



2004 Annual Transportation System Performance Report

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• *Executive Summary* •

This FY2004 Report is the sixth Annual Report on transportation system performance for the Colorado Department of Transportation (CDOT).

The purpose of this report is to document and communicate to the public the performance and progress of the CDOT toward meeting the adopted transportation system performance goals and objectives of the Transportation Commission. This report is organized by investment categories (business functions) that are concentrated areas of services provided by the Department. The categories are Safety, System Quality, Mobility, Strategic Projects and Program Delivery. Included in this report are all investment level performance measures and three program delivery core service level that are linked to ten goals and twenty-six objectives. These measures illustrate trends that reflect the progress of the Department towards accomplishing its mission and vision.

Similar to government agencies across this nation, CDOT continues to encounter challenges as it strives to meet citizen's needs and ever increasing demands for its services and infrastructure. These challenges are compounded by Colorado's economic situation that has resulted in fewer revenues available to the Department to provide these services and infrastructure. As the information in this report will substantiate, many of the goals of the Department are being met, although in some instances, performance is less than optimum. Though CDOT will continue to focus on its investment strategy to ensure the best use of available funds, should current revenue forecasts prove accurate, the performance of the state highway system will experience significant deterioration over the next twenty-five years.

Summary by Investment Category:

SAFETY – Delivering a safe transportation system to the traveling public is of prime importance to the CDOT. The two program areas that the Safety category concentrates its efforts are roadway characteristics and driver behavior programs.

The successes in this category have varied from year to year; nonetheless the trend has shown positive progress over the past twenty years. Of the measures that are tracked, five of the six measures show improvement. Crash rate is the one measure that appears to be an area of concern based on the upward trend over the past eight years. Injury, Fatal, Alcohol, and Seatbelt statistics show improvement during the fifteen years that data are available. Customer's perception of highways and interstates safety has risen slightly over the past three surveys.

SYSTEM QUALITY – The condition (quality) of the Departments infrastructure has been improving since 1998 but the future condition projections based on projected available investments are not promising.

The pavement condition, as measured by Remaining Service Life (RSL) good and fair condition rating as a percentage of the total pavement condition, has risen from a low in

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1998 of 44% good and fair condition to 61% good and fair condition at present. For the first time since 1998, the Department's goal of 60% good and fair pavement condition has been met. However, the projected pavement condition for 2010 and 2030 deteriorates to 54% and 32% good and fair condition respectively based on projected revenues.

Bridge condition has improved slightly from 1991 through 2003 from 95.5% to 96.9% good and fair condition respectively. Again the projected bridge condition for 2010 based on current funding is 94% good and fair condition.

The significant effort to maintain the transportation system has been successful from the beginning of the Maintenance Level of Service (MLOS) program in FY1999. There are nine maintenance program areas (MPA) monitored, such as snow & ice control, roadway surface, and traffic services. Out of 45 MPA ratings over the past five years 30 have met or exceeded the adopted goals. Six of the nine MPA met or exceeded the goal in FY2004. This demonstrates the commitment to provide high quality services to the transportation customer. Once again, the future maintenance levels of service condition of the state transportation system based on projected available investment indicate deterioration through 2030.

MOBILITY – The movement of “people, goods and information” is in the mission statement of the Department and a high priority of transportation system users as indicated by respondents of the 2003 and earlier Statewide Customer surveys. Because of the population growth in the already congested areas of the State and the vehicle miles traveled per individual continuing to rise, there is a respective growth in congestion. Mobility is a service provided by CDOT that is difficult and complicated to measure. Various mobility measures have been tracked since FY1999 with mixed results. Currently travel time in selected corridors, volume to capacity, and vehicle miles traveled are measured. Future condition projections indicate that congestion, as measured by volume/capacity $\geq .85$, will more than double between now and the year 2030.

STRATEGIC PROJECTS – Until the recent downturn in the Colorado economy affected available transportation revenues, this investment category had substantial progress in attaining the established goals. Of the 28 strategic projects, 2 have not been funded, 17 have encumbered or expended over 80% of the funds, of which, 13 are complete or nearing completion.

PROGRAM DELIVERY – This investment category encompasses the effort supporting the delivery CDOT's programs and services. Currently there are no adopted investment level performance measures therefore the progress for Program Delivery is reported using Core Service performance measures.

Naturally, the Department's customers recognize that the quality of CDOT's employees is directly related to the quality of the services that the Department provides. That being the case, measures on hiring practices, retention, retirement rates and training of employees are of prime importance. Over the past eight years, employee turnover has varied from 6.3% to 11%. Last year CDOT's turnover rose 2.2% to 10.2%. In the past the turnover rate trend has closely followed the economic climate: the better the economy the higher the turnover rate. Also, tracking the results of employee training is

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an absolutely essential step to ensure quality services. 90.2% of the internal customer satisfaction survey respondents indicated they were satisfied with the quality of training provided by Office of Learning and Development.

In conclusion, the Department is improving its focus on what is important to its customers and striving to meet its objectives. With the limited resources due to economic times, the Department can be proud of attaining the successes in the investment category achievements over this past year. Continuing this success in the future, in light of anticipated revenue trends will be a great challenge and require that every dollar expended be put to optimal use.

• ***Investment Strategy*** •

Since 1996, the transportation investment decisions process has been undergoing a continuing evolution within the Colorado Department of Transportation (CDOT). The Transportation Commission and the department's Executive Management Team (EMT) determined that the traditional approach to transportation decisions was losing its effectiveness. The investments in transportation must gauge, on a current and continuing basis, transportation trends to anticipate and prepare to meet the challenges of Colorado's transportation future.

The achievement of this requires sound planning, investments and the determination to attain the desired long-range vision. To succeed at solving a range of complex problems and taking advantage of opportunities, the department has developed a more comprehensive investment strategy as shown on page 7. This approach now requires a much more integrated process to investing resources that include current and accurate information and data about resources, program performance, and customer needs.

CDOT focuses on five major business functions or investment categories. The investment categories are Safety, System Quality, Mobility, Strategic Projects and Program Delivery. The categories represent the concentrated areas of services of the Department rather than the independent and individualized needs of programs and projects. This approach results in an integrated and interdependent investment strategy effort that establishes a framework for investment planning and monitoring to guide how resources can be deployed and managed to enable the Department to effectively carry out its mission.

During FY2001 and FY2002, CDOT's Investment Strategy evolved into a full cycle of strategic investment level and core service level planning. This encompasses key elements that will ensure successful implementation as well as the framework for the sustainability of an evolutionary process. Through effective communications with CDOT customers, the Department desires to raise levels of understanding, and increase support and acceptance of this visionary transportation investment strategy. This is especially important in these economic times of financial constraints.

In previous years, the investment strategy cycle was limited to alignment of CDOT's mission, performance and investment. The current investment strategy has evolved to include components of communication and linkage, implementation, and lessons learned through feedback and results. These are the key elements that will ensure continuous improvement and sustainability. The key elements that help define each component of the cycle are as follows:

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Vision/Mission/Strategy

- Evaluates stakeholder and customer expectations
- Assess the Department's strengths and weaknesses
- Assess the Department's internal and external opportunities and limitations
- Develop strategic objectives for actions by the Department

Performance Management

- Assess current processes and structures for strategic implementation
- Formulate a performance model of the business and identify fundamental drivers of success
- Institute a performance model based on reasonable targets
- Develop key performance measures
- Establish process for review, feedback and revision

Communication and Linkage

- Articulate the new investment strategy and performance plan
- Operationalize investment strategy by establishing performance measurement and targets
- Cascade performance measures to all levels
- Link performance to accountability and gain Department commitment and customer understanding

Implementation

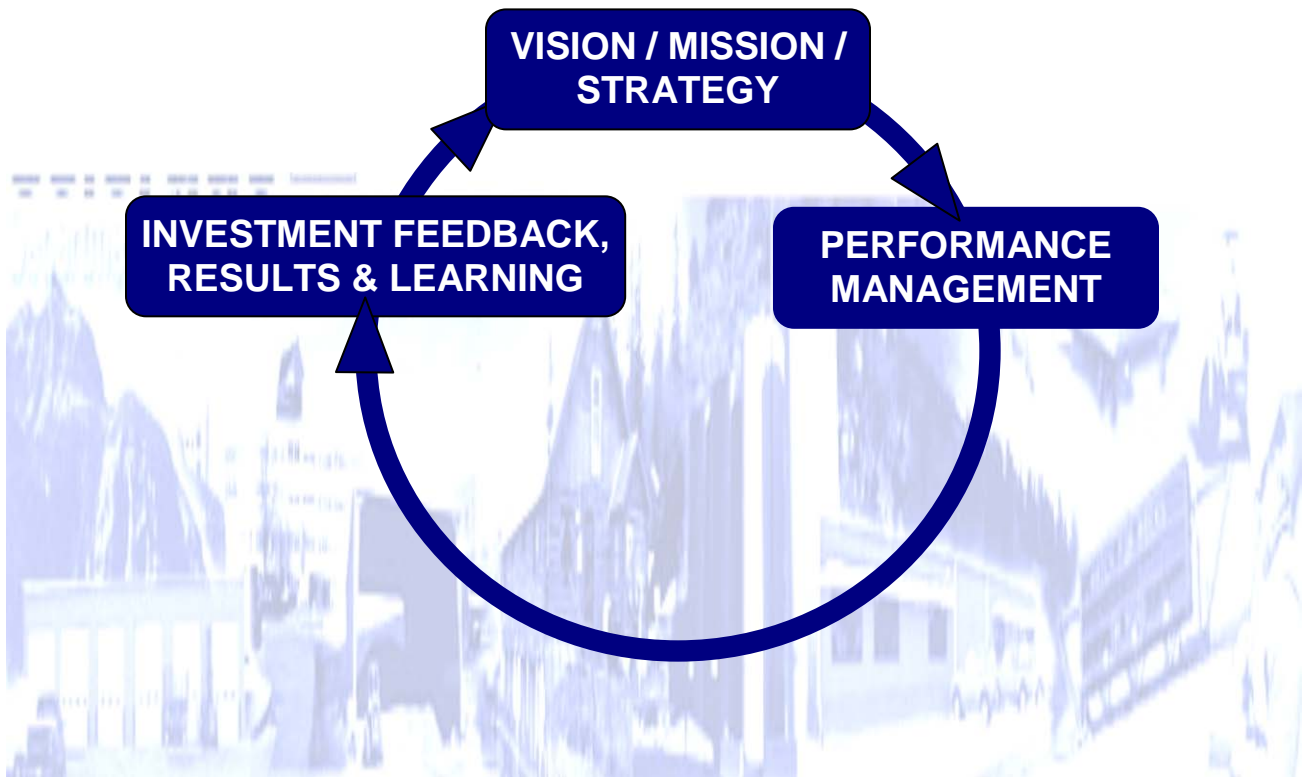
- Provide success enablers: training, system support and leadership
- Monitor progress through measures and provide process for review, feedback and revision
- Where needed, apply behavioral and Department change management
- Manage the implementation of goals, objectives and performance measures

Investment Feedback and Learning

- Review and summarize performance measures results versus expectations
- Continually assess the validity of the goals, objectives, investment categories, and performance measures and make necessary revisions
- Evaluate the areas of performance measures results not meeting expectations and identify root causes: internal or external influences, resource limitations, or inadequate agency capabilities
- Evaluate the areas of strengths to accentuate the program
- Document and summarize lessons learned and insights for strategic revisioning and refocusing

The above process is illustrated in Figure 1:

CDOT Investment Strategy Cycle

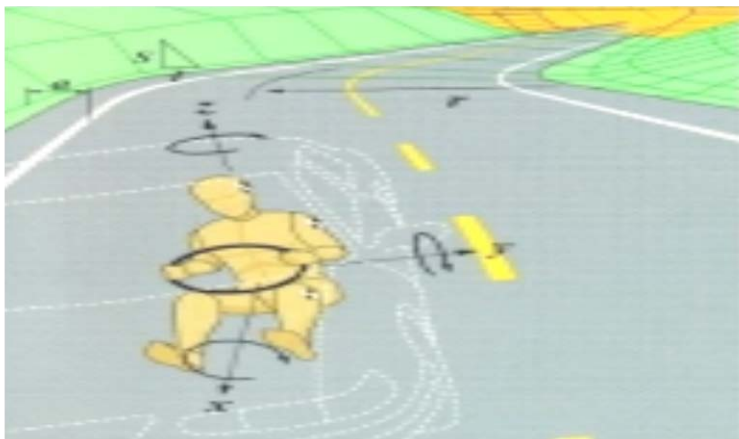


Following through with this cycle of the Investment Strategy, CDOT's Transportation Commission and the Executive Management Team has set the broad outline for the Investment Strategy by setting investment level goals and objectives. The goals state what the organization wants to accomplish or become over the next decade or more. The objectives, that support the Department's goals, channel resources to the point of implementation and commit people to action. Performance Measures were developed to allow CDOT to measure progress towards its objectives and report that progress to their employees, customers and stakeholders on the outcomes of the investments.

CDOT's Investment Strategy is supported by five investment categories: Safety, System Quality, Mobility, Strategic Projects and Program Delivery. The Strategic Projects category has an impact on Safety, System Quality and Mobility categories. The categories may appear to operate independently but are designed to encompass all of CDOT's major functions that supplement and complement each other. This requires understanding the relationship between the categories for effective decision-making. Listed on the following pages are the five investment categories and the associated definitions.

INVESTMENT CATEGORIES

System Quality:
Activities, programs and projects that maintain the function and aesthetics of the existing transportation system



Safety:
Services, programs and projects that reduce fatalities, injuries and property damage for all users of the system



Mobility:
Programs, services and projects that provide for the movement of people, goods and information



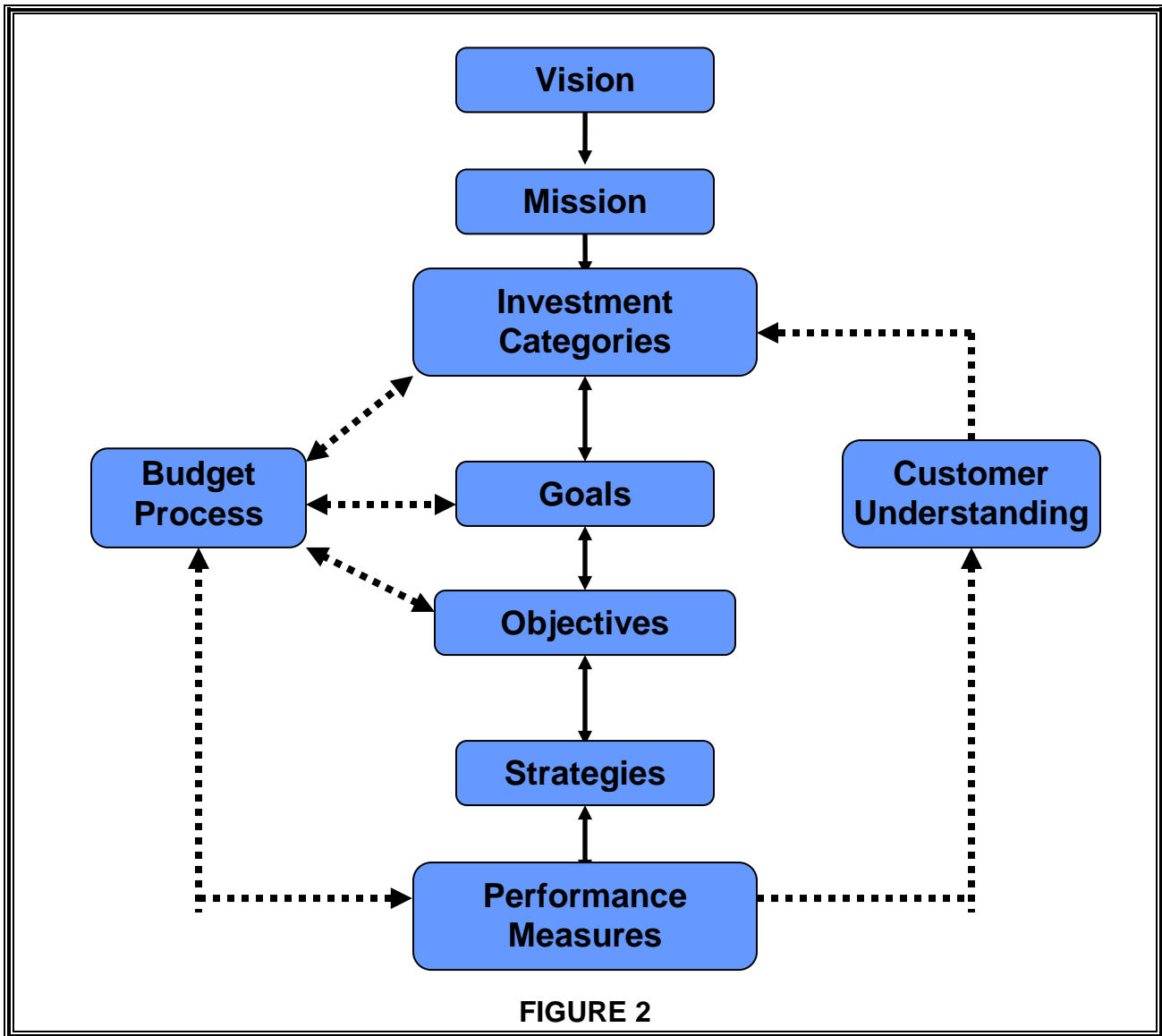
Strategic Projects:
The 28 high-priority statewide projects that have been committed for accelerated funding

Program Delivery:
Support functions that enable delivery of CDOT's programs and services



Investment Strategy Alignment Model

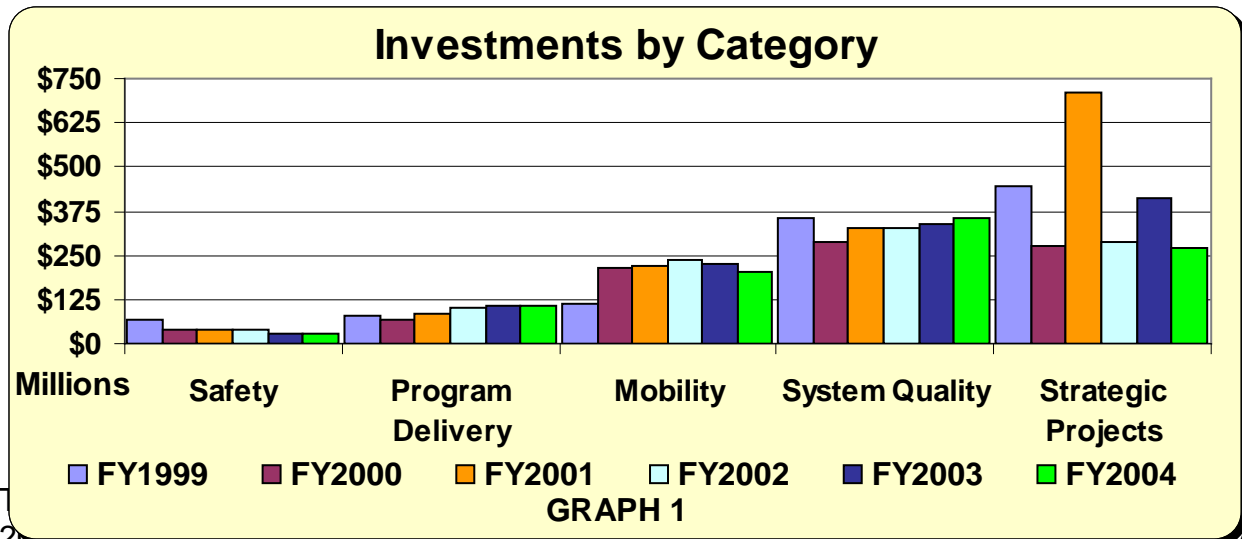
The figure below demonstrates the alignment relationship that the investment categories have within the overall Department and to other organizational processes. The design ensures support of the Department's Vision and Mission while creating alignment of the Department's Goals and Objectives. Performance Measures help determine the accomplishments within the resource parameters. Combined with the customer input, performance measures can provide the necessary data feedback that can help determine where to focus management decisions and the resources necessary to support the desired investment outcome.



