

Twelve Misleading Statements On Finance And Economic Issues In The CHSRA's Draft 2012 Business Plan

From the authors of
The Financial Risks Of California's Proposed High-Speed Rail Project
Found at <http://www.cc-hsr.org/>

January 12th 2012

Michael Rossi, Governor Brown's jobs czar and a CHSRA Board member, said;
“. . . there was no plan to mislead anyone by manipulating the numbers.”
San Jose Mercury News, December 21st 2011 ¹

We are grateful to the Community Coalition on High Speed Rail for providing a virtual 'home' for this report and all of our work since late 2010. For downloadable copies of all the material, visit their website <http://www.cc-hsr.org/>. This includes:

Major Reports:

October 2010 – The Financial Risks of California’s Proposed High Speed Rail Project
October 2010 – plus an Executive Summary
June 2011 – A Financial Analysis Of The Proposed California High-Speed Rail Project
June 2011 – plus an Executive Summary
September 2011 – Revisiting Issues In The October 2010 Financial Risks Report

Briefing Papers:

October 2010 – Dubious Ridership Forecasts
January 2011 – Six Myths Surrounding California’s High-Speed Rail Project
January 2011 – Seven Deadly Facts For California’s High-Speed Rail Authority
February 2011 – A Train To Nowhere But Bankruptcy
March 2011 – Big Trouble For California’s \$66Billion Train
April 2011 – Will The Train Benefit California’s Middle Class?

Brief Notes:

Twenty-three one page, single subject papers on various aspects of financial issues related to the proposed high-speed rail system

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Any fault found of this report’s substance or otherwise is solely the responsibility of the Authors.

INTRODUCTION

Proponents of California's proposed high-speed rail project claim the CHSRA's 2012 Draft Plan is an improvement on past business plans by the Authority. We find that like its predecessors, the Draft Plan is built on the hope for a series of miracles over the next two decades. Briefly these are:

- 1) Hope the project can use the available \$6Billion of Year of Expenditure (YOE) funds to construct the Initial Construction Section (ICS) over the next five years, despite serious legal and grass-roots political challenges, two survey results saying about two-thirds of Californians do not support the project, plus a probable Government Accounting Office investigation.²
- 2) Hope that a Democratic party-controlled Administration, House and Senate is in power in Washington between the 2012 and 2024 and will put twice as much emphasis annually on California's high-speed rail project as during the first three years of the Obama Administration.
- 3) Hope that the US and world economy grows vigorously enough to produce the fiscal surpluses needed to eradicate a cumulative Federal debt now larger than the Gross Domestic Product so that \$50-\$90Billion of high-speed rail funds become available over and above the 'triggerred' and mandated Federal debt cuts of \$1.2Trillion in the next decade.
- 4) Hope that not only does California's economy grow immensely to fill the State's coffers with tax receipts that enable the State to service not only the Prop1A debt, but also that it lifts local governments' revenues to grant \$13Billion to the train and provide the inevitable 'revenue guarantees' to subsidize the difference between operating expenses and fare box revenues.
- 5) Hope the resources – estimated to be \$341Billion-\$538Billion – to preserve the State's existing transportation infrastructure, plus resources to pay for the train are available.³
- 6) Hope that, from the above political and economic base, the project secures Federal funding commitments of at least \$65B, and possibly up to \$90B, between 2015 and 2034 for California's high-speed rail project in competition with not only other Federal transportation priorities, but also with the movement to fund the Northeast Corridor's high-speed rail project.

That's a great deal of hope. Without all that becoming true, and if the Governor insists the project go forward, the State will require voters to approve at least another \$50Billion – \$90Billion of bonds; plus face the costs of annual operating subsidies.

But the Authority's overriding hope is to start the ICS in the Central Valley and hope that, like other government projects once it's begun, some perverse rationale will be found to keep building what Californians, now that they know more about the train, have clearly stated they do not want.⁴

This paper categorizes twelve misstatements in three categories:

- 1) those related to construction costs and financing the construction,
- 2) those related to revenues, ridership and operational costs or expenses, and
- 3) those related to the societal benefits of high-speed rail.

The misstatements and misrepresentations come from varying the Draft Plan's assertions from the will of the voters – both the Legislature and the people of California. These twelve will be complemented by other findings in our longer report – **CALIFORNIA HIGH-SPEED RAIL AUTHORITY'S 2012 DRAFT BUSINESS PLAN – ASSESSMENT: STILL NOT INVESTMENT GRADE**. The twelve here seem to combine deliberate distortions of facts, incorrect calculations that lead to misleading conclusions and statements, given as fact, that have no basis in reality – all to justify a project that promised Californians that the "riders of the system pay for the system" but apparently cannot meet that promise today, even if it could when that promise was made in 2008.⁵

Summary And Table of Contents

On balance, the Draft 2012 Business Plan document seems to be one more marketing document built on false data, dubious assumptions and manipulated calculations. That harsh conclusion is in part based on the following observations, which act as section headings and are organized into the three categories.

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A Summary Table On Phases And Costs

The table below presents the 2012 Draft Plan's key financial needs for the construction of Phase 1 of California's high-speed rail project. This information will be referred to in the discussion of the Plan's twelve misleading statements that follows.

Financial and Construction Summary of California High Speed Rail Program Through Phase 1							
Based On CHSRA's Draft 2012 Business Plan (November 1, 2011) With Summary Based On New Findings							
PROGRAM PHASES CONSTRUCTION	Initial Construction Section	Initial Operating Segment North⁶	SF Bay to LA Basin (B2B)	Phase 1 Blended & Complete Terminus	Program Summary Thru Phase 1⁷	TOTAL BY SOURCE (YOE \$s)	Percent (%) Shares to Fund Phase 1
Build Time Period	2013 to 2017	2015 to 2021	2021 to 2026	2026 to 2033	2012 to 2055		
Station End Points	South of Merced to North of Bakersfield	San Jose to Bakersfield	San Jose to San Fernando Valley	SF to LA and Anaheim	Same Terminus – No Phase 2		
Mileage between End Points	140	290	410	520			
Construction Estimates - \$Bs							
2010 \$s	\$5.2B	\$19.9B	\$17.1B	\$27.7B	\$69.8B		
YOE \$s	\$6.0B	\$24.7B	\$24.0B	\$43.8B	\$98.5B		
Construction \$ Sources - \$Bs, YOE							
Available as of 31 Dec. 2011							
State Prop 1A Bonds	\$2.7B	\$4.9B	\$0.4B		\$8.0B⁸		
Federal Grants	\$3.3B				\$3.3B		
Forecasted In 2012 Draft Plan							
State Bonds or General Funds					\$0.0B		
Federal Grants		\$7.4B	\$7.5B	\$35.0B	\$49.9B		
Private Investment OR Federal Grants ⁹			Concession sold or grant of \$11.0B		Concession sold or grant of \$11.0B		
Federal QTCB (TRIP Bonds) Loan Assistance		\$12.4B	\$0.9B		\$13.3B		
Other – Local Government Assistance			\$4.2B	\$8.8B	\$13.0B		
Cumulative Construction Costs – (\$Bs YOE) by phase & % of Total	\$6.0B 6%	\$30.7 30%	\$54.7B 56%	\$98.5B 100%	\$98.5B		
SUMMARY¹⁰ – SOURCES TO BUILD (YOE \$s) TO FUND PHASE 1 CONSTRUCTION - ASSUMING NO FURTHER COST INCREASES							
Federal Grants (includes \$10.9B not available for QTCB)	\$3.3B	\$18.3B	\$8.4B	\$35.0B		\$65.0B	66%
Maximum QTCB \$s (w/1.5x leverage)	-	\$1.5B	-	-		\$1.5B	2%
California Local Governments	-	-	\$4.2B	\$8.8B		\$13.0B	13%
Concession Sale to Private Operator	-	-	\$11.0B	-		\$11.0B	11%
Prop 1A CA State Bond Authority	\$2.7B	\$4.9B	\$0.4B	-		\$8.0B	8%
Federal Grants Needed For Phase 1 – If QTCB, Local, or Concession Sale Funds Are Not Available						\$90.5B	92%

