

Presentation To

# RMRA Feasibility Study Steering Committee

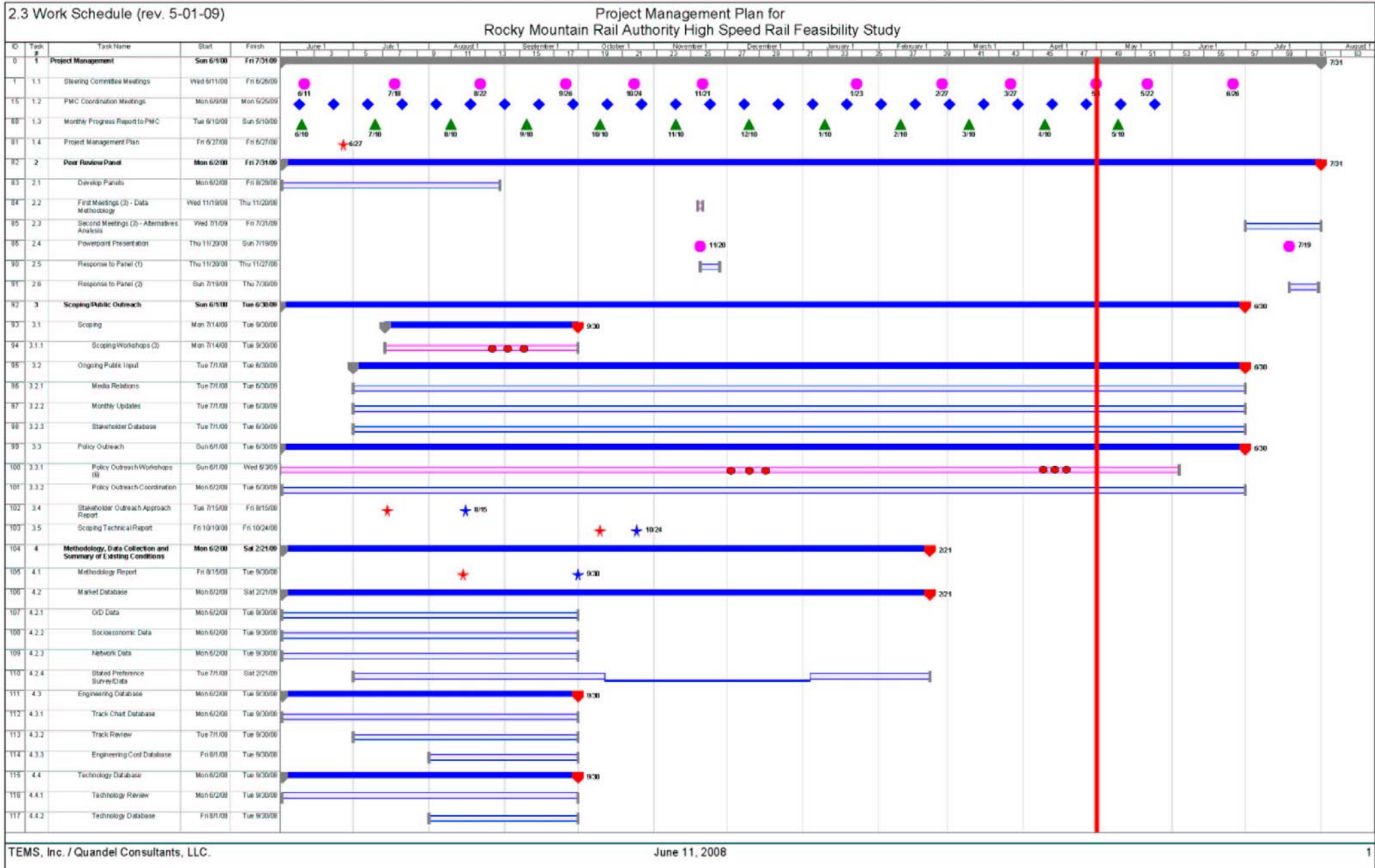
