 85% of roadway capacity

Source: [www.dot.state.co.us/App\\_ODD\\_DataAccess/index.cfm](http://www.dot.state.co.us/App_ODD_DataAccess/index.cfm)



### Another Look at Congestion – Vehicle Miles Traveled in Congestion:

In 2007, over a quarter of the vehicle miles traveled on Colorado highways were in congested conditions. As measured in terms of vehicle miles traveled (VMT), travel on all state highways was relatively steady from 2005 to 2007. Travel on congested highways decreased by 8 percent from 2005-2006, a result of capacity improvements such as the TREX expansion. Travel on congested segments increased only slightly (less than 1 percent) from 2006 to 2007.

### Another Look at Congestion – Travel Time Studies:

In 2007, CDOT in association with Navjot Consulting Services, Inc., collected travel time data for all 71 congested corridors in the state, representing approximately 844 miles of roadway. This was an ambitious undertaking, and it represents a major milestone in the evolution of mobility data collection. Travel time data is collected using the “floating car method,” a combination of down to earth and in the sky technologies. A vehicle equipped with a satellite Global Positioning System (GPS) or other distance measuring equipment is driven along the congested corridors during peak periods and follows the speed of typical drivers. By using an on-the-ground vehicle, CDOT gets data reflecting the actual commuting experience, and by utilizing GPS technology, the data is accurate and consistent. Accidents, weather and special events can affect the data collection process.



# 3 | SECTION 3 | 2007 Performance Results Detail / MOBILITY



## SUPPORTING MEASURE: Snow and Ice Control

Objective: B\*      Planned: \$40.6M  
Actual:    B-      Spent:    \$56.8M

Snowy and icy roads are a danger to the traveling public and can also result in significant travel delays. Snow and ice control, as a means to keep Colorado moving, is reported as a supporting performance measure for the mobility investment category.

Snow and ice control efforts are performed by maintenance staff and are managed by the Maintenance Levels of Service (MLOS) system, so this measure is also included in the maintenance section of this report (pages 18). These activities required much more labor and materials than planned because of the extreme weather; as discussed in

the maintenance section of this report, FY2007 included the two holiday blizzards in December of 2006.

CDOT crews set an all time record of 7.2 million snow plow miles in fiscal year 2007. The graph below illustrates the total number of annual plow miles and the cost per plow mile for the fiscal years 2001 through 2007. In 2005 and 2006, the cost per plow mile sharply increased while the total number of plow miles was relatively stable. A primary reason for this is the spike in diesel fuel prices stemming from the effects of Hurricane Katrina. Materials costs also continually rise, and the selection of materials makes a difference. For example, choosing to use a new and higher grade of deicing product may cost more, but it allows CDOT to do a better job of keeping drivers safe and mobile.

