The Alameda Corridor: Lessons Learned
Plus
Past and Future Challenges

Presented to:
Portland State University
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By:
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Cambridge Systematics, Inc.
22-Mile 40 m.p.h. Rail Corridor

Consolidates Four Branch Lines (10 m.p.h.)

Reduces Conflicts at 200 Grade Crossings

10-Mile Trench Section

4 Million Cu. Yds. Excavation

40 Grade Separations

2,000 Utility Interfaces
Regional Rail System

Legend:
- Red: Union Pacific Railroad
- Green: Alameda Corridor Transportation Authority
- Blue: Burlington Northern Santa Fe Rail Lines

Timeline

- 1984 – SCAG Recommends Alameda Corridor
- 1989 – Joint Powers Authority Formed
- 1993, 1996 – EIR and EIS approved
- 1997 – Construction begins
- 1999 – $1.1 billion in revenue bonds sold; trench construction begins
- 2002 – Corridor opens for business
- 2008 – Major milestone: 100,000th train

Trench Excavation
≈ 4,000,000 cubic yards
≈ 9 cubic yards per scoop
≈ 444,444 scoops
February 2010
Daily train count: 37
Revenue: $6.5 M
Daily TEUs 10,395
2009
Alameda Corridor handled 13% of nation’s waterborne imports and exports.
Major Challenges During Development

- Project definition
- Governance/relations with corridor cities
- Railroad cooperation and participation
- Construction and project delivery
- Environmental management
- Job training and local participation
- Fund raising
Sources of Funding
(in Millions)

- Revenue Bonds: $1,160 (48%)
- Federal Loan: $400 (17%)
- MTA Grants: $347 (14%)
- Ports: $394 (16%)
- Other: $130 (5%)

Total Project Cost: $2.43 Billion

* Federal loan already repaid. Refinanced with $686 M in new revenue bonds
2010 CHARGE PER TWENTY-FOOT EQUIVALENT UNIT (TEU)
Effective January 1, 2010

USE FEES: *

- Loaded Waterborne TEU: $19.60
- Empty TEU and Loaded Non-Waterborne TEU: $4.96
- Loaded Rail Cars, other than containers: $9.92 (per rail car)

CONTAINER CHARGE: **

- Loaded Waterborne TEU: $19.60

* Uses Corridor
**Trucked around Corridor but leaves or enters Southern California by rail.
Lessons Learned

- Negotiate third-party agreements early.
- Concentrate on concurrent processing vs. sequential processing. (“Delay Kills”)
- Adopt a partnering program.
- Resolve change orders and disputes quickly.
- Carefully allocate risk between owner and contractor.
- Systematically identify obstacles.
- Maintain adequate contingency and reserves.
- Consider design-build, particularly for revenue driven projects.
- Understand how Fitch, Moodys, and S&P think.
Public-Private Partnerships: Keys to Success

- Consensus on what to build, funding shares, method of payment
- Legal authority
- Stable revenue stream
- Funding firewalls
- Appropriate allocation of risk
- Cost and schedule control
- Experienced project management
- Product orientation not process orientation
- Focused agency mission
- Clear decision making authority
The Seven C’s of Project Development

1) Communication
2) Coordination
3) Credibility
4) Compromise
5) Consensus
6) Coalition
7) Champions

$CAPITAL
New Challenges Facing Alameda Corridor

- Environmental challenges on new projects
- Recession
- Lower cargo forecasts
- Credit rating
- Competition from other gateways
Competition from Other Regions

- Panama Canal Improvements (2014)
- CREATE project: ($100 M TIGER, $100 M SAFETEA-LU, $133 M ARRA HSRP)
- Heartland Corridor ($95 M SAEFTEA-LU)
- Crescent Corridor ($105 M TIGER)
- National Gateway Corridor ($98 M TIGER)
- Prince Rupert and Canadian National Gateway Project
Heartland Corridor
Prince Rupert and Canadian National Railway
Container Traffic at California Ports
1984-2009 (Millions of TEUs)
## Container Volumes (TEUs) 2008 and 2009

