

# 2035 Statewide Transportation Plan

March 20, 2008





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On the web: http://www.dot.state.co.us/StateWidePlanning/PlansStudies/2035Plan.asp En español: http://www.dot.state.co.us/StateWidePlanning/PlansStudies/2035Plan\_Spanish.asp

Para una copia en español del Plan, llame al 303-512-4019

email: StatewidePlanInfo@dot.state.co.us



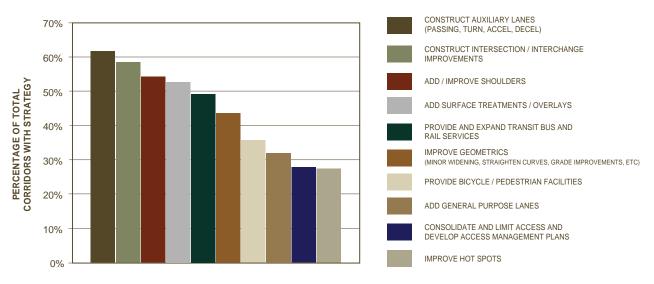
# COLORADO'S TRANSPORTATION VISION FOR THE FUTURE

In planning for Colorado's transportation future, residents and business people say one of their top priorities is to live and work in a state with a high quality of life where they can:

- · Travel on safe roads
- Depend on an efficient transportation system
- Purchase goods and services that are delivered efficiently and cost-effectively
- Find available transportation options for those who cannot or choose not to drive
- Visit Colorado's natural landmarks and tourist destinations without sitting in traffic
- Rely on a transportation system that complements the fabric of local communities, encourages economic growth and protects the environment

During the planning process for the 2035 Statewide Transportation Plan, strategies to achieve a vision for the future were updated. The vision integrates local land use decisions, community values, environmental and economic considerations with local and statewide transportation needs. Top strategies from about 350 multi-modal transportation corridors were identified to help improve safety, reduce congestion and maintain the transportation system.

# **Top Ten Strategies - All Corridors**



On the web: http://www.dot.state.co.us/StatewidePlanning/PlansStudies/2035Plan.asp



# A Message from the Transportation Commission and the Colorado Department of Transportation

# A Need to Make Tough Choices

The 2035 Statewide Transportation Plan, Moving Colorado: Vision for the Future, prepared in accordance with state and federal law represents a comprehensive effort to develop a transportation vision for all of Colorado.

To plan for the future, the Colorado Department of Transportation has worked with residents, the business community and elected officials across the state to define Colorado's transportation vision. The comprehensive vision updates the 2030 Statewide Transportation Plan including the 350 multimodal transportation corridors throughout the state. The vision provides a framework to prioritize roadway, transit and aviation projects that support Colorado's transportation needs. Implementation of the vision for the future will support the quality of life in the state for many years, but it will require a significant financial investment to make it happen.

Colorado's transportation system is at a critical point in its evolution. The state has experienced significant population and employment growth in recent years that has placed increased demands on the transportation system. Escalating growth in energy development on the Western Slope and Eastern Plains has generated unprecedented truck volumes on Colorado roadways in those areas. Add to this mix the rising costs of transportation projects along with an aging infrastructure of roads and bridges that require repair, and Colorado is unable to afford critical needs on the transportation system.

Anticipated revenues represent only about one-half of the funds needed to achieve the multi-modal transportation vision outlined in this Plan. Roadway revenues come primarily from the gas tax which in Colorado has not been increased since 1991. Regardless of the price of gasoline, the gas tax is a constant or flat rate of 22 cents per gallon state tax and 18 cents per gallon federal tax. Today our fuel tax is worth only one-third of its original value. The revenue per vehicle mile traveled has decreased as vehicles become more fuel efficient and the buying power of the funds will continue to decline with rising construction costs. Transit agencies that are primarily dependent on local funds also face a revenue shortfall and are projected to meet less than half of the expected service demand by 2035.

Without additional resources, tough choices will need to be made regarding program and project priorities in order to make the wisest investments. As outlined in CDOT's Midterm Implementation Strategies in this Plan, difficult tradeoffs will likely reduce funding for certain programs and focus spending only on the most critical transportation system program needs in order to assure the safety of the traveling public. Convenience will decline.



There is statewide consensus that additional dollars are necessary to address critical transportation needs. Governor Bill Ritter's Transportation Finance and Implementation Panel solicited public input and evaluated funding options before making recommendations to the Governor to increase transportation revenues. The Panel endorsed a direction for future transportation investments, a set of policy statements and a preferred funding threshold of \$1.5 billion annually. In the final analysis, the public will need to choose whether to support additional funding for the State's transportation system or to live with the foreseeable lengthy congestion delays and deteriorating roadways and bridges. These are indeed tough choices.

There are opportunities and there are challenges in Colorado's Statewide Transportation Plan. With everybody's help, we can make the right choices and move toward our collective vision.

Douglas E. Aden, Chairman
Colorado Transportation Commission

Russell George, Executive Director
Colorado Department of Transportation



# **Colorado's Statewide Transportation Plan Overview**

The 2035 Statewide Transportation Plan, "Moving Colorado: Vision for the Future," updates the 2030 Statewide Transportation Plan completed in 2005. CDOT was motivated by several factors to update the Plan:

- Projected population and employment growth coupled with escalating mineral development will place additional strain on the existing transportation system;
- Deterioration of the aging transportation system, declining revenues and loss of buying power due to increasing costs of construction call for CDOT to re-examine future expenditures and shift more resources from expansion to maintenance of the existing transportation system;
- New federal transportation legislation, the Safe, Accountable, Flexible, Efficient Transportation Equity Act:
   A Legacy for Users (SAFETEA-LU), reauthorized in 2005, introduced several new planning requirements that this update addresses.

The 2035 Statewide Plan updates the corridor visions based on key trends such as energy development, population increases and employment growth. It includes CDOT's midterm implementation strategy that begins identifying tough choices to maintain the existing system and leadership opportunities to manage demands placed on the transportation system. Coloradans envision a transportation system that is well-maintained, provides safe travel, offers travel choices and allows commerce to thrive. Unless revenues increase and strategies change, Colorado's transportation system will deteriorate to unacceptable levels. The Plan reflects what can be accomplished in the current climate of rising costs, aging infrastructure, increasing demands and limited resources.

# Colorado Transportation Commission 2035 Plan Policies

The 2035 Plan provides a policy framework and vision for Colorado and offers policy guidance to transportation providers including the Colorado Department of Transportation. It provides the policy structure to guide transportation investments based on Colorado's transportation mission and vision.

# **CDOT Mission**

Provide the best multi-modal transportation system for Colorado that most effectively moves people, goods and information

# **CDOT Vision**

Enhance the quality of life and the environment of the citizens of Colorado by creating an integrated transportation system that focuses on moving people and goods by offering convenient linkages among modal choices

The Colorado Transportation Commission policies emphasize:

- Continuing a high priority on preserving, maintaining, and enhancing the existing transportation system given declining revenues and increasing construction costs;
- Acknowledging that declining federal and state revenues restrict expansion of the State Highway system;
- Completing the 28 strategic projects and paying the debt service that made the acceleration of these projects possible;
- · Recognizing the role of all modes of transportation in addressing the state's mobility needs; and
- Working with planning partners to leverage limited financial resources to address the greatest transportation needs.



# As the State Grows, So Do Transportation Demands

While vehicle miles traveled on Colorado state highways are expected to double by 2035, less than one percent of new state highway lane miles are anticipated based on available resources. Visionary changes are needed to keep up with population growth and transportation demands on our transit and roadway systems. Right now, the average vehicle owner pays \$177 per year to support the State Highway system. To support growth to meet the 2035 vision on the state highway system, an average car owner would need to pay an additional \$601 per year, which is about \$50 per month or about \$1.65 per day.





# **Colorado Transportation Finance & Implementation Panel**

In March 2007, Governor Ritter appointed the Transportation Finance and Implementation Panel to evaluate the state's transportation needs and identify long-term programs and sustainable funding sources. The 32 members of the Panel included a broad spectrum of experts, policymakers, representatives from private industry, community leaders and citizens around the state. A Technical Advisory Committee helped the Panel review transportation financing options and other complex aspects of this topic.

An executive order issued by Governor Ritter provided the Panel with guidance: Convene a transportation summit; make the process inclusive; build statewide partnerships among the various stakeholders; conduct regional meetings to allow for statewide input; build upon existing studies and information, such as the Colorado Department of Transportation's 2030 Statewide Transportation Plan; and use consensus-building techniques. The summit, regional meetings and special topic presentations gave Panel members a long, thorough look under the hood at the state's transportation system.

## **Panel Policies**

The Governor's Blue Ribbon Panel endorsed a vision for 2050, a set of 15 policy statements, and a preferred funding threshold that sets the direction for future transportation investments in Colorado very consistent with the messages CDOT heard through the statewide planning process. The Panel proposes to preserve existing investments and expand travel options. Panel members unanimously support an increased investment in transportation that would address a broad range of infrastructure needs, both roadway and transit. It is critical that the state play a role in meeting the needs of those who own cars and trucks as well as those dependent on transit. Safety of the traveling public must be an integral part of every transportation program and project.

# Panel Vision for 2050: Transportation Investment for the Future

Colorado's economy and quality of life depend on the efficient movement of people and goods, and require responsible stewardship of the environment. The people of this state demand and deserve a transportation system that cannot be provided given the current level of investment by the federal, state and local governments. The transportation plans in place reflect the need to repair, maintain and expand the transportation system to meet current and future critical demands. Colorado needs a revenue base and an investment strategy to match those plans. Future transportation plans should support development patterns that maximize these investments. Colorado must address the deterioration of our transportation infrastructure and the continued erosion of mobility that looms in the near future.

Sustaining the existing transportation system and expanding it to meet the needs of current and future Coloradans will require much more than the revenues currently expected for transportation at the state and local levels. It will require more than double the expected revenue through 2035 to carry out Colorado's basic transportation needs.



# The Panel's 15 Policy Statements

# **Programs**

- 1. Maintain existing infrastructure first.
- 2. Improving shoulders is essential for safety.
- 3. Develop a state strategic mobility program.
- 4. Allocate state dollars to supplement existing rural and urban local/regional transit.
- Create a state enhancement program to mirror the federal enhancement program that funds activities such as pedestrian and bicycle facility improvements.
- 6. Promote environmental stewardship.
- 7. A local share allocation should be considered at every funding threshold for all types of transportation.

# **Leveraging Revenue Streams**

- 8. Provide increased resources to the Aviation State Infrastructure Bank that maximizes state and federal funds to make direct loans to eligible projects.
- CDOT should pursue public-private partnerships where appropriate.

- 10. If a ballot measure is pursued, a portion of new revenue should be leveraged through bonding to accelerate completion of major projects.
- Toll roads should be considered on a corridor by corridor basis.