Investments in the Transportation System



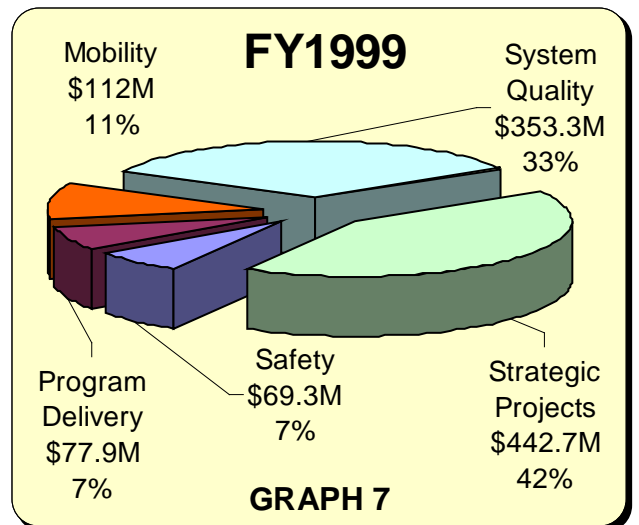
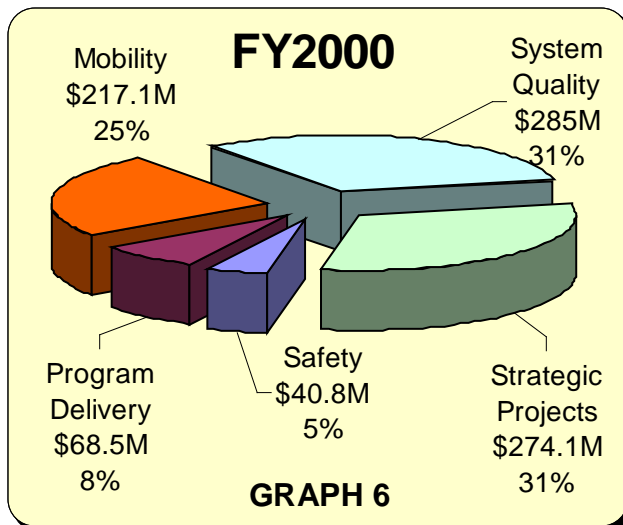
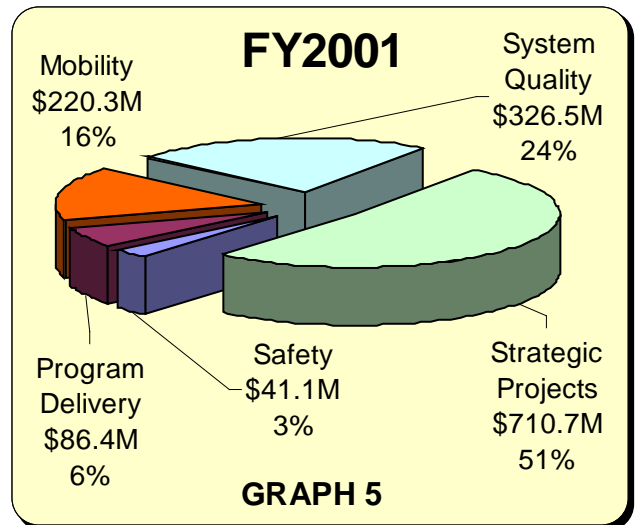
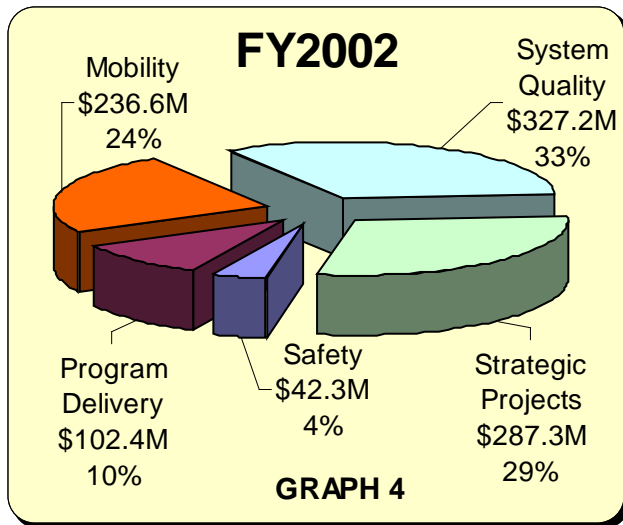
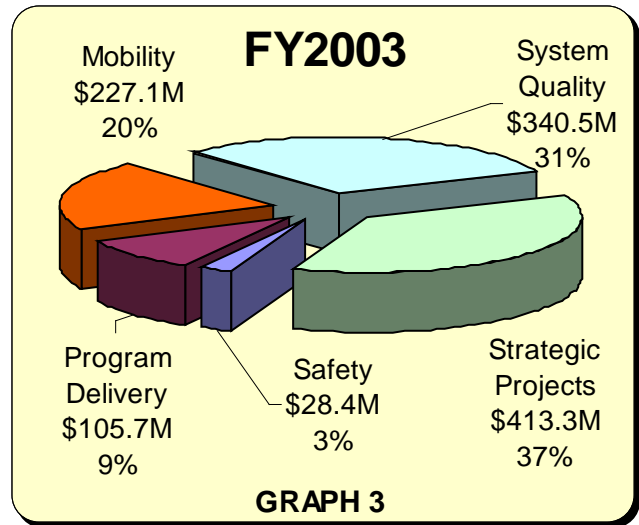
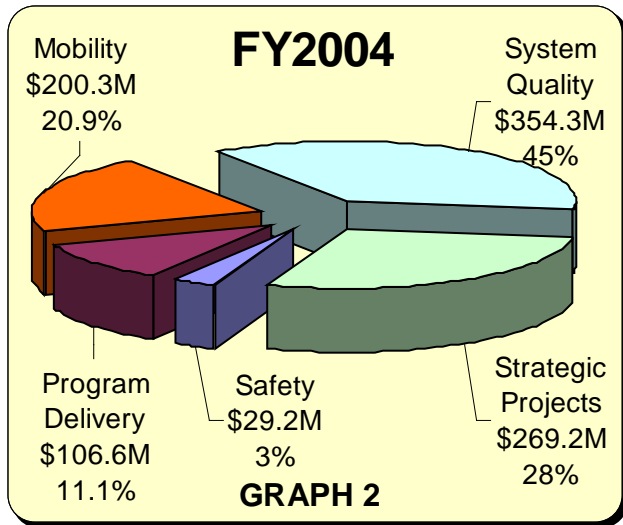
The investments shown below are consistent with the investment strategies of the Transportation Commission. The percentages of resources allocated to each investment category have remained fairly constant in each of the categories excepting in the Strategic Projects category. CDOT's fiscal year 2004 transportation funding has been allocated into the five Investment Categories based on a number of factors including previous years performance results. This allocation process into the five investment categories using performance results to guide the decision process has been accomplished for the past five years. The credibility of the performance data in the Safety, System Quality and Strategic Projects Investment Categories has increased significantly over this same time period. Mobility performance results data remains in its infancy for utilization in the budgeting process.



2000 and FY 2002 are due to programs not included within the Program Delivery category budget in FY 2000 that were added in FY2002 and change in priorities. Programs not included are Environmental Streamlining and PPIBIS. Priority change increases include Maintenance Level of Service and Buildings, grounds, rest areas and equipment. Also \$10.6 million in additional Contingency Funds were included for FY 2002 above those in FY 2000.

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Investments and Percentages by Year



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Furthermore, the management systems that provide some of the data have been going through modifications and refinements throughout the same period adding to the need for prudence in data comparisons and analyses. Additionally, the relationship between investment and outcome is less directly attributable in some programs than in others (e.g., Pavement investment related to Remaining Service Life [RSL] performance has relatively strong relationship versus Safety Behavioral investments related to seatbelt usage performance, which is less direct).

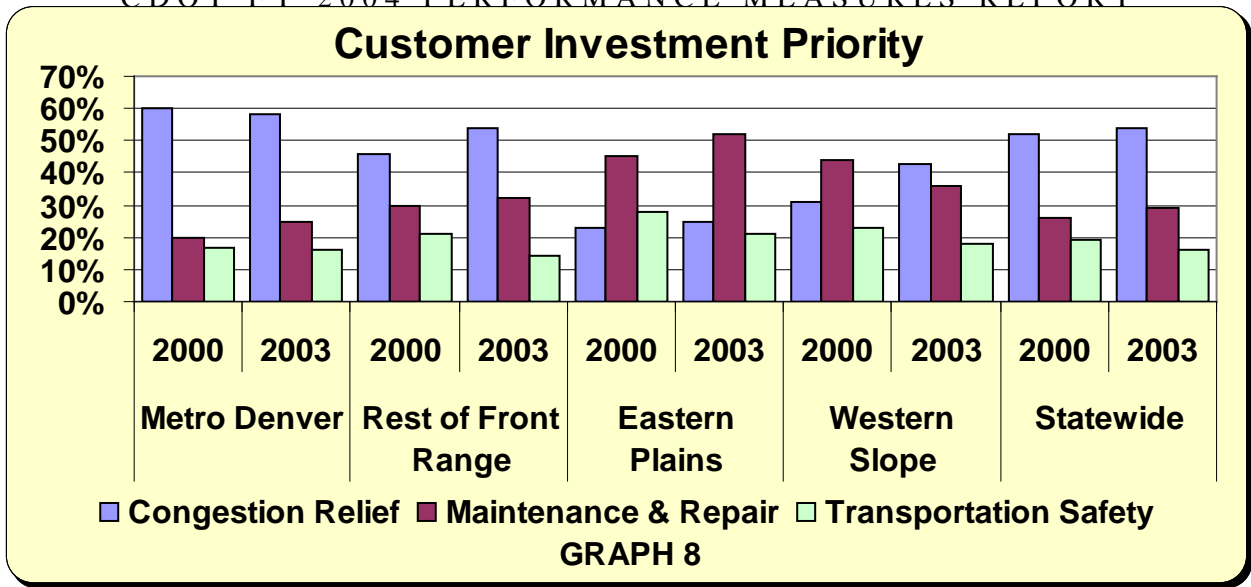
Analyzing the numerous performance indicators each fiscal year can give an indication of the state of the system and the associated relational change from year to year. However, care must be taken not to conclude that there was more or less of an emphasis or result in any of the investment categories based only on one or two performance indicators. An indication of this is displayed in the FY2001 graph on page eleven. The expenditures increased dramatically in Strategic Projects in fiscal year 2001. This does not necessarily demonstrate that the completion of the high priority Strategic Projects was the emphasis over the other investment categories. It may only be an indication that there was a funding source increase for fiscal year 2001. Also, illustrated in the FY2001 and FY2002 graphs is the System Quality budget percentage increase by 9% from FY2001 to FY2002 but only a .2 % increase in the actual dollar amount. Therefore a full analysis must be completed on the total budget dollars available, current expenditures, the need in each category, previous years expenditures, customer expectations and current performance indicators to form an entire picture of results associated to investments in the transportation system.

Customer Perception

Vitally important to CDOT is the continued input from their customers and the desire and commitment to meet their needs. One instrument to obtain input is the *Statewide Resident Survey-Opinion Survey on Transportation Issues in Colorado*. The first survey was conducted in 1994 with a follow-up survey in 2000 and the most recent version completed in May of 2003. The Department's objective is to conduct a statewide survey on a recurring basis to obtain valuable customer perception data to supplement other data to guide transportation investments.

In the 2000 survey, the respondents ranked transportation as the second most important problem facing Colorado with growth/sprawl being number one on their list. Noteworthy is that transportation dropped to a tie along with growth/sprawl for fourth in the 2003 Survey behind water issues, the economy, and taxes/government spending respectively. The previous two customer surveys typify the priority investment areas preferred by the general public. When compared with "providing travel options and relief from congestion", "maintenance and repair of the transportation system", and "transportation safety", that respectively are analogous to the Mobility, System Quality, and Safety Investment Categories, the statewide public's preference is investment in congestion relief (Mobility). Safety, in the minds of the transportation user, continues to be the lowest priority according to the results of the 2003 survey.

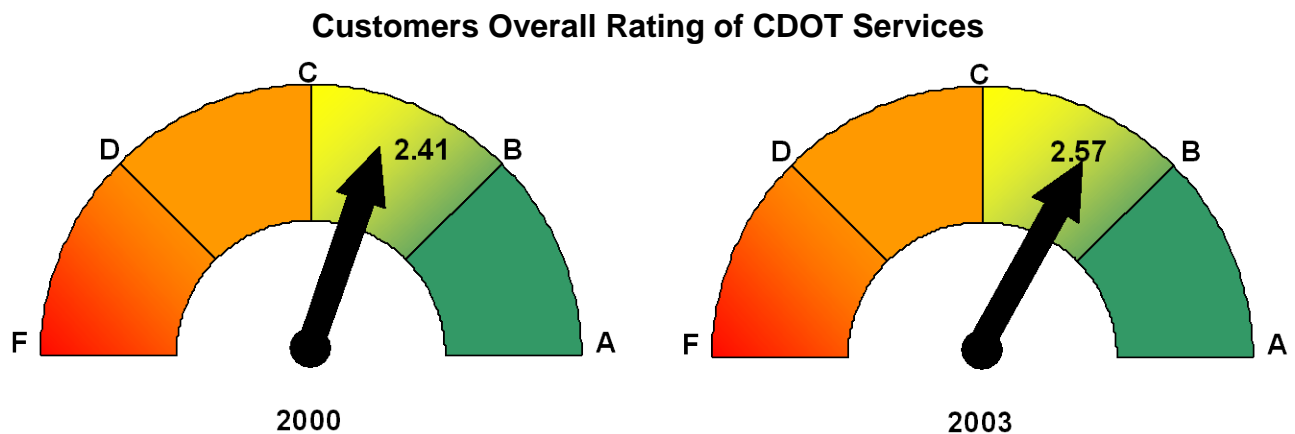
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Also quantified in the statewide survey conducted in early 2003 is the customer perception of CDOT performance. This information is provided by statewide and in four different demographic areas (Metropolitan Denver, Rest of Front Range, Eastern Plains, and Western Slope) as it was in the 1994 and 2000 surveys. In addition to geographical areas, the 2003 customer survey data are also provided by the six Engineering Regions and the fifteen Transportation Planning Regions (TPR). The survey data is a valuable tool for utilization in the statewide planning process that is currently underway, as well as other uses.

The results from the 2003 Statewide Customer Survey scored CDOT's overall performance at "C plus". This is the same grade as 2000 with a slight numerical increase (as shown below) and an increase from "C" in the 1994 survey.

Additional customer survey information relating to a specific investment category will be provided in the associated investment category portion of this document.



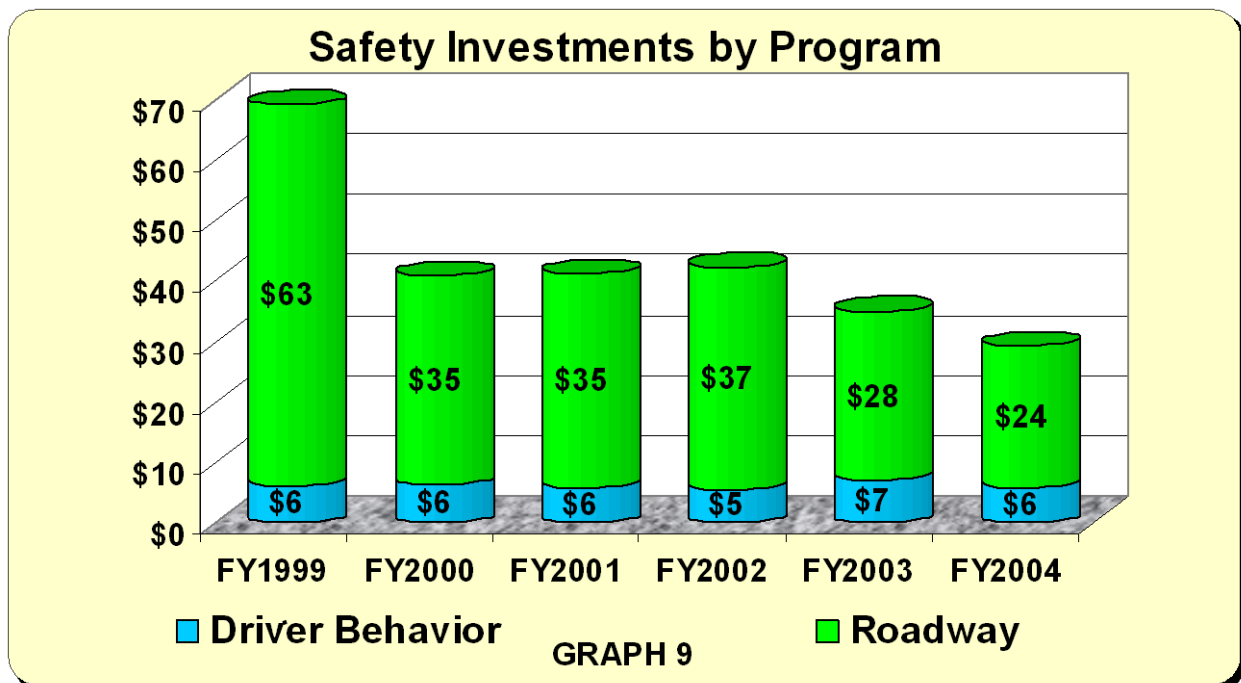
Safety Investment Category

“Services, programs and projects that reduce fatalities, injuries and property damage for all users of the system.”

The Safety Investment Category is funded in two key program areas: Roadway Safety Characteristics and Driving Behaviors. Roadway Characteristics performance is measured by: Total Crash Rates, Injury Rates, and Fatality Rates. Driving Behaviors performance is measured by tracking: Alcohol Related Fatality Rates and Seatbelt Usage. In the development stage are the performance indicators for the objective “Emphasize applicable safety features consistent with population growth”. To measure the performance for this objective, elements of safety “Before & After” treatments as well as “Evaluation of Cost Effectiveness of Safety Improvement Strategies” are being tracked. Data have yet to be solidified enough to assess the impact on the Department’s safety performance.

CDOT’s Investment in Safety

Based on the actual funding for FY 2004 in the Colorado Integrated Safety Plan, CDOT budgeted approximately \$29.2 million to Safety related programs and projects.



Goal

- Reduce transportation-related crashes, injuries and fatalities and the associated loss to society

Objective

- Reduce the rate and severity of transportation related incidents

Performance Measure

- Statewide safety incident rate including fatal and injury rate

Purpose

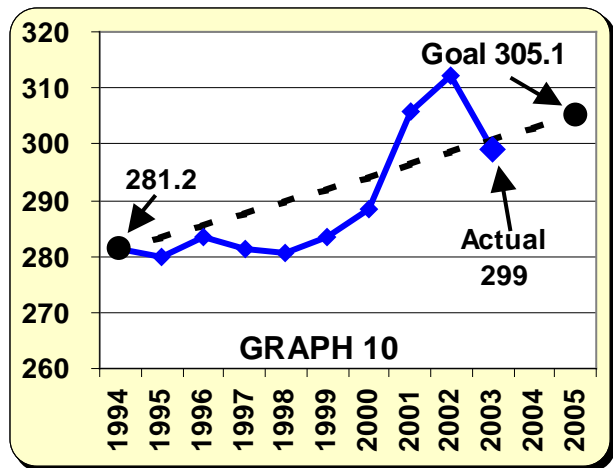
Measuring the frequency of crashes, injuries and fatalities performance by year enables CDOT to indirectly determine if their safety investments are having an impact in reducing frequency and severity of crashes.

Current Condition

After the substantial decrease in the total crash rate from 1990 through 1992 (not shown), the rate had been slowly but steadily rising to a point higher than the 299 in 1990. However, in 2003, the rate made a dramatic downward movement. The objective of monitoring total crash rates is to determine how Colorado is progressing in meeting the year 2005 goal to “reduce crashes” to 305.1 per one hundred million vehicle miles of travel. This goal was reassessed in the report titled “Colorado Integrated Safety Plan 2004-2006” and revised. The non-linear (logarithmic) trend analysis conclusions surrounding the total crash rate recommended the change in the goal to 305.1 from 273.3 for 2005

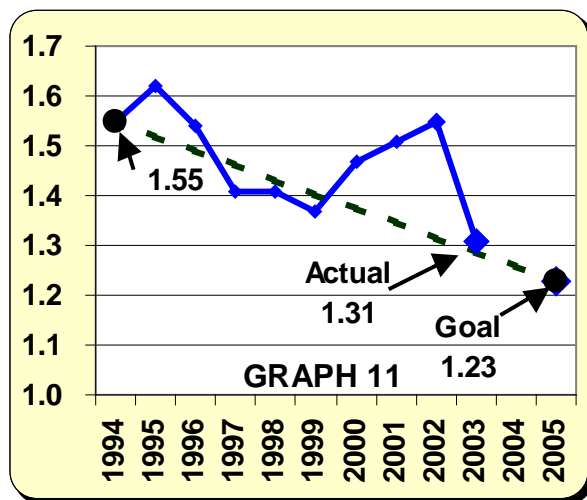
The fatality rate has been varying from year to year but in a general upward trend since 1999 when it was at an all time low of 1.37 fatalities per 100 million vehicle miles traveled (MVMT). However, similar to the crash rate, the fatality rate made a major reversal in 2003. The fatality rate is at an all time low. Because of the previous trend and the recent change, this measure should be monitored closely over the next couple of years. Consistent with the crash rate forecasts, the fatality and injury rate goals also were revised; previously the 2005 targets were 1.35 and 70 respectively.

STATEWIDE TOTAL CRASH RATE
(Crash rate per 100 million vehicle miles traveled)



--- Target Rate
— Actual Rate

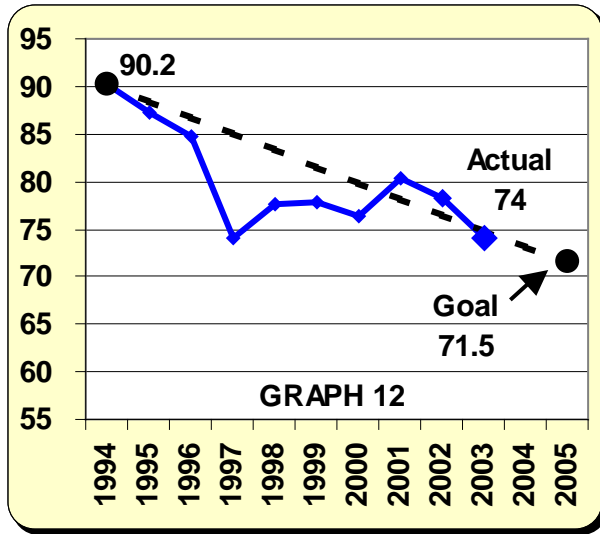
STATEWIDE FATAL CRASH RATE
(Fatal rate per 100 million miles traveled)



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STATEWIDE INJURY RATE

(Injury rate per 100 million miles traveled)



The statewide injury crash rate of 74 has improved since the 1981 high of 126.2 per 100 MVMT. Nevertheless, the rate had increased to slightly over 80 in 2001 from a low of 74.1 in 1997 before heading in a downward trend again to an all time low this past year.