## Feasibility Update

May 1, 2009

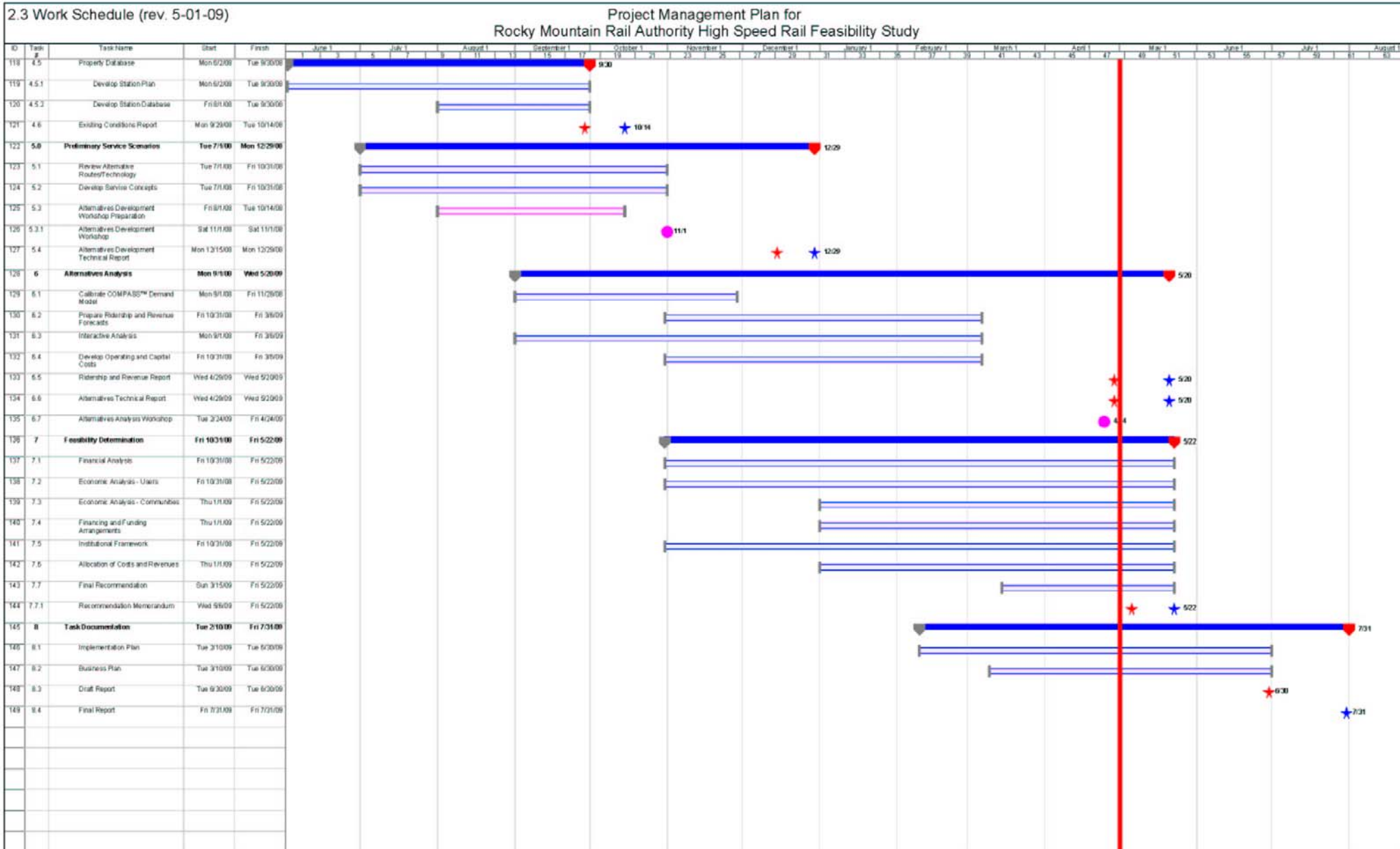
*High Speed Rail Feasibility Study*