MISLEADING STATEMENTS ON CONSTRUCTION COSTS AND FINANCING

1) Phase 1 Construction Costs Are Not \$98.5 – \$118Billion; They Are Still Seriously Underestimated - The Prop 1 ballot description had the only construction cost voters knew of; “. . . about \$45Billion” while Prop1A’s ballot description spoke of the “800-mile High-Speed Train Network”.¹¹ Two ballot descriptions saying different things is confusing if not misleading, particularly since the latter never hinted that the funds were only for LA to SF as Article 2 of AB3034 specifies.¹² Less a month after the election, Phase 1 (LA-SF) construction was estimated at \$33Billion. That too was misleading as well as illegal; since it wasn’t computed in Year of Expenditure (YOE) dollars. Twelve months later the YOE estimates for only Phase 1 were \$42.6Billion – about what voters were told the entire system was to be the year before.¹³

Now constructing Phase 1 has \$98.5Billion (in YOE \$s) as its minimum price. However the 2012 Draft Plan shows that for other than the Central Valley’s ICS, the engineering estimates have only been prepared up to the 15% level. In early 2011, when that section’s engineering estimates became more than 15%, the construction price increased 53%.¹⁴ Given that in the ICS there are no tunnels, few grade increases or decreases and the route does not pass through densely-populated urban areas, it seems far more realistic to put the increase of the other section’s costs up by at least 50%. That would make the minimum upper range at least \$150Billion rather than the \$117.6Billion in the Draft Plan. A higher than \$98.5Billion minimum cost is also a more reasonable expectation, especially since construction is going to be much slower due to delayed funding availability through the 2030s and into the 2040s. The minimum and the range given by the Plan for Phase 1 are misleading. This Draft Plan joins a long line of misleading cost estimates.

2) The Plan Uses Non-Existent Federal Construction Funding Sources
– Enshrined in AB3034 is the demand that the approval for spending bond funds depends on a viable financial plan. Not only does it demand viability, it says the Authority must specify when expected funds are to be received.¹⁵

The Authority has assumed the Federal Government will provide \$12.4Billion of TRIP/QTCB bonds to build the Initial Operating Section (IOS). [See the IOS column of the Summary Table on page 6.] Such bonds do not exist; and S1436, a Bill introduced in July 2011 to create TRIP Bonds has not progressed towards being law. Even if S1436 becomes law; under its present design, it is not solely for high-speed rail projects and each state is limited to no more than 2% of the \$50Billion desired by S1436’s authors. That means California could receive a maximum of \$1Billion – not \$13.3Billion as in the Draft Plan. How does the CHSRA expect to receive the entire amount, or at best, the remaining \$12.3Billion needed to build its Initial Operating Section when such TRIP bonds do not exist? Is it viable to depend on a non-existent funding source; which even if it did exist, could only provide one-twelfth of what the Plan asserts to use? To assert that such funding is available is misrepresents not only existing capital, but also a potential Federal source.¹⁶

3) The Construction Financing Scheme Is All Public 'At Risk Investment' With No Rationale For A Proposed Non-Risk Private Capital Infusion - CHSRA's Draft Plan says that after the Federal and State governments have risked \$31Billion on the presumption of a profitable train in the IOS, that capital infusion for the San Francisco Bay to the Los Angeles Basin section (Bay to Basin or B2B) must be augmented by another \$7.5Billion of Federal grants, another \$0.9Billion of non-existent TRIP bonds, and \$4.2Billion of grants from California's cities and counties, and the last \$0.4Billion of Prop1A bonds. That sums to nearly \$44Billion of governments' money 'at risk' before one-penny of private capital might join to build the Basin-to-Bay Section. The last component of B2B funding is \$11Billion from private investors/operators. This is gained by selling them the concession rights to all of the net operating profits (margin) for the subsequent 30 years. At that point, the total amount of capital raised and invested in construction is about \$55Billion. [See the B2B (center) column of the Summary Table on page 6.]

In the Authority's 2009 Plan, when the entire Los Angeles to San Francisco project was to be built for \$43Billion, the private sector was to have invested about \$11Billion, a quarter of the capital costs. The 2012 Draft Plan calls for selling the yet-to-exist revenue stream for \$11Billion to a private investor/operator; only 11% of the total of \$99Billion, or less than half the risk exposure as in the prior plan. What happened to the private sector's appetite for risk in the project, and as yet there are no written commitments by private sector institutions wishing to invest in this project.

The premise for the concession sale is that the train is profitable after the IOS goes into operation in 2022. If it is profitable, why in 2023 should the public sector risk investing \$45Billion only to later sell a revenue stream at an 11% discount when the public could borrow at 6-6.5% or less, and finance the remainder of the project to Sacramento and to San Diego. If the train does not prove profitable at the end of the IOS stage, then no private investor/operator will purchase a negative cash flow, and the concession sale option is moot.

The oft-repeated article of faith of the project's proponents that the private sector will step in to invest and become the operators is an illusion. Since June 2008 the Authority has known they wouldn't without subsidies and revenue guarantees.¹⁷ The Draft Plan continues the pretense.

4) The Private Concession Sale Idea In The B2B Is Built On Very Shaky Premises – Prop1As' official ballot description says taxpayers interests are protected because *"Matching private and federal [funding is] to be identified BEFORE state bond funds are spent"*¹⁸ To date NO private funds have been either forthcoming or identified as being committed.

The Draft Plan's proposal to raise the \$11Billion of private investment appears to be based on the passenger volumes, revenues and costs for the entire Phase 1, plus revenues from a subsequent twenty years. That is, the operator would take all of the supposed net operating profit (aka operating margin) between 2024 and 2053. The Draft Plan's proposed operating profit (margin) over these thirty years is estimated to be about \$67B in Year of Expenditure (YOE) dollars. This would be discounted at 11% to generate the present (2023) value of \$11B that year; that is to say

\$11Billion is the amount the Authority would receive in 2023 for the sale of the following thirty years of concession rights and revenues.

The first premise for such a sale is that the entire Phase 1 gets built with the Federal government providing \$65Billion of Federal money plus the entire State of California bond commitment of \$8Billion for construction (with another \$1Billion of planning costs), plus California's local governments contributing \$13Billion (supposedly in grants). [See the bottom right hand corner of the Summary Table on page 6.] A second prerequisite is that there will be some demonstrable profits from the Initial Operating Section (IOS). At best, we estimate that operation profits (margin) will only be \$0.1B-\$0.2B from 2022 to 2023, the IOS's start-up years. Concluding a sale of all future revenues for Phase 1 based on such small margins and with just two to three years of IOS operating experience will be very difficult if not impossible.

