



Colorado's Transportation System

Valuable
Vast
Challenged

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Division of Transportation Development
Colorado Department of Transportation

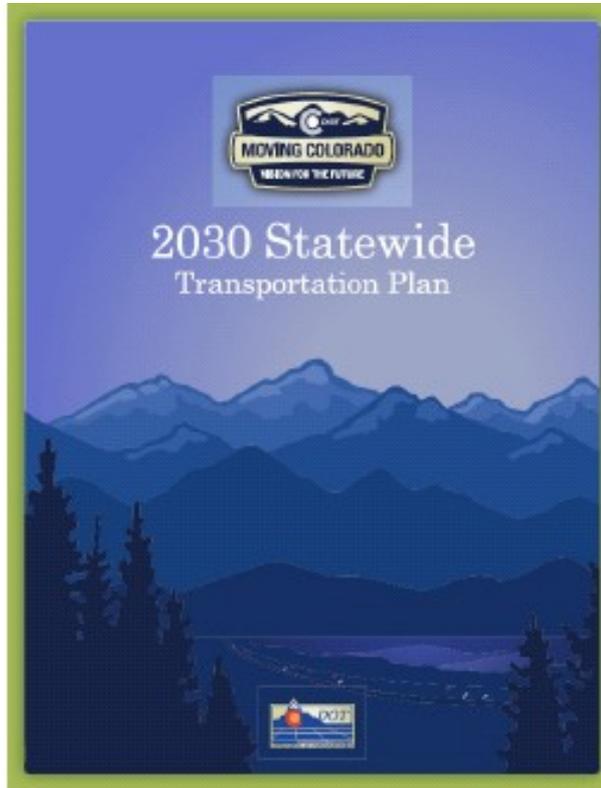
April 5, 2007

Statewide Transportation Summit



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Public Desires for the System



- Safe
- Efficient
- Cost-Effective
- Option Rich
- Access to Recreation
- Environmentally Sensitive
- Complement to Communities



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Transportation's Value



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Roads: Access and Commerce

Statewide Reliance

- 1.9+ million workers rely on an automobile
- *National Top 20* for value of originating freight

Local Economic Development

- Energy Development
- Retail
- Farm to Market
- Recreation



Source: Census (2005 and 2004)

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Transit's Value Proposition

Statewide

- 70,000+ Workers Depend on Transit
- 1.5+ million trips to human service trips in 2006

In 2003, Transit in the Denver Region

- Prevented 10.3M hours of road delays
- Saved \$171M
- Avoided 4.3M gal. of gasoline consumption



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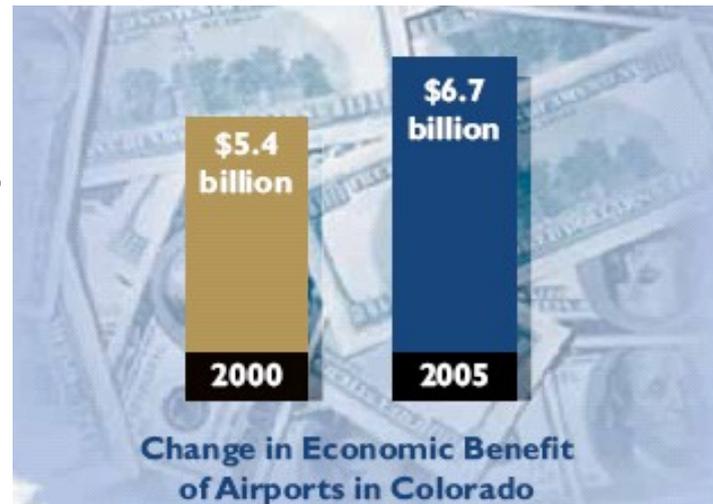
The Aviation Contribution

Denver International Airport

- America's 5th Busiest
- 40+ Million Passengers Annually
- 350K Tons of Cargo Annually

Beyond DIA, Colorado's Airports are

- Economic Lifelines
- Highway Alternatives
- Market Makers

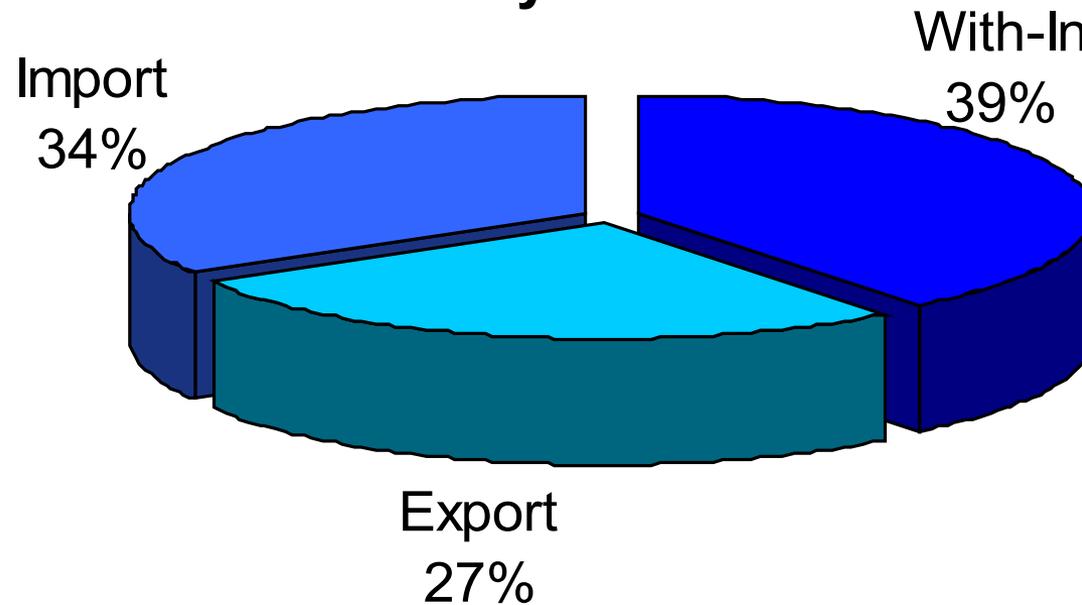


Source: DIA Partnership (2006) and CDOT (2006)

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\$230 Billion Worth of Freight Moved In, Out and With-In Colorado (2002)

2002 Colorado Freight Flows By Value



Source: U.S. DOT (Accessed 2007)

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Freight Rail: The Benefits

- In 2005, intermodal trains reduced the length of nearly 13 million truck trips
 - Reducing congestion
 - Increasing the usable life of the road
- Typical train moves 1 ton 404 miles on a single gallon diesel
 - Reduces emissions
 - Reduces the demand for diesel

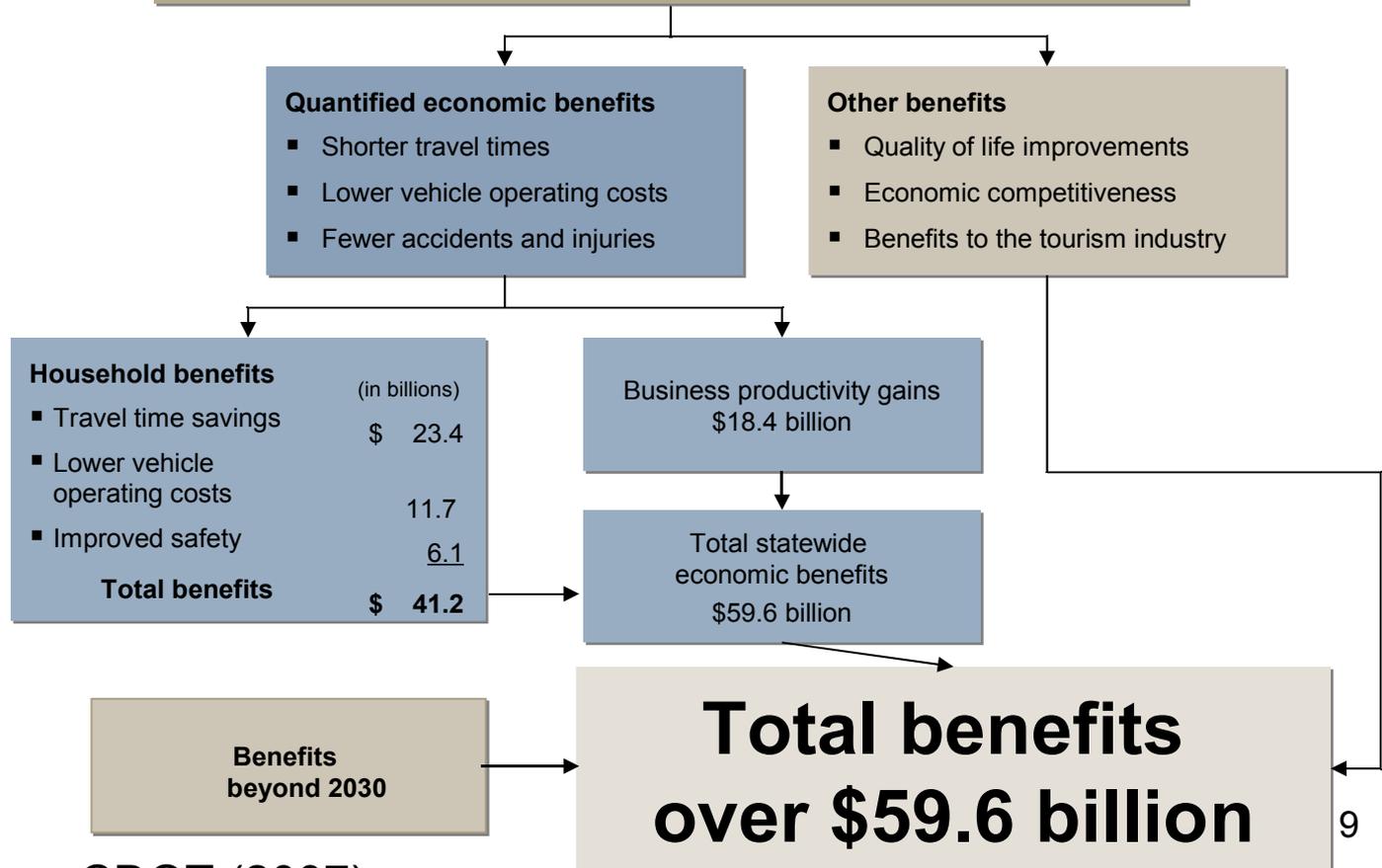


Source: Intermodal Association of North America (2006) FRA (2003)⁸

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Estimated Return on 2030 Planned Investment

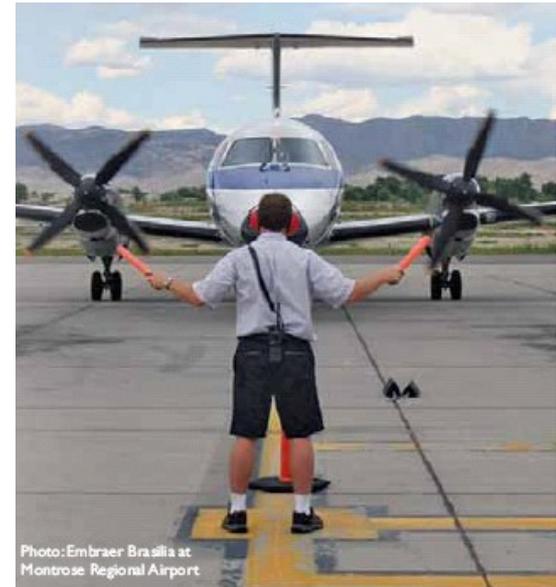
**\$48 billion additional
transportation investment**



Source: CDOT (2007)

