

### Task 2

#### State and Local Rail Programs

This **State Freight and Passenger Rail Plan** is the first comprehensive rail planning effort in Colorado in the past 20 years. It is therefore appropriate to provide not only a brief overview of previous rail planning efforts and rail related studies, but also perspective on the importance of railroads in the development of the state of Colorado.

Task 2 documentation contains the following:

- I. A Short History of Railroads in Colorado
- II. A Summary of Colorado Rail Plans/Updates
- III. A Summary of Other Rail Related Studies
- IV. A Summary of Significant State Rail Legislation and Policy Initiatives Since 1990
- V. A Summary of Key Rail Related Programs Managed by the Colorado Department of Transportation (CDOT)
- VI. A Summary of Key Rail Related Studies Relevant to CDOT
- VII. A Summary of Rail Related Programs Managed by Other State Agencies
- VIII. A Summary of Financial Support Programs for Colorado Rail Activities

#### ***I. A Short History of Railroads in Colorado***

Following the introduction of railroad technology to land transportation in the 1820s, and the successful application of steam locomotives for motive power (replacing horses) in 1830, rapid improvements in railroad equipment and operations led to exploding railroad growth across the eastern United States in the 1840s and 1850s. By the 1850s, population in the mid-western territories was growing rapidly and territories were clamoring for statehood. Texas was annexed in 1845; Oregon in 1846; and in 1861, Congress created the Colorado Territory. Gold was discovered in California in 1848, triggering the great Gold Rush. Gold was also discovered at Cherry Creek, Denver in 1858; Pikes Peak in 1859; and Cripple Creek in 1891. These Colorado discoveries attracted thousands of prospectors and settlers to the territory, bringing with them demand for improved transportation facilities.

The Mexican War of 1846-1848, which added vast territories to the United States including California, coincided with tensions with Great Britain over territories in the Pacific Northwest.

## Task 2 – State and Local Rail Programs

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There was a need for improved transportation across the vast North American continent and there was public and political pressure to build a railroad connecting the east and west in furtherance of national policy to secure these territories to the Union. In pre-Civil War America, there were a number of railroad route surveys performed by the Federal Government to determine the best routes for transcontinental railroads. However, which railroad would be built first, in the north, central or south part of the nation, became caught up in tensions which exploded into the Civil War in 1861.

With the Civil War going on and southern interests absent from Congress, in 1862 and 1864, President Abraham Lincoln signed legislation chartering two transcontinental railroad routes: the Union Pacific/Central Pacific Route, between Omaha, Nebraska and Sacramento, California; and the Northern Pacific Route, just south of the Canadian border, connecting the Great Lakes to Puget Sound. To aid in financing this and other Western railroad construction in advance of development and to meet national goals of land settlement; more efficient transportation of Federal military, mail and other traffic; and extension of Federal control to lands occupied by Native Americans, beginning with the Pacific Railway Act in 1862 and ending in 1871, Congress authorized Federal land grants of alternate sections of land directly to railroads in areas where states had not been organized while requiring reduced rates applying on Federal rail traffic (reduced rates for Federal movements was finally ended by Congress between 1940 and 1946). With the Federal Government retaining ownership of alternate sections of land, the market value and price of public lands following railroad construction increased, as did the land's taxable value. On May 10, 1869, at Promontory Summit in the Utah Territory, the first of the transcontinental railroads was completed by the Union Pacific (UP) and Central Pacific (CP) railroads. The east and the west were finally linked by rail.

The city of Denver was founded in 1858, during the Pike's Peak gold rush, as a mining town. By the 1860s, it seemed poised to benefit from a premier position on the transcontinental railroad route, as government surveys for the central corridor had passed through the Denver area. Nestled at the foot of the Colorado Front Range, Denver is where the Great Plains meets the Rocky Mountains and would be a logical place for a railroad to start its climb. The people of Denver were dismayed by UP's decision to run their line through the barren High Plains of Wyoming, 106 miles north of the city. Denver continued to seek a position on a railroad mainline.

Denver Pacific Railway & Telegraph Company was incorporated by Colorado territorial governor John Evans along with Denver government and business leaders on November 19, 1867, concerned that Denver had been bypassed by the first transcontinental railroad through Cheyenne (UP) as well as formation of a competing railroad to link Golden through Loveland to Cheyenne. Prior to formation of the Denver Pacific, the Leavenworth, Pawnee & Western Railroad, began in 1855, had been reorganized in 1863 as the Union Pacific Eastern Division to build a second transcontinental railroad from Kansas City through Fort Riley to join the UP at Fort Kearney, and had received alternating section land grants from the Pacific Railway Act. As a result of lobbying efforts by the citizens of Denver, in 1868, Congress authorized a second-phase extension of the UP Eastern Division through Denver and the Rockies to the Pacific, to

## Task 2 – State and Local Rail Programs

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compete with the Union Pacific main line, and Denver Pacific obtained a Federal alternating section land grant conditioned that it would link with the UP Eastern Division to form a through route to Cheyenne. Denver Pacific construction began on May 18, 1868 near where the Denver Coliseum now stands, and began service to Cheyenne on June 24, 1870. Meanwhile, the UP Eastern Division's name was changed in March 1869 through an act of Congress to Kansas Pacific Railway and, with \$6 million in backing from German investors, established through service to Denver in August 1870.

These two railroads were the only Colorado railroads to receive Federal land grants. Following Kansas Pacific control of Denver Pacific in the 1870s', both were merged into the Union Pacific Railway on January 24, 1880.

With the arrival of the Kansas Pacific (KP) from the east came a dynamic engineer and skilled railroad promoter, General Jackson Palmer. Palmer envisioned a network linking Denver with Mexico City. In 1870, Palmer resigned from KP and formed his own railroad company, the Denver and Rio Grande (D&RG). Palmer also took the opportunity to learn about narrow gauge railroads. These railroads, with tracks set three feet apart instead of the standard 4 feet, 8½ inches, were a popular innovation and soon spread around the world, where some networks remain in use today. Narrow gauge offered a variety of advantages in mountain terrain, including use of smaller locomotives and rolling stock, and lower construction and operating costs. A narrow gauge line could be built on a more sinuous path of steeper grades and sharper curves, through deep canyons and over high passes, thus needing less earthwork and little or no tunneling – advantageous for building railroads through Colorado's rugged mountains. Palmer wasted no time in getting the D&RG underway. Construction began southward from Denver to Colorado Springs on July 28, 1871, and regularly scheduled passenger service to Colorado Springs began in 1872.

Although Mexico was viewed as the southern terminus, the lure of Colorado mineral traffic was also an important part of Palmer's scheme. So before going south, the D&RG extended a line over La Vetá Pass to reach the fertile San Luis Valley, and pushed another branch westward from Pueblo to Cañon City, then through the Royal Gorge of the Arkansas River, a gateway to new mining camps deep in the Colorado Rockies.

Palmer's progress was stifled due to inadequate financing during the Panic of 1873. He also faced competition from the Atchison, Topeka, and Santa Fe Railroad (ATSF), pushing its way west into the Colorado Territory, with many of the same goals as D&RG. The ATSF reached the Kansas/Colorado Border in December of 1872, and in 1878 it became the first railroad to occupy Raton Pass, effectively blocking the Palmer route from reaching south. As a result of clashes with the ATSF, the D&RG refocused its efforts entirely on the Rocky Mountain region of central Colorado, Utah, and northern New Mexico.

By the 1880s, the D&RG had expanded beyond the San Luis Valley, to western Colorado mining communities, through construction of the San Juan Extension. This line ran over Cumbres Pass and then crossed the Continental Divide to reach Durango in 1881. A key branch ran northward

## Task 2 – State and Local Rail Programs

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from Durango up the Animas River to Silverton. After settling territorial differences with the ATSF, the D&RG built west from Cañon City, reaching Salida by 1880 and Leadville by 1881. The D&RG also extended a branch beyond Leadville over the 10,000 foot summit at Tennessee Pass, reaching Montrose and Grand Junction in 1881. By 1883 the D&RG had a narrow gauge line reaching Salt Lake City and beyond, reaching the CP/UP at Ogden, Utah, where it tapped into transcontinental business.

By the middle 1880s', Colorado's railroad map had a "line of demarcation" following the Front Range. East of the line, railroads were built to the national "standard" gauge. West of the line, narrow gauge railroads prevailed across the state. As long as rail movements were between mining areas and distribution centers for local traffic, the two gauge system worked well. But as passengers and freight moved longer and longer distances, the local and regional nature of Colorado's narrow gauge system became more economically disadvantaged as traffic had to be transferred to and from the nation's standard gauge rail network. First standard gauge railroad to be built into the Rockies and across the Continental Divide was the Colorado Midland Railway (1884), planned by James J. Hagerman. In 1886, this route connected Colorado Springs, Leadville, Glenwood Springs and New Castle. Most of this route was dismantled in 1921.

After nearly two decades of promoting narrow gauge railroads, the D&RG changed direction and in the late 1880's built its own standard gauge route between Denver and the Great Salt Lake. Instead of re-gauging the existing route, D&RG constructed a new mainline on the Tennessee Pass, continuing west through Glenwood Canyon on a new alignment to ease grades and curves. Colorado's narrow gauge network declined and was removed with increasing rapidity, particularly after highways spread into mountain communities and the mining industry declined. The last non-tourist operation, Rio Grande's route from Alamosa into southwestern Colorado and northern New Mexico, was abandoned in the late 1960's.

Many Colorado towns became railroad centers. Denver and Pueblo the busiest, others included Colorado Springs, Salida, Alamosa, Grand Junction, and the mining centers of Cripple Creek, Leadville, and Durango.

The railroad affair with gold and silver mining was short-lived. New industries were growing in Colorado, such as tourism, manufacturing and agriculture, and there was a need to move commodities; these became the new focus of railroads. In 1882, the Chicago, Burlington and Quincy Railroad (CB&Q) (also known by the subsidiary Burlington & Colorado), completed its line from Nebraska to Denver. Denver was now connected to Chicago over a single railroad. The ATSF eventually built north from Pueblo to Denver, paralleling the D&RG, combining to form a double track line in 1918.