The premise for this no-risk, private operator financial engineering approach is based on yet-to-be-conceived, appropriated, allocated or obligated long-term funding 'guaranteed' by the Federal and California's local governments. Specifically, by 2023 the Federal government and the local governments will need to be legally obligated to fund the rest of Phase 1 (through 2034) for this sale of the future revenue stream (which is dependent on the CHSRA's highly questionable Phase 1 passengers and revenues). Without the legal obligation for about \$44Billion of future construction spending between 2026 and 2034, why would a private investor/operator buy the rights in 2023 to a revenue stream that is dependent on the existence of the entire Phase 1 HSR system? [See the Phase 1 column on the Summary Table on page 6.]

This concession sale is likely to fail. This failure will add another \$11Billion that the Federal government would need to contribute in addition to at least \$10.9Billion from still non-existent TRIP bonds. It also requires California's counties and cities to donate \$13Billion to the project or all this funding will need to come from the Federal government. In sum, the assumption about the potential for this no-risk private sector financing is extremely misleading. The concession sale is another gimmick to cover up the fact that in more than three years since Prop1A voters were told private money would be identified, not one penny of private money has entered into the financing equation or even been identified.

MISLEADING STATEMENTS ON RIDERSHIP, REVENUES, OPERATING EXPENSES AND PROFITS

5) Extremely Flawed Ridership Still Drives Revenues and Profits – In the Prop1 description, voters were told “ . *the network will relieve 70 million passenger trips a year . . .*”¹⁹ Depending on which page is consulted, the 2008 Business Plan speaks of the train carrying “more than 90 million passengers” or “55 million trips”, both in 2030.²⁰ A year later that 2030 estimate was down to 39 Million passenger trips. The Authority continues to use even that discredited forecast. The only difference seems to be that the passenger ramp-up to about 40 Million annual passengers occurs over a longer interval. A reality check and a few examples should suffice to show how misleading the ridership forecasts are.

From the world of reality: although in business for over a decade in the highly dense, transit and train culture of America’s Northeast Corridor (NE Corridor), Acela Express only has about 3 Million passengers annually. How does the CHSRA expect to have more than ten times that within its first decade?

Another reality check: Amtrak’s planned new high-speed rail service (Acela II) for the NE Corridor is supposed to attract 18 Million passengers.²¹ The market catchment area for Acela II’s proposed service is presently 50 Million, slightly more than the 46.4 Million Californians who the CHSRA projects would be able to ride the first Phase 1 train in 2034.²² How can the Plan continue to claim that the California train, with none of the population density, nor the extensive regional rail and transit ‘feeder’ systems of Acela II, will carry more than twice as many passengers?

Then there are the strange inputs and outcomes from the Cambridge Systematics model. For example, the CS model defines all trips within California as potentially served by the train; including absurdities such as trips between Redding and Davis (along I-5), from Ventura to Monterey, or Marin to Eureka. The Phase 1 route then excludes five million Californians, some of them in the fast-growing counties north of Sacramento or on the far eastern edge of the Central Valley.²³

Another strange conclusion: At present twenty passengers board Amtrak daily in Merced. But the Cambridge Systematics model indicates sixteen high-speed rail departures daily with 900 boardings per train – 14,400 daily boardings from Merced during the IOS period. That’s more boardings than Paris or Madrid or New York City. It’s also nearly 6% of the greater Merced area’s population riding the train every day.²⁴ Because Merced is the northern termination of the IOS South, this ridership ‘spike’ may be due to assuming riders are coming from the cities not served during the IOS South phase, such as Gilroy, San Jose, and San Francisco. Ridership out of Merced will drop to a few thousand a day when the Bay to Basin operation service begins. Just how reasonable is it to expect travelers from the greater San Francisco Bay area to come over Pacheco Pass to get on a train that will take them to San Fernando Valley. If this ‘spike’ does not materialize, how will the traffic volumes justify the 2023 sale of the revenue stream needed to fund the B2B construction?

This synopsis of ridership anomalies from the Draft 2012 Plan is amplified by the work of Californians Advocating Responsible Rail Design (CARRD) and others.²⁵ Like its predecessors, the Draft Plan’s use of the CS model leads to grossly distorted conclusions of profits since almost all financial inputs are treated as variable costs.

6) The Plan Makes Unsupportable Per Passenger Mile Operating Cost Claims – Prop1A’s ballot description’s one-way SF-LA ticket prices were “about \$50 a person.”²⁷ A year later that moved up to \$105 for the same trip. Now it’s estimated to be \$81 – but that number has problems with reality.

The average ticket charge for using the European high-speed rail systems and the

Ticket price per passenger mile		Operating Expenses Per Passenger Mile	
Avg. Existing Europe, Japan, US	CHSRA 2012 Draft Plan	Avg. Existing Europe, Japan, US	CHSRA 2012 Draft Plan
43¢	19¢	43¢	10¢

Acela Express is about 43¢ per passenger mile. The CHSRA’s Draft Plan forecasts charging \$81 for a one-way ticket between Los Angeles and San Francisco.²⁸ Simple division shows this ticket price to be less than 20¢ per passenger mile. Given that the CHSRA pricing is and must be driven by

competitive market forces (83% of airline ticket prices), how can the CHSRA forecast a 50% operating profit, leading to a 10¢ per passenger mile operating cost.²⁹ This seems in direct conflict with the need around the world to provide subsidies for the HSR systems, even when they are charging 43¢ per passenger mile in ticket prices. How can California train’s per passenger mile costs be less than one-fourth the costs of existing worldwide high-speed rail systems?

7) The Plan’s Accounting Metrics Skew Results Towards ‘Phantom’ Profits

– The Prop1A ballot description said “THE USERS OF THE SYSTEM PAY FOR THE SYSTEM” and promised voters the 800-mile network (ie. the entire system) would be built “WITHOUT RAISING TAXES.”³⁰ That’s a pretty strong indication that the system would operate at breakeven or with a profit, something demanded by AB3034 [Section 2704 subsection 8 (J)]. So how does the 2012 Draft Plan propose to meet that statutory requirement and those promises?

The Draft Plan says that Operations and Maintenance costs “ . . . grew at 60 percent of the growth of ridership, so if ridership grew one percent, operating expense costs grew six-tenth of one percent.”³¹ Put another way, the Plan says that for every \$1 increase in revenue, the train will incur only 60¢ of operating costs. This asymmetrical accounting results in an incremental profit contribution of 40¢ per each one-dollar of incremental revenue. That formula increases margins (operating profits) faster than the rate of growth of the revenues.