<table>
<thead>
<tr>
<th>Port</th>
<th>2008</th>
<th>2009</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prince Rupert</td>
<td>181,894</td>
<td>265,259</td>
<td>+45.8%</td>
</tr>
<tr>
<td>Vancouver, BC</td>
<td>2,492,107</td>
<td>2,152,462</td>
<td>-13.6%</td>
</tr>
<tr>
<td>Seattle</td>
<td>1,704,492</td>
<td>1,584,596</td>
<td>-7.0%</td>
</tr>
<tr>
<td>Tacoma</td>
<td>1,861,352</td>
<td>1,545,855</td>
<td>-16.9%</td>
</tr>
<tr>
<td>Portland</td>
<td>245,459</td>
<td>174,203</td>
<td>-29.0%</td>
</tr>
<tr>
<td>Oakland</td>
<td>2,236,244</td>
<td>2,050,030</td>
<td>-8.3%</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>7,849,985</td>
<td>6,748,995</td>
<td>-14.0%</td>
</tr>
<tr>
<td>Long Beach</td>
<td>6,487,816</td>
<td>5,067,597</td>
<td>-21.9%</td>
</tr>
<tr>
<td>LA/LB combined</td>
<td>14,337,801</td>
<td>11,816,592</td>
<td>-17.6%</td>
</tr>
<tr>
<td>Manzanillo</td>
<td>1,409,782</td>
<td>1,110,356</td>
<td>-21.2%</td>
</tr>
<tr>
<td>Lazaro Cardenas</td>
<td>524,791</td>
<td>591,467</td>
<td>+12.7%</td>
</tr>
<tr>
<td>Houston</td>
<td>1,794,309</td>
<td>1,795,324</td>
<td>+0.1%</td>
</tr>
<tr>
<td>Charleston</td>
<td>1,635,534</td>
<td>1,370,000</td>
<td>-16.2%</td>
</tr>
<tr>
<td>Hampton Roads</td>
<td>2,083,278</td>
<td>1,745,228</td>
<td>-16.2%</td>
</tr>
<tr>
<td>NY/NJ</td>
<td>5,265,053</td>
<td>4,550,032</td>
<td>-13.6%</td>
</tr>
<tr>
<td>Savannah</td>
<td>2,616,125</td>
<td>2,356,573</td>
<td>-9.9%</td>
</tr>
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</table>
# POLA/POLB Container Volumes (TEUs) January - April 2010

<table>
<thead>
<tr>
<th></th>
<th>Inbound Loads</th>
<th>Outbound Loads</th>
<th>Empties</th>
<th>Total</th>
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<tbody>
<tr>
<td><strong>POLB</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>January - April</td>
<td>873,742</td>
<td>497,041</td>
<td>378,989</td>
<td>1,749,772</td>
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<tr>
<td>% Change from 2009</td>
<td>18.8%</td>
<td>20.7%</td>
<td>7.4%</td>
<td>16.6%</td>
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<tr>
<td><strong>POLA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>January - April</td>
<td>1,135,525</td>
<td>609,324</td>
<td>499,113</td>
<td>2,243,962</td>
</tr>
<tr>
<td>% Change from 2009</td>
<td>5.1%</td>
<td>22.7%</td>
<td>3.4%</td>
<td>9.0%</td>
</tr>
<tr>
<td><strong>Both Ports</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>January - April</td>
<td>2,009,267</td>
<td>1,106,365</td>
<td>878,102</td>
<td>3,993,734</td>
</tr>
<tr>
<td>% Change from 2009</td>
<td>10.7%</td>
<td>21.8%</td>
<td>5.1%</td>
<td>12.2%</td>
</tr>
</tbody>
</table>
## San Pedro Bay Ports Container Forecasts (millions of TEUs)

<table>
<thead>
<tr>
<th>Year</th>
<th>Previous</th>
<th>Current</th>
<th>Difference</th>
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</thead>
<tbody>
<tr>
<td>2008 (actual)</td>
<td>14.3</td>
<td>14.3</td>
<td>0</td>
</tr>
<tr>
<td>2009 (actual)</td>
<td>11.8</td>
<td>11.8</td>
<td>0</td>
</tr>
<tr>
<td>2015</td>
<td>27.6</td>
<td>17.0</td>
<td>10.6</td>
</tr>
<tr>
<td>2020</td>
<td>36.7</td>
<td>21.8</td>
<td>14.9</td>
</tr>
<tr>
<td>2030</td>
<td>43.2</td>
<td>34.6</td>
<td>8.6</td>
</tr>
<tr>
<td>2035</td>
<td>43.2</td>
<td>43.2</td>
<td>0</td>
</tr>
</tbody>
</table>

Port of LA and Port of LB Cargo Forecast
2009 vs. 2007

Future Capacity=43.2 @2035

Existing Capacity=28.5 @2027

Source: The Tioga Group, Inc. – July 2009 Forecast
Conflicting Opinions

“Regardless of efforts to develop alternative West Coast gateways, Los Angeles and Long Beach will remain the primary entry points for eastbound imports into the U.S.”

*Waterfront Coalition*

“Up to 25% of the US West Coast ports’ present cargo base (primarily hinterland cargo) could be lost to the East Coast and Gulf ports in the decade to come...Without radical action, intermodal distribution [from the West Coast] to the Midwest and beyond will gradually die.”

*Drewry Supply Chain Advisors*

“The expansion of the canal will be a bump, not a sea change. We won’t see much of a change — maybe a percent or two — because most of the big retailers are already going all-water.”

*Prof. Asaf Ashar, National Ports and Waterways Institute, Univ. of New Orleans*