John Evans, territorial governor of Colorado appointed by President Abraham Lincoln and earlier involved in the Denver Pacific and Kansas Pacific, continued to push for railroad development in Colorado. He believed in an alternate rail outlet to eastern markets, from Colorado south to the Gulf of Mexico. He envisioned a line connecting Denver and Pueblo to the Gulf of Mexico, where steam ships would connect and move traffic to the Atlantic

## Task 2 – State and Local Rail Programs

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Seaboard. In 1881, Governor Evans incorporated the Denver & New Orleans Railroad (D&NO). In the face of opposition from the D&RG, ATSF, and UP railroads, Evans began building the D&NO south from Denver to Colorado Springs and Pueblo on a reconfigured route. The D&NO was never built south of Pueblo. Under the guidance of Gov. Evans and General Grenville Dodge from the UP, a new company was formed in 1887. It operated from Pueblo to the Texas/New Mexico border and acquired control of both the Fort Worth and Denver Railway (FW&D) and the Denver, Texas and Fort Worth Railroad (later known as the Colorado & Southern Railway or C&S). On March 14, 1888 the FW&D connected with the Denver, Texas & Fort Worth Railroad in Folsom, New Mexico. In 1908 both the C&S and the FW&D became part of the CB&Q system.

More than a decade after the Rio Grande standard gauge line connected Denver and Salt Lake via Tennessee Pass, Denver-based railway promoter David H. Moffat envisioned a more direct route over the Front Range from Denver. In 1902 he founded the Denver Northwestern & Pacific Railway, which climbed over Rollins Pass at 11,660-feet. Known as the Giants Ladder, the highest mainline crossing in North America, it was only intended as a temporary route, since Moffat planned to tunnel under the Rockies once funds were available. Moffat ran out of money in 1911, and died shortly thereafter. Others picked up where he left off and in 1922 public funds were made available. In February of 1928, the first train passed through the 6.2-mile-long Moffat Tunnel at an elevation of 9,198-feet. Ultimately the D&RG assumed operation of the Moffat Route and connected it to its own mainline to form a through route in 1934 which survives today as a transcontinental route.

This history is the basis and background for many of the developments that occurred later in the 20<sup>th</sup> century, and made Colorado of great railroad importance, especially in handling coal, iron and steel, agricultural and food products, and intermodal traffic. Key events in later years include:

**1956** – Federal-Aid Highway Act of 1956 signed into law on June 29 for the construction of 41,000 miles of interstate highways over a 20-year period. This national highway network had immense economic consequences for the nation’s railroads.

**1968** – In January, the nation’s two largest railroads blanketing the Northeast and Midwest, the Pennsylvania and New York Central, merged to become Penn Central Transportation Company.

**1970** – CB&Q, Northern Pacific, Great Northern, and Spokane Portland & Seattle Railroads merged, to form the Burlington Northern (BN) Railroad in March. In June, Penn Central tumbled into bankruptcy – the largest business failure in the United States up until that time. By 1976, PC was one of seven major Northeast and Midwest railroads in bankruptcy.

**1971** – On May 1, Amtrak (the National Rail Passenger Corporation) took over operation of most intercity passenger trains from the freight railroads in a

## Task 2 – State and Local Rail Programs

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stopgap to keep trains running across Penn Central and other bankrupt carriers until the service could be ended or sold. A few railroads kept running their passenger trains rather than join Amtrak, including the Denver & Rio Grande, which continued its Denver-Salt Lake City service into the 1980's.

**1974-80** – Development of the Powder River Basin (PRB) in northeastern Wyoming into the largest coal mining region in the US, resulting in heavy coal movement through Colorado to Texas by BN. Chicago & North Western Railway (C&NW) gained access to the PRB in 1984; C&NW was merged into Union Pacific (UP) in 1995.

**1975** – Bankruptcies in the major railroads reached Colorado with the Chicago, Rock Island & Pacific (CRIP) Railroad's falling into bankruptcy in February. Rock Island served Colorado on a route across the eastern plains to Limon, then splitting to serve Denver (over UP) and Colorado Springs. Failure of the nation's major railroads went transcontinental when the Chicago, Milwaukee, St. Paul & Pacific Railroad (CMStP&P or The Milwaukee Road/MILW) fell into bankruptcy in December 1977. MILW did not serve Colorado.

**1980** – Rock Island shut down at the end of March, and was later liquidated. Freight service on the previous Rock Island route connecting Chicago to Colorado Springs, was re-instated from Limon to the Kansas State Line when Kyle Railroad began operations over this segment. Limon to Colorado Springs line was abandoned.

The Staggers Rail Act of 1980, signed into law by President Jimmy Carter on October 14, deregulated the American railroad industry (to a significant extent) and replaced the regulatory structure that existed since the 1887 Interstate Commerce Act. The act was named for Congressman Harley Staggers (D-WV), who chaired the House Interstate and Foreign Commerce Committee. The Staggers Act was one of three major Acts passed in a two year period, as the cumulative result of efforts to reform transport regulation begun in 1971, during the Nixon Administration. The other two acts were the Airline Deregulation Act (1978) and the Motor Carrier Regulatory Reform and Modernization Act (1980). It was meant to restore the nation's freight rail network to economic health following the wave of industry bankruptcies in the 1960s and 1970s which touched Colorado.

**1982** – Missouri Pacific Railroad and Western Pacific Railroad are merged into the Union Pacific. Legal merger of MP into UP was delayed until 1997 due to outstanding MP bonds.

**1980s** – Coal development in Western Colorado resulted in UP coal traffic on the Moffat Line to Denver and east. Both BN & UP increased development of intermodal yards.

## Task 2 – State and Local Rail Programs

---

**1984** – Philip Anschutz purchased the Denver and Rio Grande Western (DRGW) Railroad.

**1988** – Philip Anschutz purchased the Southern Pacific (SP), and merged it with the DRGW.

**1995** – BN and ATSF merged into the Burlington Northern Santa Fe (BNSF) Railway Co.

**1996** – UP and SP/DRGW merged, which shifted much of SP's overland traffic to the UP's main line across Wyoming, redirected flows on the Moffat Tunnel route and caused the UP to place the Tennessee Pass route into an "out of service" category. This was the stimulus for Colorado acquiring the "Towner Line" from the UP in 1998, to continue freight service to the eastern plains communities of Colorado. This was the former Missouri Pacific line in southeastern Colorado between North Avondale (just east of Pueblo) and Towner, Colorado (just west of the Kansas State line) which had been used by SP as a main line between Pueblo and Kansas City.

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## *II. A Summary of Colorado Rail Plans/Updates*

### **Colorado State Rail Plan – 1979 (Colorado's first state rail planning effort)**

The initial state rail planning effort in Colorado was completed by the Colorado Department of Highways in 1979. The Federal Railroad Administration (FRA) provided states with \$100,000 rail planning grants for the purposes of developing a state rail plan. Since this was Colorado's first state rail planning effort, more details are provided for the 1979 State Rail Plan than for subsequent plans. Major tasks included documentation of:

- Existing Colorado rail system
- Light density branch lines subject to abandonment

## Task 2 – State and Local Rail Programs

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- Rail passenger service evaluation
- Rail related impacts of energy development
- Transportation safety at rail - highway crossings

The Railroad Revitalization and Regulatory Reform Act of 1976 required the first two elements in the list above be included in any state rail plan. The additional three items were included in the Colorado State Rail Plan in response to legislative, regional and community concerns.

The Colorado State Rail Plan included the following findings and recommendations related to each of the tasks listed above:

### **Existing Colorado rail system**

Review of the existing rail system prompted the following recommendations:

- The existing framework of the Colorado Revised Statutes is adequate to carry out the recommendations of the state rail plan.
- An Office of State Rail Planning and Project Implementation (OSRPPI) should be designated within the Colorado Department of Highways. This office would carry out all responsibilities not currently assigned to the Colorado Public Utilities Commission (PUC).
- The PUC should continue its responsibilities, with support from OSRPPI.
- Recommendations in the state rail plan should be reviewed and amended on an annual basis. The first update should review any new proposed branch line abandonments; it should include a study of agricultural railroad rates in the state; and it should include feasibility study of possible rail bypass routes in the eastern plains, to remove coal train traffic from the Front Range corridor.

### **Light density branch lines subject to abandonment**

- The state's role in branch line abandonment issues should be to assist in retaining lines that are in the best interests of the community.
- Rail planning should not be fragmented from other modal planning activities. If a Department of Transportation is NOT recommended by the 1979 Colorado General Assembly, the Colorado Department of Highways should be designated as the State's rail planning and implementation agency.
- Federal funding available to Colorado (\$593,580) should focus on two branch lines in the Arkansas Valley, subsidizing operations from Swink to Cheraw and rehabilitating Hartman to McClave. Non-federal shares must come from private sources.

### **Rail passenger service evaluation**

- Each state rail plan update should assess the assumptions in this plan, to permit timely action on any passenger rail service options.
- Due to strong public support, the DRGW railroad should continue to operate the Winter Park Ski Train and the Rio Grande Zephyr. The OSRPPI should mediate

## Task 2 – State and Local Rail Programs

---

between the DRGW and affected communities, to reach agreements on service and compensation that are fair to both sides and the state.

### **Rail-related impacts of energy development**

A *Coal Train Assessment Study*, (CDOT, 1976) was updated in this section of the state rail plan.

The following recommendations were made:

- Any increase in coal train traffic along the Colorado and Southern (C&S) main line through Ft. Collins, Longmont, Boulder and Broomfield would adversely affect these communities. (The C&S and BN announced in late 1976 that this route would not be considered for coal train routing.)
- BN's Sterling, Brush, Denver coal routing should be continued.
- South of Denver, increased coal traffic will require additional sidings, restoration of double track from Palmer Lake to south of Colorado Springs, or a rail bypass of the Front Range.
- Tennessee Pass should continue to serve as a coal route from Utah and west central Colorado to Pueblo and points east. Northwest Colorado coal should use the Moffat Tunnel.
- State and local governments should take steps to ensure that development adjacent to rail lines is compatible with rail use.
- Whenever feasible, railroads should refrain from freight movements blocking rail-highway crossings during rush hours.
- Coal train movements and their associated community impacts are a national issue. Future rail plan updates should continue to evaluate possible solutions in Colorado. A study should be completed with the objective of determining cost effective ways to reduce impacts along the Front Range by relocating coal train movements outside of intensely developed urban areas.

