5. FISCALLY CONSTRAINED 2035 REGIONAL TRANSPORTATION PLAN

The vision for the future transportation system presented in the previous chapter would cost about $133 billion in 2008 constant dollars. This chapter presents the portions of that plan that could be accomplished with the funds reasonably expected to be available. For this reason, it is called the *Fiscally Constrained 2035 Regional Transportation Plan* (RTP). The funding reasonably expected to be available to the DRCOG region has been developed cooperatively in three arenas:

- **Transit.** The RTD FasTracks program has developed a comprehensive assessment of resources available to the entire RTD system. This financial plan is updated regularly and subject to detailed scrutiny by the DRCOG Board.
- **Regional roadways and other state highways.** CDOT's Office of Financial Management and Budget leads a cooperative multi-agency process for developing estimates of long-range funding. This process is documented in the report Colorado Department of Transportation's *Amendment to 2035 Revenue Estimate and Resource Allocation*, adopted by the Colorado Transportation Commission in June 2010. This resource allocation process identifies regional funds available primarily for roadway purposes.
- **Local revenues.** These are estimated by DRCOG staff based on information obtained from and coordination with local governments, special districts, and authorities.

The revenue estimates are presented in more detail later in this chapter. In round terms, in 2008 constant dollars, approximately $93 billion from 2012 through 2035 is expected to be available. This is only 70 percent of the $133 billion needed to accomplish the unconstrained plan. Thus, it is evident that the *Fiscally Constrained 2035 RTP* will not adequately respond to the congestion and mobility problems faced by the residents and businesses of the region, nor will it maintain the transportation system to the quality desired by users.

The need for additional revenue sources is clear to the region's decision makers. Several action strategies have been identified to increase funding to close the gap between the cost of the Metro Vision transportation system and the fiscally constrained revenues:

Transportation Funding Action Strategies

- Encourage the provision of local and private sector funds for use on transportation facilities that primarily serve local and private development access needs;
- Continue to ensure the region receives an equitable distribution of federal and state transportation funds;
- Support local, regional, and state efforts to increase transportation revenues necessary to meet the region's transportation needs, including tolling initiatives as appropriate;
- Actively seek federal discretionary funding for regionally significant transportation projects;
- Promote cooperation among elected officials, the business community, citizen groups, the Colorado Department of Transportation, and the Regional Transportation District in seeking new funding sources.
- Develop opportunities for implementing congestion pricing and other tolling techniques on existing freeways, and implement a tolling component (price-management) on new freeway lane-addition projects, where feasible, with all impacted communities included in the tolling decision and surplus revenue directed to multimodal investment or system preservation; and
- Support legislation that would implement VMT-based fees, pay-as-you-drive insurance, and other pricing strategies that more directly and immediately reflect the cost of vehicle travel to the user.

The *Fiscally Constrained 2035 RTP* was prepared by reducing the Metro Vision transportation system to the highest priority projects and pooled expenditures that can be accommodated with future expected revenues. Those projects and expenditures retained in the *Fiscally Constrained 2035 RTP* provide the greatest transportation benefit to the region in the key multimodal corridors and the most benefit toward implementing the Metro Vision growth and development elements.

The *Fiscally Constrained 2035 RTP* focuses on the regional transportation system more than the local street system. Regionally significant projects must be identified as accurately as possible in the *Fiscally Constrained 2035 RTP* to receive future federal or state funding. Smaller-scale projects have to be consistent with eligibility standards for the applicable pool category from which they will obtain funding. Funding will be allocated to projects by DRCOG through Transportation Improvement Programs (TIPs) and by CDOT through the State Transportation Improvement Program (STIP). Final designs and alignments for federally funded projects must be determined through future studies done in accordance with the National Environmental Policy Act (NEPA). Such studies will also evaluate the environmental impacts of projects and determine mitigation actions.

A. Preparation Process

The *Fiscally Constrained 2035 RTP* was originally built from the 2030 RTP and the process used to prepare it. The following steps were followed to update the *Fiscally Constrained 2035 RTP*:

- **Costs.** Total Metro Vision transportation needs identified in the 2035 RTP for all expenditure categories were reconsidered, validated, and updated. Cost estimates for regionally funded roadway projects in the Fiscally Constrained 2035 RTP were reviewed in detail. All costs were updated to a 2008 constant dollar basis.
- **Revenues.** Revenues from CDOT, RTD, the U.S. Department of Transportation, local governments, private entities, and other sources were tabulated.
    - *Regionally funded roadway projects.* New funding sources, such as the state FASTER (Senate Bill 09-108: Funding Advancements for Surface Transportation and Economic Recovery) programs were included along with other funding sources as identified by CDOT in the resource allocation process. Many assumptions were also made about future federal funds, since there is no current long term authorization bill. The assumptions are documented in CDOT's *Amendment to 2035 Revenue Estimate and Resource Allocation* document. The revenue estimates were based on existing sources and include only what could be generated under current law and reasonable economic conditions.
    - *Transit.* The current RTD FasTracks financial plan assumes passage of an additional 0.4% sales/use tax in either 2011 or 2012 on top of the existing 0.4% sales/use tax. The financial plan also includes funding sources such as bonding, COPS (certificates of participation), public-private partnerships, TIFIA loans (a loan from the U.S. Department of Transportation under the Transportation Infrastructure Finance and Innovation Act of 1998), and federal grants. The *Fiscally Constrained 2035 RTP* reasonably expects approval of the additional sales and use tax as well as the other assumptions of RTD's FasTracks financial plan.
    - *Local revenues.* Local government roadway revenue forecasts were derived from the receipts and expenditure reports provided to CDOT annually. The 1984 through 2005 revenues were converted into 2005 dollars per person by revenue group—local government general funds, local government special assessments, Colorado Highway Users Tax Fund (HUTF), developer/private, and other sources. Curves were developed for each group and applied to the population forecast for the region. The final results were adjusted to 2008 constant dollars and to year of expenditure dollars.

- **Allocations.**
    - For roadway revenues identified in the resource allocation process, allocations to specific CDOT-defined investment categories were adopted by the Transportation Commission after substantial discussion and deliberation. In general terms for this adopted 2035 RTP, there were no major allocation shifts from the previous resource allocations used for the original 2035 RTP or in 2004 for the 2030 RTP. Of the allocations to investment categories potentially available for capital purposes, DRCOG consulted with planning partners to define the share of those regional funds that would be made available to the capital projects that would be identified in the *Fiscally Constrained 2035 RTP*. No significant reduction to the share for capital projects was endorsed, even though system quality will decrease substantially. This is partly due to the fact that many of the capital projects include reconstruction, and partly due to the observation that even if <u>all</u> regional funds were devoted to preservation/maintenance, it would <u>still</u> be insufficient to maintain current conditions.
    - Transit allocations were based on updated RTD estimates.
    - Local funds were allocated to preservation/maintenance, regional roadways, non-regional roadways, and other activities based on information obtained from local governments, special districts, and authorities.

- **Project selection.**
    - *Regionally funded roadway capital improvements.* The recomputed costs of the roadway capital projects contained in the *Fiscally Constrained 2035 RTP* were found to slightly exceed the estimated revenues available for them. Adjustments were made to the amount of STP-Metro, FASTER Bridge, and FASTER Safety funds assumed to be available for the projects, thus enabling their retention. The DRCOG transportation committees and Board also directed that no additional projects would be considered for limited regional funds or inclusion in the updated *Fiscally Constrained 2035 RTP*. Appendix 3 summarizes the process used to select roadway capital projects for the *Fiscally Constrained 2035 RTP*. Projects that cannot be funded remain in the vision, but are now identified as unfunded.
    - *Transit capital improvements.* The regionally significant transit projects included in the *Fiscally Constrained 2035 RTP* are those identified to be funded as part of RTD's 2010 FasTracks Financial Plan, which assumes the passage of an additional 0.4% sales and use tax. The financial plan was approved by DRCOG in August 2010

and its assumptions for funding are reasonably expected for the 2035 RTP. Under state statute adopted pursuant to Senate Bill 90-208, the MPO has specific powers of review for fixed guideway projects and financing, including revisions thereto. The 2035 RTP will be amended following any future DRCOG Board action on substantial changes to the FasTracks Plan.

- *Other transit improvements.* A state revenue source, referred to as Senate Bill 09-108, also known as FASTER, provides funding for transit. Over the life of the 2035 plan, CDOT estimates this source, plus any other legislatively-directed funds, will generate more than $247 million in 2008 constant dollars for strategic transit projects in the Denver region. At the current time, the Transportation Commission allocates those funds in "special" short-range processes. The *Fiscally Constrained 2035 RTP* has not assumed any specific new regionally significant projects using these funds.
- *Local improvements.* DRCOG surveyed local governments, special districts, and authorities as to their plans for project planning and commitment to using 100 percent locally derived funds to construct, improve, preserve, maintain, and operate regional and local transportation facilities. Regionally significant projects committed as being built with these local resources were identified accordingly for inclusion in the RTP.