The Safety performance measures data is the perfect example of “no performance measure stands alone” rule when using data to support decisions. The recent rise in “alcohol related fatal rate” implies that the investments are not sufficient to have an impact on Safety. However, the other statewide safety rates must be assessed along with the “alcohol related fatal rate” prior to making decisions on investments in the Safety Investment Category.

Objective

- Promote the education and awareness of safe driving behavior

Performance Measure

- Alcohol related incidents compared to statewide incident rate

Purpose

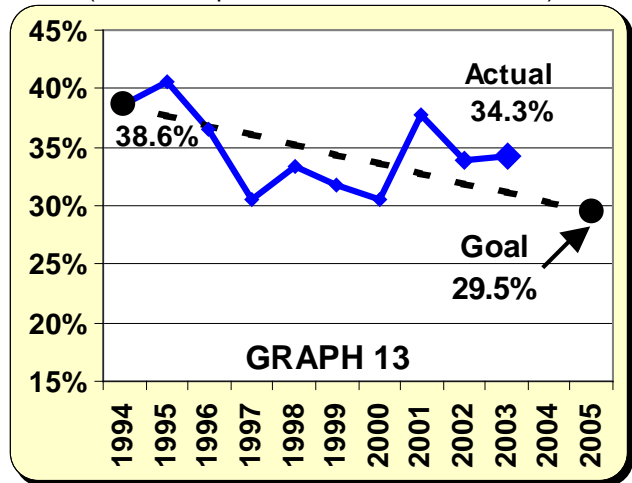
This measure determines the rate of fatal crashes resulting from driving behavior associated with driving under the influence of alcohol. It can also help determine if more emphasis needs to be focused on driver behavior specifically related to driving while impaired.

Current Condition

While monitoring total crashes helps determine the magnitude of problems in the safety category, differentiating the types of crashes between those that are roadway characteristics versus driver behavioral (seat belt usage and alcohol related fatal) can help determine the specific problem area. Upon that determination, the investment focus of the Department can be established. The monitoring and investments in these programs are aimed at decreasing the number of these types of crashes with the ultimate goal to minimize the associated economic and social impacts.

STATEWIDE ALCOHOL RELATED FATAL RATE

(Rate as a percent of all fatal accidents)



Again, similar to fatal crash and injury crash rate trends, alcohol related fatal crash rates had been steadily decreasing from a high in 1981 of 54% to a low of 30.5% in 2000 but in recent years have been varying up and down.

Objective

- Promote the education and awareness of safe driving behavior

Performance Measure

- Incidents involving seatbelt usage compared to statewide incident rate

Purpose

This measure determines what percentage of the general population is adhering to safe driving behavior by wearing their safety belt.

Current Condition

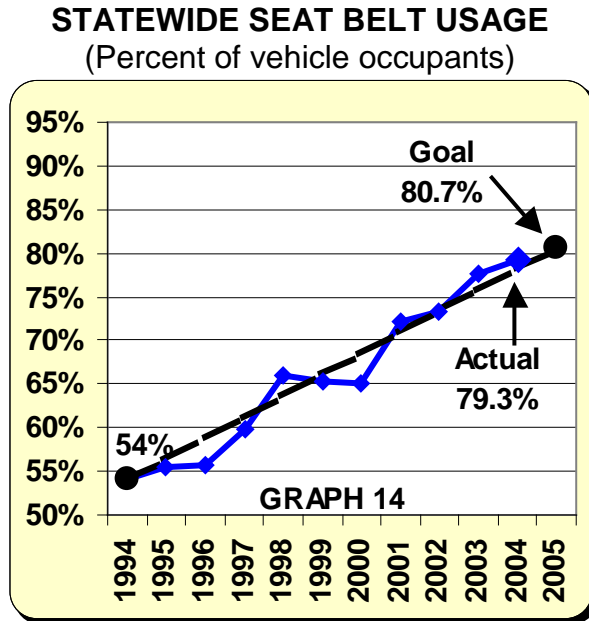
Seat belts are the most effective means of reducing fatalities and serious injuries. When traffic crashes do occur, seatbelts are estimated to save more than 11,000 passenger vehicle occupants over 4 years old each year in America¹.

Research has found that lap/shoulder belts, when used properly, reduce the risk of fatal injury to front seat passenger car occupants by 45 percent and the risk of moderate-to-critical injury by 50 percent. For light truck occupants, seat belts reduce the risk of fatal injury by 60 percent and moderate-to-critical injury by 65 percent¹.

Surveys show that use of seat belts is not uniform by area of the state, vehicle type, or age groups.

As illustrated in the graph to the right, seat belt usage in Colorado has increased substantially from 54% to 79.3% from 1994 to 2004.

The 2004 seatbelt usage surpasses the previous 2005 Goal of 70%, now adjusted to 80.7%. If the trend continues, this is another area within the Safety category that should be celebrated.



¹ U.S. Department of Transportation, National Highway Traffic Safety Administration, *Traffic Safety Facts 1999: Occupant Protection*

Objective

- Emphasize applicable safety features consistent with the population growth.

Performance Measure

- Return on Investment for Designated Improvement Sites
- Corridor Safety Assessment

Purpose

The methodology to enable the reporting of the two above performance measures is in the developmental stage. Data is currently being tracked to set the baseline and allow for comparison analysis in future years. These results will allow for focusing of investments in very specific safety problem areas.

Customer Perception of Safety

Objective

- Emphasize applicable safety features consistent with the population growth
- Promote the education and awareness of safe driving behavior
- Reduce the rate and severity of transportation related incidents

Performance Measure

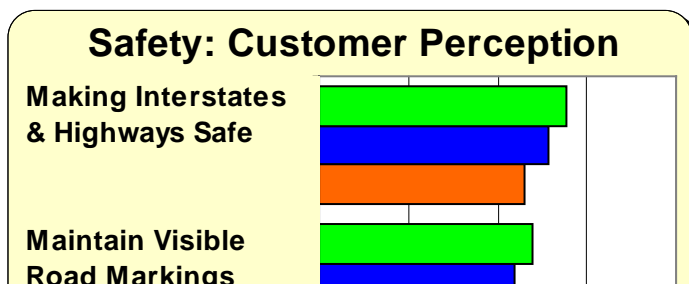
- Customer perception rating of system safety and driver behavior programs

Purpose

The purpose of this performance measure is to gauge overall customer perception on what they perceive to be safe or not safe. This measure will help CDOT determine if the safety improvement projects are perceived as having a positive impact on its customers. Gauging customer perception is one of the techniques used to validate investment decisions.

Current Condition

Customers rated making highways and interstates safe an above average grade of B minus on a scale of A through F. The customer perception has risen slightly over the past three surveys.



Customer Perception of Safety Services provided by CDOT

As shown in graph 15, there weren't any specific safety areas that demonstrated a significant low in customer perception grade. The customer survey results did convey a continued better than average performance in the visibility of signs and handling of rockslides and avalanches in the recent surveys.

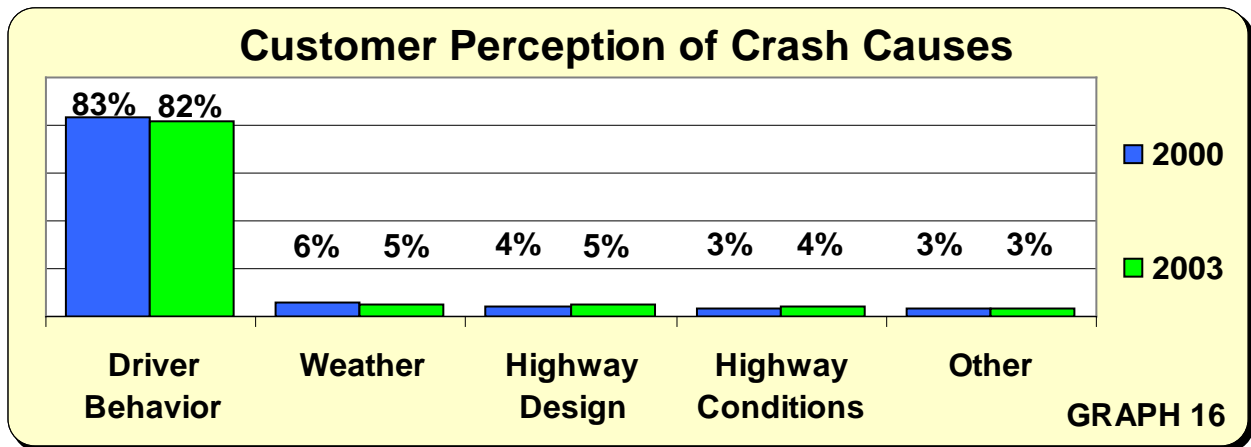
Customer Perception of Crash Causes

When asked what is perceived to be the most common cause of traffic crashes, the respondents have consistently indicated "driver behavior" as shown in graph 16.

However, contrary to this perception on causes of crashes, they also continue to prefer resource expenditures on improving the roadways rather than on public safety campaigns (driver behavior programs) to improve traffic safety.

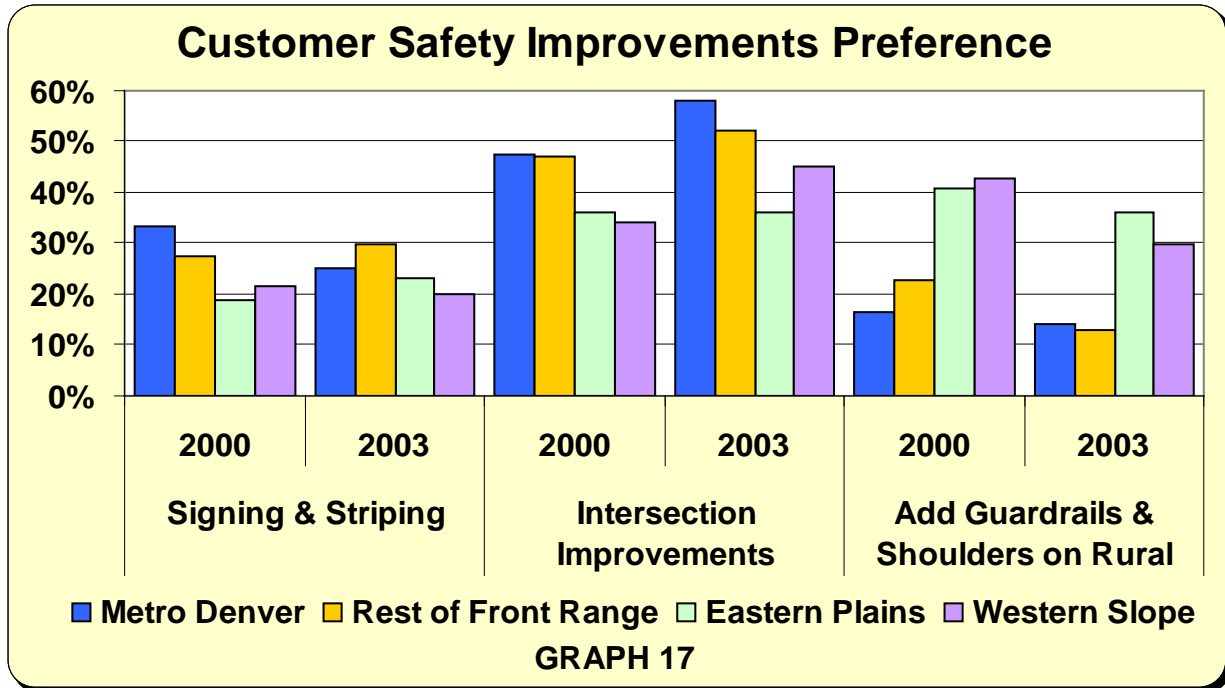
Current Condition:

This may be understandable given that sixty four percent of the participants also indicated that "driver behavior" campaigns have no effect on their driving behavior, thus giving tacit disapproval to investments in this area.



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Customer Perception: Roadway safety improvements preferences. With roadway improvements the preferred investment solution to crashes, the tradeoffs in the roadway improvements program area were posed to respondents. The Metro Denver, Rest of Front Range and West Slope respondents' highest safety priority (Graph below) is "intersection safety improvements". Whereas the Eastern Plains respondents were evenly divided between "intersection safety improvements" and "guardrails and shoulders on rural roads".



System Quality Investment Category

“Activities, programs and projects that maintain the function and aesthetics of the existing transportation infrastructure.”

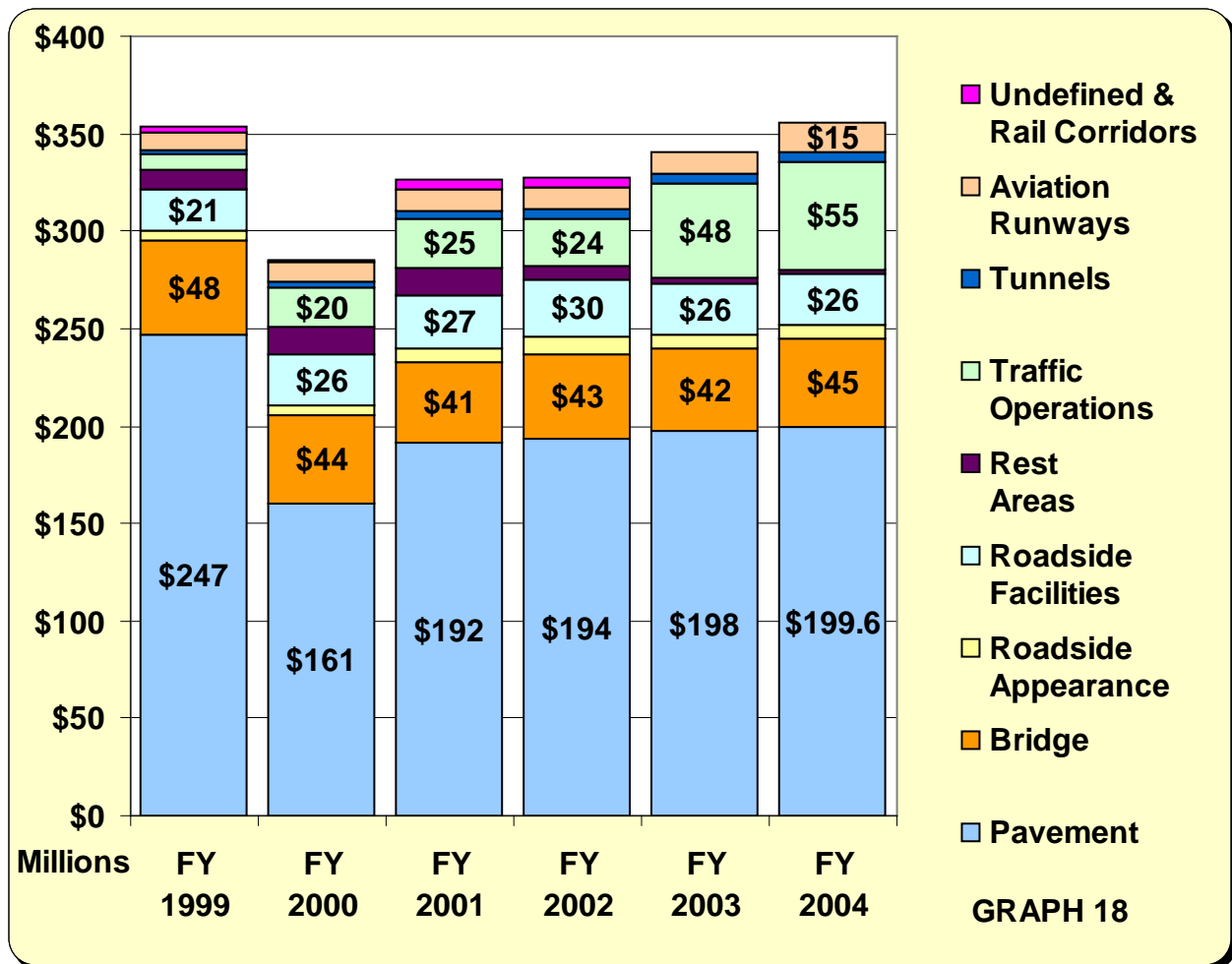
The significance of this investment category is that it is responsible for the quality of the transportation infrastructure. Investment decisions in this category impact the surface quality and remaining service life of roadways and structures. The investment Program Areas are: Pavement, Bridge, Roadside Facilities, Traffic Operations, Rest Areas, Roadside Appearance and Other Modes.

Goals

- Preserve the Transportation System
- Keep the system available and safe for travel

CDOT’s Investments by Program Area in System Quality

Based on the fiscal year 2004 Budget, CDOT allocated approximately \$354.3 million, which is 36.9 % of the total budget, to System Quality programs, services and projects.



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The system quality budget is allocated to nine program areas as shown in graph 18. The pavement (includes surface treatment program, roadway surface [within Maintenance Level of Service], and gaming funds) and bridge (includes bridge program and Structures [within Maintenance Level of Service] funds) program investments, as shown in the graph above, constitute between 68% and 84% of the system quality budgeted dollars respective of the year.

Objective:

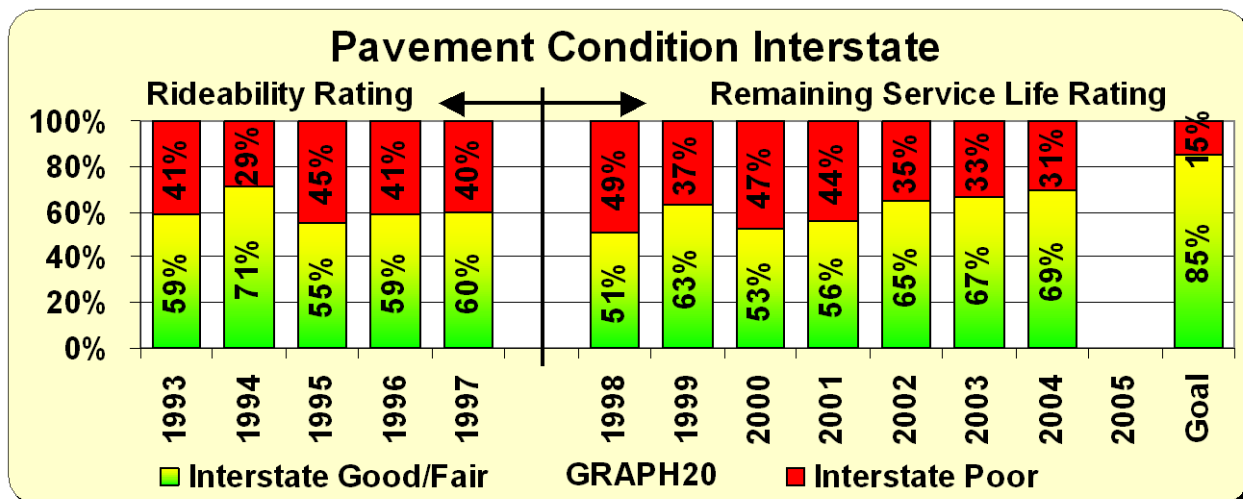
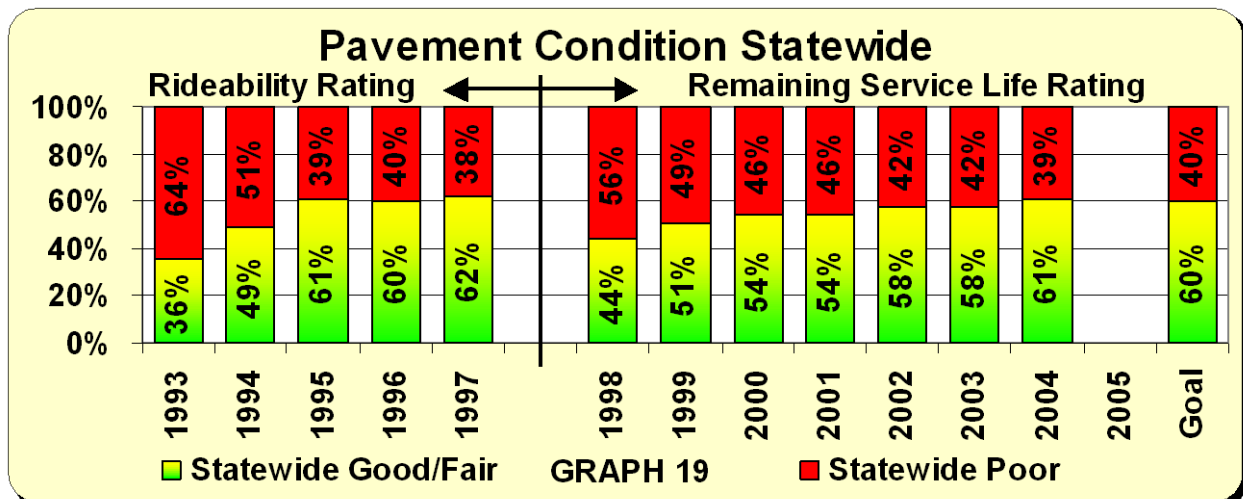
- Enhance and maintain the transportation system to ensure maximum useful life