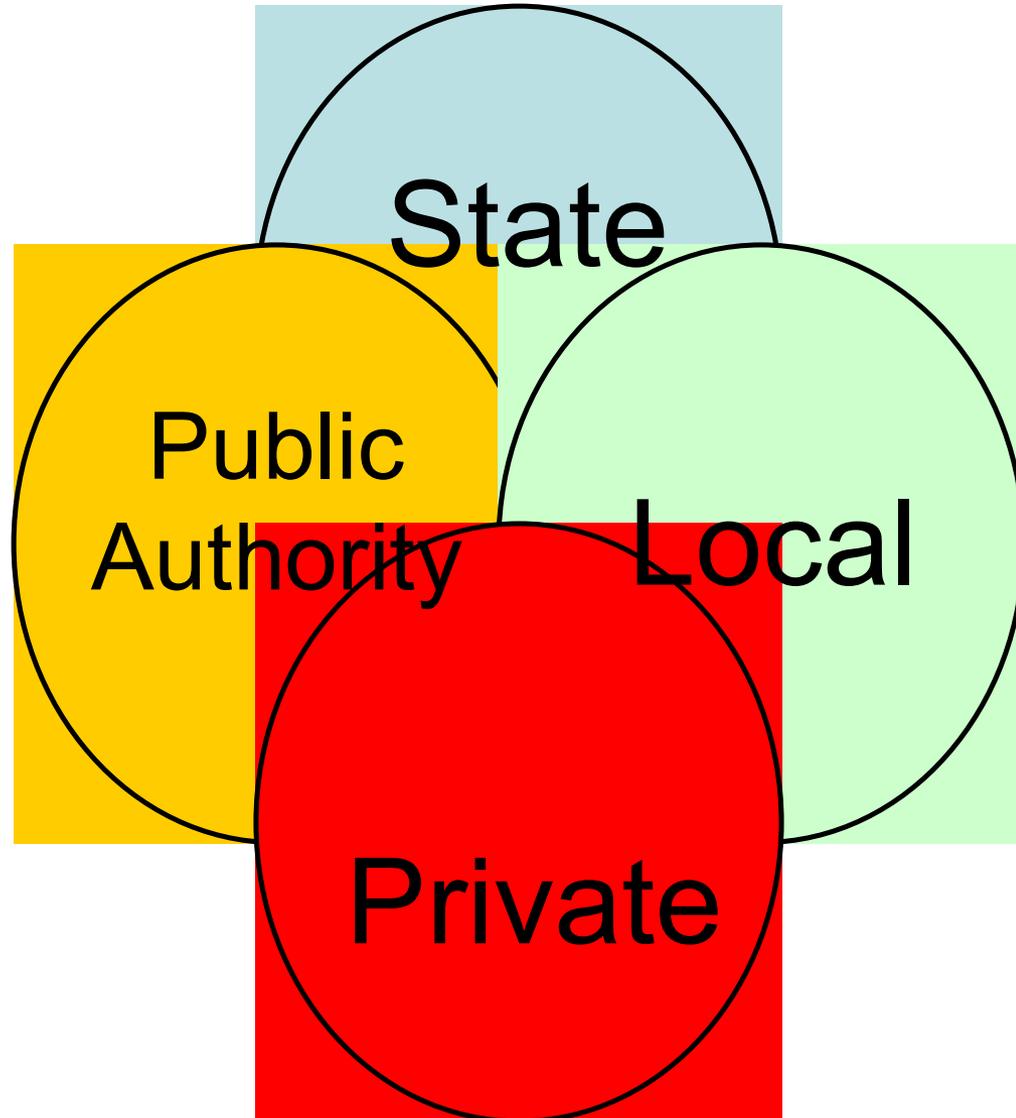
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Multi-Modal Assets



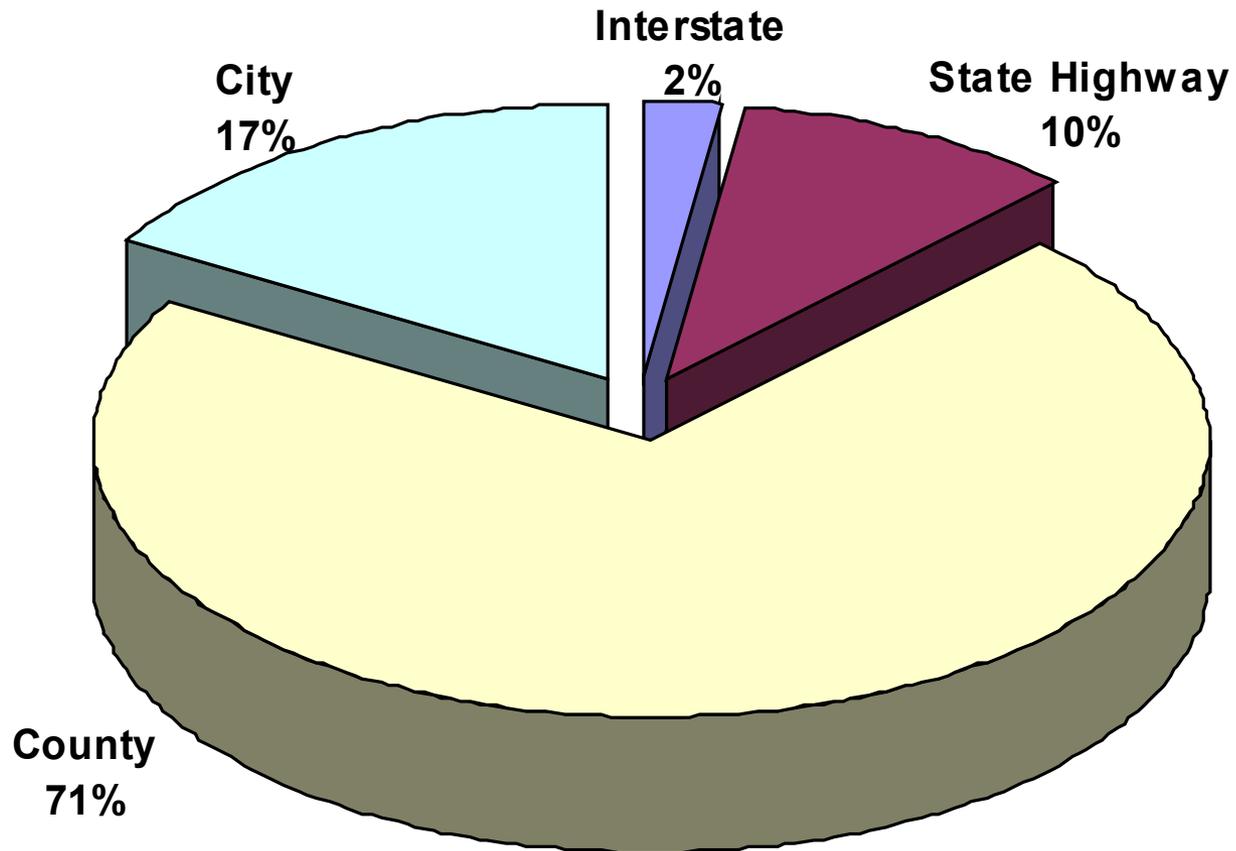
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Multi-Jurisdictional Scope



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190,000+ Lane Miles of Roads

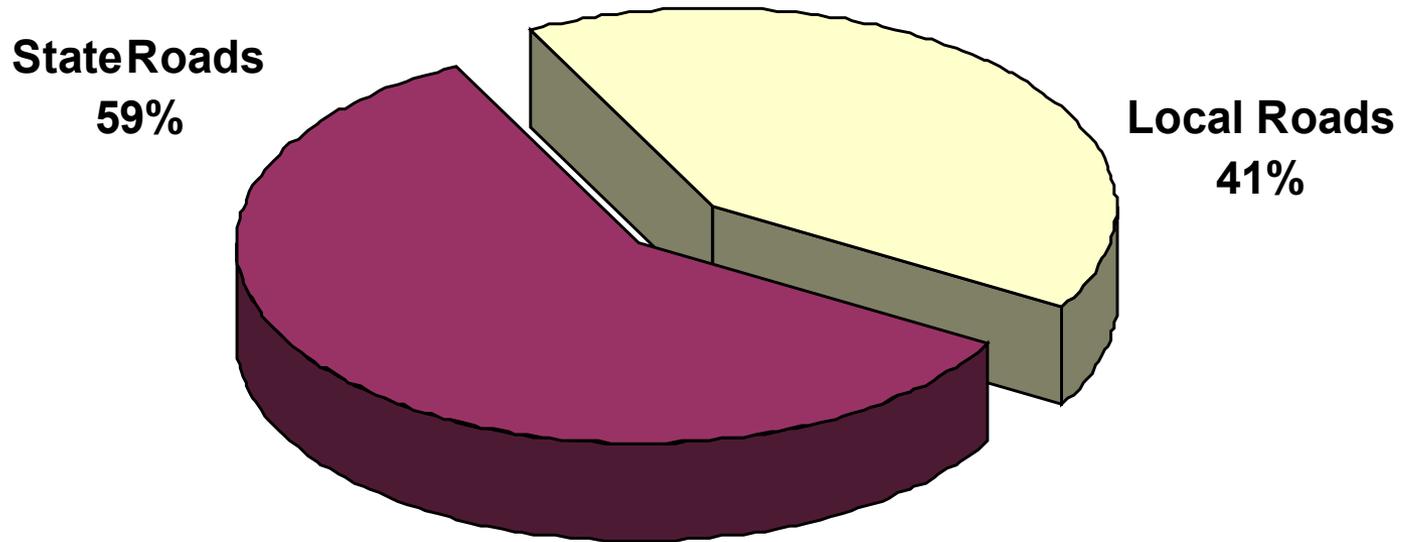


Source: CDOT 2005 Figures

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What Roads Coloradans Use

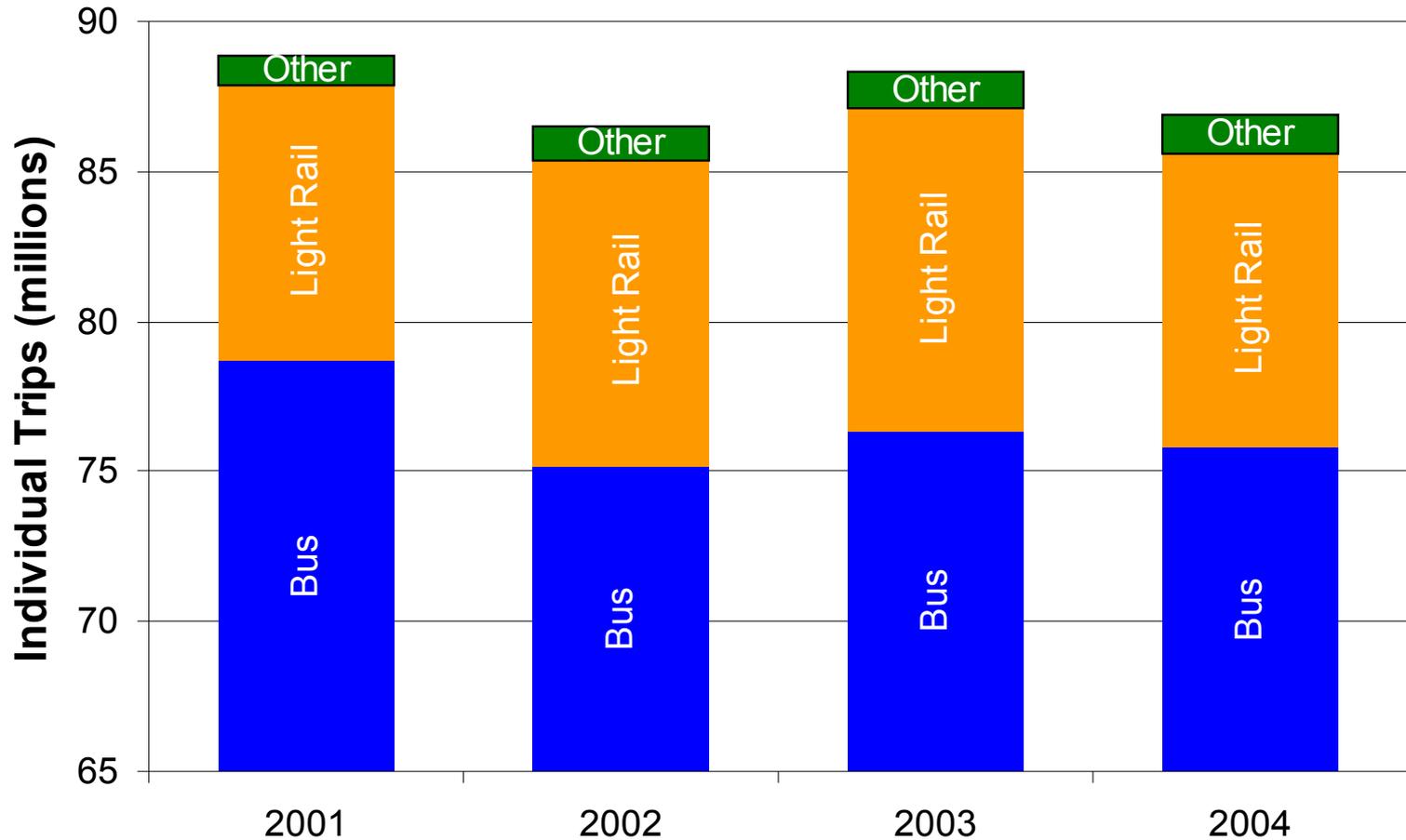
Vehicle Miles Traveled in 2005



Source: CDOT (2007)

