

Chairman Dale conducted a poll among the RMRA Executive Committee members on Tuesday, July 30 regarding additional freight railroad risk assessment work. The Executive Committee voted 6 to 1 in favor of proceeding with the additional Option 1 freight railroad risk assessment work.

The explanation for this poll is provided below.

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The TEMS Team is already completing freight railroad risk assessment work as defined in the study supplemental agreement task 5. This includes an Option 2 route around Metro Denver within the C-470/E-470 roadway right of way.

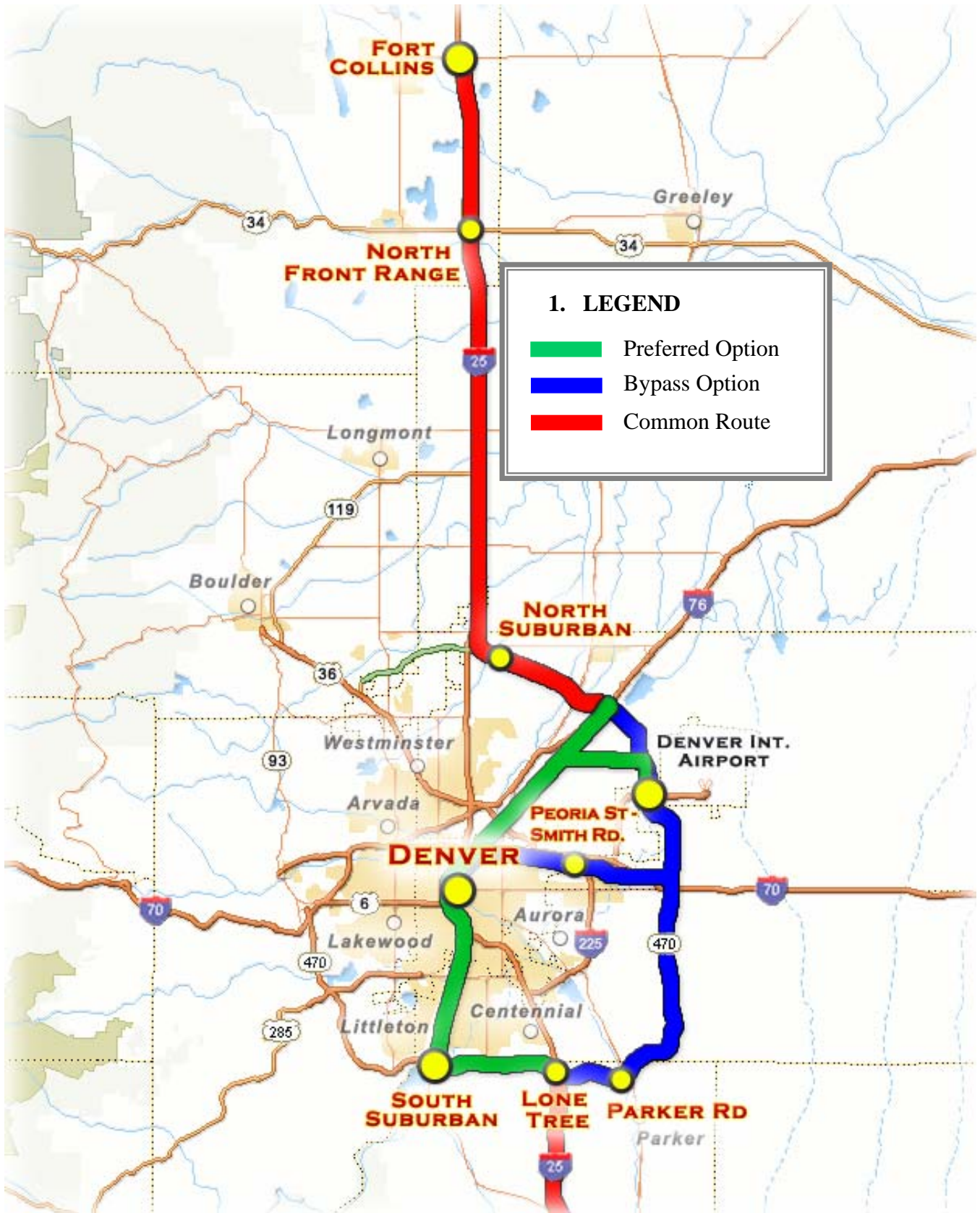
Chairman Dale's request was to also include the Option 1 route in the freight railroad risk assessment in addition to the Option 2 route analysis. The Option 1 route includes the Joint Line through Metro Denver and the Brush Line northeast of downtown Denver.

