

Presentation To

# RMRA Feasibility Study Steering Committee

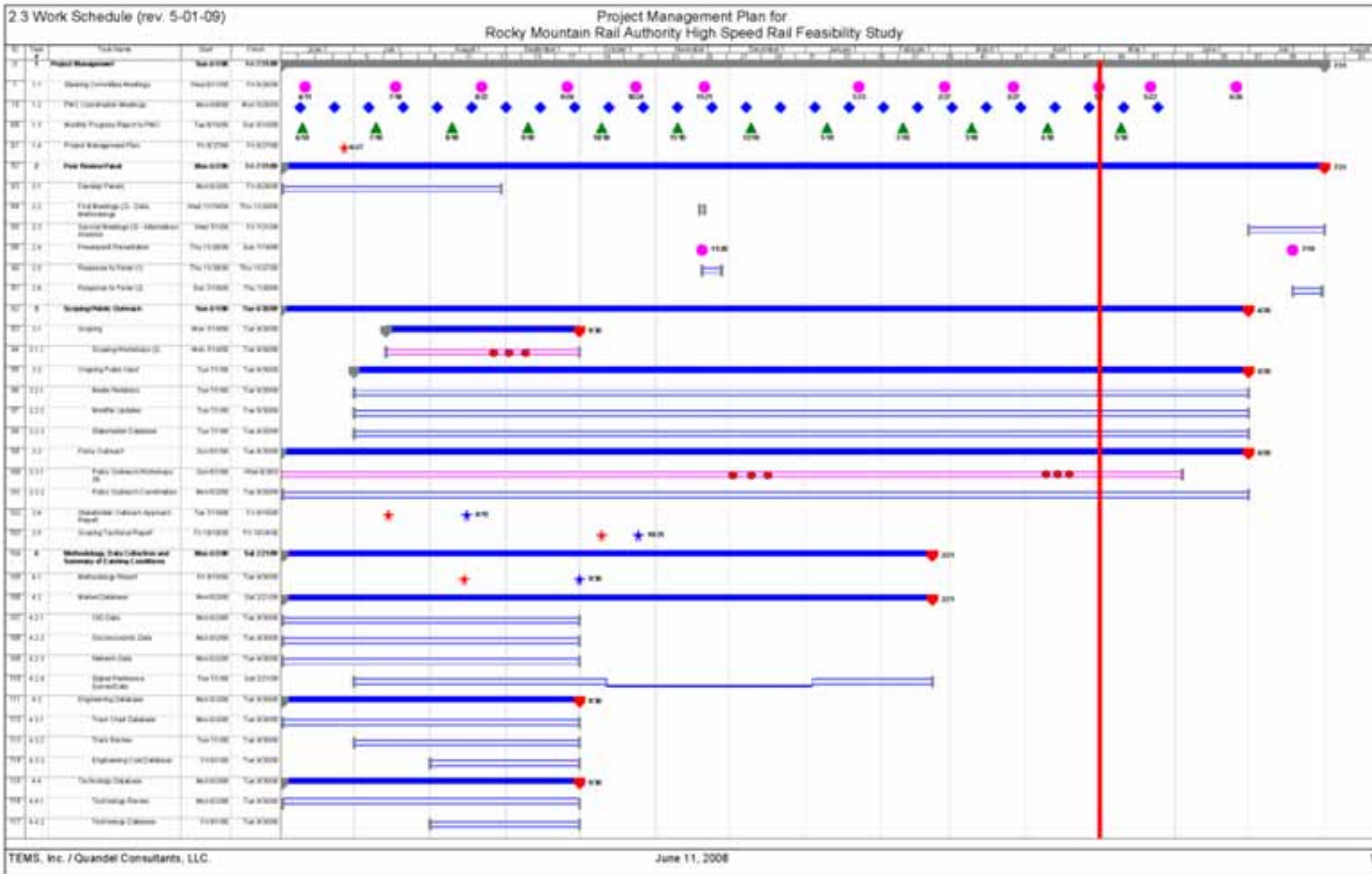