### **Transportation safety at rail-highway crossings**

This element of the state rail plan evaluated existing rail-highway crossings, examining their potential need for a grade separation structure (overpass or underpass). The key data element used to develop these prioritized lists was the "exposure factor" (number of trains per day multiplied by the number of vehicles per day using the crossing). Fourteen crossings were recommended for grade separation structures, and another eleven crossings were recommended for further study.

### **Colorado State Rail Plan – 1980 Update**

The 1980 update to the Colorado State Rail Plan included the following:

- Response to FRA comments on the initial 1979 State Rail Plan.
- Updated description of the state's railroads and the state rail network.
- Discussion of light density lines in the state.
- Discussion of Local Rail Freight Assistance Program (LRFA) - Colorado received \$805,000 in LRFA funding in 1980, and the following projects were conducted:
  - Rehabilitation of a unit train grain loading facility in Hugo, Colorado.
  - Construction of a unit grain loading facility in Cheyenne Wells, Colorado.

## Task 2 – State and Local Rail Programs

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### Colorado State Rail Plan – 1981 Update

The 1981 Colorado State Rail Plan Update consisted of three volumes. Volume I was primarily an update of the 1980 update, and it responded to FRA comments on that update. Specific elements addressed in Volume I were:

- Updated description of the state’s rail system.
- Responses to FRA’s comments concerning the 1980 Update.
- Discussion of the State’s past and proposed Local Rail Service Assistance (LRSA) projects. Proposed LRSA projects were:
  - Rehabilitation of the former Rock Island Railroad between Limon and Flagler (\$607,143 FRA funds; Mid-State Port Authority share \$260,214).
  - Rehabilitation of the San Luis Central (SLC) Railroad from Monte Vista to Center, Colorado (FRA share of \$101,776; SLC share \$43,618).
- Discussion of the potential for additional rail passenger service to Colorado’s western slope.
- Study of the feasibility of rail relocation in Walsenburg. (Two alignments were determined to be feasible from an engineering standpoint. Additional meetings and studies were proposed between the community, state and railroads.)
- Narrative regarding the state’s grade crossing protection programs, and update of grade crossing analysis related to grade separation prioritization.
- Market analysis of a proposed auto-ferry service from the Chicago area to Denver. (The analysis indicated that ridership would be only about 1/3 of the ridership on the Virginia to Florida auto ferry service.)
- Discussion of light density rail lines, including the Rock Island Railroad. (This section of the update discussed activities related to the sale of the Rock Island Railroad to the Mid-State Port Authority, from Limon east to north central Kansas, for a total of \$19.5 million.)
- Summaries of public meetings and A-95 reviews (‘A-95’ was a federally mandated process in the 1970s/1980s documenting public input on projects proposed to receive any federal funding).

Two supplemental documents became Volumes II and III of the 1981 Update:

Volume II - Options for Rail Service along the Rock Island Railroad in Colorado. This study determined the economic feasibility of a short line railroad or branch line operation, focusing on the probable profit or loss of a carrier providing rail service. This effort led to the Kyle Railroad’s eventual operation of the line from Limon into north central Kansas, which continues to this day.

Volume III - Meeker-Piceance Basin Rail Feasibility Study. This study determined that it would be feasible to construct a new rail line into the Piceance Creek basin area (an area of proposed oil shale development approximately 30 miles northwest of Rifle, CO). The study evaluated several possible alignments and determined preliminary cost estimates as well as potential impacts related to the proposed routes.

## Task 2 – State and Local Rail Programs

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### **Colorado State Rail Plan – 1984 Update**

The 1984 Colorado State Rail Plan Update included the following:

- Response to FRA comments on earlier updates.
- Updated description of the state's railroads and the state rail network.
- Discussion of light density lines in the state.
- Discussion of the Local Rail Freight Assistance Program (LRFA). The program continued to be reduced at the national level, due to federal budget deficits. Colorado was eligible for \$805,000 in LRFA funding in 1980; the appropriation for Colorado in 1983 was only \$87,000 for light density rail line assistance.

### **Colorado State Rail Plan – 1985 Update**

The 1985 Colorado State Rail Plan Update included the following:

- Response to FRA comments on the 1984 update.
- Updated description of the state's railroads and the state rail network.
- Discussion of light density lines in the state.
- Discussion of proposed ATSF/Southern Pacific merger on Colorado railroad operations.
- Fort Collins Rail Bypass Study – This study evaluated several alternative scenarios for re-locating the BNSF rail freight mainline out of downtown Fort Collins. The study evaluated the costs and impacts of various alignments, including possible relocation of UP and Great Western Railway rail operations in the area.

### **Colorado State Rail Plan – 1991 Update**

The 1991 Colorado State Rail Plan Update was the first state rail plan update to be completed by CDOT. The previous plans were completed by CDOT's predecessor, the Colorado Department of Highways (CDOH). CDOT was created by legislation passed by the Colorado General Assembly in 1991.

The 1991 update included the following:

- Response to FRA comments on the 1985 update.
- Updated description of the state's railroads and the state rail network.
- Discussion/description of light density rail lines in the state.
- Summary of rail passenger services in the state.
- State policy revisions affecting rail planning in Colorado.
- Grade crossing studies in La Salle and Denver.
- Kyle rail yard rehabilitation project.
- Status of railroad mergers – The UP merged with the Missouri Pacific. The Missouri Pacific line between Pueblo and the Kansas state line became part of the UP system. The DRGW in 1984 became a part of Rio Grande Industries, which also included the Southern Pacific and Cotton Belt railroads. All of these railroads then operated under the name Southern Pacific Lines.

## Task 2 – State and Local Rail Programs

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### ***III. A Summary of Other Rail Related Studies***

#### **Colorado State Rail Plan – Rail Bypass Feasibility Study - 1979**

The *Rail Bypass Feasibility Study, (CDOH, 1979)* addressed the issue of increasing unit coal train traffic moving through the state, from the Powder River Basin in northeast Wyoming to Texas electric utilities. It focused on north/south coal movements and projected coal traffic to the year 2000. The study was completed with the assistance of an advisory committee that included the seven Class I railroads operating in the state at that time.

The following is an overview of the study recommendations. The key factor in the recommendations was the total number of unit coal trains along the route.

- If there were fewer than 20 coal trains per day, the study recommended moving forward with the “Urban” alternative. This essentially meant constructing grade separation structures at numerous key locations and leaving the railroad network and operating arrangements unaltered.
- If coal trains were likely to be in the 20 - 30 per day range, construction of the Brush to Limon segment of the “Sterling – Rock” alternative was to begin. (The “Sterling – Rock” alternative would also have used the Rock Island railroad between Limon and a point near Colorado Springs where new construction was to occur, linking the line to the joint line north of Pueblo.) This scenario would also have built some key grade separation structures along the existing route.
- If coal trains were likely to approach 35 per day, steps were to be taken to initiate the “All New” alternative, new construction between Brush and Las Animas.

Due to the complexities of this public/private project, involving broad community issues, the study recommended a “phased” approach. This would “help minimize potential impacts from increased coal movements and simultaneously provide an opportunity to reassess and re-evaluate project investment risk prior to large-scale commitment of public funds.” The study recommended the following sequence of steps, to “minimize risk and maximize benefits”:

- Step 1. – Discuss recommendations in a public forum within the legislative process to see if a commitment to proceed existed.
- Step 2. – Develop and construct key grade separation structures to eliminate most significant rail/highway conflicts. Begin rehabilitation of the Rock Island alignment with FRA light density line rehabilitation funds available to CDOT.
- Step 3. – Continue to monitor growth in coal train volume. The study considered the value of beginning an Environmental Impact Statement (EIS) for new construction of Sterling to Brush alignment. Simultaneously, begin negotiations with railroads, state and other parties to refine details of this alternative essential to implementation.
- Step 4. – Continue monitoring coal train growth to see if the “All New” alternative was justified. This again, was dependent on future coal train volumes reaching 35 trains per day.

## Task 2 – State and Local Rail Programs

---

### **Analysis of Proposed Amtrak Service among the States of New Mexico, Colorado, and Texas Providing Rail Passenger Service for Selected Communities (1994)**

This study conducted by the New Mexico Department of Transportation, evaluated the feasibility of new Amtrak service between El Paso, Texas, and Denver, Colorado through Albuquerque, New Mexico. The El Paso to Denver service would take approximately 17 hours and 45 minutes. It was estimated that the proposed service would generate \$7.817 million in revenues but would have a net operating loss of \$3.245 million per year excluding equipment costs. Before beginning operations, an estimated \$79.3 million in rail infrastructure improvements would be required. Of this investment, \$57.6 million would be required between Denver and Pueblo.

The study noted that further analysis would be required to:

- Develop detailed railroad operations simulation modeling. Results from this modeling would provide more specifics in terms of operating schedules and costs, due to its ability to determine conflicts with other trains.
- Finalize a detailed cost estimate.
- Cross check ridership estimates with Amtrak’s estimate of ridership.
- Explore equipment procurement options. Obtain optimum equipment arrangements for both locomotives and passenger cars, whether by purchase or lease.
- Examine commissary and maintenance facilities costs. Maintenance would include both heavy equipment maintenance costs as well as cleaning the train at its origin stations.
- Evaluate whether an EIS is necessary and if construction of additional railroad infrastructure is required at some locations.
- Identify station facilities costs that were not included in initial cost estimates. Also, all stations must be Americans with Disabilities Act (ADA)-accessible and include those costs.

Additionally, other issues were identified that could impact the feasibility of the proposed service:

- Proposed ATSF/BN merger – Rail traffic along the route could be affected by such a merger.
- Dissolution of the Interstate Commerce Commission (ICC) – This could impact the level of train traffic on the corridor as well, depending on what agency takes on the ICC’s responsibilities.
- Amtrak’s existing contract with the Class I railroads expired in 1996. Future contracts could change Amtrak’s cost structure

### **Colorado Passenger Rail Study (1997)**

In February of 1995, CDOT published its 20-year multi-modal transportation plan, based on 15 regional plans compiled around the state. The 20-year plan concluded passenger rail service was lacking in the state. Nine corridors were identified as potential candidates for passenger

## Task 2 – State and Local Rail Programs

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rail service (at a CDOT-developed capital cost estimate of \$757 million), and two projects were identified that would enhance existing Amtrak service (at a cost of \$72.1 million). The plan stated that five corridors were considered “high priority” for passenger rail service:

- Denver – Colorado Springs
- Leadville – Avon
- Craig – Steamboat Springs
- Glenwood Springs – Avon
- Fort Collins/Greeley – Denver

Very little quantitative data on ridership, costs, and other impacts were available during the development of the regional plans. Many of the high-priority corridors were identified based on stakeholder input.