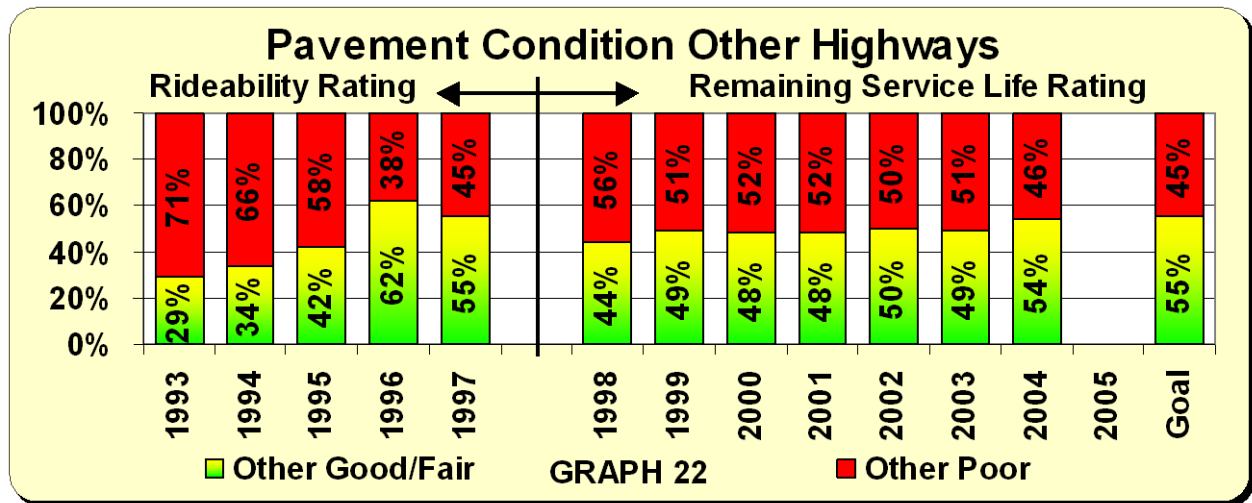
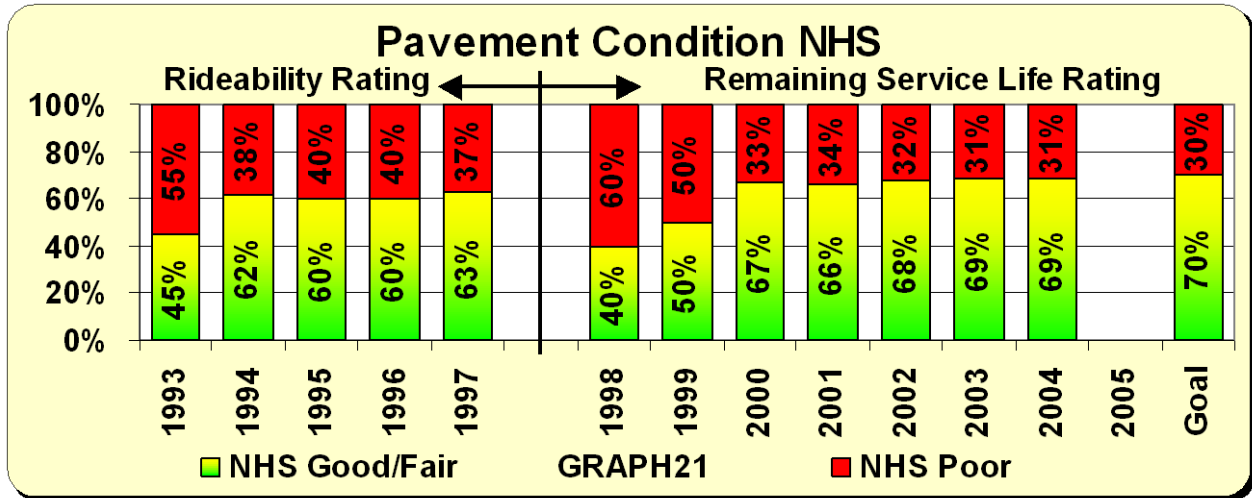
Performance Measure

- Percent surface condition rating of fair or better

Purpose

These measures gauge the foundational strength and condition of the transportation infrastructure. The transportation investments in system quality category can impact the performance and customer perception of other investment categories such as the level of safety and mobility performance.





Current Condition

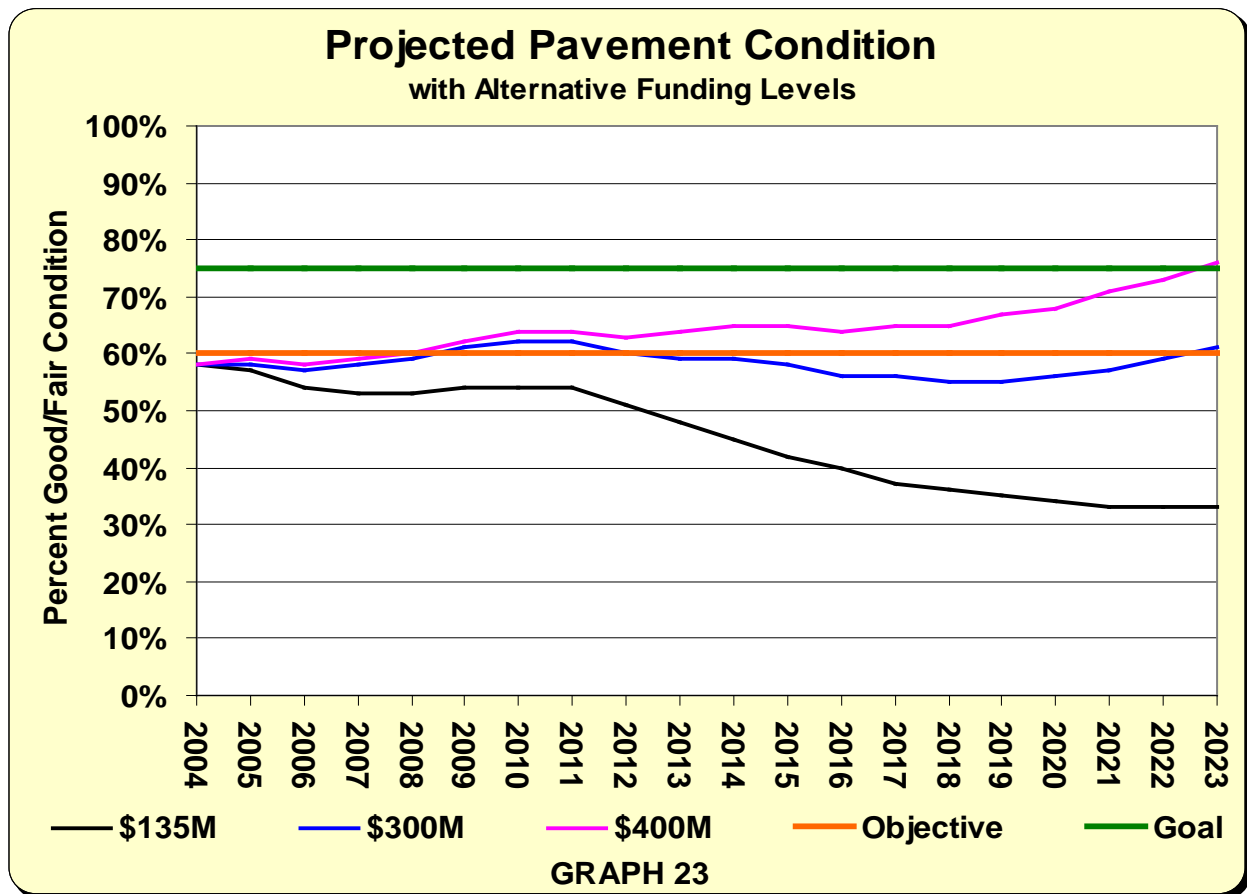
Colorado’s state highways pavement condition rating trend is reflected in the four preceding graphs. Consistent with the Department’s investment strategy direction, the output of the Pavement Management System is focused on Remaining Service Life (RSL).

The graphs illustrate a substantial change in pavement condition between years 1997 and 1998, which is due to the different methodology to measure pavement condition at the juncture of these years. Instead of a ride-ability index pavement condition rating based on elements of surface smoothness and aesthetics used in 1997 and prior years, the pavement condition is rated for the length of remaining service life condition from 1998 and thereafter. Thus the data for 1997 and prior years are not comparable to 1998 and subsequent years. This change of evaluation redistributes the investment away from the obvious visible needs of the surface and more towards sustaining and maintaining the remaining value of the roadway.

CDOT FY 2003 PERFORMANCE MEASURES REPORT

The pavement condition goal is to attain a 60 percent Good/Fair remaining service life on highways statewide overall. This target is further separated into three classifications: interstates, NHS (National Highway System non-interstate), and other state highways. The goals for these are 85 percent on interstate highways (976 centerline miles), 70 percent on NHS highways (2395 centerline miles), and 55 percent on all other state highways (5669 centerline miles).

As shown by the statewide pavement condition graph 19, the overall pavement condition has improved by 17% on state highways from 44% to 61%² from 1998 to 2004 respectively. The Interstate highways pavement condition has improved for the fourth year in a row, the NHS has improved a couple of percent, and the “Other State” highways has improved by 6% over the same period of time. However, monitoring the pavement condition during the next several years will be critical based on projections. The following pavement condition projection graph indicates that a substantial annual³ investment increase over present investment (\$135M) will be necessary to maintain the overall statewide Good/Fair pavement condition at or above the department’s goal of 60% Good/Fair.



² Based on lane miles of data collected

³ Assumes 6.0% inflation in costs and 3.5% increase in budget per year.

Does not include all essential project associated costs or non-surface improvement costs such as safety and bridge enhancements.

Objective

- Enhance and maintain the transportation system to ensure maximum useful life

Performance Measure

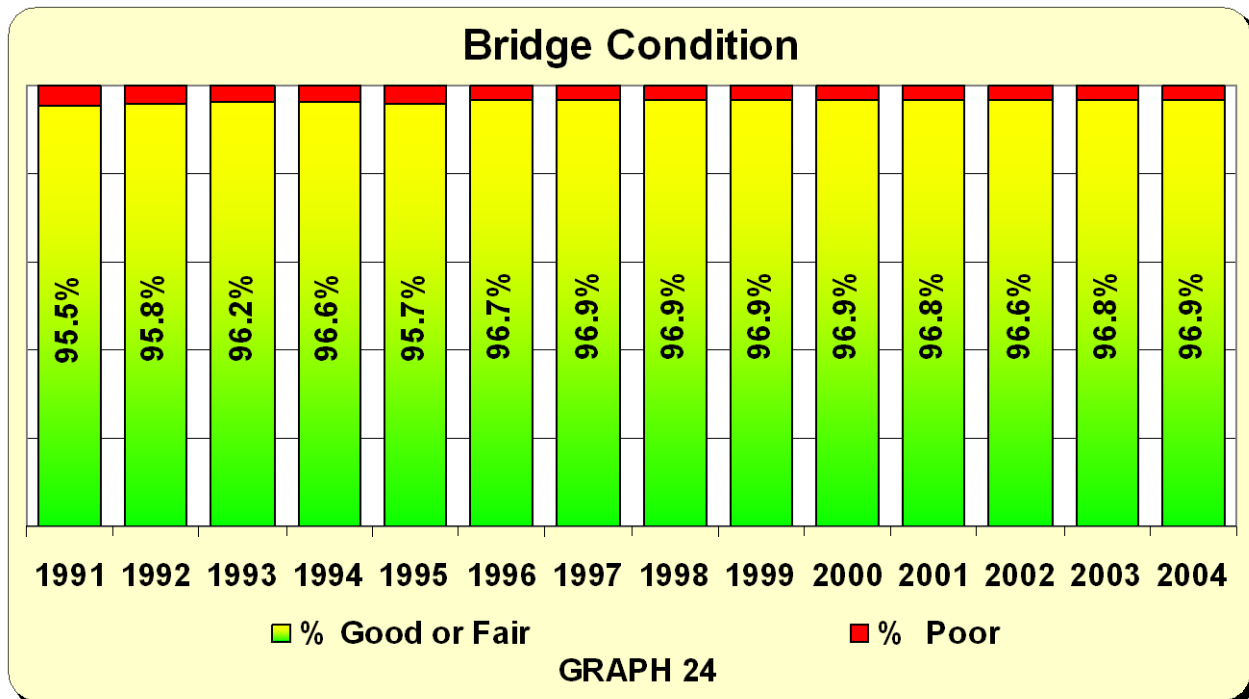
- Percent bridge sufficiency rating of fair or better

Purpose

These measures gauge the foundational strength and condition of the transportation infrastructure. The transportation investments in system quality category can impact the performance of other investment categories such as the level of safety and mobility performance as well as customer perception of these.

Current condition – Bridges

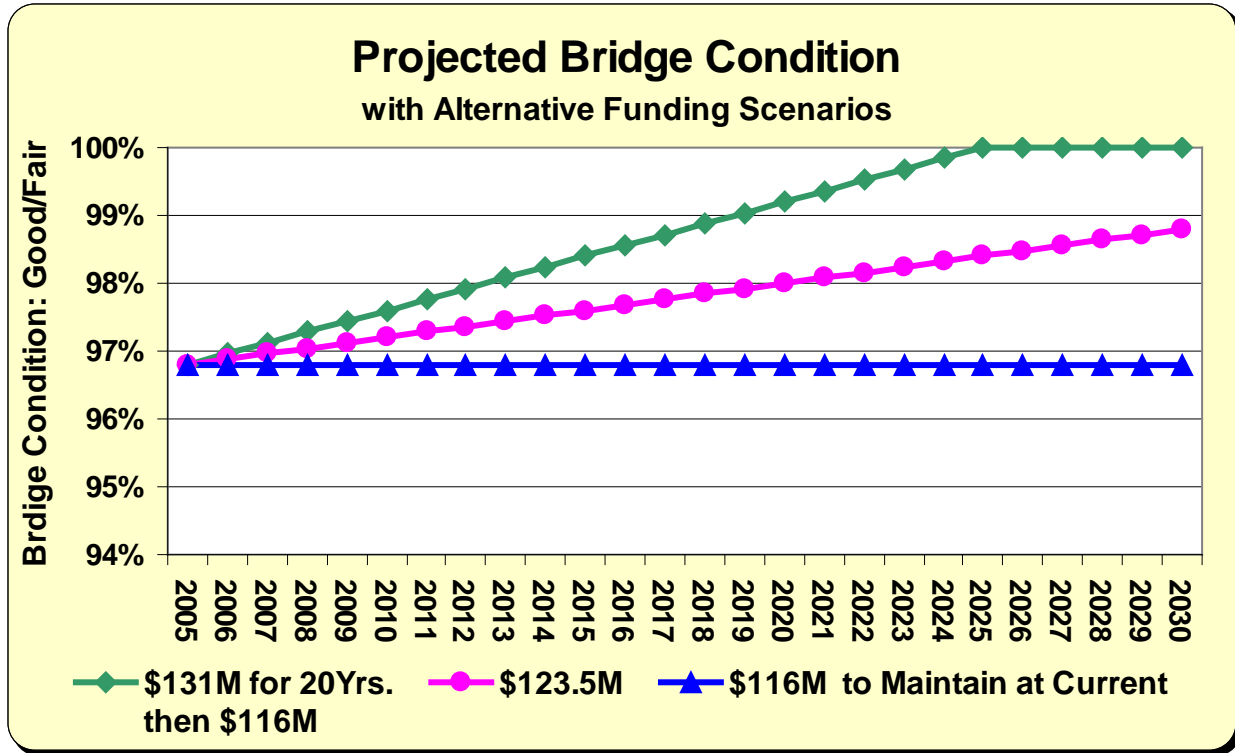
As in previous years, the bridge sufficiency rating for 2004 had a very slight change in the Good/Fair rated bridges. The percentage of bridges in the poor rating category has been shrinking at an extremely slow pace. Bridges in the poor category typically indicate a need for replacement versus preservation. The current replacement cost for these bridges is estimated at \$297 million dollars. Obviously this presents an enormous challenge for the CDOT because of the decreased funding caused by Colorado’s tight fiscal situation. The total bridge dollars represented in the graph on page 21 does not include other bridge dollars included in programs such as Strategic Projects or T-Rex. This makes it difficult to ascertain an exact investment to results analysis for the bridge program.



Good = Structural Sufficiency Rating > 80 or NO
 Fair = Structural Sufficiency Rating ≥ 50 but ≤ 80 and SD or FO
 Poor = Structural Sufficiency Rating < 50 and SD or FO
 SD = Structurally Deficient FO = Functionally Obsolete NO= Not Structurally Deficient or Functionally Obsolete

CDOT FY 2003 PERFORMANCE MEASURES REPORT

The following graph shows the estimated bridge condition needs⁴ over the next twenty-five year period based on alternative funding levels per year. A projected funding of \$131 million dollars per year for twenty years would eliminate the backlog of current bridge needs and thereafter funding of \$116 million per year would maintain the bridges at 100% Good or Fair condition.



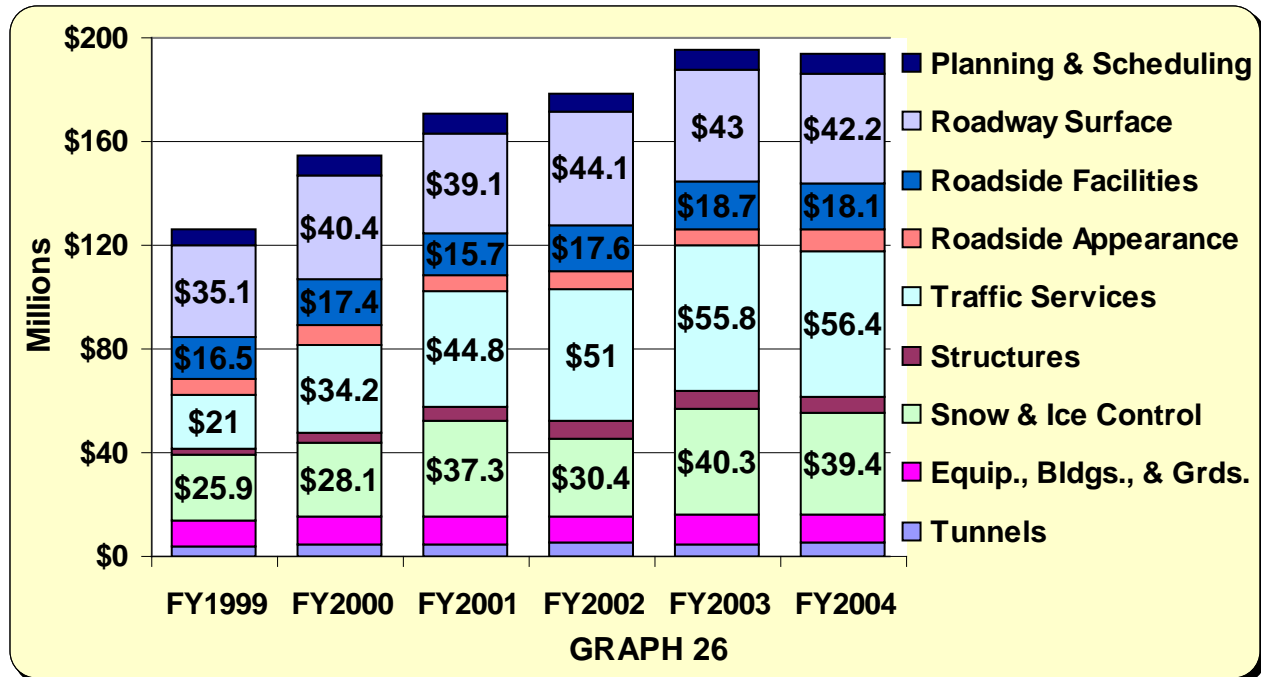
The ideal funding scenario is to provide dedicated funding against the bridge needs to preserve the bridge infrastructure and minimize cost impacts due to deferred preservation/maintenance. The alternative funding scenarios demonstrate the current bridge program investment needs based on the below assumptions. Present direct investments of \$30+ million to the bridge program falls far short of the projected need.

- ⁴ Assumptions:
 1. Bridge life expectancy of 75 years
 2. \$297 million backlog of poor bridges requiring replacement
 3. \$270 per square foot total project replacement cost
 4. Number of bridges remains constant
 5. Calculations in 2005 dollars not adjusted for inflation

Maintenance Levels of Service

Within the Colorado DOT, there are three tiers of performance accountability ranging from the investment level, to core service level and finally to the tools & service level. The activities encompassing the Maintenance Levels of Service (MLOS) represent performance accountability from the activities level that are rolled up to the investment level within the maintenance program. The following performance measures and levels of service have been incorporated within a process of annual maintenance program development based upon performance management principles. The delivery of maintenance services encompasses about 70 individual activities organized within nine Maintenance Program Areas (MPAs). They are as follows: Planning & Training; Roadway Surfacing; Roadside Facilities; Roadside Appearance; Traffic Services; Structures; Snow & Ice Control; Equipment, Buildings, & Grounds; and Tunnels. Each of the nine program areas is assessed for the service level achieved against their expenditures. Each assessment is then converted into a grading scale of A through F.