B. Estimated Revenues and Expenditures

DRCOG, in coordination with CDOT, the Regional Transportation District (RTD), local governments, special districts and authorities, paratransit operators and various special funding agencies, estimated the total revenue available for transportation purposes. The financial analysis covers the 24-year period of 2012 through 2035. The analysis covers the DRCOG region. Values are presented in two formats; year of revenue generation/expenditure and constant current (2008) dollars.

The two values reflect different perspectives in presenting revenues/costs over a long time period under the assumption that construction and maintenance costs will increase. However, revenues typically grow over time as well. Federal planning regulations require that fiscally constrained transportation plans state costs in year of expenditure (YOE) dollars and demonstrate fiscal constraint by reporting revenues in equivalent terms (year of generation); for example, assuming that $20 million of 2020 revenues is devoted to a project that costs $20 million to build in 2020. Reporting revenues and costs in constant current dollars, the traditional way of reporting these in Colorado, means that the buying power of future years'

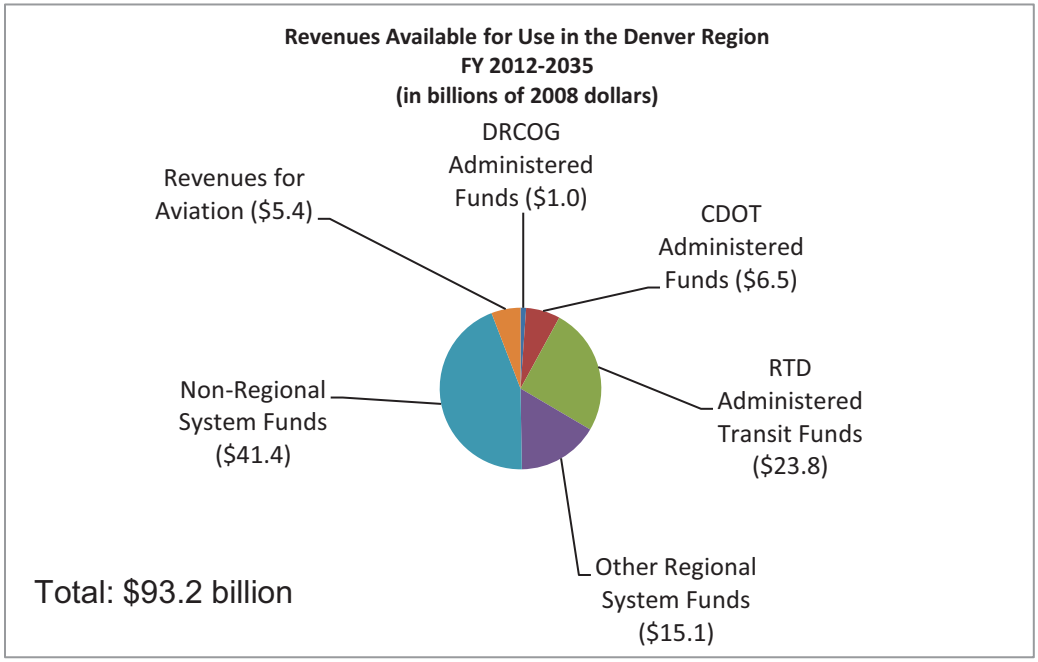
funds is brought into current terms by application of factors based on anticipated increases in costs. So the project that costs $20 million to build in 2020 might only cost $15 million to build today, and would therefore require the buying power of $15 million expressed in today's revenues. With inflation, revenues/costs presented in year of generation/expenditure are always larger numbers than when presented in constant current dollars.

The CDOT resource allocation process and the RTD financial plan process begin by estimating revenues by the year of generation. The constant 2008 dollar estimates are computed from that (see the methodology documented in the CDOT *Amended 2035 Revenue Forecast and Resource Allocation*). Local resource estimates were generated in current 2008 dollars and were assumed to grow over time for year of generation/expenditure presentation by the factors developed and utilized in the resource allocation process.

Revenues

Estimated revenues are illustrated in Figure 24 and detailed in Table 5. RTD will administer the largest individual-entity share of revenues, nearly $24 billion in 2008 constant dollars (nearly $36 billion in YOE dollars). The largest source of funding for transportation will be local governments/private sources, providing over $53 billion in 2008 constant dollars ($89 billion in YOE dollars) and second will be RTD, which is estimated to generate non-federal revenues of approximately $22 billion in 2008 constant dollars ($33 billion YOE). Of this amount, $18 billion is estimated to be generated by the RTD sales and use tax, and $2 billion (2008 constant dollars) through farebox revenues. These revenue estimates assume an increase in RTD's sales tax rate. They also assume that transit fares will be increased in line with inflation. CDOT will administer just over $6 billion ($11 billion YOE) of state and federal revenues.

Figure 24


Revenues Available for Use in the Denver Region
FY 2012-2035
(in billions of 2008 dollars)
DRCOG Administered Funds ($1.0)
Revenues for Aviation ($5.4)
CDOT Administered Funds ($6.5)
RTD Administered Transit Funds ($23.8)
Non-Regional System Funds ($41.4)
Other Regional System Funds ($15.1)
Total: $93.2 billion

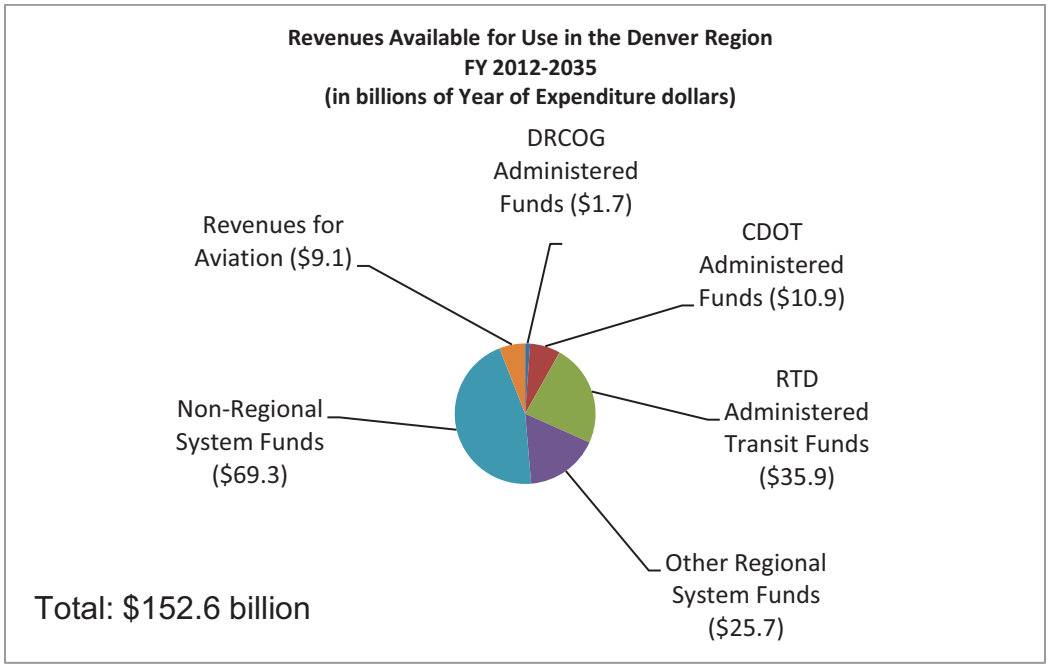

Revenues Available for Use in the Denver Region
FY 2012-2035
(in billions of Year of Expenditure dollars)
DRCOG Administered Funds ($1.7)
Revenues for Aviation ($9.1)
CDOT Administered Funds ($10.9)
RTD Administered Transit Funds ($35.9)
Non-Regional System Funds ($69.3)
Other Regional System Funds ($25.7)
Total: $152.6 billion

Table 5 Fiscally Constrained 2035 RTP Revenues (Total from 2012 to 2035)