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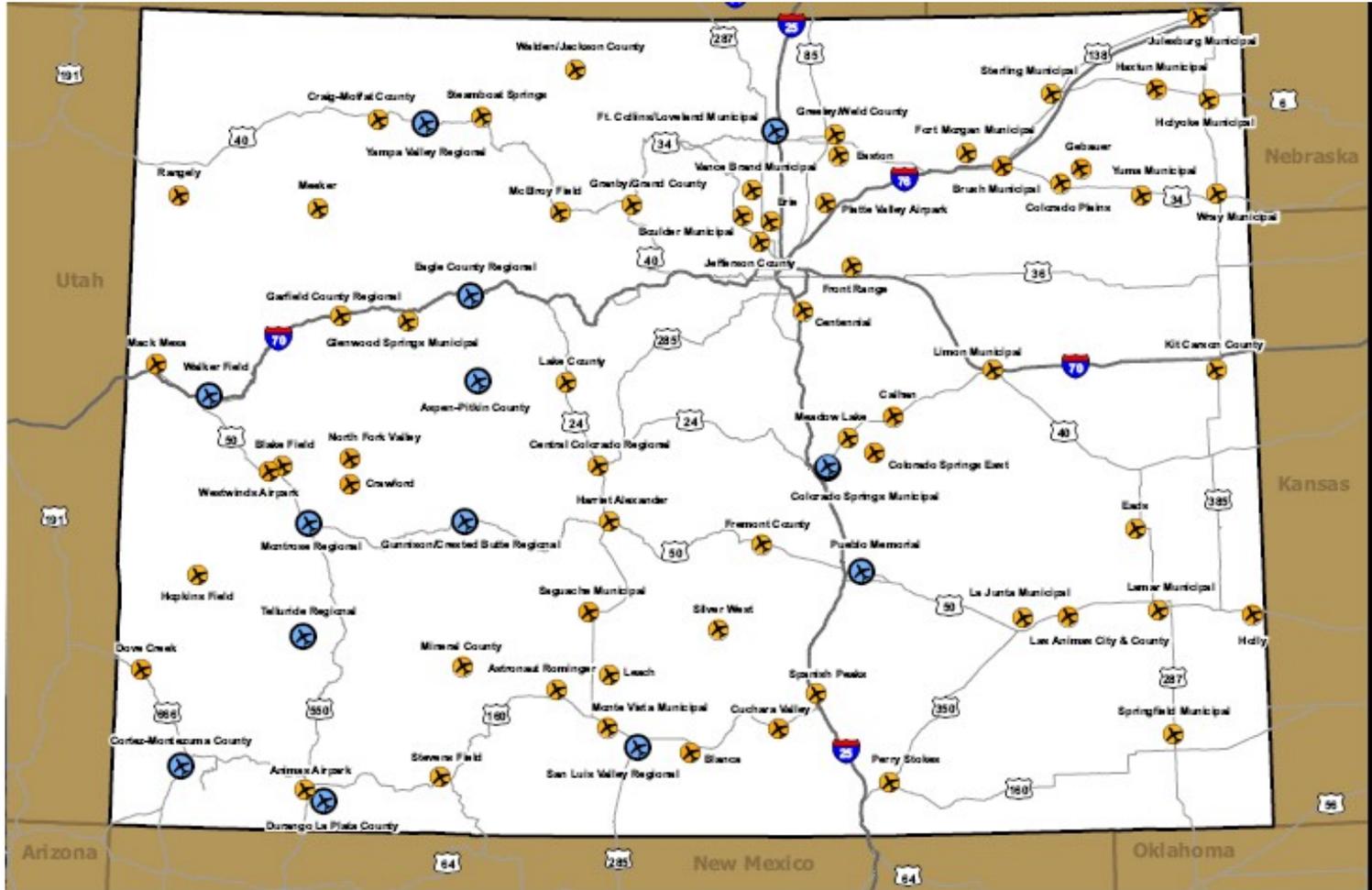
7 Largest Transit Agencies Carry Nearly 90 Million Trips Each Year



Source: BTS (2006)

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14 Commercial Service Airports 60+ General Aviation Airports



EXISTING COLORADO STATE AIRPORT SYSTEM

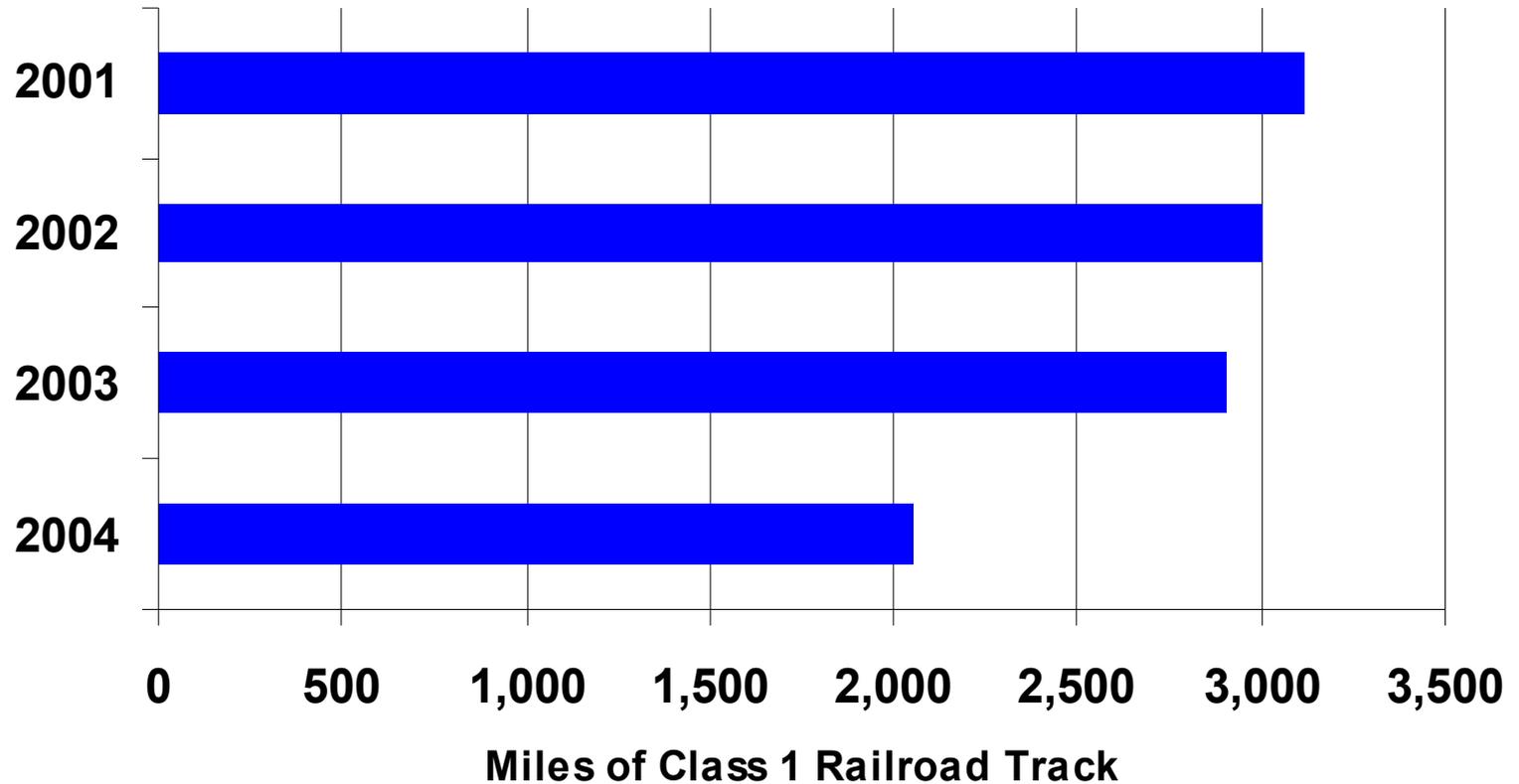


- Commercial Service
- General Aviation

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2,000+ Miles of Freight Rail Track

33% decline from 2001



Source: BTS (2006)