Maintenance Level of Service Investments



Objective

- Preserve and maintain the system in an acceptable level of service/condition state

Performance Measure

- Maintenance condition survey

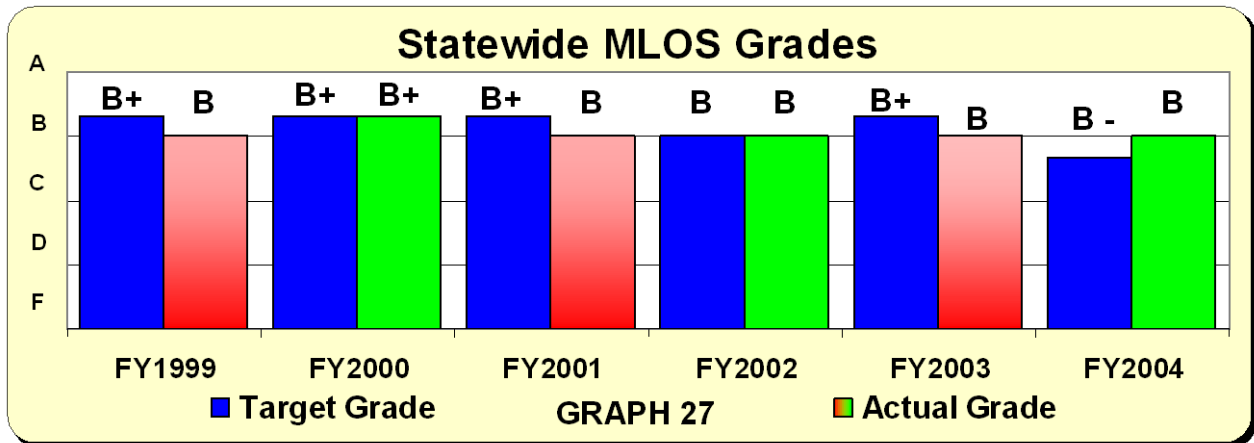
Purpose

This measure demonstrates the optimization of the maintenance budget and the service results achieved in each of the program areas.

CDOT FY 2003 PERFORMANCE MEASURES REPORT

Current Condition

The expenditure in the Maintenance Level of Service program for FY 2004 is \$193.5 million dollars. The concept of gauging performance within the Maintenance Level of Service programs areas has been in operation for five years. As a result, it's not surprising that the current service levels remain relatively constant and near the targets from 1999 through 2004.



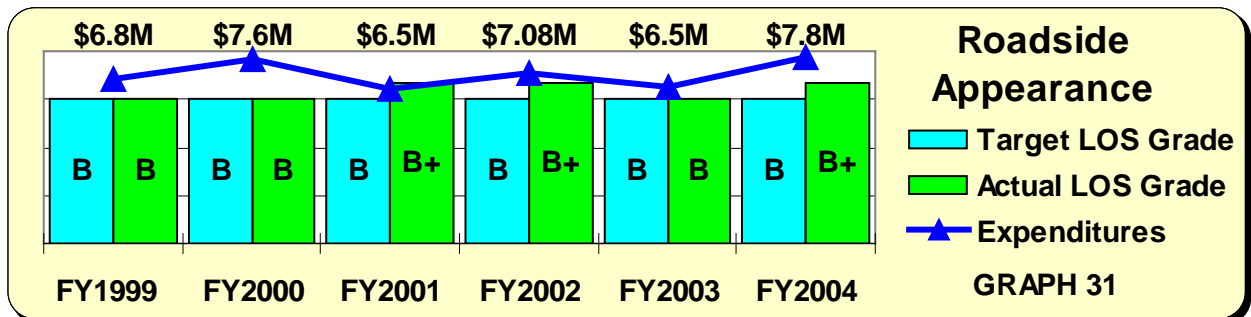
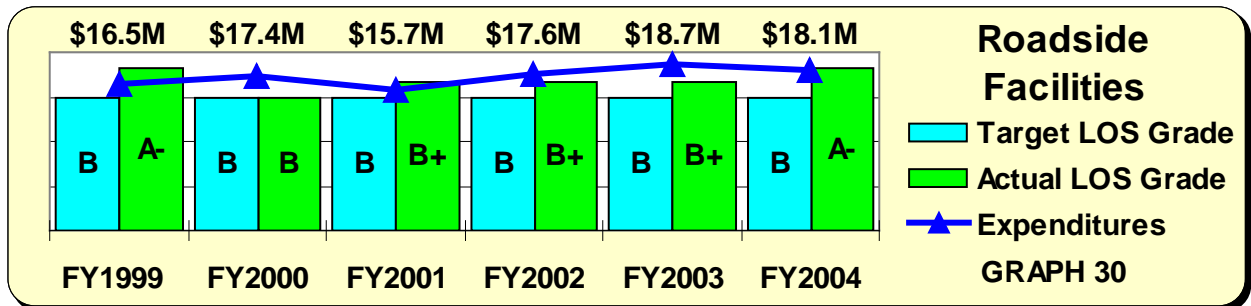
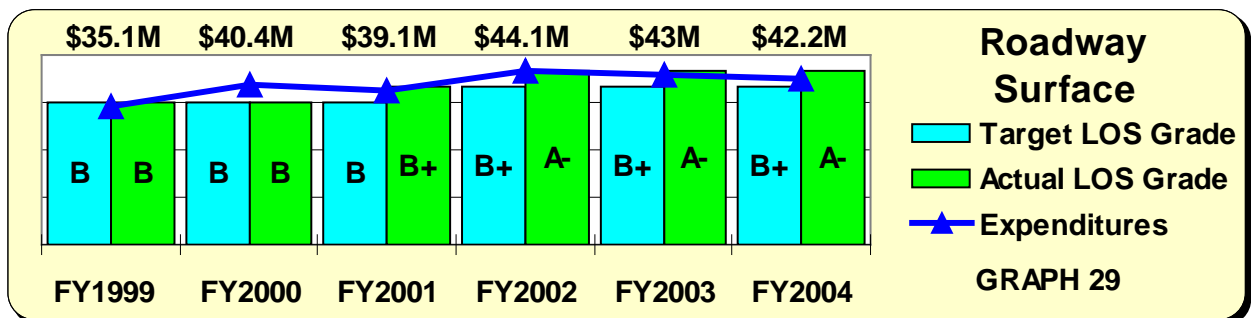
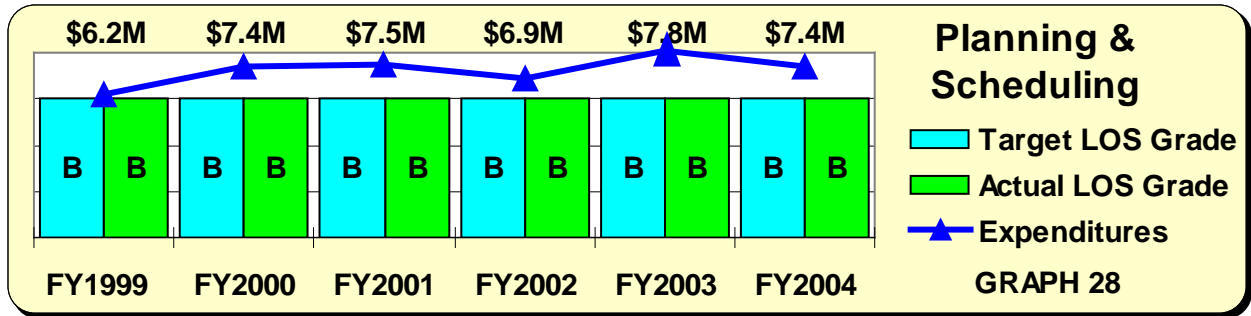
The graph above illustrates the Department meeting or exceeding the Statewide Level of Service (LOS) targets in three of the past six years of the program. The table below lists all nine maintenance program areas with the projected targets and actual results for each. Four of the nine maintenance program areas exceeded and two met the targeted performance for 2004 and should be celebrated for accomplishments that are of high importance to the traveling public.

Maintenance condition survey			
Maintenance Program Areas	FY 2004 Targets	Current Performance	FY 2004 Achievement
Planning & Scheduling	B	B	Target met
Roadway Surface	B+	A -	Target exceeded
Roadside Facilities	B	A -	Target exceeded
Roadside Appearance	B	B +	Target exceeded
Traffic Services	B	B	Target met
Structures	C -	D+	Target not met
Snow & Ice Control	B	B -	Target not met
Equip., Bldgs., & Grounds.	C +	B	Target exceeded
Tunnels	B	C +	Target not met
Statewide Total	B -	B	Target exceeded

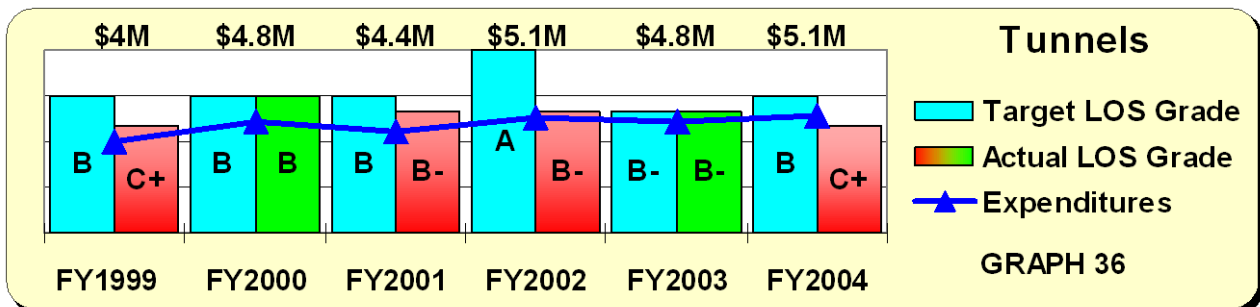
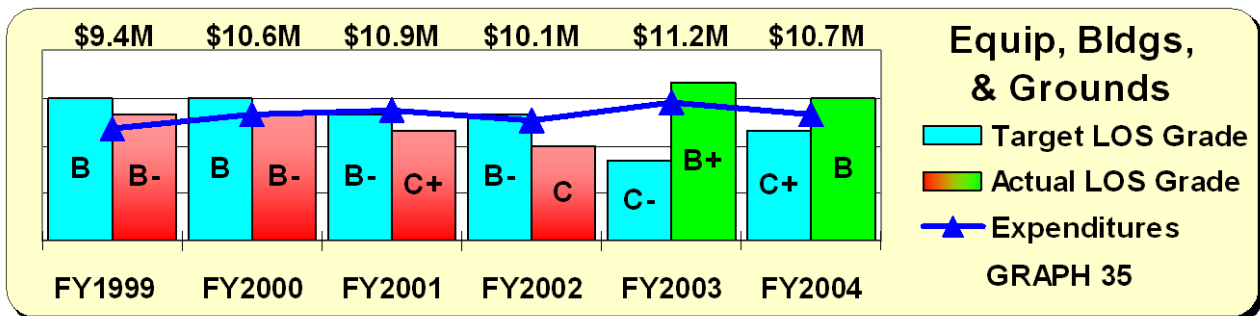
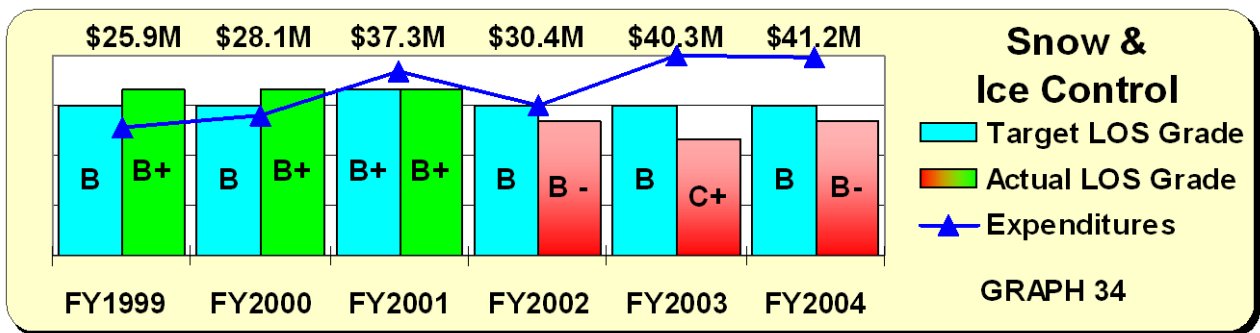
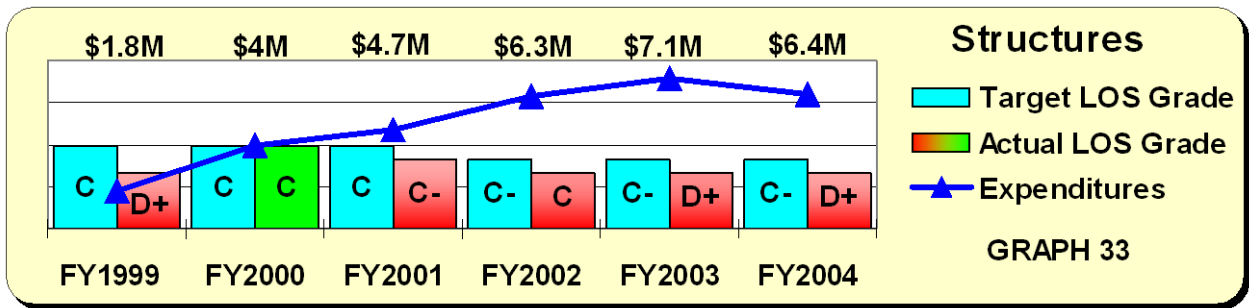
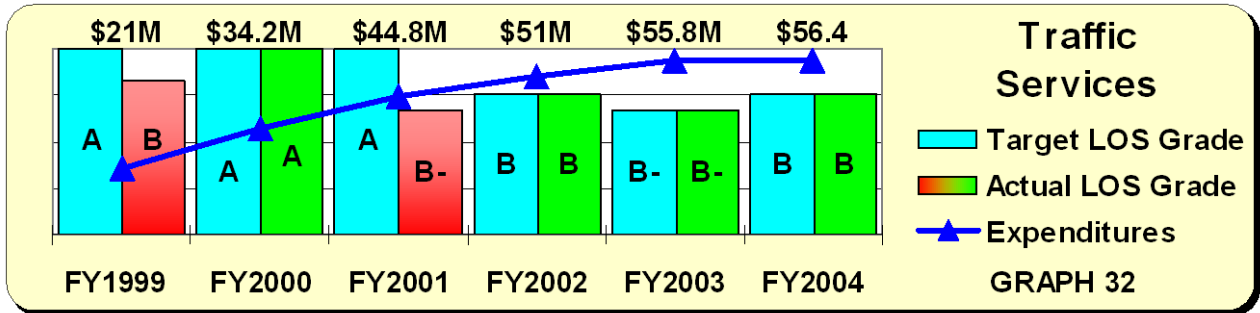
TABLE 2

CDOT FY 2003 PERFORMANCE MEASURES REPORT

The following graphs illustrate five years of investments (in millions of dollars), the levels of service targets, and the levels of service outcomes on an annual basis in the maintenance program areas.



CDOT FY 2003 PERFORMANCE MEASURES REPORT



Customer Perception of System Quality

Objective

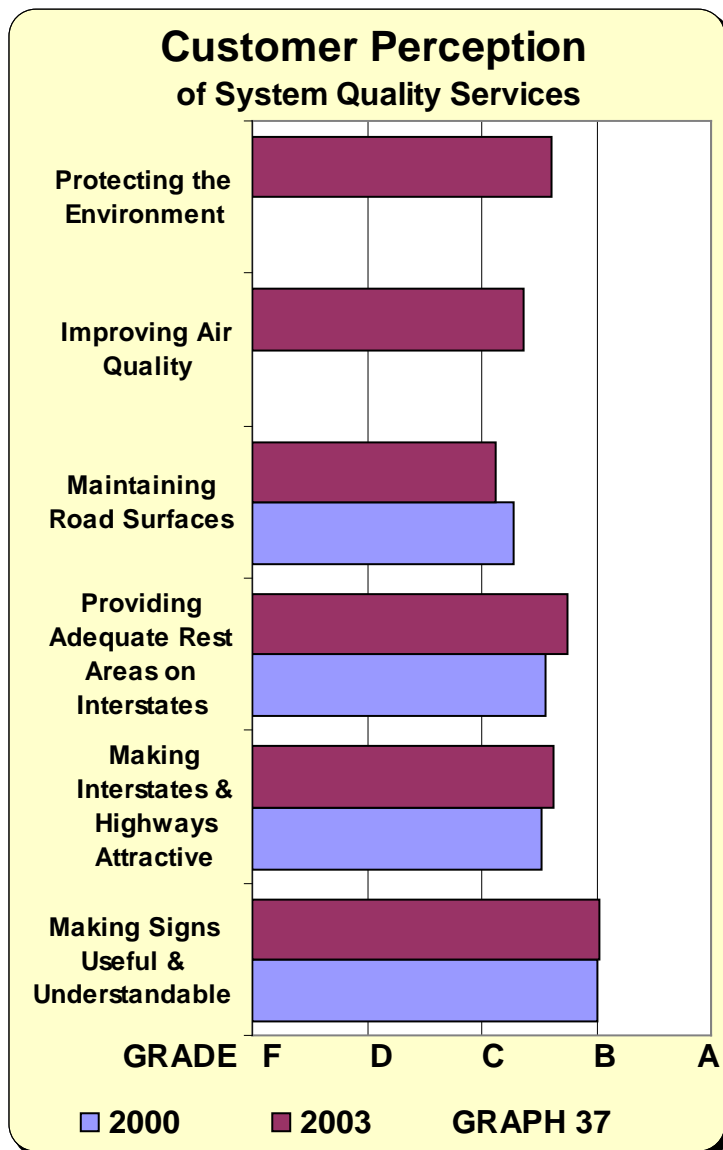
- Develop a "travel friendly" transportation system that incorporates reasonable customer desires
- Ensure that investments into the transportation system preserve quality of life through aesthetics and environmental concerns

Performance Measure

- Perception of return on investment for quality of life

Purpose

The measure over time will help CDOT understand if its investments are providing value and benefit in meeting the Department's goals as well as meeting customer expectations.



Current Condition

Ratings shared by the customer related to specific aspects of services provided by CDOT included under the system quality category, ranged from "B" level for 'signage' down to the "C" level for 'maintaining road surfaces'. The resident's feedback highlights areas of concern and focus to guide decisions for investments for CDOT.

Two questions related to Quality of Life issues in the 2003 survey were asked of the respondents for the first time. Both improving air quality and protecting the environment received a rating of "C" plus.

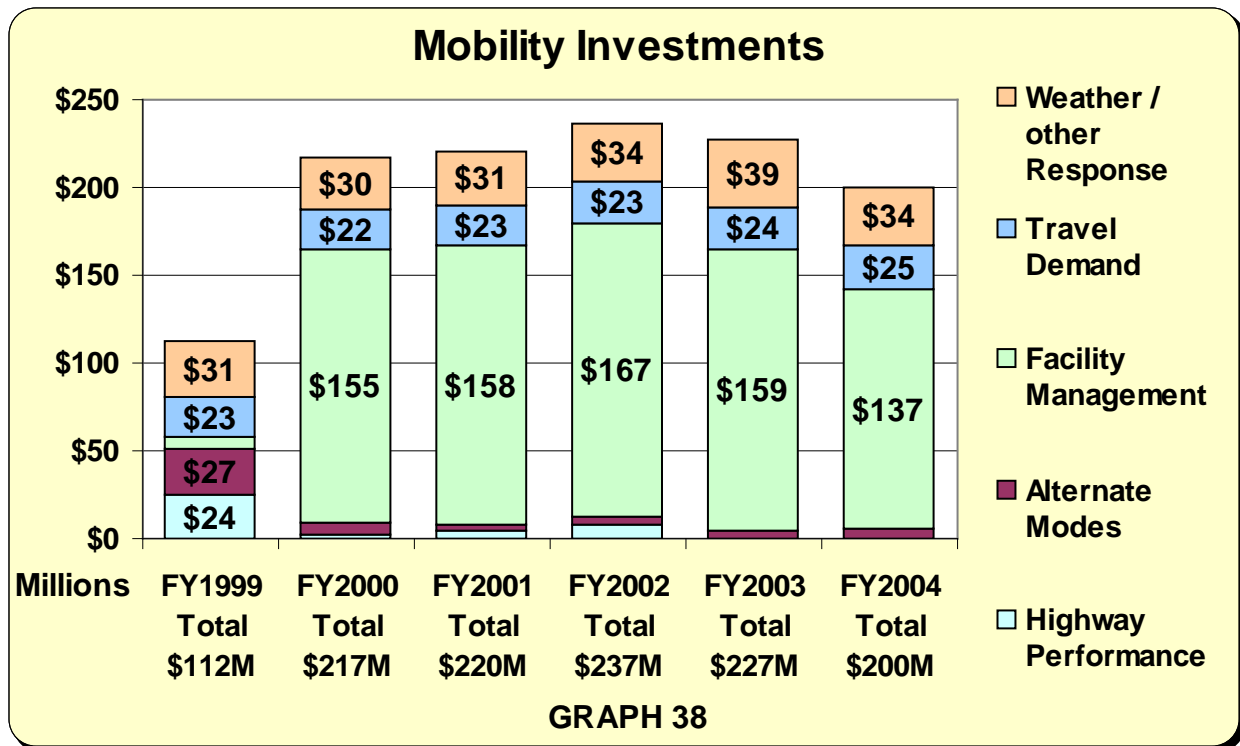
Mobility Investment Category

“Programs, services and projects that provide for the movement of people, goods and information.”

