2016 Business Plan RECORD DETAIL

Submission Date :	2/19/2016
Submission Method :	Website
First Name :	Debra
Last Name :	Martin
Stakeholder Comments/Issues :	To have transportation throughout and within our state of CA. Will help thousands of people travel, see relatives, have the access to move within our state to interview for employment where it is located. The bullet would have been ideal to save on fuel, it is mass transportation which moves quickly and Thousands of people, including myself would have used this method. The challenge I see that we, as a state are having, is that we do not have the funds to complete this project, which I find so sad, because many regions in our planet uses this system and now there are legislatures who want to put it to a stop. There is a certain rep. on t.v. right now who asks us to write our opinion. This is mine, but if he feels that Jerry Brown doesn't have the funds to do, or complete the project and our tax dollars could be put to better use, I will reluctantly agree.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/19/2016
Submission Method :	Website
First Name :	Brian
Last Name :	Phegley
Stakeholder Comments/Issues :	I appreciate the current business plan and its more moderate understanding of sources of funding to build high speed rail, but I am concerned about the lack of Southern California connections in the current initial operating system proposal. Has it been considered to build between Merced and Palmdale, and ensure timed connections to local rail service to more urban areas as the initial segment? I feel this would close a more significant rail gap, and motivate more interest and funding for the plan.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/19/2016
Submission Method :	Project Email
First Name :	James
Last Name :	Shingledecker
Stakeholder Comments/Issues :	I am a Sacramento resident and would like to know if there is proposed track layout, drawn on a street map of sorts, for the Sacramento region south toward Merced and is it available to view? Thank you James Shingledecker 8332 Alpine Laurel Way Sacramento, CA 95829
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/19/2016
Submission Method :	Project Email
First Name :	Michael
Last Name :	Rooney
Stakeholder Comments/Issues :	Hello, Can you address how the Draft 2016 Business Plan achieves the legally-mandated maximum service travel times prescribed in Prop 1A? Based on the travel times shown in Figure 2 of the Service Planning Methodology source document, the travel times from Article 2, Section 2704.09 of Prop 1A are not achieved. For example: - San Francisco to Los Angeles - 2:40 mandated vs. 3:08 in 2016 Business Plan - San Jose to Los Angeles - 2:10 mandated vs. 2:15 in 2016 Business Plan - San Francisco to San Jose - 0:30 mandated vs. 0:51 in 2016 Business Plan Thanks, Michael Rooney
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/19/2016
Submission Method :	Project Email
First Name :	Vinton
Last Name :	Lampton
Stakeholder Comments/Issues :	It's time to stop the BS. This will never be anything but a money pit. Shut down this farce. Vinton M. Lampton 318651 Windrush Rd. Agua Dulce, CA 91390 vintana@dslextreme.com
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/19/2016
Submission Method :	Project Email
First Name :	Marjie
Last Name :	Carver
Stakeholder Comments/Issues :	Please abandon your plans to use traditional rail for high speed rail and switch to mag-lev monorail for many good reason including lower cost , less environmental footprint by far , less noise , less maintenance , better efficiency (milage per pax mile) , corners better and safer plus climbs steeper grades for far less tunnels and bridges , can easily enter urban areas , cannot hit cars or people , much less time and materials to build (pylons and spans can be built off site and carried in) , and also much of the technology is available in California plus all components can be built here . It is not to late to change from 1800's freight train technology to modern passenger carrying technology ! Feel free to contact me anytime . Cheers, Hugo Marjie Carver ,Cell 619-206-8041, Home 619-225-0864 Manager, Carver Marine Hugo Carver, Marine Surveyor, Eternal Boat Builder and Marine Engineer, Cell 619-778-7036 3698 Zola Street, San Diego, CA, 92106 See also CarverMarine@yahoo.com
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/19/2016
Submission Method :	Project Email
First Name :	Wayne
Last Name :	Schotten
Stakeholder Comments/Issues :	Excellent news! The Bay Area is heavily supportive of public transportation, San Francisco will soon finish the downtown terminal joining the HSR with BART, MUNI, and within walking distance of the financial district. Further, San Francisco has he highest acreage per square mile of rooftop solar, so they get it, and most of Muni is electrified. Caltrains is electrifying the tracks already from San Francisco to beyond San Jose. Since the casinos are planning to build HSR from Las Vegas to Burbank, then the final leg could be the connector between Palmdale and Bakersfield through the Tehachapi Pass. The current Amtrak from San Francisco to Bakersfield is heavily used and the HSR can easily replace it using the existing shuttle service from Bakersfield to other Southern Cities.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/19/2016
Submission Method :	Project Email
First Name :	John
Last Name :	Kolski
Stakeholder Comments/Issues :	QUESTION WHERE DOES THE TRAIN STOP BETWEEN THE BAY AREA ND BAKERSFIELD? JOHN KOLSKI ducksfly10@gmail.com

Notes :

2016 Business Plan RECORD DETAIL

Submission Date :	2/20/2016
Submission Method :	Website
First Name :	Paul
Last Name :	Herman
Stakeholder Comments/Issues :	I greatly appreciate the California High-Speed Rail Authority's efforts to build high-speed rail in California. I have been a long time supporter of the project and have a few questions about the 2016 Draft Business Plan. I read in the report that with the current available funds the Authority will be able to build from San Jose to just north of Bakersfield. What is the current estimate of costs to construct from 'North of Bakersfield' to Downtown Bakersfield? I believe it would be worth funding this extension as to appropriately connect to the community it is serving. Terminating the train 25 miles outside of the city is an unacceptable outcome for anybody that claims to be building a true high-speed rail system. I would even prioritize this segment of track to be built before the necessary upgrades between San Jose and San Francisco because it is that bad of a solution. If the State is going to be taking out loans against future Cap-and-Trade revenues why not loan enough money to get into the city of Bakersfield? I, just as much as the Authority, want the federal government to be more forthcoming with funding for this project, but terminating the Initial Operating Segment 25 miles north of Bakersfield is unacceptable. Please reconsider this proposal and look at ways to find the necessary funding to build San Jose to Bakersfield completely, and ask the federal government to fund the San Jose to San Francisco upgrades this draft business plan says will be necessary for higher revenues and a higher concession price. Thank you for all of the hard work it takes to build this transformational project in our great State. I want this project to be a success and for other states to follow California's leadership in building a great high-speed rail network.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/20/2016
Submission Method :	Website
First Name :	Robert
Last Name :	Allen
Stakeholder Comments/Issues :	Would appreciate getting a hard copy. If that is too costly, have you given a copy to public libraries or other places where I could review it in detail? Robert S. Allen 223 Donner Avenue Livermore, CA 94551-4240 My main concern is that HSR be securely fenced and grade separated. Let operation north of San Jose be by Caltrain under their rules and with their crews. You could thus get a one-seat ride for San Francisco passengers with minimal CPUC involvement - a little slower, but safer and sooner. When you go beyond Bakersfield, I strongly urge that you follow I-5 past Tejon Pass.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/20/2016
Submission Method :	Website
First Name :	Joseph
Last Name :	Eisenberg
Stakeholder Comments/Issues :	I commend the CAHSRA for this improved, realistic business plan. I would strongly support further Federal and State support to complete the full HSR system. To make this possible, I suggest the Authority study alignments that could lead to further savings in construction and operations costs. The most important change is to reconsider a Tejon pass alignment, instead of the current route via Palmdale. According to detailed calculations by Clem Tillier (http://www.cahsrblog.com/2013/06/the-truth-about-tejon/), this route could save $5 in construction costs and improving the operating profits by $175 million a year due to lower operating costs and higher ridership. This route will also avoid the need to tunnel under the San Gabriel mountains from Palmdale to Burbank. Palmdale could be served in the second phase of the system, along a connection to Xpress West. This route could also serve Bakersfield via a station on the west side of the city, reducing impacts in downtown Bakersfield and greatly reducing costs, while providing faster service to LA and San Francisco for residents of Bakersfield. The lower costs and higher profits of the Tejon route will greatly increase the chance of private investment in completing the tracks from Bakersfield to LA. Politically, the Tejon Ranch company may not approve of this route, but the cost savings are enough to justify eminent domain if needed. I would also suggest the Authority study early service to Sacramento, and coordinate with the Bay Area MTC to study a new cross-bay route from San Francisco to the East Bay. These costs should be set aside for a "phase 1.1", along with the money planned for LA to Anaheim, to more clearly distinguish the capital costs for initial service in the key SF to LA route from the costs of addition track. I also would like the Authority to seek funding to plan LA to San Diego service. Although this would not need to be part of the initial business plan, it could be valuable to plan this route sooner. The Authority should also study an Anaheim to San Diego alignment via upgraded and electrified tracks along the coast, prior to the high-cost, full-speed route via Riverside. It is possible this route would be allow trip times sufficient to compete with driving and flights profitably, even at 110 to 125 mph max speed, at a much lower cost than the inland, high speed route.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/22/2016
Submission Method :	Project Email
First Name :	Ed
Last Name :	Olson
Stakeholder Comments/Issues :	Why doesn't the high speed rail line go from LA to LAS VEGAS???? who goes to Las Vegas.....lots of people. who goes from the Central Valley to San Jose??? no one. Was the LV to Los Angeles considered????? Ed Olson
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/22/2016
Submission Method :	Project Email
First Name :	Cameron
Last Name :	Latchford
Stakeholder Comments/Issues :	Hello, my name is Cameron Latchford. I am currently conducting research on behalf of UC Davis, on rail ridership in California. I am a proud rail and public transit advocate and have been searching for data. Unfortunately, I have been having lots of trouble finding data on rail ridership in California--I know ridership has been increasing all across the board, but all I can find are data from 2013-2015. I'm looking for graphs that show ridership over the past few decades up until today, to show the overall trend of people giving up their cars for trains and other forms of transit. I read through the 2016 business plan, and was quite impressed! However, I only found forecasts of ridership, and no data on changes in ridership over the decades or changes in attitudes. Does anybody at CHSRA have any idea where I could find this information? Thank you, Cameron J Latchford
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/22/2016
Submission Method :	Project Email
First Name :	Xavier
Last Name :	Baldwin
Stakeholder Comments/Issues :	I believe this is a greatly improved business plan to help insure success and acceptance of the California High Speed Rail Project!
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/22/2016
Submission Method :	Project Email
First Name :	Jeffrey
Last Name :	Johnson
Stakeholder Comments/Issues :	California can not afford this. It's already doubled in cost from the original projections and everyone knows once you start to build it, it will double again. PLEASE don't do it. The masses will not ride it. It's easier to take a plane from the north to the south and if you are only going a couple hundred miles, people will drive. We are attempting to solve a problem that doesn't exist. Without a NATIONAL bullet train solution like other countries (Japan for instance), it won't work. You need to be able to get everywhere before this solution makes sense. Instead, please spend the money on the aging infrastructure. The roads and bridges are in need of repair. California needs a solid water distribution system because without water/food...a bullet train isn't going to matter. So I love that you are thinking about ways to improve but PLEASE... roads are terrible. You can put people to work by fixing and EXPANDING infrastructure. Traffic is terrible. That's a REAL problem that needs fixing. thx for listening.Jeffrey Johnson408.398.1783
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date : 2/22/2016

Submission Method : Project Email

First Name : Geoffrey

Last Name : Graff

Stakeholder Comments/Issues : To Whom it May Concern,

I have enjoyed doing an initial review of the CHSRA 2016 Business Plan Draft and am excited about the progress!