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The System is Challenged



Road and Bridge Condition



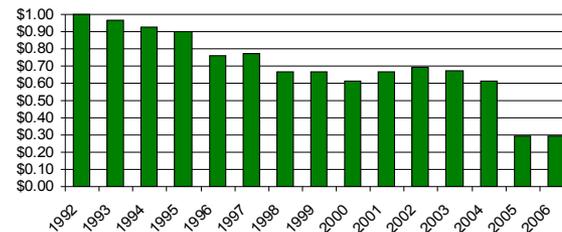
Maintenance



Congestion

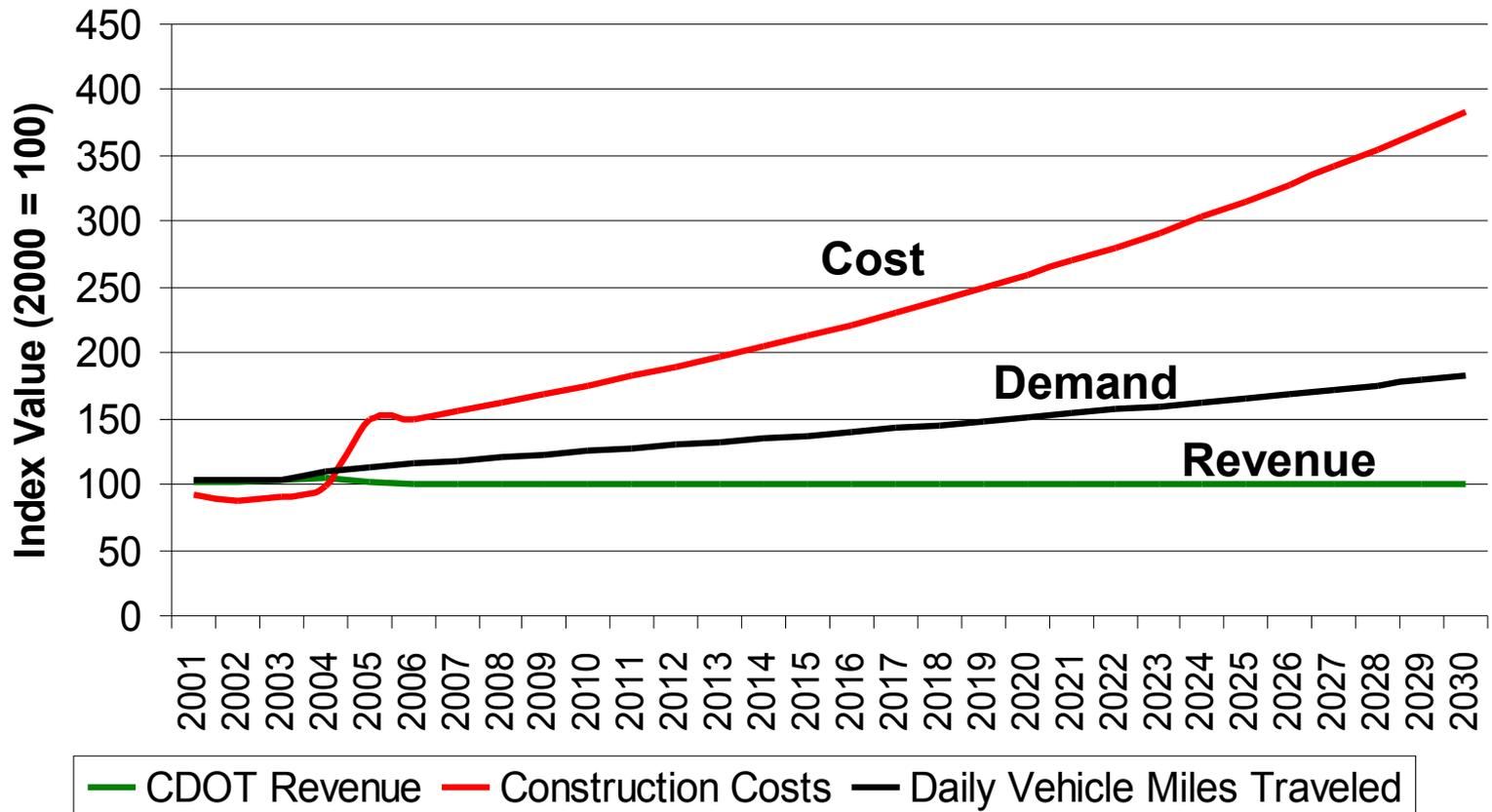
Finances

Relative Value of State Motor Fuel Tax



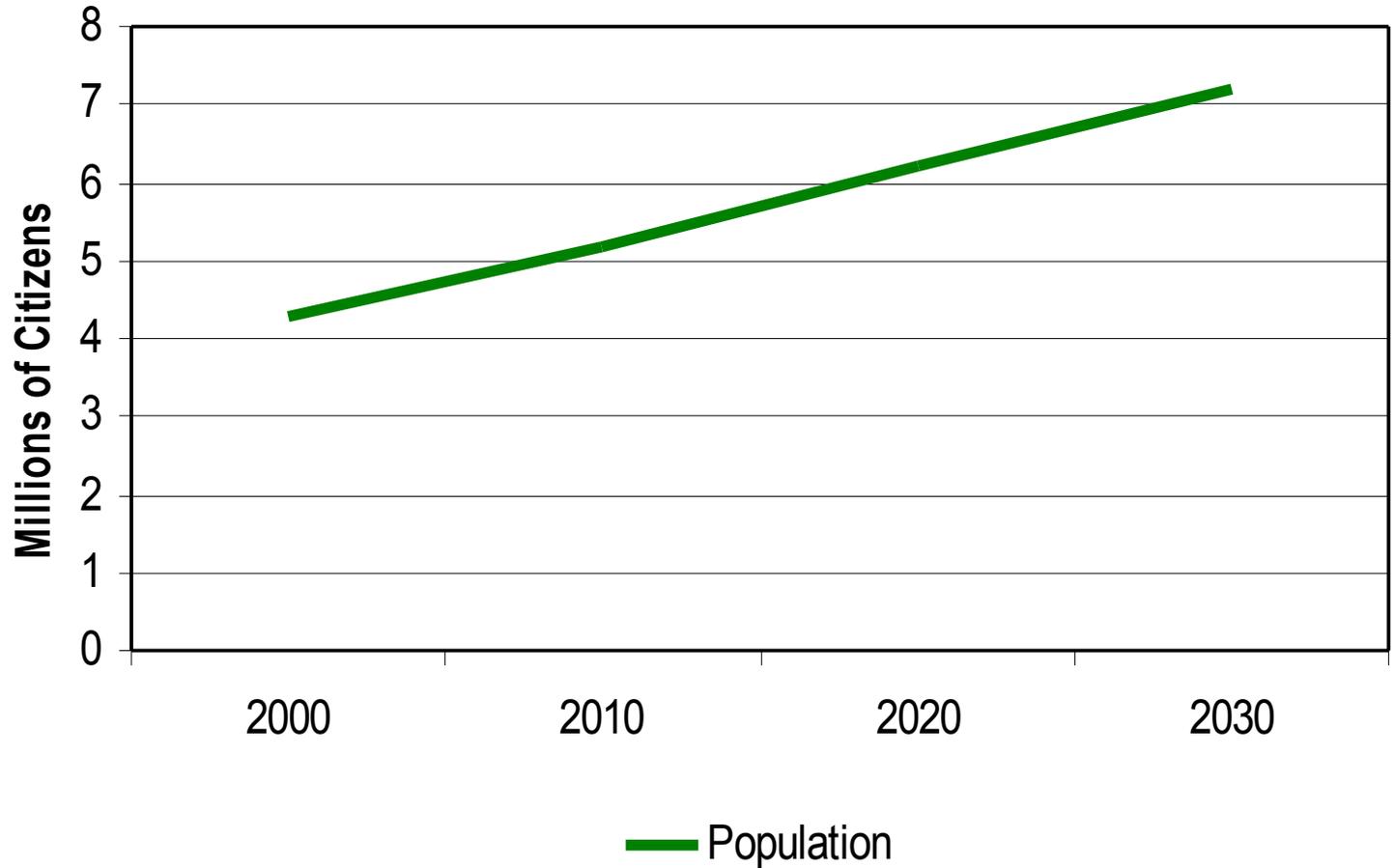
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Future Demand and Costs Grow Projected Revenues Flatten



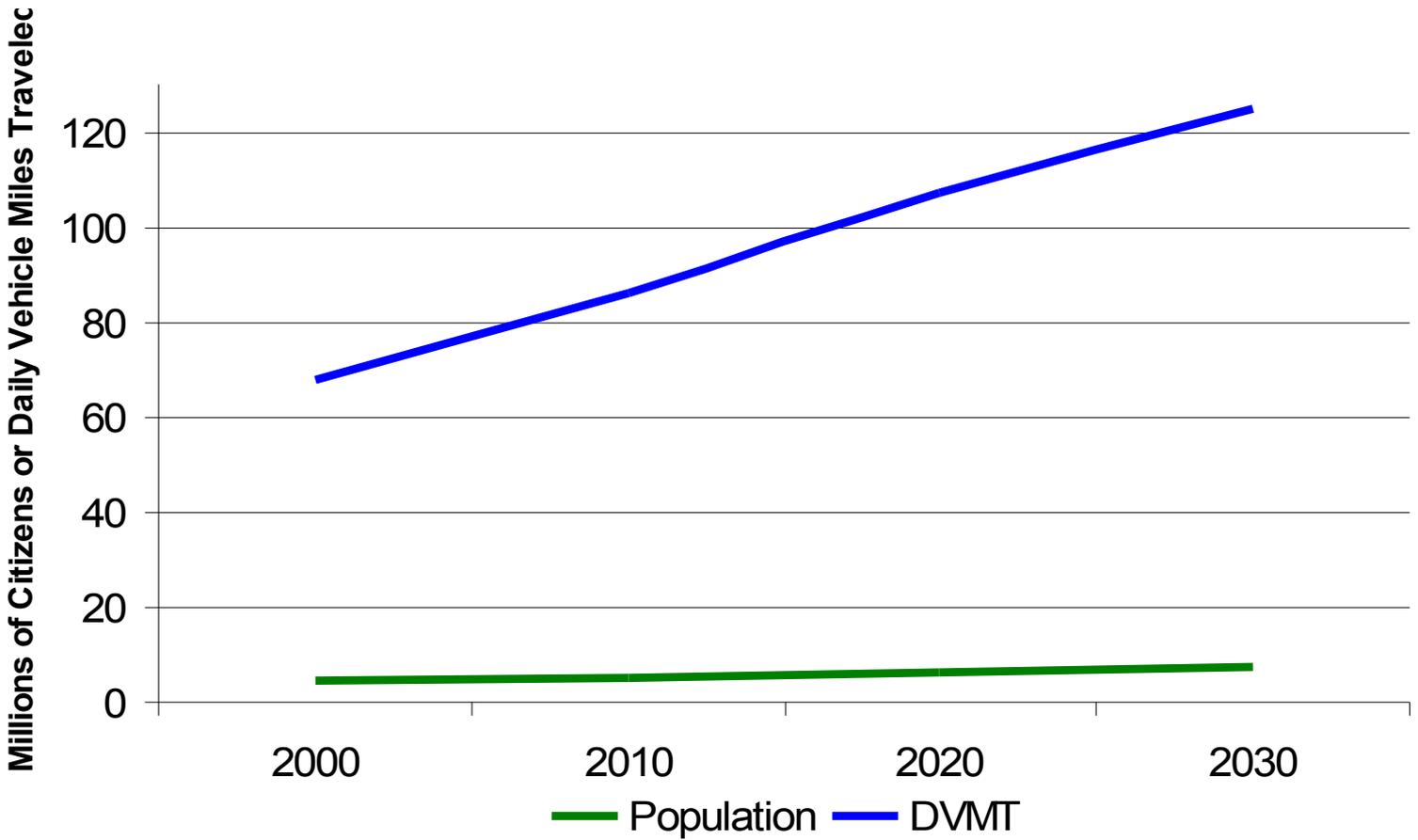
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Growth in Population



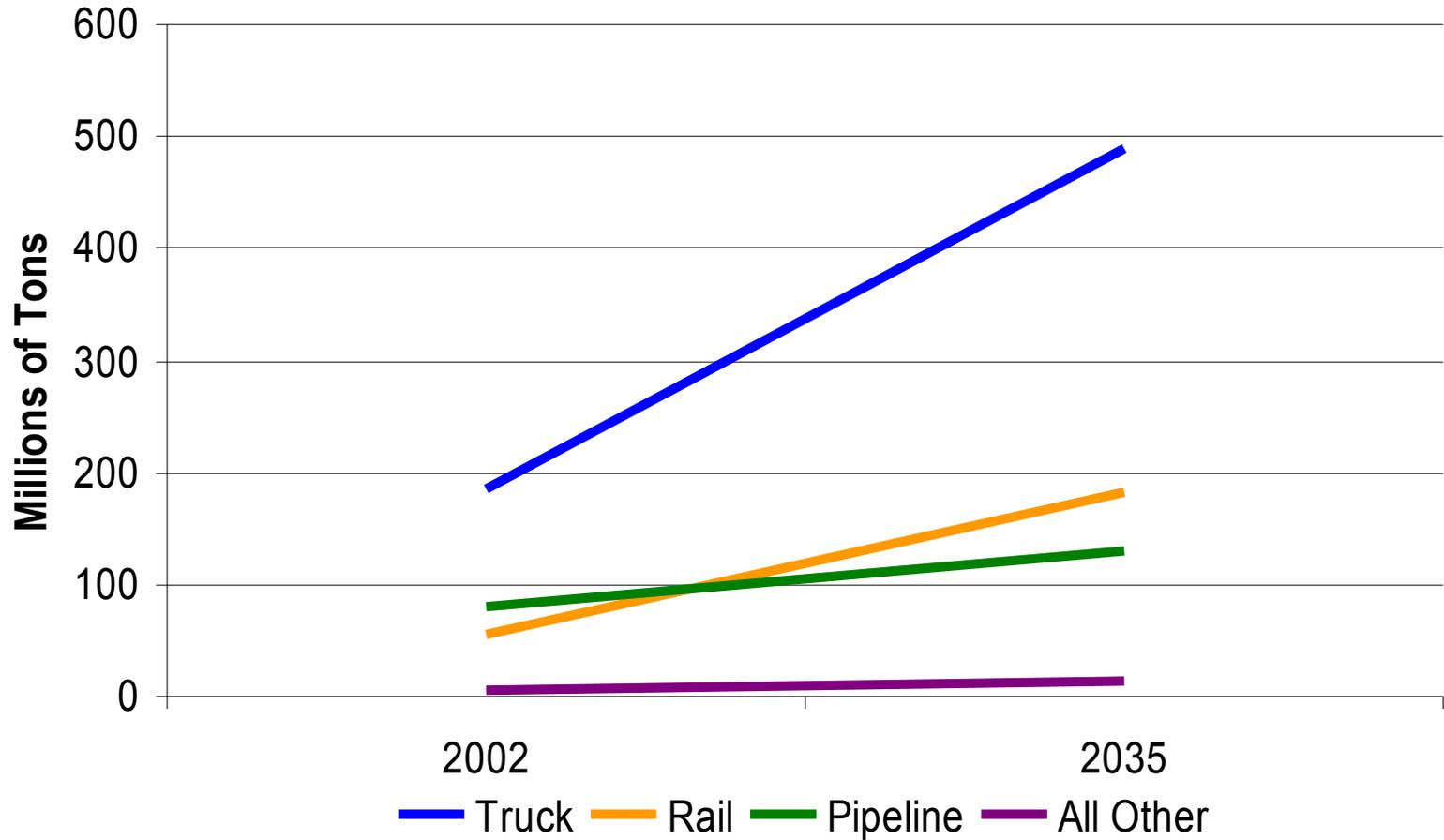
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Growth in Driving Outpaces Population



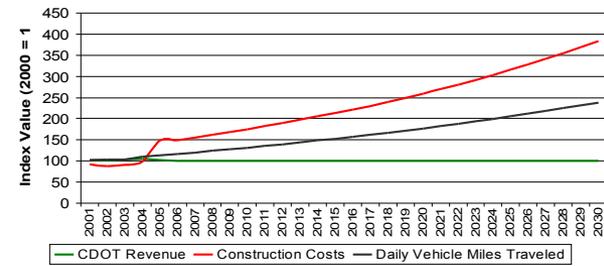
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Freight Growth



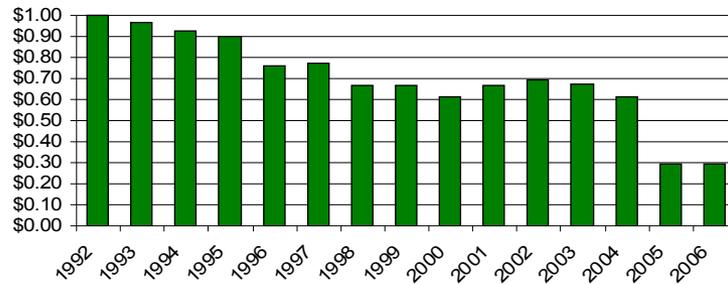
Source: U.S. DOT (Accessed 2007)