## Feasibility Update

May 1, 2009

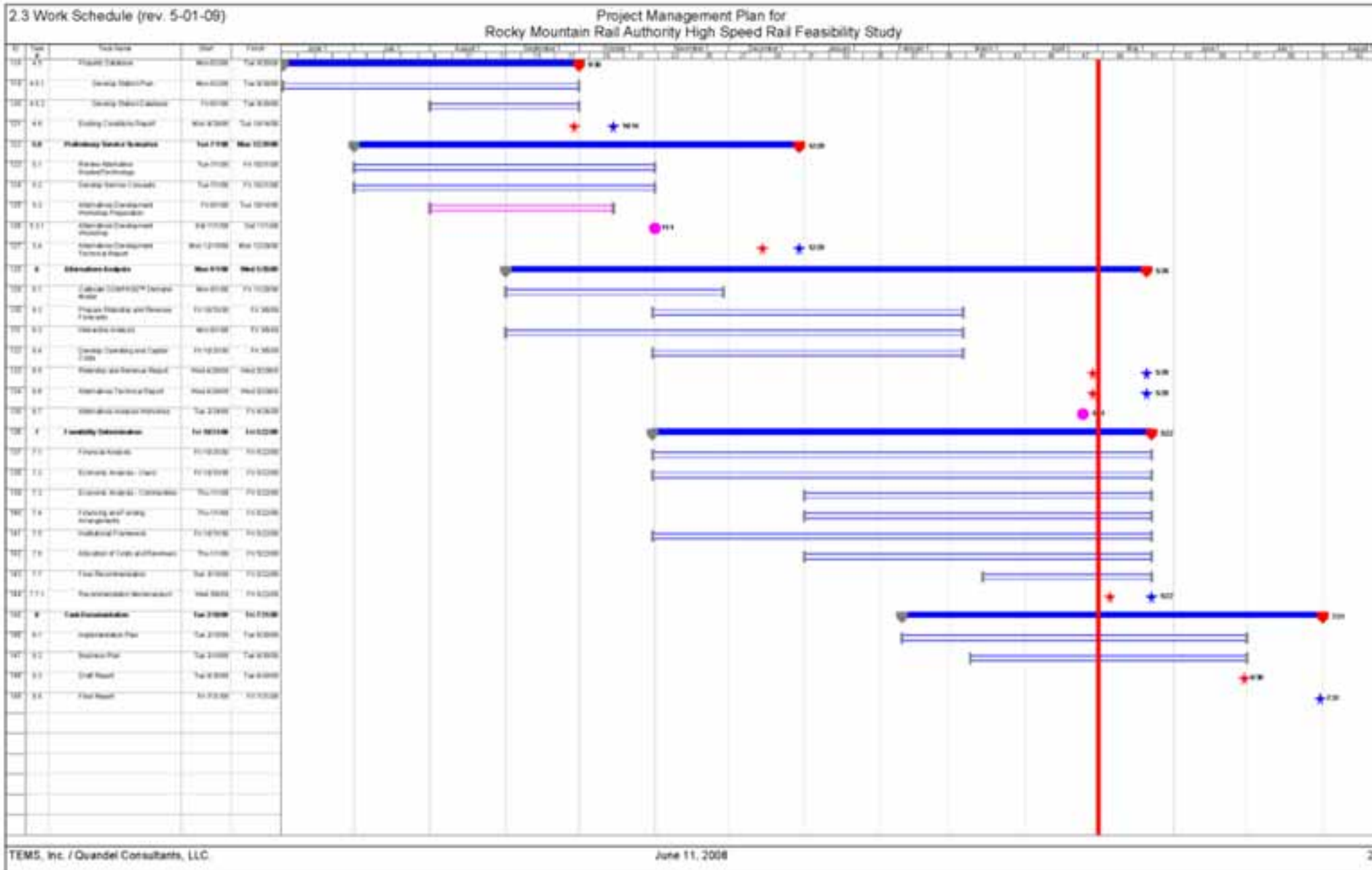
*High Speed Rail Feasibility Study*