As a result, CDOT moved forward with a statewide study to determine the feasibility of implementing passenger rail service in selected corridors. The screening process utilized in the *Colorado Passenger Rail Study* identified the following ‘high priority’ passenger rail corridors, and recommended further analysis:

- Denver - Fort Collins
- Denver - Colorado Springs
- Leadville – Vail – Glenwood Springs – Aspen
- Steamboat Springs – Vail – Aspen

The following ‘medium priority’ corridors were found to have some potential for passenger rail service and were recommended for further study:

- Winter Park – Steamboat Springs
- Golden – Black Hawk/Central City
- Fort Collins – Cheyenne

Study recommendations were offered in three steps:

- Long range vision, which would take well over 30 years to develop
- Core system plan, which would take at least 20 years to develop
- Immediate action plan; which outlined recommended ‘next steps’

Three segments of the core system plan were recommended for immediate advancement:

- Denver – Fort Collins
- Glenwood Springs – Aspen

Steamboat Springs – Hayden/Yampa Valley Regional Airport

### **Statewide Rail Needs Study (1999)**

The *Statewide Rail Needs Study*, (CDOT, 1999), was similar to the rail plan updates in the 1980s and in 1991. The study addressed the following topics:

- Class I and short line system overview and individual analysis of each railroad
- Discussion of potential branch line abandonments
- Rail-highway grade crossings

## Task 2 – State and Local Rail Programs

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- Passenger rail needs
- Overall rail transportation needs
- Rail funding opportunities
- Analysis of current rail planning in Colorado
- Assessment of successful rail planning programs in other states

The following summary highlights study recommendations:

- Tennessee Pass is the only corridor considered “high priority” as a possible abandonment candidate. Since the line is currently “out of service”, CDOT should continue to monitor the corridor and should take action if the line is scheduled for abandonment.
- CDOT should review the formula used to recommend grade crossings for improvement. The 25 highest priority crossings in the state have been recommended for upgrades totaling \$25.75 million. A systematic inventory of all rail-highway crossings (public and private) should be established.
- A “crossing closure” study should be undertaken by CDOT to see if any crossings might be closed.
- The North Front Range planning process should continue to evaluate whether rail is the most cost-effective transportation solution for the Ft. Collins / Greeley / Denver corridor.
- CDOT should consider approaching UP and BNSF to see if opportunities exist for partnering in the joint line corridor from Denver to Pueblo.
- CDOT should explore possible new Amtrak stops at Wray and Kremmling, and possible improvements to other existing stations.
- CDOT should create a formal mechanism for communicating with railroad operators in Colorado.
- CDOT should consider establishing a state rail assistance program.
- Elements of the Rail Vision should be evaluated to see if there are elements that can be undertaken immediately.
- Overall state rail needs are estimated at \$2.74 billion, with 90% of the total for passenger needs.

### **Rail Oriented Development: Strategies and Tools to Support Passenger Rail Handbook – CDOT Research Branch (2002)**

*Rail-Oriented Development: Strategies and Tools to Support Passenger Rail Handbook (CDOT, 2002)*, (known as ‘the Handbook,’) is the final product associated with the *Land Use and Transportation System Components to Support Passenger Rail Study (the ‘Study’)*, sponsored by CDOT in 2001. The 9-month study was initiated to research and define land uses, land development patterns and transportation system characteristics that support passenger rail. The Study’s findings are presented in the Handbook, which was designed to provide practical answers to questions regarding passenger rail planning. The Handbook lists factors to be considered by local decision makers when developing a community’s policies regarding land use decisions that support rail. The Colorado Department of Transportation does not endorse these factors or present them as recommended policies.

## Task 2 – State and Local Rail Programs

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The Handbook was based on extensive research into the land use/rail transit relationship, and on an evaluation of existing North American rail transit systems and their urban environments. The Handbook was described land uses and development patterns that would support rail transit in Colorado. It is worth noting that the land uses, development patterns and transportation system characteristics described in the Handbook are applicable outside of Colorado. Communities across the state and country could find that these strategies and tools also achieve a variety of common community goals, including:

- A mix of land uses and design treatments, which can help to create vibrant activity centers and contribute to a sense of place
- Creation of a balanced transportation system
- A land use pattern that can easily be served by any type of transit
- Preservation of open space by encouraging infill development

### **2002 High Speed Rail Application**

In February, 2002, CDOT applied to the FRA for the designation of a High Speed Rail (HSR) Corridor in Colorado, called the Colorado Corridor. The proposed corridor was comprised of two separate segments. The first segment was along the Front Range of Colorado, running in a north-south alignment, from Pueblo north to Fort Collins. This Front Range line would connect 85% of the state's population in the urbanized areas of Pueblo, Colorado Springs, Denver, Boulder, Longmont, Loveland, Fort Collins and Greeley. The 180-mile corridor would consist of a southern and northern portion.

The southern portion (between Denver and Pueblo) would likely be located within the rail right of way jointly owned and operated by BNSF and UP. The northern portion would likely consist of some combination of existing UP and BNSF lines, as well as some new construction. A recently completed North Front Range Transportation Alternatives Feasibility Study (TAFS) - 2000 identified a preferred new fixed guide way alignment along I-25, but a subsequent North I-25 Draft EIS is examining other alignments, including existing tracks. One extension of this Front Range segment was commonly referred to as the 'Air Train.' Planned as a commuter rail line between downtown Denver and Denver International Airport (DIA), this 23-mile leg was viewed as a functionally significant connection for the Front Range HSR line.

The second segment of the Colorado Corridor was identified as HSR service running east-west along I-70 from DIA to Vail and the Eagle County Airport. This segment would also incorporate the above-mentioned Air Train segment to DIA. Considerable local planning has taken place along this corridor and passenger rail service has been chosen as the preferred alternative in a Draft I 70 Mountain Corridor Programmatic Environmental Impact Statement (PEIS) – (2002). However, many issues of technology choice, compatibility, and system integration remain. Given steep grades, engineering difficulties, and power requirements, this 160-mile line was anticipated to cost more than \$4 billion in 2002.

## Task 2 – State and Local Rail Programs

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The Colorado Department of Transportation sought FRA approval in granting designation status for the Colorado Corridor. CDOT urged the designation of both the Front Range and the I-70/Mountain lines as one “corridor,” although the Front Range line was the top priority. (FRA did not take any action to designate this corridor).

### **Eastern Colorado Mobility Study (2002)**

The *Eastern Colorado Mobility Study*, (CDOT, 2002) was undertaken to assist the Colorado Transportation Commission in making investment decisions regarding infrastructure improvements to enhance freight mobility within a study area that included all of eastern Colorado, extending to the I-25 corridor on the west and Colorado’s borders on the north, east and south. The study purpose was defined as: “To evaluate the feasibility of improving existing and/or construction of future transportation corridors and intermodal facilities to enhance the mobility of freight services within and through eastern Colorado.” The study’s recommendations are summarized as follows:

- SH 71 from the Colorado/Nebraska state line to Brush and on to Limon, as well as I-76 from Brush to Denver, was officially designated by the Colorado Transportation Commission as the “Heartland Expressway”; one of the federal “High Priority Corridors” on the National Highway System (NHS).
- Additional site-specific highway improvements were also recommended.
- Relocation of existing intermodal facilities to new sites was recommended, in order to provide additional land for future expansion of the facilities.

Rail Project recommendations were as follows:

- Class I Railroad Projects – focused on increasing capacity by constructing new lines, second main tracks or siding tracks.
- Short Line Railroad Projects – focused on upgrading existing track structure and roadbed materials to accommodate heavier car loadings.
- Highway/Railroad At-Grade Crossing Improvements – focused on Class I rail lines aimed at improving safety by constructing grade separation structure or closing crossings.

### **CDOT Public Benefits and Costs Study (2005)**

CDOT and the two Class I railroads operating in Colorado, the BNSF and the UP (hereafter jointly referred to as the Railroads), completed several reviews and studies since 1979, investigating the potential for public-private partnerships that would culminate in the relocation of a significant portion of through freight rail traffic, away from the congested Front Range onto a bypass route in the Eastern Plains of Colorado.

In 2003, CDOT, in cooperation with the Railroads, initiated the *Public Benefits and Costs Study* (Public Benefits Study). It measured the benefits and economic impacts of the proposed projects, estimated construction costs, and assessed broad funding and financing options. The study focused on two options for through freight rail: No-Build and Build.

## Task 2 – State and Local Rail Programs

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### **The No-Build Option**

This option established a baseline against which to evaluate the proposed project. The No-Build Option was a scenario in which the proposed bypass project is not built. Significant improvements to the existing freight railroad infrastructure would still be needed. Capital investments and ongoing operating and maintenance (O&M) costs would continue to accrue to the railroads even if the project is not built. For example, some track improvements to handle increased traffic along the Front Range would be required under the No-Build Option, but not with the Build Option.

### **The Build Option**

The Build Option involved the various costs of a major relocation of through-freight train traffic east of the Front Range urban corridor, plus additional infrastructure improvements and/or relocations of rail yards and intermodal facilities. There were also benefits associated with each of these undertakings. Public benefits associated with the Build Option included:

- Reduced auto, truck, and emergency vehicle delays at grade crossings.
- Improved air quality and reduced noise and vibration in built-up metro areas. Less populated areas may experience reduced air quality and more noise and vibration.
- Statewide economic development, jobs creation, and urban redevelopment opportunities.
- Reduced train-vehicle incidents.
- Alternate routing to reduce terrorist and hazardous materials risk and system-wide delays.
- Future passenger rail facilitation.

The Public Benefits Study concluded that the citizens of Colorado would accrue more than sufficient benefits to warrant the investment of public dollars in the proposed relocation project.