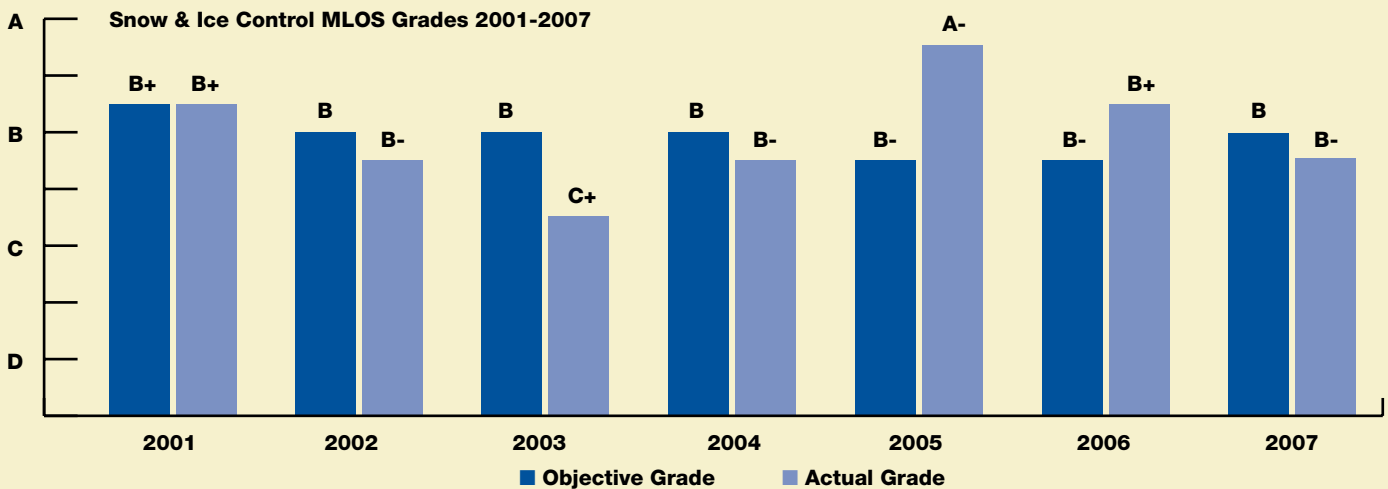
*\* Based on available revenue*



### Paying for Big Storms:

Because snow and ice control is critical to the safety of drivers and Colorado's economy, funding for unexpected weather events comes from a contingency fund set up by the Transportation Commission.

Over-budget spending for snow and ice control does not take away from spending in other maintenance areas. However, exceptional weather may pose challenges to meeting the objectives set in other areas when efforts are focused on keeping the road clear of snow and ice.



# 3 | SECTION 3 | 2007 Performance Results Detail / MOBILITY



**SUPPORTING MEASURE:**  
**On-time Performance for Buses on the I-25 HOT Lanes**  
 Actual: 99% on-time

HOV and HOT lanes benefit transit riders with reliable travel times for buses and are part of CDOT's multi-modal approach to combating congestion. Riders that depend on bus service to commute to work or school reduce congestion by not traveling by car. Most would be able to drive if needed, but choose to ride the bus



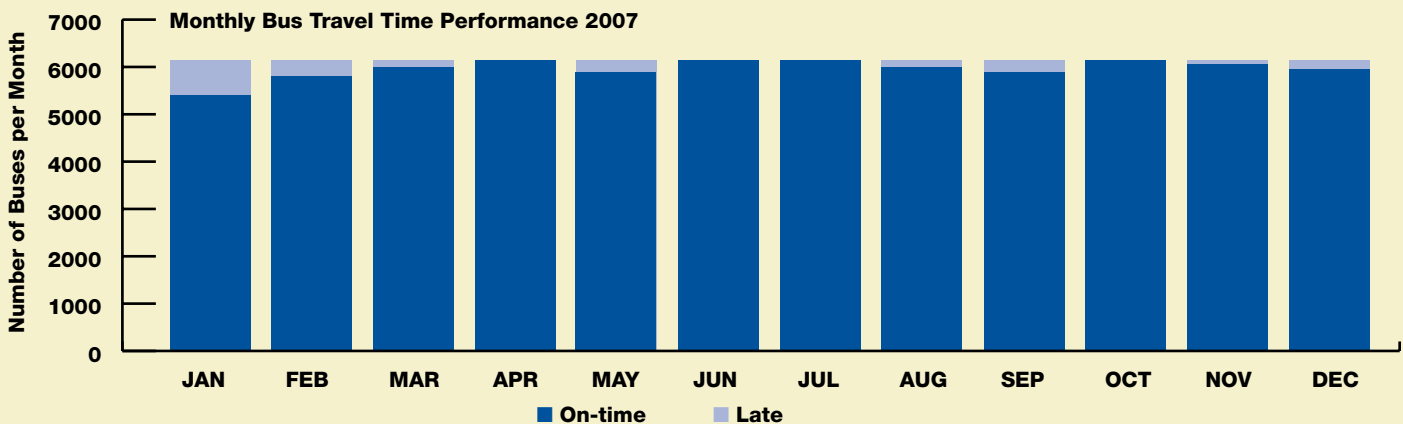
for reasons of economy and conveniences including reliable travel time. An agreement between CDOT and RTD regarding the U.S. 36/I-25 HOT lanes assures a "free-flow" travel time for busses.

According to Monthly Express Lane Reports prepared by the Colorado Tolling Enterprise, buses through the I-25 HOV/HOT lanes ran on time 99-100 percent of the time for nine out of twelve months. January and February delays were attributed to weather and signal timing issues.<sup>3</sup>

In June 2006, HOV lanes on I-25 became HOT/HOV lanes. Solo drivers could choose to pay a toll and use the lanes along with buses, carpool vehicles, and motorcycles which travel the lanes at no cost. The HOT lane tolls are not intended for profit, but rather to cover operational costs. Actual toll revenues in FY2007 exceeded estimated revenues in every month. Total toll revenues in FY2007 were \$1.57 million.