Years	Yr 1 ³²	Yr 2	Yr 5	Yr 7	Yr 10	Yr 15	
Growth at 1% pa ³³							
# of Riders that Yr	100	101	104	106	109	115	
Revenue-\$s	81	\$8,100 ³⁴	\$8,181	\$8,429	\$8,598	\$8,859	\$9,311
Costs - \$s	60% ³⁵	\$5,000	\$5,030	\$5,121	\$5,182	\$5,277	\$5,437
Margin - \$s		\$3,100	\$3,151	\$3,308	\$3,415	\$3,582	\$3,874
Margin - %		38.3%	38.5%	39.2%	39.7%	40.4%	41.6%

Figure 7a will illustrate how distant from reality the Draft Plan’s formula for profits is. If in Year One, LA to SF ridership were 100 passengers, each paying \$81, revenue would be

\$8,100. Assume that the operating expense costs for that year were \$5,000. This would yield \$3,100 or a 38.3% operating profit (margin). But a one percent growth in ridership in Year Two would lift revenue to \$8,181; with a 0.6% growth in operating costs adding only \$30 – ie operating costs would be \$5,030. This results in

an operating margin of \$3,151. Year One's forecast shows an operating profit (margin) of 38.3% $[(8,100 - 5,000)/8,100]$. That makes Year Two's operating margin 38.5%. Year Five's operating margin should be 39.2%, Year Ten's margin 40.4%, Year Fifteen's margin 41.6% etc. etc. – automatic profit increases.

Increase from	2025 to 2060	2040 to 2060
Years of Operations	35yrs	20yrs
Ridership	82%	9.58%
Revenues	81%	9.49%
Costs	72%	4.70%
Margin	87%	13.18%

The Draft Plan's Ridership and Financials, (in 2010 \$s) shows the long-term effect of this type of assumption. The center column of Figure 7b shows the entire period of operations as shown in the Plan, including large gains in ridership, revenues and costs (effectively

starting at zero) and the right column shows the smaller increases, in the last 20 years, once the entire Phase One has been built. Note that the Plan shows Margins (Net Operating Profits) growing faster than Revenues in both time periods.

The outcomes in Figure 7b are based on the two assumptions underlying the Plan: first, that initially total costs are low relative to total revenues (about 50% of revenues) and second: that about only 40% of the operating costs are fixed and 60% grow proportional to revenues. That is why the Draft Plan can claim that the profit margin grows over time. In effect, if an operation has some amount of Fixed Costs that do not grow at all over a long period of time, and the Variable Costs grow at no more than at the rate of growth of the Revenues, then the Margin percentage will always increase. This is a very rare situation in the real world.

All by itself, this assumption attenuates statements of profit. While this is a winning formula for 'phantom' operating margins, it's divorced from real world experience, and deliberately misleads readers to think that the proposed high-speed rail system in California will be very profitable.

8) The Plan Denies Evidence Of Worldwide Capital And Operating Subsidizes For High-Speed Rail Systems – Within the past months, both the CHSRA Board Chair and AB3034's Assembly Sponsor have repeated the mantra that high-speed rail systems are profitable.³⁶ The Plan shows, and its Directors and supporters claim, that all high-speed rail systems are profitable. However, the Congressional Research Service found, and the Director of High-Speed Rail at the International Union of Railways corroborated Congressman John Mica's (R-FL) April 2007 statement when speaking of existing high-speed rail systems in an Hearing; *"Unfortunately, most of those systems are highly subsidized by government . . ."*³⁷

Existing high-speed rail financing systems have national governments absorb all the capital costs, then much if not most of the operating costs. The Authority has never produced independently validated income statements, manpower levels, balance sheets or other standard GAAP accounting measures to support their statements of profits by themselves or other current high-speed rail operators. The Prop1 ballot description says; *"Two independent ridership and revenue forecasts by outside experts were subject to tough peer review"*³⁸ What value was that peer review since it was done before the demand by AB3034 that the California train could not have an operating subsidy? CHSRA's Draft Plan claims of profits are unsubstantiated, contrary to evidence, and misleading.

9) The Plan Says 'Trust Our Operating Costs': But There Are No Detailed Operating Cost Items Listed – The Prop1A ballot description says taxpayers' interests are protected because of "*public oversight and detailed, independent review of financial plans.*"³⁹ Yet there is no detail on operating expenses to be reviewed.

What exactly are the factors the Plan's authors used when they computed their Operating Expenses and Operations and Management costs. There is only a single-figure, 'top line' citation in the Plan of the costs for the profits claimed. As net operating profits are necessary to meet the strictures of California law, and the Federal Government is being asked to take a 'front-end' risk of \$23Billion of the \$31Billion to construct a forecasted 'profitable' Initial Operating Segment, this is the crucial question.

Federal and State investors must have comparative data, based on GAAP and standards that validate the Plan's costs estimates relative to actual results from other HSR system around the world. This is important, as based on a per passenger mile basis, the Plan's current cost estimates are about quarter of what appear to be the costs of subsidized high-speed rail systems. To not provide that for analysis is tantamount to hiding an essential element of understanding the project's risks.

MISLEADING STATEMENTS ON THE BENEFITS TO SOCIETY FROM HIGH-SPEED RAIL

10) The Draft Plan's Capacity Analysis Depends On the CHSRA and Parsons Brinckerhoff Having Inflated High-Speed Train Usage Far Beyond Credibility – How can the CHSRA not recognize the conclusions of the Peer Review Group when the ballot description said; taxpayers' interests are protected because of "*public oversight and detailed, independent review of financial plans.*"⁴⁰ Also, the CHSRA doesn't recognize the misleading conclusions of their calculations designed to 're-set' the train's debate away from the statutory requirement to be financially viable towards being a relative transportation benefit.

The Draft Plan states that a \$171Billion investment is required in airports and highways to gain the same transport capacity advantage as the \$98.5Billion high-speed train. Upon closer inspection however, that infrastructure cost is not related to the CHSRA's own (discredited) 40Million passenger forecast but rather to a calculation designed to prove the train's societal advantage.

To create that advantage, the Authority's project managers, Parsons Brinckerhoff, invented a maximum capacity scenario to prove their point. They used the assumption of one train leaving both San Francisco and Los Angeles every five minutes, every day (365 days) for 19 hours per day, each train carrying 700 passengers – more than 116Million annual passengers. This sets the 'peak capacity' benchmark to then determine what the equivalent costs of new highways and airport infrastructure would be.⁴¹

That calculation, yielding 116.5Million passengers, results in ridership almost three times the forecasted CHSRA ridership by 2050, four times the current Amtrak's entire nationwide ridership, eleven times the entire current Northeast Corridor's ridership, nearly forty times Acela Express' present ridership and more than six times Amtrak's ambitions for its NE Corridor high-speed train.⁴² That convenient-to-CHSRA scenario produces the costs for the highway and airport capacity – \$171B in YOE dollars, or \$114B in 2010 dollars.

If that calculation had been done for meeting the equivalent demand capacity of 'only' the CHSRA's 40Million projected passengers, costs would have been about \$59Billion (ie. 40M passengers/116M passengers or 34% times \$171Billion) to build the equivalent highway and airport infrastructure – only about 60% of the train's \$98.5Billion YOE minimum price tag. Why did the CHSRA use such a transparently false comparison of costs when there is no justification for demand in excess of even their largely overly optimistic and increasingly disputed 40 Million passengers per year? This type of misleading statement discredits high-speed rail because it discredits its supporters.