Funding Source/Administrator	Revenues ($ millions, rounded)	
	Constant (FY08 $)	Inflated (YOE $)
DRCOG Administered Funds		
STP-Metro	$437	$731
Local Match/Overmatch for STP-Metro	$148	$247
STP-Enhancement	$72	$121
Local Match/Overmatch for STP-Enhancement	$36	$60
Congestion Mitigation/Air Quality (CMAQ)	$306	$512
Local Match/Overmatch for CMAQ	$41	$69
DRCOG Subtotal	**$1,040**	**$1,740**
CDOT Administered Funds		
Strategic Projects	$640	$1,072
Surface Treatment	$773	$1,294
Faster Bridge	$1,167	$1,954
Bridge Programs	$379	$635
System Quality Maintenance/Tunnels	$631	$1,056
Congestion Relief Program	$160	$269
Mobility Maintenance (snow & ice)	$344	$576
Gaming	$177	$296
Faster Safety	$646	$1,082
Strategic Transit	$248	$415
Safety Programs	$755	$1,265
Project Delivery	$104	$174
Regional Priority Program (RPP)	$242	$406
Local Participation in CDOT Projects	$36	$61
FTA Specialized Transit Programs (5310, 5311,5316,5317)	$96	$161
Other Federal	$60	$100
Toll Revenues	$19	$31
CDOT Subtotal	**$6,480**	**$10,850**
RTD Administered Funds		
RTD Sales and Use Tax	$18,273	$27,948
Farebox Revenues	$2,130	$3,566
FTA New Starts	$1,173	$1,340
FTA Formula Funds (5307, 5309, 5316, 5317)	$917	$1,536
Other RTD Revenues	$1,275	$1,529
RTD Subtotal	**$23,770**	**$35,920**
Other Revenues for Regional System		
Local/Private Funding for System Improvements	$2,039	$3,604
Local Funding for Regional System Operations & Preservation	$8,560	$14,368
Toll Authority Funding for System Improvements	$626	$1,144
Toll Authority Funding for Preservation, Operations, & Debt	$2,929	$5,101
Local Funding for Transit Operations	$521	$872
Local & GOCO Lottery Funding for Bike/Ped	$381	$637
Other Regional System Subtotal	**$15,060**	**$25,730**
Revenues for Non-Regional Facilities		
Local/Private Funds for Non-Regional Facilities	$29,650	$49,640
Local Funds for Non-Regional System Preservation	$11,730	$19,640
Non-Regional Subtotal	**$41,380**	**$69,280**
Revenues for Aviation		
Aviation Subtotal	**$5,450**	**$9,120**
GRAND TOTAL	**$93,180**	**$152,640**

* CDOT funds for non-regional facilities included in CDOT totals

The second largest individual allocation of funds, $6.5 billion in 2008 constant dollars ($10.9 billion in YOE dollars), will be administered by CDOT. Federal and state fuel taxes are the primary source. About 30 percent of the CDOT administered revenues will originate from Federal Highway Administration (FHWA) formula sources (Surface Transportation Program, Interstate Maintenance, National Highway System, Bridge, etc.). CDOT combines all of the federal funds with state funds and then redistributes them through several categories as shown in Table 5. All federal funds expended in the Denver TMA must be approved by DRCOG for inclusion in six-year TIPs.

DRCOG will administer and select projects for three FHWA formula categories. Including match, these total approximately $1.0 billion in constant 2008 dollars ($1.7 billion in YOE dollars). STP-Metro funds can be used on a wide variety of project types, most commonly on roadway improvements. STP-Enhancement funds are primarily used for bicycle and pedestrian projects. Congestion Mitigation/Air Quality (CMAQ) funds will be used for several types of projects and activities related to improving air quality. Example CMAQ projects include:

- DRCOG RideArrangers Program and TDM pool
- Regional Traffic Signal System Improvement Program
- Regional ITS Pool
- New bus services (start-up) and transit stations
- New rapid transit facilities
- Street sweepers, vacuums, and liquid deicers
- Other air quality improvement projects (e.g., diesel retrofits)

Local governments, along with private developers and tollway authorities, are anticipated to have available about $15 billion in revenues in 2008 constant dollars ($26 billion in YOE dollars) to complete projects on and preserve and operate the regional transportation system. Some of these revenues are reported in Table 5 as local match to DRCOG or CDOT administered funds. An additional $41.4 billion in 2008 constant dollars will be spent on non-regional facilities. This estimate is primarily based on applying historic trends of private and local government expenditures to the forecast growth in population and local street mileage.

Periodically, federal revenues are awarded through grant programs such as the Recreational Trails Program, the Transportation and Community and System Preservation Program (TCSP), and other programs. Projects chosen to receive funding from these programs must be included in the TIP. The *Fiscally Constrained 2035 RTP* does not include estimates for these types of revenues nor identify specific projects that might receive them. DRCOG will endorse those programs and projects

identified in or consistent with the goals and policies of the *Metro Vision 2035 Plan*, 2035 MVRTP, and other plan elements identified in Chapter 1, Section B. In general, projects of this nature are not regionally significant and the awards are not overly large, so RTP amendments may not be needed.

Federal earmarks or discretionary awards are reflected in the *Fiscally Constrained 2035 RTP* in three ways:

- RTD's FasTracks financial plan includes assumptions about receipt of federal New Starts funding over the life of the plan. Those assumptions have been validated through the Senate Bill 90-208 review process and are identified in Table 5. No other federal discretionary awards or transit earmarks are explicitly included in the estimated revenues.

- Federal earmarks previously called out in SAFETEA-LU authorization are assumed to be already expended and are not included in the *Fiscally Constrained 2035 RTP* financial plan.

- The resource allocation process also defined that any future earmarks that would diminish the amount of federal funds expected by the state in the formula programs would not be considered as additional revenue. Depending on the size of such awards, if they are for projects that are not currently specified or inferred in the *Fiscally Constrained 2035 RTP*, it may be necessary to amend the *Fiscally Constrained 2035 RTP* to show earmarked projects and remove other projects that had been assumed to be undertaken with regional revenues. If federal earmarks or discretionary awards are determined to truly be above the estimated formula amounts, an RTP amendment would be processed to include any that are for regionally significant project work. DRCOG may also endorse requests for studies or pre-implementation actions for projects identified in or consistent with *Metro Vision 2035 Plan*, 2035 MVRTP, and other plan elements identified in Chapter 1, Section B if they do not diminish the amount of federal funds expected by the state in formula programs.

Expenditures

Table 6 displays the estimated needed costs for categories of transportation activities in 2008 constant dollars and the fiscally constrained revenues in 2008 constant dollars that are estimated to be expended through 2035 to address them.

Table 6 Metro Vision Transportation System Costs and Fiscally Constrained 2035 RTP Expenditures (from 2012 to 2035 in FY '08 $ millions)			
System Category		**Total Estimated Cost**	**Fiscally Constrained Revenues**
1. Preservation and Maintenance	**Total**	**$35,100**	**$23,370**
A. Regional Roadway System:			
- Resurfacing, Maintenance		$11,400	$7,290
- Toll Operations		$630	$370
- Road Reconstruction (Specific Projects + Pool)		$3,720	$2,450
- Bridge (Specific Projects + Pool)		$3,630	$1,110
B. Off-street Bicycle/Ped. Facility Maintenance		$35	$30
C. Non-regional roads		$15,000	$11,780
-Non-regional bridges		$640	$340
2. Base Transit Services	**Total**	**$14,800**	**$14,070**
- RTD System Facilities & Fleet		$2,030	$2,030
- Base RTD Bus/Rail Service		$10,710	$10,710
- Base RTD Specialized ADA Service		$710	$710
- Maintain Other Transit Services (E&D, rural)		$1,300	$620
3. Management, Operational, & Air Quality	**Total**	**$4,200**	**$2,190**
- Roadway Operational, Multimodal, RR Grade Sep.		$910	$370
- Transportation Management, ITS, Signal Systems		$340	$190
- Maintain and Operate Management, ITS, Signals		$2,400	$1,180
- Safety Specific Improvements		$350	$340
- TDM Program + RideArrangers		$130	$66
- Air Quality Conformity Programs and Purchases		$90	$39
4. Capital Improvements - Capacity Expansion	**Total**	**$66,200**	**$42,250**
A. Regional Roadway System:			
- Additional GP lanes		$11,651	$3,280
- Interchange (new & upgrade)		$3,200	$1,080
- Bus/HOV Lanes		$684	$490
- I-70 Mountain		$1,290	$590
B. New Regional Transit:			
- FasTracks Rapid Transit / BRT stations / DUS		$6,080	$6,080
- Other Regional Rapid Transit (Tier 2 part)		$3,560	$0
- Other Conceptual Rapid Transit Lines (Tier 3)		$3,870	$0
- RTD Bus Capital Expansion (FasTracks bus + CMAQ)		$480	$480
C. Other:			
- New Bicycle/Pedestrian Facilities		$900	$590
- Other enhancement		$40	$10
- Front Range Commuter Bus		$40	$0
- State Intercity Corridors (Tier 2 part)		$3,580	$0
- Eastern Freight Rail Bypass + UPRR Improves.		$230	$0
- New UPRR and BNSF Intermodal + DRIR		$980	$0
- New Minor Arterials & Collectors		$11,390	$11,390
- New Local (developer) Streets		$18,260	$18,260
5. Debt Service (Tollways & RTD)	**Total**	**$5,850**	**$5,850**
- RTD FasTracks debt service		$3,500	$3,500
- Toll highway debt service		$2,350	$2,350
6. Aviation Facilities	**Total**	**$6,410**	**$5,450**
	GRAND TOTAL	**$132,560**	**$93,180**

Source: RTD, DRCOG, and CDOT

Figure 25 displays the surface transportation expenditure categories shown in Table 6. Table 7 displays the fiscally constrained expenditure information in year of expenditure dollars. The following generalized categories are presented:

1. Preservation and maintenance of the regional roadway system, off-street bicycle and pedestrian system, and the local street system;
2. Provision of base transit services;
3. Future management, operational, and air quality projects and services;
4. Capital improvements and expansion of the regional roadway, transit, bicycle, local street, and freight railroad systems;
5. Debt service payments; and
6. Aviation facilities.