The Mobility Investment Category is a comprehensive category that complements other investment categories. The Mobility Investment Category Strategy encompasses investments made in accessibility to the transportation system, transportation options, connectivity, travel time variability and overall infrastructure management.

CDOT’s Investment in Mobility

CDOT allocated for fiscal year 2004 slightly over \$200 million, which is 20.9 % of the total budget, to Mobility related areas including: Highway Performance, Weather/Other Response, Travel Demand, Facility (System) Management and Alternate Modes.



Goals

- Improve mobility
- Increase travel reliability

Objectives

- Seek external customer feedback to improve functional and regional delivery of services
- Preserve transportation choices as a part of an integrated statewide transportation planning process
- Maximize efficiency of the existing infrastructure prior to adding new capacity
- Ensure environmental stewardship of the transportation system
- Implement transportation improvements that enhance the quality of life and promote community values
- Preserve options to anticipate Colorado's future transportation needs in major mobility corridors

Performance Measures

- Rate of change in Vehicle Miles of Travel
- Rate of change in Volume to Capacity
- Congested Person Miles Traveled
- Travel Rate Index
- Customer Perception Rating of Travel Reliability and Ability to Travel
- Percent of Travel Needs Met

Purpose

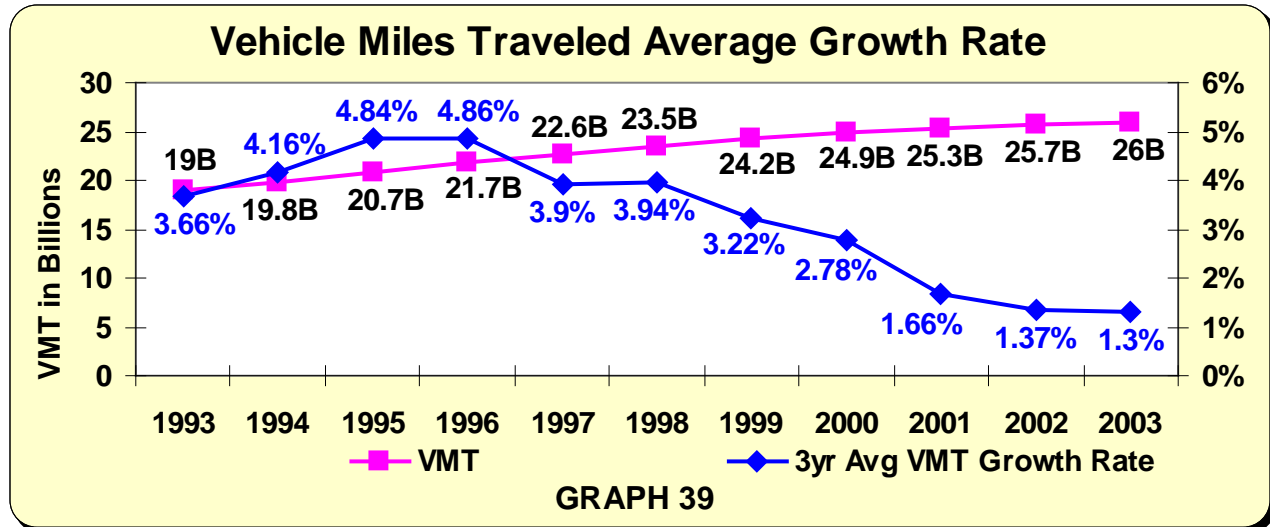
The collective Mobility measures will be able to assess the reliability as well as the accessibility of the transportation system to provide consistent travel, connectivity of the system, the ability to choose alternative modes of travel and the overall movement to the traveler.

Current Condition

The measure of performance of "Mobility" is an area that has been evolving since the beginning of the investment strategies program. There are numerous suggested measures that have been proposed, not only in Colorado but also in many other States, to measure Mobility with little concurrence on best practices. Mobility means many different things to many different transportation users. The effort to illustrate mobility performance statewide led to CDOT being committed in the near term to measure mobility by the growth in vehicle miles traveled (VMT) and volume to capacity (V/C). As well as, measures indicating travel reliability by measuring road closures in major corridors. Customer perception of mobility is an important tool to balance the priorities of mobility reliability, accessibility, variability, availability, and connectivity.

Vehicle Miles Traveled

The number of vehicle miles traveled is continuing to increase but at a slower pace than during the middle 1990's. The 3-year average growth in VMT continues in a downward trend.



Volume to Capacity

The following table illustrates the centerline-miles with V/C ratio of greater than .85 for the calendar years 1996 through 2003. The methodology and data availability used for calculation purposes changed from 2000 through the current year which restricts the ability to compare results before and after of congestion in Colorado. A consistent methodology and data to calculate congestion will enable better comparison analysis in future years.

Year	Centerline Miles \geq .85 V/C	Percent of Centerline Miles
1996	582	6.4%
1997	635	7.0%
1998	N/A	8.2%
1999	860	9.4%
2000	867	9.5%
2001	724*	7.92%*
2002	734	8.03%
2003	623*	6.81%*

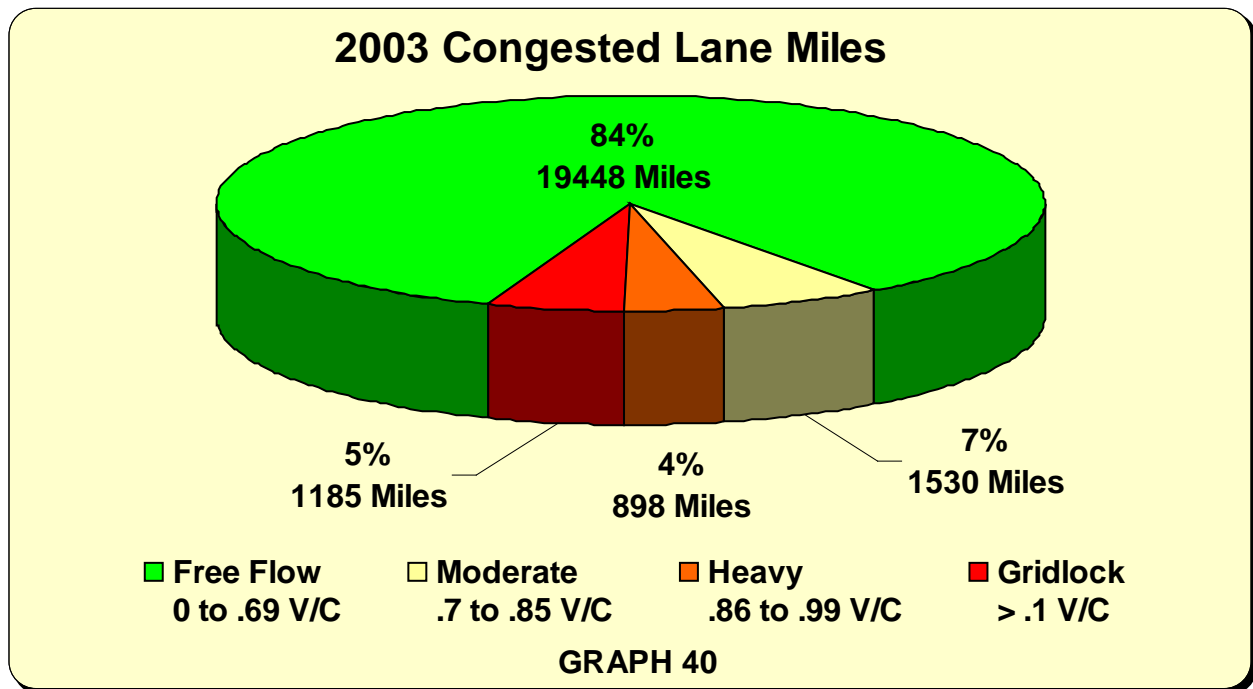
TABLE 3

* **NOTE:** The drop from 2000 to the 2001 is attributable to a change in the methodology used to update the Directional Distribution (DD) and Design Hour Volumes (DHVs). From 2002 to 2003, the drop in total congested miles was mostly due to lane additions that were not reflected in the 2002 capacity values. Also, in a few cases decreases in Average Annual Daily Traffic (AADT) at some segments or relatively big changes in DHVs in other segments account for the reduction in total congested miles.

CDOT FY 2003 PERFORMANCE MEASURES REPORT

CDOT conducts annual analysis of highways to determine congested segments of volume-to-capacity (V/C) ratio and will continue to track these changes over time. The congested lane miles of less than .7, from .7 to .85, .86 to .99, and over 1 volume to capacity ratios are identified in the chart below. On page 38, the statewide map shows the corridors with .85 and greater volume to capacity in red. It should be no surprise that the map reveals that the majority of the congestion resides along the Front Range where the majority of Colorado's population resides.

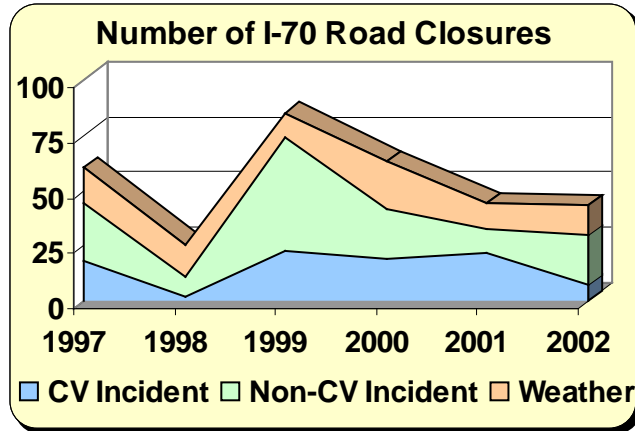
The congestion data, tracked over a period of time, on the highway system gives valuable data for trends to develop strategies for mitigation of congestion.



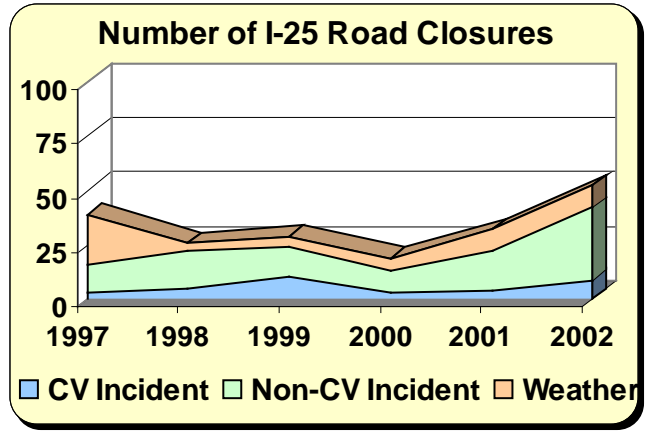
Road Closure

Number of Road Closures by Closure Type

Road closure data for 2003 was lost and cannot be reported. Road closures are primarily caused by weather, construction and incidents (crashes, stalled vehicle, etc.). The difficulty is managing road closures where incidents and weather are typically unmanageable factors. The graphs 41a and 41b show the number of road closures on two of the busiest interstates in the state, I-70 and I-25, for years 1997 through 2002. The data on I-70 and I-25 reveal that a majority of the road closures are caused by incidents. Non-Commercial Vehicle (Non-CV) incidents contributed to the significant change on I-70 in 1999. However, the impact of weather, directly or indirectly, on the number of incident closures must be kept in mind. The statistically lower weather related road closures combined with the rise in total road closures may be indicative of the ever increasing problems of driver behavior and road rage. This is consistent with CDOT's 2000 and 2003 Customer Survey results where 83% and 82% respectively of road crashes were perceived as the result of driver behavior.



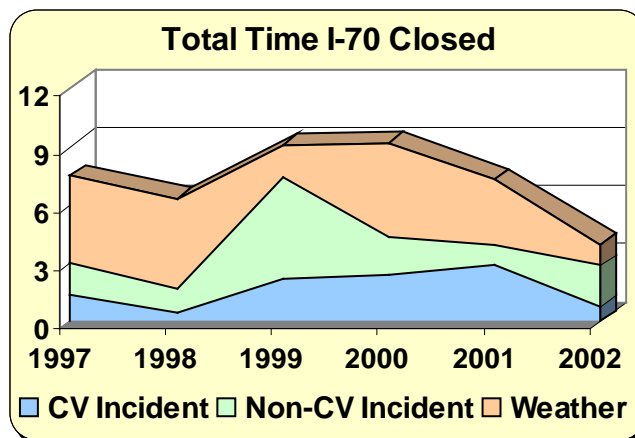
GRAPH 41a



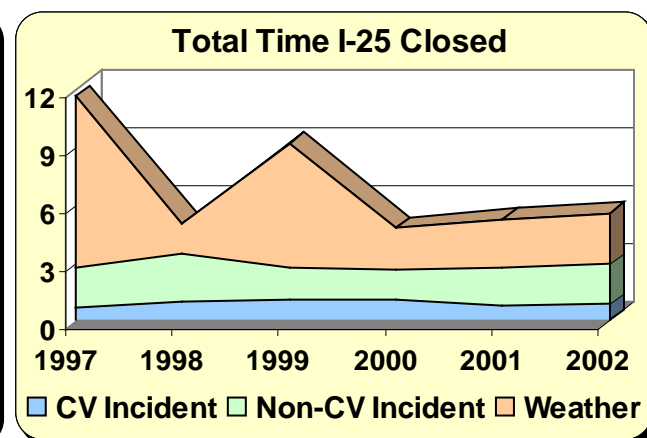
GRAPH 41b

Duration of Road Closures

While the number of road closures connotes the frequency of I-70 and I-25 road closures, duration of the closure measure connotes the severity of these closures. On I-70, the total duration of closures have ranged between a total of 4 days in 2002 to 9.2 days in 2000. For I-25 the duration of the closures variance has been significant, from a low of 4.8 days in 2000 to a high of 11.7 days in 1997. Again, non-commercial vehicle incidents contributed significantly to the increase between 1998 and 1999 on I-70. Weather related closures are the major contributor on I-70 and overwhelmingly in 1997 and 1999 on I-25. Relying solely on the data, it may appear that CDOT is more efficient in responding to weather incidents on I-25 from one year to another. What isn't clear are the differences in handling weather incidents in rural areas versus metropolitan areas and how severe or frequent the winter storms are while contending with traffic, roadways, structures and safety precautions. In theory, the safest road during inclement weather is a closed road. The duration of closed roads may have been more a result of unsafe weather conditions rather than CDOT performance issues.



GRAPH 42a



GRAPH 42b

Customer Perception of Mobility

Objective

- Seek external customer feedback to improve functional and regional delivery of services

Performance Measures

- Customer Perception Rating of Travel Reliability and Ability to Travel

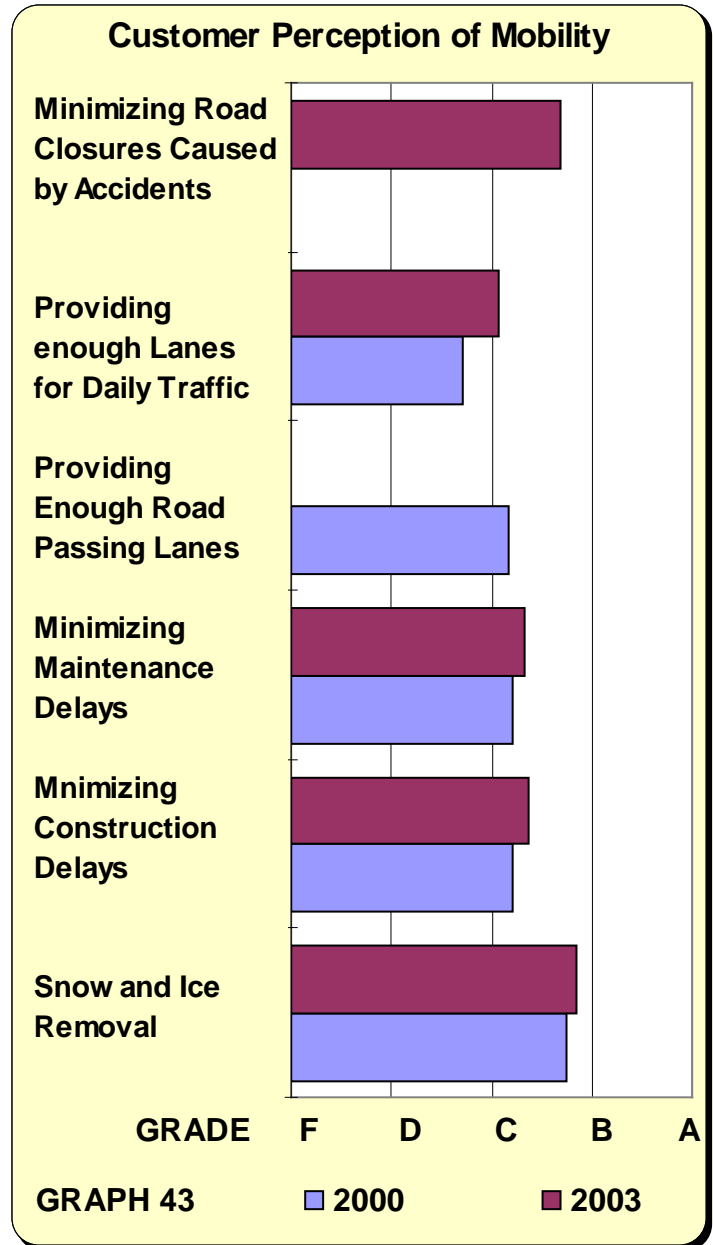
Purpose

This measure over time will help CDOT understand if their investments are providing value and benefit in meeting the Department's Mobility goals as well as meeting customer expectations.

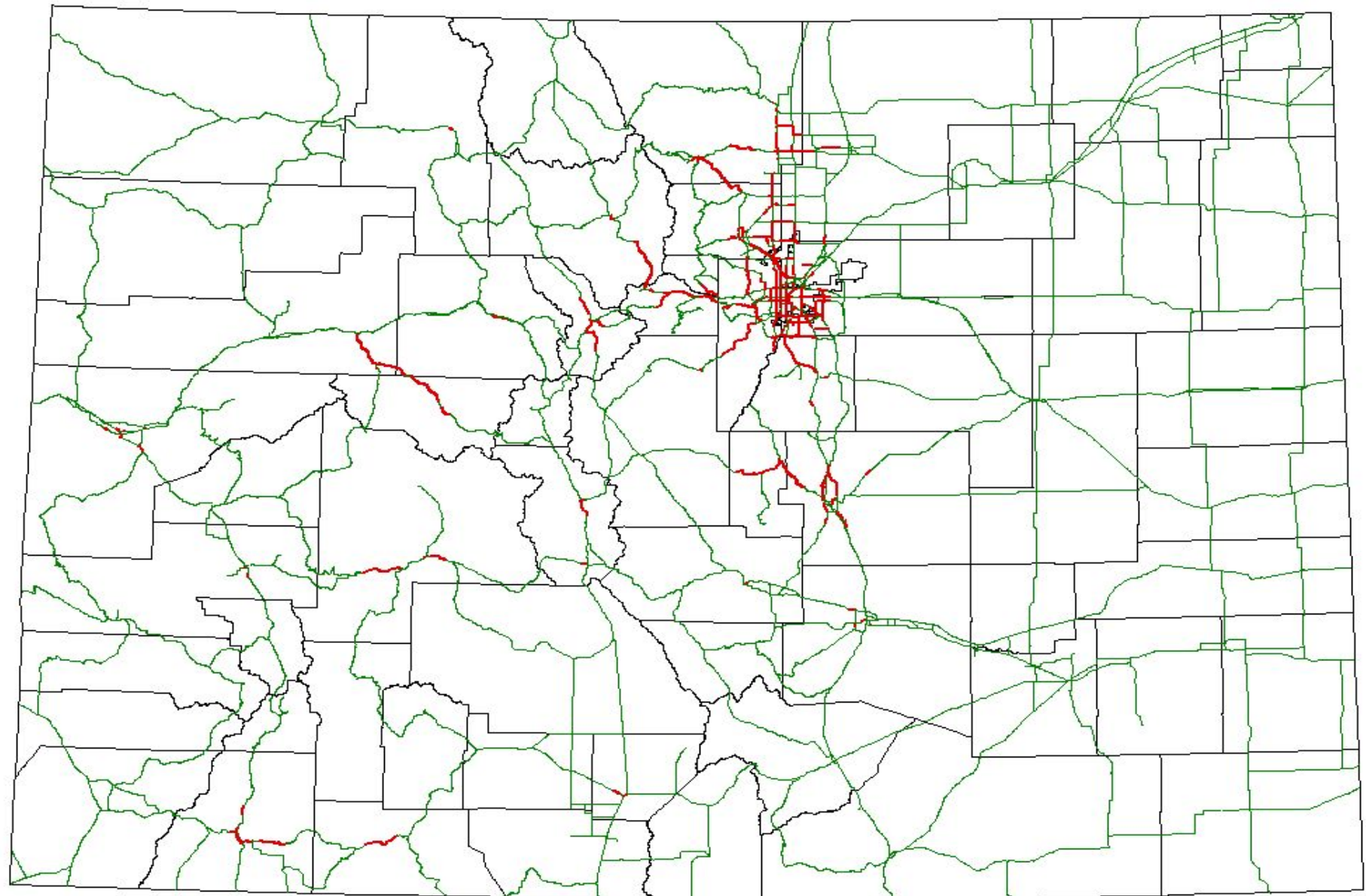
Current Condition

According to the 2003 Statewide Resident Survey, congestion remains the highest priority transportation related issue in three of the four geographical Regions that were surveyed within the state.