### **General Policy**

- 12. Identify and address freight issues.
- Ensure the State's transportation system is sufficiently funded, operated and maintained to provide Coloradans with the infrastructure needed for a vibrant state economy.

### **Process**

- 14. CDOT should continue to ensure resources are expended in an effective and accountable manner.
- 15. Use the transportation planning process to select projects funded with new revenue.

### **Future**

The state and its transportation planning partners need to take a leadership role in developing strategies to reduce carbon-based vehicle miles traveled and the greenhouse gas emissions associated with them.

# **Panel Recommendations**

The Panel recommends a package of funding mechanisms that would generate additional annual revenue for transportation at any of four levels: \$500 million, \$1 billion, \$1.5 billion or \$2 billion. The Panel's preferred alternative – the one most reflective of a vision for a comprehensive transportation system – would raise an extra \$1.5 billion a year.

This level of funding would make it possible for the state to address needs across all program areas. One-third of the new revenue – approximately \$500 million – would be focused on safely preserving roads, bridges, shoulders and other existing components of infrastructure. The other \$1 billion would go to projects designed to relieve traffic congestion, better connect regions of Colorado, improve local roads and add more transit options. Choosing an alternative level of funding – more or less than \$1.5 billion – would mean fulfilling these needs more or less quickly.

A proposed package of five tax and fee revenue increases were selected by the Panel based on revenue raising capacity, logical connection to transportation and political viability. Fees may be legislatively mandated while tax initiatives require voter approval. An increased average vehicle registration fee of \$100 per year for each vehicle would generate about \$500 million a year and be used to support the existing infrastructure. A 13-cent increase in motor fuel tax from the current state tax of 22 cents a gallon on gasoline and 20 cents a gallon on diesel would raise \$350 million a year and could be indexed for inflation. Since it was last increased in 1991, the current motor fuel tax has lost two-thirds of its purchasing power.

A new daily visitor fee of \$6 on hotel rooms or auto rentals is proposed for visitors and Colorado residents alike. A 0.35 percent increase in sales and use tax is estimated to generate \$312 million and can be used for transit since it is a general tax, unlike vehicle fees or fuel taxes which are constitutionally restricted to highway spending. A 1.7 percent increase in severance tax on oil and gas extraction could raise an estimated \$96 million that if allocated to transportation, would help compensate for the industry's use of the transportation system. The Panel strongly endorsed CDOT's current planning process as public, transparent and collaborative and should be used to define project priorities.



# **Midterm Implementation Strategies**

The concept of Midterm Implementation Strategies was developed during the 2035 planning process to set priorities that address the funding shortfall over the next decade. Both CDOT and the Regional Transportation Planning Regions developed cooperative approaches to focus available funding on critical corridors and programs. At the CDOT level, strategies are being developed to make tough choices focusing available funding on the most critical needs due to funding shortfalls. At the Regional level, key strategies on specific corridors were identified for implementation over the next decade based on available funding levels.

# **CDOT Tough Choices**

CDOT is developing a new midterm implementation strategy for handling the immediate funding crisis. At current funding levels, CDOT cannot continue to achieve the performance levels of service that have been provided in the past. The midterm implementation strategy will provide guidance on the difficult tradeoffs that are necessary to manage the transportation system over the next decade, knowing there are limited funds and increasing costs. It will identify methods to most effectively utilize available dollars and make the wisest investments given the anticipated funding shortfall. This approach is necessary to maintain the current system and consider desired enhancement, mobility and capacity improvements in response to the state's continued growth. CDOT will always have a safety focus and as a result, other programs may be reduced to assure the safety of the traveling public on the State Highway system.

CDOT is also working on leadership opportunities that coordinate transportation and land use planning to minimize impacts and manage demand placed on the State Highway system. To assist local governments as they consider transportation implications of their land use decisions, CDOT is considering greater emphasis on access management plans, corridor optimization studies and technical assistance activities. In addition, a Maintenance Incentive Program will provide the opportunity to transfer certain state highways that no longer serve the purpose of the state highway system to interested local governments on a voluntary basis.

# CDOT Tough Choices In Response to Funding Shortfall

- CDOT needs to make tough decisions by investing available dollars on only the most critical purposes, targeting only the most significant corridors, and/or lowering performance standards, or some combination of the three.
- Strategies may include refocusing funding between and within programs such as Maintenance, Bridge and Surface Treatment.
- Improved tools will be developed to aid the Transportation Commission in analyzing and making the best tradeoffs when establishing funding priorities. These could include establishing and focusing investments primarily on priority roadways using possible criteria such as roadway usage, truck traffic, system connectivity, and/or lifeline routes to communities.

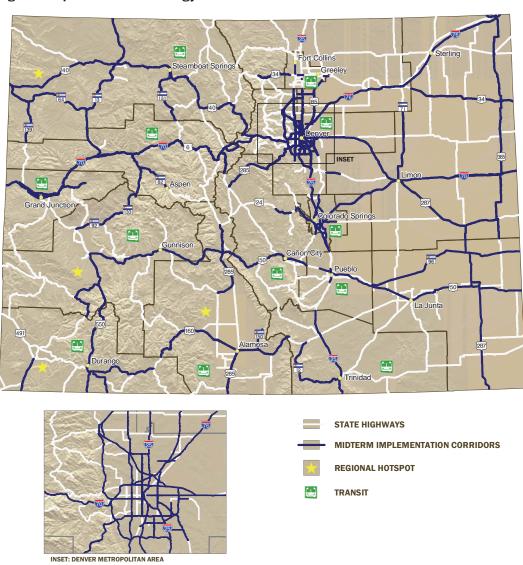


# **Regional Priorities**

At the regional level, each of the state's 15 transportation planning regions identified corridor and/or project strategies for priority implementation over the next decade based on available transportation revenues. In each case, the Midterm Implementation Strategies are a subset of the constrained Regional Transportation Plans. The transportation planning regions have expressed a strong desire to strengthen the transportation funding stream.

The map below identifies Transportation Planning Region highway corridor and transit priorities over the next decade. Transit priorities are typically associated with a community service area, rather than a highway corridor. The map also shows a series of "regional hotspots" that identify general characteristics of the regional system that need to be addressed, such as intersection or safety improvements in multiple locations. Detail on the regional strategies is included in the Midterm Implementation Technical Report.

# **Regional Implementation Strategy Corridors**





# **KEY ISSUES AND EMERGING TRENDS**

Many key issues and emerging trends identified in the 2030 Plan have become even more pressing in recent years. Energy development as well as population and employment growth continue to impact the transportation system. At the same time, the ability to address emerging issues has become more difficult due to limited revenues and the rising costs of maintenance and construction.

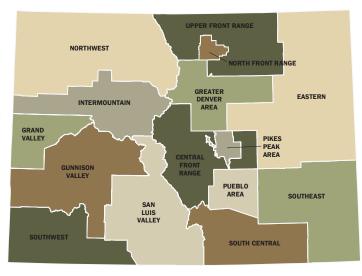
CDOT sought input on regional and statewide trends that impact transportation from business, governmental and transportation leaders, stakeholders and the general public.

# **Public Input**

Each of Colorado's 15 Transportation Planning Regions, guided by local elected officials and staff examined options, set priorities and built consensus through regional transportation forums as they developed a long-range transportation plan for their region. A 2006 customer survey was conducted in which over 3,000 residents were asked how they felt about their transportation system. Regional Transportation Forums in

each region were held to gather information and exchange ideas. The Statewide Transportation Advisory Committee (STAC), representing each planning region and the Indian Tribal Governments, provided both a sounding board for transportation issues and advice to the Colorado Department of Transportation during monthly meetings.

For the first time, an Environmental Forum brought together environmental resource and regulatory agencies with county commissioners and regional planners to identify significant environmental issues in each planning region early in the planning process. CDOT continues to operate in a



manner consistent with the government-to-government relationship between the Southern Ute and Ute Mountain Ute Tribes and the State of Colorado. Both Tribes provided input on the 2035 Plan through the Transportation Planning Region process and STAC meetings. Meetings were held with the Indian tribes to discuss coordination of environmental issues. In addition, the tribes, CDOT, the Federal Highway Administration, the Bureau of Indian Affairs, and representatives of the three neighboring states meet regularly to discuss pertinent issues and projects.

Other political action groups such as Club 20, Action 22, Progressive 15, the Colorado Municipal League, and Colorado Counties, Inc., held meetings on transportation issues with their constituencies. Extensive contact was made with transit providers through the Human Services Outreach Program to identify local and regional transit needs. A series of focus groups helped identify the transportation needs of low-income, minority and disadvantaged groups. The Transportation Commission hosted a series of workshops in which transportation agencies and the public were invited to contribute to the development of transportation policy, implementation strategies and the 2035 Statewide Transportation Plan.



# **Common Themes**

Citizens, government leaders, transportation providers and planners around Colorado discussed how important transportation is to everyone's quality of life. Keeping up with demand eases drive time to work and supports a thriving economy of state and national commerce while providing visitors with positive experiences in all seasons. Deterioration in service and conditions affects quality of life in terms of lost time and productivity.

Many Coloradans are concerned with the rapid population growth the state has experienced, including urban-like growth in previously rural areas. The boom in second home purchases around many resort areas brings its own special set of needs, including seasonal demand, an absence of employment-generated tax base to support infrastructure development and skyrocketing real estate prices. Escalating housing costs continue to force more workers further from their place of employment, resulting in longer commutes



at greater costs to workers and to the infrastructure. Growth in energy development provides economic opportunities and transportation challenges as unprecedented truck volumes contribute to safety, congestion and maintenance costs.



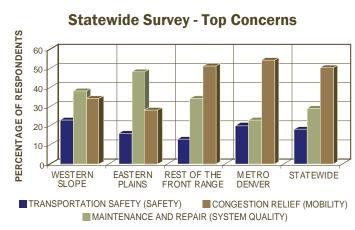
Rural Colorado sees a critical need for roadway and bridge maintenance as well as shoulder improvements to improve safety. Shoulders offer all drivers including truckers a valuable recovery area that can help prevent crashes. A healthy tourism economy generates demand for commuter and recreational bike travel, reinforcing the need for shoulders.

Northwest Colorado is faced with increasing truck volumes from the booming energy industry. Southeast Colorado also sees increasing trucks connecting Gulf Coast ports to Colorado's urban centers. During construction on State Highway 287, over

160 trucks were counted within a half-hour period. Mountain resort towns see the need for increased transit service for relatively low-income workers to travel to and from work. Elderly and disabled populations rely on transit services to get to medical facilities and other services. Movement of corn for ethanol production and shipment of ethanol is putting increased demand on transportation infrastructure in eastern and northern Colorado. Many areas are turning to enhanced public transportation to balance transportation needs. All are concerned about the relative decline of resources – at all levels – to fund our transportation needs.

