

Appendix 6.4

Colorado Rail Relocation Implementation Study Preliminary Project Purpose and Need December 1, 2008

Purpose

The purpose of *Colorado Rail Relocation Implementation Study* is to investigate the feasibility of moving through-freight rail traffic away from the Denver to Pueblo Front Range corridor to the Eastern Plains of Colorado.

The Colorado Department of Transportation (CDOT) has been evaluating changes to the State's rail freight infrastructure in studies conducted since 1979.¹ In 2003, CDOT revived the discussions regarding changes to the rail infrastructure and initiated *The Public Benefits and Costs Study*. The purpose of that study was to determine whether the public benefits warranted consideration of public-funded participation in the relocation of through-freight rail traffic to a location east of the Front Range while still maintaining local freight service. The study analysis found that the total public and private benefits exceeded the estimated costs.²

The Executive Summary of *The Public Benefits and Costs Study* (completed in 2005) stated "Under any scenario studied, there seems to be more than sufficient benefit accruing to the citizens of Colorado to warrant the investment of public dollars in the proposed project."³ Given these findings, CDOT launched the *Colorado Rail Relocation Implementation Study* (hereinafter referred to as the Study) in 2007. The purpose of the Study is to better define and evaluate preliminary rail alignments, to determine what steps will have to be carried out to form a public/private partnership with the railroads, to better define and finalize the scope and costs of relocating the rail route, to determine how costs should be shared based on both public and private benefits and related factors, to investigate what sources of funding are available, to determine how to finance the relocation project, and to develop strategies for carrying out the necessary environmental clearances.

Existing Conditions

Like the rest of the nation, the Colorado economy relies heavily on the state's freight transportation network. Historically rich in natural resources and with an economy based in large part on agriculture, Colorado has a need to transport large quantities of commodities. Furthermore, Colorado is a 'bridge' state in the national and international movement of freight, resulting in large quantities of goods flowing through the state. In Colorado, approximately 24 percent of the freight hauled by weight is carried by rail, compared to the national average of 16 percent.^{4,5}

The bulk of the rail freight is hauled by Colorado's two Class One railroads, the BNSF Railway and the Union Pacific Railroad. Both of these railroads interface in the Denver metro area, with a joint line following the I-25 corridor between Denver and Pueblo. It is not uncommon for heavily traveled rail routes whether single main line track or two main line tracks to have capacity limitations which can result in freight being delayed. The joint line between Denver and Pueblo and the BNSF's Brush Subdivision along I-76 between Denver and Brush accommodate at least 20 trains per day, with over 30 trains per day between Pueblo and Denver.⁶ Coal train traffic carrying

Powder River Basin coal from northeast Wyoming to the electric utilities in Texas account for a majority of this daily traffic. Whereas 60 percent of the commodities moved along the Front Range are part of the Bulk Material group including coal, over 66 percent of the commodities moved in the Eastern counties are part of the Farm Products group.⁷

The route between Denver and Pueblo encounters the Palmer Divide with ascending grades up to 2.2 percent for southbound loaded trains. This steep grade causes fully-loaded unit coal trains to be slowed to 10 to 15 mph and to require added locomotives to provide the required power. The grades of alternative alignments in eastern Colorado are relatively flat, do not exceed 0.8 percent. Grades of 1 percent or less help to achieve the efficient movement of fully-loaded freight trains at speeds of 45 to 50 mph.

Through the Denver metro area and elsewhere along the Front Range where I-25 and the joint line and/or main lines are parallel, the I-25 corridor carries 20 times the volume of other major roadways. Once away from the Front Range, all primary routes carry less than 10,000 vehicles per day. Nearly all other roads in eastern Colorado carry less than 2,500 vehicles per day.⁸ The population density along the Front Range coupled with high vehicular volumes accounts for a significant number of conflicts at rail-highway at-grade crossings.

Future Conditions

As the economy of the country is projected to continue to grow, the demand on the freight network in the US also will grow. By 2035, the total freight moved on the network is projected to double. By 2035, increases in Colorado freight exports are expected to surpass the national averages and grow by factors of 2.5 (by weight) and 2.7 (by value).⁹ Future commodity flow projections indicate that the 10 Front Range counties are projected to grow by approximately 115 percent, while the commodities of the Eastern Plains counties are estimated to grow by nearly 90 percent.¹⁰ While the percentage share of Bulk Materials is expected to increase slightly over existing percentages in and out of the Front Range, the percentage share of Farm Products to and from the Eastern counties is projected to decrease from the existing percentages.¹¹

By 2035, the population growth within the Denver, Colorado Springs and Pueblo metropolitan areas is expected to increase by approximately 50 to 60 percent to a population of nearly 5 million persons. These areas will continue their strong need for efficient freight rail service. The corresponding growth in vehicular traffic is projected to be greater than what can be handled by the existing transportation system. Within the Denver metro area alone, severe congestion is expected to increase by nearly 100 percent even with the transportation improvements that are scheduled for implementation. By 2035, weekday vehicle miles of travel (VMT) are expected to increase by 72 percent.¹² The counties within eastern Colorado are projected to grow by over 80 percent, accounting for nearly 150,000 persons.¹³

To provide for anticipated increases in travel demand, the State of Colorado is interested in preserving the existing rail rights-of-way and infrastructure for potential future passenger rail services along the I-25 corridor.

Project Purpose

The purpose for undertaking the relocation of through freight rail lines is to:

1. Minimize through-freight movements in the major population centers along the Front Range.
2. Minimize rail/vehicle conflicts.
3. Acquire capacity for commuter rail options within existing freight rail corridors.
4. Create economic development opportunities in the eastern portions of Colorado.

Project Need

The need for the relocation of through freight rail lines results from the combined effects of:

1. The significance of the growth in Front Range communities and the growth in through freight rail traffic.
2. The chronic vehicular congestion in the major metro areas along the Front Range combined with the existing and projected growth in through freight-rail traffic whose flow is slowed by additional factors such as steep rail grades.
3. The desire of the Front Range communities to be positioned for future passenger rail along the Front Range in order to maintain mobility.
4. The opportunity to foster economic growth in the Eastern Plains communities.

¹CDOT, *Colorado State Rail Plan – Rail Bypass Feasibility Study*, 1979

²CDOT, *The Public Benefits and Costs Study of the Proposed BNFS/UP Front Range Railroad Infrastructure Rationalization Project*, Executive Summary, 2005, pg 3.

³Ibid., pg 4.

⁴CDOT, *2035 Statewide Transportation Plan*, Freight Technical Report (Draft), 2007, pg. 3.

⁵AASHTO, *Freight-Rail Bottom Line Report*, 2002, pg. 14.

⁶CDOT, *Eastern Colorado Mobility Study*, 2002, pg. II-14.

⁷Ibid., pg. III-3.

⁸Ibid., pg. II-1.

⁹CDOT, *2035 Statewide Transportation Plan*, Freight Technical Report (Draft), 2007, pgs. 2 and 6.

¹⁰CDOT, *Eastern Colorado Mobility Study*, 2002, pg III-5.

¹¹Ibid. Pgs. III-3 and III-7.

¹²DRCOG, *2035 Metro Vision Regional Transportation Plan*, 2007, pg. 126.

¹³Eastern TPR, *2035 Regional Transportation Plan*, 2007, pg. 62.