BRIEFING: JULY 18, 2017 BOARD MEETING AGENDA ITEM #4

TO: **Chairman Richard and Board Members**

FROM: **Tom Fellenz, Chief Counsel and Interim CEO**
Alice Rodriguez, Small Business Advocate

DATE: **July 18, 2017**

RE: **Presentation on the Economic Impact of High-Speed Rail**

Background

Over the last year, High-Speed Rail Authority (Authority) staff has conducted a study to better understand the economic impacts of planning and constructing high-speed rail in California. The 2016 California High-Speed Rail Economic Impact Analysis (Analysis) estimates the economic impact of the Authority's expenditures over a ten-year period (July 2006 through June 2016). The Analysis also includes a short-term projection of the impact through the end of FY 2016-2017, when American Recovery and Reinvestment Act (ARRA) funds will have been fully spent. Lastly, the Analysis includes a broader assessment of total economic impact of the completion of the Silicon Valley to Central Valley Line in 2025, as envisioned in the 2016 Business Plan.

This Analysis illustrates the regional, subregional, statewide, and national economic benefits of the high-speed rail program. In addition, the Analysis describes the positive impacts the program has had on California's small businesses and disadvantaged communities.

The scope of this Analysis is strictly limited to the economic impacts from historical and forecast project expenditures. It does not attempt to quantify the many long-term benefits and impacts associated with future rail operations, such as increased accessibility, reduced vehicle miles traveled and vehicular congestion, increased safety, greenhouse gas emission reductions, and other benefits.

Methodology

The range of economic impacts was estimated using multiple industry-standard approaches, including a "top-down" analysis applying input-output models to project expenditures to estimate impacts at the state level, and a more in-depth, "bottom-up" methodology that involved rigorous internal and external research on detailed project expenditures and customized geographic economic impact modeling using economic modeling software.

To confirm this methodology and its assumptions, the Authority requested review and validation from a number of industry experts both within and outside of government who reviewed inputs, assumptions, methodology, and outputs associated with the Analysis. The reviewers confirmed the validity of the models and assumptions used in the Analysis and provided valuable feedback. These reviews included experts from the University of the Pacific's Center for Business and Policy Research, the California High-Speed Rail Peer Review Group, the Department of Finance, and the Employment Development Department.

Lastly, to ensure that the economic impact analysis can be updated on a yearly basis, the Authority's Policy and Procedures are being updated to include an Economic Impact Analysis and Data Gathering Policy and Procedure. In addition, specific language has been added to new Authority contracts commencing after July 2017. The purpose of this new contract requirement is to ensure that the Authority's contractors provide the data used in the Analysis in the format and at the time required.

Discussion

The Analysis presents the economic impacts (or effects) in terms of:

- *Direct impacts* - the economic effects generated by direct spending on a project
- *Indirect impacts* - the economic effects that occur in the next step in the supply chain (dispersed among the industries that supply intermediate goods and services to firms with direct impacts).
- *Induced impacts* - are the economic effects that result when income earned by direct and indirect employees gets spent elsewhere in the economy.
- *Job-years* - represent a combination of total jobs and the length of time of those jobs. For example, one job supported for five years equals five job-years; five jobs supported for one year also equals five job-years.

As shown on the table below, the $2.3 billion infrastructure investment has supported total direct, indirect, and induced jobs ranging from 19,900 to 23,600 and generated $3.5 to $4.1 billion in economic activity. More than 630 prime and sub-consultant firms have worked for the program in this period.

California Economic Impacts, July 2006 – June 2016

	Jobs-Years	Labor Income	Economic Output
Direct	8,900 - 10,500	$730M - $900M	$1,640M - $1,920M
Indirect	5,000 - 6,000	$330M - $390M	$900M - $1,030M
Induced	5,900 - 7,100	$320M - $390M	$950M - $1,150M
Total	**19,900 - 23,600**	**$1,380M - $1,680M**	**$3,500M - $4,100M**

The majority of this economic activity has taken place within the state, with 94% of spending going to contractors, consultants, and small businesses based in California. Forecasted spending of approximately $1.3 billion during FY 2016-2017 is expected to support approximately 12,550 additional job years.

The Silicon Valley to Central Valley Line will be the first operating segment of high-speed rail in California with a projected investment of over $18.7 billion (2015$) during the planning and construction phase of the segment, it is estimated to result in a total of 198,700 job-years of employment and generate $36.2 billion (2015$) in total economic activity.

Program investments have already had significant positive impact on the Central Valley economy, generating an estimated 6,800 job years of employment and about $1.2 billion in total economic activity from July 2006 to June 2016. This reflects the fact that construction has been ramping up in the Central Valley since FY 2013-2014 with the three design-build construction contracts. The Sacramento region also shows significant impact because of direct Authority expenditures at its Sacramento headquarters and other government spending, with 4,200 total job-years and $710 million in total economic output. The Bay Area and Southern California show comparable impacts derived primarily from engineering and other professional services firms based there, with 2,500 total job-years and $460 million in economic output, and 2,500 job-years and $420 million in total economic output respectively.

Over half (52%) of the $2.3 billion program investment in the system through June 2016 occurred in designated disadvantaged communities throughout California, spurring economic activity in these areas. Furthermore, the results show that almost a quarter (23%) of program investment through June 2016 has occurred in the most disadvantaged communities in the State. This is consistent with the substantial investments that the program is making in the Central Valley region, where many of the state's disadvantaged communities are located.

While most of the spending has occurred within California, companies from 35 different states have worked on the program, contributing to everything from planning and engineering to construction. Out-of-state spending has accounted for about 6% (around $121 million) of total expenditure and includes spending across the United States as well as some expenditures for specialized services that could only be provided from experts abroad. Of this out-of-state spending, nearly 90% of it stayed within the United States (around $109 million). About 10% of out-of-state spending was international (nearly $13 million). The states with the highest program investment outside of California include Colorado, New Jersey, New York, Oregon, Texas, Washington and Washington DC.

Over the duration of this Analysis, program expenditures grew from $10 million in FY 2006-2007 to $968 million in FY 2015-2016 with forecast expenditures for FY 2016-2017 at $1.3 billion. As the investment in high-speed rail infrastructure grows over time, so too will the economic effects associated it. The analysis of these effects will be updated on an annual basis.

Recommendations

This is an information item; there are no staff recommendations at this time.

Attachments

- 2016 Economic Impact Analysis Technical Support Document
- National Impact Map

- Economic Impact Factsheet
- Economic Impact Infographic