# **Statewide Survey**

The Colorado Department of Transportation conducted a public opinion survey in 2006 to learn what Coloradans want from the transportation system. Differing perspectives represent each area of the state. The more congested Denver Metro Area and the rest of the Front Range regions want congestion relief over road maintenance and safety. Almost all Metro Denver and Front Range residents felt that using public transportation and carpooling were solutions to the congestion problem, but most typically still



drive alone. Those on the Western Slope balanced priorities between congestion relief and maintenance and repair. Residents of the Eastern Plains put a higher priority on maintaining existing roadways and bridges.

On the web: http://www.dot.state.co.us/StateWidePlanning/PlansStudies/Docs/CDOT\_2006\_Final\_Report\_2006-03-13.pdf

# **Coordinated Human Services and Local Transit Planning**

Coordinated human service plans were developed during the 2035 planning process. Projects requesting federal transit funding for human services transportation supporting the elderly, individuals with disabilities and low income persons must be derived from a locally developed coordinated public transit-human service transportation plan. The human service plans were developed in conjunction with the 2035 planning process in order to ensure better planning integration. This effort was helpful in identifying needs and successfully brought together a variety of organizations with a common interest in improving human services transportation.



CDOT met with transportation and human service providers in each of the 15 Transportation Planning Regions. Extensive outreach included public, private, and non-profit providers as well general population groups such as seniors, individuals with disabilities and low income households. Participants were asked about available local services, needs, priorities, and the extent of existing coordination efforts. Their responses were included in the core of the human services transportation plans.

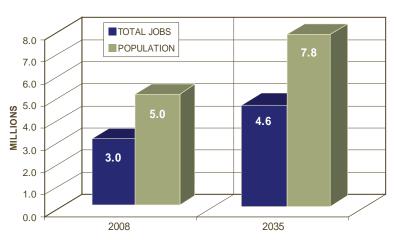
Common themes heard during public outreach included transportation needs for the aging and other at-risk populations, population growth, and the cost of providing service in rural areas of dispersed geography. Throughout the process, participants talked of the need for more mobility options for medical trips, social service-related trips, and commuter trips. Other issues included the need, logistics, and resources required for better transit coordination; use and sharing of resources including vehicles; insurance uncertainties; and the challenges of dealing with multiple agencies with different missions, rules and regulations, and clientele.



# **Population Growth**

Colorado's population continues to expand much more rapidly than other parts of the country, thereby changing the face of Colorado. The State's scenic beauty and appealing climate combine with the highly educated and skilled workforce to attract commerce and high value jobs. Colorado's aging population is projected to increase from approximately one-half million currently to an estimated 1.3 million in 2035. The state's total population is projected to grow from about five million today to 7.8 million by 2035. The total number of jobs is projected to grow from three million today to 4.6 million in 2035.

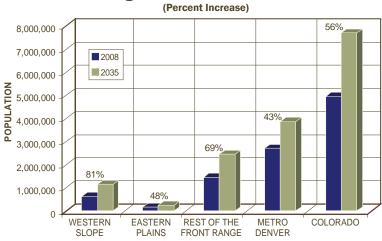
# **Colorado Population & Employment**



# **Regional Growth**

Not only are our urban centers growing, but growth has extended into previously rural areas, especially the mountains. These trends are projected to continue. Urban areas along the Front Range will see an increase of about 2.2 million people by 2035. While the majority of growth in total population is expected to be along the Front Range, all areas of the state will see significant population increases. For instance, the Western Slope is projected to grow by 81 percent or a half-million people by the year 2035 causing these communities to experience congestion traditionally found in more urban areas.

# Regional Growth 2008-2035



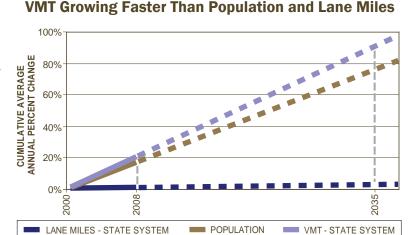
The mismatch between where people live and where they can find employment continues to be a key factor in traffic growth. Employees serving the tourism industry often live long distances from the tourism-based employment centers due to the high cost of housing. The tourism, retirement and energy industries are all major components of growth on the Western Slope and in mountain communities that drive the need for improvements in the roadway, transit and bicycle networks.

Source: Colorado Department of Local Affairs, (2007) http://dola.colorado.gov

# **Growth Impacts to Transportation**

Due to dwindling transportation revenues and increasing costs, improvements to the transportation system are not keeping up with demand. From 2000 to 2035, vehicle miles of travel (VMT) on state highways are projected to double, but the addition of new lane miles is expected to be less than one percent. At the

same time, the population is projected to increase 80 percent. At these rates, VMT is growing faster than population. With the recent escalation in roadway construction costs, our buying power has diminished at a time when demand for additional capacity is increasing. roadway Overall, planned expansion to the infrastructure cannot keep pace with projected travel demands. Average daily delay in congested corridors is forecast to increase from 22 minutes per commuter in 2005 to 70 minutes in 2035.



# Congestion

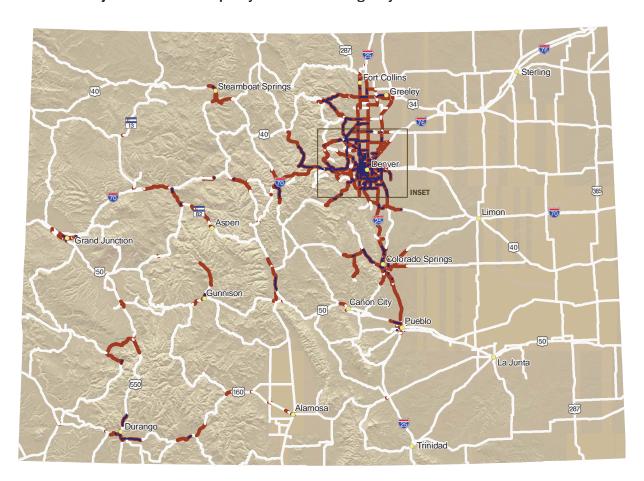
The demands placed on roads, bridges and other parts of the system have increased with our quickly growing population and economy. Like existing residents, newcomers will travel to work, go shopping, have packages delivered, travel to medical services and take leisure trips.

Today there are about 520 miles of congested state highways on which traffic volume exceeds 85 percent of the roadway capacity. Congested highway miles are projected to more than triple by 2035. Effective congestion management not only improves mobility, it also improves safety. Intelligent Transportation Systems (ITS), congestion pricing and courtesy patrols are effective strategies to reduce crashes as well as travel time.

Congested highway corridors that offer travelers more than one travel choice provide a more realistic way to reduce traveler delay. Robust multi-modal corridors provide travelers choices based on specific needs. Managed toll lanes provide fast, reliable, predictable and flexible transportation now and in the future. Regional buses operating on dedicated lanes and light rail offer reliable, predictable and energy efficient transportation. General purpose lanes provide convenient and flexible transportation, although they may be congested during peak periods. Offering many modal choices allows travelers the opportunity to select the best mode of transportation for each travel trip. A comprehensive multi-modal transportation program provides people the choices they deserve to make the travel decisions that best fit their needs each and every day, now and in the future.



# **Current and Projected Volume to Capacity Ratio on State Highways**





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\_DTD\_DataAccess/index.cfm

# **State Highway and Bridge Condition**

# **State Highways**

The Colorado Transportation Commission has set a goal of maintaining the state's highway system pavement at a minimum of 60 percent *Good* and *Fair*. The Colorado Department of Transportation evaluates the condition of highway pavement based on how many years remain before resurfacing is necessary. The CDOT Pavement Management System uses indicators such as roughness and cracking to rate the smoothness and structure of highway pavement. A



Good surface condition rating means there is a remaining surface life of 11 years; a Fair rating indicates a remaining surface life of six to 10 years; and, a Poor evaluation represents a remaining surface life of less than six years. The state highway system surface condition was rated about 59 percent Good or Fair in 2007. Based on available revenue forecasts, the overall condition is projected to drop to 25 percent Good/ Fair condition by 2035.

# **Major Bridges**



The Colorado Transportation Commission's goal is to maintain or improve the current percentage of bridges in *Good* or *Fair* condition. CDOT monitors the condition of approximately 3,775 major bridges on the State Highway system during regularly scheduled inspections which typically occur on a two-year frequency. Major bridges are classified as *Good*, *Fair* or *Poor* using a nationally defined sufficiency rating and status of structurally deficient or functionally obsolete. There are currently 116 bridges rated as *Poor* on the State Highway system, which means having a sufficiency

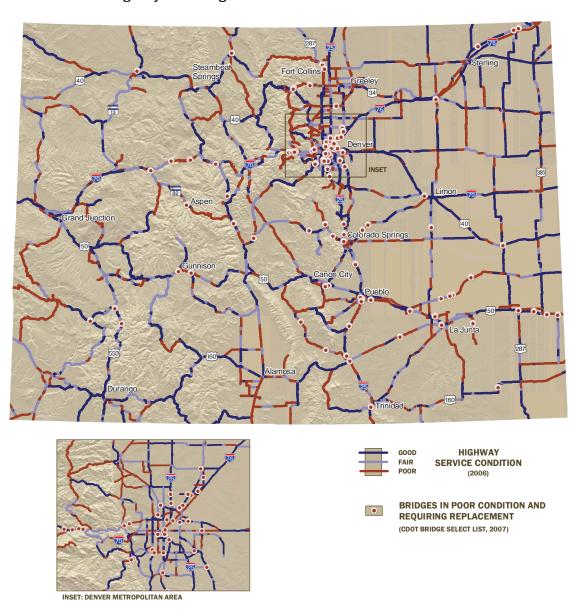
rating less than 50 based on a 100 point scale and a status of structurally deficient or functionally obsolete. Approximately 95 percent of Colorado's bridges were rated in *Good/Fair* condition in 2007 while only 60 percent are projected to be in *Good/Fair* condition by 2035.

The sufficiency rating is a numerical rating for bridges that takes into account 20 factors including both structural adequacy and functionality. To be categorized as *Poor*, a bridge must have a sufficiency rating of less than 50 and be either structurally deficient or functionally obsolete. A bridge is structurally deficient when the condition or capacity of the bridge is less than fully adequate and may need maintenance, rehabilitation, or replacement. A bridge is functionally obsolete when its lane widths, shoulder widths, or vertical clearances are not adequate to serve current traffic demands.