# Study Work Schedule: Tasks 1 thru 4.4.2



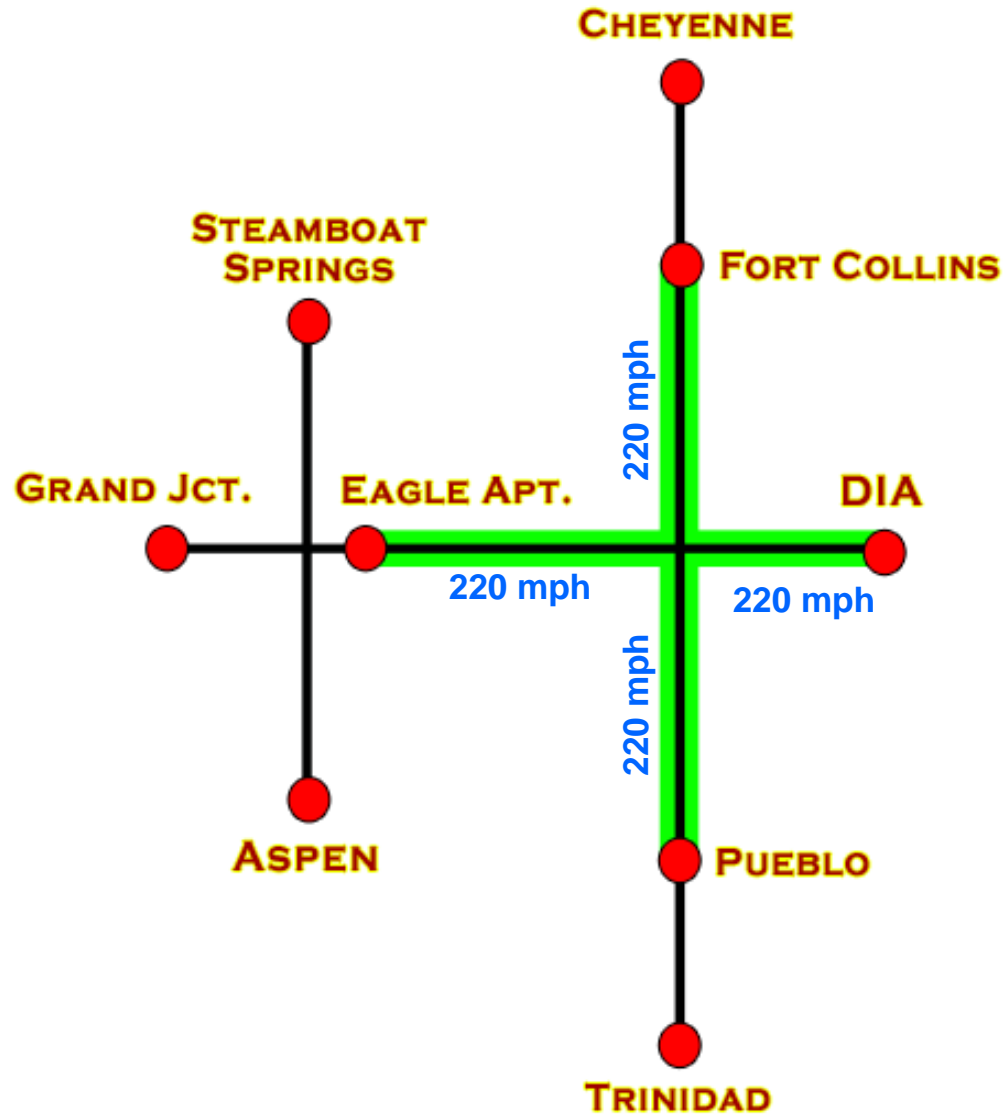
# Study Work Schedule: Tasks 4.5 thru 8.4