### **CDOT Rail Governance Study (2008)**

The need for this study stemmed from the fact that no government entity had the funding mechanism or the statutory authority to operate a coordinated system of interregional or statewide transit service in Colorado. CDOT conducted the *Rail Governance Study* to examine options that could be used to plan, fund, implement, operate and maintain interregional or statewide transit service. Developing passenger rail governance options was the initial direction of the study. However, based on input from a technical advisory committee (TAC), it was agreed that interregional transit via *any* technology would have the same issues as passenger rail. CDOT has the statutory authority to plan and develop multimodal transportation projects, including transit. CDOT also has clear statutory authority to construct and maintain the state

## Task 2 – State and Local Rail Programs

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highway system and provide funding to support transit services provided by others (Senate Bill 1 and FTA transit grants). There was no clear authority allowing CDOT to implement and operate transit service, nor was there a long-term reliable source of funding necessary for an interregional or statewide transit system. There are some private sector providers such as Greyhound, and TNM&O Coaches and government-owned AMTRAK. These service providers have limited routes, frequency, and hours of operation which, while valuable, could not be interpreted as an integrated statewide or regional transit service.

CDOT formed a TAC to assist with the Rail Governance Study. The TAC identified three basic governance types: Special statutory districts; Regional Transportation Authorities (RTAs); and Colorado DOT-based structures. The three options considered most viable by the TAC were:

- 1. Enhanced CDOT structure:** This would create a program within CDOT with decision-making and fiduciary responsibility. The program would include an advisory committee or board with community members. Final decisions would rest with the Colorado Transportation Commission. This model would require statutory action with a mandate and authority for CDOT to implement statewide or interregional transit services.
- 2. Autonomous structure housed within CDOT:** This would be an entity within CDOT but with a separate, autonomous board, similar to the CDOT Aeronautics Division, with powers and funding set by statute. The current Aeronautics Board is appointed by the governor, but other options for a transit division could include an elected board or a board made up of local jurisdictional representatives.
- 3. Statewide or interregional transit/rail district:** This public entity would be formed under the State's Special Statutory District provisions, similar to that used by the Regional Transportation District (RTD), with powers established by statute. It would be an entity unto itself, apart from CDOT. It would have its own fiduciary responsibility, which would require creation of a new organization and administrative structure.

All three options focus on having a governance structure that is capable of providing interregional or statewide transit services.

The TAC reached consensus that the use of a statewide/interregional (and not regional) model is important, given the concept and scale of a statewide, integrated transit system. The TAC recognized CDOT's unique position and potential for intermodal planning, interregional coordination, and more direct access to federal funding, and institutional capability in developing large-scale projects. Use of a CDOT-based model requires an increased focus on transit and new statutory authority. At the same time, a separate district governance model was viewed as potentially more focused on a specific mission or project.

The TAC recommended that the state should take a leading role in setting overall policy, providing planning and project guidance, securing financing, and ensuring meaningful input from local entities as to policy, service delivery, and station design and development.

## Task 2 – State and Local Rail Programs

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### **CDOT Rail Relocation Implementation Study (2009)**

The *Colorado Rail Relocation Implementation Study*, (CDOT, 2009). This study was also referred to as R2C2 (Rail Relocation for Colorado Communities). The purposes of the study were to:

- Determine steps that must be taken to form a public-private partnership.
- Better define and finalize the scope and costs of potential projects.
- Determine how costs should be shared, based on both public and private benefits and related factors.
- Identify sources of funding.
- Determine how to finance a project.
- Develop strategies for carrying out the necessary environmental requirements.
- Make recommendations for ‘next steps’.

The final report listed the numerous assumptions and methodologies that were used in the R2C2 study, which would need to be reviewed and updated to provide a current analysis as future steps are taken. The following is a list of recommendations for CDOT’s further consideration:

- Create a citizens advisory group to provide a basis for citizen involvement with CDOT, relating to potential relocation of through rail freight to eastern Colorado.
- Provide a detailed evaluation of the benefits and impacts of a potential new eastern Colorado rail bypass line to the agriculture industry and communities of eastern Colorado.
- At the completion of the R2C2 and Rocky Mountain Rail Authority (RMRA) studies, combine the results of R2C2 and portions of the RMRA’s I-25 corridor passenger rail feasibility study to determine the consolidated benefits and costs to the state of both freight and passenger operations. Continue to identify funding sources to combine the findings of the R2C2 and RMRA studies.
- Continue conversations with the Railroads and the public to explore options that might lead to implementation of a bypass under a public-private partnership. Utilizing the results of the cost and rail operations analysis of study alignments A and B, pursue with both Railroads options that might lead to the future implementation of a bypass. Such options could include either of the study alignments A or B, combinations of those two alignments, or different alignments that might emerge in ongoing discussions.
- Continue to support federal and state initiatives that might provide funding and financing programs that could be utilized in the implementation of a new rail bypass. Take steps necessary to keep possible partners in a public-private partnership well positioned to take advantage of future funding sources.
- Provide R2C2 study results to other private parties that have expressed interest in participating in a partnership that might lead to the potential implementation of a through rail freight bypass in eastern Colorado.

## Task 2 – State and Local Rail Programs

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### **Rocky Mountain Rail Authority High Speed Rail Feasibility Study (2010)**

The Rocky Mountain Rail Authority (RMRA) was formed in 2008 as a multi-jurisdictional government body of more than 50 Colorado cities, towns, counties, and transit authorities, for the purpose of conducting the *RMRA High Speed Rail Feasibility Study*. The study evaluated the I-70 corridor from Denver International Airport (DIA) to Grand Junction and the I-25 Corridor from Cheyenne, to Trinidad. The 18-month study focused on determining whether options exist that are capable of meeting FRA technical, financial and economic criteria for high-speed rail feasibility.

Combinations of technologies/routes/stations were analyzed with a focus on technical and economic feasibility. Additionally, a steering committee of stakeholders met monthly to provide input to the project team.

Rail routes were organized into three categories:

- Existing rail – Using either the tracks or right-of-way of an existing rail corridor
- Constrained/highway right-of-way – Solely within, or contiguous to the I-70 and I-25 highway rights-of-way
- Unconstrained/Greenfield – A new route outside the rights of way of the I-70 and I-25 corridors

The study evaluated six types of proven vehicle technologies. It determined that multiple feasible options exist, but the RMRA selected one option for further refinement and analysis to use as the test case for the development of an implementation plan. This option, known as the ‘FRA Developed Option,’ uses a very high speed electric train (average speeds of 120 to 200 mph and a maximum speed of 220 mph in the I-70 highway right-of-way and I-25 unconstrained routes.)

The study divided the project development into four phases, which included building and clearing the proposed routes in segments. It recommended the following ‘next steps’:

- Develop a Colorado state rail plan
- Develop an interregional connectivity study
- Coordinate with the freight railroads
- Request HSR Corridor designation
- Expand the coalition of supporters

## ***IV. A Summary of Significant State Rail Legislation and Policy Initiatives Since 1990***

### **Rail Line Acquisition Report (1997 – 2010)**

The purpose of the Rail Line Acquisition Report is to provide the Transportation Legislative Review Committee (TLRC) with the Colorado Department of Transportation’s report on rail abandonments and recommendations relative to possible rail line acquisitions. Legislation

## Task 2 – State and Local Rail Programs

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passed in 1997 called for this report to be submitted annually by the Executive Director of CDOT to the TLRC, pursuant to 43-1-1303 (3) C.R.S.

The structure of this annual report is described below. The specific elements identified and recommendations that follow are from the 13<sup>th</sup> version of the CDOT report, provided to the Legislature in September, 2010.

### **Part I – Background information**

### **Part II - New initiative and activities**

### **Part III - Recommendations**

There were no abandoned major rail lines in Colorado, nor were there any lines which were considered to be at high risk for abandonment. Consequently, the department is not recommending to the TLRC that any railroad rights-of-way or rail lines be acquired by the state. However, the department is recommending the following actions:

- Continue to monitor the Towner Line
- Complete the State Rail Plan
- Continue to monitor the status of the Tennessee Pass line
- Continue to monitor the status of the Fort Collins Branch line

### **Towner Line Acquisition Legislation (1998)**

The Colorado Legislature passed House Bill 1395 on April 22, 1998 which authorized CDOT to acquire a 121.9-mile-long rail line in eastern Colorado known as the “Towner Line”. This legislation was amended in 1999 by HB 99-1382 which extended the length of time by 18 months (to December 31, 2001) for CDOT to sell or lease the line to a financially responsible railroad operator. (The results of this legislation are discussed in more detail in the “Towner Line Acquisition and Lease” portion of this document.)

### **Rail Corridor Preservation Policy (2000)**

In June of 2000, the Colorado Transportation Commission passed Policy Directive #1607.0, adopting policy related to railroad corridors of state interest. The directive’s purpose was to provide a framework for determining the conditions CDOT would consider for defining and preserving rail corridors.

The policy stated that state transportation interests may be served by participating in rail transportation for the following reasons:

- Preserving rail corridors for future use may save money since the cost to preserve a corridor for future transportation is often far less than having to purchase an equivalent corridor in the future.
- Rail transportation may be needed in certain corridors to supplement the highway system and to provide adequate mobility and travel capacity.

## Task 2 – State and Local Rail Programs

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- Rail transportation can be a cost effective and environmentally preferable mode of transportation in certain situations.
- Preserving existing freight rail service by preventing a railroad from being abandoned can reduce the maintenance costs on state highways, since the transportation of displaced rail freight will increase deterioration of the state highway system.
- Freight rail service can serve as a lifeline for the economic health of a community when there are no other modes that adequately and economically serve the community's needs.

The policy selected the following criteria for identifying State Significant Rail Corridors:

- Magnitude of negative impacts upon adjacent highways
- Immediacy of possible abandonment
- Immediacy of actions that may jeopardize an existing or future rail corridor
- Estimated cost of acquiring the corridor
- Public-private partnership potential for the corridor

The policy stated that CDOT will identify State Significant Rail Corridors in the statewide plan. Also, the policy noted that if a corridor is identified as a State Significant Rail Corridor, CDOT may engage in, but is not restricted to, certain methods of participation in either passenger or freight rail transportation. Lastly, the policy described the appropriate activities for CDOT if the rail corridor has not been identified as a State Significant Rail Corridor but has been identified in a Regional Transportation Plan.

### **Creation of Division of Transit and Rail (2009)**

In 2009, the Colorado Legislature passed Senate Bill 94, creating the Division of Transit and Rail (DTR), a new division within the Colorado Department of Transportation. The new Division is authorized to promote, plan, design, finance, maintain and contract transit and rail services such as passenger rail, advanced guideway systems, and buses. In May, 2010, the Colorado Transportation Commission approved the 2010/2011 budget for the new division which included eight new employees (including a director), in addition to the existing seven employees transferring to DTR from CDOT's Division of Transportation Development.