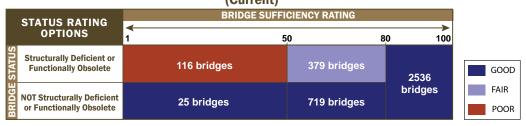
The criteria for determining the sufficiency rating, structural deficiency, and functional obsolescence is established by the Federal Highway Administration and used by all state Department of Transportations. For planning purposes, CDOT considers bridges in *Poor* condition that have exhausted their remaining economically viable service life and should be replaced or receive major rehabilitation. Bridges in *Good* condition adequately meet all safety and geometry standards and typically only require preventive maintenance. A bridge in good condition could have a low sufficiency rating due to *Poor* ratings in some of the 20 factors not related to public safety. A bridge in *Good* condition could have a low sufficiency rating due to *Poor* ratings in some of the 20 factors not related to public safety, for example, a long detour.



# **Condition of State Highways and Bridges**



# Bridge Conditions (Current)



# **Energy Development**

The explosive growth of the energy industry has generated unprecedented truck volumes on Colorado roadways. Colorado has substantial conventional fossil fuel and renewable energy reserves which are being rapidly developed with over 70,000 employees and \$17 billion in direct revenues. Truck traffic from across Colorado supports coalbed methane, natural gas, coal, oil shale and oil development, in addition to wind power and agriculture-based fuels (biofuels). Top oil producing counties include Weld, Rio Blanco, Garfield and Cheyenne. Colorado accounts for more than five percent of annual U.S. natural gas production. Top natural gas and coalbed methane gas producing counties include La Plata, Garfield, Weld, Montezuma, and Las Animas. Substantial deposits of coal are also found in the state.

The growing energy development boom has had a major effect on local, regional and statewide economies, injecting billions to the Colorado economy. Along with the benefits of energy dollars that are strengthening Colorado's job markets and the tax base, come some challenges for transportation. The increasing presence of drill rigs and heavy trucks traveling highways and back roads stresses the existing infrastructure and creates mobility and safety issues for commuters and other travelers. From 2002 to 2007, the number of active wells in Colorado



grew by one half and new drill permits tripled. Up to 1,300 heavy truck trips may be required to bring each well to production, depending on location and type of well. The challenge is to keep up with increased safety and congestion impacts to the system.

Several planning regions identified roadway impacts from energy development as a key issue. The map on the next page identifies energy areas and transportation corridors with increasing truck traffic.

On the web: http://www.oil-gas.state.co.us/

# Resurfacing \$ per lane mile Plowing, Sanding, De-Icing

\$ per lane mile

per storm

**Maintenance Costs** 

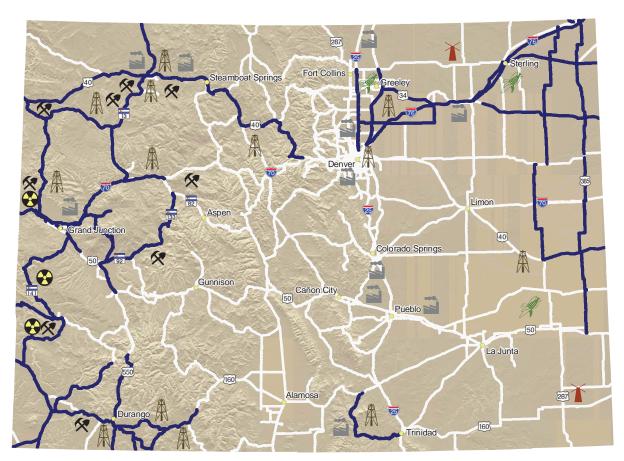


### **The Components of CDOT Maintenance**

Regular maintenance is less expensive than rebuilding roads, but it still requires a large portion of available resources. Resurfacing a road requires materials, equipment and labor. Besides resurfacing, roads need to be restriped, signs replaced and other improvements made on a regular basis to assure safe driving conditions and protect the investment. Also, each year Colorado winters take their toll on our roads. As the snow falls, highways are plowed to keep them open and safe. The dollars and miles add up. More than 23,000 lane-miles of state highway need attention every year.



# **Key Energy Development Existing Corridors and Areas**



# FROM REGIONAL CORRIDOR VISIONS



NOTE: Excluding Coal Fired Power Plants and Coal Mines, symbols reflect regional activity, not individual facilities

# **Colorado's New Energy Economy**

- Two of the nation's largest oil fields located in Colorado
- Seven of the nation's 100 largest natural gas fields located in Colorado account for five percent of national production
- Colorado accounts for 25 percent of all US-produced coalbed methane gas
- Colorado ranks 7th in coal production nationally
- New drill permits up from 2,000 in 2002 to 6,368 in 2007 with 34,000 active wells
- Colorado ranks 11<sup>th</sup> for wind energy potential nationally

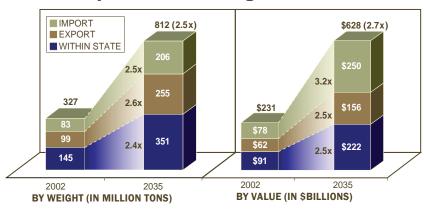
# **Freight**

Colorado's strategic position as a "bridge" state in the national and international freight system, along with its strong agricultural and natural resource sectors, result in the transportation of large quantities of intra- and interstate goods. By 2035 freight hauls across Colorado highways and rail lines are expected to more than double from today's levels. More than 327 million tons of freight worth over \$231 billion is currently moved across roads, railways and runways in Colorado. Rail transports 24 percent of all freight by weight. In turn, about 70 percent of freight is hauled by trucks based on value. Grains, coal and ore account for the largest shares of all freight.

The greatest concentrations of truck traffic are experienced on the Interstate highways, I-25, I-70 and I-76. Furthermore, four high priority freight corridors in Colorado have been federally designated to support the nation's commerce: the Ports to Plains Corridor connecting Texas to Denver via US 287, US 40 and Interstate 70; the Heartland Express connecting Denver to Nebraska via I-76 and SH 71; the High Plains Corridor on US 50 from Pueblo to Kansas; and the Camino Real Corridor connecting El Paso to Montana via I-25. Two Class I railroads and 11 regional, local or switching railroads operate more than 3,500 miles of rail line. There are also 75 public-use airports in the state, which serve an important and growing function in goods movement.

While it is projected that total freight moved on the nation's transportation network will double by the year 2035, Colorado freight is expected to grow at an even more rapid rate – by a factor of at least 2.5 by 2035. Recognizing the importance of freight to the state's economy and its impact to the state's infrastructure, a number of freight related initiatives are being undertaken.

# **Projected Growth of Freight in Colorado**



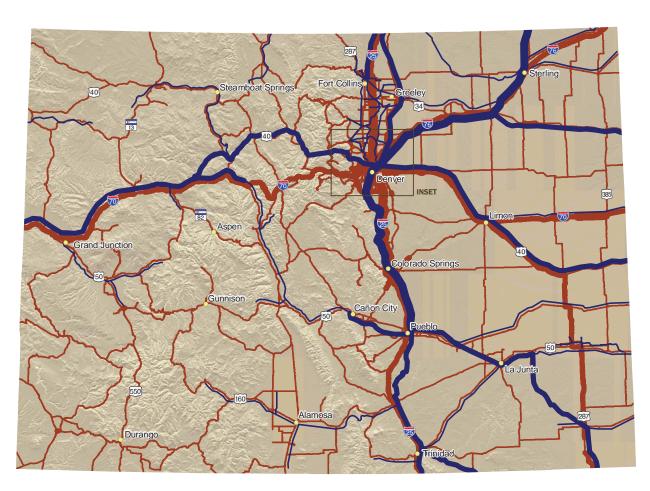
Source: "Freight Analysis Framework," FHWA, Office of Freight Management and Operations, 2006

### **Freight Planning Initiatives**

- Conducting a series of Freight Advisory Council meetings;
- Planning for improvements in the high priority freight corridors;
- Rail Relocation While the central focus of the Colorado Rail Relocation Implementation Study is to identify an alignment and construction costs of developing a freight rail bypass on the Eastern Plains primarily to address a more efficient movement of coal traffic along the Front Range there would also be an ancillary transit benefit in freeing up rail capacity on the Front Range that could be used for passenger rail service;
- Planning for additional intermodal facilities accommodating the movement between air, rail and truck services; and
- Conducting research on how to better collect and maintain freight data bases and on how to incorporate these data into the planning process.

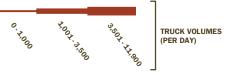


# **Key Freight Corridors**





INSET: DENVER METROPOLITAN AREA



Source: CDOT; 2006 Traffic Colorado Roadway Information System

 $http://www.dot.state.co.us/App\_DTD\_DataAccess/index.cfm$ 



Source: Major Rail Lines; Public Benefits and Costs Study, CDOT, May 18, 2005

Minor Rail Lines; Federal Rail Administration http://safetydata.fra.dot.gov/OfficeofSafety/ newcrossing/Default.asp?page=xingqryloc.asp

# **Tourism**

Tourism is one of the major industry sectors in Colorado's diverse economic base. In 2006, the tourism industry generated a record \$8.9 billion from total travel spending, an increase of eight percent over the previous year. For the third year in a row, the overall number of visitors rose, adding four percent in 2006 to an all time record of almost 27 million overnight visitors. Most statewide travel spending is for accommodations, eating and drinking; next for transportation and retail; and last for recreation. About one-third of Colorado visitors travel on I-70 west, one-third visit Denver, and one-third visit other areas of the state.

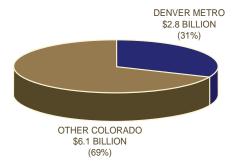


Some of the key reasons tourists visit Colorado are for the outdoor activities such as biking, river rafting, and enjoying national and state park experiences. Colorado also offers visitors and residents trips along scenic and historic byways with 25 designated routes. Nearly 60 percent of all overnight pleasure travelers participated in historical or cultural activities, contributing to 44 percent of all travel expenditures. About half of these traveler trips were on the state's scenic byways.

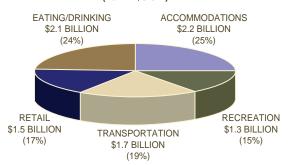
Tourists, whether Colorado residents or visiting from out of state, expect an effective transportation system when traveling by car, air, bus, or train, to and from airports, ski areas, and Western Slope communities. The I-70 West Corridor is the lifeline to tourism in ski country and the Western Slope. Twenty-six ski resorts in Colorado hosted 12.6 million skier visits during the 2006-2007 season, 21 percent of the nation's total. The often over-crowded corridor presents a special challenge to maintaining the health of western Colorado's tourism-based economy. Weather and other natural conditions, including high mountain passes, tunnels, snow storms, avalanches, and rock slides are costly facts of life for travel and maintenance throughout western Colorado.

In order to support the tourism industry and its economic benefits, we need to assure reliable transportation with minimal delays for our visitors. Addressing congestion in tourism corridors is vital to the continued strength of the industry.