# Study Work Schedule: Tasks 1 thru 4.4.2



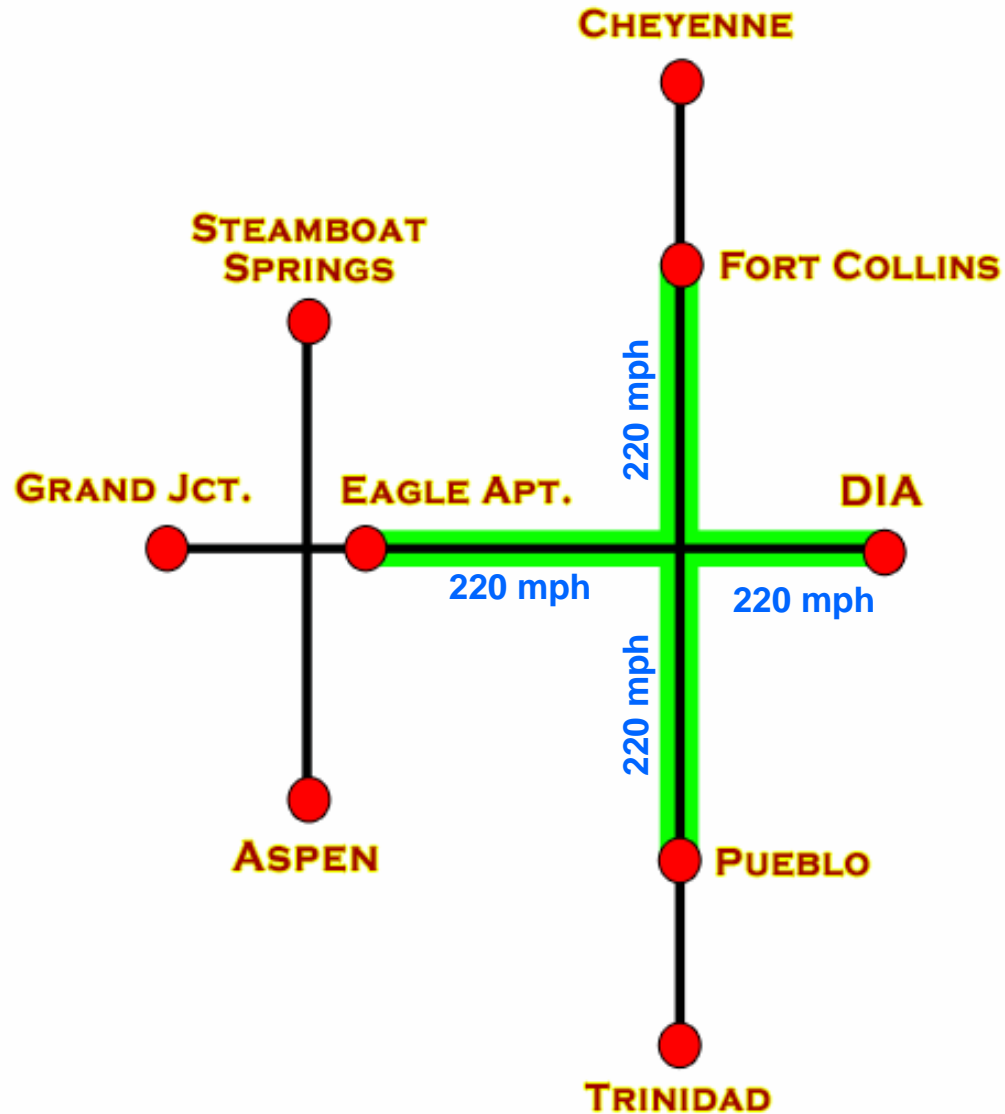
# Study Work Schedule: Tasks 4.5 thru 8.4