One issue that is perhaps mostly related to eventual operations, but also might have physical infrastructure implications, is the potential for early service connecting Merced directly via HSR to both the Bay Area and Fresno/Bakersfield to the south.

With the completion of the Central Valley Wye and the track to Merced, a few trains (1 or even 1/2 TPH) on the new initial Silicon Valley to N. Bakersfield line could service Merced as a reversal station with no additional track and minimal service disruption.

This kind of operation would provide attractive service to the growing population center at Merced; including immediate (UC Merced) and proximal (Yosemite Park) destinations. Also, it would provide an additional, closer entry point to the HSR system for the population in the northern San Joaquin Valley early in the system's operation. One seat HSR service to/from the Bay Area and Merced in particular would be appealing to potential riders.

This type of service may have been discussed, but I have not been able to find it mentioned in the documentation.

Happy to discuss further. Please let me know if there are questions.

Best regards,
-Geoff

Geoff Graff, NCARB, LEED AP BD+C
ideocraft, LLC
www.ideocraftllc.com
314-496-8019

Notes :

2016 Business Plan RECORD DETAIL

Submission Date : 2/22/2016

Submission Method : Project Email

First Name : Kelliane

Last Name : Parker

Stakeholder Comments/Issues : To whom it may concern;

I support the new proposal for high speed rail connection between the Central Valley and Silicon Valley. Silicon valley continues to bring jobs to the Bay Area which could benefit the Central Valley by making job opportunities possible. There is no question that our current infrastructure will not support the continued population growth of California.

High speed rail will bring us in line with most major cities in the industrialized world. We have not made this type of long term investment in our transportation system in many decades.

While there are critics, who will argue that money needs to be used somewhere else, they are missing the point. Yes, California water is a priority, and yes we need to make a plan for it, but this money isn't earmarked for it, so it is a moot point. Also, failure to invest in transportation will harm our economy, including agriculture. We have far outgrown what our highway system is now capable of handling. With continued issues with fossil fuels, we need to expand public transit statewide so that all may benefit.

Though expensive now, the costs will only continue to grow. This isn't a project for short-term thinkers. This is a plan to keep California a world class economy. Not only benefiting only the cities, but rural California as well.

It will take courageous leadership to keep pushing this through, but history will be kinder than the present. Remember, when the automobile was first created, there were no interstate highways to support the number of cars we have today, someone had the vision and courage to dream and plan for the future to benefit all. Without that foresight, our agri-business wouldn't be able to grow to the super economy it has, because distribution would not have been able to scale.

As a third generation Californian, I implore you to ignore the naysayers of high speed rail. The only argument they have is that it is expensive and they want the money spent elsewhere. This is not a reasonable argument, as we need to bolster our infrastructure for transportation, water and other services, these needs aren't mutually exclusive. Invest in the future economy and we will grow the funds for other projects.

Sincerely,

Kelliane Parker
kellianeparker@gmail.com

(510)599-8355

Confucius Quote

Notes :

Attachments : image001.jpg (11 kb)

2016 Business Plan RECORD DETAIL

Submission Date :	2/22/2016
Submission Method :	Telephone
First Name :	Daniel
Last Name :	Yoljanick
Stakeholder Comments/Issues :	
Notes :	
Attachments :	voice_msg_455968754_1455931796.wav (41 kb) Yoljanick_BP_Voicemail.pdf (38 kb)

Yes my name is Daniel Yoljanick and I truly believe that this is one of California's finest moves to let the rail come though and link San Jose. They will not need to spend no more money on the original track. Thank you.

2016 Business Plan RECORD DETAIL

Submission Date :	2/22/2016
Submission Method :	Project Email
First Name :	Kathleen
Last Name :	Irgens
Stakeholder Comments/Issues :	Have you heard about the ballot initiative that would put a stop to this train fiasco and divert the funds to water storage?? A much more timely project since you don't seem to be able to comply with the rules set down in the "Bullet Train" initiative. You were supposed to come up with a plan that provided train service within these parameters: - It would take no more than 2 hours and 40 minutes, end to end - It would cost no more than 40 Billion - You would have private funding lined up before construction began - There would be no public/government subsidies (you are diverting cap and trade funding for this debacle) - You would comply with all environmental laws and conduct required studies - You lied about ridership projections (saying you would have more riders than all of Amtrak combined) - It was supposed to have a dedicated track, now you are delivering a "Blended Track System". - You lied about the cost of a projected ticket - It was supposed to go from San Francisco to San Diego - Now it will only go San Francisco to LA - Too many other things to list You need to stop spending money on this fraud and admit you can't comply with the with the ballot initiative!!You should all be in jail for fraud and deceit! PLEASE stop wasting our money so you can continue raping the taxpayers with your scandalously high salaries on this illegal project! STOP THE FRAUD, Kathleen Irgens
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/22/2016
Submission Method :	Website
First Name :	Stephen
Last Name :	Rosenblum
Stakeholder Comments/Issues :	In order to gain support in the SF Bay Area HSR must commit to grade separation along the entire right of way from San Jose to San Francisco The preferred method should be tunneling or trenching the tracks below the ground as this will minimize the traffic flow and eminent domain impacts in the bordering communities. I am an HSR supporter in principle but will aggressively oppose it if grade separation is not an inviolable part of the plan.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/22/2016
Submission Method :	Website
First Name :	Sean
Last Name :	Maiwald
Stakeholder Comments/Issues :	I think the plan is a great plan- makes more sense in terms of economics. The garish bridge over 280 was a bad idea in the first place, and it was good to get rid of that. My issue is that unfortunately there is no mention of people with disabilities and the accommodations needed. Are there mandates for universally accessible stations, trains and more? Not only for people with wheelchairs/mobility problems, but for blind, and/or deaf people?
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/22/2016
Submission Method :	Project Email
First Name :	Robert
Last Name :	Allen
Stakeholder Comments/Issues :	Based on news reports, I hope CHSRA considers this proposal. (I have not seen the plan itself.) In the Bay Area we need coordinated rapid transit around the Bay with a single elected governing board, e.g., annexing San Mateo and Santa Clara Counties into BART as proposed in SFBARTC 1957 Report to the Legislature. If Caltrain is electrified, run a single train as CHSRA from CV to SJ, and as Caltrain from SJ to SF. CV to SJ would be high speed on fenced and grade separated track. On the peninsula, the train would go by Caltrain rules, including train speeds, minimizing the likelihood of CPUC dictate. The result, a one-seat San Francisco ride, slightly slower, but at much lower cost.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/22/2016
Submission Method :	Website
First Name :	Antonio
Last Name :	Valenzuela
Stakeholder Comments/Issues :	Antes pasado el plan de negocio estaba en Espanol. Porque no esta en Espanol en este ostancia? Que no estan enteresados de comunicase con la gente Latina?
Notes :	Translates to: Before the business plan was in Spanish. Why isn't it in Spanish in this iteration? Are you not interested in communicating with Latinos?

2016 Business Plan RECORD DETAIL

Submission Date :	2/22/2016
Submission Method :	Website
First Name :	Mark
Last Name :	Mcavoy
Stakeholder Comments/Issues :	It is absolutely imperative that the link between Bakersfield and Palmdale/So Cal be prioritized. I don't understand why that isn't the very next thing on the to-do list. Riding high speed rail from the bay area or central valley down to Bako, just to get on that bus, is ridiculous. IOS means nothing without that critical link. Nothing at all.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/23/2016
Submission Method :	Project Email
First Name :	John
Last Name :	Pivirotto
Stakeholder Comments/Issues :	All that money to litigate HSR up the peninsula when you can stop it at San Jose and have folks take Caltrains to San Francisco at a reasonable clip (speed). We don't want HSR here and we'll do everything in our powers to stop the "boondoggle". If you insist on that HSR train going direct to San Francisco's Trans-Bay Terminal, you need to find another way. With the HSR litigation, the tunnels under the delta, the overspending on Covered CA, is there any other ways that this state legislature and it's Governor can waste tax-payers dollars? I have a grand idea- Fix the existing roads, bridges and tunnels instead. Maybe built another reservoir before another drought shows us what water rationing really is. You all seem to be making way too much money for doing so may stupid things. John Pivirotto Cell- (650) 867-9122
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/23/2016
Submission Method :	Project Email
First Name :	Michele
Last Name :	McManus
Stakeholder Comments/Issues :	Scan of comment attached
Notes :	
Attachments :	SKMBT_C284e16022316350.pdf (269 kb)

Bakersfield F Street Station Alignment - RECORD #104 DETAIL

Status :	Action Pending
Record Date :	2/23/2016
Response Requested :	
Submission Date :	2/23/2016
Affiliation Type :	Individual
Interest As :	Individual
Submission Method :	Website
First Name :	Michele
Last Name :	McManus
Professional Title :	
Business/Organization :	
Address :	
County :	Kern
Apt./Suite No. :	
City :	Shafter
State :	CA
Zip Code :	93263
Telephone :	661-746-0225
Email :	mccrazies@bak.rr.com
Fax :	
Cell Phone :	
Email Subscription :	Fresno - Bakersfield
Add to Mailing List :	Yes
Comment Type :	Issue (concern, suggestion, complaint)

Stakeholder Comments/Issues :

The new proposed terminal in Shafter is not a sound idea. If there is not enough money to finish the project, it is not good business to forge ahead expecting funding. We have travel to Sacramento from Wasco and getting off of the train onto the bus in very inconvenient. That alone is a reason not to take the train. Now you are proposing 30 minutes from Bakersfield a stop! If that because us farmers haven't sued you yet? You call us the backbone, but you should just call you the train wreck that broke our back! Straighten out the lawsuits that you have with the City of Shafter and stop taking our ag land for an unwise ventures.