Vice Chairman Lehnert and Chairman Dale had a conference call with the TEMS Team on Monday, July 29 to discuss the progress made to date on the Option 2 analysis as part of task 5 of our supplemental agreement with TEMS.

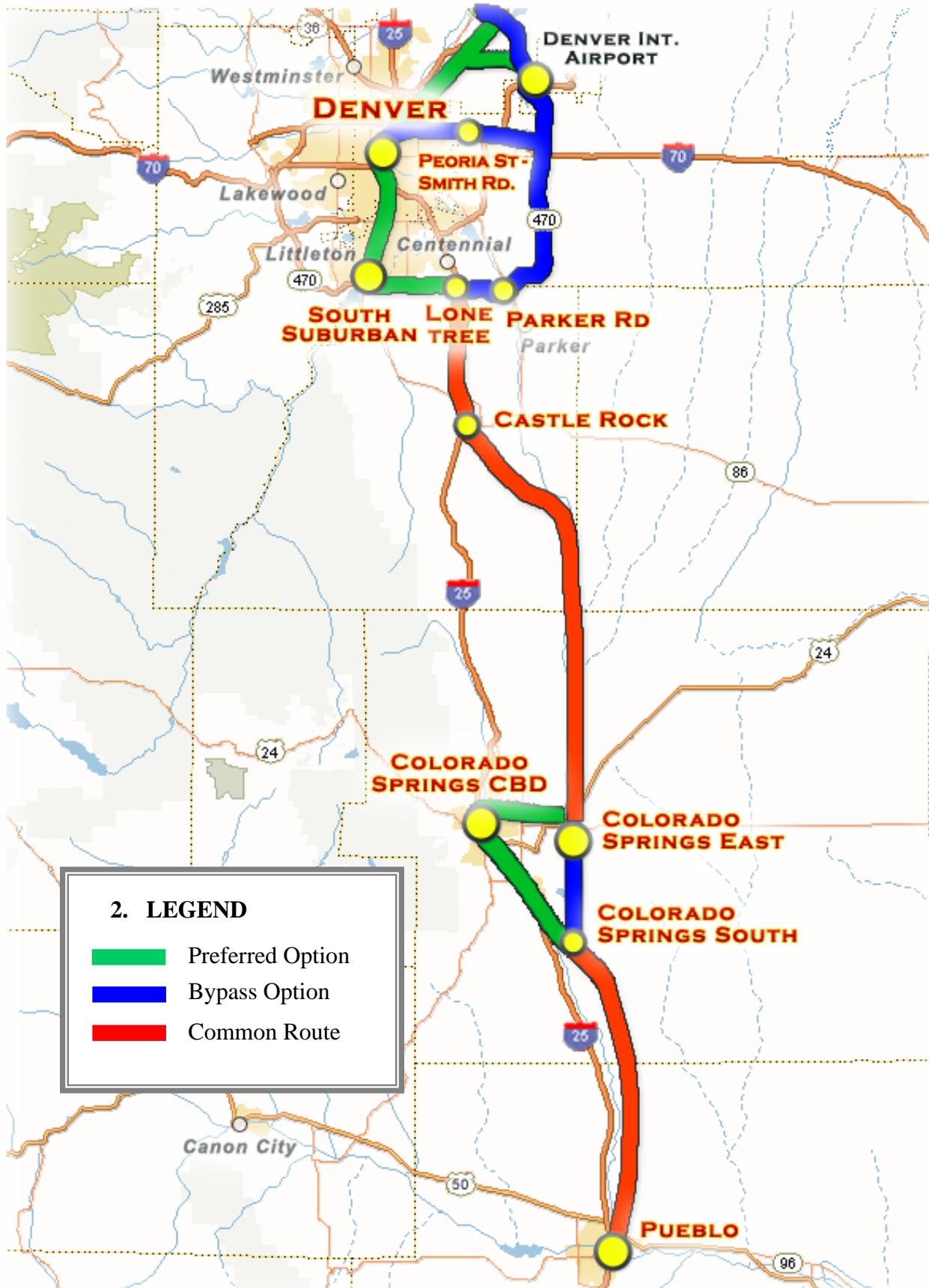
The TEMS team reported that the Option 2 access from both north and south of Denver to downtown Denver is 10 to 20 miles longer than in the original set of alternatives evaluated in the RMRA study. The corresponding ridership for the C-470/E-470 route will be 10 to 15 percent less than in the original set of alternatives because of this additional distance and the increased travel times for this distance.