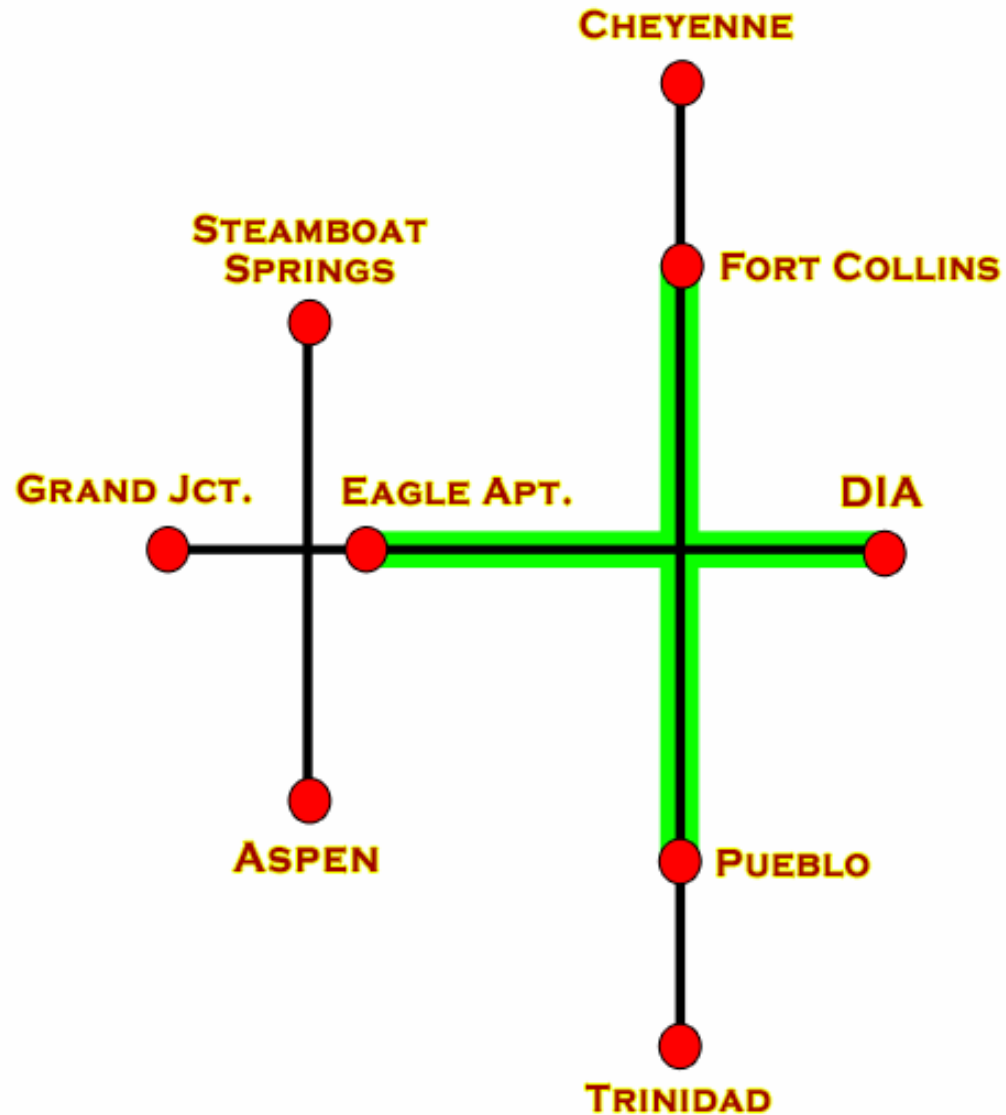
# Key Workshop Results

- **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 Meeting Summary

# 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**

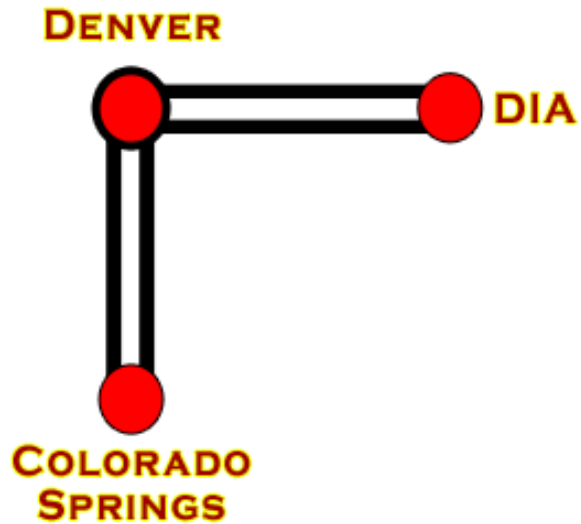
# Criteria for Implementation Plan

- **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 (TGV) is shown at a station platform. The train is white with a red stripe and the DB logo. The text "First-Cut Implementation Plan" is overlaid in the center of the image.