CDOT closely monitors travel times through the I-25 HOT/HOV facility to ensure that the HOT lane traffic does not create any travel time delay for buses and carpoolers. The Colorado Tolling Enterprise controls tolls in order to maintain an optimum level of usage while keeping free-flow traffic conditions.

<sup>3</sup><http://www.dot.state.co.us/cte/expresslanes/reports.cfm>

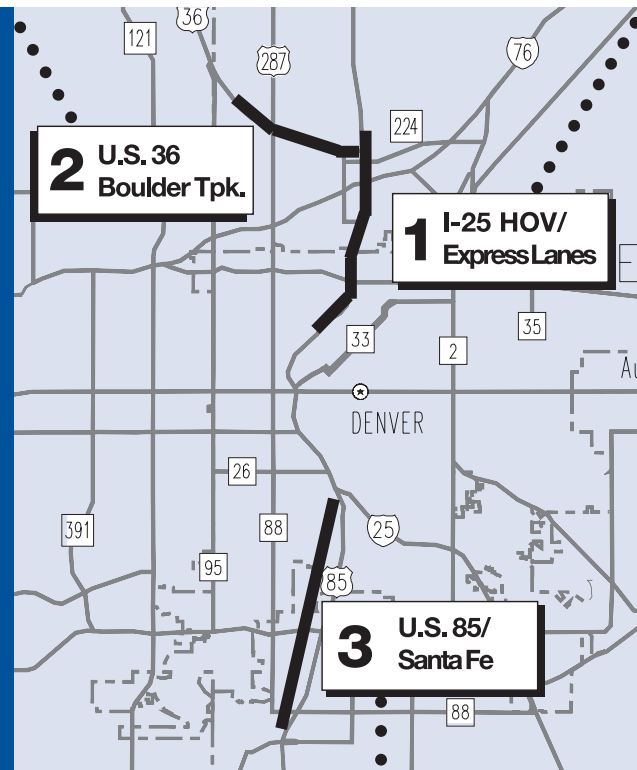




## Improving Mobility – Congestion Alternatives:

The use of high occupancy vehicle (HOV) and high occupancy toll (HOT) lanes provide an option to avoid congestion. HOV lanes are reserved for buses, motorcycles, and vehicles with more than one person. HOT lanes allow single occupancy vehicles to pay a toll to drive with the HOV travelers. Starting in 2008, solo drivers of permitted hybrid vehicles are allowed to use HOV and HOT lanes at no cost. The department has HOT lanes in operation on I-25 and U.S. 36 and HOV lanes on U.S. 85 (Santa Fe Blvd). The travel time savings created by these alternatives is impressive. A 2007 study found that:

- travel time for drivers in the I-25 HOV/HOT lanes was 20-37 percent lower than in the general purpose lanes, and
- travel times through HOV lanes in the U.S. 85/Santa Fe corridor were 40-45 percent lower.





# 3 | SECTION 3 | 2007 Performance Results Detail / PROGRAM DELIVERY

## Project Delivery

An excellent organization delivers its projects and services with quality and efficiency. To do this the organization must effectively manage its financial and human resources, act sensitively toward the environment and develop a network of suppliers that competitively meet the needs of the organization.