According to the TEMS team this reduction in ridership is not enough to make the Option 2 route "not feasible", but it does hurt the cost to benefit ratio of this option by probably a couple of tenths. Alex had projected that with optimization, we are looking at a 1.4 plus cost to benefit ratio number for the current 7 percent grade capable EMU option from Fort Collins to Pueblo and from DIA to Eagle County Airport. It would drop by a couple of tenths with the "blue line" (Option 2 route) as shown in the "Preferred & Bypass" diagram below.

# I-25 North Corridor Preferred & ByPass Options

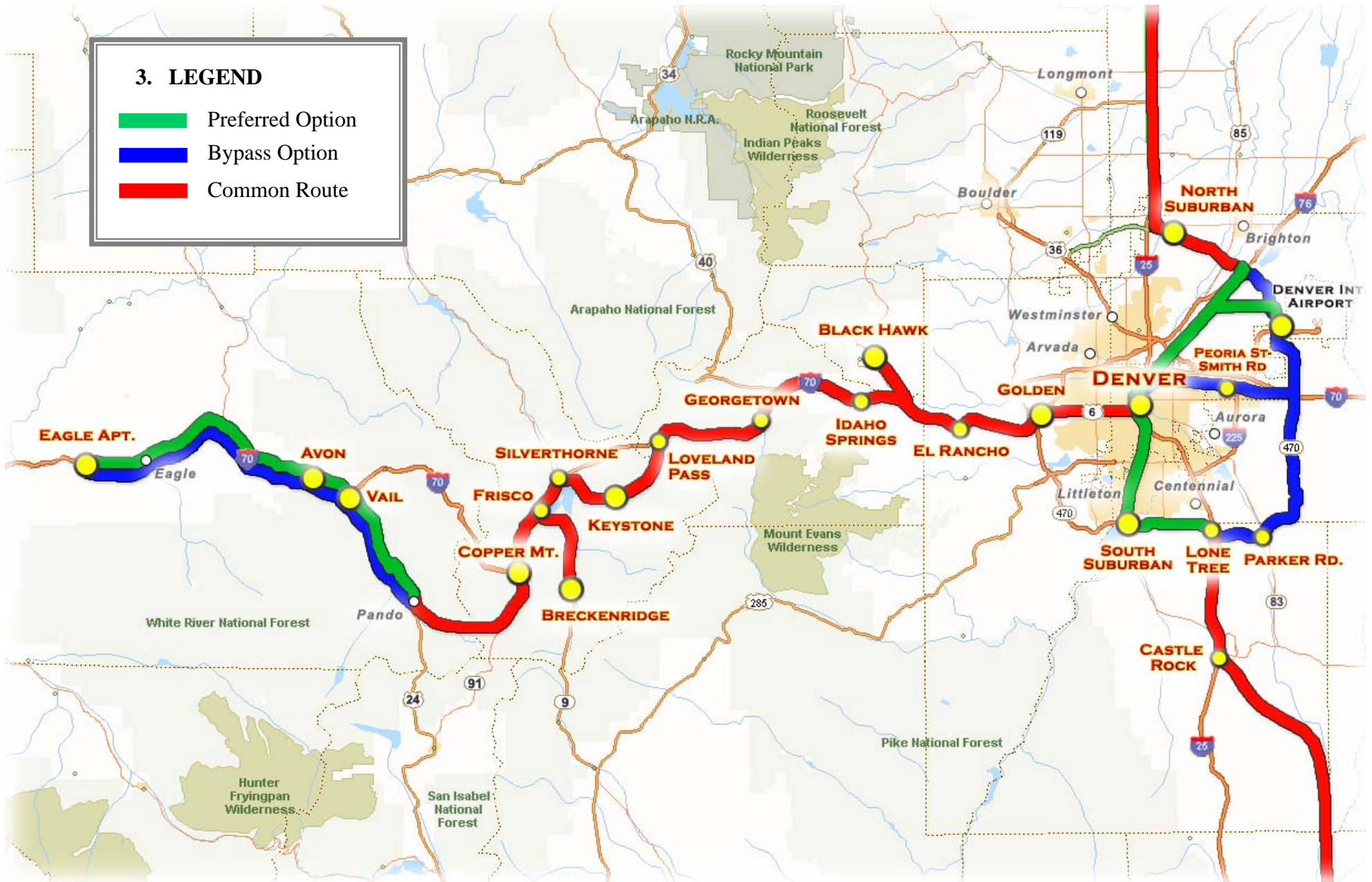


# I-25 South Corridor Preferred & ByPass Options





# I-70 West Corridor Preferred & ByPass Options



With a better understanding of the California true High Speed Rail approach, the Option 1 route freight railroad risk analysis in task 5 would seem to be the most likely to produce the best results. The Option 1 analysis assumes the same general route as the original alternatives in our study, but with significant distance from the freight tracks so that non FRA buff strength compliant vehicles may be used (assuming the FRA would grant a waiver). This route through Metro Denver on or parallel to the Joint Line and Brush Line now appears to be the most optimal in terms of ridership of the general route concepts we have explored to date in the study.

The general California High Speed Rail model uses some railroad right of way where the railroads have a 200 foot wide path and are not currently using a good portion of that 200 foot width. Then where the freight railroad alignment narrows down from the 200 foot width, the California High Speed Rail program will purchase the adjacent land up to the 200 feet.