# Total Travel Spending in Colorado (TOTAL \$8.9 B)



# Travel Spending by Sector (TOTAL \$8.9 B)



Source: Longwoods International Study - Colorado Travel Year 2006, Final Report. May 2007 http://www.dot.state.co.us/StatewidePlanning/PlansStudies/LongsProfileFinal2007.pdf

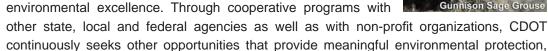


# The Environment

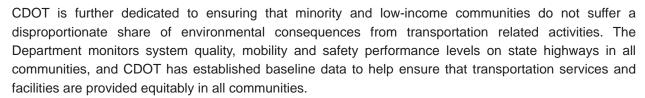
Environmental issues are critically important in the long range planning process – just as they are when projects are being built – because Coloradans care deeply about minimizing community and wildlife impacts, protecting air and water quality, and coordinating transportation improvements with land-use development.

CDOT has proven its leadership in environmental stewardship with several programs that set the standard nationally for transportation agencies. The Shortgrass Prairie Initiative mitigates impacts to wildlife in the eastern portion of Colorado and will preserve 30,000 acres of the endangered shortgrass ecosystem.

The Linking Colorado's Landscape program identifies significant wildlife crossing areas throughout Colorado. Both programs won national awards recognizing



while meeting CDOT's own environmental obligations and reducing costs to taxpayers.



The growing congestion problem also has air quality implications. The longer a car idles in gridlock, the more emissions it contributes. Providing alternatives to congestion, such as increasing the use of transit, alternative modes, and alternative fuels that use less energy and are less reliant on fossil fuels would provide benefits to air quality, reduce our reliance on foreign oil, and decrease Colorado's contribution to global warming.

# **CDOT's Environmental Stewardship Ethic**

CDOT will support and enhance efforts to protect the environment and quality of life for all of Colorado's citizens in the pursuit of providing the best transportation systems and services possible.

# **Colorado Climate Action Plan**

In 2005, transportation represented 23 percent or the second largest source of all greenhouse gas emissions in Colorado. Goals set in the Colorado Climate Action Plan would reduce greenhouse gas emissions 20 percent below 2005 levels by 2020 and 80 percent below those levels by 2050.

To meet greenhouse gas reduction goals, transportation policies need to include strategies to reduce energy consumption, dependence on foreign oil and carbon dioxide emissions from cars, trucks and air travel. Strategies may include:

- Improving vehicle efficiency with technology that reduces greenhouse gas emissions in new vehicles.
- Reducing carbon-based emissions by modifying transportation systems. This could include masstransit options, measures aimed at congestion relief, and the use of more-efficient vehicles.

# **Colorado Emmissions**

Transportation and Electricity consumption are the largest contributor to greenhouse gas emmissions in Colorado.

-Colorado Climate Action Plan, November 2007

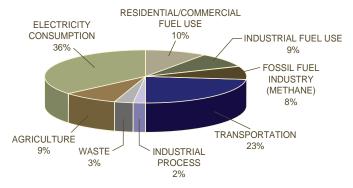
- Recognizing community excellence in land use and transportation and the importance of neighborhood design to limit residents' and workers' dependence on cars.
- Expanding low-carbon and no-carbon fuel options.

# **Sustainable Transportation**

CDOT will begin identifying strategies and actions to achieve Colorado's transportation goals to address global warming. Sustainable transportation systems manage demand placed on the transportation system and reduce greenhouse gas emissions. Some sustainable options include transportation modes that use energy more efficiently such as walking, cycling, carpooling and public transit; planning corridors that support multiple options for travel; using telecommunications to reduce or replace physical travel; and using cleaner fuels and technologies, such as biodiesel, hybrid or electric cars.

One implication of increasing vehicle fuel efficiency under the current transportation funding system is the decline in the gas tax revenue, which further inhibits the ability to maintain or improve the transportation system. A modified funding approach is needed that can support both system improvement and environmental goals.

# Greenhouse Gas Emissions Produced in Colorado (2008)





# **Transit and Shared Rides**

Communities across Colorado recognize the need for a multimodal approach to address growing transportation demand. These communities support multimodal travel with bus and light rail systems and carpool and vanpool programs. Together these approaches provide choices for people to get to work, school, recreation, and medical facilities. Transit systems and ride sharing also improve air quality, may provide an alternative to travel on congested roadways, and is often less expensive than private automobile ownership and travel. Transit is a critical element of an integrated statewide transportation system.



Throughout the planning process Coloradans spoke of a need to expand job access, avoid congestion and improve mobility with more and better transit services. In the rural areas, elderly people and people with disabilities, low income households and households without vehicles identified transit as the greatest need. In resort areas, demand grows for commuter transit as many workers commute long distances from where they live to employment centers. At the same time, resort visitors continue to demand convenient and reliable transit. The demand for public transportation services will increase through 2035 as Colorado's

population simultaneously grows and ages. While many Coloradans have some access to transit, available service often does not meet the needs expressed by the public to reach desired destinations at convenient times. Transit needs are projected to grow at a much greater rate than transit services. Currently, an estimated 45 percent of transit need is met statewide. By 2035, only about 30 percent of the total transit need is projected to be met as transit services fail to keep up with growing trip needs.

Transit need estimates are based on national standards for projected trips from transit dependent populations and other potential transit riders. The trip estimates vary by population groups such as access to medical facilities for senior citizens and access to employment for low-income households. The numbers of trips determined to be needed for each group are added together to determine the total need within each region and for the state.

As with highway improvements, investments in transit have lagged behind need. While detailed

# 500 400 ESTIMATED TRIPS NEEDED 100 ESTIMATED TRIPS PROVIDED

2035

**Estimated Transit Trip Needs** 

performance forecasts for transit are not available, it is anticipated that transit agencies outside the Denver region will not be able to maintain current service levels without additional resources. It is difficult to keep buses in good condition and equip them with new technology and that makes transit less reliable, less attractive and less efficient. This results in lower ridership, lower revenues and higher operation costs.

2006

The majority of funds spent each year to operate statewide public transportation services are generated from local revenues. Additional funding is provided by Federal Transit Administration programs and human services programs. Funding for capital and equipment is provided through federal, state, and local funding. Colorado's commitment to public transportation has grown through funding from Senate Bill 97-1 which, for the first time, designates a portion of state general fund revenues to pay for strategic transit capital or planning projects.

# **Transit Gaps**

Gaps in transit service have been identified along with strategies to improve the gaps in services. Gaps include geographic areas without service, insufficient frequency or type of service, or lack of connections between communities. While intercity bus service is provided in the I-70 corridor, the timing of the service is not adequate for employees commuting to work between mountain communities. Transit service is not currently provided between Summit and Eagle Counties and a significant number of workers make the trip in private vehicles. In some rural areas, local providers may be unable to transport individuals with medical needs from outlying areas to medical facilities due to high costs.

These service gaps may be filled through intercity bus service, passenger rail service, or improved local transit services. Recognizing the growing demand in several high volume transportation corridors, Colorado is taking steps to evaluate the feasibility of additional transportation options. Studies are being conducted by CDOT and other agencies to examine transit options:

- State Significant Rail Corridors The state identified a statewide system of state significant rail corridors for both freight and passenger service.
- High Speed Rail Feasibility Study The Rocky Mountain Rail Authority (RMRA), an organization formed by intergovernmental agreements among various local governments, will evaluate the feasibility of high speed passenger rail service in the I-25 corridor from New Mexico to Wyoming and in the I-70 corridor from Denver International Airport to the Utah border. The study is funded with Senate Bill 97-1.
- Land Use and Zoning Study The Northwest Colorado Council of Governments and the I-70
  Coalition are identifying land use planning and zoning issues that are essential for incorporating a
  potential fixed-guideway transit system from DIA westward along the I-70 corridor.
- CDOT Rail Governance Study CDOT is analyzing governance structure options that could be
  used to implement future statewide, regional transit or passenger rail services that would span
  multiple jurisdictions.
- Colorado Statewide Regional and Intercity Bus Network Study A 2007 CDOT study looked
  at the potential of statewide, regional, and interregional bus service needs and the connectivity
  potential of those services. The study identified a preferred network of regional and intercity bus
  routes and the associated costs of implementing service.



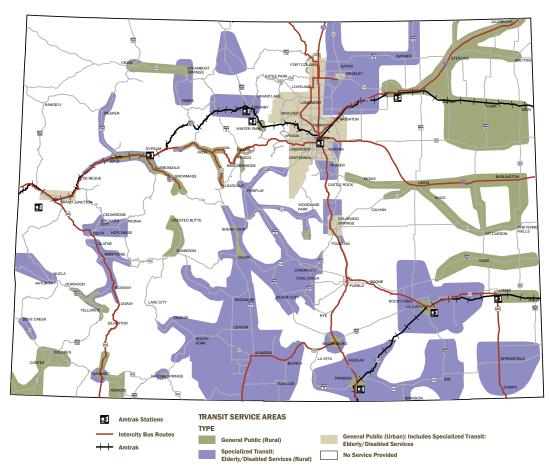
# **Major Transit Planning**

Additional planning efforts in the state looking at transit service include:

- Denver Metro Area approved funding of the FasTracks program which includes construction of six light rail and commuter rail corridors. Additionally, the entire build-out program will add 122 miles of new light rail and commuter rail, 18 miles of Bus Rapid Transit (BRT) service, and 57 new transit stations to the system.
- **City of Colorado Springs** is currently planning four BRT corridors (two running east-west, two running north-south) in addition to a downtown streetcar circulator.
- Roaring Fork Transportation Authority (RFTA) has completed a BRT feasibility study and is now refining cost estimates to implement a high frequency, high capacity BRT service in the SH 82 corridor.

Collectively, Colorado's urbanized areas are planning for a future that includes increased levels of transit services, expansion of light rail and commuter rail lines, development of intermodal facilities, increased regional and intercity bus services, and Front Range passenger service. Resort communities are focusing on maintaining and providing visitors with enhanced transit services and transportation options for employees who often commute long distances. Both rural and urbanized transit systems are planning for increased demand in services for the elderly and disabled.

# **Transit Service Areas**



# **Air Travel**

Colorado is served by 76 airports including general aviation facilities and commercial service airports. Colorado's 14 commercial-service airports form the backbone of the state's aviation system with passenger boardings estimated at 23 million in 2005 and projected to double by 2035. In 2006, the Denver International Airport was ranked fifth in passenger boardings and 19th in freight cargo by weight for airports in the nation. Air cargo shipments are also projected to double in the coming decades.