Also, if 116.5Million, rather than 40Million passengers is to be CHSRA's capacity, it's not clear if the current designs of LA's Union Station, Anaheim station or the SF Transbay Terminal can 'turn around' twelve trains per hour eighty percent of every day of the year, particularly if they presently serve regional rail carriers. To make their convenient capacity analysis work, PB and the CHSRA need to completely rethink the entire schemes and costs for Phase 1's metropolitan end points.

11) The Draft Plan Also ‘Skewed’ Upwards The Costs Of Increased Highway Capacity

– As the reader will find, not only are the costs of highway and airport construction inflated beyond credibility, their \$98.5Billion estimate does not meet AB3034’s statutory requirement to be only one-third the cost of new highways and airport improvements.⁴³ Even if the \$171Billion claim of higher highway and airport costs were accurate, \$98.5Billion is 57% of \$171Billion – not one third – which makes the Authority’s claim illegal, plus being false.

A Parsons Brinckerhoff (PB) document, released with the Draft Plan, on the costs of alternatives to high-speed rail said; *“Since costs don’t scale directly as new lanes are added, averaging the costs into urban and rural stretches makes them more applicable across the numerous circumstances found in California.”*⁴⁴ In order to prove their point, PB adopted far less-than-professional standards when it attempted to justify the superior advantage of the minimum \$98.5Billion investment in California’s high-speed train over expansion of the state’s highway and air travel infrastructure – the latter leading to the CHSRA cost of \$171Billion (YOE).

First, PB collected data on 26 sections of 775-miles of highway length between SF to LA. They used these highway miles to compute highway lane mile costs. But 775 miles is 80% longer than the straight-line distance between the metropolitan centers (430 miles) and 50% longer than their own Draft Plan’s train route (520 miles). Choosing this higher figure of 775 miles automatically increases highway costs in the capacity analysis since it artificially increases the distances. By using a flawed mathematical approach as exposed below, unintentionally or intentionally, the Plan computed the costs for the “highway costs” alternative at 775 miles of highway when it should have been compared to the costs of their own 520 miles of high-speed rail.

Second, without agreeing with PB on highway distances, but in order to analyze the approach PB took to make the calculations, Californians Advocating Responsible Rail Design (CARRD) accepted PB’s 775-mile assertion. Using PB’s data, CARRD found that Parsons Brinckerhoff subdivided the LA-SF highway lengths into twenty urban and six rural sections.⁴⁵ For every mile of highway, PB assumed the need for new three lanes – a total of 2,326 lane miles.

Figure 11a – Calculations of Total Highway Lane Mile Costs			
	Rural Sections	Urban Sections	Total Sections
Number of Sections	6	20	26
Total Lane miles	1,226.4	1,099.5	2,325.9
Total Highway miles	408.8	366.5	775.3
PB’s Incorrect Method			
Sum of the average “Cost per Lane Mile” ⁴⁶	\$99,561,000	\$1,169,312,000	
Average Cost Per Lane Mile ⁴⁷	\$16,593,500	\$58,465,600	
Total cost of PB Calculations⁴⁸	\$20,350,268,400	\$64,282,927,200	\$84,633,195,600
Correct Method			
Total of Non-Averaged Costs⁴⁹	\$18,475,597,500	\$39,230,965,500	\$57,706,563,000
Difference Between PB’s Costs And The Correct Method’s Costs			
Cost Overstatement Due To Incorrect Method	(\$1,874,670,900)	(\$25,051,961,700)	(\$26,926,632,600)

The logic for this three-lanes per mile assumption in both urban and rural area was explained as the amount of lane capacity needed to

carry the highway’s share of the 116Million travelers per year, between LA and SF. However, CARRD re-analyzed the individual costs of each of the twenty-six sections using Parsons Brinckerhoff’s data and calculations on the number of miles, lane miles and average costs per lane mile. CARRD then computed a total cost for each of the twenty-six sections, based on the number of lane miles and the average cost per

lane mile for that section. In CARRD’s calculations, the costs of the more lengthy and expensive urban lanes (\$39.2Billion) represent 68% of the total costs, while the rural lanes cost (\$18.5Billion) represent 32% of the total. The sum of those calculations on a section-by-section basis, [ie. costs per lane mile per section multiplied by the number of lane miles per section, for each of the 26 sections] based on PB’s own data, gave CARRD a total cost of \$57.7Billion for Parsons Brinkerhoff’s 2,326 lane miles. The results are shown in Figure 11a on the row labeled “Total of Non-Averaged Costs”

Parsons Brinckerhoff’s published costs in the Plan for the new lane miles of \$84.6Billion is nearly half again as much (47%) as the \$57.7B which is the sum of the cost per lane mile multiplied by the number of lane miles for the 26 listed sections.⁵⁰ The error Parsons Brinckerhoff made was multiplying the “total number of Urban lane miles” times the “average of the 20 urban sections average cost per lane mile”, leading to a projected cost of \$64.3Billion for urban miles. Then PB repeated this process for the six rural sections, leading to a projected cost of \$20.4Billion for rural miles. These totaled to the \$84.6B. Parsons Brinckerhoff clearly used the simple, un-weighted average of the urban and rural lane mile costs that uplifted the price of building more highway lane miles.⁵¹ The fact that their costs of \$84.6B do not equal the sum of the total costs for all of the sections (\$57.7B) is clearly an indicator of a statistical analysis process error.

Figure 11b – Corrected Cost to Build Peak Capacity and Demand					
	For Capacity of 116.5M Passengers per year			Change Capacity to Demand Ratio Down to 40M Passengers per year ⁵²	Projected Phase 1 Build Costs – 2012 Plan
	Cost in 2012 Plan	Corrected Math for 775 Miles ⁵³	Corrected Math for 520 Miles ⁵⁴		
Expressed in 2010 \$’s in Billions					
Air (Not Analyzed)	\$29.7	\$29.7	\$29.7	\$10.2	
Highways	\$84.6	\$57.7	\$38.7	\$13.3	
Total	\$114.3	\$87.4	\$68.4	\$23.6	\$69.8
Expressed in YOE \$’s in Billions⁵⁵					
Air (Not Analyzed)	\$44.6	\$44.6	\$44.6	\$15.4	
Highways	\$126.9	\$86.6	\$58.1	\$20.0	
Total	\$171.5	\$131.1	\$102.6	\$35.4	\$98.5

The difference between the two calculations (\$84.6Billion less \$57.7Billion) translates into \$26.9Billion in 2010 dollars or \$40.3Billion in Year of Expenditure

(YOE) dollars. The net effect of correcting this misrepresentation would be to decrease the Draft Plan’s claim of having to spend \$171Billion to about \$131Billion. Figure 11b shows this in the first two left columns, which show the Plan’s projected costs in 2010 and YOE dollars, compared to the column with the “Corrected math for 775 Miles”. Note that the data for the Air marketplace was not analyzed, and it is left unchanged.

Furthermore, if Parsons Brinckerhoff’s 520-mile LA-SF rail distance in their Draft Plan is used rather than the chosen 775 miles, the number of lane miles and the costs of building more highways shrinks to \$68Billion in 2010 \$s, and \$103B in YOE \$s. This is shown in the center column of Figure 11b, “Corrected math for 520 miles”. That is about equal to the costs projected to build the Phase One HSR system, as shown in the right hand side column.