This high concern is also reflected in the mobility related areas, as shown in the graph at right, rated by the travelers in Colorado. The lowest grade of "C" is in "providing enough lanes". Of significance, is that there was more than a half percentage point difference between the four geographical areas surveyed. The Denver metropolitan area gave a 1.9 rating to a 2.5 given by the western slope. The combined Mobility related response averages for 2000 and 2003 are 2.2 and 2.6 respectively.



CDOT FY 2003 PERFORMANCE MEASURES REPORT



State Highways
vc ratio less than 0.85
vc ratio equal or greater than 0.85

Volume to Capacity Ratios on State Highways for 2002
Based on 30th Highest Hourly Volumes

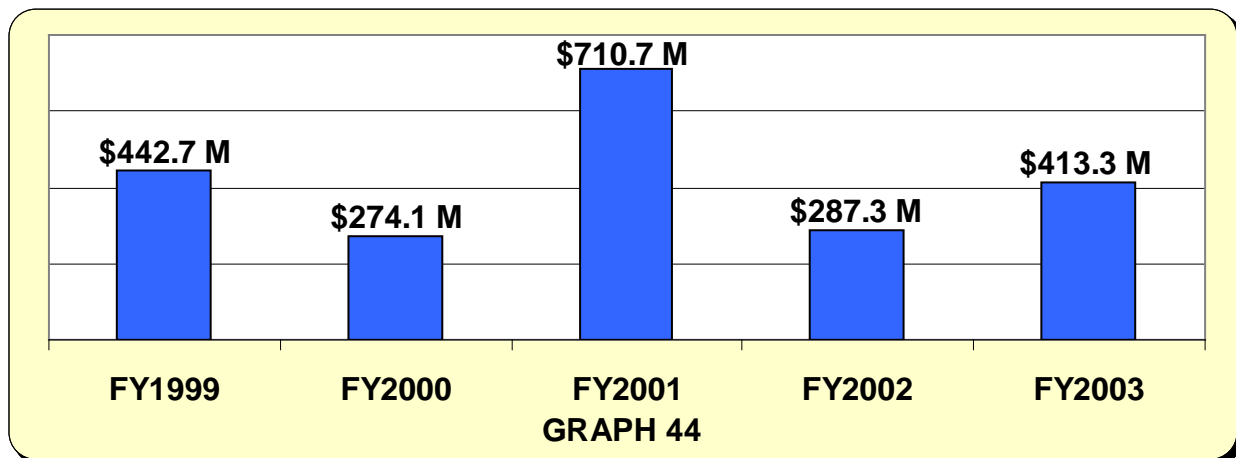
Strategic Projects Investment Category

“The 28 high-priority state-wide projects that have been committed for accelerated funding.”

The Strategic Projects Investment Category was established to accelerate the funding and development of high priority transportation projects throughout the state. A base of 28 specific projects is maintained within this investment category. The elements that qualify a project for high priority status are based on the overall visibility, cost and return on investment of the project in addressing on-going needs of safety, mobility and reconstruction.

CDOT’s Investment in Strategic Projects

As approved by the Transportation Commission, the total 1999 projected un-inflated cost to build the 28 strategic projects was \$4.65 billion dollars. The current cumulative programmed dollars are \$2.983 billion dollars⁵. For fiscal year 2004, CDOT allocated approximately \$269 million dollars to continue towards the completion of these Projects.



Goals

- Accelerate the completion of the projects
- Increase investment in the program

Objective

- Accelerate Strategic Project delivery while minimizing the impact to all other objectives
- Promote partnerships with all governments to enhance working relationships
- Maintain eligibility of CDOT’s bonding program to ensure non-default and ability to bond in the future

⁵ Funds were encumbered and expended prior to 1999 on the 28 Strategic Projects
Cumulative dollars are inflated dollars

Performance Measures

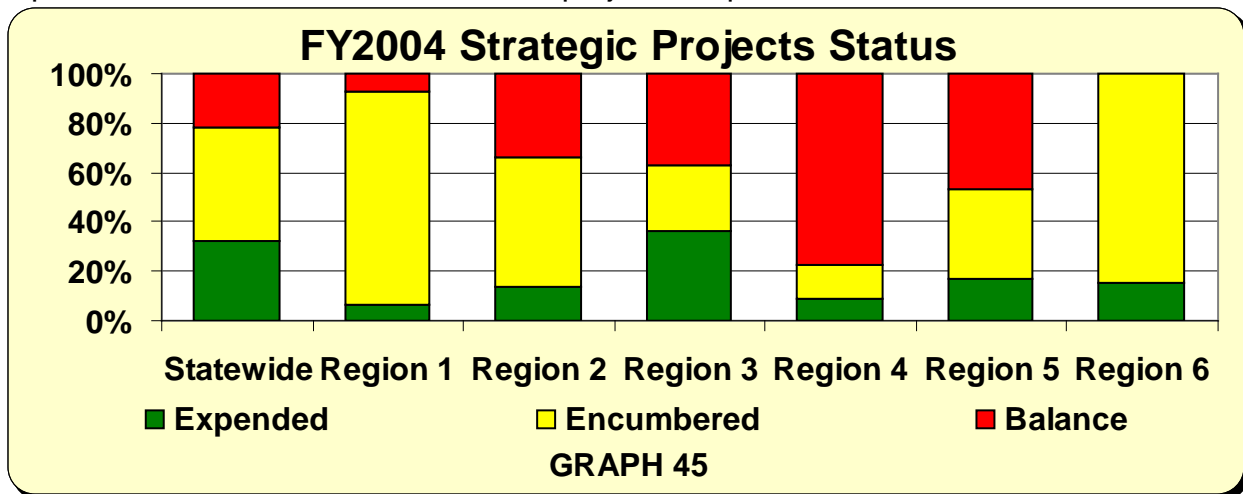
- Actual Funds Encumbered Versus Total Encumbrance Planned by Program
- Actual Funds Expended Versus Planned reported on a quarterly and yearly basis

Purpose

The combined efforts of the Strategic Projects measures will provide the fiscal accountability to managers necessary to plan and prepare for project development and delivery. These measures will provide quantifiable data to management to assist in determining project shortfalls or overages that impact project delivery timelines and high priority project investments.

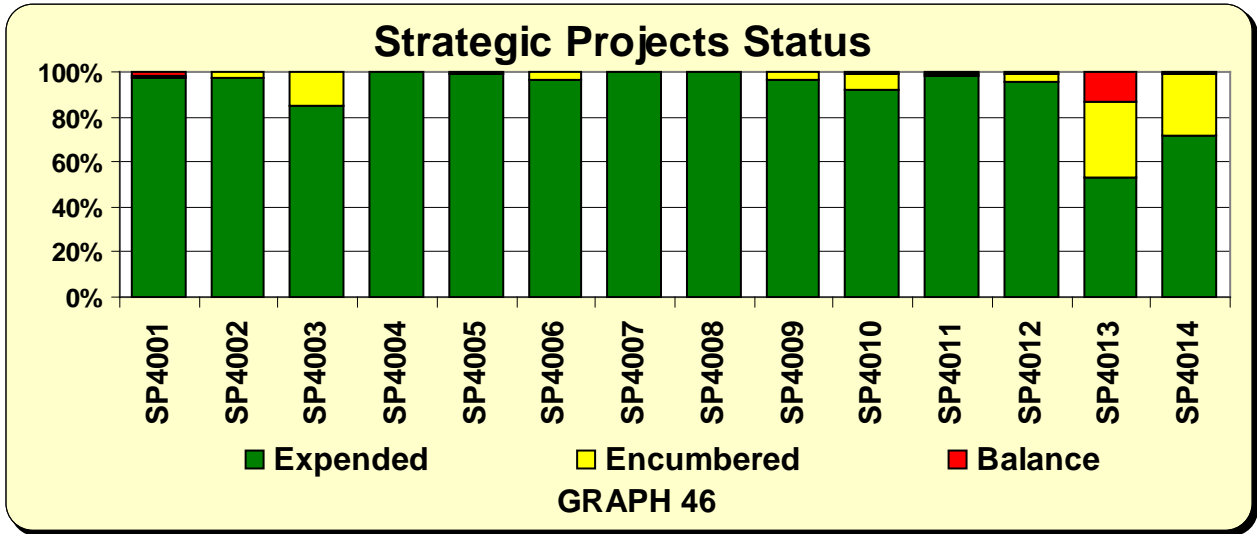
Current Condition

Of the 28 Strategic Projects, 78.4% of the projects have expended and encumbered the project dollars for fiscal year 2004 to expedite the delivery of the projects. The continuing challenge is to encumber or expend 100% of funds within a specified timeframe on projects planned. The difficulty of this measure is the environment in which projects are managed. Project delays can and do occur outside of the direct control of CDOT project managers. Despite this somewhat difficult situation and challenge, CDOT's pursuit of this measure, combined with other performance data, should ultimately provide the necessary information to improve the encumbrance and expenditure of funds that will effectuate project completions.

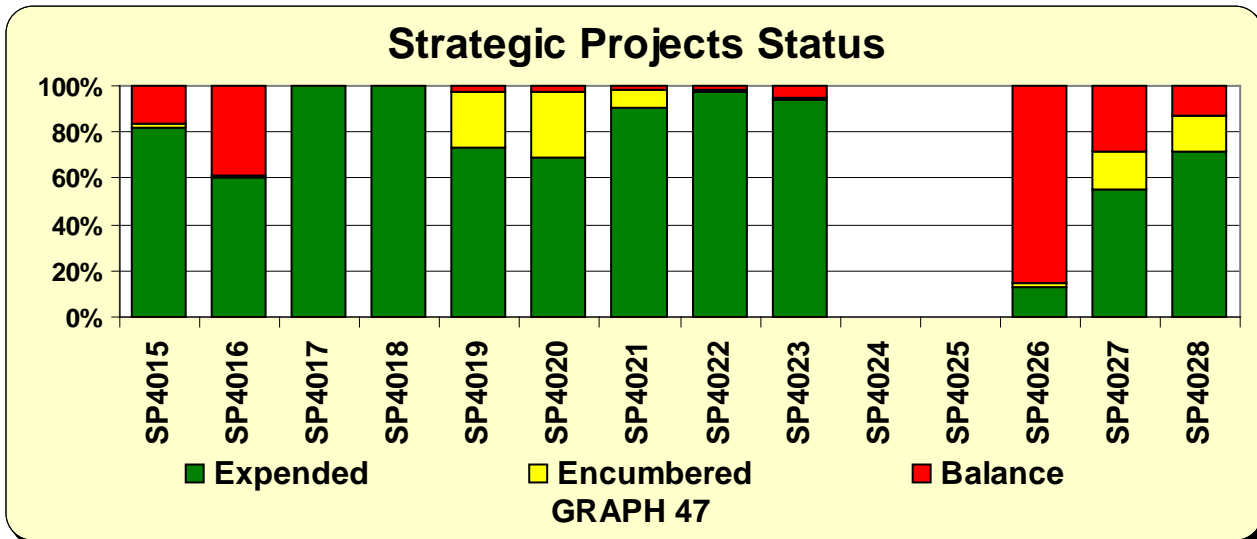


The graph on the next page illustrates the Strategic Projects status by project in budgeted to date terms. The Department's current status indicates that 92.8% percent of the budgeted dollars have been expended or encumbered since the adoption of the Strategic Projects program. The following projects: US 50 Delta to Grand Junction, I-25/US50/SH47 Interchange, I-225 and Parker Interchange, I-76 and 120th Avenue Interchange, I-25 (Owl Canyon Rd. to Wyo.), I-70: Tower Rd. to Kansas, U.S 287, C-470 Extension, US34 (I-25 to US 85), Santa Fe Dr. corridor, I-76/120th Interchange, US285 (Goddard Ranch Ct. to Foxton Rd.), SH82 (Basalt to Aspen), and Santa Fe Corridor are complete or nearing completion.

CDOT FY 2003 PERFORMANCE MEASURES REPORT



SP 4001	I-25 / US 50 / SH 47	SP 4008	I-70, Tower Rd to Kansas
SP 4002	I-25, S. Academy to Briargate	SP 4009	I-25, SH 7 to SH 66
SP 4003	I-25 / US 36 / SH 270	SP 4010	US 50 Grand Jct. to Delta
SP 4004	I-225 / Parker	SP 4011	US 285, Goddard Ranch Ct to Foxton Rd.
SP 4005	I-76 / 120th Ave	SP 4012	US 287, Kiowa County to Oklahoma
SP 4006	I-25 / I-70 (Mousetrap)	SP 4013	US 160, Wolf Creek Pass
SP 4007	I-25, Owl Canyon Rd / Wyo.	SP 4014	US 40, Berthoud Pass



SP 4015	US 550, Durango to New Mexico	SP 4022	Santa Fe Corridor in Denver
SP 4016	US 160, Jct. SH 3 to Florida River	SP 4023	SE Corridor (I-25, Broadway to Lincoln)
SP 4017	C-470 Extension	SP 4024	East Corridor (Denver to DIA) ⁶
SP 4018	US 34, I-25 to US 85	SP 4025	West Corridor (US 6, I-25 to I-70) ⁵
SP 4019	US 287, Broomfield to Loveland	SP 4026	West Corridor (DIA to Eagle Cty. Airport)
SP 4020	Powers Blvd in Colorado Springs	SP 4027	I-25 (Denver to Colorado Springs)
SP 4021	SH 82, Basalt to Aspen	SP 4028	I-25 (SH 66 to Fort Collins)

⁶ No resources were allocated to these strategic projects over the initial 20 year period

CDOT FY 2003 PERFORMANCE MEASURES REPORT

Objective

- Promote partnerships with all governments to enhance working relationships
- Maintain eligibility of CDOT's bonding program to ensure non-default and ability to bond in the future

Performance Measures

- Percent Ad Dates Met Prior, On-Time, Within 30 Days, 60 days, or beyond 60 days
- Days to Complete Payment Processing and Billing Compared to Indenture and Continuing Disclosure

Current Condition

The performance of meeting Ad-Dates is key to the Strategic Projects but is shared with the Program Delivery investment category. Though the data measures strategic projects timeliness, Ad-Dates is a measure of the support services leading up to the project completion. Accordingly this measure is being included in the Program Delivery section of this report. The days to complete payment processing measure tracking system has not been pursued as of this date.

Program Delivery Investment Category

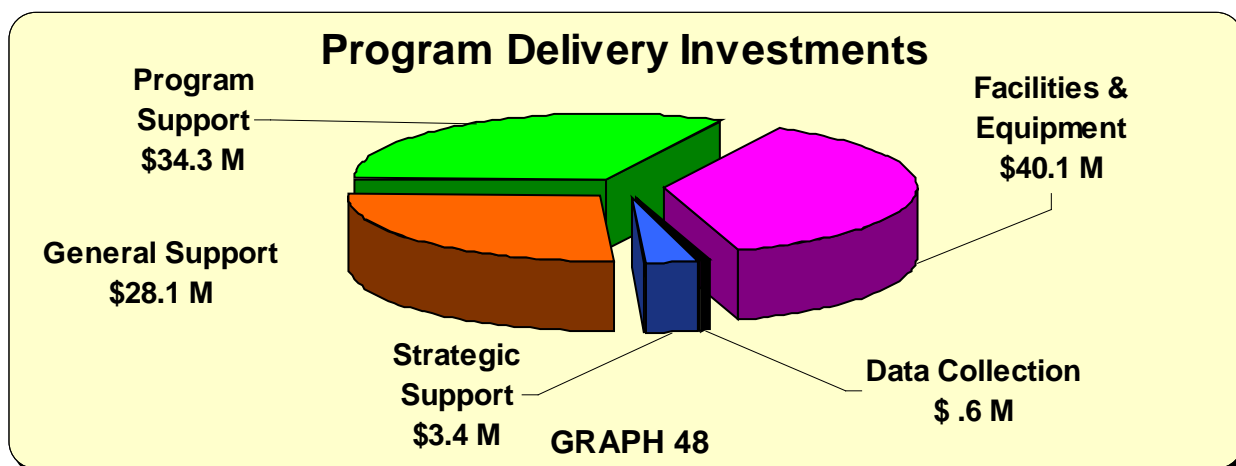
“Support functions that enable the delivery of CDOT’s programs and services.”

The Program Delivery Investment Category contains the organizational support that enables the delivery of CDOT’s programs and services.

- Strategic Support is responsible for the policy and communication functions.
- General Support is responsible for those functions that assist in the day-to-day operational support such as Finance Management and Budget, Administrative Services, Human Services, Procurement and Project Development.
- Program Support includes functions that are unique to CDOT, which would not normally be found in most governmental agencies. Since CDOT’s mission supports the movement of people, goods, and information, specific programs are used including Right-of-Way Services, Staff Construction and Materials, the Environmental Programs, Staff Design, Aeronautics, and Staff Maintenance.
- Facilities and Equipment is responsible for the maintenance and management of CDOT facilities, vehicles and equipment.
- Data Collection is responsible for all of CDOT’s data collection programs.

CDOT’s Investment in Program Delivery

For fiscal year 2004, CDOT allocated approximately \$106.6 million, an increase of less than 1% from FY 2003. These funds are disbursed in the above five program areas and illustrated in Graph 48. This area of investment is somewhat limited in volatility from year to year because of the legislative cap on the number of personnel within CDOT. Regardless, there is an overriding concern by the public to ensure accountability and efficiency in government. The Transportation Commission and Executive Management Team recognize this fact and have been tracking performance at the investment level for the past five years and the core service level for the past two years to focus on delivery of services results.



Goals

- Deliver high quality products and services in a timely fashion
- Attract and retain an effective and qualified workforce
- Foster an environment that respects workforce diversity

Objectives

- Maintain fiscal integrity to CDOT through timely encumbrance of funds and project delivery
- Create a funding environment that preserves the base while pursuing new sources
- Ensure timely product and service delivery
- Create public confidence in Department accountability
- Incorporate education in project development & implementation
- Develop planning processes that enhance future project development
- Design projects that foster alternative modes in partnership with local entities
- Maintain a viable service industry to create a competitive environment
- Create an environment that fosters high employee productivity

The following performance measures are at the core service level. Investment level performance measures are to be developed as the Transportation Investment Strategies evolve.

Strategic Support Level Performance Measures:

- Customer Assessment Survey Rating (General Public)
- Percent of Projects Accelerated With Additional Funds
- Percent of Projects Ahead of Schedule
- Percent of Projects That Incorporate a Wide View (includes multi-modal elements) of Transportation
- Post Project Quality Assurance Rating (includes project elements such as conformance to standards, rules & regulations, policies, design)

General Support Level Performance Measures:

- Employee Satisfaction Survey Rating Regarding Management Support, Tools, Resources & Training
- Internal Customer Satisfaction Survey Rating
- Average Employee Turnover Rate Per Year Per Critical Job Class
- Average Employee Replacement Time from Vacancy to Hire

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- Average Contract Development Days From Project Scope to Contract Implementation
- Percent of Contracting Documents Encumbered within Five Days of Contract Execution
- Percent Technology Needs Implemented Versus Technology Requirements
- Percent of Vendor Payments processed within Established Goals
- Operational Cost Vs. Average Age of Facility or Equipment

Program Support Level Performance Measures:

- Percent Funds Encumbered Within Reporting Period
- Percent of Projects Completed Within the Fiscal Year Scheduled
- Percent Ad Dates Met On-Time, Within 30 Days, 60 days, or beyond 60 days
- Percent of Projects Accelerated Resulting From Improved Environmental Assessments
- Average Length of Time for Environmental, ROW, and Utilities Clearance
- Three Year Average Percentage of “project overhead”
- Percent of Budget Spent on Contractor Work vs. Total Budget

Purpose

The measures will provide quantifiable data that will help determine to what extent funding is spent and encumbered and the contribution of support services to the delivery of projects and programs within planned timeframes. The measures balance the need to fiscally manage the resources while ensuring high caliber product delivery and customer service. The Program Delivery performance measures included in this report are in the evolutionary process and may change from year to year as the Investment Strategies are implemented.

