The Carquinez Strait Bridges
The Future of Northern California

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Bridge Characteristics
- 8 Bridges link Bay Area
- Carquinez Bridge a major connector between Bay and farther north
- 110,000 average daily trips=second most used bridge
- Accounts for about 18% of toll revenue (27M)
- Expected growth of 44% + 48,500 daily riders

History: First steel truss bridge built in 1927, followed by a second steel truss bridge, 1958
Problem: Oldest bridge has expanded life span, both bridges are not earthquake sound
Solution: Dismantle 1927 bridge, retrofit 1958 bridge, build a new twin-tower suspension bridge (Al Zampa Memorial), west of existing bridge, and build new Crockett Interchange

Project Overview

Bridge Benefits
- Improves mobility across Northern California:
  - satisfy current seismic and safety standards
  - correct existing roadway deficiencies
  - improve traffic safety
  - maintain routes for local, regional, and interstate truck freight movement
  - support high occupancy vehicle (HOV) use
  - addition of public amenities (bike lanes and vista)

Bridge Costs
- Initial Estimates=$340M
- Actual Costs= $480M
  - Regional Measure I (1988)
- Cause a huge bottleneck during project span
- Impact on local residents and environment
- Loss of 20 homes, noise, water disturbances

Construction Pictures
Project Funding

Regional Measure I (1988): voter-approved measure, run by Bay Area Toll Authority (BATA) to set a uniform toll of $1 on all state-owned Bay Area bridges, specifically for bridge and transit improvements

Collaboration between BATA, Metropolitan Transportation Commission (MTA), State (Caltrans), and local Crockett residences

Project Funding, cont.

State Senate Bill 226: State transferred a portion of revenues and existing fund balances collected before June 30, 1998.

- Total transfer amount: $600 M
- Total bonds issued: $400 M fixed and variable rate, more to be issued soon
- TOTAL Available Funding > $1 Billion
- Carquinez Bridges = approx 36% of funding
  - $144M of Bond (mature in 2018 and 2035)

Cost/Benefit Analysis

i=5%

NPV Cost=$144M
NPV Rev=$146M
Annual Rev=$27M

Conclusion

- The Carquinez Bridges are not only essential for commuters and travelers, but also profitable if $2 toll remains
- Improvements will help alleviate large traffic jams and make driving more safe
- Final Question: What will the growing demands of the Bay Area have in store for the future of its bridges?

References

- “Bay Area Toll Authority Sells $400M in Bonds for Bridge Work.” http://www.mtc.ca.gov/whats_happening/press_releases/rel159.htm