The first five categories represent the surface transportation system. In most categories of expenditures, only a portion of total costs can be covered by fiscally constrained revenues.

Figure 25 2035 Metro Vision RTP Total Vision System Cost & Fiscally Constrained Revenues by Expense Category

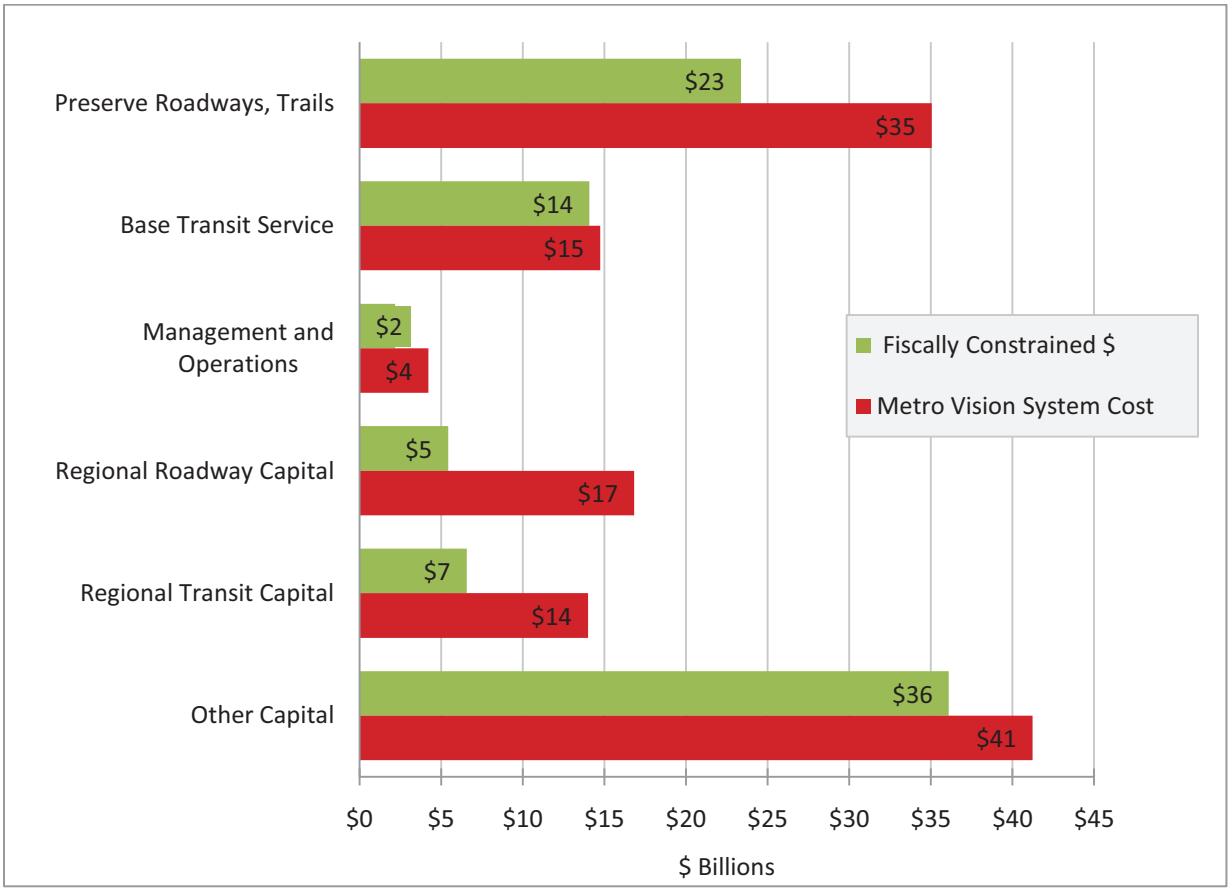


Table 7 Fiscally Constrained 2035 RTP Expenditures (from 2012 to 2035 in YOE $ millions)		
System Category		**Fiscally Constrained Revenues**
1. Preservation and Maintenance	**Total**	**$39,130**
A. Regional Roadway System:		
- Resurfacing, Maintenance		$12,210
- Toll Operations		$620
- Road Reconstruction (Specific Projects + Pool)		$4,100
- Bridge (Specific Projects + Pool)		$1,850
B. Off-street Bicycle/Pedestrian Facility Maintenance		$50
C. Non-regional roads		$19,730
- Non-regional bridges		$570
2. Base Transit Services	**Total**	**$23,560**
- RTD System Facilities & Fleet		$3,400
- Base RTD Bus/Rail Service		$17,940
- Base RTD Specialized ADA Service		$1,190
- Maintain Other Transit Services (E&D, rural)		$1,030
3. Management, Operational, & Air Quality	**Total**	**$3,840**
- Roadway Operational, Multimodal, RR Grade Separations		$620
- Transportation Management, ITS, Signal Systems		$290
- Maintain and Operate Management, ITS, Signals		$2,180
- Safety Specific Improvements		$570
- TDM Program + RideArrangers		$110
- Air Quality Conformity Programs and Purchases		$70
4. Capital Improvements - Capacity Expansion	**Total**	**$67,770**
A. Regional Roadway System:		
- Additional GP lanes		$5,740
- Interchange (new & upgrade)		$1,850
- Bus/HOV Lanes		$740
- I-70 Mountain		$990
B. New Regional Transit:		
- FasTracks Rapid Transit / BRT stations / DUS		$7,000
- Other Regional Rapid Transit (Tier 2 part)		$0
- Other Conceptual Rapid Transit Lines (e.g., C-470, E-470)		$0
- RTD Bus Capital Expansion (FasTracks bus + CMAQ)		$800
C. Other:		
- New Bicycle/Pedestrian Facilities		$990
- Other enhancement		$20
- Front Range Commuter Bus		$0
- Statewide Passenger Rail Corridors (Tier 2)		$0
- Eastern Freight Rail Bypass + UPRR Limon Subd. Improves.		$0
- New UPRR and BNSF Intermodal + DRIR, Denver Utah Jct., etc.		$0
- New Minor Arterials & Collectors		$19,070
- New Local (developer) Streets		$30,570
5. Debt Service (Tollways & RTD)	**Total**	**$9,220**
- RTD FasTracks debt service		$5,280
- Toll highway debt service		$3,940
6. Aviation Facilities	**Total**	**$9,120**
	GRAND TOTAL	**$152,640**

Source: RTD, DRCOG, and CDOT

Preservation and Maintenance of the Roadway System and the Base Transit System

In 2008 constant dollars, approximately 40.2 percent of the funds expended on transportation will be used for preservation and maintenance of the roadway system and operation, and maintenance of the base transit system. Table 6 details the expenditure of $37.4 billion in these activities. Of that, about $11.2 billion will be available to preserve and maintain the regional roadway system, far less than the $19.4 billion needed. About $12.1 billion will be available to preserve and maintain non-regional roads and bridges, again less than the $15.6 billion needed. RTD and other transit operators have identified about $14.1 billion to provide base transit service. The deficit of revenues to preserve base transit service is approximately $650 million, principally for non-RTD service.

As inferred by the great disparity between needs and fiscally constrained expenditures, roadway system quality will decrease dramatically. As previously discussed, more reasonably anticipated resources could conceivably have been devoted to regional roadway system quality. However, even putting ALL "regional roadway capital" funds to bridge and roadway reconstruction and maintenance activities does not fully address the need. Performance would be substantially below that experienced today. Simply put, current resources are insufficient to maintain the system at a desired level.

Management and Operation of the Roadway System

About $2.1 billion will be used for operational and safety improvements and management activities to enable more efficient travel on the system. Management and operational strategies (see Chapter 4, Section I) to improve the efficiency and reliability of the roadway system are very important in light of the limited revenues that will be available for expansion of the system. However, anticipated management and operational expenditures cover only about half of the identified need.

Travel Demand Management

A little more than half of the envisioned cost for providing travel demand management services will be funded in the *Fiscally Constrained 2035 RTP*. Extensive services will still be provided with the $66 million in 2008 constant dollars allotted to future programs run by DRCOG, transportation management organizations, local governments, and other entities. With limited funding available for expansion of the roadway system, TDM services (see Chapter 4, Section J) will be critical to reducing motor vehicle travel demand and offering mobility options.

for expansion of the roadway system, TDM services (see Chapter 4, Section J) will be critical to reducing motor vehicle travel demand and offering mobility options.