Subscription Request/Response :	URL: http://sites.focalbeam.com/chsra.gov/pb_commentSubmit.php?fn=Michele&ln=McManus&em=mccrazies%40bak.rr.com&city=Shafter&state=CA&zip=93263&interest=Individual&sections[]=Fresno+-+Bakersfield Response: *OK*
EIR/EIS Comment :	No
Attorney or Law Firm? :	No
Need PI Response :	Yes- Individual Response
Form Letter :	
Submisison in Language other than English :	

2016 Business Plan RECORD DETAIL

Submission Date : 2/23/2016

Submission Method : Project Email

First Name : Robert

Last Name : Benson

Stakeholder Comments/Issues : I have been closely following the project for several years now (and I also am a major contributor to the Wikipedia website for California High-Speed Rail).

I approve of 2016 Business Plan. More specifically:

(1) Similarly to the argument for starting construction in the Central Valley first, choosing the IOS-North route makes the most sense. It is true that more passengers could be served by the IOS-South, however the current limited financing environment forces the completion of the only affordable and viable self-sustaining segment, Silicon Valley to Bakersfield. It makes no sense to ignore this reality.

(2) A delay in construction of the IOS-South might also benefit the necessary tunneling projects. This is a whole new area of complexity, and a delay here might well be worth it in terms of costs, construction-time, and the quality of the constructed tunnels themselves.

(3) I also agree that additional funding for the San Jose to San Francisco and LA to Anaheim segments is highly desirable. It puts the money where it would provide the most benefit in heavy population centers, and addresses current transportation needs as well as being preparation for high-speed rail. Additional monies for these should be found, or appropriated by the state government.

(4) I also agree that the Central Valley line should terminate in Bakersfield, and not a temporary station north of the city. This NOT essential to the success of the line, but would be very desirable. Again, supplemental monies should be found for this.

(5) I further agree that continuing to fund the environmental and planning studies for the entire Phase 1 system is highly desirable. Those expenditures are comparatively small, and yet are critical to being able to move rapidly ahead when more funding becomes available as well as being able to more accurately estimate project costs. In this rather volatile political climate it is entirely possible that the funding environment could change and more monies made available, and it is best to be prepared. This is being prudent as well as forward-looking.

Sincerely,

Robert G. Benson
San Diego

Notes :

2016 Business Plan RECORD DETAIL

Submission Date :	2/24/2016
Submission Method :	Website
First Name :	David
Last Name :	Ng
Stakeholder Comments/Issues :	Regarding to news about your agency's plan to build the high speed rail to the Bay Area first, I want to submit my comment and suggestion that the San Francisco area is more dependent on public transit than San Jose and I have strong beliefs that having your high speed train directly serving San Francisco wil help promote healthy ridership levels as currently a lot of motorists hate driving into San Francisco due to terrible traffic conditions and difficulties finding parking, unlike San Jose where there is plenty of room to serve motorists driving their automobiles. It is very important to make sure the high speed train will directly serve San Francisco and not forcing any transfers at San Jose for trips to/from San Francisco other than unplanned emergencies along the Caltrain ROW.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/24/2016
Submission Method :	Website
First Name :	Sean
Last Name :	Corbin
Stakeholder Comments/Issues :	It appears that in the new business plan, Merced doesn't get a functional station until 2029. It seems unfair that ridership should begin without a station serving Merced or Madera counties, given that significant portions of the HSR will run through those counties. For those of us living in Merced, this seems to mean that we'd have to first drive an hour to Fresno in order to board a train to San Jose/San Francisco. While it's nice to imagine the eventual completion of a Merced station in 2029, it seems that the HSRA would gain more local support if each county that is offering cooperation, land, and money were to have a station ready to go upon the start of initial service in 2025. You can imagine that for those of us living in Merced, the idea that our station would get pushed back from 2022 to 2029, or roughly the time it would take for my daughter to go from junior high to graduating high school, is hard to swallow. Personally, this makes it likely that I would re-locate to Fresno in order to receive 5 years additional access to the Bay Area. I can imagine that cities like Merced and Modesto would actually suffer in the short-term as residents move to further south to gain access to the HSR.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/24/2016
Submission Method :	Website
First Name :	Sean
Last Name :	M
Stakeholder Comments/Issues :	An idea to save considerable dollars: for the cities that want a trench or other expensive option, only provide enough money for the cheapest option. Then, from there if the city wants a more expensive option, they can pay the difference.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/18/2016
Submission Method :	Letter
First Name :	Ted
Last Name :	Hart
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Letter from Ted Hart 2.25.16.pdf (37 kb)

February 18, 2016

Dan Richard. Chairman
Tom Richards, Vice Chair
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
770 L Street. Suite 800
Sacramento, CA 95814

Re: Phase 2 Cost and Total Cost

Dear Dan and Tom,

I am really disappointed that you have decided to continue to hide the total cost of high-speed rail from the public. Your excuse that it is too difficult to estimate that far out doesn't hold up against the history of the project. From the inception, costs or even approximate costs, were mandatory and provided a base to move forward.

With the engineers and risk analysis experts you have on payroll, it is inconceivable that you can't come up with a cost. I can extrapolate the existing costs and arrive at an approximate cost of $100 billion. And that is the low-end cost, which avoids your revealing the high-end cost.

How far do you think you would have gotten with the voters in 2008 without showing the total cost of approximately $45 billion. An absolute rule in concrete; people don't buy things without knowing what it costs. Or is it that once you have the money, then it is no longer necessary to inform the voter that the cost has doubled to approximately $100 billion? This is the classic bait and switch.

What if the cost is $125 or $150 billion, is there any pain threshold at which you step in and say we have to stop this? The signal you are sending is that it doesn't make any difference what it costs, we are soldiering on come hell or high water.

I understand the difficult task and political situation you are in. The entry of the ballot initiative on the front page of the L.A. Times, puts into play your exposure to noncompliance with PUC 185033. I think the question is, are you better off putting a number in the 2016 Business Plan to get ahead of the curve?

My remarks are strictly business and don't detract from my personal regard for both of you.

Regards,

Ted Hart

2016 Business Plan RECORD DETAIL

Submission Date :	2/19/2016
Submission Method :	Website
First Name :	Dan
Last Name :	Hariton
Stakeholder Comments/Issues :	OVERVIEW OF KEY RISK AREAS The key risk areas that we have identified and manage on an ongoing basis vary based on the individual section's design or construction phase. This section provides an overview of the most significant risks identified by the Risk Management Program, together with management strategies and mitigations. We have grouped the key risk areas in three broad categories: 1. Program level risks 2. Construction risks 3. Technology risks = page 88 = My Risk (Security & Value-Added Cost) Comments: Please consider in the costs these add-inns, right now, at construction phase, them being cheaper to build-in now rather than later, built-in (electronic) security for: •Rail integrity (rail damage, anti-tamper, rail discontinuity; minimum scan frequency 1scan/second with GPS location alert) •Track intruder proximity-alert (underground buried cable for EMI field-distortion intruder alert for cows, persons, vehicles, etc. scan frequency 1scan/second, with GPS location alert) •Physical track/rail obstructions •Air space proximity (drones, either RC or autonomous) http://www.hsr.ca.gov/About/Business_Plans/Draft_2016_Business_Plan.html Please forward these comments to (I was unable to get online access). Thank you: https://www.hsr.ca.gov/About/Business_Plans/Draft_2016_Business_Plan_Comments.html at 2/19/2016 2:25:40 PM: The connection has timed out The server at www.hsr.ca.gov is taking too long to respond. The site could be temporarily unavailable or too busy. Try again in a few moments. Dan Hariton Dan.hariton@comcast.net 1-408-981-4788 (no robo-calls please)
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/26/2016
Submission Method :	Website
First Name :	Samuel
Last Name :	Gerner
Stakeholder Comments/Issues :	Thank you for your hard work and persistence in setting up the high speed rail in California. We definitely need it. Seeing this is such an extensive investment, please consider the emerging hyperloop technologies that are being explored. California is the pinnacle of innovation, and we can be on the forefront with a quicker and more efficient mass transit solution. Thank you, --Sam
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/28/2016
Submission Method :	Website
First Name :	Kevin
Last Name :	Wagner
Stakeholder Comments/Issues :	As a engineer, I understand the technical risks and challenges of 'closing the gap' between the Central Valley and Southern California. However, I am disappointed that the 2016 Business Plan abandons the attempt to quickly bring passenger rail service from Bakersfield to Los Angeles. This section of rail from Bakersfield to Burbank via Palmdale will be the most expensive, technically challenging, and the longest to construct. I hope that CAHSRA will reconsider the plan to postpone this difficult but vital portion of the project.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/28/2016
Submission Method :	Website
First Name :	Eugene
Last Name :	Chao
Stakeholder Comments/Issues :	I am curious why the authority ask K.P.M.G. to do cash flow analysis, CamSys to do ridership and revenue forecast, and an unidentified agency to do O&M analysis. Should three of these analysis be consistent? Is there a possibility to create a mismatch?
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/26/2016
Submission Method :	Telephone
First Name :	Hugo
Last Name :	Diaz
Stakeholder Comments/Issues :	
Notes :	
Attachments :	voice_msg_456210831_1456535312.wav (36 kb) Diaz_Transcript.pdf (38 kb)

Voicemail – My name is Hugo Diaz. I approve of the high-speed rail train. I think it is the best thing that could ever happen to California in the last 50 years.