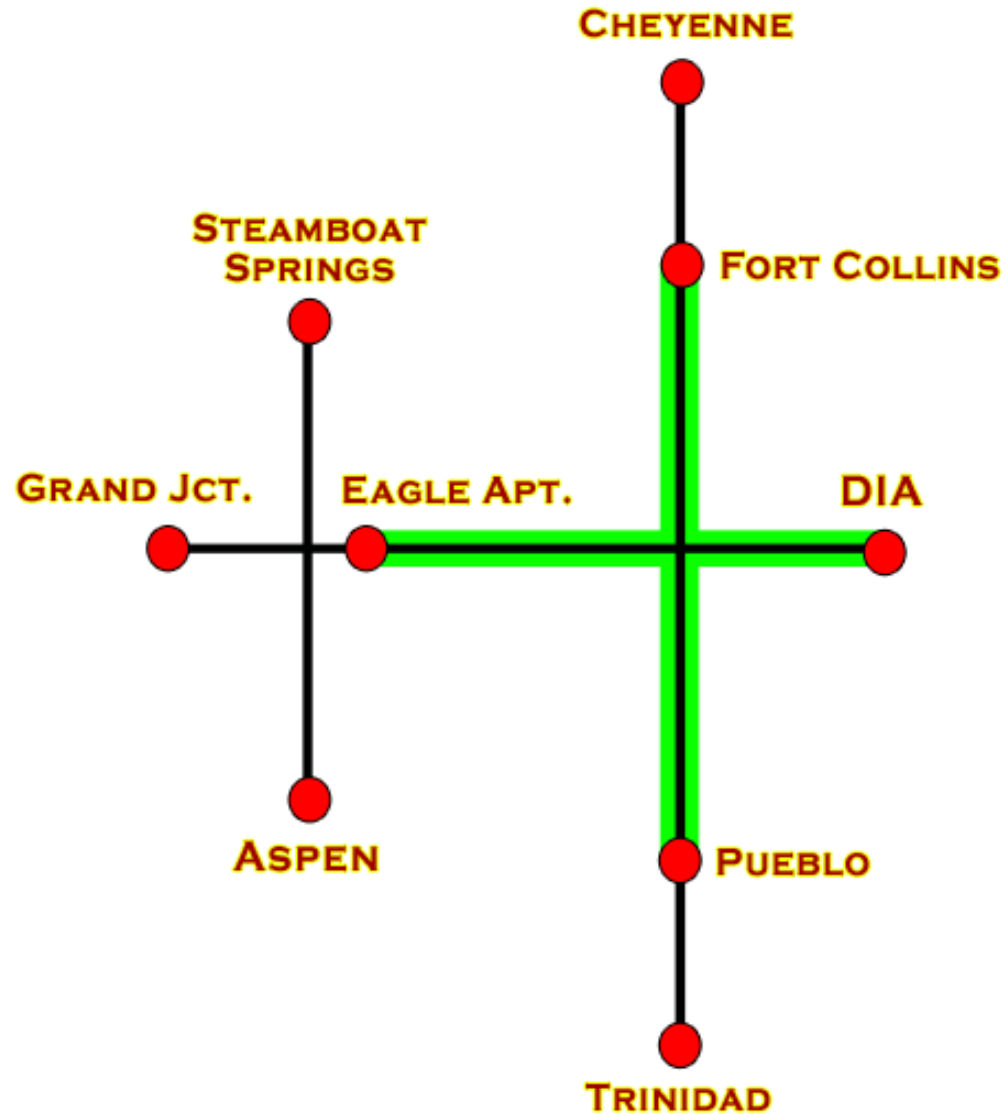
# Key Workshop Results

- **The workshop found that all “Full System” alternatives failed the Cost Benefit test due to lightly-used segments**
  - Truncated Rail options were found viable on I-25 and I-70, but Maglev can be supported in I-70 only with connecting rail in I-25.
  - The cost for Maglev construction on I-25 is too high and pushes the Cost Benefit ratio for even a truncated Maglev solution into negative territory.
- **Recommended to Retain for Detailed Analysis:**
  - Best Option: An “Interoperable” 220-mph (5W) Electric on both I-25 and I-70 truncated, with potentially some 110-mph diesel Western Extensions.
    - **Meets all FRA Economic and Financial criteria.**
    - **Provides a single-seat ride between I-70 and I-25.**
- **I-25/I-70 Synergy**
  - The results confirm the findings of the I-70 PEIS that a standalone I-70 rail or maglev alternative is not viable.
  - However, it is the synergy of the I-25 and I-70 together that produces a viable solution for both corridors.

# Recommended System: EMU 220mph Truncated



# Possible Western Expansions





# Workshop Request for Additional Alternatives Analysis

- **Requested Consulting team to develop analysis for an HSR alternative which would be:**
  - Completely separate from freight trains
  - Does not require R2C2 and
  - Could allow FRA Non-Compliant vehicles to run on the system
- **Would require examination of:**
  - Potential additional Infrastructure capital cost for full separation
  - Potential operating benefits from full separation, e.g. higher speed
  - Potential savings on Vehicle capital and operating cost
- **Additional analysis would have a time and budget impact**

# Corridor Input Team Meetings & Feedback

- **Held 4 Corridor Input Team meetings**
  - Denver
  - I-70
  - I-25 (North and South)
- **Provided Overview**
  - Alternatives Analysis,
  - Capital Costing Considerations, &
  - Preliminary Results
- **Discussed Results & Gathered Input**



# Denver Corridor Input Team Meeting

## Key Takeaways & Feedback:

- General agreement with the recommended option
- Evaluate options to reduce/avoid segments that require sharing freight ROW
- Continued importance of FasTracks station integration
- Question of what CDOT savings (delayed/unneeded projects) result from HSR
- Clarify assumptions related to CDOT and RR ROW
- Reexamine East Corridor option to DIA in future NEPA studies
- Others?

# I-70 Corridor Input Team Meeting

## Key Takeaways & Feedback:

- Some agreement with the recommended option, but there are concerns
- Explore sections of more 4% alignment w/ 220 mph technology to improve ridership, reduce capital costs
- Concern over perceived infeasibility of I-70 corridor alone
  - Importance of proper positioning of system-wide results
- Highlight phased approach to incorporate western extensions – some question of ridership/revenue #s in truncated sections

# I-70 Corridor Input Team Meeting

## Key Takeaways & Feedback (cont):

- Evaluate options to reduce/avoid segments that require sharing freight ROW
- Interoperability was very important
- Reexamine type & level of ridership to and from resorts
- Others?