C. Regional System Improvements

Excluding debt service on bonds, about $12 billion in 2008 constant dollars ($17.1 billion in YOE dollars) will be available for roadway and transit capacity and other major improvements to the regional surface transportation system. Aviation system expenditures will total about $5.5 billion in 2008 constant dollars ($9.1 billion in YOE).

The characteristics of the fiscally constrained 2035 surface transportation system are compared to the existing 2010 system in Table 8. Table 8 also shows the characteristics for the full unconstrained Metro Vision system described in Chapter 4.

Fiscally Constrained 2035 Roadway System

Regionally significant roadway capacity improvements included in the *Fiscally Constrained 2035 RTP* are illustrated on Figure 26 and listed in Appendix 4. They are depicted as either regionally funded or funded with 100 percent locally derived revenues. Figure 27 depicts the fiscally constrained roadway system that will result from the improvements. The specific number of lanes and alignment of some roadways are estimated at this time. Final definition will occur in future studies.

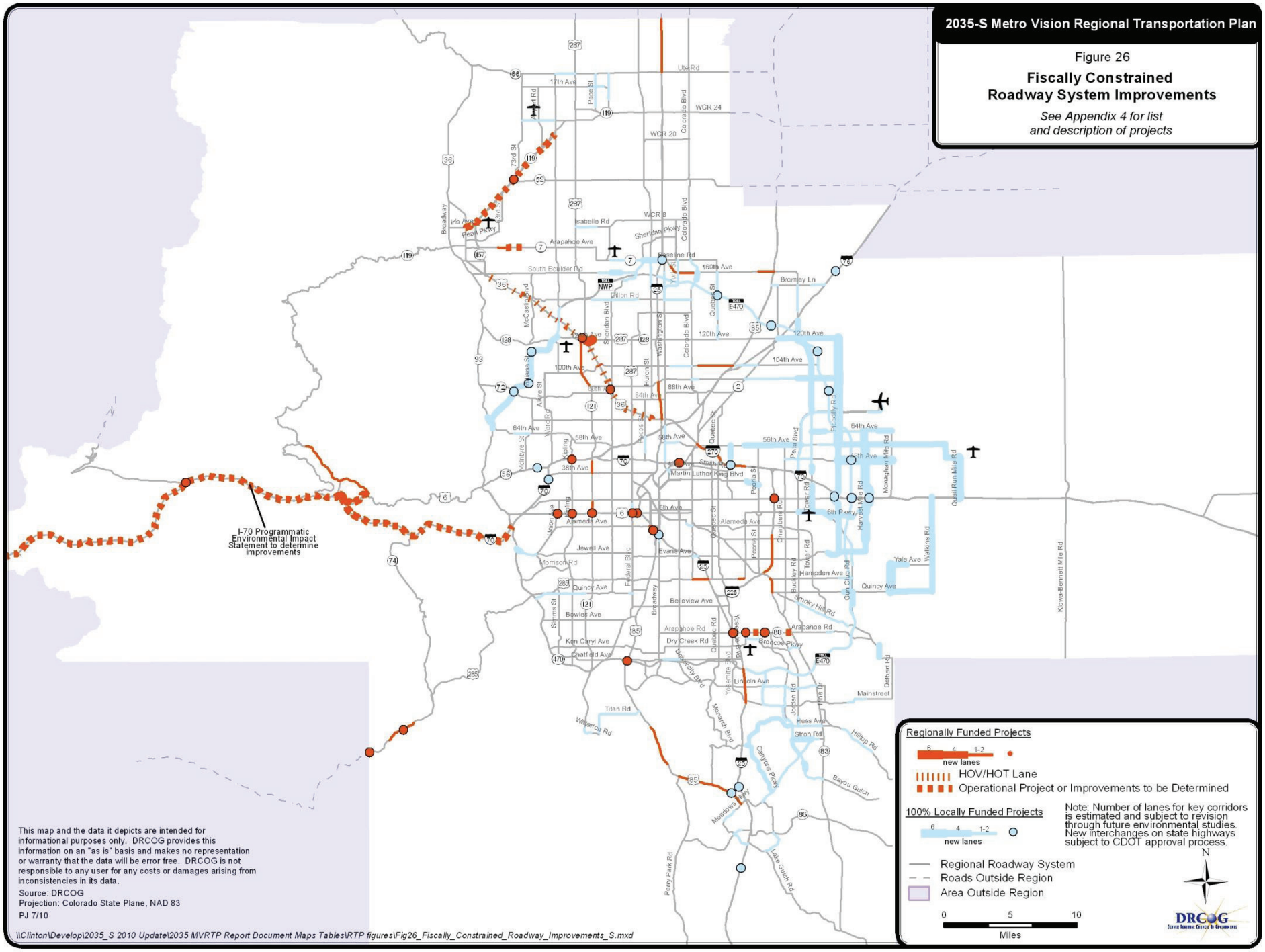
Table 8 Fiscally Constrained 2035 RTP System Characteristics			
System Characteristic	**2010**	**2035 Fiscally Constrained**	**2035 Metro Vision**
Regional Roadway Lane-Miles (includes reclassified roads)			
Freeways/Tollways	1,935	2,154	2,374
Major Regional Arterials	1,042	1,103	1,242
Principal Arterials	3,960	4,768	5,405
Total Regional Roadway System Miles	**6,937**	**8,025**	**9,021**
Interchanges			
On Freeways/Tollways	221	235	241
On Arterials, not Freeways	24	32	56
Rapid Transit Centerline Miles			
Light Rail	36	63	63
Commuter Rail	0	92	92
Undetermined Rail Technology	0	0	290
High-occupancy Vehicle/Bus Facilities	34	37	71
Bus Fleet (fixed-route systems)	1,130	1,480	1,480
Bus Hours (millions in annual revenue service)	2.4	3.3	3.3
Bus Miles (millions in annual revenue service)	36.8	48.3	48.3
Rail Cars	49	311	undetermined
Transit Stations and park-n-Ride Lots (*number of parking spaces*)			
Rapid Transit Stations with Parking	31 *(19,766)*	63 *(44,059)*	undetermined
Rapid Transit Stations without Parking	15 *(0)*	28 *(0)*	undetermined
Transit/Transfer Centers	4 *(0)*	5 *(0)*	undetermined
RTD park-n-Ride Lots	41 *(7,021)*	48 *(9,020)*	undetermined
CDOT Carpool Lots	6 *(926)*	6 *(926)*	undetermined
Total	***(27,713)***	***(54,005)***	

Source: DRCOG for highway, bicycle and airport statistics and rapid transit estimates.
RTD for bus and rail fleet and park-n-Ride estimates