### ***V. A Summary of Key Rail Related Programs Managed by CDOT***

#### **Rail Crossing Safety Program**

The Railroad Crossing Safety Program, within CDOT's Safety and Traffic Engineering Branch, has the following responsibilities and work products:

1. Manage the federal Section 130 program which includes:
  - a) Install protective devices at highway-rail grade crossings.

## Task 2 – State and Local Rail Programs

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- b) Eliminate at-grade crossings by closure or by construction of grade separation structures.
  - c) Coordinate work by railroad forces on CDOT construction projects.
  - d) Evaluate and prioritize candidate projects for Section 130 grade crossing protection device projects.
  - e) Coordinate between the railroads and region designers on CDOT construction projects that involve construction on or near railroad right of ways, such as highway bridges over a railroad. Ensure that the needs of both parties are met as much as possible.
  - f) Prepare and coordinate the execution of contracts among CDOT and the involved railroads and/or local agencies.
  - g) Prepare (or coordinate preparation of, if on local streets or roads) applications to Public Utilities Commission (PUC) covering proposed changes to the existing grade crossing.
  - h) Schedule and conduct periodic coordination meetings among CDOT staff, Class 1 railroads, Federal Highway Administration (FHWA), and FRA.
  - i) Prepare/coordinate issuance of plans for Section 130 grade crossing device projects.
  - j) Monitor grade crossing project construction and coordinate change order activities.
  - k) Advise CDOT engineering staff on the nature of hazards to highway users posed by railroad operations.
2. In coordination with the railroads, maintain the statewide crossing database and ensure that the FRA database corresponds with the latest state information.
  3. In coordination with the CDOT Safety and Traffic Engineering Branch and other state and local agencies, investigate and evaluate train-vehicle incidents to determine what safety measures were in place and what additional measures should be applied, if any.
  4. Coordinate railroad planning activities such as mobility studies, abandonment/corridor acquisition, intermodal connections, and passenger rail, with Rail Planning Unit of CDOT's Division of Transit and Rail.
  5. Maintain a record of all hazardous materials incidents. In the past 35 years, there have been almost three hundred such incidents, which resulted in 12 actual spills of hazardous material.
  6. Ensure that the highway-rail component of the annual Highway Safety Improvement Plan complies with the mandates of that program.

### **Federal Section 130 Funds**

Highway-rail crossing safety work may occur on any CDOT transportation improvement project. In addition, the federal Section 130 program (in existence since 1974) earmarks funds (approximately \$2 million annually) for individual grade crossing safety projects on Colorado streets, roads and highways. Each year, the Federal Highway Administration (FHWA) apportions funds to help improve roadway-rail safety, pursuant to 23 U.S.C. §130 and related federal law. These funds must be applied toward projects that eliminate hazards at highway-rail crossings, including the separation or protection of at-grade crossings, and the relocation of highways to eliminate grade crossings. Section 130 projects are identified and prioritized based on an accident prediction analysis. The CDOT Safety and Traffic Engineering Branch, Railroad Crossing

## Task 2 – State and Local Rail Programs

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Safety Program, administers the Section 130 program and is the point of contact with the railroads, the PUC, and/or local agencies on all CDOT/railroad contracts.

Colorado's annual Section 130 program funds total approximately \$2 million, of which at least half must be available for the installation of protective devices at rail/highway at-grade crossings. The balance of funds may be applied, at CDOT's discretion, toward at-grade crossing protective devices or a grade-separation project.

CDOT is capable of constructing three to six grade crossing upgrades (e.g., installation of flashing lights, gates, and bells) each year. A typical project will cost, on average, about \$350,000. Such projects often consist of the installation of active warning devices at locations that only have passive warning devices or inadequate active warning devices. Most of these projects are on local roads and streets, as most state highway rail crossings have already been sufficiently upgraded.

Due to the high cost of a typical grade separation structure (\$12+ million), it is impractical for CDOT to apply the remaining \$1 million annual apportionment to a new grade separation project each year. Instead, CDOT will occasionally allow three to four years' worth of apportionment to "pool," until a meaningful amount (\$3 - \$4 million) is available for such a project.

### **Solicitation of candidate projects**

The passage of SAFETEA-LU in 2005 changed the underlying basis of the Section 130 program, to create a data-driven process that emphasizes accident prediction through modeling. The legislation allows states to develop the specifics of their models. To carry out this new requirement CDOT has begun to emphasize the use of accident prediction modeling as a primary factor in project selection.

### **Ranking, selection and prioritization of projects**

A statewide priority list of grade crossing improvement projects is developed every year, based on the accident prediction number generated by the data in the FRA database, called Web Based Accident Prediction System (WBAPS).

### **On-site diagnostic review meeting**

On-site 'diagnostic review' is conducted by a team that includes representatives from the Railroad Crossing Safety Program, the appropriate CDOT region, the railroad company, and the local governmental agency. This group investigates and evaluates various aspects of the identified crossing and makes a determination about the type of improvement required.

### **Rail Crossing Inventory**

The FRA, in cooperation with the Association of American Railroads (AAR), has developed the Rail-Highway Crossing inventory. Updating the information on the crossing inventory, previously the sole responsibility of the railroads is now the responsibility of the state. The inventory at each crossing (at-grade and above grade) contains the following data:

## Task 2 – State and Local Rail Programs

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- Location of the crossing
- Train traffic volume and type
- Existing traffic control devices
- Topographic features of the crossing

CDOT has recently undertaken a comprehensive survey of the State's rail-highway crossings to gather current information to make informed decisions regarding the use of funds allocated under the Section 130 program. That survey was completed in 2010 and the results were provided to the FRA. CDOT's Railroad Program in the Safety and Traffic Engineering Branch is responsible for the ongoing maintenance of the crossing inventory.

### **Towner Line Acquisition and Lease**

The Colorado Legislature passed HB 1395 on April 22, 1998 which authorized CDOT to acquire a 121.9-mile-long rail line in eastern Colorado, known as the "Towner Line". This rail line was a former Missouri Pacific Railroad line which extended from NA Jct. (east of Pueblo) to Towner, Colorado near the Kansas state line. The line had been "out of service" since UP proposed the line for abandonment in late 1996. The acquisition price from the UP was \$10.2 million. SB 1395 also required CDOT to arrange for the sale or lease of the line by June 30, 2000 to a financially responsible railroad operator who would use the line to provide rail service. HB 1395 also required CDOT to receive at least the purchase price paid to UP by CDOT, plus interest, as a result of any sale or lease/sale of the line.

On July 29, 1999 CDOT issued a Request for Proposals for the purchase (or lease-purchase) of the Towner Line. Following a review of the proposals submitted, the Colorado Kansas and Pacific (CKP) Railway Company was selected to negotiate an agreement with CDOT for the lease and/or sale and continued operation of the line. A lease purchase agreement was executed by CDOT and CKP on December 9, 1999.

CKP began operating the line by moving a limited number of loaded grain cars at Haswell, Eads and Towner, as well as storing a significant number of empty intermodal cars for the TTX Company.

On March 27, 2003 a derailment occurred on the line east of Arlington, Colorado. This derailment of 44 empty intermodal cars resulted in significant damage to the track and a concrete box culvert, which took the line out of service for several months.

In late 2003, Watco Companies began negotiations with CKP to acquire the CKP through a stock transfer in order to take over operation of the lease with CDOT and reinstate service over the line. On February 13, 2004, CDOT ordered CKP to cease operations on the line, due to CKP's failure to keep its required insurance on the line. The Watco/CKP negotiations were terminated in April 2004, when Watco determined it would be a better business decision to compete for the line in the event CDOT issued another Request for Proposals for a purchase or lease purchase of the line.

## Task 2 – State and Local Rail Programs

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On August 20, 2004, a net liquidation value assessment was completed for CDOT which estimated the value of the line at that time to be \$7,166,869. This value, considerably lower than the \$10.2 million that CDOT paid for the line in 1998, was due to the very ‘deflated’ price of steel.

On February 8, 2005, CDOT issued another Request for Proposals for the sale or lease of the Towner Line and re-commencement of operation of the line. Following a review of the proposals submitted, the Victoria and Southern Railway, Inc. (V&S) was selected to negotiate an agreement with CDOT for the lease and/or sale and continued operation of the line. A Lease Purchase Agreement was executed by CDOT and V&S on December 1, 2005.

The V&S agreed to operate the line for a three-year period, known as the initial operating period. Also, for the following three years, V&S agreed not to abandon the line at any time before December 1, 2011. CDOT did retain the right of first refusal to purchase the line and associated rights of way in the event the V&S intended to dispose of the line. CDOT would be required to pay the lesser amount of:

- The purchase price paid by V&S plus documented capital improvements made by V&S to the line, plus 8% interest, compounded annually; or
- The net salvage of the line at the time CDOT intends to sell all or any part of the line.

In January 2006, the V&S (aka VST) began rehabilitation and improvements of the line, including track repair, track replacement, repair of active crossing equipment, and returning the track to Class II operating standards. The first grain train returning the line to service was moved in September 2006. On April 15, 2008, a massive prairie fire destroyed two wooden bridges in the vicinity of Ordway. Both bridges were replaced with culverts and the line was restored to full service within months.

During most of 2009 and 2010, the line has been storing UP cars east of the Crowley County line to about 8 miles west of Arlington. In 2010, the VST reached an agreement with Watco to operate necessary rail service for movements of grain over the line.

### ***VI. A Summary of Key Rail Studies Relevant to CDOT***

#### **Eagle County / Tennessee Pass Route Rail Related Studies (1995 – 2003)**

A series of studies were conducted between 1995 and 2003 focusing on the possible re-opening of the out-of-service Tennessee Pass line currently owned by UP. These studies were developed by the Intermountain Partnership, comprised of local governments and key companies in the private sector. The studies were provided to CDOT with a request that the agency consider partnering with the Intermountain Partnership in realizing the transportation vision within the Eagle River Valley. The following is a summary, in chronological order, of the study efforts.