2016 Business Plan RECORD DETAIL

Submission Date : 2/29/2016

Submission Method : Project Email

First Name : Alexander

Last Name : Friedman

Stakeholder Comments/Issues : Dear Sir or Madam:

The decision to open the initial HSR segment in the Bay area would be WRONG on so many levels... Yes, I understand that funding and costs are key issues, but what is the sense of building the project if it will not serve the main regions?! Los Angeles County - is where most of the California population is. Compare:

- 19 million population (in L.A. County), versus
- 6.4 million (San Jose area), versus
- 4.2 million (Fresno area).

Building the HSR to the highest-population, highest-density area is a Must. Otherwise, no sense of implementing the project.

Remember the saying, "Penny-wise, pound-foolish". By trying to save money and opening the 1st segment where "it's quicker and cheaper" may - in the long run - put the whole project in jeopardy; and you will end-up losing very many supporters - resulting in federal and state funding shortfalls.

Initial connection with Southern California - i.e. Burbank (if not Los Angeles), or at least Bakersfield - should remain, as originally planned. This is what we voted for, and this is what CHSRA had promised us.

I truly believe that the 1st segment should be between Palmdale (or Lancaster) and Bakersfield - to fill-in the missing rail gap.

To recap, I strongly encourage you to go with the original plan - i.e. to open the 1st segment of the HSR connecting with Southern California, rather than the Bay Area.

Thank you!

~ Alexander Friedman
Los Angeles, California
(323) 465-8511

Notes :

2016 Business Plan RECORD DETAIL

Submission Date :	2/29/2016
Submission Method :	Letter
First Name :	Fred
Last Name :	Gage
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Gage_BP_Letter_022416.pdf (328 kb)

24 February 2016

California High Speed Rail Authority
Attn: Draft 2016 Business Plan, Ms. Annie Parker
770 L Street, Suite 620
Sacramento, CA 95814

Subject: High Speed Rail Authority (HSR) 2016 Business Plan

Dear Ms. Parker,

The purpose of this letter is to provide my comments concerning the HSR 2016 Business Plan (the plan). I thank HSR for the opportunity to provide comments.

I have reviewed the plan and I believe there are some significant flaws in the document.

A. The plan does not address where the electric power needed to power the system will be generated. In order for HSR to work a dedicated power system will be required. The major utilities in California have not built any significant electrical power plants in years. In fact, the state has had a net loss of power generation with the closures of the Rancho Seco, and San Onofre nuclear plants. There have been no hydroelectric plants constructed in the recent past and any proposal to develop them has been blocked by environmental groups. Our utility rates are the highest in the nation. As I see it, HSR will further tax an already fragile electrical system and end up causing significant increases in our electric bills.

B. I believe your passenger load factors a wildly optimistic. I seriously doubt many people from the Bay Area are going to rush to hop a train to Bakersfield. The plan gushes about the train opening opportunities for the Central Valley. I do not see how given the low skillsets in the Central Valley. The High Tech companies in Silicon Valley are seeking college educated employees. If you assume the tech companies are going to build manufacturing plants in the valley it is not going to happen. California is the most business unfriendly state in the union. If you have not noticed companies have moved production facilities out of state or out of the country.

C. The plan mentioned that air fares from the Bay Area to the Central Valley are expensive. There is a reason for this. The reason is a lack of demand. The passenger loads are not there. A train is not going to magically create demand. The simple fact is that it is easier and more convenient to drive. If one flies or takes Amtrak or Greyhound one usually has to get to their final destination. Unless that destination is within walking distance to a terminal a person will still rent a car. Money would be better spent by adding train service provided by Amtrak from San Francisco and San Jose to the Central Valley. The route could use the existing tracks over Altamont Pass or reinstall the tracks over the former Southern Pacific right of way.

D. The plan makes a huge assumption that the private sector would be interested in operating the system. I am sure the private sector would, as long as the state provides a subsidy. The plan refers to the Monte Carlo method of projecting results. You could not have picked a worse choice for words. In case you did not know, Monte Carlo is one of the gambling centers of the world. At least keep the method in the United States and call it the Las Vegas method. I would call it a "crap shoot." Is this the attitude of HSR, "Let's gamble with someone else's money?" That someone else happens to be the taxpayers of California. I digress. If the private sector was really interested in participating in passenger rail projects it would be running Amtrak or the municipal transit systems. The passenger rail systems in Europe and Japan are built and run by their respective governments. That should send a message to HSR that passenger train operations do not generate the profit necessary, if at all, to attract private investment.

E. I do concur with the portion of the plan that discusses making improvements to the Burbank to Anaheim corridor. I believe rail projects for local areas can ease traffic problems and reduce automobile caused pollution. This would benefit everyone.

F. I believe the long term goal of the plan which is to construct and profitably operate a high speed rail system is totally unrealistic. Air travel is and will continue to be the choice to get from the Bay Area to Southern California. The airlines provide service to all the strategic locations. One does not have to travel from only one point to another such as SFO to LAX. The same is true traveling from Southern California to the Bay Area. If the demand grows I know the carriers will add capacity. It is true that weather can cause delays. However, weather delays are reasonably infrequent. In addition, one can often reroute to another airport if the original airport is closed due to weather issues. Trains cannot be easily rerouted and in the case of HSR, rerouting would be impossible.

G. Having read all the optimistic projections I did not find a worse case option. What happens if the construction costs escalate? Right now the inflation rate is low. What happens if inflation rears its ugly head? Who makes up the difference if the passenger load factors do not meet expectations? Who will pay if the operations and maintenance costs are not supported by passenger fares? The plan does not address these issues. I know the answer and that answer is, the taxpayers of California are stuck with the bill for HSR.

If past performance is any indication, I view the ability of government to adequately estimate the cost of anything correctly with extreme skepticism. With the possible exception of the military, fire and police departments the performance of government run operations has been less than stellar. The Veterans Administration, Public Schools, the Postal Service, and Amtrak are good examples of why a governmental agency should not operate anything.

As mentioned, I read the rosy projections and believe them to be wildly optimistic. All I see in the immediate and long term future is a train to nowhere that will cost billions

with the taxpayers of this state getting stuck for the bill. No one will get fired and the expenses will mount until the citizens of this state will finally say, "We have had enough" and vote to shut it down.

If you wish to contact me I can be reached at 916-961-8019 or at the address below.

Sincerely,

Fred W. Gage
6809 Albury St.
Citrus Heights, CA 95621-6323

Fred Gage
6809 Albury Street
Citrus Heights, Ca. 95621

SACRAMENTO CA 957
25 FEB 2016 PM 6 L

California High Speed Rail Authority
Attn: Draft 2016 Business Plan, Ms. Annie Parker
770 L Street, Suite 620
Sacramento, CA 95814

FEB 29 2016

9581439857O

2016 Business Plan RECORD DETAIL

Submission Date :	2/26/2016
Submission Method :	Project Email
First Name :	Doug
Last Name :	Muirhead
Stakeholder Comments/Issues :	Hello High Speed Rail People, Where do I find the "plan and profile conceptual drawings" mentioned on page 31 of the Capital Cost Basis of Estimate Report - DRAFT 2016 Business Plan: Technical Supporting Documents I am interested in the high-speed rail viaduct along Monterey Road from south of Tamien to Gilroy. Thank you, Doug Muirhead 15901 Village Way Morgan Hill, California 95037-5657 Email: doug.muirhead@stanfordalumni.org
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/25/2016
Submission Method :	Letter
First Name :	Colleen
Last Name :	Carlson
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Kings_County_Draft_2016_BP_Comment.pdf (461 kb)

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VANJI R. UNRUH

February 25, 2016

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620, MS-1
Sacramento, CA 95814

Via U.S. Mail, Electronic Mail, and Web Form

RE: Comments on Draft 2016 Business Plan

Dear Sir or Madam:

I write on behalf of the County of Kings to comment on the California High Speed Rail Authority's Draft 2016 Business Plan.[1] In general, the Plan reads like a marketing document rather than the informational and planning document envisioned by Public Utilities Code section 185033. The discussion that follows outlines why the Plan falls short of the requirements stated in section 185033, and also provides a general list of concerns that Commenter has with HSR as currently proposed.

1. **Estimated capital costs for each segment or combination of segments** (Pub. Util. Code, § 185033, subd. (b)(1)(A)):

    a. Section 5 of the Plan indicates that construction bids to date demonstrate an eventual $5.5 billion total savings over 2014 estimates for Phase 1. The Authority therefore contends that it is now feasible to set aside $2.1 billion to provide high speed service from Los Angeles to Anaheim. This assertion raises three concerns for Commenter:

        i. There is no discussion in the Plan of the cost of crossing over or tunneling through the Tehachapi Mountains. Evidence in the record in *Tos, et al. v. California High Speed Rail Authority*, Sacramento Superior Court Case

[1] Hereinafter, "Commenter" refers to the County of Kings, "Authority" refers to the California High Speed Rail Authority, "HSR" refers to the proposed high speed rail system, and "Plan" refers to the Authority's Draft 2016 Business Plan.

No. 34-2011-00113919 (*Toss*), shows that to help achieve the maximum travel times required by Streets and Highways Code section 2704.09, subdivision (b), the Authority proposes an alignment over the Tehachapi Mountains that would include almost nine miles at a grade in excess of the Authority's design guidelines. (AG 027511-027513.) It is reasonable to assume that it would be unsafe for a train to operate at 220 m.p.h. down that grade, as estimated by the Authority in its travel time analysis. (AG 017438, 017439, 13544:15-16.) It may, therefore, be necessary to tunnel through the Tehachapi Mountains, which will affect construction costs. Without analyzing the costs of tunneling, it is premature to predict a $5.5 billion total savings, or availability of funds to provide a higher level of service from Los Angeles to Anaheim.

ii. Although the Plan now proposes high speed service from Los Angeles to Anaheim, it continues to propose a blended system from San Jose to San Francisco. In Commenter's opinion, for reasons argued by the petitioners in *Toss*, a blended system violates Proposition 1A.

iii. Even if the Authority can achieve economies of $5.5 billion below previous estimates, as set forth in Part 2 below, the Authority still fails to identify sources of most of the funds needed to complete the system.

b. The Plan describes HSR as ultimately terminating in San Francisco at Fourth and King Streets. Commentator has understood until recently that HSR would terminate at the planned Transbay Terminal. In fact, the Transbay Joint Powers Authority's website states that HSR eventually will link to the terminal. The cost of this extension is not addressed in the Plan. The Plan also fails to discuss whether a phased approach to reaching the terminal will cost more than linking to the terminal from the outset. Commenter is also concerned that the Authority's arguments and evidence in the *Toss* matter imply that the choice to terminate initially at Fourth and King Streets was made to shave valuable minutes off of travel times so that HSR can meet maximums established in Streets and Highways Code section 2704.09, subdivision (b). This is disingenuous, especially if HSR ultimately will connect to the Transbay Terminal.

c. Commenter is perplexed by the proposal stated on page 24 of the Plan to subsidize construction of the Central Subway in San Francisco, a public works project with a staggering price tag of approximately $1 billion per mile. This expenditure appears calculated to help connect HSR to downtown San Francisco to make HSR a more viable option for city residents. The expenditure would seem unnecessary if HSR initially connects to the Transbay Terminal.