The simplest example of this error is in the Merced to Bakersfield section.⁵⁶ The first set of data is for 186 miles of highway costs on I-5, the other four data sets are for

170 miles of highway costs along SR-99. That total of 334 miles of highway construction costs is being compared to about 164 miles of high-speed rail costs. If this data had been used to just calculate an average cost per mile or lane mile, and then multiplying this average times the actual distances (adding up to 520, not 775 miles), this would be the correct mathematical approach. The "Corrected Math for 520 miles" column in Figure 11b is the correct approach to these calculations.

Reflecting the discussion in Section 10 about the projected peak capacity planning versus meeting the demand load; if the costs of the capacity column for the "Corrected Math For 520 Miles" in Figure 11b are reduced to reflect only the need to meet the demand of 40Million passengers, not an artificial peak capacity of 116.5Million travelers, then the costs of the airport improvements plus the highway expansion costs drop to \$24B in 2010 \$s, or \$35B in YOE dollars. This is substantially less – about 65% less – than the costs of the Phase 1 high-speed rail system.

By selecting to ignore correct statistical and mathematical processes to gain a more favorable answer to the societal benefits of spending on a train versus highways, PB and the CHSRA further misrepresented the capacity case. And their 'rigged' conclusions are illegal as \$98.5Billion is much greater than one-third of \$171Billion.

12) The Draft Plan's Statements On Jobs Far Exceed Independent Professionals' Estimates – Prop1A's description said the project would create nearly ". . . 160,000 construction jobs and 450,000 permanent jobs . . ." ⁵⁷ Now the Draft Plan says: ". . . starting in the Central Valley will generate 100,000 jobs for people who need them most. Connecting the Los Angeles and San Francisco metropolitan areas will generate approximately 800,000 to 900,000 jobs and eventually will result in well over one million jobs." ⁵⁸ This assertion was preceded several months before by the CHSRA's CEO statement to the same effect. ⁵⁹

On Construction Jobs – Using the same methodology as California's

Figure 12a - Estimated Range of the Annual Number of Jobs Created By The Four Stages Of California's Proposed High-Speed Rail Project

Four stages of the proposed high-speed rail project – by stage	Incremental construction expenditure (2010 \$s)	Years to build that stage	Average annual range of FTE jobs, by stage of construction	
			Low Estimate*	High Estimate**
ICS (Central Valley)	\$5.2Billion	5	14,300	18,300
IOS North	\$19.9Billion	7	38,900	49,800
LA Basin to SF Bay	\$17.1Billion	6	39,200	50,200
Phase 1 Completion	\$27.7Billion	8	47,400	60,800
Total costs + average annual range of FTE jobs by stage of construction	\$69.8Billion	21	45,600	58,500

* FTE Jobs (13,713 per Billion of 2010 \$US) - Source of job data used in estimate of jobs in the 2009 to 2011 time period: GAO Testimony before House Committee on Transportation and Infrastructure – "Recovery Act – Use of Transportation Funds, Outcomes, and Lessons Learned". Found at: <http://www.gao.gov/assets/130/126114.pdf>

** FTE Jobs (19,024 per Billion of 2006 \$US or 17,575 of 2010 \$US) - Source of Multipliers: California Economic Strategy Panel. (2009). Using Multipliers to Measure Economic Impacts. Found at: http://www.labor.ca.gov/panel/pdf/Using_Multipliers_to_Measure_Economic_Impacts.pdf

Department of Labor uses to compute construction jobs produces a more realistic estimate of likely employment during the project's building. ⁶⁰ About 60,000 jobs would be the most in any given year; that is, not the 800,000-900,000 the Draft Plan's statement implies. A more accurate statement would have come from dividing the CHSRA's assertion by the more than twenty years the present Plan projects it will take to build Phase 1. Based on GAO's reported actual

2009 and 2010 DOT ARRA's job creation results, a lower estimate, about 45,000 per year, is also reasonable.

While an increase of 45,000 to 60,000 jobs is not to be disparaged, it represents only three-tenths to four-tenths of one percent of California's employed workers; unlikely to dent the state's construction unemployment.

Nor will all those jobs be in California; probably half or less will be given that steel, power cable, and rolling stock are likely to be sourced from the lowest bidders.⁶¹ That means China's steel and rolling stock fabricators may profit as much as they did on building the east span of the SF Bay Bridge. It's more likely that only a maximum of 30,000 full time equivalent jobs per year will be created in California, the remainder being elsewhere.

The CHSRA's construction job forecasts also skip over the point that every job created by building the railroad would be a job that would otherwise have been created expanding highway capacity or adding new runways or terminals in California's airports. But neither the 2008 Plan, nor the 2009 Plan, nor the 2012 Draft Plan chose to be honest about construction net job creation.

On Permanent Jobs – The Draft document later states *"With implementation of the HSR system in California, as many as 400,000 long term jobs could be created as the state's economy becomes more efficient."*⁶² In their 2009 Plan, the statement was for 450,000 permanent jobs, while only documenting about 4,500 annual permanent jobs directly operating and maintaining the high-speed train system.⁶³ Even if the 'multiplier effect' created three jobs at local retailers and service businesses for every one direct job, the combined total (18,000 annual permanent jobs) represents less than five percent of the Draft Plan's claims.

It is most important however to not overlook the fact that every 'permanent' job the train creates, that job would displace an equivalent job in the existing airline, airport services, highway services and maintenance industries. The net addition is zero to employment creation – and more dangerously a negative contribution if the Draft Plan's statement *"long term jobs could be created as the state's economy becomes more efficient."* is to be believed.⁶⁴ As with construction jobs, the Draft plan chose to misrepresent both actual job creation and net job creation in the rail project, during the construction period and the decades of operations afterwards.

But neither the ballot description the 2008 Plan, nor the 2009 Plan, nor the 2012 Draft Plan chose to be honest about construction net job creation. How can five times the ballot description's construction jobs get created for the same project whose costs 'only' doubled in 2012 dollars? And how exactly is the project to create more than twice the permanent employment of the government of the state of California?

END NOTES ON MISLEADING STATEMENTS

¹ "Most California High-Speed Rail Jobs Too Good To Be True"; Michael Rosenberg; San Jose Mercury News, December 21st 2011. Found at:

http://www.mercurynews.com/california-high-speed-rail/ci_19596026

² Transportation Committee Chairman John Mica and Rail Subcommittee Chair William Shuster joined Majority Whip Kevin McCarthy et al in requesting the GAO conduct a study on the project. See: http://republicans.transportation.house.gov/Media/file/112th/Railroads/2011-12-19-GAO_Letter_CA_HSR_Project.pdf. This request was supplemented with a similar request of GAO by eleven more Representatives. See: <http://www.turnto23.com/news/30135100/detail.html> <<http://www.turnto23.com/news/30135100/detail.html>>

³ 2011 Statewide Transportation System Needs Assessment; November 2011; California Transportation Commission. Found at <http://www.catc.ca.gov/reports/>

⁴ In late September 2011, Probolsky Associates found that two out of every three Californians would vote to stop the project. This finding was reinforced in December 2011 when the Field Organization found even more opposition to the high-speed rail project. Both are mentioned in: <http://articles.latimes.com/2011/dec/06/local/la-me-train-poll-20111207>

⁵ The Official Voter Information Guide, page 2. See:

<http://www.voterguide.sos.ca.gov/past/2008/general/argu-rebut/argu-rebutt1a.htm>

⁶ IOS North is selected in this Summary since its median cost is less expensive than IOS South. However the long-term financial impacts of both IOS are similar.