### PRIMARY MEASURE:

#### Percent of Design Projects Meeting Established Schedule

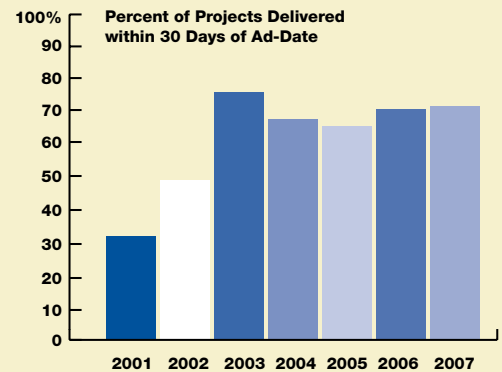
Objective: >70.2%\*

Actual: 71.4%

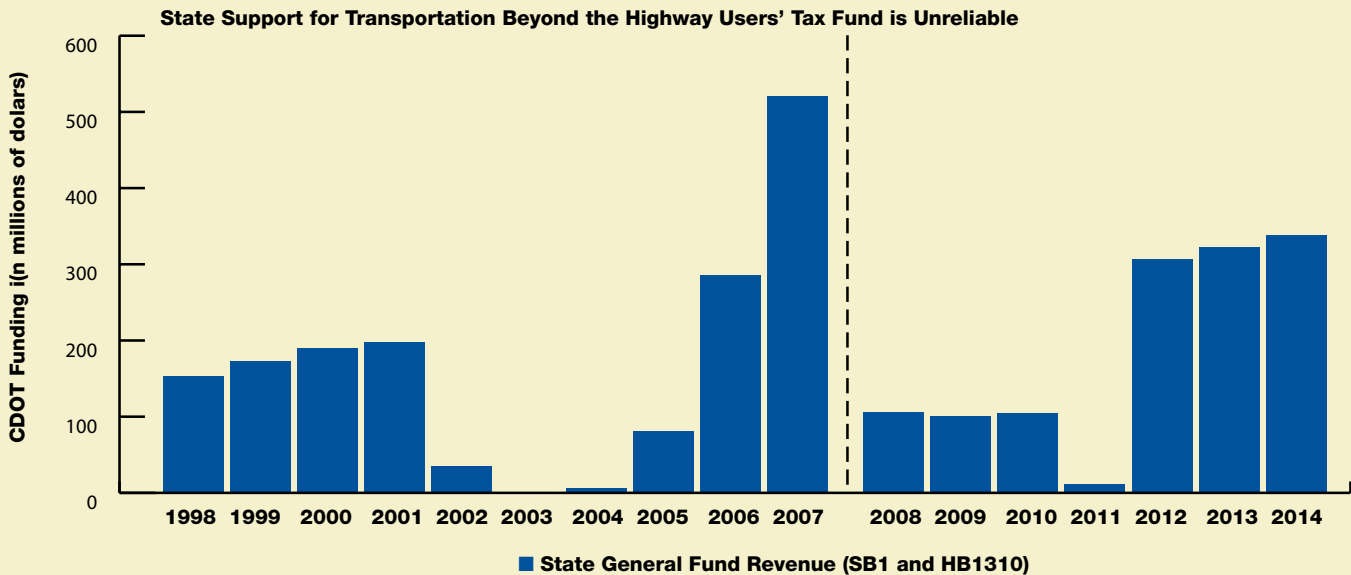
Delivering projects on-time is one measure of the department's ability to effectively manage resources. Projects occur in two phases: design and construction. CDOT designs the majority of its projects in house and then solicits bids for the construction phase from contractors. At the beginning of the fiscal year the department establishes projected completion dates for projects to be designed in the coming year. When all design work has been completed a project is ready to be advertised for construction bids. One measure of department efficiency is the percent of projects that meet their planned advertisement dates (Ad Dates).

A fundamental challenge faced by engineering staff in the on-time delivery of projects is the instability of state funding. As the chart at upper right illustrates, the funding provided the department can fluctuate considerably and unpredictably. Unstable funding makes it difficult to plan accurately for the advertisement of projects.

In FY 2007, 71.4 percent of projects were advertised for bid within 30 days of their planned ad date. This is an improvement over FY 2006 where 70.1 percent of projects were delivered within 30 days of their planned ad dates. In March of 2008 the Colorado Transportation Commission established the objective of continuously improving year over year on-time performance. While performance improved in FY 2007, greater improvements in performance are anticipated in the coming year. New scheduling software that enhances project management efforts has been deployed across the department.



\* Based on available revenue



**SUPPORTING MEASURE:**

**Percent of Environmental Clearances Completed On Time**

Objective: 90%\*

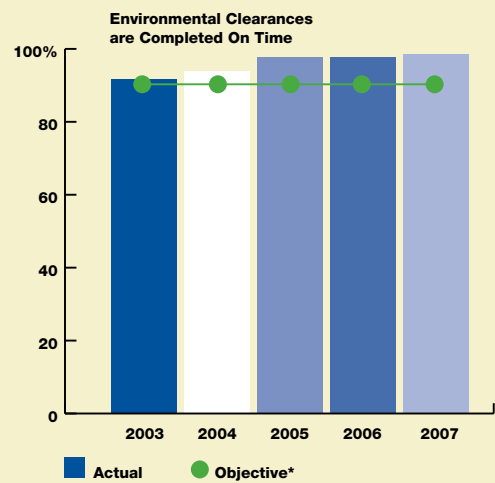
Actual: 98.7%

The department's environmental ethic insures that the statewide transportation system is constructed and maintained in an environmentally responsible, sustainable and compliant manner. Transportation decisions are subject to more than 40 federal and State environmental laws. Compliance with these laws requires that the department's environmental experts provide project clearances. These clearances are usually necessary in order to proceed with advertisement of a project, beginning a project, or continuing with a project. Environmental clearances include:

- plan reviews
- field surveys
- inspections
- obtaining permits or approvals from agencies
- consultations

When these clearances are delayed projects may fall behind schedule and the environment may be put at risk.

\* Based on available revenue



# 3 | SECTION 3 | 2007 Performance Results Detail / PROGRAM DELIVERY

## Human Resources



### SUPPORTING MEASURE: CDOT's Annual Employee Turnover Rate

Objective: 8-10%  
Actual: 12.1%

A vital workforce is required to effectively deliver the department's programs and projects. Employee turnover serves as a measure of workforce vitality.

A healthy rate of employee turnover is not too high, but also is not too low. High turnover may indicate retention problems within the organization. However, low levels of turnover may also be problematic if employees with unsatisfactory performance are remaining on the job. An organization strives to have a healthy churn in order to have the best workforce.

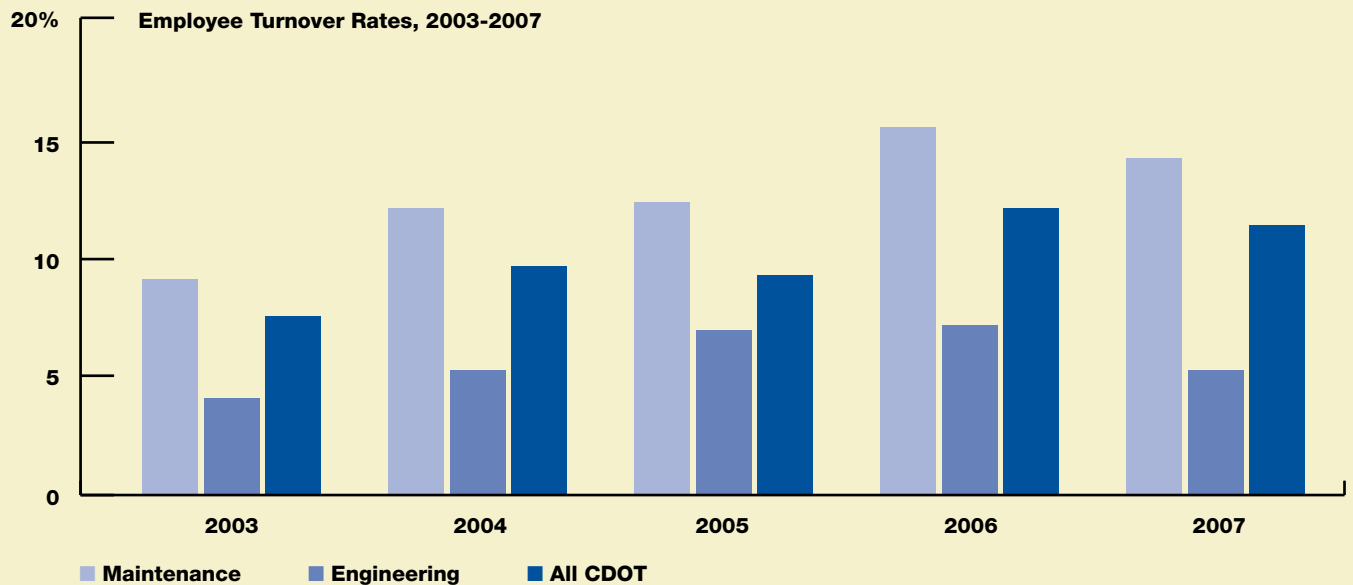
From experience and from looking at trends over many years, CDOT's HR leadership sees the optimum turnover rate for CDOT between 8-10 percent, so this is the criteria for receiving a green stoplight rating. A turnover rate between 11-15 percent is not as ideal and receives a yellow light.

A rate of less than eight percent or greater than fifteen percent is considered problematic and would receive a red light.