# First-Cut Implementation Plan

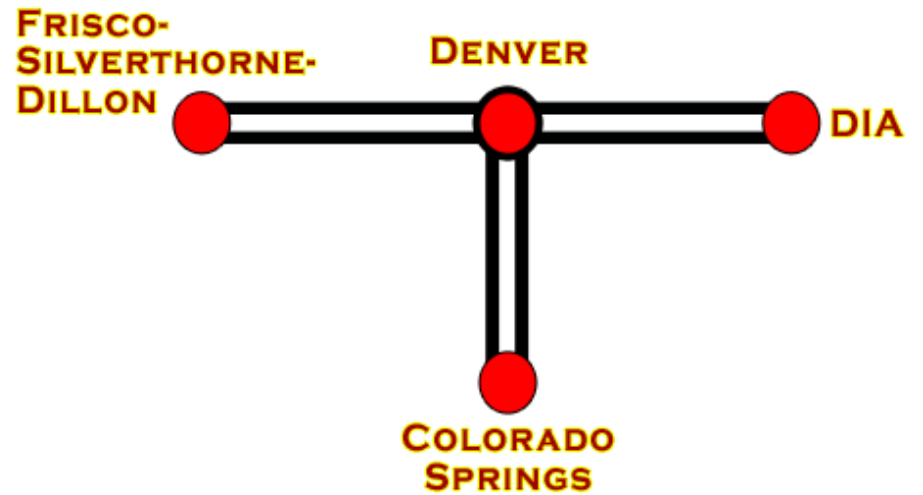
# Phase 1



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>

**Capital Needed for Phase 1:**  
**\$2.96 Billion**

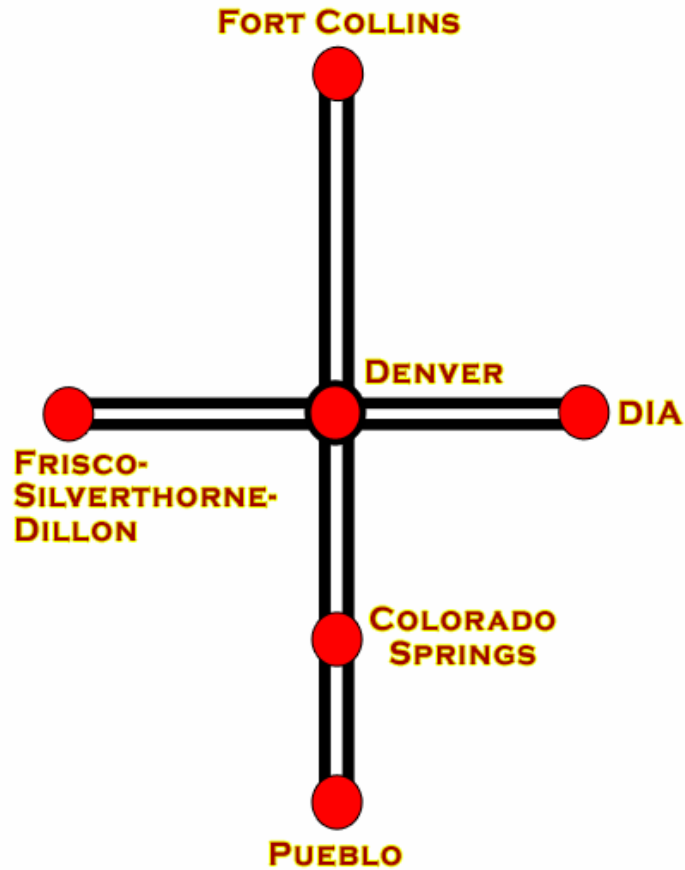
# Phase 2



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>

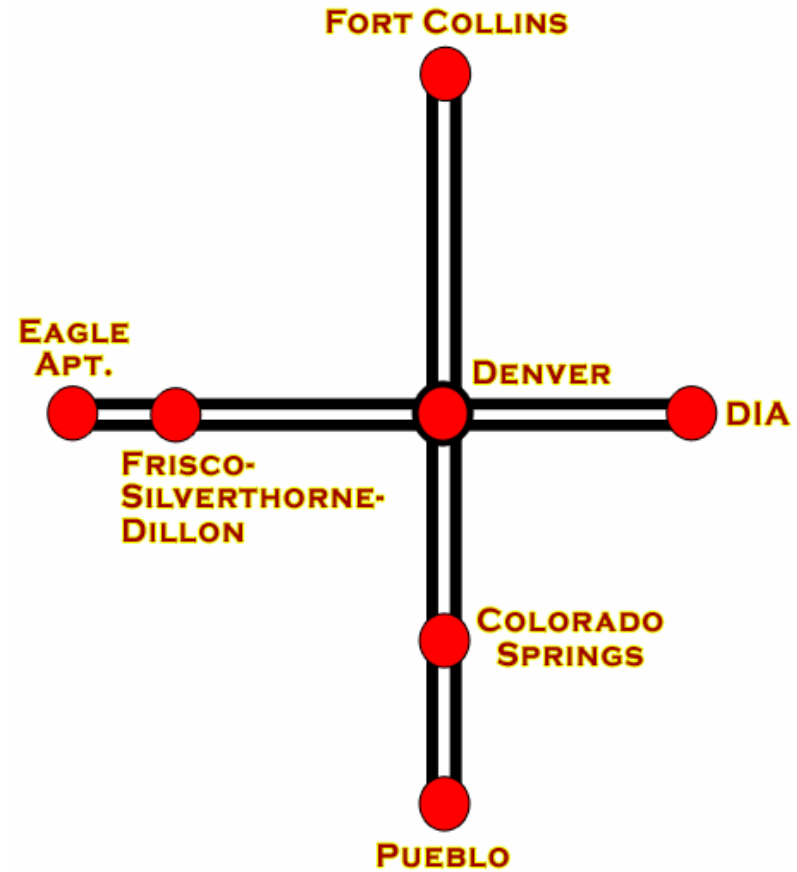
**Capital Needed for Phase 2:**  
**\$8.98 Billion**