# I-25 Corridor Input Team Meetings

## Key Takeaways & Feedback:

- General agreement with the recommended option
- Some question of urban ROW cost assumptions
- Access concerns re: downtown Colorado Springs
- Impact to Colorado Springs Airport
- Question of using RR ROW north of Denver and greenfield elsewhere to reduce costs
- Interoperability was viewed as important
- Supportive of evaluating options to reduce/avoid segments that require sharing freight ROW
- Interest in future expansion to New Mexico
- Others?



# Remaining Steps to Complete the Study

- **Feasible Alternative Selection by Steering Committee**
- **Business Plan Quantification**
  - Mix and Match Analysis
  - Implementation Phasing
- **Peer Panel Review**
- **Final Report**



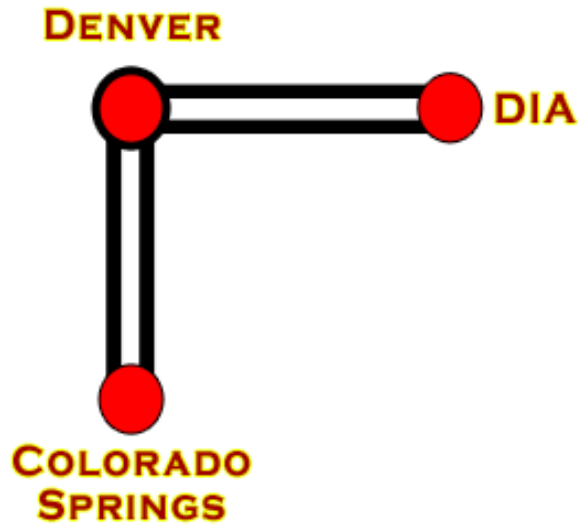
# Criteria for Implementation Plan

- **Analysis to determine how to develop the system. Aim to achieve the following goals:**
  - Minimize operating cost losses.
  - Maximize geographic coverage.
  - Maximize economic and environmental benefits.
  - Develop system in line with reasonable financing capability.

A high-speed train, likely a Deutsche Bahn (DB) model, is shown at a station platform. The train is white with a prominent red stripe running along its side. The DB logo is visible on the front. The train is positioned on tracks, and the platform is visible in the background with some people walking. The image is slightly faded, and the text "First-Cut Implementation Plan" is overlaid in the center.

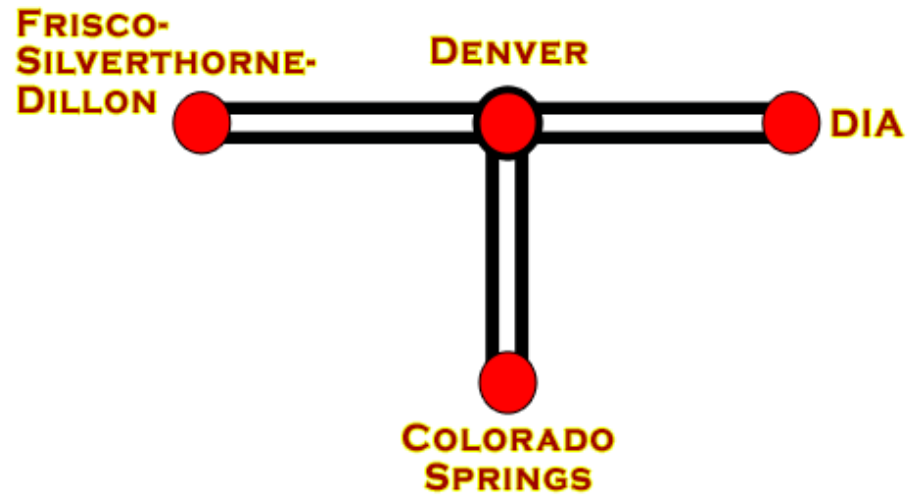
# First-Cut Implementation Plan

# Phase 1



PHASE 1: Capital Costs		
I-25:	2.66	Billion
I-70:	.19	Billion
Vehicle:	.12	Billion
<b>TOTAL:</b>	<b>2.96</b>	<b>Billion</b>
<b>Capital Needed for Phase 1:</b>		
<b>\$2.96 Billion</b>		