Current Condition:

A key driver in meeting both the Strategic Projects and Program Delivery Investment Category goals is gauging how well project advertisement dates (ad-Dates) are being met (Graph 49). In FY2004 41.1% of projects ad-dates⁷ in the Regions were met prior to or on the scheduled date. The overall ad-date performance decreased during FY 2004 from FY 2003 levels but remains substantially above the previous two years. The projects beyond the 60-day scheduled ad-date timeline increased to 25.6% from 17.7%. For each delayed day, not only are the project timelines impacted but also the ability to manage project resources effectively is impacted. More importantly, fiscal accountability becomes difficult to manage. The ability of the Department to begin projects on time has tremendous impacts on the Department’s credibility with customers and stakeholders,

⁷ State ad-date plan projects only are part of the data tracking: Prior years data adjusted to same criteria

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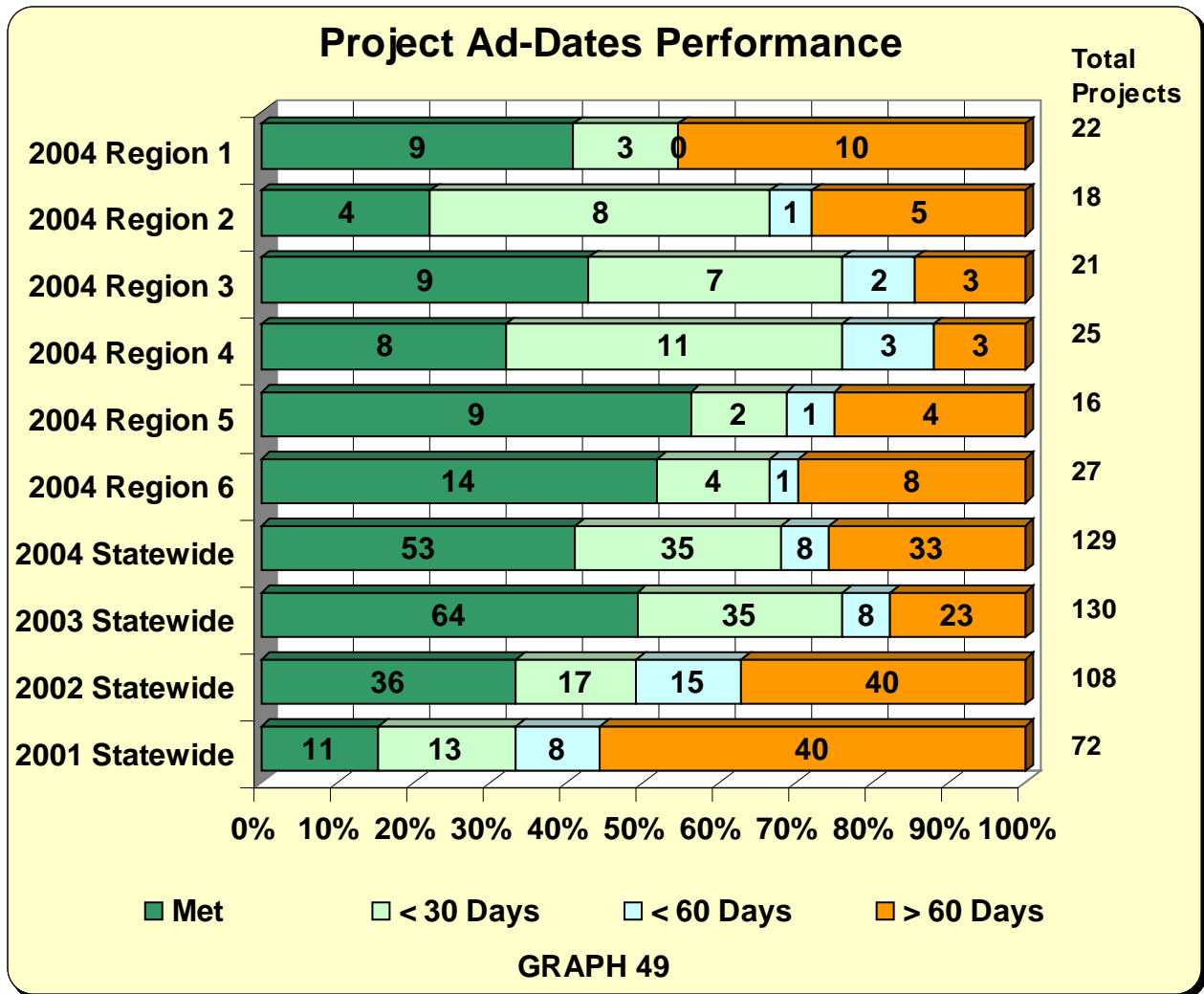
as well as bonding firms. The reality is that there will always be external barriers affecting this achievement. However, monitoring this performance will assist in understanding the magnitude of the problem, impacts and reasons for change to improve.

Objective

- Maintain fiscal integrity to CDOT through timely encumbrance of funds and project delivery

Performance Measure

- Percent Ad Dates met On-Time, Within 30 Days, Within 60 days, or beyond 60 days



CDOT Employee Turnover Rate

Objective

- Identify innovative human resource solutions that maximize existing resources to meet business needs.

Performance Measures

- Average employee turnover rate per year per critical job class

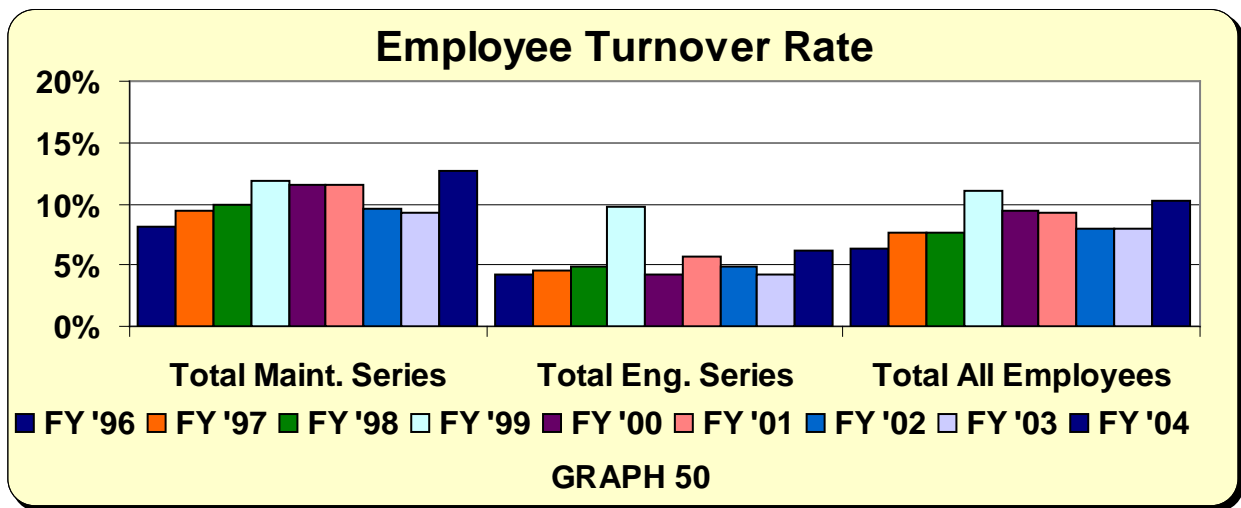
Purpose

Annual turnover rate contributes to the optimization of the Department's capability in retaining a qualified workforce.

Current Condition

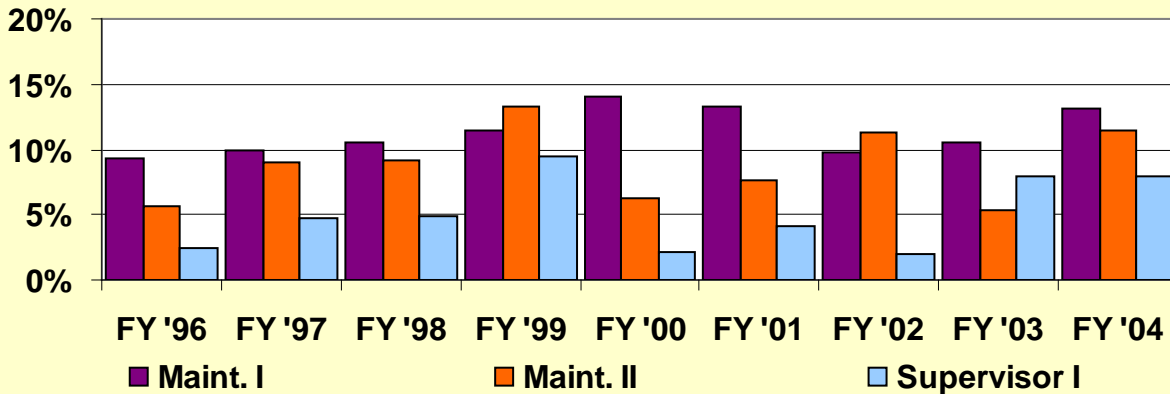
The Center for Human Resource Management (CHRM) has collected and analyzed CDOT's annual employee turnover rate for several years.

CDOT's annual turnover rate for FY 2004 has increased over the past two years. This indicates that 10 out of every 100 CDOT employees terminate employment with CDOT on an annual basis. Employees generally terminate employment voluntarily through retirement or for job opportunities outside the Department. Additionally, employees separate involuntarily through lay off or termination. The turnover rate for fiscal year 2004 remains just below the historical high of 11% in fiscal year 1999 but is substantially higher than the 6-7% turnover rates experienced during fiscal years 1996 through 1998.



The rate of transportation maintenance turnover over the past nine years has been generally higher (8.1 to 12.7%) than the rate of engineering turnover (4.2 to 9.7%). The annual turnover rate of Maintenance Worker I employees continues to be high at 13.1%.

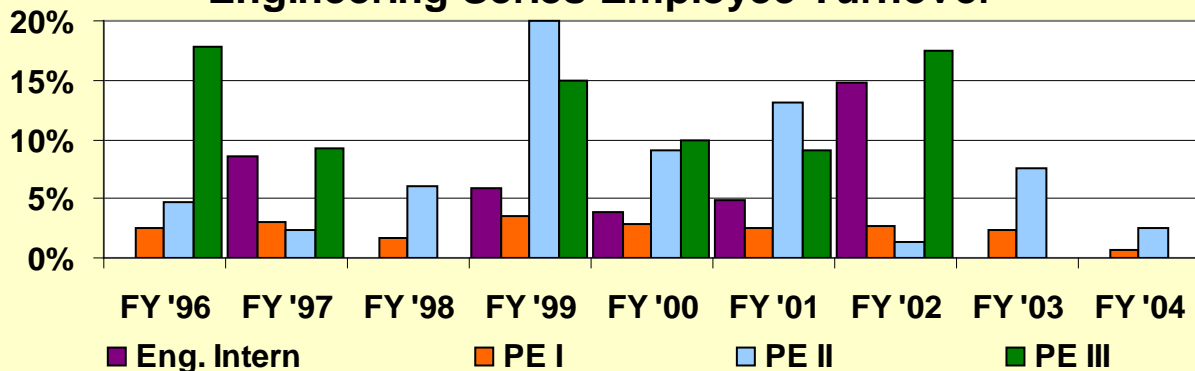
Maintenance Series Employee Turnover



GRAPH 51

Maintenance Worker II employee turnover dropped to an all time low in FY 2003 of 5.4% but returned to over 11% in FY 2004. The Engineering series all have had a low turnover rate for FY 2003 and FY 2004. The Engineer Intern and Professional Engineer III employees have remained at zero percent for the past two years.

Engineering Series Employee Turnover



GRAPH 52

Turnover can also be examined specifically for short-term employees. Probationary employees are those CDOT employees within their first year of state employment. The annual turnover rate of probationary employees for the fiscal years 1999 through 2004 has remained relatively steady at 22.3 to 26.5%. This is approximately 2.5 times the turnover rate for CDOT as a whole (10.2%). This suggests that a more effective job at selecting, orienting and retaining new employees may be a useful strategy. High turnover of new employees results in increased costs for CDOT in the area of selection, new employee training and reduced productivity. However, because the probationary period is the final step of the selection process, it is anticipated that the turnover rate would be higher during this period of time.

While the loss of probationary employees occurs at a higher rate than with tenured employees, this loss may not have as much impact to the Department as the loss of long-term employees. Long-term employee turnover can be of great costs to the

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Department because it involves the loss of valuable organizational knowledge, training, skills, experiences, productivity, and cohesiveness among co-workers. Therefore, it is in CDOT's interest to minimize the rate of avoidable turnover wherever possible.

Data on employees' reasons for separation from CDOT between 1999 and 2003 indicate that of the total number of separations from CDOT, approximately 48% was attributed to voluntary resignation (e.g., accepted new job, personal reasons), and approximately 38% was attributed to retirement. Employee separation attributed to retirement is something that will consistently contribute to annual employee turnover rates, and should therefore be monitored for succession planning purposes.

Performance Measures

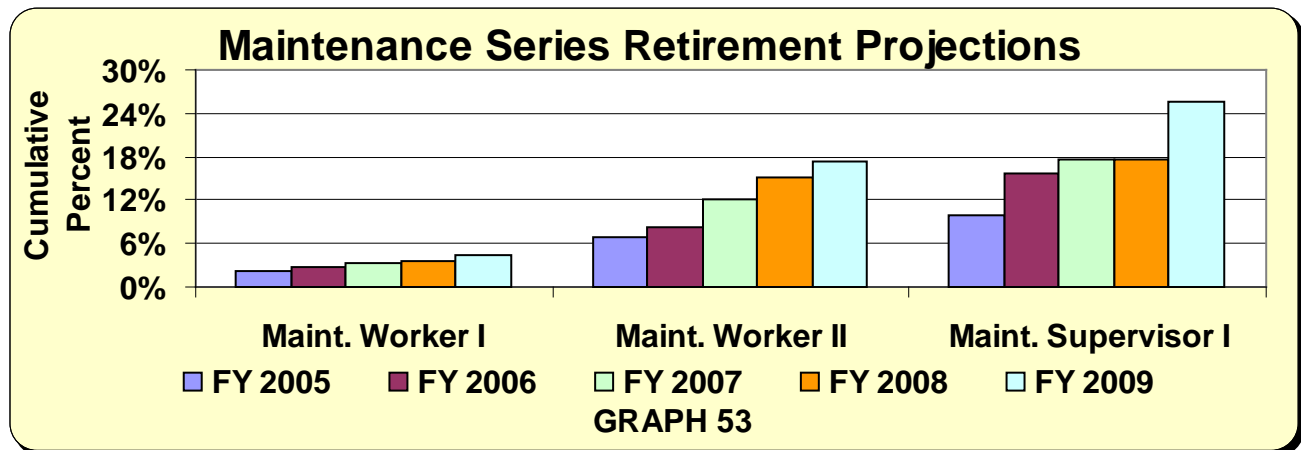
- Five-year projection of employees in critical job classifications eligible for full retirement.

Purpose

This measure gives CDOT information on how large a pool of workers it will need to draw on internally and externally to fill its need for qualified workers.

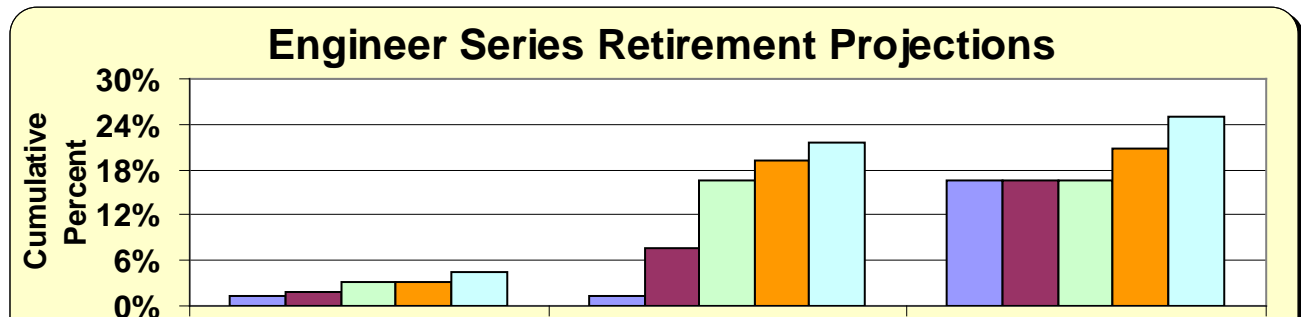
Current Condition

CDOT can expect to lose approximately 12% of its workforce over the next five years due to full retirement. This number does not include employees who may take early retirement with reduced benefits or those employees who have purchased retirement service credit. As expected, anticipated retirement projections increase at the higher classifications within a job series. The more tenure an employee has, the more likely they are to be in supervisory / management-level positions and the closer to retirement.



*The data above represents the cumulative percentage of employees in that job classification eligible for full retirement benefits for that and all preceding fiscal years

On a positive note, smaller projected retirement rates for classifications lower in the class series suggest that adequate numbers of employees should be in the applicant pool to promote into these supervisory-level positions as they become vacant.



Over the next five years, approximately one-in-four Professional Engineer III employees are eligible for full retirement benefits. Similarly, the smaller projected retirement rates for classifications lower in the class series suggest that adequate numbers of employees should be in the applicant pool to promote into these supervisory-level positions as they become vacant.

Employee Satisfaction

Objective:

- Identify innovative human resource solutions that maximize existing resources to meet business needs.

Performance Measures

- Employee satisfaction survey rating regarding management support, tools, resources, and training

Purpose

Level of employee satisfaction contributes to whether employees remain with the Department.

Current Condition

CDOT did not conduct an employee satisfaction survey in 2003 or 2004. CHRM completed CDOT's initial annual employee survey in 2001 and repeated the survey in 2002. Results from CDOT's second annual employee survey highlight several important elements that are strongly related to employees' intentions to stay employed with CDOT. Satisfaction with employment, nature of work, satisfaction with pay, effective leadership and freedom from job stress are all-important contributors to an employee's intent to remain employed with CDOT.

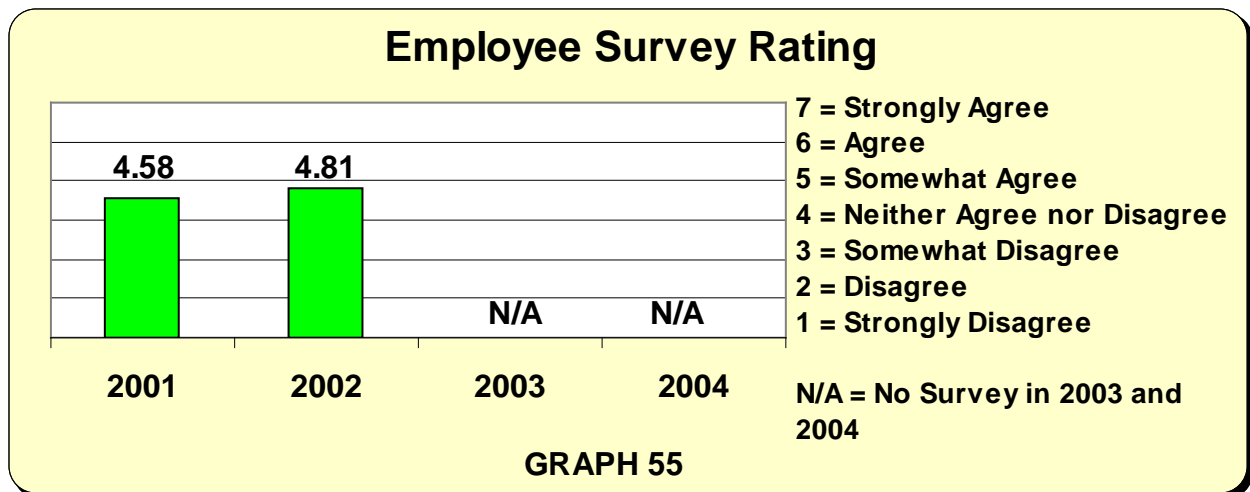
CDOT's employee satisfaction survey conducted in 2002 measured employee attitudes on 33 aspects (opinion areas) of CDOT's work environment. The results of the 2002 survey revealed that CDOT employees were most satisfied with the nature of their work, the high social standards of CDOT (i.e., freedom from workplace violence, harassment, substance abuse, etc.), job security, retirement benefits, and CDOT as an employer. Employees expressed the least satisfaction with issues involving the linkage between performance and pay, medical benefits, and elements of management decision-making.

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CDOT's Executive Management Team is working on strategies to build upon the strengths and deal effectively with the areas of concern by employees.

The aforementioned 33 aspects were measured by having a statistically valid sample of CDOT employees complete 96 items on a scale from 1 (Strongly disagree) to 7 (Strongly agree).

The following chart presents the overall average of all employee responses to all opinion areas on the employee survey. The ratings represent the overall favorableness of employee opinions of working at CDOT. The overall favorableness of employee opinions of working at CDOT increased from 4.58 to 4.81 from FY 2001 to FY 2002. This represents a 5% increase.



Next Steps Within the Investment Strategy Cycle

Strategy:

- Assess opportunities to provide improved service
- Evaluate customer segment needs and behavioral changes
- Analyze program/service use and cost
- Evaluate resource allocations

Performance Management:

- Plan data collection strategy, design data collection process and identify required technology
- Identify current performance level, deploy measures, compare and link to departmental objectives
- Identify sources of core competencies and alternative strategies to deliver customer service
- Identify leverage points and key learnings from the investment strategy
- Compare investment strengths and weaknesses to customer needs

Communication & Linkage:

- Communicate the investment strategy to the Department, to customers and to stakeholders
- Check and validate support with necessary levels of management
- Continue the development of performance measures throughout the Department

Implementation:

- Continue to provide performance measurement training and reemphasize linkages to investment strategy and departmental objectives
- Facilitate the use of performance measurement to evaluate performance and proactively manage results
- Implement data collection technology for performance measurement
- Monitor progress towards departmental goals
- Revisit Investment Strategy Cycle

Strategic Feedback & Learning

- Conduct feedback process to evaluate progress, identify gaps and redirect efforts
- Articulate insights and learnings and communicate to employees
- Emphasize the importance of good measures for decision making

Results of a Successful Investment Strategy

- A clear future direction is set for the organization
- A clear set of priorities is established
- Coherent decision making is the norm
- The organization can focus on its priorities
- Decisions are made across levels and programs
- Organizational performance improves
- Teamwork and expertise are expanded