# Phase 3



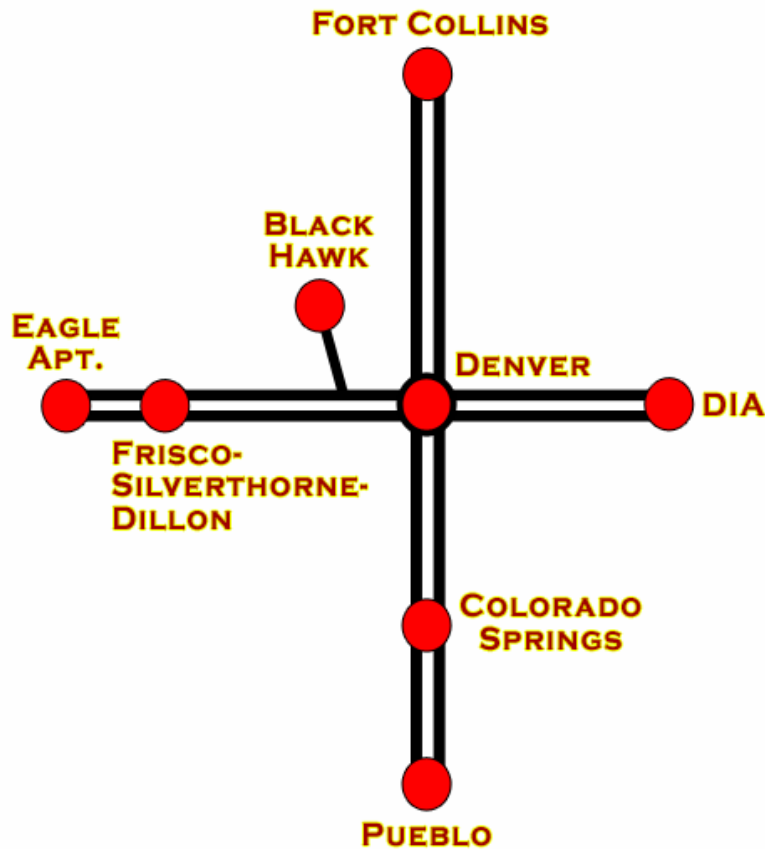
PHASE 3: Capital Costs		
I-25:	5.96	Billion
I-70:	8.98	Billion
Vehicle:	0.50	Billion
<b>TOTAL:</b>	<b>15.44</b>	<b>Billion</b>
<b>Capital Needed for Phase 3:</b>		
<b>\$3.5 Billion</b>		

# Phase 4



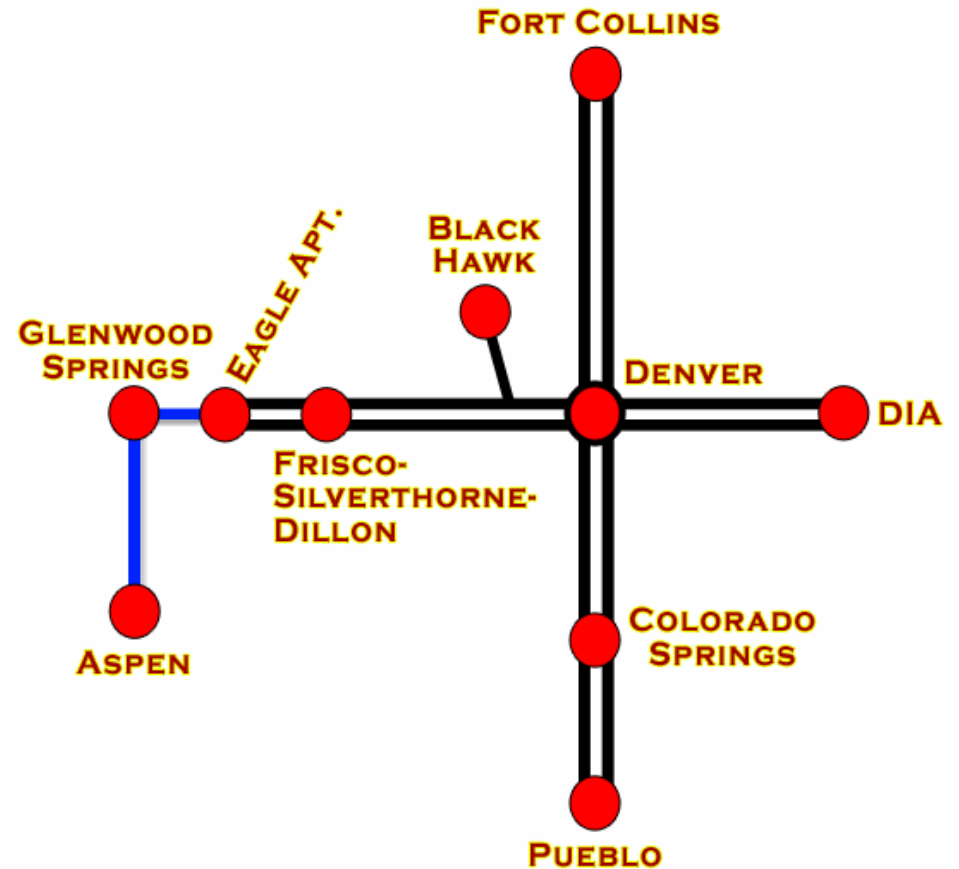
PHASE 4: Capital Costs		
I-25:	5.96	Billion
I-70:	12.47	Billion
Vehicle:	0.55	Billion
<b>TOTAL:</b>	<b>18.98</b>	<b>Billion</b>
<b>Capital Needed for Phase 4:</b>		
<b>\$3.54 Billion</b>		