CDOT reduced the overall employee turnover rate slightly from 12.7 percent in FY2006 to 12.1 percent in FY2007. The overall turnover rate mirrors the turnover rate of maintenance employees who make up 42 percent of all CDOT employees.

According to the State of Colorado Workforce Report for FY2007, CDOT's employee turnover rate was below the overall State employee average for fiscal years 2002 through 2005. In fiscal years 2006 and 2007, CDOT's rate rose and is now comparable to the average of all State employees. In fiscal year 2007, CDOT reports 364 employee separations. Half of these were voluntary resignations, 36 percent were retirements, 10 percent were non-voluntary resignations and the remaining 4 percent were for other reasons.

Over the past five years, the level of non-voluntary resignations (such as disciplinary termination and failed probation) and of other separations (such as disability retirement) was stable.



Hiring and training employees is expensive, and it makes good business sense to invest in programs to retain employees who perform well.

The number of separations due to retirement has fluctuated, though the level dropped from FY2006 to FY2007. Within the next five years, 15.8 percent of all CDOT employees will be eligible for retirement. This is an area that the organization has little control over. The organization would have to provide value that far exceeds economics to keep its employees who are eligible to retire.

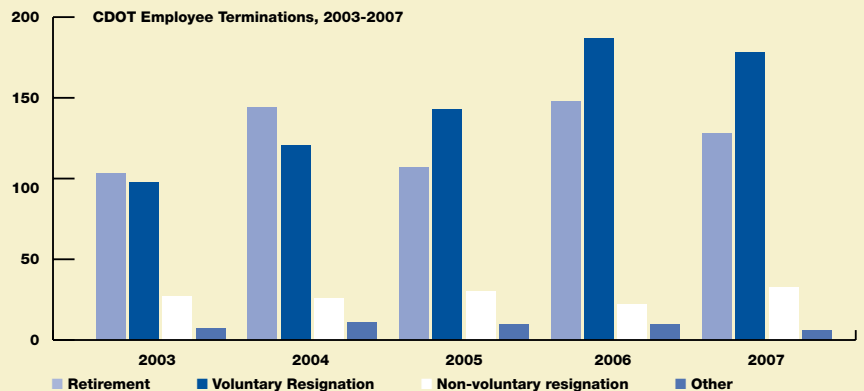
The number of voluntary resignations increased sharply from 2005 to 2006 and remained relatively high in 2007. There are steps that may be taken to reduce voluntary resignation. This is important because, when an employee voluntarily resigns, CDOT loses a worker who is probably performing at least satisfactorily and who has already gone through the hiring and training process, both of which are investments lost by CDOT when the employee leaves.

Hiring and training employees is expensive, and it makes good business sense to invest in programs to retain employees who perform well.

One way to encourage employee retention is to increase the value of working at CDOT. The department is committed to education and training benefits. Three new actions in 2008 were taken to address the issue of improving employee retention.

The first is an expanded education and professional development reimbursement program. As of March 20, 2008, employees are eligible to receive a reimbursement of 50 percent or 75 percent of course fees for degree and non-degree courses, and these are not restricted to courses relating specifically to job duties, as in the past. The maximum benefit is \$2,500 per fiscal year. The program also adds reimbursement benefits for eligible licensing, certifications and professional membership dues.

Another action taken is the funding of a new leadership development program for middle managers. This program is designed to prepare mid-level managers to be future leaders in the transportation industry.



To continue the development of employee retention initiatives, funding has been approved to hire two new employees who specialize in recruitment and who have expertise in compensation issues.

These three initiatives will be applied throughout CDOT.

As noted, the turnover within maintenance positions appears to drive the overall average turnover rate. Unfortunately, turnover in these positions is heavily influenced by outside factors including the overall economy and job market, and by competition from other industries.