Figure 26

Fiscally Constrained Roadway System Improvements

See Appendix 4 for list and description of projects



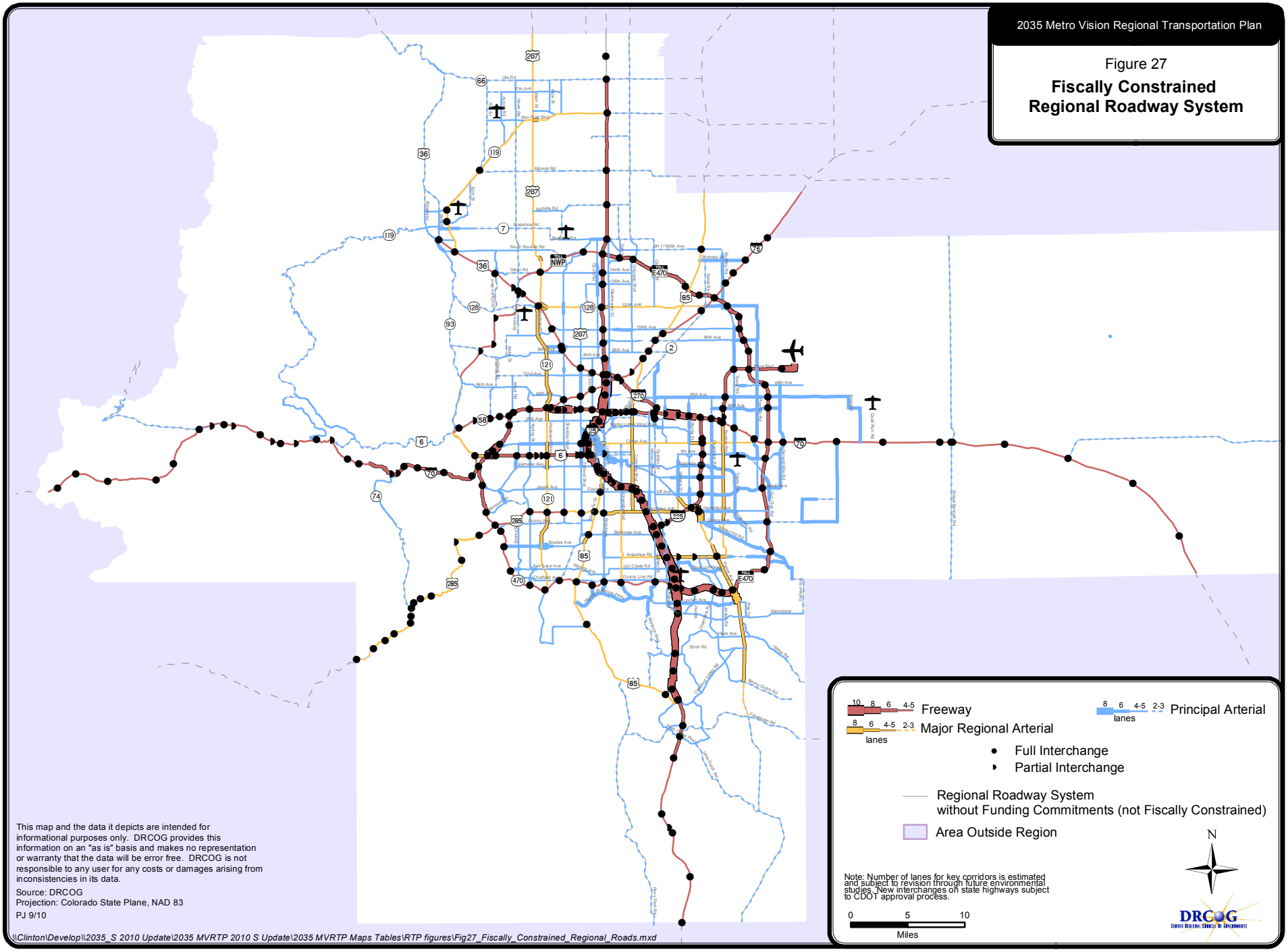
This map and the data it depicts are intended for informational purposes only. DRCOG provides this information on an "as is" basis and makes no representation or warranty that the data will be error free. DRCOG is not responsible to any user for any costs or damages arising from inconsistencies in its data.

Source: DRCOG
Projection: Colorado State Plane, NAD 83
PJ 7/10

\\Clinton\Develop\2035_S 2010 Update\2035 MVRTP Report Document Maps Tables\RTP figures\Fig26_Fiscally_Constrained_Roadway_Improvements_S.mxd

Figure 27

Fiscally Constrained Regional Roadway System



Note: Number of lanes for key corridors is estimated and subject to revision through future environmental studies. New interchanges on state highways subject to CDOT approval process.

This map and the data it depicts are intended for informational purposes only. DRCOG provides this information on an "as is" basis and makes no representation or warranty that the data will be error free. DRCOG is not responsible to any user for any costs or damages arising from inconsistencies in its data.

Source: DRCOG
Projection: Colorado State Plane, NAD 83
PJ 9/10

\\Clinton\Develop\\2035_S 2010 Update\2035 MVRTP 2010 S Update\2035 MVRTP Maps Tables\RTP figures\Fig27_Fiscally_Constrained_Regional_Roads.mxd

The key fiscally constrained roadway improvements are presented below.

Freeways:

- I-225 widening from Parker Road to Mississippi
- I-25 widening from US-36 to Thornton Parkway
- I-25 widening from Ridgegate Parkway to C-470
- I-25 widening from SH-66 to Weld County Road 38
- I-270 widening from Vasquez Boulevard to Quebec Street
- I-70 in Clear Creek County and western Jefferson County (undetermined improvements)
- I-70 viaduct replacement (partial) from Brighton Boulevard to Colorado Boulevard
- I-70 widening from I-270 to Havana Street
- Pena Boulevard widening from I-70 to DIA
- US-36 addition of Bus/HOV/HOT lanes from Table Mesa Drive to I-25. This project will also include bus rapid transit (BRT) accommodations such as slip ramps to transit stations.
- E-470 widening from I-25 south to I-25 north
- Jefferson Parkway from SH-93 to SH-128

New Freeway Interchanges:

- I-25/Douglas Lane
- I-25/Castle Gate
- I-70/Harvest Mile Road
- SH-58/Cabela Drive
- E-470 at 48th Avenue, 88th Avenue, 112th Avenue, Potomac Street, and Quebec Street
- Jefferson Parkway at SH-72, Candelas Parkway, and Indiana Street

New Movements at Freeway Interchanges:

- I-70/Picadilly/Colfax
- US-36/Wadsworth Boulevard/120th Avenue

Major Improvements of Freeway Interchanges:

- I-25 at SH-7, Alameda Avenue/Santa Fe Drive, and Arapahoe Road
- I-70 at 32nd Avenue, Kipling Street, Vasquez Boulevard, and E-470
- US-6 at Simms Street, Kipling Street, Wadsworth Boulevard, and Federal Boulevard
- US-36 at Sheridan Boulevard

- C-470 at Santa Fe Drive
- I-225 at Colfax Avenue/17th Avenue

Elimination of Freeway Interchanges:

- US-6/Bryant

Major Regional Arterial Roadways:

- 120th Avenue from east of US-36 to US-287 new roadway
- Arapahoe Road (SH-88) widening operational improvements from I-25 to Potomac Street
- US-85 widening from Meadows Parkway to Cook Ranch Road
- Wadsworth Boulevard widening from 36th Avenue to 46th Avenue and from 92nd Avenue to SH-128
- SH-119 operational improvements from Foothills Parkway to Hover Road
- Parker Road widening (SH-83) from Quincy Avenue to Hampden Avenue
- Hampden Avenue widening from Colorado Boulevard to I-25 and from Dayton Street to Havana Street
- US-285 widening from Richmond Hill to Shaffers Crossing

Major Regional Arterial Grade-Separated Intersections:

- Longmont Diagonal (SH-119)/Mineral Road (SH-52)
- US-85/ North Meadows Drive
- US-285/ Pine Junction
- US-285/Kings Valley Drive

Principal Arterials

About 264 lane-miles of new principal arterial roadways are planned for construction as part of the *Fiscally Constrained 2035 RTP*. About 544 lane-miles will be added to existing facilities through widening projects. Improvements are concentrated within the DRCOG urban growth boundary/area (UGB/A) except for arterials that connect non-contiguous UGB/A sections, such as freestanding communities. Improvements to principal arterial roadways are detailed in Appendix 4.

Other Roadway Improvements

Many other improvements to the regional roadway system are anticipated in the *Fiscally Constrained 2035 RTP* but are not classified as regionally significant for purposes of air quality conformity modeling, nor have exact locations for such been defined. Such improvements are not illustrated on the system improvement map (Figure 26) but are eligible for future TIP funding from the following categories:

- Safety
- Operational
- Management and ITS
- Reconstruction
- Bridges

Fiscally Constrained 2035 Improvements that Address Freight

Freight concerns largely relate to mobility and access issues. Mobility issues pertain to smooth and reliable traffic conditions on the region's freeways, major regional and principal arterials, and at-grade crossings on freight railroad tracks. Access issues deal with road geometrics, bridge clearances and weight restrictions, and severe bottlenecks between the regional system roadways and major freight facilities.

The following fiscally constrained roadway improvements will especially benefit the movement of freight:

- Improvements to I-70 viaduct;
- Widening of I-270, I-25 north of US-36 and north of SH-66, I-25 south of C-470, I-70 east of I-270, and I-225 north of Parker Road;
- Widening key arterials such as US-85 north of Castle Rock, 56th Avenue, Wadsworth Boulevard, and SH-7 east of I-25;
- Widening of US-36 (HOT/HOV lanes);
- Improvements to I-70 and US-285 in the mountains;
- Other improvements to the regional roadway network (widenings, new interchanges, interchange reconstruction);
- Operational and reconstruction pool projects to be selected in future TIPs; and
- Expansion of the ITS facilities and traffic management capabilities.

Fiscally Constrained 2035 Improvements that Address System Quality

Practically all of the regionally funded roadway improvements shown on Figure 26 include reconstruction of the current facility and structures in the estimated cost. Obvious exceptions are entirely new roadways (e.g., 120th Avenue connection east of US-36) and interchanges (e.g., I-25/Castle Gate). Some of the projects with notable reconstruction aspects include:

- I-70 viaduct replacement (partial) from Brighton Boulevard to Colorado Boulevard;
- I-225 widening from Parker Road to Mississippi Avenue;
- I-270 widening from Vasquez Boulevard to Quebec Street;
- I-25 widening from US-36 to Thornton Parkway; from SH-66 to WCR 38;
- US-285 widening from Richmond Hill to Shaffer's Crossing;
- US-85 widening from Meadows Parkway to Cook Ranch Road; and
- Major improvements of freeway interchanges such as I-25/Alameda/Santa Fe, I-70/Vasquez, US-6/Wadsworth, US-6/Federal, and US-36/Sheridan.