⁷ Construction and financial costs of Phase 2, promised by Prop 1A (includes San Diego, Riverside, Sacramento, and Oakland), would be about 60-70% of Phase 1.

⁸ Of the \$9B in Prop 1A Bonds for Phase 1 construction, \$1B has been set aside for administrative costs – therefore not available for construction

⁹ Concession Sale of discounted 30 years of Phase 1 Future Net Profit/Margins in 2023, when Net Profits/Margins are \$0.1B to \$0.2B year or additional Federal Grants.

¹⁰ The Summary table's downgrade of TRIP bond availability from \$12.4B (Draft Plan) to \$1.5B is based on S1436 and testimony given by Mr. Blake Fowler, CA Dept. of Treasury, at a December 5th 2011 hearing.

¹¹ Even diligent voters could become confused in 2008 as there were two ballot descriptions on high-speed rail, one on Prop1 and a later on Prop1A. They not only mentioned different intermediate points and destinations, but also were inconsistent in other descriptions, particularly the latter not mentioning construction costs. The Prop1 description mentioned the \$45Billion. See:

<http://www.voterguide.sos.ca.gov/past/2008/general/pdf-guide/suppl-complete-guide.pdf>. The Prop1A ballot description did not mention construction costs See: <http://www.voterguide.sos.ca.gov/past/2008/general/pdf-guide/suppl-complete-guide.pdf>

¹² Article 2 2704.04 (c) (2) of AB3034 says; "As adopted by the authority in May 2007, Phase 1 of the high-speed train project is the corridor of the high-speed train system between San Francisco Transbay Terminal and Los Angeles Union Station and Anaheim."

¹³ The Authority's 2008 cost estimate was illegal because AB3034, Section 2704.08 (C) says the Authority's plans shall include; "The estimated full cost of constructing the corridor or usable segment thereof, including an estimate of cost escalation during construction and appropriate reserves for contingencies. "

¹⁴ The underlying analysis for this conclusion came from comparing the 2008 Plan cost (adjusted to 2010 \$s) to the cost in the August 2011 EIR's for Merced to Fresno and Fresno to Bakersfield in 2010\$

¹⁵ AB3034, Section 2704.08 (D) says the Authority's plans shall include: "The sources of all funds to be invested in the corridor, or usable segment thereof, and the anticipated time of receipt of those funds based on expected commitments, authorizations, agreements, allocations, or other means."

¹⁶ The CHSRA cannot claim the use of QTCB/TRIP bonds is only illustrative since TRIP bonds are included in calculations in exhibits throughout Chapter 8, Funding and Financing, of the 2012 Draft Plan. The mathematics of gaining the \$12.4Billion, since the Federal government only pays interest charges, suggest the State would have to borrow around \$18Billion to gain around \$12Billion.

¹⁷ See: Report of Responses to the Request for Expressions of Interest For Private Participation in the Development of A High-Speed Train System in California by the Infrastructure Management Group (IMG) to the California High-Speed Rail Authority Board Financing Workshop, dated October 2008; page 2 of 17 The presentation was given in June but the printed report issued in October. "A presentation summarizing the results of the RFEI was made before the Authority Board of Directors on June 11, 2008 "

¹⁸ See: <http://www.voterguide.sos.ca.gov/past/2008/general/argu-rebut/argu-rebutt1a.htm>.

¹⁹ <http://www.voterguide.sos.ca.gov/past/2008/general/pdf-guide/suppl-complete-guide.pdf>

²⁰ See: California High-Speed Train, Business Plan, November 2008; pg. 7 is different from pg. 17

²¹ "Full-Speed Ahead" by Al Engel, VP High-Speed Rail; appears on pg.10 of the July/August 2011 issue of All Aboard. Also see: <http://www.arrive-digital.com/arrive/20110708#pg10>

²² See: <http://www.city-data.com/forum/general-u-s/468856-census-bureaus-2030-population-projections-50-a.html>

²³ There are twenty-seven counties north, seven east of and three west of the proposed LA/Anaheim to SF route. They represent 11.9 million of California's 38.7 million 2010 residents. See: <http://www.counties.org/default.asp?id=399>

²⁴ See: testimony of Rich Tolmach of the California Rail Foundation, December 5th 2011 at the joint Senate hearing on high-speed rail. Found at <http://www.youtube.com/watch?v=pS-pd1nsUoo>

²⁵ Ridership is also addressed in both our October 2010 report, The Financial Risks In California's Proposed High-Speed Rail Project (Chapter 2, pg. 45-51) and Chapter 2 of our 2011 report; Revisiting Issues In The October 2010 Report: The Financial Risks In California's Proposed High-Speed Rail Project; Both are found at <http://www.cc-hsr.org/>

²⁶ This table's genesis is in: Revisiting Issues In The October 2010 Report; The Financial Risks Of California's Proposed High-Speed Rail Project, September 14 2011. Found at <http://www.cc-hsr.org/>. Distances between European and US city pairs are from Google Maps, taking their city center to city center driving distances as representative of track miles. Ticket prices for European systems are from Rail Europe; <http://www.raileurope.com/index.html>. Prices are at an exchange rate of US\$=0.69Euros. Distance and price (\$US=80.9 Yen) for Shinkansen are from East Japan Railway Company; at <http://www.jreast.co.jp/e/charge/index.asp>. Also see Briefing Note 14, at <http://www.cc-hsr.org/>

²⁷ See: <http://www.voterguide.sos.ca.gov/past/2008/general/argu-rebut/argu-rebutt1a.htm>

²⁸ While the 2012 Draft Plan states the distance as 520 miles, our calculations are based on 430 SF to LA city-center to city-center air miles, as it is impossible to know the final track mileage the train's configuration will take. Using the 430 miles also gives us a consistent base by which we are able to compare the per passenger mile ticket charges proposed by the Authority with the actual ticket mile charges of European and Japanese systems. It is also useful to review our Brief Notes 14 and 15 found at <http://www.cc-hsr.org/>

²⁹ The California High-Speed Rail Program Draft Business Plan, November 1, 2011: pg. ES-8 says; ". . .the average ticket fare between San Francisco and Los Angeles will be \$81 (83% of anticipated airline ticket prices) in 2010 dollars . . ."

³⁰ See: <http://www.voterguide.sos.ca.gov/past/2008/general/argu-rebut/argu-rebutt1a.htm>

³¹ California High-Speed Rail Benefit-Cost Analysis (BCA) October 2011, prepared by Parsons Brinckerhoff, Section 5.2

³² The baseline data for the first year is 100 riders, with a ticket price of \$81, for a total revenue stream of \$8.1K. First year costs are \$5K, 60% of which are variable, and will grow at the same rate as the numbers of riders (1%). Forty percent (40%) of costs are fixed. Margin is Revenues less Costs. Margin % is Margin/Revenues.

³³ The annual growth in riders is 1%.