2. **An estimate and description of the total anticipated revenues the Authority intends to access to fund construction and operation of the system, and the level of confidence for obtaining each type of funding** (Pub. Util. Code, § 185033, subd. (b)(1)(E)): Unless the Authority concretizes its funding plan, California ultimately could

end up with a train that connects only San Jose and Shafter. Commenter has the following concerns regarding funding:

a. Section 6 of the Plan demonstrates that the Authority has identified only enough funding to construct HSR from San Jose to north of Bakersfield. It remains unclear how the rest of the project will be funded. The Plan is particularly vague in describing revenue sources that may be tapped to link HSR from Bakersfield to Burbank, and there is no discussion at all on funding for Phase 2 of HSR.

b. The Authority has consistently argued in *Toss* that compliance with Proposition 1A is not necessary if the HSR system is not constructed using bond revenues. Yet on page 59, the Plan states that $2.605 billion in Proposition 1A bond funds have been appropriated to match federal investments. There is no alternative source of matching funds addressed in the Plan.

c. To fund the remainder of Phase 1 beyond the San Jose to north of Bakersfield segment, the Plan identifies cap-and-trade, federal funds, and private sector investment leveraged through anticipated future revenue streams. However:

   i. The Plan lacks a discussion of how estimates of cap-and-trade revenues were derived, and the required analysis of the Authority's level of confidence that those revenues will be realized is entirely lacking. Commenter also wonders whether HSR is an appropriate use of cap-and-trade funds. For example, on page 32, the Plan states that all power used to run HSR will be supplied through contracts with renewable energy suppliers. Whether an actual offset of fossil fuel consumption will be achieved through these contracts, however, depends upon whether, because of the Air Resources Board's Renewables Portfolio Standard and other incentives, the suppliers ultimately will go into operation regardless of whether HSR is built. If so, then HSR will merely use renewable power that otherwise would have gone into the grid for other uses, which will instead be powered through traditional means.

   ii. The Plan's discussion of federal funding sources: (1) is lacking in specifics, (2) includes no confidence analysis, and (3) is vague concerning fund matching requirements. It also appears from the discussion that the Authority is relying heavily on the President's "21st Century Clean Transportation System" proposal, even though there is no evidence in the Plan that the proposal has been introduced as legislation in Congress, or that the Authority will qualify for funding under the proposal. Nor is there any indication of the specific amount of funding for which the Authority may qualify if the proposal materializes.

   iii. The discussion concerning private investment details the amount of investment the Authority can expect to receive based upon HSR's anticipated profitability, but no strategy is provided for securing such investment, and no current efforts for doing so are described.

3. **Forecast of the expected patronage, service levels, and operating and maintenance costs for the Phase 1 corridor** (Pub. Util. Code, § 185033, subd. (b)(1)(B), (C)):

    a. As part of this element, the Authority is required to describe "alternative financial scenarios for different levels of service." The only "different level of service" discussed in Section 7 of the Plan is a potential initial operating segment from San Francisco to Bakersfield rather than from San Jose to Shafter (i.e., north of Bakersfield). Furthermore, all financial projections for this alternative are based only on a medium level of ridership, revenue, and cost. More than one alternative and a fuller analysis based upon high, medium, and low levels of ridership, revenue, and cost seem appropriate.

    b. Reliance on Monte Carlo simulation is dubious. Many financial experts warn against reliance on Monte Carlo simulation because it fails to account for the fact that future investment performance depends as much on the sequence of future investment returns as on the average of those returns. According to Julie Crawshaw in an article in *WealthManagement Magazine* (www.wealthmanagement.com, accessed Feb. 24, 2016), in assessing risk, Monte Carlo simulation spreads potential losses across the full investment period, without giving consideration to the possible impact of multiple simultaneous loss years. A comparison may be drawn to climactic conditions. An analysis of the long-term impact of California droughts, for example, would be skewed if we assume that droughts happen at regular intervals without multiple dry years scenarios like the current one. According to Crawshaw, Monte Carlo simulation also fails to treat a starting position as an actual position, instead treating it as one scenario amongst many. Thus, based upon the Authority's figures, HSR may well operate at a loss in its anticipated first year of 2025, with fare box revenues estimated at $186 to 339 million, and projected operation and maintenance costs running between $268 and 306 million. However, Monte Carlo simulation assumes that a loss is merely one scenario among many, and gives equal weight to it without any analysis of the actual likelihood of a loss or its impact on future years or the ability in future years to compensate for the loss. In fact, here the Authority first calculates the likelihood of profits in future years, and then assumes that those profits will be adequate to cover initial year losses, without instead factoring the need to repay losses into calculations of future year profitability.

4. **The expected schedule for completing environmental review** (Pub. Util. Code, § 185033, subd. (b)(1)(D)): The Plan makes much of the Silicon Valley housing shortage and the potential benefits that an initial operating segment between San Jose and the Central Valley may have on alleviating the shortage. If a new goal of HSR is to spur high density housing development in Central Valley cities, this may be a significant impact that will require supplemental environmental analysis. It is also worth considering whether a market for high density housing in the Central Valley reliant on HSR is even sustainable. At page 67, the Plan estimates that a single trip from San Francisco to Los Angeles will cost $89. Even assuming that the trip from Fresno to San Jose, for example, is only one-third of that amount (which is conservative since Fresno and San Jose are 150 miles apart,

compared to the total distance of 380 miles between San Francisco and Los Angeles), a round trip ticket between San Jose and Fresno will cost approximately $60. Assuming a work year of 220 days, the total annual cost of commuting would be over $13,200, enough to contribute an additional $1,100 per year toward housing, without considering the tax and investment benefits of home ownership over sinking money into transit expenses. Under these circumstances, while there may be an initial demand for housing in the Central Valley from Silicon Valley tech workers, query whether that demand will remain constant as the market responds to the reality of HSR ticket pricing. While bulk pricing or fare subsidies may provide a solution to the problem, it does not appear that current Plan projections consider the impact of bulk pricing, and HSR is required by law to operate without subsidy, pursuant to Streets and Highways Code section 2704.08, subdivision (c)(2)(J).

5. **Any agreements with public or private entities to fund components of the high-speed rail system, including stations and terminals, and any impediments to the completion of the system** (Pub. Util. Code, § 185033, subd. (b)(1)(F)): Although the Plan appendix indicates that this element is addressed in Section 6 of the Plan, Commenter finds nothing directly on point in Section 6 or elsewhere in the Plan.

6. **Alternative public-private development strategies for the implementation of Phase 1** (Pub. Util. Code, § 185033, subd. (b)(1)(G)): The Plan appendix indicates that this element is addressed in Sections 3 and 6 of the Plan. Nothing in Section 6 clearly and concretely addresses this element. Section 3 states only that: (1) the system will be operated by a private party, and (2) the Authority will engage an operator early. There is also general mention in the Plan that private parties will serve as station concessioners, HSR will be constructed by private entities under design-build contracts, and HSR will enter into agreements with utility companies during construction. These bare bones assertions are not "development strategies," and this statutory element of the Plan is lacking.

7. **Discussion of all reasonably foreseeable risks the project may encounter, and the strategies, processes, or other actions the Authority intends to use to manage those risks** (Pub. Util. Code, § 185033, subd. (b)(1)(H)): According to the Plan's appendix, Section 9 of the Plan is intended to address this element. Generally, Section 9 is overly vague in describing risk management strategies. Commenter also is perplexed by the language on page 89 of the Plan that to mitigate potential legal challenges, the Authority will "[w]ork closely with affected stakeholders to address issues before they become formal lawsuits," and will seek to resolve "legal issues raised through those lawsuits." Commenter currently is engaged in litigation with the Authority specifically because the Authority refuses to do what it pledges here. From the beginning, the Authority has treated the people of Kings County with utter contempt. The Authority never consulted with the local community before deciding that HSR would shuttle through valuable Kings County farmland, and refuses to sit down with local officials to discuss seriously alternatives to condemning farmland rather than building HSR along existing right-of-ways through the County. Neither has the Authority made a single effort to address concerns raised by Commenter in litigation. Commenter has felt shut out of the process and entirely disregarded at every turn, and the message from the Authority consistently

has been that Commenter's communities stand in the way of "progress," and do not matter.

For the foregoing reasons, Commenter deems the Plan inadequate, and respectfully asks the Authority to complete the analysis for each of the Plan's statutorily required elements.