Fiscally Constrained 2035 Transit System

The rapid transit system contained in the *Fiscally Constrained 2035 RTP* is depicted on Figure 28 and the improvements are listed in Appendix 4. The *Fiscally Constrained 2035 RTP* also includes the fixed-route bus network. The park-n-Ride facilities that support the Fiscally Constrained 2035 rapid and bus transit system are shown in Figure 29 and listed in Appendix 2.

Fiscally Constrained 2035 Rapid Transit System

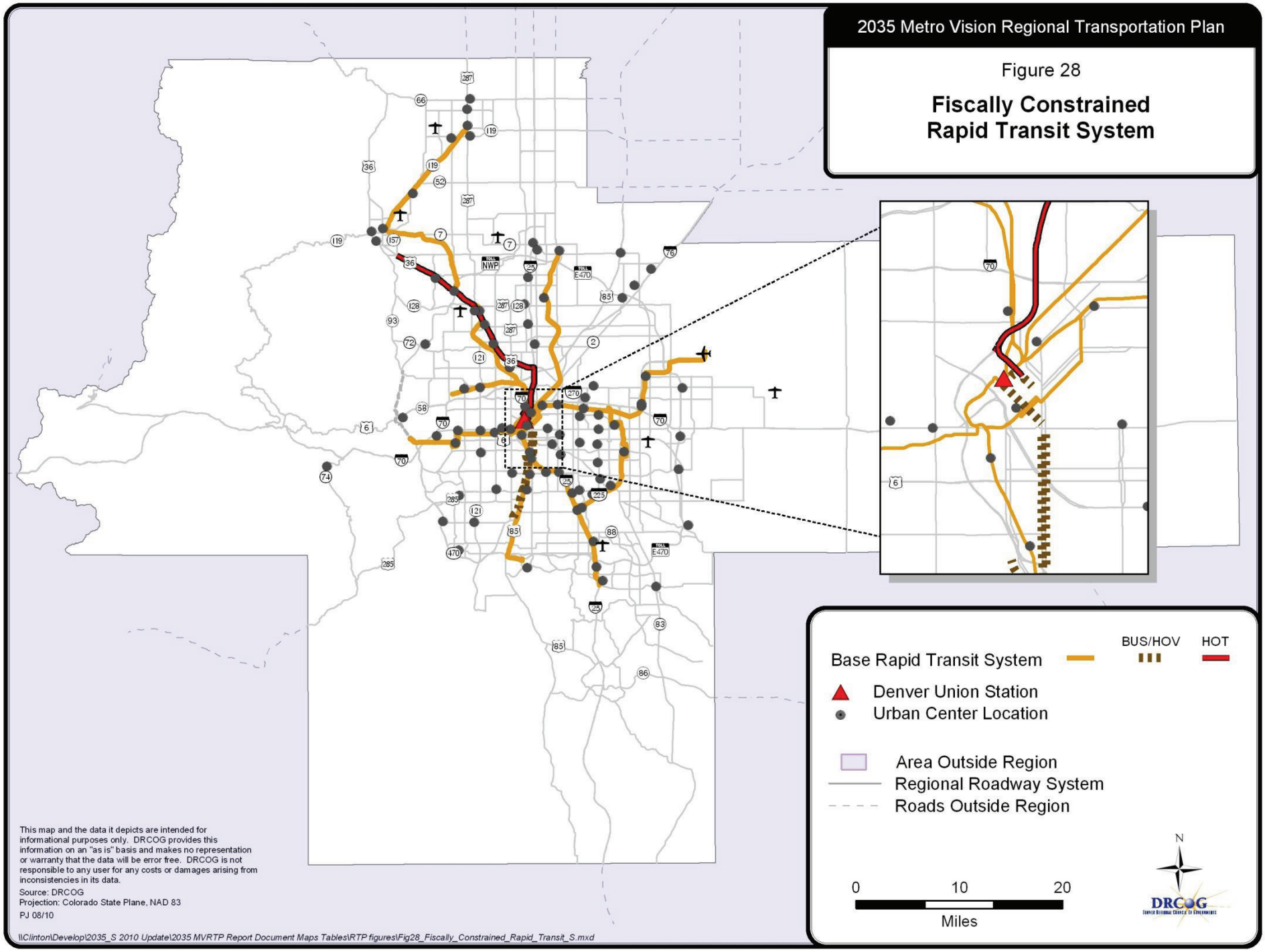
In November 2006, the Southeast Corridor light rail line opened for service. It represents another step toward the completion of the 2035 fiscally constrained rapid transit system depicted in Figure 28. An additional 119 miles of rapid transit rail lines will be constructed as part of the RTD FasTracks Plan. These additional lines will be completed by 2019, under the assumption that voters will approve an additional 0.4 percent sales/use tax. Several major urban centers will be developed around rail stations.

Bus/HOV lanes make up another component of the rapid transit system. The current facilities along Santa Fe Drive, Broadway/Lincoln, the 16th Street Mall, and US-36 will be complemented by the extension of a bus/HOV/HOT facility to Boulder along US-36. The US-36 lanes will be enhanced with special stations, ramps, and vehicles to serve as a bus rapid transit (BRT) system. The I-25 Express lanes north of downtown will continue operation as managed lanes.

2035 Fixed-Route Bus and Other Services

RTD will expand its fixed-route public bus service extensively within its boundary. Fixed-route service includes scheduled regional, express, and local routes. Overall bus service will increase by about 36 percent by 2035 over the service levels provided in 2005. This value accounts for bus routes that will be eliminated or redeployed after rail transit lines open. Key elements of the 2035 system include:

- Increase bus fleet from 1,130 to 1,480;
- Many bus routes will be adjusted to serve as feeders to rapid transit stations;
- Suburb-to-suburb crosstown bus service will expand significantly;
- New bus routes will be added;
- RTD will facilitate expanded bus service through an integrated system of timed transfer points;
- RTD's ADA service will expand along with adjacent fixed route bus service;
- Non-RTD elderly and disabled transit services will expand as funding permits; and
- Physical and operational improvements will be made to multimodal streets that will have high-frequency bus service such as:
    - Colfax Avenue;
    - Colorado Boulevard;
    - Broadway (Denver, Englewood, and Littleton);
    - Broadway (Boulder);
    - Federal Boulevard;
    - Sheridan Boulevard;
    - Alameda Avenue;
    - 28th Street (Boulder); and
    - Wadsworth Boulevard.


2035 Metro Vision Regional Transportation Plan
Figure 28
Fiscally Constrained Rapid Transit System
Base Rapid Transit System
BUS/HOV
HOT
Denver Union Station
Urban Center Location
Area Outside Region
Regional Roadway System
Roads Outside Region
0
10
20
Miles
N
DRCOG
This map and the data it depicts are intended for informational purposes only. DRCOG provides this information on an "as is" basis and makes no representation or warranty that the data will be error free. DRCOG is not responsible to any user for any costs or damages arising from inconsistencies in its data.
Source: DRCOG
Projection: Colorado State Plane, NAD 83
PJ 08/10
\\Clinton\Develop\2035_S 2010 Update\2035 MVRTP Report Document Maps Tables\RTP figures\Fig28_Fiscally_Constrained_Rapid_Transit_S.mxd

park-n-Ride Lots, Stations, and Transfer Points

RTD's park-n-Ride lots provide an important place for thousands of patrons to access transit service. They are an integral part of the rapid transit and bus systems. Several existing lots fill up early in the morning each weekday, prohibiting more commuters from using transit. Many new lots will be constructed by 2035 and several existing lots will be expanded (see Figure 29 and listing in Appendix 2). Park-n-Ride lots can be associated with rapid transit stations or can serve bus routes only. By 2035 the following fiscally-constrained facilities will be available:

- 111 RTD park-n-Ride lots (stand-alone and rail stations with parking);
- 6 carpool lots (CDOT operated);
- 1 non-RTD transit parking facility;
- approximately 54,000 parking spaces; and
- 41 integrated bus timed-transfer points.

In addition to the park-n-Ride transit stations, there are numerous existing and planned stations without parking (see Appendix 2). There are currently 15 transit stations without parking that are located primarily in the central area of Denver and associated with the Central Corridor and Central Platte Valley light rail line. An additional 14 stations without parking are planned in the FasTracks program.

Over 10,000 bus stops will be located around the region to serve transit patrons. Several bus stops will be enhanced to become key timed-transfer points in the system. They will enable convenient bus-to-bus, bus-to-rail, and rail-to-bus transfers. Others will receive enhanced station-like treatments for passengers to allow BRT buses to load more quickly.