The statewide aviation system plays a key role in the transportation network, generating billions of dollars in economic benefits, including thousands of jobs. Colorado's public-use airports generate \$23.5 billion in annual economic activity and are responsible for more than 280,000 jobs and nearly \$10 billion in yearly wages including \$1.5 billion in economic activity, along with 19,000 jobs and \$645 million in salaries from general aviation airports. To meet future aviation demands and ensure a healthy and diverse economy in the years to come, continued investment in Colorado's airport system on the local, state and federal levels will be necessary. Federal and state funds are available for use at commercial and publicly owned general aviation airports. A listing of airport public and private ownership is included in the Aviation Technical Report on the CD-ROM in the back of this Plan.

### **Colorado Airports**



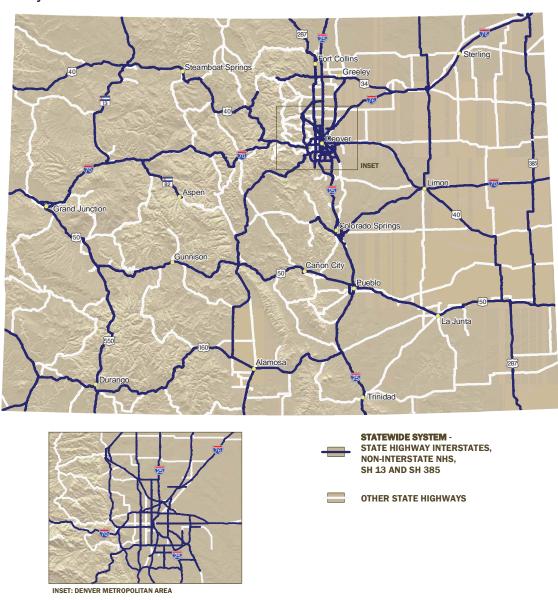


# STATEWIDE SYSTEM OF CORRIDOR VISIONS

Corridor visions comprise an integrated transportation network reflecting long range local, regional and statewide travel needs in response to community values, economic development and environmental considerations. By projecting population, employment and growth a quarter-century into the future, corridor visions offer recommendations about what the future could and should look like.

The Transportation Commission provides policy guidance to ensure the integrity of the Statewide System. For Interstate and Inter-regional travel routes designed in blue on the Statewide System map below, the Commission places a high priority on: maintaining the original federal Interstate purpose as part of the National Defense System, achieving performance measure objectives, optimizing the transportation system before expansion, recognizing a variety of funding mechanisms and coordinating comprehensive land use and transportation planning to limit growth in vehicle miles traveled.

# **Statewide System**



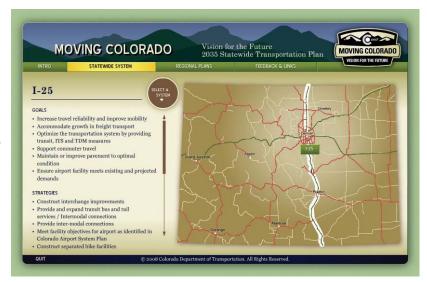


# **Corridor Visions**

Colorado's extensive system of transportation corridors serve Colorado residents, visitors and commerce in accessing jobs, health services, recreation and moving products through the state. The corridor vision concept introduced in the 2030 Transportation Plan was further refined in the 2035 Statewide Plan. Approximately 350 corridor visions have been updated by the Transportation Planning Regions to identify current trends and conditions. Environmental resources and mitigation strategies were included in response to SAFETEA-LU. Together the individual corridor visions present a statewide vision that links transportation goals and strategies to investment decisions. Corridor visions increase the efficiency and accountability of

the transportation system by aligning vision strategies and project priorities.

The corridor visions propose strategies aimed at meeting each corridor's unique transportation goals, such as: constructing passing lanes and improving shoulders; expanding transit bus and rail services; improving *Poor* pavement conditions; providing bike and pedestrian pathways; adding general-purpose lanes to improve congestion and safety; supporting linkages to other transportation facilities; and promoting Transportation Demand Management strategies such



as carpool and vanpool services. Taken together, the corridor visions establish an integrated, system-wide vision that balances local and statewide transportation goals and strategies.

The corridor visions further CDOT's environmental stewardship role by incorporating environmental resources present in the corridor and linking to statewide activities that could be used to mitigate project impacts to protected environmental resources.

All the corridor visions can be accessed on the web or CD-ROM; see the last page of this document for instructions. A graphical display describing each corridor vision, such as the one shown above for I-25, is available on the accompanying CD-ROM and on the web:





# RECENT ACCOMPLISHMENTS

The state continues to invest in key improvements throughout Colorado. Many planning partners have been involved in these accomplishments, helping improve mobility, safety and system quality options. A few of the recent accomplishments are highlighted below.

# Strategic Project Program

This program advances improvements to 28 transportation corridors of state and regional significance that were initiated by the Transportation Commission in 1996 and accelerated through a voter supported bond issuance in 1999. The Legislature has continued to fund this program with a transfer of General Funds through Senate Bill 97-1. Over 60 percent of the strategic projects are complete. Recent progress on the Strategic Projects Program includes:

**COSMIX Project** - Short for the Colorado Springs Metro Interstate Expansion, the project is widening I-25 to three lanes in each direction along 12 miles through the city core. It will also improve the configuration of several key interchanges and bridges.

COSMIX 1.25 in Colorado Springs

**T-REX** - Metro Denver's Transportation Expansion Project, a \$1.67 billion combined freeway reconstruction and light-rail extension, along 17 miles of Denver's I-25 and I-225 freeway system.

**Strategic Transit Program** - A legislative mandate calls for a minimum of ten percent of Senate Bill 97-1 (General Funds) to be used for strategic transit-related capital improvements. The Transportation Commission has approved \$65 million in funding for 19 transit projects from 2006 to 2010 and if additional SB-1 funding becomes available, more transit projects will be funded. A few project examples include:

- Front Range Express (FREX) service in Colorado Springs running between Colorado Springs, Monument, Castle Rock and Denver. The \$6 million project purchased 19 coaches and began daily weekday service in 2007.
- Transit Center located in downtown Durango will support the city's bus fleet and other
  regional and local bus services by housing eight bus bays with room to expand to 14 bays
  for public and private operations. The \$5 million project is scheduled to be operational
  in 2009.

**US 287 Ports to Plains Corridor** – Recently completed segments of the Ports to Plains Corridor, an important truck route from Texas to Denver, carries up to 70 percent large trucks. Improvements include concrete paving, wider lanes and shoulders, and intersection and safety upgrades. Approximately 80 percent of the anticipated \$150 million project is now complete.



**US 40 Berthoud Pass Corridor** - Reconstruction of this previously narrow, high altitude highway provided a safer, modern mountain corridor and also improved water quality, reduced erosion, and took steps to protect local wildlife. The project received five national and international awards.

# Strategic Projects - continued:

**US 160 Wolf Creek Pass** - The project included a one-half mile stretch of US 160 east of the new tunnel. Crews blasted and removed rock, widening the lanes and shoulders and upgraded guardrails to meet current federal safety standards.

**I-25/US 50/SH 47 Interchange** - The I-25 and Eagleridge Interchange located on the north end of the City of Pueblo improved safety and mobility in the rapidly growing area.

**I-25, SH 7 to SH 66** – Interstate 25 has been widened from two to three lanes in each direction from SH 7 to SH 52 and construction is underway extending the I-25 widening to SH 66.

# **Other Projects:**

**FasTracks -** Planning and design has begun for the Denver area Regional Transportation District's 12-year comprehensive plan to build and operate rail lines and expand and improve bus service and park-n-Rides throughout the region.



Photo courtesy of RTD

Safe Routes to School - With the passage of SAFETEA-LU, Colorado implemented its Safe Routes to School program to encourage children K-8 to bike and walk to school. Colorado leads the nation by being the first state to put this federally-funded program in place. It continues to lead by helping local jurisdictions develop both infrastructure and non-infrastructure projects across the state such as the Walking and Wheeling Wednesday program in Boulder that now has almost 50 percent of the students walking or biking to school every day.



**I-25 Express Lanes** – New High Occupancy Toll lanes allow single-occupant vehicles to use the new express lanes for a toll automatically billed through transponder technology. Actual usage far exceeds forecasts.

**US 50 near Cimarron** – Recent widening near Cimarron on Black Mesa straightened curves, widened shoulders, and added guardrails and other safety improvements on this critical east-west link in western Colorado.





State Highway 9 Frisco to Breckenridge – This ongoing project includes widening SH 9 to four lanes. Design elements include intersection reconstruction, divided medians, recreational path relocations, water quality ponds and wetland mitigation, a bridge over the Blue River, curb and gutter in some areas, right-of-way acquisitions, the Park Avenue Roundabout at the entrance to Breckenridge, and traffic signal upgrades.



**US 50 in Cañon City** – Construction is under way of a new roundabout on US 50 in Cañon City to provide vehicle and pedestrian safety improvements as a key component to a more accessible downtown and Main Street.

**Maroon Creek Bridge** - Originally constructed as a railroad trestle bridge in 1888, the Maroon Creek Bridge on SH 82 was converted for highway use in 1929. The nearly completed new bridge will be a safe, cost-effective, environmentally-friendly and aesthetically-pleasing structure.



**I-25 Reconstruction in Trinidad** – CDOT has begun replacement of the aging viaduct through Trinidad to provide safe, acceptable access to and from the city and the Colorado state border. Along with the new infrastructure being designed and constructed to the latest geometric and safety standards, the new facility incorporates aesthetic features that tie into the city's historical architecture and natural surroundings.



**Scenic Byways** - The Secretary of Transportation designated two of Colorado's 25 Scenic & Historic Byways as National Scenic Byways: Trails of the Ancients and Colorado River Headwaters. Colorado is now tied with Oregon with 10 national designations, the most in the country.

**US 287 North of Longmont** – With the completion of the Berthoud Bypass, this 20 year vision to widen US 287 to four lanes from Broomfield to Ft. Collins was finally realized.

**Riverside Parkway** – The Riverside Parkway in Grand Junction is a 100 percent locally funded project with a shared community vision to improve pedestrian and bicycle access and provide an attractive entryway into the City, eliminate dangerous railroad crossings, and provide future flood protection to the Riverside neighborhood.



# SH 131 – Yampa River South Corridor Reconstruction

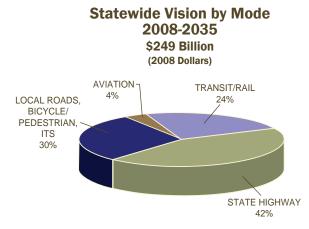
Roadway construction, shoulders and drainage improvements have been completed on the Catamount South project near Steamboat Springs. Additional roadway reconstruction and shoulder widening is scheduled for the SH 131/Choke Cherry Lane project beginning summer 2008.

# FINANCIAL OUTLOOK

The greatest hurdle to meeting transportation demand in Colorado will be finding the resources to pay for it. Revenues simply are not keeping pace with the growth in demand throughout the state or with the dramatic increases in maintenance and construction costs.