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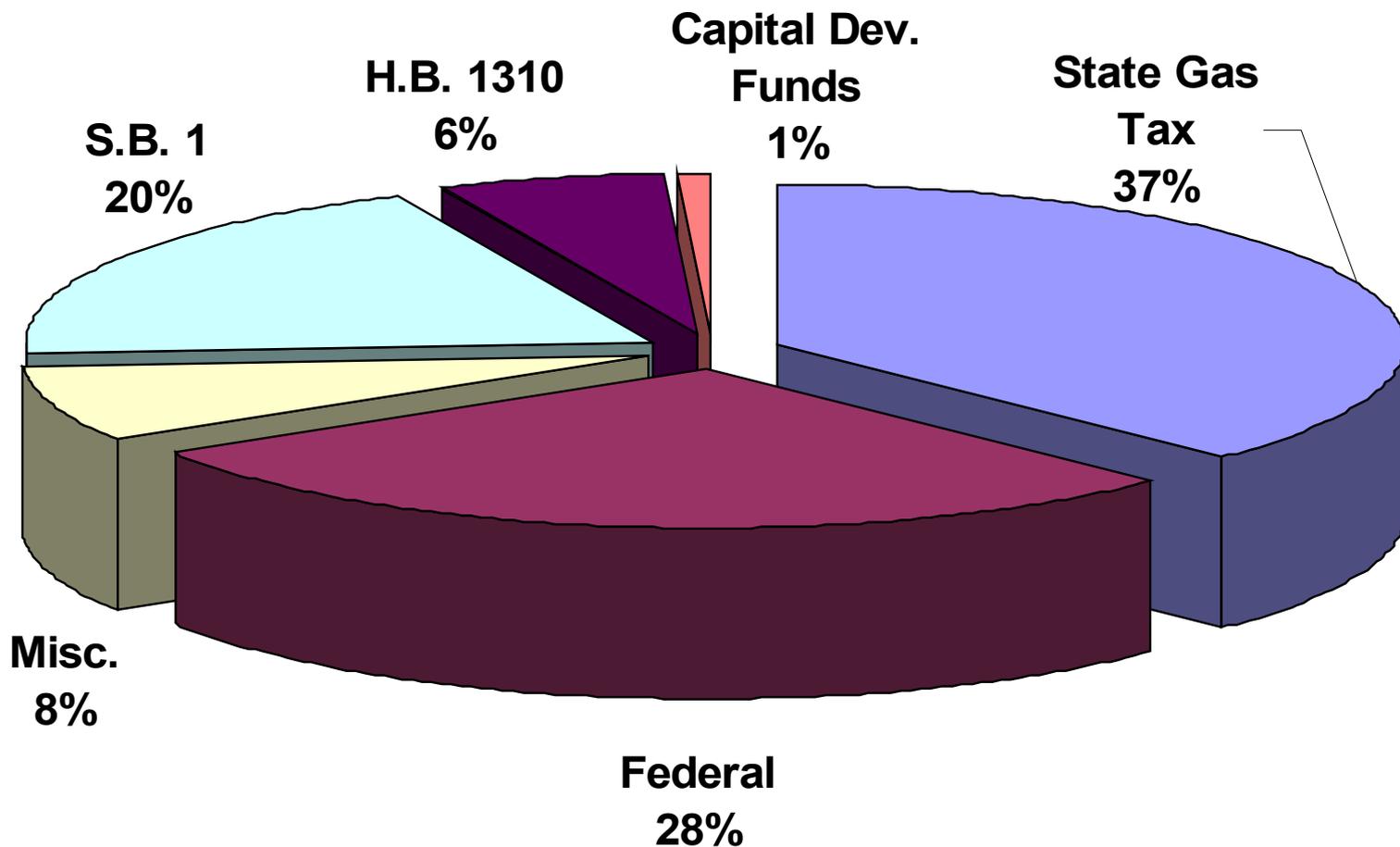
Finances

Relative Value of State Motor Fuel Tax



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CDOT's 2006 Sources of Revenue

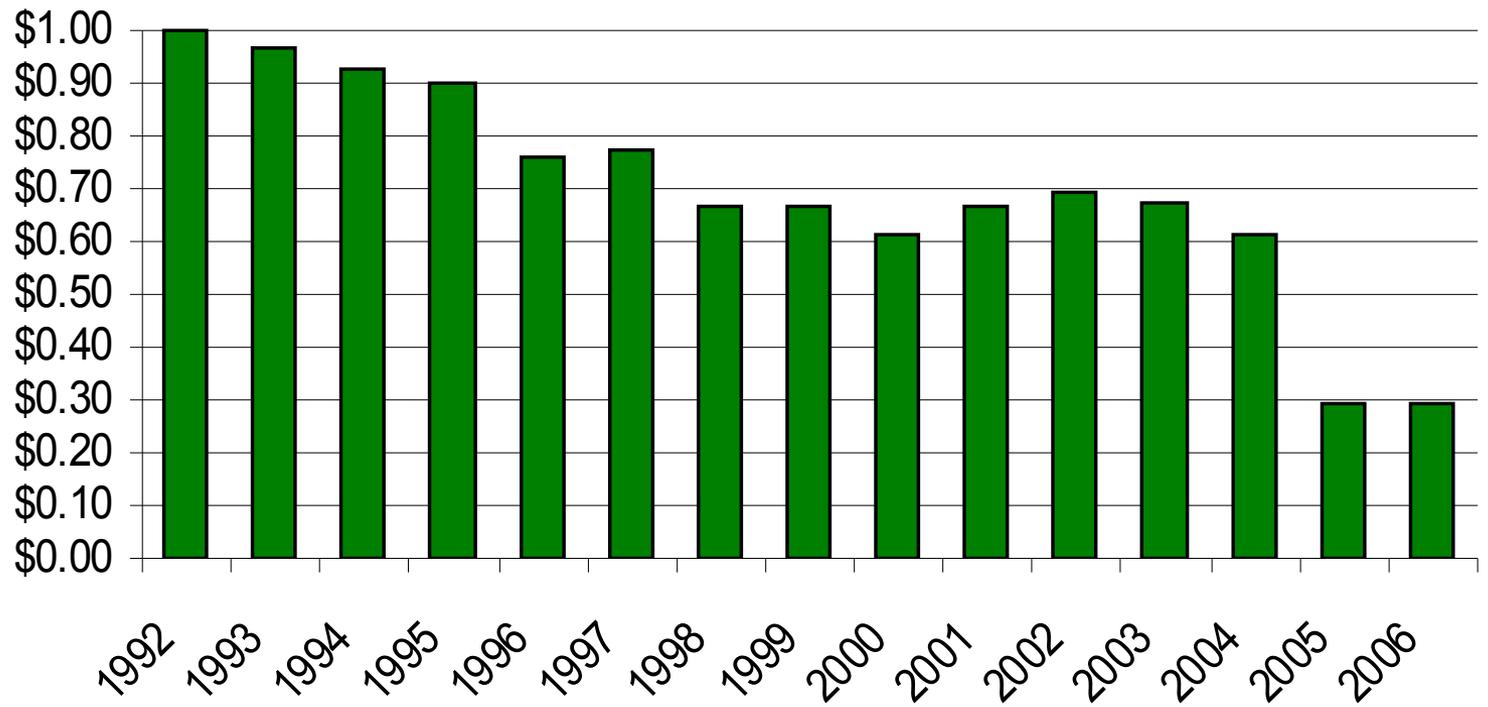


Source: CDOT (2006)

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State Fuel Tax - Worth 30% of It's Original Value

Relative Value of State Motor Fuel Tax



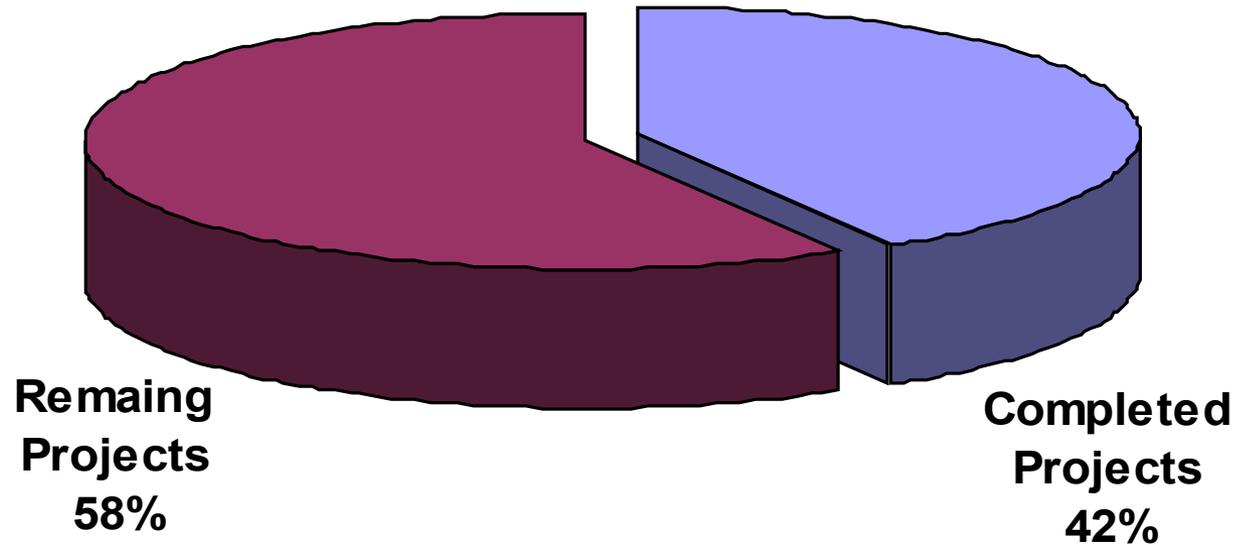
Note: The value is deflated by the Colorado Construction Cost Index (C-CCI). The C-CCI average 6.9% annually between 1992 and 2006.



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Remaining “7th Pot Projects”

SB 1-97 Strategic Projects By Dollar Value



- Estimated completion of all projects 2025
- Approximately \$3B of projects remain (current dollars)



Source: CDOT (2006)

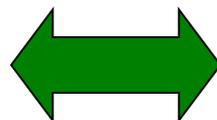
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Transportation Investments Decisions

Regional Transportation Plans



Management
Systems



Statewide
Transportation
Plan



Corridor Visions



Projects



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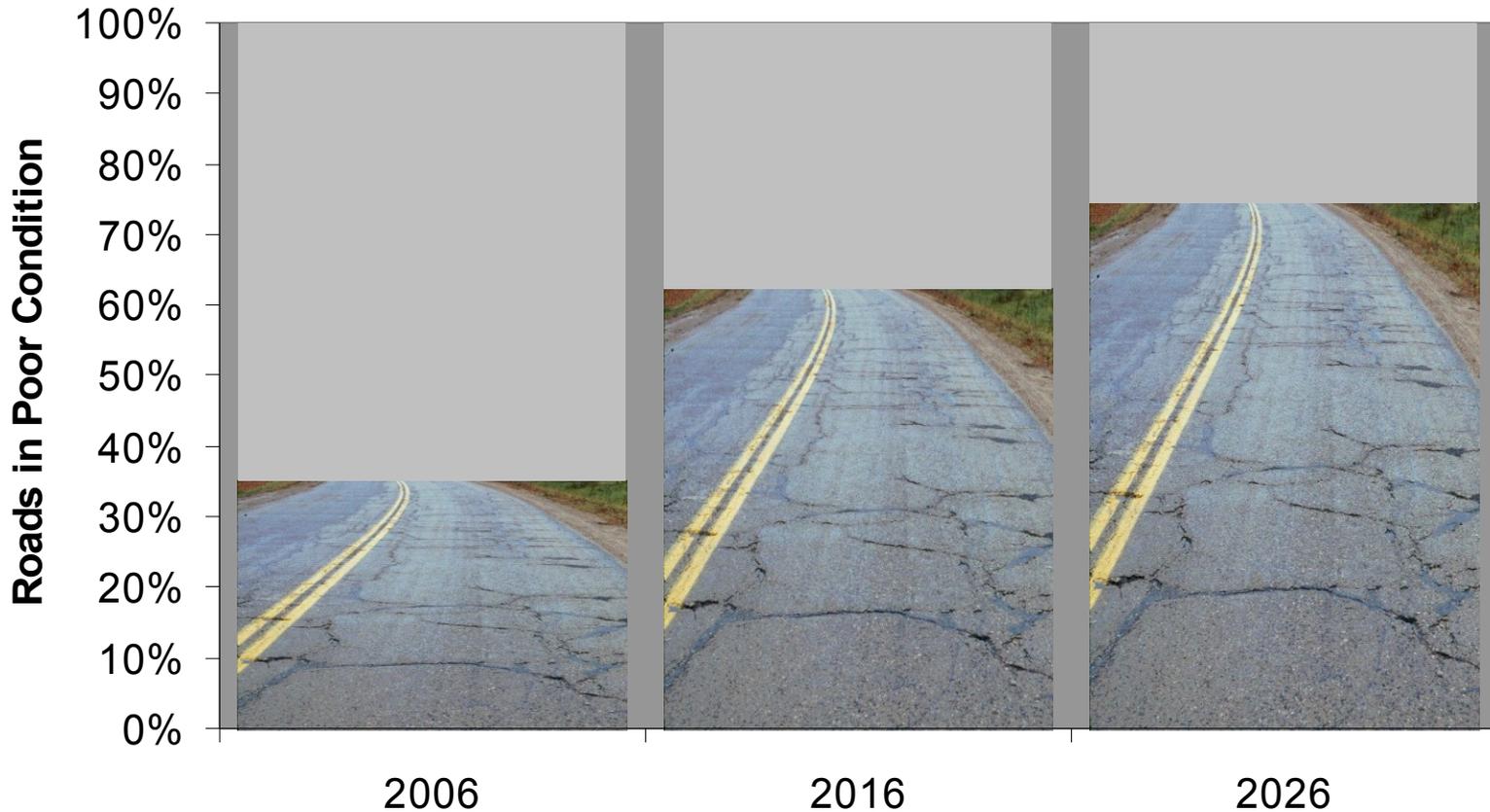