The concept is to build a completely fenced, completely grade separated double track true high speed rail alignment parallel but some distance from the actual freight railroad tracks. This will allow the California High Speed Rail program to run off-the-shelf Alstom or Siemens high speed trains without the need for FRA buff strength compliance. The adjacent land purchases may actually exceed the 200 foot width to allow the alignment to be straightened in order to achieve speeds in the 150 mph to 200 mph range in order to meet the travel time commitments provided in the California HSR ballot question.

My expectation of the Option 1 work is that TEMS would provide us with a high level cost estimation for accomplishing this kind of California HSR program separation from the freight railroad tracks in the US85 corridor through Metro Denver. This would provide enough horizontal and/or vertical separation from the Joint Line and Brush Line so that we could run non compliant high speed trains in these corridors. If done correctly it would also not eat up any railroad right of way that the freight railroads may need for additional future capacity, so we would not mandate an eastern freight rail bypass to be built on our behalf.

Originally, the TEMS team had provided us with a \$117,000 number for the Option 1 analysis. Today, that number is \$20,016.

Based on our current financial position, I believe it is prudent to include the option 1 analysis in the task 5 freight railroad risk assessment that TEMS is currently proceeding with and believe it will provide us with an outstanding and comprehensive freight railroad risk assessment. My estimation of our closing balance for the RMRA study is between \$45,000 and \$50,000, so we can easily afford the extra \$20,000 on this risk assessment.