Sincerely,

By: */s/ Erik Kaeding*, deputy

COLLEEN CARLSON,
Kings County Counsel

OFFICE OF
COUNTY COUNSEL
KINGS COUNTY
1400 W LACEY BLVD
HANFORD CA 93230

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MAR 1 2016

Attn: Draft 2016 Business Plan
Calif High-Speed Rail Auth.
770 L St., Ste. 620, MS-1
Sacramento, CA 95814

9581435900

2016 Business Plan RECORD DETAIL

Submission Date :	3/7/2016
Submission Method :	Website
First Name :	Randy
Last Name :	Coleman
Stakeholder Comments/Issues :	We live in San Martin CA. and want to know where exactly the track is going to be built.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	3/7/2016
Submission Method :	Project Email
First Name :	Robert
Last Name :	Allen
Stakeholder Comments/Issues :	Your 2016 Business Plan is far better than those of previous years. It totally misses, however, the important role of another state agency, the California Public Utilities Commission. CPUC has safety oversight responsibility over railroad operations. Yet I find no mention of CPUC's role in safety. Until a note at the bottom Page 93 not related to safety, CPUC is not even mentioned. You ignore CPUC at your peril. They are fierce, even overbearing at times, in pursuing safety issues. Let me cite an example with a publicly-owned railroad like yours. In January, 1979, a third rail power pickup paddle on a BART train broke, sending a high voltage power surge that set a train on fire in the trans-Bay tube. I have retired from engineering and operations on three Class 1 railroads now part of Union Pacific. Any of those railroads after such a freak incident would have repaired the damage and continued operations. CPUC here, though, ordered BART to keep their vital trans-Bay tube closed, causing chaos in the Bay Area commute for well over three months. Nobody would deny that the changes were needed, but the regional havoc was a stiff price to pay. You plan "Blended Rail", operating on Caltrain tracks that now have a maximum speed of 79 mph. You and Caltrain talk of raising that speed to 110 mph or more and running your trains at close to the maximum speed. Bourbonnais is a good example of a train at 79 mph hitting a truck loaded with steel. Two Amtrak locomotives and 11 of 13 cars derailed, with many deaths and injuries. Had that train been going faster , the toll would have been much higher. Or the truck could have been a gasoline or chlorine tanker or loaded with explosives. Trains are vulnerable to accidents, suicides, sabotage, and even terrorism at grade crossings. Demand grade separation of roads crossing tracks where you operate. CPUC will likely demand it. One thought re CPUC: operate your trains only south of San Jose. Let Caltrain either pilot or run your equipment north of San Jose as Caltrain.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	3/8/2016
Submission Method :	Public Hearing - Written Comment
First Name :	Ted
Last Name :	Hart
Stakeholder Comments/Issues :	
Notes :	He also provided written remarks, which he read from at the Board meeting. The transcript and letter provided are attached
Attachments :	Hart_Letter_030816.pdf (248 kb) Hart_Biz_Plan_030816.pdf (59 kb)

March 3, 2016

California High-Speed Rail Authority
770 L Street, Suite 620
Sacramento, CA 95814

Re: Comments To The 2016 High-Speed Rail Draft Business Plan

The 2016 Draft Business Plan does not contain one word concerning the need for security to prevent a terrorist attack on the High-Speed Rail system. How could this have been overlooked with the threat and execution of bombings, murder and mass destruction a 24/7 worldwide reality? Security is not something that High-Speed Rail can ignore if it expects passengers to actually ride its trains. It must be part of the business plan.

Why was a security plan left out of the business plan? Possible reasons are:

1. It would be impossible to execute a security plan, given the conditions necessary to adequately protect rail travel passengers.
2. The cost would be prohibitive.
3. It would reduce ridership because of increased wait times at train stations.

Imagine the terrorists' eyes lighting up when they see a beautiful shiny blue and gold bullet train flying down the track at over 200 miles per hour. It is a dream target for them. What a spectacular way to kill hundreds of the Infidel and obtain worldwide attention for their Jjhadist goals.

The methods for attacking a train are endless. Start at the stations. Preventing a terrorist attack should include the same system as the one we have in place for our airports. The dream expressed by some members of the Authority is how wonderful it would be to just park your car and walk over and board the train, instead of enduring the hassle one has to go through in airports and other public venues that now require extensive security checks. That dream puts rail passengers in a highly vulnerable position, given all the small stations on a rail line with passengers boarding and leaving with suitcases in hand...or leaving their suitcase bomb behind.

The Authority needs to explain how they are going to protect 800-miles of open track. Imaginations can run wild with various methods terrorists can potentially use to derail or blow up a train. Any type of fencing is useless because of drones and ultra-lite aircraft. All road crossings are open. Keep in mind that people have been blowing up trains since the first ones made it out onto the tracks. It was perfected in World War II.

Since there isn't a security plan there isn't any way to make a cost analysis of it. But one thing for sure you would be adding $ billions more to an already over budget

bottomless pit. The present low cost is at $99 billion for the entire 800-mile statewide system and the Authority continues to hide the high range cost estimate.

The first terrorist created high-speed train wreck would potentially end the demand for high-speed rail travel in the United States, for the simple reason that fear would drive people to make the choice to fly or drive instead. Of course planes are vulnerable, but so far they have a great safety record. It's hard for the bad guys to attack a plane once it is in the air, whereas a train is exposed the entire trip. And, it is impossible to convince Californians to give up their favorite mode of travel-their cars.

Fear is a great motivating factor. And people who fear a terrorist attack are not going to buy tickets on the California High-Speed Rail.

The High-Speed Rail Authority must address these serious security issues.

I look forward to their response in the Final 2016 Business Plan.

Ted Hart
6847 Terreno Dr
Rancho Murieta, CA 95683

from
Jed Hart
@Board mtg
3/8/16
JH

California High-Speed Rail Authority

Comments To The 2016 High-Speed Draft Business Plan

have fatalities, and you do want to add tunnel ventilation later. The equipment interferes with the air flow in the tunnel, which means that eventually you're going to have to increase the diameter of the tunnels. That needs to be looked at.

But in closing, with all due respect to the Members of this Board, my recommendation moving forward is that next time you have vacancies is you follow the example that Mr. Rossi started with Administration and Finance -- start with engineering and consider appointing civil engineers to the Board who have got this kind of expertise. Who basically are going to stop this thing like right there before it gets anywhere in your Business Plan.

Thank you very much.

CHAIRMAN RICHARD: Thank you, Mr. Lebrun.

Ted Hart followed by Robert Allen.

MR. HART: Good morning.

CHAIRMAN RICHARD: Good morning.

MR. HART: The 2016 Draft Business Plan does not contain one word concerning the need for security to prevent a terrorist attack on the High-Speed Rail System. How could this have been overlooked with the threat and execution of bombings, murder, mass destruction a 24/7 worldwide reality?

Security is not something that High-Speed Rail

can ignore if they expect passengers to actually ride its trains. It must be part of the Business Plan. Why was a security plan left out?

Possible reasons, it would be impossible to execute a security plan given the conditions necessary to adequately protect all travel passengers. Two, the cost would be prohibitive. Three, it would reduce ridership because of increased wait times at train stations.

Imagine the terrorists' eyes lighting up when they see a beautiful shiny blue and gold bullet train flying down the rail at 200 miles an hour. It’s a dream target for them. What a spectacular way to kill hundreds of infidels and obtain worldwide attention for their jihadist goals. The methods for attacking a train are endless.

Start at the stations. Preventing a terrorist attack should include the same system as the one we have in place for our airports. Rail passengers are in a highly vulnerable position given all the small stations on the line with passengers boarding and leaving with suitcases in hand. The Authority needs to explain how they're going protect 800 miles of open track.

Imaginations can run wild with various methods that can potentially use to derail or blow up a train. Any type of fencing is useless, because of drones and ultra-

light air craft. All road crossings are open. Keep in mind that people have been blowing up trains since the first ones made it out on to the tracks. And blowing up trains was perfected in World War II.

Since there isn't a security plan there isn't any way to make a cost analysis. The first terrorist-created high-speed train wreck would potentially end the demand for high-speed rail travel in the U.S. for the simple reason that fear would drive people to make the choice to fly or drive. Of course, planes are vulnerable, but so far they have a great safety record. It's hard for the bad guys to attack a plane once it's in the air whereas the train is exposed the entire trip. Fear is a great motivating factor. And people who fear a terrorist attack are not going to buy tickets on the high-speed rail.

The High-Speed Rail Authority must address these serious security issues. And I look forward to the response in the final 2016 Plan. Thank you.

CHAIRMAN RICHARD: Thank you Mr. Hart.

Next is Robert Allen.

MR. ALLEN: I never thought that we would see a train uprooted by a tree. A tree uprooted in the rain was all it took to stop that train. They tell us now that it was just a slide. The train was slow, but no one died.

I think you're on the right track. Your 2016

2016 Business Plan RECORD DETAIL

Submission Date :	3/14/2016
Submission Method :	Website
First Name :	STEVEN
Last Name :	BARNES
Stakeholder Comments/Issues :	IT IS GREAT THAT CALIFORNIA IS ACTUALLY BUILDING THIS HIGH SPEED RAIL. I WATCH THE WEBSITE DAILY. KEEP GOING AND HAVE SUCCESS !!
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	3/14/2016
Submission Method :	Website
First Name :	Kevin
Last Name :	Bush
Stakeholder Comments/Issues :	We at the Kern County Black Chamber of Commerce would like to see an extension of CP4 to 7th Standard Road (North of Bakersfield), the proposed site for an interim Multi-modal facility and Terminal Storage and Maintenance Facility.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date : 3/17/2016

Submission Method : Letter

First Name : Bob

Last Name : Huff

Stakeholder Comments/Issues : March 17, 2016

Mr. Dan Richard, Chair
California High Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

RE: Draft 2016 Business Plan

Dear Chairman Richard,

As the Senator representing the 29th Senate District covering portions of Los Angeles, Orange and San Bernardino Counties, I reject the Draft 2016 Business Plan unveiled by the California High Speed Rail Authority. This draft will result in a continued series of broken promises to Californians who were sold a promise of “electric-powered high-speed trains running up to 220 miles an hour on modern track.”

Proposition 1 promised Californians that Phase 1 of the high speed rail project would connect Los Angeles with San Francisco at speeds up to 220 miles per hour, providing a "one-seat ride" for the trip in 2 hours and 40 minutes. Backers also promised that the system would operate without a subsidy, and would connect the state's major cities in the Bay Area, Central Valley and Southern California.

The Draft 2016 Business Plan unveiled by the California High Speed Rail Authority (HSRA) contains a dramatic change in promises previously made with Phase 1 of the project. It abandons Los Angeles and Southern California until much later and reverses track with promises to connect the Silicon Valley to the Central Valley.

Californians were promised stations and stops in San Diego, Los Angeles, San Jose, San Francisco and Sacramento. None of these stations will be built in the revised Phase 1 guidelines contained in the 2016 Draft Business Plan.