³⁴ The price per ticket is held constant at \$81, as this example is to use fixed dollars, such as \$2010 dollars.

³⁵ The portion of the costs that will grow with the rate of growth defined for "Riders". These are defined as Variable Costs, the balance being defined as Fixed Costs.

³⁶ See: *Wall Street Journal* Letters, June 6, 2011 "Central Valley Start Is Ideal for Fast California Trains" by Thomas J. Umberg, *Chairman, California High-Speed Rail Authority*. Mr. Umberg's letter was in response to a *WSJ* editorial of 31 May 2011 entitled "Off the California Rails". Also, Assembly Member Galgiani said this during June 2nd 2011 hearings on AB145 by Assembly Member Diane Harkey. See: http://www.smdailyjournal.com/article_preview.php?type=bnews&id=160156&title=Assembly%20acts%20to%20end%20independent%20rail%20authority&eddate=

³⁷ For the statement by the Director for High-Speed Rail of International Railway Union, see: statement by Iñaki Barrón de Angoití; *NY Times*, May 29, 2009 For Representative John Mica's statement see: International High-Speed Rail Systems: a Hearing before the Subcommittee on Railroads, Pipelines and Hazardous Materials of the Committee on Transportation and Infrastructure, House of Representatives; April 18, 2007. http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_house_hearings&docid=f:34799.pdf

³⁸ <http://www.voterguide.sos.ca.gov/past/2008/general/pdf-guide/suppl-complete-guide.pdf>

³⁹ See: <http://www.voterguide.sos.ca.gov/past/2008/general/argu-rebut/argu-rebutt1a.htm>.

⁴⁰ Ibid

⁴¹ See: Cost of Providing Equivalent Capacity to HSR through Other Modes; Parsons Brinckerhoff, Oct. 2011. Extensive engineering computations by Parsons Brinckerhoff are based on their 116.5Million ridership equivalent. From PB's calculations, this translated into 2,300 new lane miles of highway, 115 additional gates at California airports and 4 new airport runways.

⁴² For 2011's estimated thirty million passengers, See: Railroad News; 2011 Amtrak Ridership Officially "Best-Ever" at <http://www.railroad.net/2011/amtrak-ridership-officially-best-ever-294.html>

For 2010 ridership see: AMTRAK SETS NEW RIDERSHIP RECORD; THANKS PASSENGERS FOR

TAKING THE TRAIN; Press Release; October 11th 2010.

⁴³ AB3034, Section 8. (c) states; “*The high-speed train system proposed by the authority will cost about one-third of what it would cost to provide the same level of mobility and service with highway and airport improvements . . .*”

⁴⁴ See: Cost of Providing Equivalent Capacity to HSR through Other Modes; Parsons Brinckerhoff, Oct. 2011; p. 26

⁴⁵ Ibid Table 6, page 25

⁴⁶ The arithmetic sum of the “Cost per Lane Mile” values, for all sections of this type, as shown on Table 6 of the “Cost of Providing the Equivalent Capacity to High-Speed Rail through Other Modes”, October, 2011, CHSRA, page 25.

⁴⁷ Average Cost per Lane Mile was computed by dividing the “Sum”, above, by the number of sections. In effect it means the average of the average cost per lane mile for each of the sections of each type, 6 rural sections and 20 urban sections.

⁴⁸ Total Cost was computed by multiplying “Average Cost Per Lane Mile” by the Total Lane Miles

⁴⁹ Total of Non-Averaged Costs means the arithmetic sum of each of the “total section cost” for each of the sections of this type, where “total section cost” is the “Cost per Lane Mile” from Table 6 multiplied by the number of Lane Miles, from Table 6, for that section.

⁵⁰ See: Parsons Brinckerhoff; “Cost of Providing the Equivalent capacity to High-Speed rail through Other Modes”; Table 6, pg. 25.

⁵¹ From “Cost of Providing Equivalent Capacity” starting on page 15 (S7 and S8) it appears PB did the following. First PB summed the average cost per mile for each of the six rural sections, from the lowest cost (\$9.8Million per lane mile of SR-152 to SR-99) to the highest (\$29.7Million per lane mile of I-880 to I-5 via I-238); then attained an average (of the average costs per mile) cost of \$16.6Million per rural lane mile. Next PB took the twenty urban sections, from the lowest cost (\$19.9Million per lane mile of Fresno to Tulare/Visalia) to the highest (\$272Million per lane mile- of the 2.4 miles of the LAUS to I-10 section); then attained an average cost of \$58.5Million per urban lane mile. Then PB multiplied the average (of the average) rural lane mile costs by the total lane miles (\$16.6Million times 1,226 lane miles). The resultant rural lane mile cost was \$20.4Billion. When that exercise was repeated for urban lane miles (\$58.5Million per lane mile times 1,099 lane miles) total urban lane mile costs became \$64.3Billion. The sum of the urban and rural lane miles then became \$84.6Billion.

⁵² This column is 40/116’s of the column to the left for both Air and Highway projections.

⁵³ This column corrects the 2010 \$s highway projection in the 2012 Draft Plan, per the discussion in Section 11 of this document.

⁵⁴ This column is 520/775’s of the column to the left, for the Highway projections.

⁵⁵ Ratio of YOY \$’s to 2010 \$’s in “Cost of Providing the Equivalent Capacity to High-Speed Rail through Other Modes”, October, 2011, CHSRA, page 4, is 150%.

⁵⁶ See Parson Brinckerhoff’s Table 6; page 25 in “Cost of Providing the Equivalent Capacity to High-Speed Rail Through Other Modes”

⁵⁷ See: <http://www.voterguide.sos.ca.gov/past/2008/general/argu-rebut/argu-rebutt1a.htm>.

⁵⁸ See: California High-Speed Rail Program Draft Business Plan, November 1, 2011; pg. ES-4.

⁵⁹ On August 25th 2011, CHSRA CEO van Ark said that building the project’s first phase would create 800,000-900,000 temporary jobs. See: <http://www.bizjournals.com/sanjose/news/2011/08/25/state-funds-eyed-for-high-speed-rail.html>

⁶⁰ This type of overstatement of job creation was also addressed in both our October 2010 report, The Financial Risks In California’s Proposed High-Speed Rail Project (pages 85-88) and our 2011 report; Revisiting Issues In The October 2010 Report: The Financial Risks In California’s Proposed High-Speed Rail Project; Section 3.3.3 and Section 3.3.4 (pages 37-39). Both are found at <http://www.cc-hsr.org/>

⁶¹ Material in the same documents as reference in the table suggest that anywhere between 45-55% of any construction job creation is off-site; whether within California, the US or abroad. See: California Economic Strategy Panel. (2009); Using Multipliers to Measure Economic Impacts. Found at: http://www.labor.ca.gov/panel/pdf/Using_Multipliers_to_Measure_Economic_Impacts.pdf

⁶² See: California High-Speed Rail Program Draft Business Plan, November 1, 2011; pg. ES-5.

⁶³ See: CHSRA: Jobs_FactSheet_051910.pdf and

<http://www.cahighspeedrail.ca.gov/assets/0/152/159/0150b8aa-a61b-4aeb-9c18-6223d8fe429f.pdf>

⁶⁴ Ibid