# 3 | SECTION 3 | 2007 Performance Results Detail / PROGRAM DELIVERY

## Disadvantaged Business Enterprise (DBE) Participation



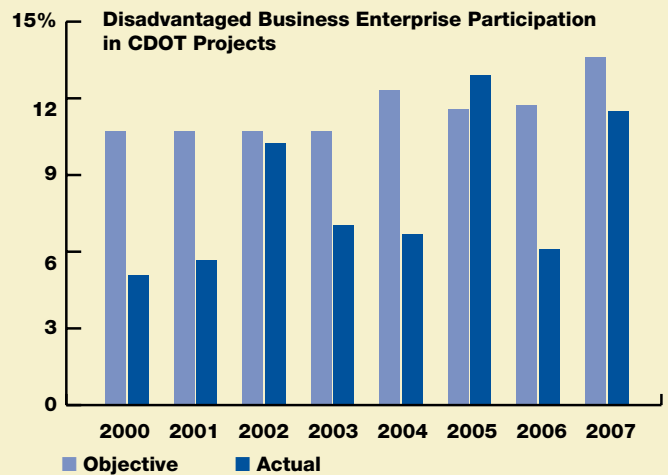
### SUPPORTING MEASURE:

**Percent DBE Participation in CDOT Projects**  
 (Does not include TRES and COSMIX Projects)  
 Objective: 13.8%  
 Actual: 11.9%

In 1983, Congress enacted the first disadvantaged business enterprise (DBE) statutory provision. This provision required that at least 10 percent of the federal funds authorized for the highway and transit financial assistance programs be expended with DBEs. The program fosters a competitive marketplace by creating a level playing field where DBEs can compete fairly for contracts. Ultimately, the program assists the development of DBEs to compete successfully in the marketplace outside the program.

CDOT sets an annual objective percentage of DBE participation in construction projects. In 2007, CDOT achieved 11.9 percent participation missing a 13.8 percent objective. While the department missed its objective, participation did increase 5.4 percent from the previous year. This increase was generated by participating firms winning

prime contracts. Decreases in participation in 2003, 2004 and 2006 are attributable to a poor economy and contractors submitting “tight” bids. Participating firms most often serve as subcontractors, the tighter bids result in subcontractors receiving a lower percentage of the total contract. CDOT provides technical assistance, training and project-specific outreach to the contracting community in support of achieving DBE objectives.



## What businesses qualify as disadvantaged?

To be certified as a Disadvantaged Business Enterprise, a firm must be a small business owned and controlled by individuals that are both socially and economically disadvantaged individuals. African American, Asian American, Native American, Hispanic and female business owners are presumed to be socially disadvantaged. Business owners not falling into one of those groups may establish individual proof of personal social disadvantage.

Economic disadvantage is established by showing that the personal net worth of the individual owners is less than \$750,000. The equity of the business and personal residence is excluded from the personal net worth calculation. A firm must meet Small Business Administration size criteria and not exceed \$20.4 million in average annual gross receipts.

DOT's DBE Certification Office evaluates information about each applicant firm through reviewing information submitted with their application, such as licenses, stock ownership, equipment, bonding capacity, work completed, resume of principal owners, financial capacity, and type of work preferred as well by conducting an on-site visit.

## Strategic Project Delivery

In 1996 the transportation Commission identified 28 high priority projects of statewide significance in increasing safety, mobility and reconstruction. These projects have collectively become known as the “7th Pot” and were identified as high priority based on their visibility, cost and return on investment. To accelerate construction of these projects and save on inflation costs, CDOT issued bonds and uses federal and state revenues to pay back bondholders over time. Issuing bonds for the TREX and COSMIX projects is estimated to have saved over \$1 billion in construction-related inflation costs. Nineteen of the 28 projects have been completed for just over \$2 billion. It is anticipated the nine remaining projects will cost \$3 billion (not accounting for inflation) to complete. Completion of these projects is dependent on the future of general funds (non-highway funds) allocated by the legislature on an annual basis. Current forecast indicates that all the remaining projects will not be completed until 2025.

Beginning in 2006, 10 percent of the general funds made available to the department are invested in transit capital projects. By Fiscal Year 2007 projects were awarded, but none had been completed. Awarded projects include transit vehicles, intermodal centers, and planning studies. The 2008 performance report will include a section on the progress of these projects.