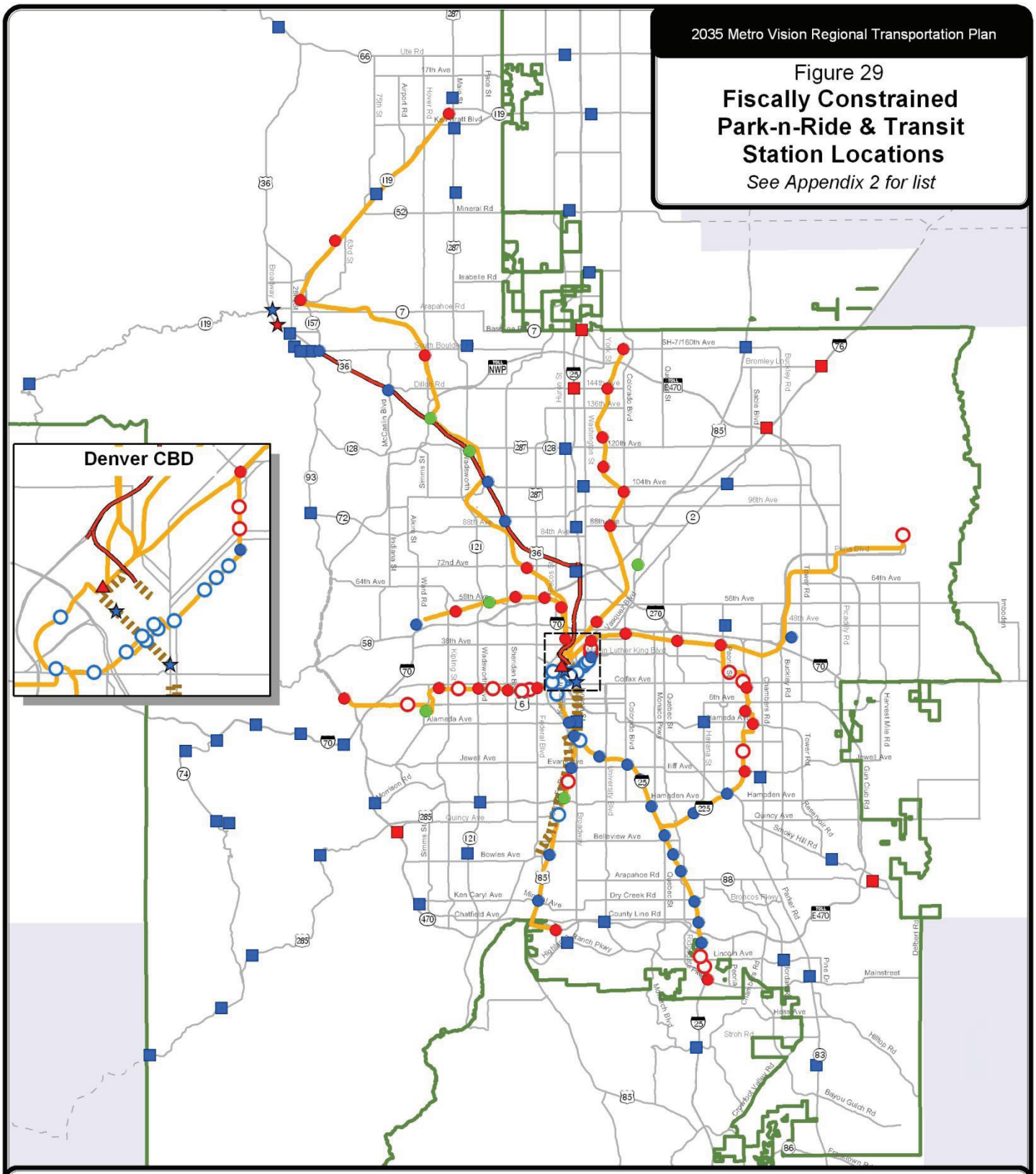
In order to improve efficiency, new systems will transmit information to variable message signs on the roadways to inform drivers of the availability of spaces in key park-n-Ride lots. Transit information kiosks will be provided at major park-n-Ride lots, transfer points, and BRT bus stops to provide riders with information regarding the arrival and departure of transit vehicles.

2035 Metro Vision Regional Transportation Plan

Figure 29

Fiscally Constrained Park-n-Ride & Transit Station Locations

See Appendix 2 for list



This map and the data it depicts are intended for informational purposes only. DRCOG provides this information on an "as is" basis and makes no representation or warranty that the data will be error free. DRCOG is not responsible to any user for any costs or damages arising from inconsistencies in its data.

Source: Regional Transportation District; DRCOG
Projection: Colorado State Plane, NAD 83
PJ 10/10

\\Clinton\Develop\2035_S 2010 Update\2035 MVRTP Report Document Maps Tables\RTP figures\Fig29_PnR_S.mxd

Fiscally Constrained Aviation

Airport funding for capital projects comes from a number of sources as detailed below:

- The Airport Improvement Program, a federal airport grant program administered by the Federal Aviation Administration (FAA), is funded primarily through user taxes on airline tickets and aviation fuels;
- Passenger facility charges imposed by air carrier airports, subject to FAA approval, are collected by airlines for each passenger who enplanes at the collecting airport, with current DIA charges at $4.50 per enplaned passenger;
- Excise taxes on aviation fuels are charged by the State of Colorado, and 65 percent of the tax revenue collected is returned to the collecting airport to be used for aviation purposes;
- The Colorado Discretionary Aviation Grant Program, administered by the Colorado Aeronautical Board, is funded with the 35 percent of aviation fuels excise tax not returned to the collecting airports. The purpose of the grant program is to benefit the state air transportation system, with individual grants generally limited to $50,000; and
- Airports may also generate operating revenue by implementing fuel flowage fees, landing fees, lease and rental fees, sale of agricultural crops, etc. These revenues can be used to fund the day-to-day operation of the airport, or as local match for state and federal grant programs. Local match can also be provided through the sale of revenue bonds or from local general funds.

Improvements to the region's airport system will be limited to the funds available from the resources identified, and other funding opportunities that may develop. Table 9 lists identified total needs for the region's airports and an estimate of the funds that may be available through 2035. Fiscally constrained funding for the general aviation airports will only allow the completion of a portion of the improvements identified in Chapter 4. Priority will be given to the rehabilitation of runways, taxiways, and safety areas.

Table 9 Identified Metro Vision Costs and Estimated Funds for the Region's Airports (millions of current dollars)		
Airport	**Projected Needs**	**Estimated Fiscally Constrained Funds Available**
Denver International (DIA)	$5,870	$5,350
Boulder	$28	$12
Centennial	$127	$22
Erie Municipal	$9	$6
Front Range	$143	$21
Rocky Mountain Metropolitan	$218	$24
Vance Brand (Longmont)	$12	$8
Total	**$6,407**	**$5,443**

Source: CDOT Division of Aeronautics survey of airports and DIA.

Other Funding Considerations

- Fiscally constrained 2035 roadway system improvements on Figure 27 indicated to be funded with 100 percent locally-derived revenues are not eligible for FHWA formula funds;
- Overmatch incentives for the TIP have historically resulted in a 30 to 40 percent match for non-capacity projects. This level of match has therefore been assumed for such projects in the plan. A 20 percent match has been assumed for STP-Metro or CMAQ-funded roadway/HOV capital improvements;
- Nearly all federal STP-Enhancement funds expected to be available will be used for bicycle and pedestrian improvements. Some enhancement funds will be used for other eligible improvements. Additional bicycle and pedestrian improvements are expected to be part of highway capacity improvements;
- Elderly and disabled transit services will be funded through RTD; FTA Section 5310, 5311, and 5317 funding sources; and money generated by private carriers. Transit services for job access/reverse commute trips will be funded by FTA Section 5316 funding sources; and
- To demonstrate conformity, interim years of the Fiscally Constrained 2035 RTP must be examined. DRCOG and air quality planners defined these interim modeling years to be 2015, 2020, and 2025. DRCOG, local governments, CDOT, and RTD identified, for modeling purposes, best estimates as to which projects in the Fiscally Constrained 2035 RTP would be completed by the end of each of these interim staging years. Consideration

was given to funding source, project schedule, status of studies, project scores, reconstruction needs, and interest/availability of local match. For regionally funded roadway projects, each of these staging periods was fiscally constrained to reasonably expected revenues identified by the resource allocation process. Consistent with the RTD FasTracks Financial Report, the regional rapid transit system of Figure 28 was assumed to be fully operational by the 2020 interim stage with the exception of the final segment of the US-36 Bus/HOV/HOT lane from Table Mesa to Interlocken. Appendix 5 identifies the Fiscally Constrained 2035 RTP roadway projects and the staging year the improvements are estimated to be completed. This staging process is neither a guarantee nor a prohibition of funding in a certain period. It reflects current best estimates. Actual project funding is determined through the TIP process (within the TMA) and the STIP process in the non-TMA portion of the region. Staging adjustments necessitated by TIP/STIP awards would be reflected in the TIP conformity and an associated revision to conformity of the RTP.