Road and Bridge Condition



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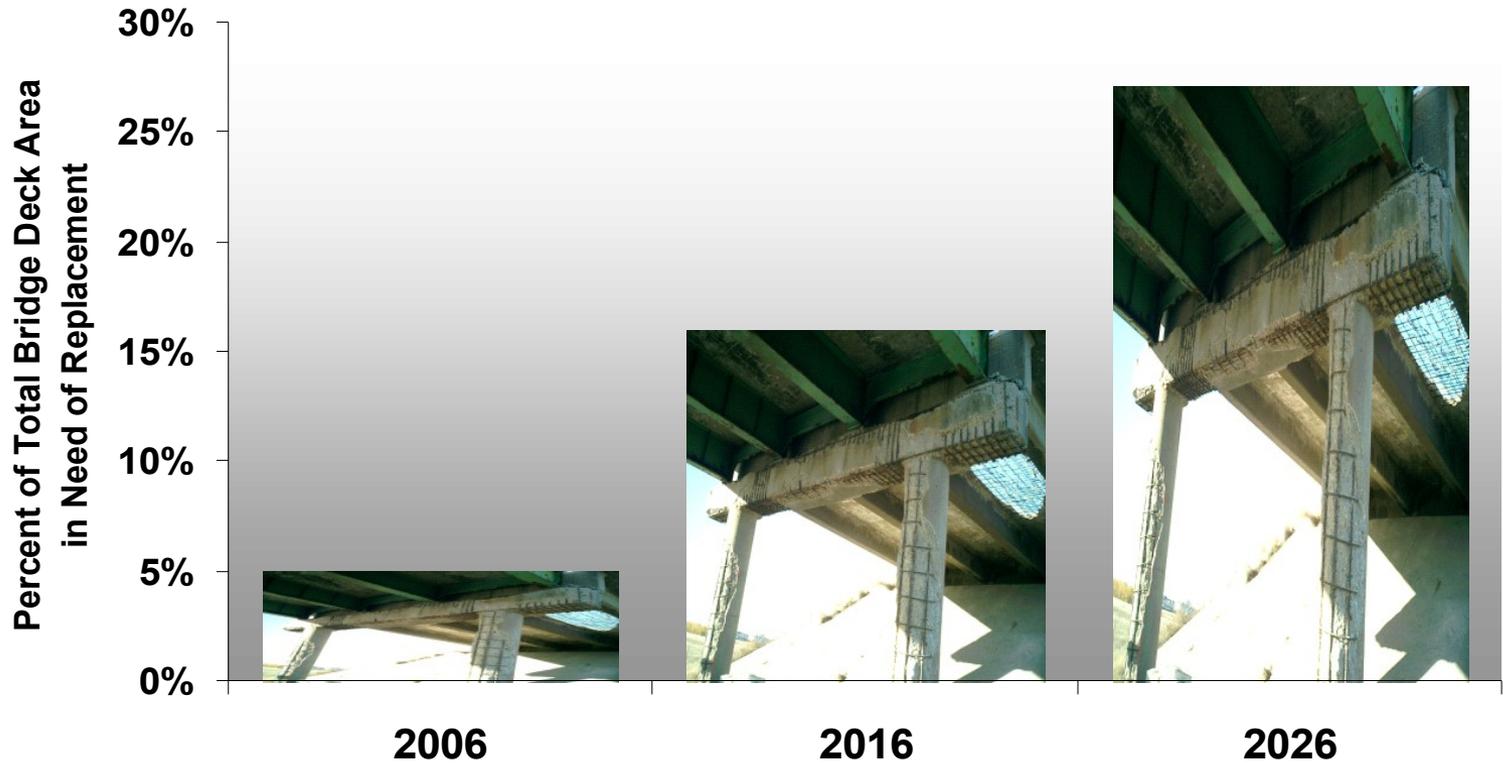
Decreasing Revenue + Aging Roads +
Increasing Volumes + Higher Costs =
Deteriorating Road Conditions



Source: CDOT (2006)

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Decreasing Revenue + Aging Roads +
Increasing Volumes + Higher Costs =
**Tripling in the Percent of
Bridge Deck in Need of Replacement**

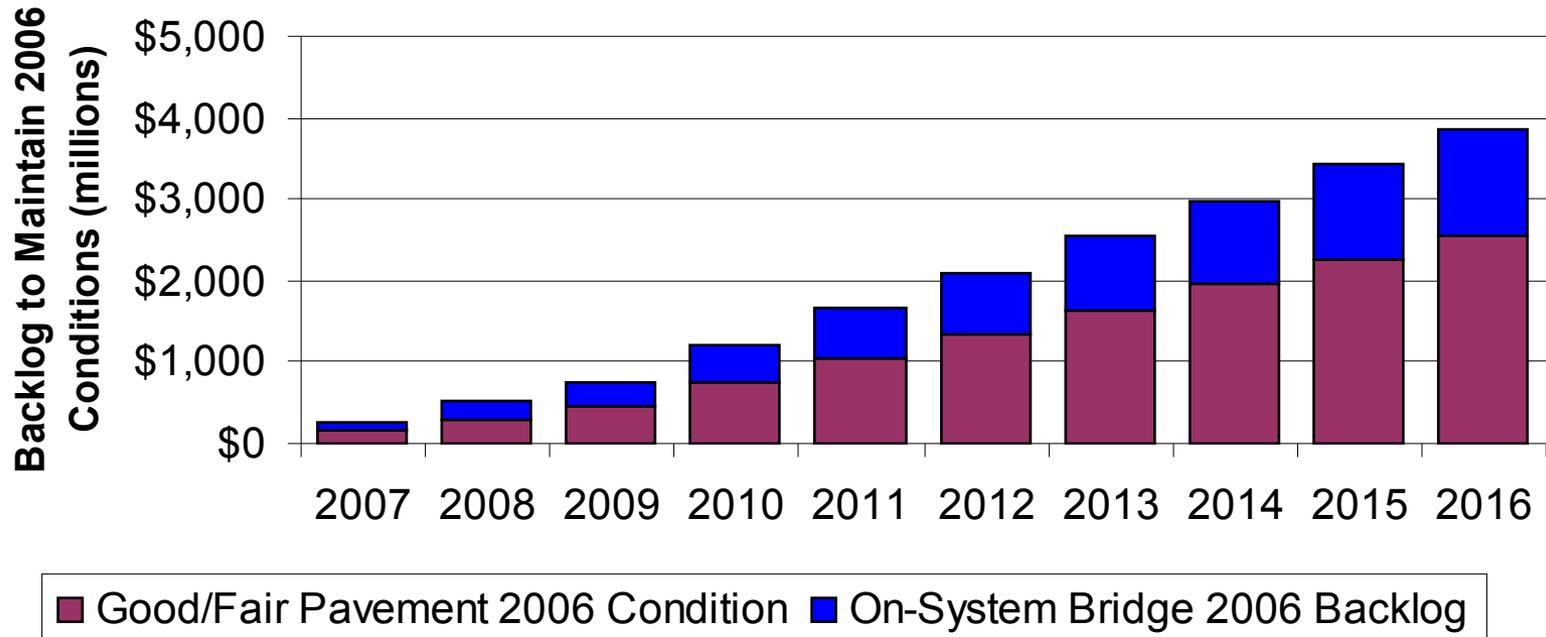


Source: CDOT (2006)

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Pay Now or Pay More Later

Pavement and Bridge Backlog Grows to \$4B by 2016 at forecast funding levels



Source: CDOT (2006)

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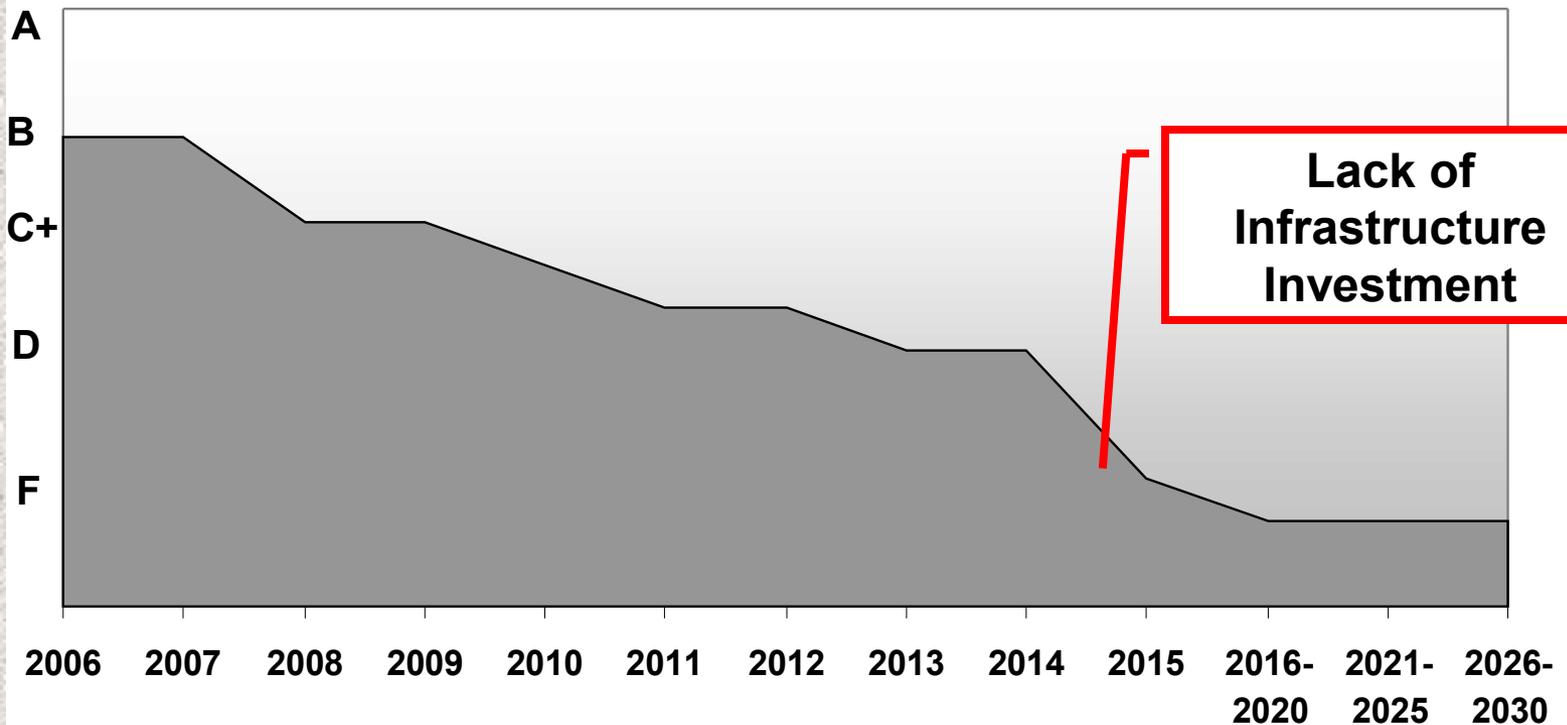
Maintenance



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Not Making The Maintenance Grade

CDOT's Projected Maintenance Quality



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Impacts of A Deteriorated System

- Greater Long Term Cost
- Speed Reductions/rough roads
- More Congestion/less reliability
- Weight posted bridges
- More hours of Closed Roads
- Closing Additional Mountain Passes
- Less Safe Roads