It’s been nearly eight years since California voters approved Proposition 1A. The only thing that Californians have received from the HSRA is a system of cost overruns and broken promises.

Revising Phase 1 of the project to connect the Central Valley to the Silicon Valley isn’t going to make tunneling through the Tehachapi Mountains any easier or cheaper. Instead of being upfront with the cost of this massive infrastructure undertaking, which will most certainly run into the billions of dollars, the Authority is instead opting to distract Californians with a shiny bauble. It isn’t going to work.

To make matters worse, work on the Central Valley segment is way behind schedule. Proponents of high speed rail promised us they would have the trains rolling by next year. Now this isn’t projected to take place until 2019, if at all.

Furthermore, the 2016 Draft Business Plan relies upon federal funding to extend the line to Bakersfield. Let’s be clear about this. This is funding that has not been promised by the federal government nor has it been received. Congressman Jeff Denham, a member of the House Transportation and Infrastructure Committee, recently weighed in with the prediction that “Congress is never going to allocate more money to a project that lacks the ridership numbers, speeds, private funding and voter support once promised.”

This is not the high speed rail system that voters supported in 2008. I believe it’s time to reveal the Draft 2016 Business Plan for what it truly is: wishful thinking and more broken promises. I will advise my Senate colleagues to reject this plan when it is presented to the State Legislature.

Sincerely,

BOB HUFF
29th Senate District

Notes :

Attachments : HSRLetter2016DraftBusinessPlan-Huff3-17-16.pdf (64 kb)

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SENATOR
BOB HUFF
TWENTY-NINTH SENATE DISTRICT

March 17, 2016

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California High Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

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2016 Business Plan RECORD DETAIL

Submission Date :	3/8/2016
Submission Method :	Public Hearing - Oral Comment
First Name :	Roland
Last Name :	Lebrun
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Lebrun_DRAFT_2016_BP_Transcript_030816.pdf (9 kb)

well, we're extremely proud that our sites have no to minimal environmental issues.

Lastly, Supervisor Gleason and our coalition would like to invite you to hold a meeting in Bakersfield or Kern County. And we welcome any of you individually at any time.

Thank you for your time.

CHAIRMAN RICHARD: Thank you, Ms. Skidmore. If you could pass on to the Supervisor our best wishes and tell him I actually thought his airplane was back in the shop. So that was -- thank you.

Okay, I think those are the comments from various people on the -- well no, I'm sure they're not. I'm sure we have at least one more on the heavy maintenance facility issue, so I'll hold my comment on that.

Next is Roland Lebrun, followed by Ted Hart.

MR. LEBRUN: Good morning, Chair Richard and Members. And thank you for reaching out earlier. I really appreciate that.

The first thing I'd like to say with regards to earlier remarks, it is really unfortunate when your own Chief Executive is quoted in the press as saying that the Authority is transitioning from providing a high-speed connection between L.A. and San Francisco. That's unfortunate.

But the real reason I'm here is to share some concerns with what we know of the Draft Business Plan so far. And the first one is Monterey Highway, which is in my back yard, and the second one is serious issues with the proposed tunnel designs.

The proposal right now is to pretty much build a $1.4 billion 20-mile viaduct between South San Jose and Gilroy. And it doesn't make any sense, because if you look at the Monterey Highway Alignment it's all built up, which means you've got the 125-mile-an-hour speed limit. And then you're going to hit something called Tulare Hill, which is a sharp bend around a hill that you can't possibly touch.

So the question is why are we having a 60-foot viaduct that basically goes over everything, all on the overpass over there?

The second thing I want to talk about, which I'm extremely concerned about, is the so-called value engineering for the Pacheco Pass tunnels. And the proposal is to reduce the tunnel diameters and eliminate the tunnel ventilation. And that is really remarkable, because the only way that you're going to be able save lives, if there is an incident in the tunnel, is with tunnel ventilation.

And the issue that you have is let's just suppose worst comes to worse and you do have an incident and you

have fatalities, and you do want to add tunnel ventilation later. The equipment interferes with the air flow in the tunnel, which means that eventually you're going to have to increase the diameter of the tunnels. That needs to be looked at.

But in closing, with all due respect to the Members of this Board, my recommendation moving forward is that next time you have vacancies is you follow the example that Mr. Rossi started with Administration and Finance -- start with engineering and consider appointing civil engineers to the Board who have got this kind of expertise. Who basically are going to stop this thing like right there before it gets anywhere in your Business Plan.

Thank you very much.

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MR. HART: Good morning.

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MR. HART: The 2016 Draft Business Plan does not contain one word concerning the need for security to prevent a terrorist attack on the High-Speed Rail System. How could this have been overlooked with the threat and execution of bombings, murder, mass destruction a 24/7 worldwide reality?

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Submission Date :	3/8/2016
Submission Method :	Public Hearing - Oral Comment
First Name :	Robert
Last Name :	Allen
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Allen_DRAFT_2016_BP_Transcript_030816.pdf (9 kb)

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The High-Speed Rail Authority must address these serious security issues. And I look forward to the response in the final 2016 Plan. Thank you.

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I think you're on the right track. Your 2016

Business Plan is far better than plans of previous years. However, it does miss the important role of another state agency, the California Public Utilities Commission. CPUC has safety oversight responsibility over railroad operations. Yet I find no mention of the CPUC's role in safety. Indeed it's until we get to a note at the bottom of page 93 that we even see the CPUC mentioned.

You ignore the CPUC at your peril. They are fierce, even overbearing at times, in pursuing safety issues. Let me cite an example with a publicly-owned railroad like yours. In January of 1979, a third rail power pick up paddle on the BART train broke, sending a high voltage power surge that set the train on fire. The CPUC ordered BART to -- now let me look, my notes are missing here. I have the (indiscernible) --

CHAIRMAN RICHARD: Let me help you out with this. What you are going to tell us is that a firefighter died in the ensuing fire and the PUC shut down BART for many months after that.

MR. ALLEN: Yes, for over three months the PUC ordered BART to keep that Transbay Tube closed, even though -- well I've worked for three different railroads, which are all part of the Union Pacific now -- any of those railroads after such a freak incident would have repaired the damage and continued operations. The PUC here ordered

the BART to keep the Transbay Tube closed, causing chaos in the Bay Area commutes for well over three months. Nobody would deny that the changes were needed, but the regional havoc was a stiff price to pay.

You plan blended rail operating on Caltrain tracks that now have a maximum speed of 79 miles an hour. You and Caltrain talk of raising that speed to 110 miles an hour or more and running your trains at close to the maximum speed. Bourbonnais is a good example of a train at 79 miles an hour hitting a truck loaded with steel. Two Amtrak locomotives and 11 of 13 cars derailed, with many deaths and injuries. Had the train been going faster, the toll would have been much higher. Or the truck could have been loaded with gasoline, or chlorine, a chlorine tanker, or it could have been loaded with explosives.

Trains are vulnerable to accidents, suicides, sabotage and even terrorism at grade crossings. Demand grade crossings -- demand grade separation at roads that cross your tracks where you operate. PUC will likely demand it.

One thought regarding the PUC, operate your trains only south of San Jose. Let the Caltrain either pilot the equipment or run the equipment north of San Jose as a Caltrain train. Thank you.

CHAIRMAN RICHARD: Thank you, Mr. Allen.

2016 Business Plan RECORD DETAIL

Submission Date :	3/23/2016
Submission Method :	Project Email
First Name :	Mony
Last Name :	Vaca
Stakeholder Comments/Issues :	Estimados señores: Soy estudiante de la Universidad de Barcelona y para fines académicos necesito la información completa que contiene el plan de negocios 2016. El documento que se encuentra publicado en su página web con el nombre "Borrador del Plan de Negocios 2016" (url: http://www.hsr.ca.gov/docs/about/business_plans/borrador_del_plan_de_negocios_2016.pdf), no contiene la información completa, únicamente consta hasta la introducción. Con estos antecedentes, agradeceré su ayuda para el envío o publicación del documento completo en idioma español. Quedo pendiente de sus comentarios y facilidad de información. Gracias por su gentil atención. Saludos cordialesMónica Vaca
Notes :	Translation below: Dear Sirs/Madams: I am a student at Universidad de Barcelona. For academic purposes, I need all the information about the 2016 Business Plan. The document on your webpage titled "Borrador del Plan de Negocios 2016" (url:http://www.hsr.ca.gov/docs/about/business_plans/borrador_del_plan_de_negocios_2016.pdf), does not contain all the information but just the Introduction. Therefore, I would really appreciate your help in the delivery or publication of the entire document in Spanish. I will be looking forward to your comments and the availability of such information. Thanks in advance for your attention. Sincerely Mónica Vaca

2016 Business Plan RECORD DETAIL

Submission Date :	3/23/2016
Submission Method :	Project Email
First Name :	Morris
Last Name :	Brown
Stakeholder Comments/Issues :	Attached in PDF format are comments to the 2016 Draft Business plan. Thanks, morris brown
Notes :	
Attachments :	Comments-to-2016-draft-business-plan-morris-brown.pdf (463 kb)

3/10/2016

California High Speed Rail Authority

Comments on the 2016 Draft business plan.

False promotion of using HSR as a commuter train.

Chair Richard and others have been trying to make the point, that commuters will be able to buy homes much cheaper in the Central Valley, say Fresno or Bakersfield as examples, and these buyers will be able to commute to Silicon Valley, since the speed of the HSR Train would allow for relatively short commute times of 45 minutes.

The claim is being made that this will help the jobs / housing imbalance that currently exists now in Silicon Valley and elsewhere on the Peninsula.

The reality of the situation is not being presented however. HSR is a premium transportation service; the fares needed to be charged to operate the system without a subsidy are quite high compared to fares on commuter lines, like BART or Caltrain.

Thus we see, that the projected one-way fare from San Jose to Fresno is $68.00. Each day the round trip to and from home would cost $136.00. This being the case, the cost to a commuter in fares, to have a home in Fresno / Bakersfield would be around $34,000 per year. (250 working days x $136.00 = $34000.00 per year). This does not even add in possible parking lot fees and transportation at one end.

