Big Bear Modal Alternatives Analysis

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September 16, 2011
Study background

- Co-funded by SCAG, SANBAG, and Inland Valley Development Agency (IVDA)
- February 2010: Study Began
- September 2010: Milestone Update to SCAG Transportation Committee
- August 2011: Draft Report Completed
About the Big Bear Valley

- 25,000 residents (full-time and part-time)
- 8,000,000 annual visitors
- 100,000 population on peak weekends
Existing mountain access routes
The problem with existing roads

- Highly congested during peak times
- Unsafe winter driving conditions
- Closures due to snow or landslides
In 20 years...

- Fossil fuels dwindling
- Legislative mandates (AB32, SB 375, etc.) implemented
  - Difficult to widen or build new roads up mountain
  - Clean energy powers most vehicles
- Clean vehicles useful for flatter terrain
- Population growth throughout region
- More non-driving seniors in the population
- Mountain roads increasingly subject to closure
Advantages of a non-roadway mode

- Smaller footprint, less land impact than new or widened roads
- Few if any shutdowns
- Good access to Big Bear for non-drivers
- Alternative mode and route for emergencies/evacuations
- Economic boost – new tourist attraction
- Powered by non-fossil fuels
Study objectives

- Recommend technologies
- Recommend potential alignments
- Evaluate costs, benefits, and impacts of alternatives
- Develop funding strategies
- Recommend next steps
Technologies evaluated

- Aerial ropeway—cable-propelled
- Aerial ropeway—self-propelled
- Suspended monorail
- Cog rail
## Technology recommendations

<table>
<thead>
<tr>
<th>Technology</th>
<th>Proven Technology</th>
<th>Competitive Speed</th>
<th>Capital Cost</th>
<th>Freight Capability</th>
<th>USFS Firefighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerial ropeway—Cable-propelled</td>
<td>Yes</td>
<td>No</td>
<td>Lower</td>
<td>Limited</td>
<td>Potentially Problematic</td>
</tr>
<tr>
<td>Aerial ropeway—Self-propelled</td>
<td>No</td>
<td>Yes</td>
<td>Lower</td>
<td>Possible</td>
<td>Potentially Problematic</td>
</tr>
<tr>
<td>Suspended monorail</td>
<td>Yes</td>
<td>Yes</td>
<td>Higher</td>
<td>Limited</td>
<td>OK</td>
</tr>
<tr>
<td>Cog rail</td>
<td>Yes</td>
<td>Yes</td>
<td>High</td>
<td>Yes</td>
<td>OK</td>
</tr>
</tbody>
</table>
Alignment considerations
USFS Roadless and Non-Motorized Areas
Alignment considerations
Critical Habitats
Alignment alternatives with stations
Alignment lengths and capital costs

Alt 1
57 mi
$5.2-9.6B

Alt 2
42-51 mi
$4.1-8.6B

Alt 3
30-41 mi
$2.8-7.2B

Alt 4
32-40 mi
$2.9-6.6B

Alt 5
37 mi
$3.2-5.2B

Alt 6
54-58 mi
$5.1-9.4B
Most cost-effective corridors

Alt 3
30-41 mi
$2.8-7.2B
Annual riders: 769,000-981,000

Alt 4
32-40 mi
$2.9-6.6B
Annual riders: 855,000-981,000
San Bernardino Valley connections
Operations & Maintenance costs can be covered by passenger fares and freight revenue

Capital costs could be covered without sizable grants if:

- Capital cost toward lower end of range
- Future conditions attract more passengers and freight
- New local or regional revenue sources provide reliable funding stream
- Very low interest bond financing available
SANBAG decision-makers in the process of considering next steps:

- Cost/revenue refinements
- Phasing
- Engaging stakeholders

SCAG staff likely to recommend inclusion in 2012 RTP’s Strategic Plan