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San Diego Association of Governments
California Department of Transportation, District 11

State Route 11 Toll Road and East Otay Mesa Port of Entry

Financial Feasibility Study

Final Report

December 21, 2006

HDR | HLB Decision Economics Inc.

Risk Analysis • Investment and Finance
Economics and Policy

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Prepared By:

HDR|HLB DECISION ECONOMICS INC.
8403 Colesville Road, Suite 910
Silver Spring, MD 20910

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EXECUTIVE SUMMARY

Background

Trade between the U.S. and Mexico fuels economic growth on regional and national levels. Investments in border infrastructure attempt to keep pace with U.S. import demand but with partial success. New demands for improved security extend average processing times and exacerbate waiting times at the port of entries. Problems are particularly acute in the San Diego-Tijuana region, since San Ysidro is the busiest land crossing in the world in terms of numbers of people processed. Waiting times at existing facilities routinely can last over an hour for passenger vehicles, and truck drivers have logged four hours in line.

Budget constraints at the federal level have limited its ability to contribute to border infrastructure needs. Where funds are available, long lead times are required between project design and allocation. In this context, innovative financing mechanisms such as public-private partnerships can play an important role. Infrastructure investments that can generate revenue - and even an attractive return on investment - become potential examples of win-win solutions.

While local resources are also constrained, the demand for generating public benefits from investments can sometimes drive action to unlock funds. In this regard, it can become very important to understand the implications of investment levels on the size and distribution of public benefits.

Project Summary

The San Diego Association of Governments (SANDAG) has retained HDR|HLB Decision Economics Inc. (HDR|HLB) to assess whether the proposed State Route (S.R.) 11 and East Otay Mesa (EOM) Port of Entry (POE) could be financed as toll facilities. In this effort, HDR|HLB has developed traffic, revenue, cost and financial risk models--approaches that have been extensively used in other toll road feasibility analysis for capital markets (rating agencies, bond insurers, etc).

Development of S.R. 11 and the EOM POE would help reduce long wait times at nearby POEs. These facilities have limited options for expanding capacity to meet current demand. As population and economic development drive future demand, wait times would increase accordingly. A new POE in the San Diego-Tijuana region will relieve this pressure and can achieve reductions in wait times for all persons crossing the border.

Study Approach

The primary focus of this study is whether the S.R. 11 and EOM POE project is a good candidate to attract private investment. To answer this question, HDR|HLB investigated whether the necessary conditions for a "successful" toll facility are met; evaluated the facility in light of standard credit rating criteria for toll facilities; analyzed the impact of potential revenue and cost scenarios; and assessed the investor market.

The traffic and revenue forecast analysis is built around transparency. An expert panel, convened by HDR|HLB, SANDAG, and the California Department of Transportation (Caltrans) thoroughly reviewed the models, verified data accuracy, assessed reasonability of assumptions and suggested revisions, as necessary. In all cases, key assumptions on the drivers of traffic and revenue are characterized with a risk

profile and uncertainty. Analytical models incorporate these uncertainties to ultimately provide a probability of achieving the necessary debt service coverage levels over time.

Findings

Principal financial findings are contained in Table ES-1. This table summarizes debt service coverage ratios (DSCR) for a series of cost scenarios with baseline revenues. The baseline cost scenario includes only capital and operation and maintenance (O&M) costs for S.R. 11. Additional cost scenarios assess the grant level requirements necessary to achieve a solid financial rating while including the cost of additional project elements.

Regarding baseline costs, passenger vehicles and trucks transaction growth and a high demand for the lower waiting times at the EOM POE appear to produce the revenues that are necessary to limit debt service coverage risk to only a few years. With a $50 million grant (17% of the total capital cost), the revenues achieve a high likelihood of success and reasonably likelihood of an investment grade rating. To achieve the same investment grade rating, the capital grant requirement rises substantially to $400 million if project revenues are intended to cover S.R. 11 capital and O&M costs and also the EOM POE capital cost (Scenario C-1). The grant amount is over 60% of the total capital cost. If the EOM POE O&M costs (including personnel) are added to the project budget, the debt service coverage simply cannot be met. Only if O&M costs for the first thirty years are covered by an external source and with the same $400 million capital grant can the project achieve a reasonable credit rating Scenario C-3. The cumulative shortfall in O&M costs over this period is approximately $1 billion in current year dollars.

Table ES-1: Expected S.R. 11 and EOM POE Credit Ratings and Needs for Public Co-Investments (In Millions of 2012 Dollars)

Scenario	Total Capital Costs	Annual O&M Costs	Capital Grant	Likelihood of "Success" [1]	Likelihood of Investment Grade Rating[2]
Cost Scenarios					
Baseline Scenario S.R.-11 Capital and O&M Costs	$294.5	$0.42	**$0** 0%	**>90%**	**75% - 80%**
			$50 17%	**>95%**	**80% - 85%**
Scenario C-1 S.R.-11 Capital and O&M Costs, plus POE Capital Costs	$660.4	$0.42	**$300** 45%	**>80%**	**65% - 70%**
			$400 61%	**>95%**	**80% - 85%**
Scenario C-2 S.R.-11 Capital and O&M Costs, plus POE Capital and O&M Costs	$660.4	$37.02	**$400** 61%	**<5%**	**<5%**
Scenario C-3 S.R.-11 Capital and O&M Costs, plus POE Capital and O&M Costs **after 30 years**	$660.4	$37.02	**$400** 61%	**>90%**	**75% - 80%**

Note: (1) Major bond insurers (with AAA ratings) would prefer to insure projects with a 99 percent probability that the DSCR (the first percentile) is 1.0 or higher. This level of analysis is limited to an upper probability bound of 95%. Exact determination at the 99% level may be required by the major bond insurers.
(2) Major bond insurers (with AAA ratings) consider a DSCR of 1.25 to be the minimum level for an investment grade rating of BBB.

Strengths, weaknesses, and an assessment of the investor market can be summarized as follows:

Strengths

- EOM and S.R. 11 would be an alternative border crossing to increasingly congested Otay Mesa (OM) and San Ysidro (SY) facilities.
- New facilities would offer dramatic travel time savings for users.
- Travelers continuing to use the free POEs would experience small reductions in wait times, but if aggregated would amount to a sizable public benefit.
- Over the next several decades, population growth in the region – especially in Mexico, would lead to success of the toll facilities.

Weaknesses

- Estimated construction and operational costs for S.R. 11 and EOM are quite expensive.
- As with most toll road start-ups, a financing plan with relatively low obligations in early years of operations (e.g., principal repayments starting a few years after opening) would be needed to be viable.

Investor Market assessment

- The analysis reveals that S.R. 11 and EOM POE would require at least $400 million in external funds to pay for all construction costs. This level of funding is however insufficient to cover the EOM POE O&M costs until the facility has been operating for 30 years.
- Integration with the Mexican toll road would lower the total cost burden somewhat, but not enough to pay for the annual O&M shortfall at the EOM POE.

Next Steps

Given the need for public participation, some additional analyses may be needed. These include an assessment of economic benefits and distributional welfare effects on the region (i.e. an assessment of whether the rate of return from the social perspective warrants the local public investments in the project). In addition, conducting a due diligence and risk-based assessment of estimated construction and O&M costs of S.R. 11 and the EOM POE may identify mitigation strategies for reducing risks. Also, a more complete financial analysis could broaden the scope of study to explore the potential of non-toll revenues (e.g. development fees) to reduce grant needs and to explore mechanisms for alleviating shortfalls in O&M costs.