## Task 2 – State and Local Rail Programs

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A 1995 property valuation was conducted on the Tennessee Pass route, at that time owned by the Southern Pacific Railroad. The section of railroad appraised was 64 miles between Gypsum and Leadville; 109 miles between Leadville and Canon City; and 4.7 miles of the Leadville Branch. Net liquidation value (NLV) was determined to be \$6.23 million. NLV is the liquidation value minus the costs associated with removal of track, ties, ballast and bridges.

A study, called *Rails and Trails to Link the Communities of the Vail and Eagle Valleys (Intermountain Partnership, 1998)* was completed and presented to CDOT in 1998. The study described the concept of acquiring the out-of-service railroad in the Eagle Valley from the UP for the purposes of initiating rail passenger service in the valley and also creating a corridor of trails on railroad elements not used for passenger service.

The recommended 'next steps' were:

- Commence negotiations for the Tennessee Pass Railroad Corridor.
- Create a public/private partnership with the Eagle County Regional Transportation Authority.
- Allocate funding for continued planning and design of the start-up phase.
- Develop criteria for and implement a public involvement process.
- Allocate funding for the construction of the start-up phase.

The start-up activities would include the following planning and engineering work:

- Existing conditions report, ridership forecasting, environmental documentation, capital cost estimation, and operations and maintenance cost estimation.

Systems phasing and implementation would include:

- Track design and grade work, right of way and utilities, station and park and ride facilities preliminary design, crossings and signalization, trail design, ticketing and fare structure, and construction scheduling.

The study, *A Vision for Rails and Trails to Link the Communities of the Vail and Eagle Valleys, (Intermountain Partnership)*, was submitted to CDOT in September, 1998. This document described the vision for transportation in the Eagle Valley. It also provided specific details of a proposed a partnership between the Intermountain Partnership, a consortium of Eagle County communities, authorities, and businesses, with CDOT to create the Intermountain Connection which would utilize the Tennessee Pass rail route to connect Gypsum and the Eagle County Airport to Avon and Leadville.

*The Intermountain Connection Feasibility Study, Eagle County Airport to Avon, (Intermountain Partnership, 2003)*, was developed to provide additional detail on operational characteristics, stations, and preliminary cost estimates for the construction of the Intermountain Connection. The report concluded that the connection could be in service in 4 - 5 years.

It was suggested that the first three steps (environmental clearance, right-of-way negotiations, and the creation of a public/private partnership) could occur concurrently over a two year

## Task 2 – State and Local Rail Programs

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period. Design was expected to take less than a year. Equipment procurement could begin early in the design phase and would take about 2 years. Following design, track improvements, maintenance facility construction and station development would take 2 - 3 years to complete.

*Connectivity Concepts – Intermountain Connection, (Kracum Resources for J. F. Sato & Associates, 2003)*, was completed as a response to a Colorado Transportation Commission resolution “to explore options to preserve rail service in the Eagle Valley corridor.” The report updated ridership estimates and other data elements from previous Intermountain Connection-related studies and also included public railroad crossing and track improvement evaluations.

These ‘next steps’ were identified:

- Develop a Memorandum of Understanding with Eagle County, Vail Associates, and local communities
- Obtain right-of-way appraisal
- Negotiate cost sharing with Eagle County, local governments, and Vail Associates
- Negotiate purchase of rail line with the UP

### **Castle Rock Railroad Relocation Feasibility Evaluation – 2001**

The *Castle Rock Railroad Relocation Feasibility Study (2001)* evaluated the technical feasibility of relocating the UP tracks currently moving trains primarily northbound through Castle Rock, to another alignment west of I-25. Both the UP and BNSF were involved in the development of the design criteria and the evaluation of three identified alignment alternatives:

- Alternative 1 would require approximately 18 miles of track to be relocated from Larkspur to Sedalia. It would eliminate 13 public and 12 private at-grade crossings and would cost an estimated \$62.9 million.
- Alternative 2 would require approximately 14 miles of track to be relocated to the west side of I-25, and would eliminate 12 public and four private at-grade crossings. It would cost an estimated \$52.8 million. The project would extend from Larkspur to Meadows Parkway.
- Alternative 3 would require approximately 7.5 miles of track to be relocated. It would require the construction of two major bridges that the other alternatives would avoid. It would eliminate eight public and two private at-grade crossings and would cost an estimated \$45.4 million. The project would extend from Bell Mountain Road to Meadows Parkway.

It was projected that the selected alignment, alternative 1, might be completed in a four year period.

## Task 2 – State and Local Rail Programs

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The proposed project represented an important opportunity for the town of Castle Rock and Douglas County to revitalize the town's Central Business District (CBD). It would also improve the safety of the traveling public, and remove obstacles to the efficient movement of goods and services within the community. The study identified a process which would establish specific technical elements of the project and mitigate known impacts, secure necessary funds to implement the project and move the project forward through construction. In addition, CDOT would see future savings related to planned improvements to both I-25 and US 85 if the proposed rail relocation were to be completed. This project was never implemented due to lack of available funding.

### **Denver Union Station Redevelopment Study (2004)**

In 2001, the Denver Union Station (DUS) Executive Oversight Committee was formed through an intergovernmental agreement between four partnering agencies: CDOT, the Regional Transportation District (RTD), the City and County of Denver (CCD), and the Denver Regional Council of Governments (DRCOG), to pursue redevelopment in DUS. After the purchase of DUS by RTD and partner agencies in 2001, an EIS and master planning process were initiated. After careful consideration by the agencies and a 93-member public advisory committee, the Master Plan was adopted in 2004 with a supplement published in 2008. The Final EIS and Record of Decision were signed in 2008. The selected build alternative accommodates all public transit operations needed to efficiently implement all RTD's new FasTracks services, and to maintain existing Amtrak service.

The arrangement of the new facilities includes:

- Two tracks for light rail parallel to the Consolidated Mainline, perpendicular to 17th Street
- Twenty-two bays for RTD's Regional Buses, Downtown Circulator and some commercial bus use below-grade under 17th Street
- Eight tracks in a stub-end passenger rail facility at-grade adjacent to the historic station building
- Street enhancements for the 16th Street Mall Shuttle, bicycles, pedestrians, taxis, and passenger loading

The funding for the \$485 million project is a compilation of RTD FasTracks funds, Senate Bill 1 Transit and FASTER funds from CDOT, Railroad Rehabilitation and Improvement Financing (RIFF), and Transportation Infrastructure Finance and Innovation Act (TIFIA) loans. These are to be repaid by a newly formed metro district in the area immediately surrounding the station. As of summer 2011, the project is approximately 35% complete with an anticipated opening date in 2014.

## Task 2 – State and Local Rail Programs

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### **Wyoming Commuter Rail Study – 2008**

The *Wyoming Commuter Rail Study*, (Wyoming DOT, 2008), examined the feasibility of commuter rail service between Fort Collins and Casper. The proposed service would essentially use the existing BNSF tracks currently used for rail freight service. The momentum for this study began in 2004 with the Front Range Commuter Rail advocacy group meeting with Wyoming officials. The study acknowledges that Wyoming's access to quality regional passenger rail service is tied to the success of Front Range initiatives.

The study evaluated the physical rail inventory features of the following segments:

- Fort Collins – Cheyenne
- Cheyenne – Wendover
- Wendover – Bridger Jct.
- Bridger Jct. – Casper

The analysis suggested that track upgrades in the \$1.0 - \$1.5 million/mile range would be required to accommodate the proposed services.

The study suggested that a next step would be to further refine the capital and operating cost estimates, in addition to better describing the service features which might be available to Wyoming residents. It was also suggested that this study be coordinated with the Rocky Mountain Rail Authority (RMRA) study, when results from that study become available. (No formal coordination of this study with the RMRA study has occurred at this time.)

### **Amtrak Pioneer Feasibility Study (2009)**

This study examined the feasibility of reinstating Amtrak's *Pioneer* route, which operated from 1977 to 1997 between Chicago, Illinois and Seattle, Washington via Denver, Colorado and Salt Lake City/Ogden, Utah. Amtrak was directed to perform this study by the Passenger Rail Investment and Improvement Act of 2008 (PRIIA) (Public Law 110-432), which reauthorized Amtrak and tasked Amtrak, the federal government, states, and other rail stakeholders to improve intercity passenger rail service.

Amtrak evaluated seven options along four routes, with schedule-based variations. On the basis of total potential ridership, annual operating costs, net operating impact, and fare box recovery, the highest ranking options per route are presented in this study. Options 1 and 3 served Colorado via the Rio Grande Route; Denver to Salt Lake City through Glenwood Springs and Grand Junction over the old DRGW route. Options 2 and 4 connected Denver to Ogden Utah via the Overland Route; the Union Pacific Railroad route from Denver to Cheyenne through Greeley and across Southern Wyoming to Ogden, Utah.

## Task 2 – State and Local Rail Programs

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### Financial Performance

Projected direct operating costs are:

- Option 1 (Salt Lake City – Seattle): \$36.6 million
- Option 2 (Denver – Seattle): \$46.2 million
- Option 3 (Salt Lake City – Portland): \$35.9 million
- Option 4 (Denver – Portland): \$44.7 million

These expenses are comprised primarily of labor costs for train and engine crews and on-board service (OBS) employees, fuel, and mechanical costs.

The projected direct operating loss (revenue minus direct operating costs) is:

- Option 1 (Salt Lake City – Seattle): \$25.0 million
- Option 2 (Denver – Seattle): \$33.1 million
- Option 3 (Salt Lake City – Portland): \$28.3 million
- Option 4 (Denver – Portland): \$35.5 million

### Capital and Mobilizations costs

Capital and mobilization costs are as follows:

- Option 1 (Salt Lake City – Seattle): \$382 million
- Option 2 (Denver – Seattle): \$478 million
- Option 3 (Salt Lake City – Portland ): \$379 million
- Option 4 (Denver – Portland): \$493 million

The study indicated that the actual capital costs of service restoration are subject to significant uncertainty.

### Conclusions and ‘Next Steps’

The addition of the *Pioneer* and other long distance routes to the Amtrak national network could produce numerous public benefits, at a cost. While PRIIA recognizes the importance of Amtrak’s existing long distance routes, it does not provide capital or operating funding for expansion of service beyond current levels. Therefore, additional federal and/or state funding would be required for any service expansion.