# Phase 2



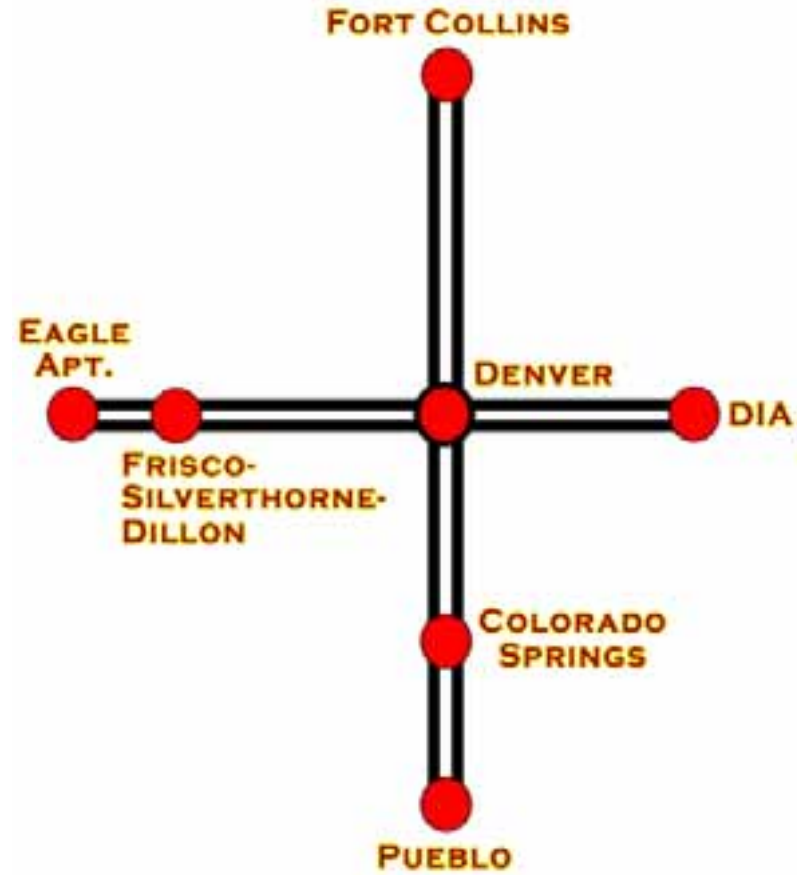
PHASE 2: Capital Costs		
I-25:	2.66	Billion
I-70:	8.98	Billion
Vehicle:	0.30	Billion
<b>TOTAL:</b>	<b>11.94</b>	<b>Billion</b>
<b>Capital Needed for Phase 2:</b>		
<b>\$8.98 Billion</b>		

# Phase 3



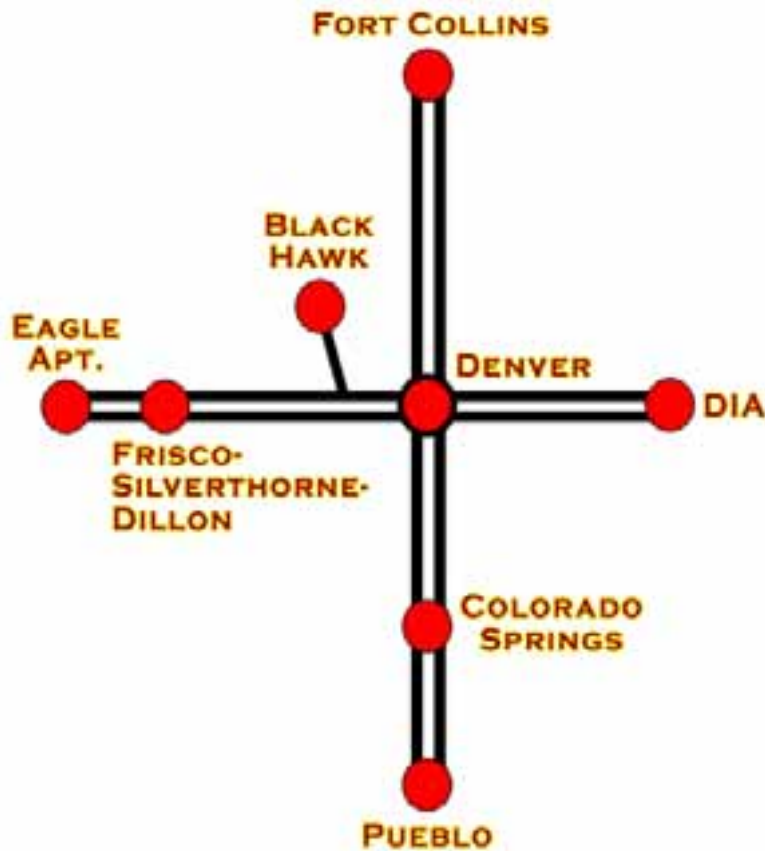
PHASE 3: Capital Costs		
I-25:	5.96	Billion
I-70:	8.98	Billion
Vehicle:	0.50	Billion
<b>TOTAL:</b>	<b>15.44</b>	<b>Billion</b>
<b>Capital Needed for Phase 3:</b>		
<b>\$3.5 Billion</b>		