Harry Dale  
Chairman, RMRA

## **RMRA – RISK ANALYSIS**

### **Route Option 1 Analysis**

#### **1. Introduction**

The purpose of this analysis is to consider the development of an elevated HSR option along the CML (Combined Mainline) through Denver from the E470/Brush Line in the north to downtown Denver and then to the south Suburban Station at Littleton, where it will connect to the Lone Tree station.

#### **2. Analysis**

The analysis will consider

- Higher train speeds, revised operating plan, and allow the use of non compliant equipment compared to the Preferred Option
- Improve access from the Southern I-25 corridor to the Southern I-70 corridor and downtown Denver compared to the Bypass Option (E470 Bypass), which is the only other option that allows non-compliant equipment.

The analysis of the Route 1 Option will be integrated into the current Risk Analysis of the Preferred Option and Option 2 (E470 Bypass) and presented as a separate option within the results. The map shows the Option 1 and Option 2 Risk Analysis routes.

#### **3. Resources**

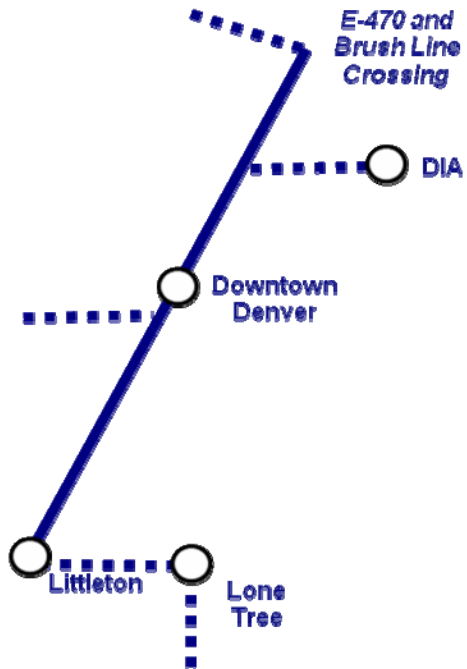
The work will be integrated into the existing Risk Analysis. The aim is to have the results available by the next steering committee August 28<sup>th</sup> 2009. The work will cost \$20,000.

**Rocky Mountain Railroad High Speed Rail Feasibility Study  
Extra Work - Task 6 - Risk Analysis – Budget**

<i>TEMS - Hours</i>	<i>Hourly Rate</i>	<i>Option 1 Risk Analysis Task 6</i>	<i>Total Task 4 Hours/Cost</i>
<b>Project Manager</b>	\$213	20	20
<b>Managing Operations Planner</b>	\$151	32	32
<b>Senior Rail Technologist</b>	\$150	0	0
<b>Senior Demand Analyst</b>	\$100	40	40
<b>Financial Planner/Economist</b>	\$85	0	0
<b>Tech Support</b>	\$55	33	33
<b>TOTAL HOURS</b>		<b>125</b>	<b>125</b>
<b>TOTAL COSTS</b>		<b>\$14,907</b>	<b>\$14,907</b>
<b>QUANDEL - Hours</b>			
<b>Deputy Project Manager</b>	\$229	16	16
<b>Managing Engineer</b>	\$225	0	0
<b>Senior Consultant</b>	\$200	0	0
<b>Engineer</b>	\$83	15	15
<b>Planning Analyst</b>	\$96	0	0
<b>Tech Support</b>	\$48	0	0
<b>TOTAL HOURS</b>		<b>31</b>	<b>31</b>
<b>TOTAL COST</b>		<b>\$4,909</b>	<b>\$4,909</b>
<b>EXPENSES</b>			
<b>TEMS</b>		\$200	\$200
<b>SUBTOTAL</b>		<b>200</b>	<b>200</b>
<b>TOTAL</b>		<b>\$20,016</b>	<b>\$20,016</b>

# Risk Analysis Options

Option 1 – Non Compliant on Freight ROW



Option 2 – E470 only