Eight billion dollars in intercity passenger/high speed rail capital funding was made available in 2008 by the American Recovery and Reinvestment Act (ARRA). This represents a significant source of funding for capital costs associated with the expansion of intercity passenger rail service. Since the *Pioneer* route is not a federally designated high speed rail corridor, one or more states along the route would have to be an applicant or co-applicant for ARRA funding. Funding for the cost of operating the service would have to be obtained from other federal and/or state sources, since ARRA funding cannot be used for that purpose.

Amtrak recommends that federal and state policymakers determine if passenger rail service should be reintroduced along the former *Pioneer* route, and if so, they should identify the

## Task 2 – State and Local Rail Programs

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preferred option for service restoration as well as provide the required levels of capital and operating funding to Amtrak. Upon such a decision, Amtrak will work aggressively with federal and state partners to restore the *Pioneer* service.

### ***VII. A Summary of Rail Related Programs Managed by Other State Agencies***

#### **Public Utilities Commission Rail Related Program Responsibilities**

The Colorado PUC has responsibility for and jurisdiction over the following railroad related programs within the state of Colorado:

**Rail Safety** – The state’s jurisdiction over railroad safety has been pre-empted in recent years by the creation of the Surface Transportation Board (STB). The PUC has retained primary jurisdiction over all public highway-rail crossings, including openings, closings, upgrading, overpasses/underpasses, and the allocation of costs for such projects.

**Rail Transit Safety** – The PUC also has responsibility for the oversight of the safety and security of rail fixed guideway systems within Colorado. This applies to any rail fixed guideway, whether or not it has received federal funding that meets the requirements outlined in 49 CFR Part 659 (Rail Fixed Guideway Systems; State Safety Oversight).

Specifics related to the PUC’s authority are in Title 40 (Utilities) of the Colorado Revised Statutes and also in Rules (Part 7 – Rules regulating railroads, rail fixed guideways, transportation by rail, and rail crossings).

Key features of the PUC’s jurisdiction cover the following areas/activities:

- Operating authority
- Crossings and warning devices
- Safety
  - Railroad clearances
  - System safety program standard for rail fixed guideway systems
- Employment of Class I railroad peace officers

**Colorado PUC Highway/Rail Signalization Fund** – The purpose of this fund is to promote public safety and pay the costs of installing, reconstructing, and improving safety appliance signals or devices at highway-rail crossings that do not receive federal funding. The statute states that funding for these purposes shall occur “if appropriated”. However, the Colorado Legislature has not made an appropriation to this fund since 2002.

#### **Moffat Tunnel Improvement District**

The Moffat Tunnel Improvement District was originally formed to facilitate transportation and communication between eastern and western Colorado, through the efficient operation and

## Task 2 – State and Local Rail Programs

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maintenance of the existing Moffat Tunnel underneath the Continental Divide. After the Moffat Tunnel Commission successfully accomplished the construction of the tunnel and the retirement of bonds issued to finance the construction, the Colorado General Assembly in 1996 passed legislation transferring control of the District from the Commission to the Colorado Department of Local Affairs (DOLA). DOLA has served as the custodian of the leases related to the tunnel since the Moffat Tunnel Commission ceased to exist in 1998. DOLA continues to be responsible for managing the existing leases of the Moffat Tunnel with both UP and Qwest. Today this effort essentially consists of receiving the annual lease payments and up-to-date insurance certificates from both UP and Qwest.

### ***VIII. A Summary of Financial Support Programs for Colorado Rail Activities***

#### **State Rail Bank Fund**

Pursuant to S.B. 97-037, the General Assembly may from time to time allocate revenues to the State Rail Bank Fund. Appropriations for moneys in the State Rail Bank Fund may be requested and used for the acquisition, maintenance, improvement, or disposal of rail lines, railroad right-of-way or any other purpose necessary to carry out the implementation of Part 13 of S.B. 97-037, which created a new section of statute related to the acquisition of abandoned railroad rights of way.

#### **General Fund Transfers**

These General Fund (GF) transfer funds must be used in the implementation of the strategic transportation project investment program. No more than ninety percent of these funds may be used on reconstruction, repair, maintenance, and capital expansion projects for highway-related capital improvements, including, but not limited to, high occupancy vehicle lanes, park-and-ride facilities and transportation management systems. At least ten percent of the funds must be used for transit purposes or for transit-related capital improvements. The designation of ten percent of the S.B. 97-001 transfer of general fund revenues for transit remains in place for any general fund transfers to CDOT that they may receive from the new transfer mechanism created in S.B. 09-228.

#### **FASTER Safety Revenue**

S.B. 09-108 (FASTER) revenue must be used by CDOT for road safety projects only. Except that CDOT must set aside \$10 million annually of its allocation from the highway safety surcharge distributed to the department through the Highway User Tax Fund's (HUTF) 3rd stream revenue formula. These revenues may be used for planning, designing, engineering, acquisition, installation, construction, repair, reconstruction, maintenance, operation, or administration of transit-related projects, including, but not limited to, designated bicycle or pedestrian lanes of highway and infrastructure needed to integrate different transportation modes within a multimodal transportation system, which enhance the safety of state highways for transit users.

## Task 2 – State and Local Rail Programs

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Another \$5 million of S.B. 09-108 (FASTER) revenue is deducted from the HUTF's 3rd stream revenue formula distributions to local governments and transferred to CDOT. The Division of Transit and Rail redistributes these funds as transit grants to local governments.

### **Colorado State Infrastructure Bank**

The Colorado State Infrastructure Bank (COSIB) is, in fact, not a bank but a revolving fund created by the state legislature that is authorized to make loans to public and private entities, to facilitate the financing of public transportation projects within the state. The COSIB operates four distinct programs: One for highways, another for transit, a third for aviation, and finally one for rail. The overall objective of the COSIB is to seek loan applications for transportation projects that can both benefit from COSIB assistance, and meet the terms for loan repayments. The proposed project must ultimately have revenue sources available to it to repay the loan.

Historically, the COSIB program's primary use is within the aviation community. While all elements of the state's transportation system have projects that merit assistance, aviation is unique in its capacity to generate steady revenues that meet or exceed the cost of operating its facilities over time and is willing to ultimately pay for the full cost of its infrastructure improvements. These two factors make the program particularly useful for aviation.

### **Transportation Infrastructure Finance and Innovation Act**

The Transportation Infrastructure Finance and Innovation Act (TIFIA) program provides credit assistance for qualified projects of regional and national significance. Many large-scale surface transportation projects – highway, transit, railroad, intermodal freight, and port access – are eligible for assistance. Eligible applicants include state and local governments, transit agencies, railroad companies, special authorities, special districts, and private entities.

TIFIA offers three distinct types of financial assistance, designed to address the varying requirements of projects throughout their life cycles: Secured (direct) loans, loan guarantees, and standby lines of credit. The amount of federal credit assistance may not exceed 33 percent of total reasonably anticipated eligible project costs. The exact terms for each loan are negotiated between the U.S. Department of Transportation (USDOT) and the borrower, based on the project economics, the cost and revenue profile of the project, and any other relevant factors. TIFIA interest rates are equivalent to Treasury rates. Depending on market conditions, these rates are often lower than what most borrowers can obtain in the private markets. Unlike private commercial loans with variable rate debt, TIFIA interest rates are fixed. Overall, borrowers benefit from improved access to capital markets and potentially achieve earlier completion of large-scale, capital intensive projects that otherwise might be delayed or not built at all because of their size and complexity and the market's uncertainty over the timing of revenues.

Any type of project that is eligible for federal assistance through existing surface transportation programs (highway projects and transit capital projects) is eligible for the TIFIA credit program,

The following types of projects are eligible:

- International bridges and tunnels

## Task 2 – State and Local Rail Programs

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- Intercity passenger bus and rail facilities and vehicles
- Publicly owned freight rail facilities
- Private facilities providing public benefit for highway users
- Intermodal freight transfer facilities and projects that provide access to such facilities
- Service improvements on or adjacent to the National Highway System
- Projects located within the boundary of a port terminal under certain conditions

An eligible project must be included in the applicable state transportation improvement program. Major requirements include a capital cost of at least \$50 million (or 33.3 percent of a state's annual apportionment of federal-aid funds, whichever is less) or \$15 million in the case of Intelligent Transportation Systems (ITS). TIFIA credit assistance is limited to a maximum of 33 percent of the total eligible project costs. Senior debt must be rated investment grade. The project also must be supported in whole or in part from user charges or other non-federal dedicated funding sources and be included in the state's transportation plan. Applicable federal requirements include, but are not limited to Titles 23 and 49 of the U.S. Code, NEPA, Buy America provisions, and the Civil Rights and Uniform Relocation Acts.

### **Railroad Rehabilitation and Improvement Financing**

The Railroad Rehabilitation & Improvement Financing (RRIF) Program provides direct federal loans and loan guarantees to finance development of railroad infrastructure. The RRIF program was established by the Transportation Equity Act for the 21st Century (TEA-21) and amended by the SAFETEA-LU. Under this program the FRA Administrator is authorized to provide direct loans and loan guarantees of up to \$35.0 billion. Up to \$7.0 billion is reserved for projects benefiting freight railroads other than Class I carriers.

The funding may be used to: Acquire, improve, or rehabilitate intermodal or rail equipment or facilities, including track, components of track, bridges, yards, buildings and shops; refinance outstanding debt incurred for the purposes listed above; and develop or establish new intermodal or railroad facilities. Eligible borrowers include railroads, state and local governments, government-sponsored authorities and corporations, joint ventures that include at least one railroad and limited option freight shippers who intend to construct a new rail connection.

Direct loans can fund up to 100% of a railroad project with repayment periods of up to 35 years and interest rates equal to the cost of borrowing to the government. All federal financial assistance programs must pay for the cost to the government of providing that financial assistance. In most cases this is done with appropriations from Congress. Since the RRIF Program does not currently have an appropriation, this cost must be borne by the applicant, or another entity on behalf of the applicant, through the payment of the Credit Risk Premium. The FRA Administrator will calculate the amount of the Credit Risk Premium that must be paid for each loan before it can be disbursed. In addition to the Credit Risk Premium, which is paid only if a loan is approved, each applicant must pay an Investigation Fee regardless of whether the loan is approved. The Investigation Fee defrays costs the FRA incurs in evaluating RRIF loan

## Task 2 – State and Local Rail Programs

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applications. The Investigation Fee may not exceed one half of one percent of the requested loan amount, but it is often substantially less.