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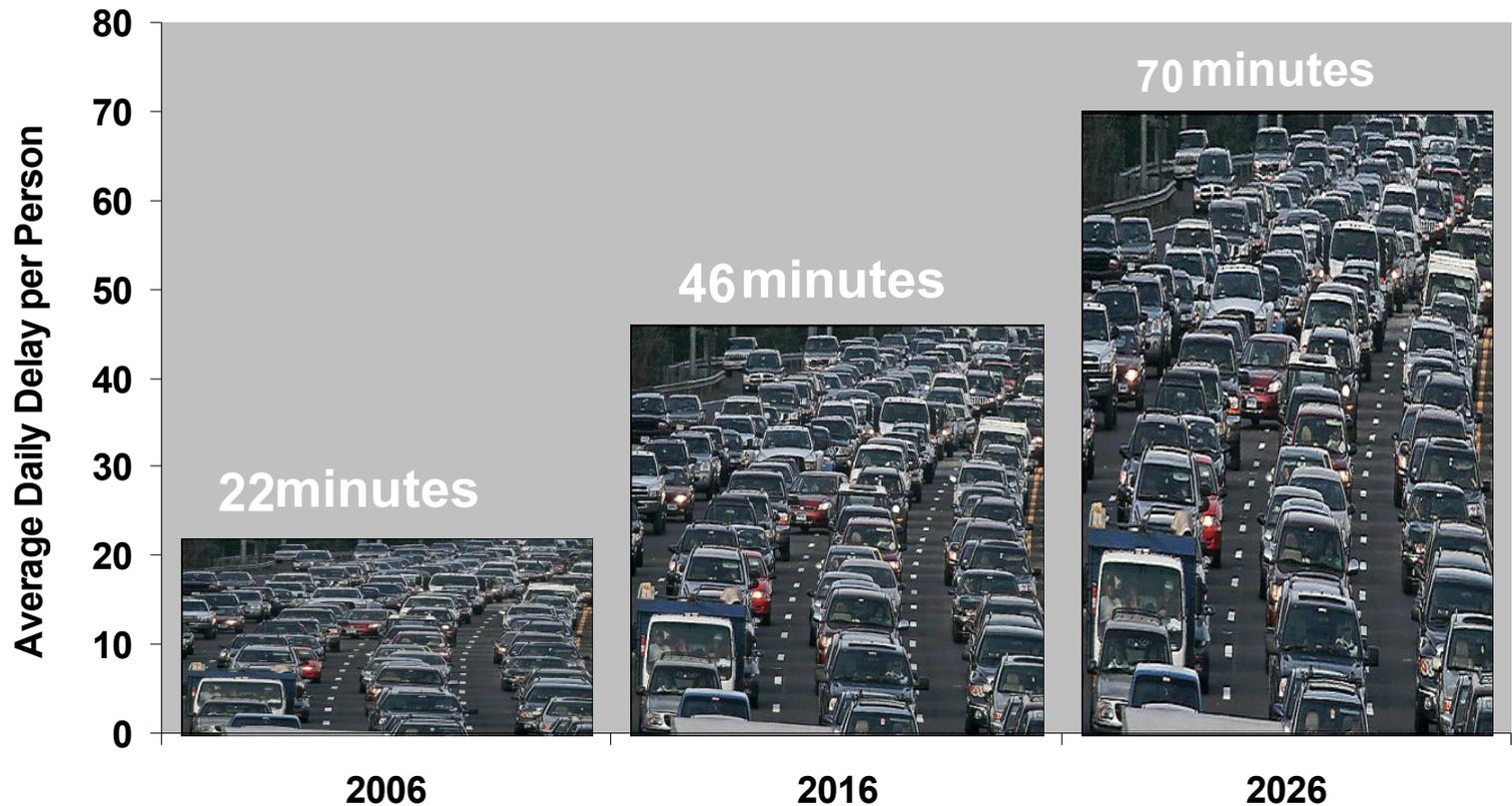


Congestion



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Congestion is on the Rise

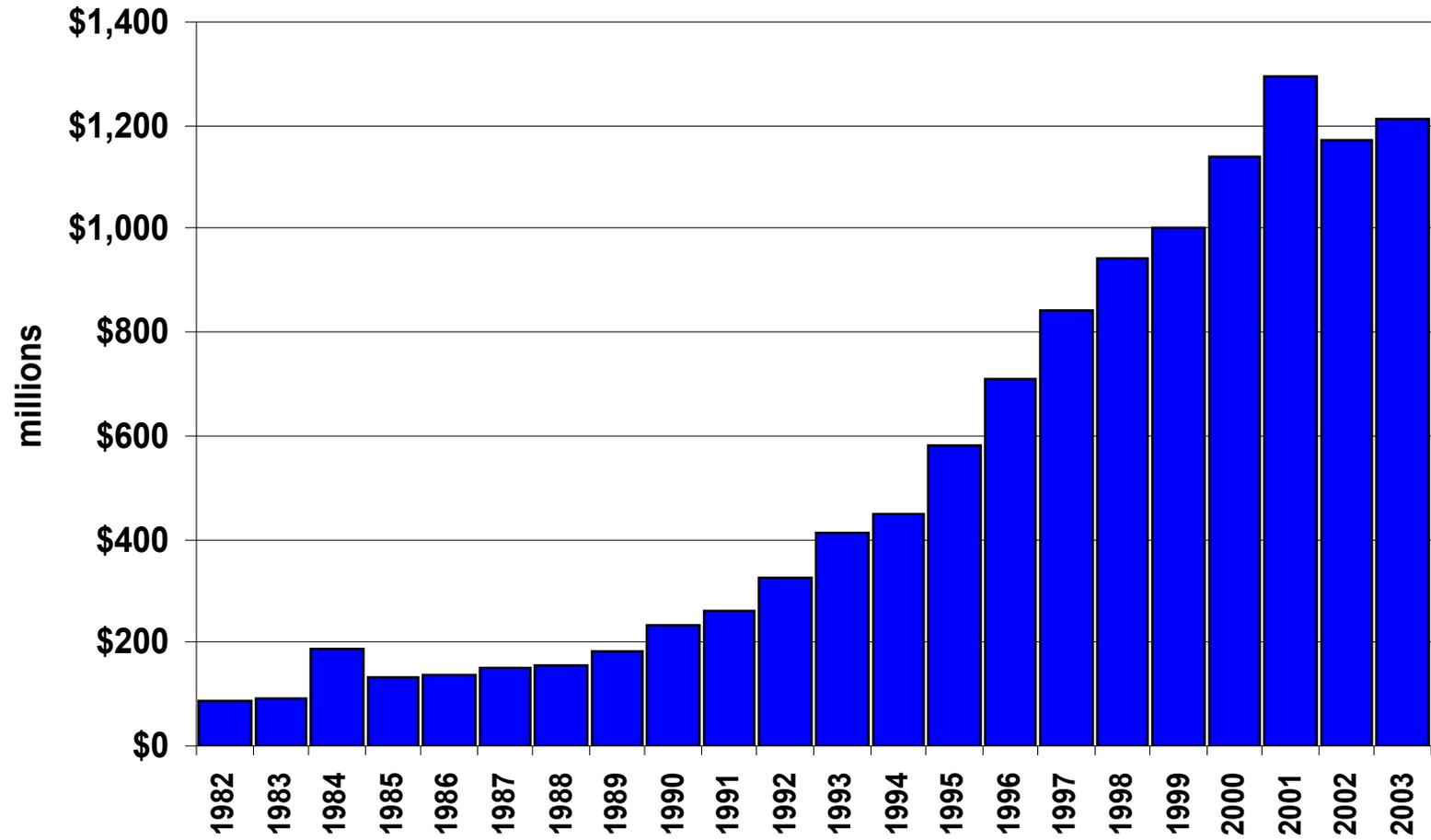


Note: Figure reflects average daily delay per person in congested corridors statewide



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Since at least 1999, Congestion Cost Colorado \$1+ Billion/Year



Source: Texas Transportation Institute (2005), "The 2005 Urban Mobility Report," College Station, Texas: <http://mobility.tamu.edu>

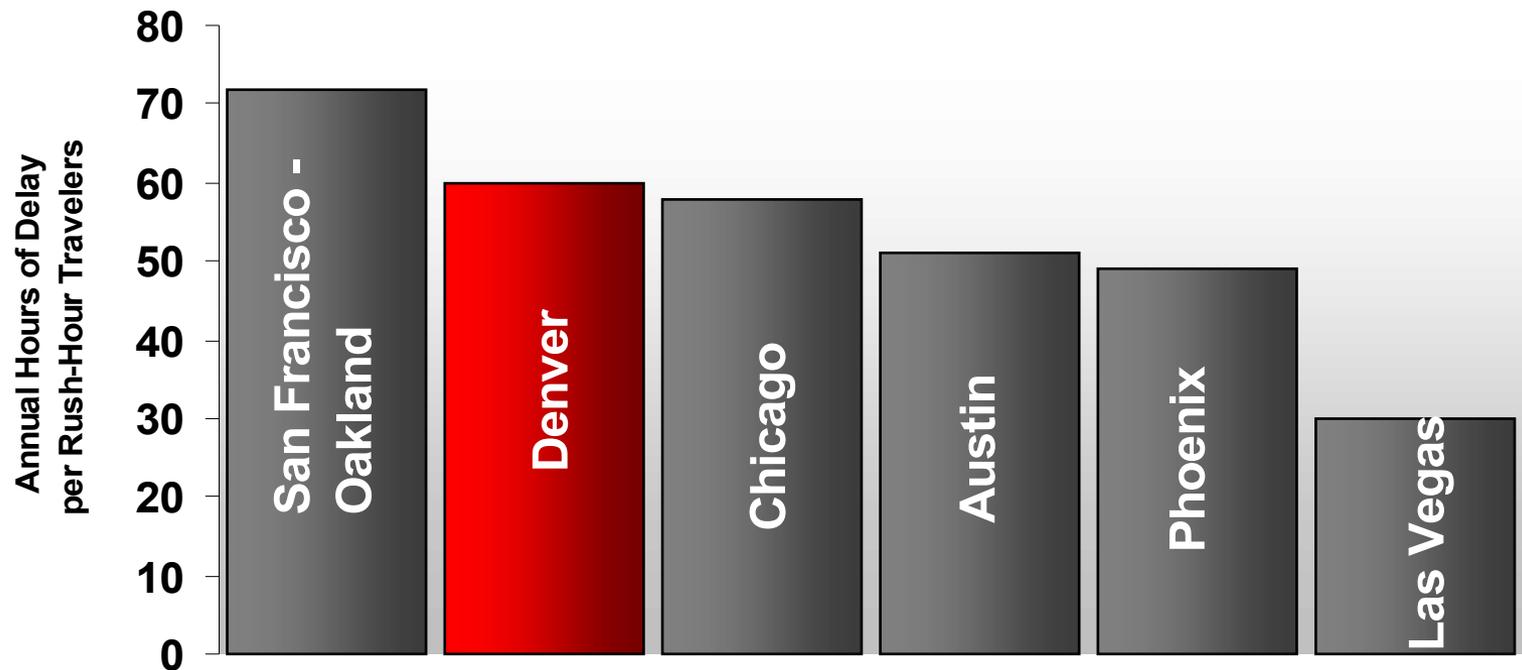
Note: This estimate is conservative, in that it only estimates the cost of congestion in ³⁶ Denver, Boulder and Colorado Springs.



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Congestion Related Delays: A Competitive Disadvantage

**Denver's Rush-Hour Travelers Experienced More Delay
in 2003 than Rush-Hour Travelers in Competative Cities**



Source: Texas Transportation Institute (2005), "The 2005 Urban Mobility Report," College Station, Texas: <http://mobility.tamu.edu>³⁷



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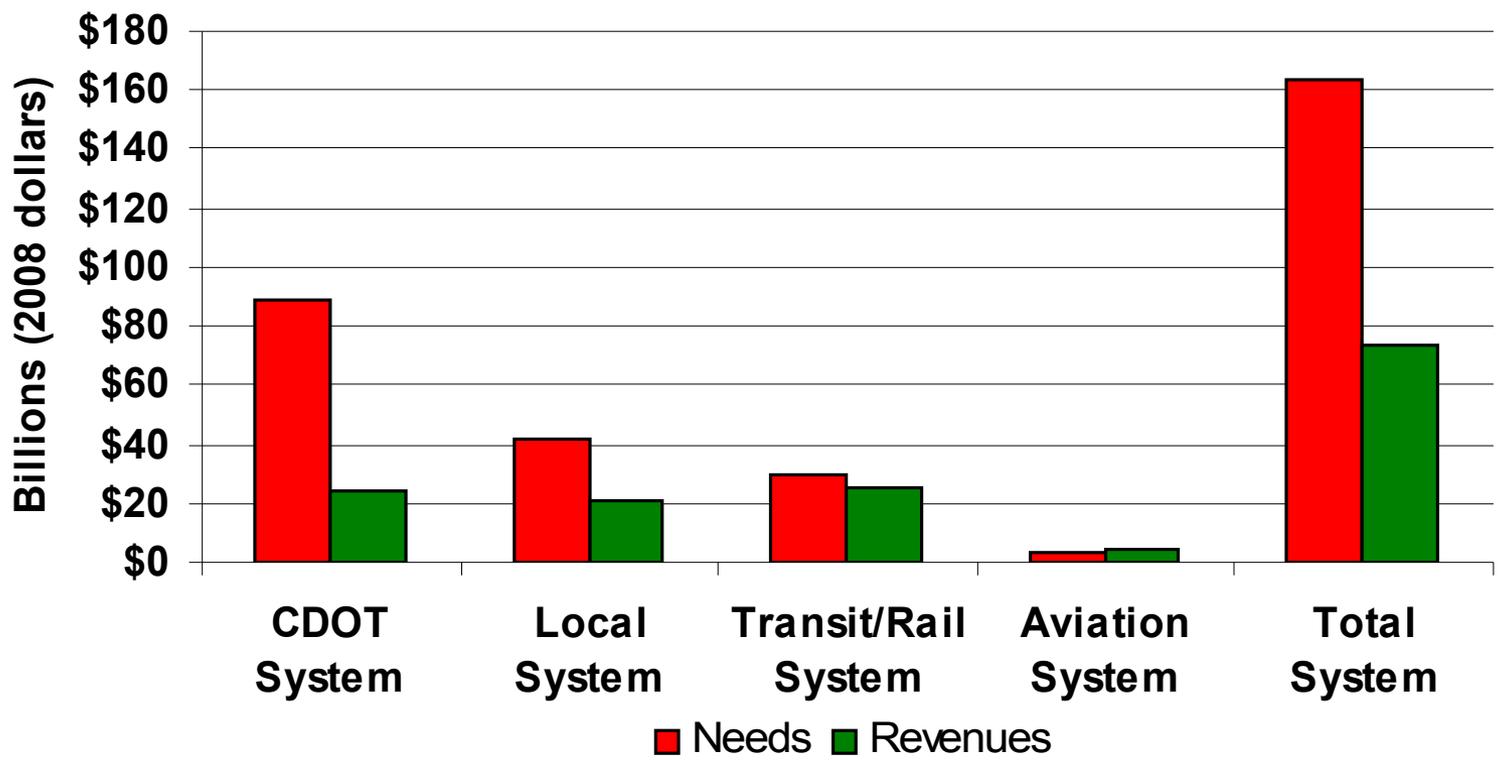
How Can More Reliable Travel Times Be Provided?