# 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>		

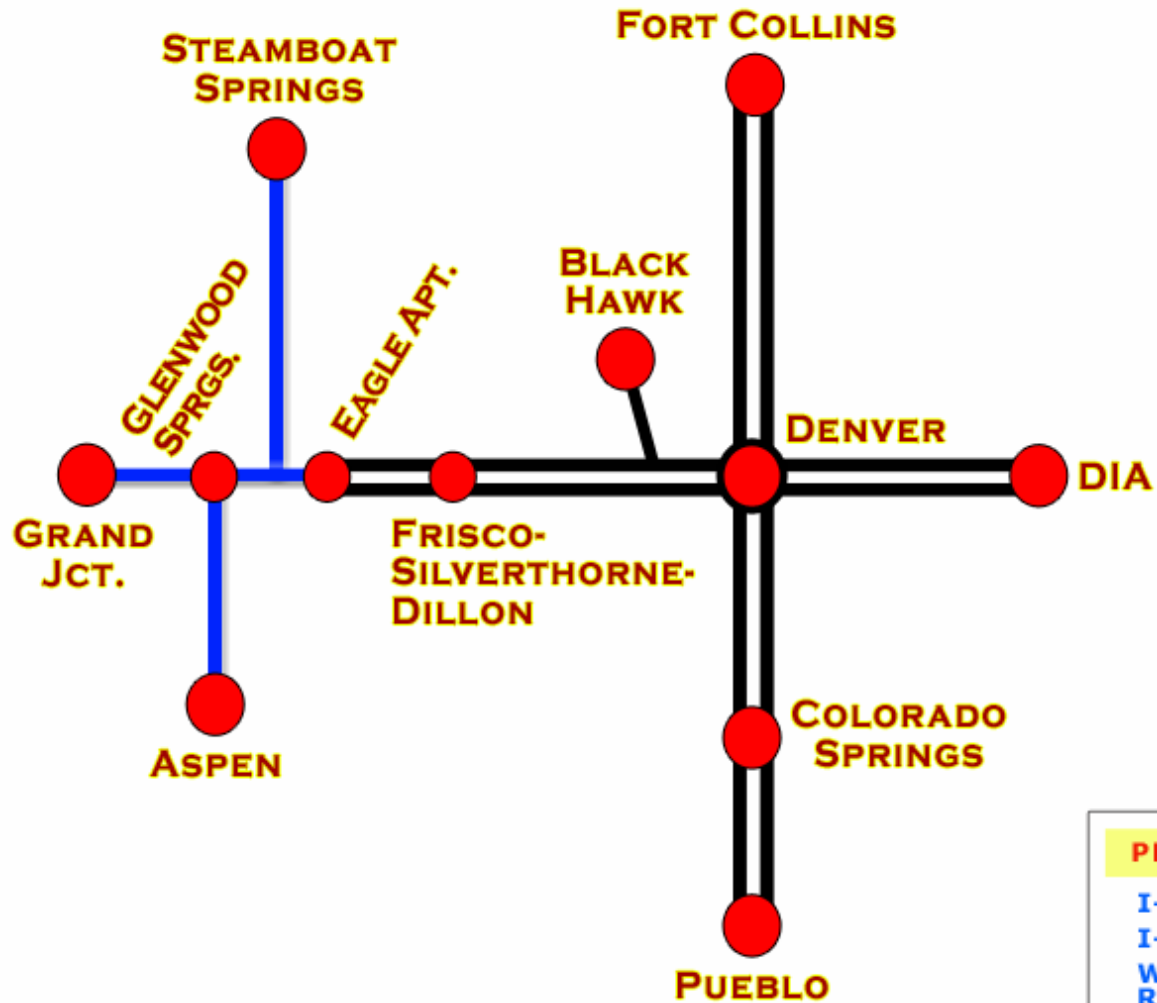
# Phase 6



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



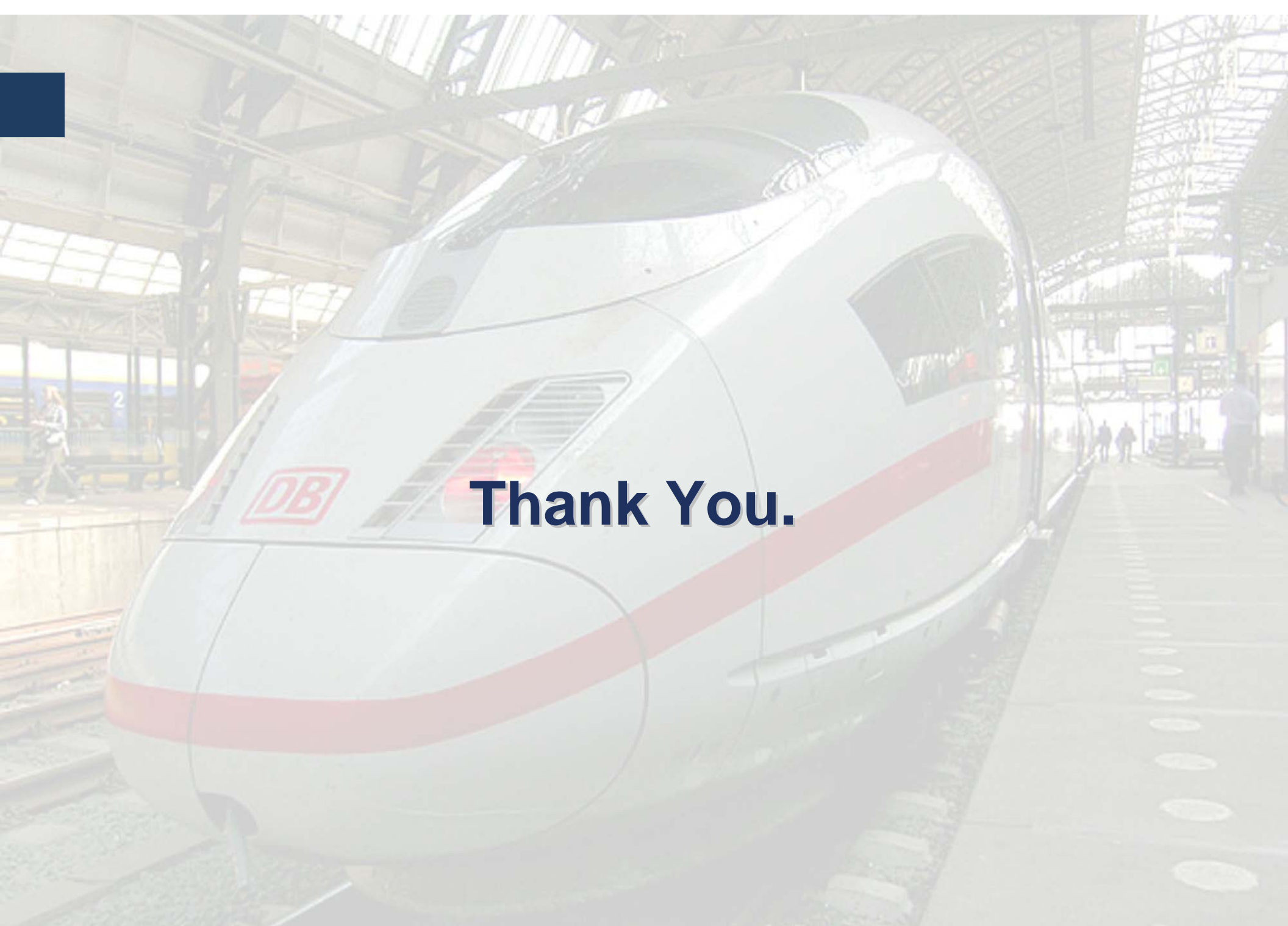
PHASE 7: Capital Costs		
I-25:	5.96	Billion
I-70:	13.28	Billion
Western* Routes:	1.81	Billion
Vehicle:	0.80	Billion
<b>TOTAL:</b>	<b>21.85</b>	<b>Billion</b>
<b>Capital Needed for Phase 7:</b>		
<b>\$1.03 Billion</b>		

*\* 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.**