# **Vision Plan Costs**

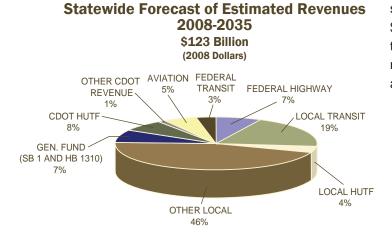
Achieving the vision set forth in this plan will come with a challenging price tag. The total cost to provide the 2035 statewide vision expressed by Coloradans for all modes and corridors at the state and local level is estimated to be \$249 billion in 2008 dollars. About 42 percent of these funds will be needed for state highways, 24 percent will be required for transit and rail enhancements, 30 percent will be needed for local roads, bicycle/pedestrian and Intelligent Transportation Systems (ITS) improvements, and four percent will be directed to aviation. Funding this level of commitment will be quite a challenge in the years ahead.



From a grass roots effort, each of the 15 Transportation Planning Regions updated the corridor visions to integrate community values, land use decisions, and environmental concerns with transportation needs. Regional corridor visions were combined into the statewide vision. If funds become available to implement the vision strategies, roadway improvements and modal choices will enhance transportation mobility and reliability for Coloradans.

# **Estimated Revenue**

Total revenues of \$123 billion are forecast to fund Colorado's transportation program from 2008 to 2035 which is about half of the funding needed to build the vision. The revenue estimate includes about \$28 billion projected for the state highway system. Dedicated transportation revenues are generated from federal and state fuel taxes, state vehicle registration fees and regional sales taxes. Discretionary transportation funds



come from local taxes and portions of the state sales and income tax. The remaining \$95 billion will come from sources directed toward investment in the local roadway network, public transportation systems, and the aviation system.

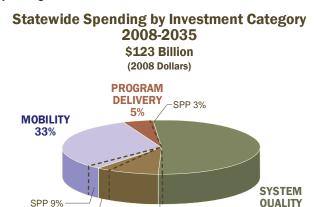


# **Investment Categories**

Given the expanding gap between needs and resources, investments in the transportation system must be both efficient and effective. The Colorado Department of Transportation, as the steward of the state highway system funds, has developed a funding decision-making process based on investment categories and goals and objectives for each investment category, using a set of performance measures and standards. This process allows CDOT to establish funding priorities and to track progress toward meeting its goals and objectives.

CDOT funding decisions are based on four primary investment categories. A fifth category, Strategic Projects, has been incorporated into these four primary categories:

- 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





SPP 1%

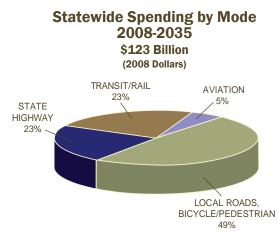
52%

**SAFETY** 

**10**%

SPP 5%

These investment categories, objectives and performance measures are used by the Transportation Commission to make informed trade-offs about how best to allocate limited state and federal financial resources to meet growing transportation needs. CDOT always identifies safety as the highest priority to assure the safety of the traveling public. The common link between safety, system quality and mobility investment categories often includes multiple investment categories. For instance, widening roadway shoulders provides safety benefits to cyclists and pull-off areas for vehicles while improving mobility and system quality. Current spending allocations on a statewide basis reflect the priority of system quality and mobility investment categories that include the inherent safety component.



In order to ensure that the residents of Colorado are afforded choices in meeting their transportation needs, decision-makers must also consider how funds should be allocated across all modes of travel. While Transportation Commission policy prioritizes the spending of most state and federal highway funds, local governments determine how to allocate local funds for local roads, transit and other modes. This chart illustrates current expectations for allocations among the modes.

# **System Performance Related to Investment**

# **Forecast Revenue Scenario**



The base scenario, Forecast Revenue, represents the level of funding currently estimated to be available by CDOT's resource allocation program plus local and modal revenue projections through 2035. It is estimated that \$28 billion will be available for state highway programs, and an additional \$95 billion will be available for transit, other modes and local roads, totaling \$123 billion from all sources by 2035.

With this scenario, conditions on the state transportation system will deteriorate. The average driver on the state's congested routes will experience an increase in daily delay from 22 minutes today to nearly 70 minutes in 2035. Today's approximately 60 percent *Good/Fair* rating for roadway surfaces on the state highway system will fall to 25 percent; local roads will also deteriorate. It is also estimated many major bridges statewide will require load restrictions, increased maintenance or other special management measures to ensure safe conditions. Efforts to reduce traffic fatalities and crashes will be diminished, and less than two-thirds of the estimated demand for public transit in the state will be met. These results will have a negative effect on our quality of life.

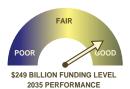
# **Sustain Current Performance Scenario**



The Sustain Current Performance Scenario represents the funding needed to sustain the transportation system at current performance levels. The level of investment necessary to achieve today's level of performance is estimated at \$176 billion, or \$53 billion beyond currently forecast revenues through 2035. It will cost \$64 billion - \$36 billion beyond forecast revenues - to sustain the state highway

system, including maintenance and operation costs beyond improvements to widen the state highway system. If the funding becomes available to sustain the system at current performance levels, the system would not reflect any improvement over today's conditions. Instead, with an additional \$53 billion beyond the current revenue forecast through 2035, the maintenance level of service would be sustained at a "B" grade, congestion delay sustained at 22 minutes, pavement and bridge condition sustained at today's levels, fatality rates reduced, as well as sustaining service levels for aviation, transit and local roads.

# **Accomplish Vision Scenario**



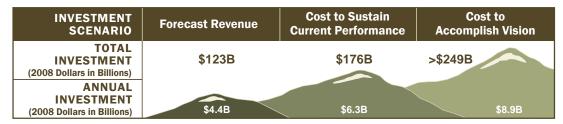
The Accomplish Vision Scenario reflects the additional investment level necessary to achieve the transportation vision strategies developed through the corridor visioning public process. To accomplish the vision would require a total of more than \$249 billion, more than double the currently forecast revenues through 2035.

If additional funds were available to accomplish the vision, the investment would result in significantly better performance on the network than is experienced today, even with the growth anticipated in the state. The vision would provide Colorado with significant mobility and safety benefits such as a 21st Century inter-regional public transportation, state-of-the-art traveler information systems, seamless point-to-point travel over a multimodal system, and inter-modal freight transportation.

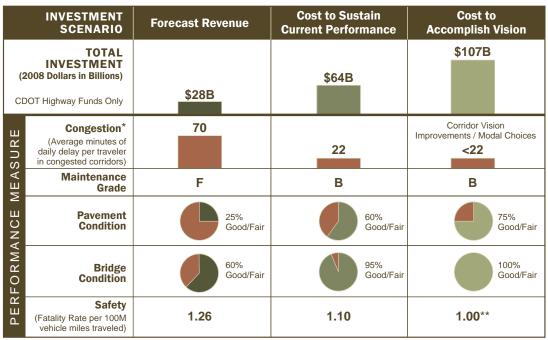
Vision improvements and modal choices would enhance transportation activities defined by CDOT's management systems. Regional priorities in vision plans include activities such as adding shoulders and passing lanes, making interchange and intersection improvements, widening highways, implementing intercity public transportation and high speed rail. In addition to these quantifiable results, the additional vision investment would make great strides in other benefits such as economic development and improved quality of life.



# Total Plan Costs 2008-2035



# **Estimated 2035 State Highway System Performance Outcomes**



# Estimated 2035 Local Roadway, Transit / Rail and **Aviation System Performance Outcomes**



<sup>\*</sup>Dollar amounts may not add due to rounding.

<sup>\*</sup>Congestion is one component of the mobility investment category
\*\*Fatality Rate may decrease with the passage of a primary seat belt law

# The Funding Gap

With the extensive statewide effort that helped create this 2035 Plan, the strategies necessary to maintain and improve Colorado's transportation system in order to support the state's economic growth and to enhance our quality of life are clear. But under existing revenue and financing conditions, funding allocations will fall far short of being able to implement those strategies. It is estimated that between now and 2035 an additional \$53 billion will be necessary just to sustain existing transportation service levels in Colorado. If we wish to fulfill the vision of the citizens of Colorado and to meet community values throughout the state, we will need to raise \$126 billion more than forecast through traditional sources.

The funding gap grows due to increasing demands on the aging infrastructure, deteriorating performance of the transportation system, climbing costs and stagnant revenue. An increasing population with more travel needs is increasing traffic on already congested roadways and putting extra wear and tear on aging roads and bridges. Deteriorating roadway surface conditions will result in an increase in driving time on rough pavement from 20 minutes today to 40 minutes in ten years when driving an hour on an average stretch of highway. Bridges in disrepair will be weight-posted requiring heavy trucks to take longer, most costly routes to deliver consumer goods. About 50 percent of transit vehicles in rural areas need to be replaced. Since the last gas increase in the early 1990s, construction costs have increased so that federal and state gas tax dollars have lost about one-third of their buying power. Regardless of the increasing price of gasoline, the gas tax that supports the transportation system remains at a flat rate.

This is where tough choices must be made. We know that transportation investments create economic benefits to citizens and businesses in the state, and most importantly, transportation investments will enhance the quality of life for the state's residents and will improve the state's economic competitiveness. Without additional resources and implementation of leadership programs that manage demand placed on the transportation system, only the most critical transportation needs can be met.

**Estimated 2035 Funding Gap By Investment Scenario** 



# Estimated 2035 Funding Gap By Mode (2008 Dollars in Billions)

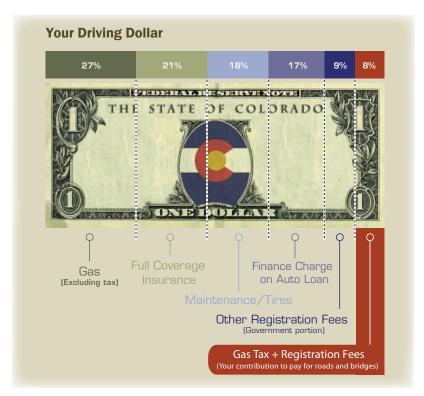
Mode	Forecast vs. Sustain		Gap	Forecast vs. Vision		Gap
State Highway	\$27.8	\$63.7	\$35.9	\$27.8	\$107	\$79.2
Transit/Rail	\$27.8	\$32.4	\$4.6	\$27.8	\$59	\$31.2
Local Roadway	\$60.7	\$73.4	\$12.7	\$60.7	>\$74*	>\$13.3
Aviation	\$6.5	\$6.5	NA	\$6.5	<\$9	<\$2.5
State Transportation System (Total)	\$122.8	\$176	\$53.2	\$122.8	>\$249	>\$126

<sup>\*</sup>Includes \$1B in DRCOG Bicycle/Pedestrian Vision Costs



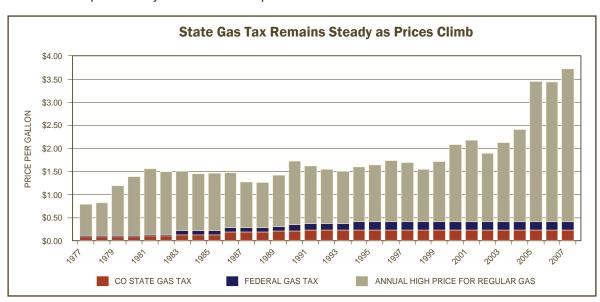
# What Are You Really Spending When You Hit The Road?