# Phase 4



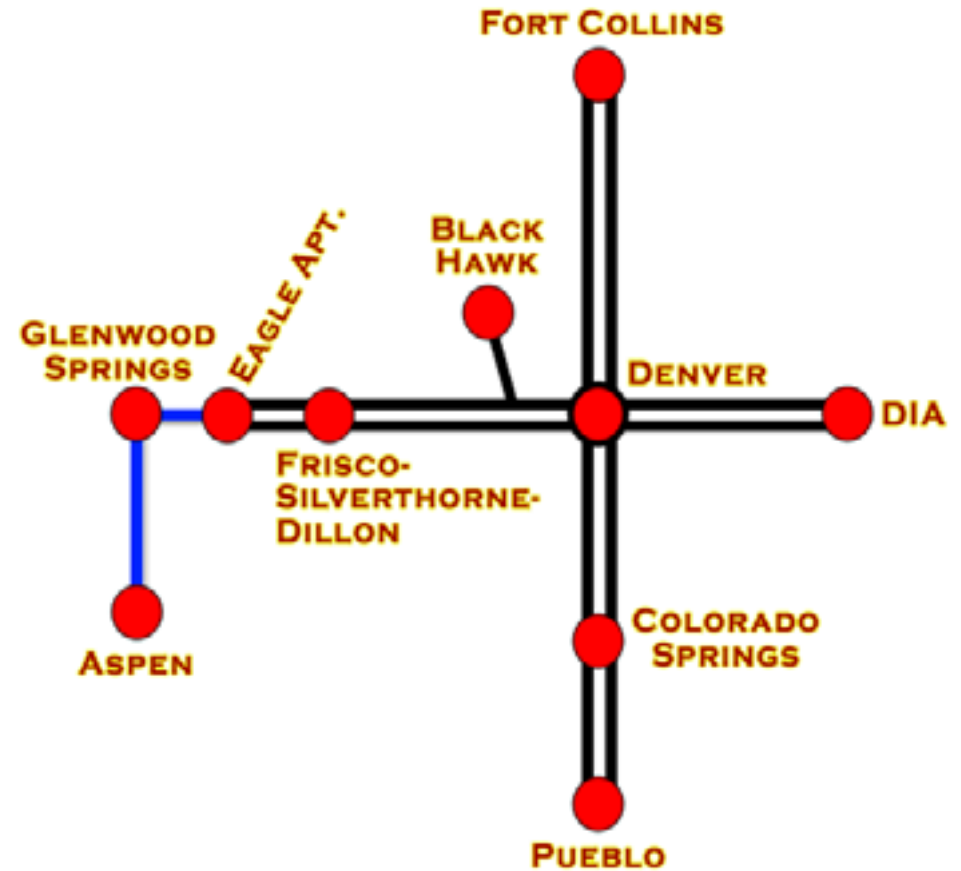
PHASE 4: Capital Costs		
I-25:	5.96	Billion
I-70:	12.47	Billion
Vehicle:	0.55	Billion
<b>TOTAL:</b>	<b>18.98</b>	<b>Billion</b>
<b>Capital Needed for Phase 4:</b>		
<b>\$3.54 Billion</b>		

# Phase 5



PHASE 5: Capital Costs		
I-25:	5.96	Billion
I-70:	13.28	Billion
Vehicle:	0.60	Billion
<b>TOTAL:</b>	<b>19.84</b>	<b>Billion</b>
<b>Capital Needed for Phase 5:</b>		
<b>\$0.86 Billion</b>		