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Estimate to Maintain Current Service Levels in 2030

\$6B (2008\$) annual through 2030



Source: 2030 Statewide Plan inflated from 2005 to 2008 dollars, consistent with factors used for the 2035 Statewide Plan.



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A Sustainable Transportation Solution

- **Reliable Revenue Stream**
- **Maintain Colorado's Assets**
- **Partnerships**
- **Address Congestion**
- **Environmentally Responsible**
- **Safe**



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Extra slides



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Typical Cost to Construct 1 Lane Mile of New Freeway Capacity



Eastern - \$1.6M to \$3.1M



Denver Regional Council of Governments

**Front Range (Urban)
\$2.1M to \$6.1M**

**Front Range (Suburban)
\$650K to \$2.4M**



Mountains - \$990K to \$4.5M



Source: CDOT (2006)

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Transit Capital Costs

1 Mile of Light Rail Track

– \$30M+

Light Rail Vehicle

– \$3.3M (2006)

Local Bus

– \$500K

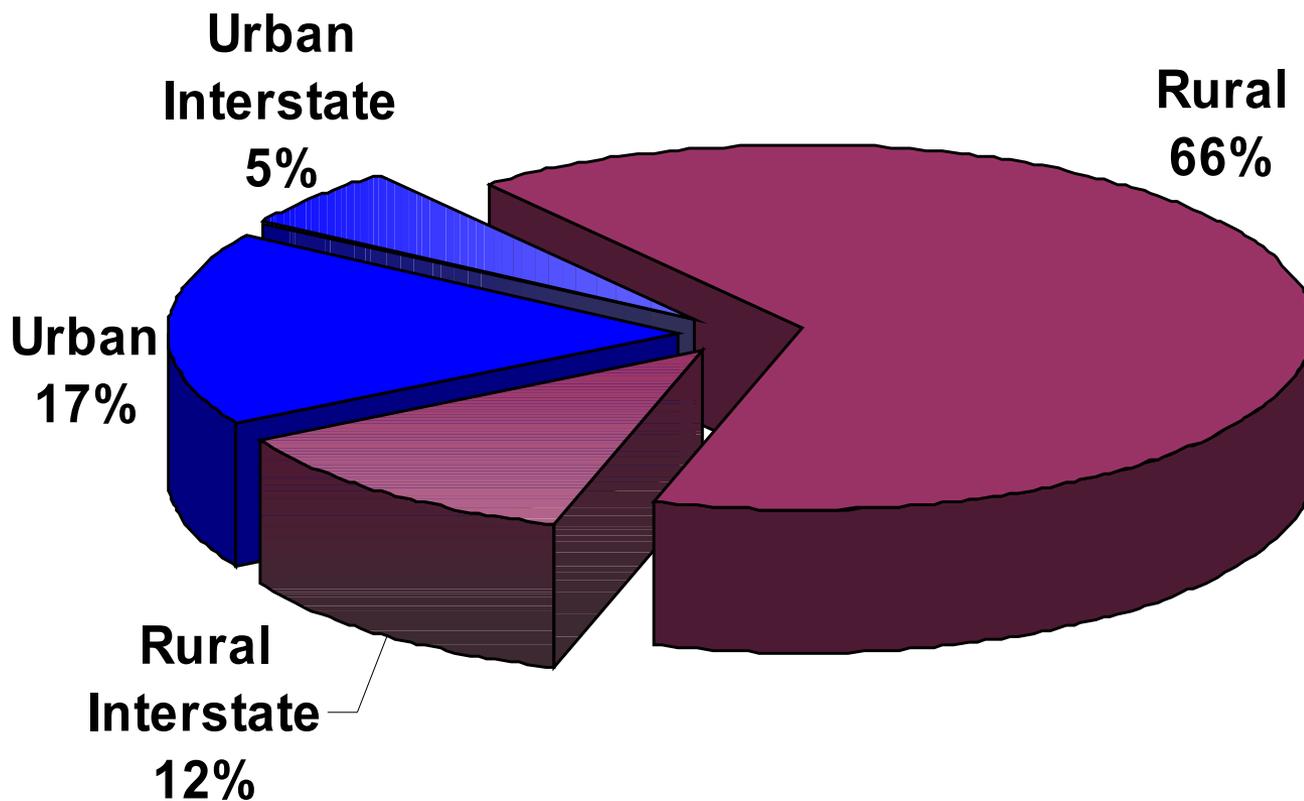
Commuter Bus

– \$550K



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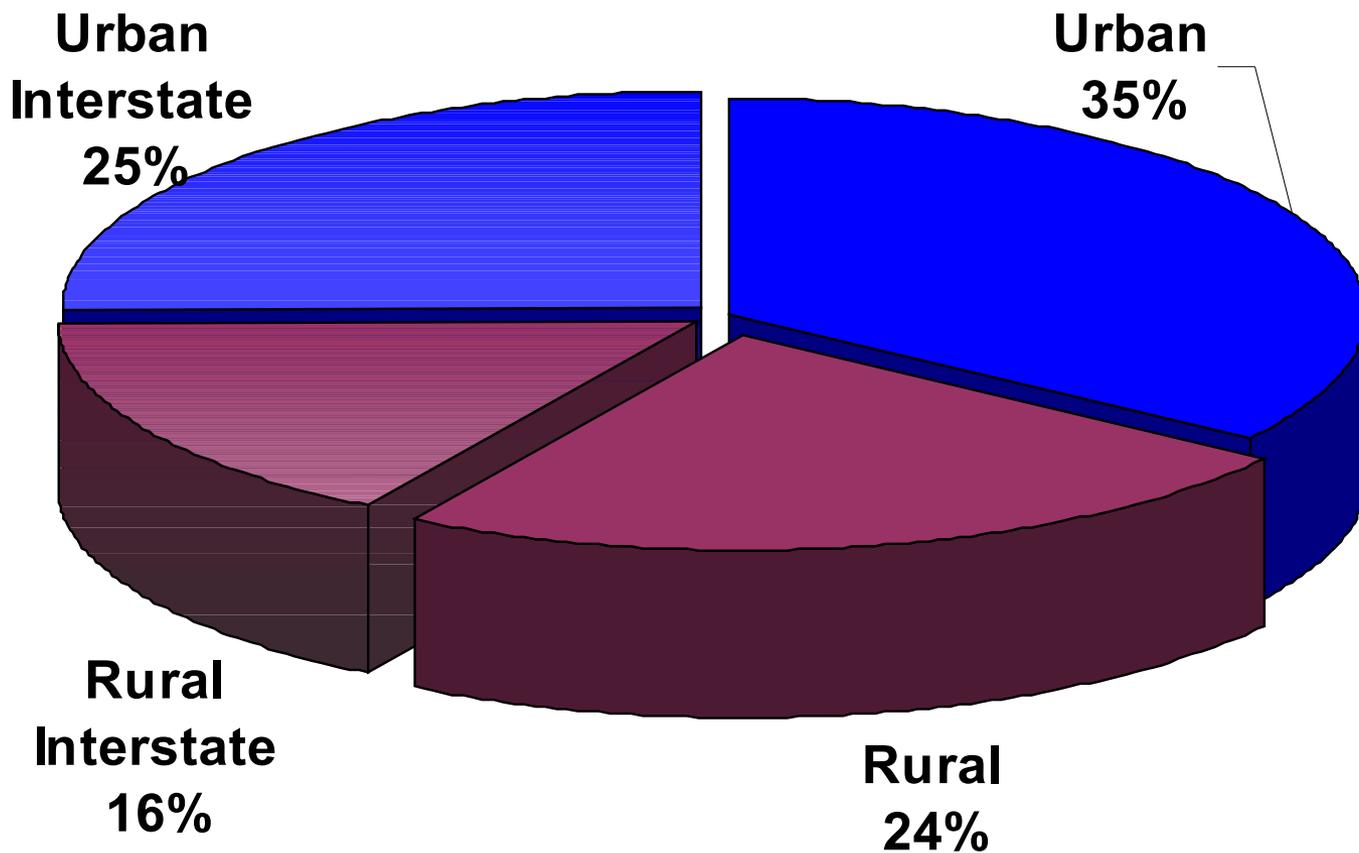
23,000+ Lane Miles of State Highway



Source: CDOT (2005)

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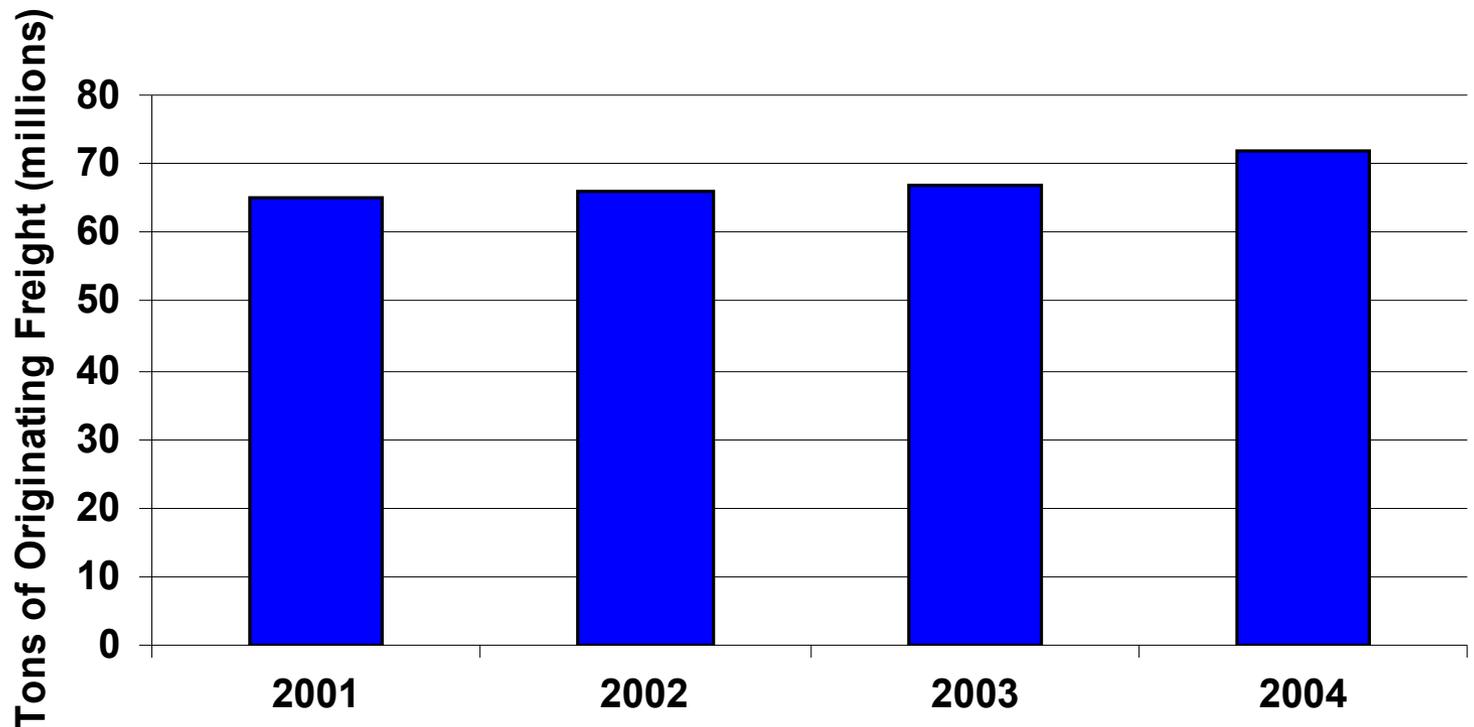
78 Million Miles of Vehicle Travel on the State Highway System Each Day



Source: CDOT (2005)

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Freight rail shipments to/from Colorado up 11% since 2001



Source: BTS (2005)