## Status of Strategic Projects

Project	Completed	% Funded
I-25 / US 50 / SH 47 Interchange	✓	100%
I-25 / S. Academy to Briargate	✓	100%
I-25 / US 36 / SH 270	✓	100%
I-225 / Parker Rd.	✓	100%
I-76 / 120th Ave.	✓	100%
I-25 / Owl Canyon Rd. to Wyoming	✓	100%
East I-70 / Tower Rd. to Kansas	✓	100%
North I-25 / SH 77 to SH 66	✓	100%
US 50 / Grand Junction to Delta	✓	100%
US 285 / Goddard Ranch to Foxton rd.	✓	100%
US 160 / Wolf Creek Pass	✓	100%
US 40 Berthoud Pass	✓	100%
C-470 Extension	✓	100%
US 34 / I-25 to US 85	✓	100%
US 287 / Broomfield to Loveland	✓	100%
SH 82 / Basalt to Aspen	✓	100%
Santa Fe Corridor	✓	100%
Southeast MIS / I-25 / Broadway to Lincoln	✓	100%
US 287 / Campo to Hugo		70%
US 550 / New Mexico State Line to Durango		51%
US 160 / SH 3 to the Florida River		68%
Powers Boulevard – Colorado Springs		42%
I-70 / West Denver to Eagle County MIS/EIS		52%
I-25 / Denver to Colorado Springs MIS		52%
I-25 / North Denver to Fort Collins MIS		74%
I-70 / East and West Corridor MIS's		19%

# 4 SECTION 4 | Future Performance – Tough Choices

## Imagine not receiving a raise for 16 years.

**At first, you might work more hours to keep your income the same. Then as the prices of basic necessities rose you might cut back your spending on non-essential items.**

When there were no more hours to work in the day and prices continued to rise you would find yourself making tough choices about what necessities you could afford and what you would do without.

Colorado's current state gas tax is about 22 cents per gallon. The last time it was raised was 16 years ago. For the eight years following the state gas tax increase, Colorado drivers purchased more gallons of fuel each year and gas tax revenues rose. In the most recent eight years, Coloradans have switched to more fuel efficient vehicles and state gas tax revenues have been more or less stagnant. The response to recent record gas prices has been for Coloradans to drive less. Since gas taxes are paid on a per gallon basis, less driving means fewer dollars to support the department's maintenance and construction efforts.



During this time, the cost of CDOT's necessities has risen. Asphalt, concrete and steel are all at record prices. The cost of labor has risen as well. The department has established a reputation for being able to more with less. As this report demonstrates CDOT has continued to provide a high level of service in the face of rising costs and stagnant revenues.

The department always seeks out efficiencies. Governor Ritter's 2007 Government Efficiency and Management Performance Review identified nearly \$3 million of savings over the next five years at the department. These savings are the direct result of increasing the department's reliance on its already highly efficient engineering workforce. The review notes that replacing 11 consultant engineers with 11 full time staff will save approximately \$300,000 per year.<sup>4</sup> These savings could not have been achieved before 2007, because of a hiring freeze that had been in place for 21 years. The department's own maintenance workers found a method to reduce weed cutting costs by \$150,000 over five years. While important, these savings combined represent less than one tenth of one percent of the department's five year budget.

The stark reality is that the department can no longer ask itself, "Can we do more with less?" In the absence of additional revenues the relevant questions in the years to come are "Can we do the same with less? Can we do just a little less with a lot less?"

The answers to these questions are not simple. The department's primary objective is to provide the traveling public a safe transportation system. The department will not sacrifice safety, but it may be forced to close lanes, roads or bridges, put fewer snowplows on the roads and reduce capacity improvements just to maintain the existing system.

Regardless of the answers to these questions, the Annual Performance Report will keep the public informed about the condition of Colorado's state highways and the performance of the department.

<sup>4</sup> Colorado Government Efficiency and Performance Review (June 2008) page 34. accessed June 27, 2008 [www.colorado.gov/cs/Satellite/GovRitter/GOVR/1198314076903](http://www.colorado.gov/cs/Satellite/GovRitter/GOVR/1198314076903)



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### *Report Advisors*

Bryan Allery  
Tim Aschenbrener  
Mehdi Baziar  
Tom Boyce  
Bruce Coltharp  
Heather Copp  
Cindy Crandall  
Greg Diehl  
Debra Gallegos  
Rick Garber  
Stephen Henry  
Pam Hutton  
Mark Leonard  
B.J. McElroy  
John Nelson  
Mark Nord  
Steve Olson  
Adrienne Raiche  
David Reeves  
Scott Richrath  
Juan Robles  
Tracie Smith  
Chris Ukowich  
Cristina Valencia  
Gabriella Vidal  
Jeffrey Wassenaar  
Beverly Wyatt





Colorado's transportation system faces a quiet crisis. Colorado must address the deterioration of our transportation infrastructure and the continued erosion of mobility that looms in the near future.