# Phase 6

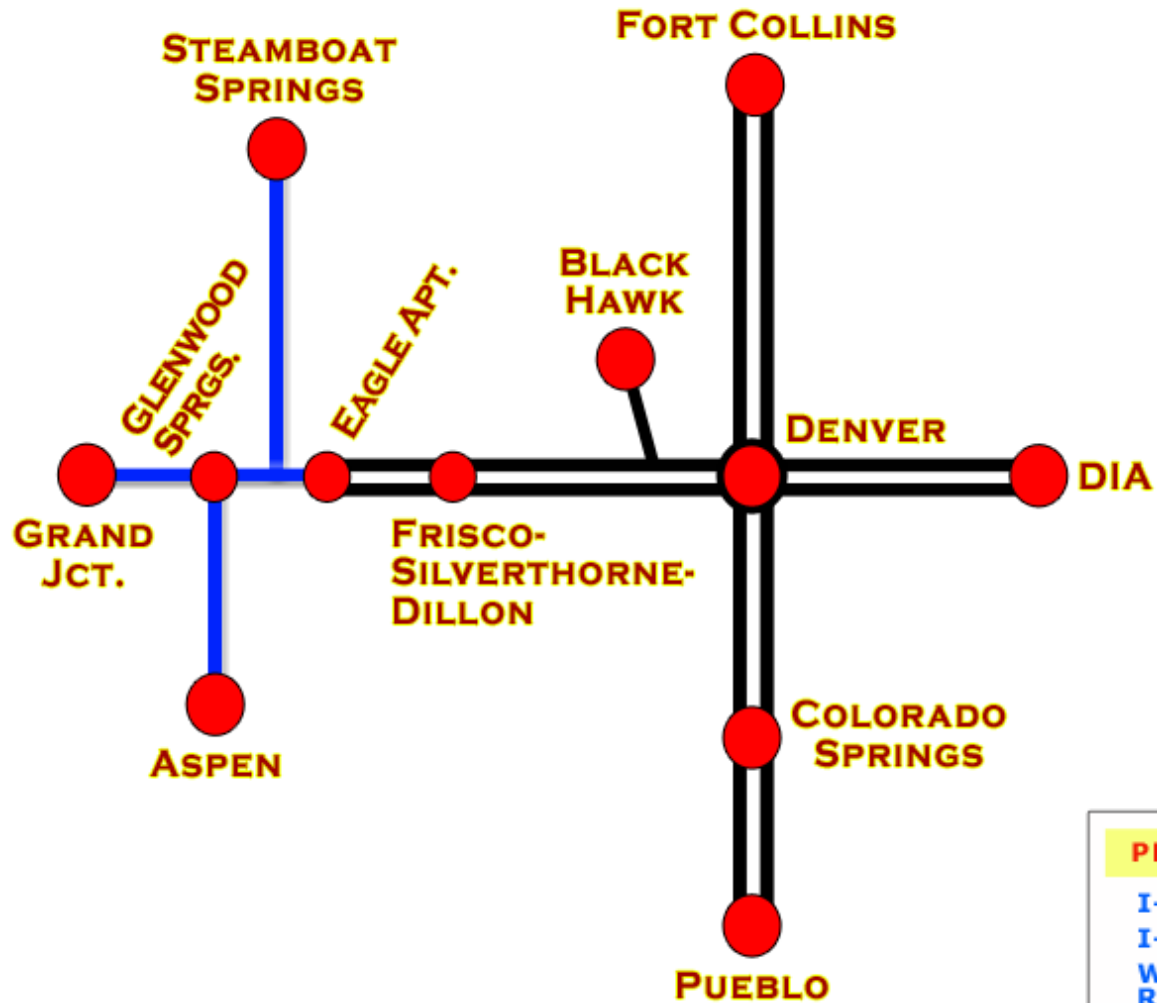


PHASE 6: Capital Costs		
I-25:	5.96	Billion
I-70:	13.28	Billion
Western* Routes:	0.88	Billion
Vehicle:	0.70	Billion
<b>TOTAL:</b>	<b>20.82</b>	<b>Billion</b>
<b>Capital Needed for Phase 6:</b>		
<b>\$0.98 Billion</b>		

*\* Preliminary estimate pending engineering cost re-evaluation.*



# Phase 7



PHASE 7: Capital Costs		
I-25:	5.96	Billion
I-70:	13.28	Billion
Western* Routes:	1.81	Billion
Vehicle:	0.80	Billion
<b>TOTAL:</b>	<b>21.85</b>	<b>Billion</b>
<b>Capital Needed for Phase 7:</b>		
<b>\$1.03 Billion</b>		

\* Preliminary estimate pending engineering cost re-evaluation.

# Open Discussion

- **Alternative to carry forward into Business Planning**
  - Technology selection
  - Reasonableness of Implementation Phasing
  - Financing Capability
- **Peer Review Panel Update**
- **Other Events and Meetings**
- **Other Business**

***Next RMRA Steering Committee Meeting:  
May 22, 9:00 AM, JeffCo Administration Building***



**Thank You.**