The per capita spending that supports roads and bridges is relatively small compared to the cost of operating a vehicle.



# **Gas Tax Remains Flat**

The eight percent of your driving dollar dedicated to tax support for transportation improvements has not kept pace with other driving costs, particularly the cost of fuel, over time. Even though the price of gas goes up at the pump, the gas tax remains flat. Since the gas tax supports the transportation system, increasing gas costs do not provide any increase in transportation revenues.





# TRANSPORTATION CONNECTION TO THE STATE'S ECONOMY

Most people choose to live in Colorado because of the unparalleled quality of life offered by our state. Great scenery, blue skies, a reasonable cost of living, and a vibrant economy providing job opportunities – these are the elements that make Colorado so attractive. This quality of life and the economic successes that Colorado residents and businesses enjoy are made possible by a safe and efficient transportation system. Our economic health and our ability to remain competitive with other states clearly depend on the efficient transport of people and goods.

A recent CDOT study found that economic benefits exceed transportation investments when considering travel cost savings and additional income for Colorado residents. Based on 2030 projections, an additional \$48 billion in future transportation investments would amount to \$60 billion in quantifiable economic benefits. The additional investment would reduce congestion-related delays by 72 percent compared to 2030 revenue projections. Better pavement quality would lower annual per vehicle operating costs by six percent and safety improvements would reduce the number of fatalities on public roadways by 14 percent. In addition, other more intangible economic benefits from transportation investments are realized such as economic competitiveness, new jobs benefits to the tourism industry, quality of life, as well as short-term construction benefits such as construction services and raw materials.

By investing at a level to attain the transportation vision, even greater economic benefits may be realized. In addition to further enhanced safety, greater travel cost savings and greater productivity, significant benefits to economic development, meeting public transportation demand and access to recreation would further enhance our quality of life, benefiting Coloradans individually and collectively.



In order to sustain Colorado's transportation system current levels of service, it will cost much more than forecast revenues will allow. Right now, the average vehicle owner pays \$177 per year to support the State Highway system. To maintain existing roads, bridges and transit services, the average owner would need to pay \$405 per year. That's an increase of less than \$19 per month or 63¢ per day, about the same as upgrading a morning coffee from a small to a large cup.



# Implementing the 2030 Plan Positive Return On Investment

# \$48 BILLION Spent on Infrastructure **Improvements** TOTAL **BENEFIT** THROUGH **EXAMPLES OF ANNUAL BENEFITS INCLUDE:** 2030 • 26 hours of time saved (per resident) \$23 • \$240 in travel time savings (per resident) **IMPROVED TRAVEL TIME SAVINGS BILLION** • \$600 million in savings for Colorado • 30 Gallons of fuel saved per resident \$12 • \$205 vehicle maintenance savings **REDUCED VEHICLE OPERATING COSTS BILLION** per vehicle · 12,100 fewer total accidents \$6 **IMPROVED SAFETY CONDITIONS** · 4,300 fewer accidents with injuries **BILLION** • 140 lives saved · Increased economic competitiveness including 10,900 new long-term jobs \$19 **BUSINESS EXPANSION AND ATTRACTION** · Improved access to health and human **BILLION** services Increased visitation to tourist destinations · Quality of life • Economic Competitiveness OTHER BENEFITS • Tourism



Source: Statewide Economic Benefits of Transportation Investment, BBC Research & Consulting and Felsburg Holt & Ullevig, April, 2007; http://www.dot.state.co.us/StateWidePlanning/PlansStudies/Docs/Statewide\_econ\_benefit\_study\_2007.pdf

Study based on 2005 dollars as projected in Colorado's 2030 Statewide Transportation Plan.

# **MOVING COLORADO**

The 2035 Statewide Transportation Plan represents the vision the people of Colorado would like to see for their transportation system. The corridor visions identified in this Plan integrate local land use decisions, community values, and environmental considerations with local and statewide transportation needs. Within each corridor vision, specific improvement strategies are identified that will help achieve that vision. These visions represent an ultimate goal to work toward and are not time-specific.

The corridor visions and strategies developed by the public and identified in the plan provide a context within which to include and prioritize projects. The rate of population and employment growth, travel patterns and local land-use decisions all influence priorities and timing of transportation improvements. These corridor visions help CDOT coordinate with local governments to prioritize the investment of available dollars into projects that best meet the visions expressed by the public.

**Moving Colorado: Vision for the Future** provides the foundation for a discussion between policy makers and the public on what part of the visions the state can afford to accomplish, including potential compromises in service levels to stay within available dollars.

The Midterm Implementation Strategy concept will help guide investments over the next few years. Funding may only be focused on corridors and improvements that are considered critical to maintain and operate the system as safely as possible for travelers, visitors, residents and businesses. Over the past 10 years, CDOT has been stretching dollars to maintain all of the transportation system. Due to stagnant revenue streams lagging behind rising construction costs,



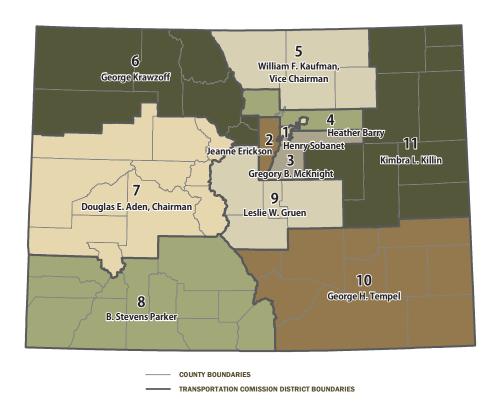
CDOT must now only invest in the most critical programs, corridors and/or lower performance standards. It is no longer possible to maintain the entire system at current performance levels with reduced funding levels. Specific strategies are being developed to set the stage for tough decisions that must be made to focus investments if revenues do not increase.

Difficult challenges continue to threaten the state's transportation system. Declining resources compared to escalating costs, rapid population growth, increasing traffic congestion, and an aging infrastructure all pose obstacles to a seamless, efficient and rapid movement of people, goods and information. It is now time to make the tough decisions to invest only in the most critical needs. At the same time, revenue options to increase transportation revenues identified by the Governor's Blue Ribbon Panel need momentum by community and business leaders and CDOT's planning partners to prevent the system from falling short of the public's expectation.

The public has a tough decision, also. Are you willing to live with reduced transit services, increased congestion, *Poor* road surfaces, load-posted bridges, and roads closed due to snow or is transportation a priority that you are willing to support through additional funding to maintain the existing transportation system and quality of life in Colorado?



# TRANSPORTATION COMMISSION OF COLORADO



**The Colorado Department of Transportation**, under the direction of the Transportation Commission, manages the State Highway system and in cooperation with its planning partners, provides strategic multimodal planning for the state transportation system. The Commission is comprised of 11 commissioners who represent specific districts. Each commissioner is appointed by the Governor, confirmed by the Senate, and serves a four-year term. To provide continuity, the Commissioners' term expiration dates are staggered every two years.

# Under state law, the powers and duties of the Transportation Commission include:

- Formulating general policy with respect to the management, construction, and maintenance of public highways and other transportation systems in the state;
- Assuring preservation and enhancement of Colorado's environment, safety, mobility and economics be considered in planning, selection, construction and operation of transportation projects; and
- Adopting Transportation Department budgets and programs, including construction priorities on the state highway system.

# INSTRUCTIONS FOR THE STATEWIDE PLAN ON CD-ROM

The enclosed CD-ROM is a reference tool designed to help you review the various components of the 2035 Statewide Transportation Plan.

### Instructions:

- 1. Once inserted into your computer, the CD-ROM will automatically load the interactive program that will allow you to access and navigate through the statewide and regional versions of the 350 Corridor Visions.
- 2. To view the remaining components of the Plan, hit the Esc key on your keyboard.
- 3. Minimize the CD-ROM page.
- 4. Open Windows Explorer or My Documents on your computer.
- 5. In the address window, select the drive that contains the "The 2035 Plan."

El CD-ROM incluido es una herramienta de referencia diseñada para ayudarle a repasar los varios componentes Del Plan Estatal del Transporte 2035.

# Instrucciones:

- Insertado por primera vez en su computadora, el CD-ROM cargará automáticamente el programa interactivo que permitirá que usted tenga acceso y que navegue con las versiones estatales y regionales de las 350 visiones del pasillo.
- 2. Para ver los componentes restantes del plan, empuje la tecla de salida Esc en su teclado.
- 3. Reduzca al mínimo la página del CD-ROM.
- 4. Abra el explorador de Windows o My Documents (mis documentos) en su computadora.
- 5. En la ventana de la dirección, seleccione la impulsión que contiene "El Plan 2035."

This directory will allow you to access the following documents:

- 2035 Statewide Transportation Plan, Moving Colorado: Vision for the Future
- 2035 Regional Transportation Plans for the 15 Transportation Planning Regions
- Local Transit and Human Services Coordination Plans for each Transportation Planning Region (as Appendix)
- Additional appendices for Environmental and Public Involvement for each Transportation Planning Region
- Technical reports on the following content ares:
  - » Accomplishments
  - » Aviation
  - » Bicycles and Pedestrians
  - » Corridor Visions
  - » Economic Connection
  - » Environmental
  - » Socioeconomic
  - » Finance
  - » Freight
  - » Highway
  - » Midterm Implementation Strategies

- » Intelligent Transportation System
- » Investment Strategy
- » Local Needs
- » Passenger Rail
- » Public Participation
- » Transportation Safety
- » Security
- » Transit
- » Transportation Commission Policies
- » Transportation Demand Management

If you have questions about the 2035 Statewide Transportation Plan or are experiencing difficulties with the CD-ROM, please contact CDOT's Statewide Planning Unit at 303-512-4019.

Link to Statewide Plan Corridor Visions, Technical Reports and Regional Transportation Plans:

www.dot.state.co.us/StatewidePlanning/PlansStudies/2035Plan.asp

www.dot.state.co.us/StatewidePlanning/PlansStudies/2035Plan\_Spanish.asp

Para una copia en español del Plan 2035, llame al 303-512-4019