Now just how many commuters will be able to pay this much in commuting fares and justify this expense for sake of a cheaper mortgage in the Central Valley? The numbers just don't work. There will be very very few commuters taking such an option. (It should also be noted that mortgage interest can be a tax deduction, whereas the commuter fares for the most part are after tax dollars. (Maximum possible $225 / month or $2700 / year deduction if employer has a suitable plan.

The new plan will not fill in the passenger rail gap between the North and South

One of the major selling points for the 2014 business plan, was that by building South, the gap in passenger rail service from Bakersfield to Los Angeles would be closed. By going north first, the gap remains, perhaps forever, since there is certainly no foreseeable funding to ever complete Phase I.

Private equity will never be available to build from Bakersfield on south.

Despite lack thus far of any Private Equity to invest in the project, the plan is claiming that after IOS San Jose to Bakersfield is complete, private Equity will appear. I have

heard this myth of private equity coming for 7 years now. At first it was claimed in meetings with investors, such funding was imminent. Now 7 years later such private equity funding is nowhere in sight.

The Authority is now claiming the private equity will be willing to finance the capital cost of filling the gap between Bakersfield and Los Angeles. Building this segment of the system, is by far and way the most technically challenging and costly of any segment of the system. Why would any private equity group seek to fund this section and simply risk losing the equity when the possibility of failure due to technical problems or unexpected escalation of costs to complete, would be on the horizon?

Morris Brown
Menlo Park
A founder of DERAIL, the original grass roots effort against this HSR project

2016 Business Plan RECORD DETAIL

Submission Date :	3/23/2016
Submission Method :	Project Email
First Name :	Mir S.
Last Name :	Alikhan
Stakeholder Comments/Issues :	Minor comments, please see attached. Regards Mir Mir Alikhan, P.E. 770 L Street, Suite 800 Sacramento, CA 95814 (916) 384-1091 alikhanms@pbworld.com<mailto:alikhanms@pbworld.com> wsp-pb.com/usa
Notes :	
Attachments :	2016 BP Comments.pdf (757 kb)

CALIFORNIA
High-Speed Rail Authority

Connecting and Transforming California

DRAFT 2016 BUSINESS PLAN

FEBRUARY 18, 2016

www.hsr.ca.gov

Executive Summary

Much has happened since we issued our 2014 Business Plan. There are now more than 100 miles of construction underway in the Central Valley. We have made a fundamental transition from being a planning organization to a program-delivery organization. And the Legislature and the Governor reaffirmed their commitment to the program by providing an ongoing revenue stream through the state's Cap and Trade proceeds (also referred to as Greenhouse Gas Reduction Funds). We are now positioned to deliver the program in a logical and practical way.

As we move forward, we remain focused on three fundamental objectives:

- → **First, initiate high-speed rail passenger service as soon as possible.** By doing so we both demonstrate its benefits and begin generating revenues which will then attract private sector participation and help fund extending the system beyond an initial line.
- → **Second, make strategic, concurrent investments throughout the system that will be linked together over time.** By making discrete investments that connect state, regional and local rail systems, we can provide immediate mobility, environmental, economic and community benefits. Together these prepare a solid foundation for high-speed rail. We will enter into partnering agreements with other transportation providers, aggregate federal, state and local funding sources and advance regional planning and coordination. This approach will yield the best and fastest results.
- → **Third, position ourselves to construct additional segments as funding becomes available.** This requires completing the required environmental analyses for every mile of the program and securing environmental approvals as soon as possible. These three objectives will continue to provide a framework for decision-making as we move forward.

What Is Different from our 2014 Business Plan

- → **Funding** - The funding authorized by the Governor and Legislature, by the federal government and the people of California is sufficient to deliver a high-speed rail line connecting the Silicon Valley to the Central Valley
- → **Schedule** – We now project starting passenger service on that line in 2025 instead of on a line between Merced and the San Fernando Valley in 2022
- → **Cost Estimates** - Our capital cost estimates for building the Phase 1 system between San Francisco/Merced and Los Angles/Anaheim are lower than prior estimates

THIS IS THE AUTHORITY'S DRAFT 2016 BUSINESS PLAN

This Draft 2016 Business Plan provides an update on the progress made, the changes that have occurred and the lessons we have learned over the past two years. It focuses on achieving the above objectives and specifically it:

- → Lays out an approach to sequencing the Phase 1 system that will ultimately connect the San Francisco Bay Area to the Los Angeles Basin via the Central Valley with high-speed passenger rail service
  - ▸ This sequencing approach is designed to maximize current federal and state dollars – and use them to deliver the earliest operating high-speed rail line within anticipated funding levels and to comply with Proposition 1A, which the voters approved in 2008.

- It also positions the program to begin generating revenues that will allow access to private sector investment that in turn will be used to continue building out the Phase 1 system.

→ Describes our plan to deliver high-speed rail service connecting the Silicon Valley to the Central Valley, and offer high-speed rail passenger service between these two important economic regions within the next ten ~~year~~ years

→ Provides a clear path for making concurrent investments in concert with regional partners and delivering early, tangible mobility and safety benefits in Southern California, while building a solid foundation for the critically important passenger rail corridor that links Burbank, Los Angeles and Anaheim .

→ Commits to completing environmental clearance, and selecting alignments and station locations for the remaining sections in order to position the entire system to be ready for immediate construction as funds become available

→ Provides updated capital cost estimates, showing that the projected cost of the entire system has been revised downward by $5.5 billion. This lower cost estimate comes about mainly through value engineering efforts, better operational and technical approaches to design, and the favorable bidding environment.

California's investment in high-speed rail will provide both near- and long-term transportation benefits—in addition to increasing safety, protecting the environment, creating jobs, supporting disadvantaged communities, businesses and workers, and helping California continue to prosper in an increasingly competitive global economy.

WE ARE MOVING FORWARD

Building on lessons learned. Over the past few years, we have received bids for three design-build construction contracts in the Central Valley from 13 world-class teams with significant experience delivering large, complex transportation projects including developing high-speed rail projects internationally. The proposals for the first three construction packages not only offered valuable design innovations, they contained bids that were hundreds of millions of dollars under our estimates. The international marketplace for construction has been very responsive and competitive in its bidding.

However, advancing construction on the first design-build construction package (Construction Package 1) has been challenging. Specifically, as construction got underway, acquiring the necessary right of way lagged. Further, the time associated with completing third party agreements, such as utility relocations, took longer and is now projected to cost more than originally predicted. We acted quickly to analyze and address these challenges. Based on this experience, we reorganized and enhanced our land acquisition processes, increased our estimates for the cost of third party agreements, and instituted aggressive management and mitigation strategies. Despite these challenges, we have been able to maintain project momentum as we advance through the Central Valley.

This Draft 2016 Business Plan focuses on three positive developments that impact how we are advancing the delivery of the program:

→ **Progress on Environmental Clearance –** Over the last two years, significant progress has been made in advancing environmental clearance of the Phase 1 system. In June 2014, we achieved a Record of Decision on the Fresno to Bakersfield section. Completing the rest of the environmental clearance for the entire Phase 1 system is a high priority yielding maximum flexibility to take advantage of opportunities to develop any segment of the system as circumstances allow.

→ **New funding –** As previously noted, with the passage of Senate Bill 862, the Legislature and Governor approved an annual appropriation of 25% of the annual Cap and Trade proceeds on a continuous basis to fund high-speed rail.

sential to completing structural design, demolished mostly-dilapidated existing structures and relocated utilities along the right of way in preparation for the construction of dedicated high-speed rail trackways and bridges.

→ By June 2015 the first vertical structure started to take shape at the Fresno River Viaduct in Madera. Seven small businesses and more than 100 workers have been involved in the construction of the viaduct.

→ In January 2016, we began the process of demolishing and rebuilding the Tuolumne Street Bridge in downtown Fresno to allow for clearance over the high-speed rail line and for two-way traffic to support the revitalization of downtown Fresno's city core.

→ In February 2016, drilling and concrete operations began at the Fresno trench, the almost 1.5 mile long and 40-foot deep trench that will carry high-speed rail trains under State Route 180 in Fresno.

→ In partnership with Caltrans, work has begun to realign portions of State Route 99 north of Fresno to accommodate high-speed rail and at the same time improve traffic operations, reducing congestion and improving safety in this busy corridor.

→ We continue to work closely with homeowners, property owners and businesses being relocated as part of the development of the high-speed rail system. This process can be a challenge for those affected by the relocation. However some property owners have chosen to use the relocation as an opportunity to expand and grow their businesses or move to better locations.

→ As of January 29 2016 we have acquired 642 parcels of the 1458 parcels needed. With this, we have reached critical mass and have advanced construction in Construction Packages 1 and Construction Package 2-3.

→ We have been able to advance property acquisition and deliver right of way through better understanding of individual property owner concerns, improved communications and processes and increased staff and resources.

→ We have partnered with Caltrans to use its Quick Map traffic system to inform public safety officials and the public about any construction activities that may impact them.

→ With work underway, a comprehensive set of project management, finance, and risk reports were developed and are updated monthly, reviewed by our Finance and Audit Committee, and made available to the public on our website.

→ We have selected an alignment and station locations between Fresno and Bakersfield, certified the environmental document and received approval to begin construction.

→ As of November 2015, 214 construction craft laborers have been dispatched to work on Construction Package 1.

→ 174 people have graduated from a Pre-Apprenticeship Training Program established by the Fresno Workforce Investment Board.

→ As of November 2015, 266 Small Businesses are working on the program statewide

CENTRAL VALLEY LESSONS LEARNED AND MANAGEMENT STEPS IMPLEMENTED

As with many projects of this magnitude, the initial implementation stages often reveal unknowns that require adjustments and mitigation strategies. Some of these factors have worked in favor of the project and some have exposed challenges. Our experience with construction bids and project delivery to date has taught us the following:

→ Since 2013, we have received competitive design-build bids for the first three construction contracts in the Central Valley, demonstrating strong competition within the industry to be part of building the first high-speed rail system in the country.

→ On average, Construction Package 1 and Construction Package 2-3 bids came in approximately 30% below engineer's estimates. As announced in January 2016, bids for the Construction Package 4 contract continued this trend and came in about 25% below engineer's estimate.

→ We have not carried this 30% reduction directly into the current cost estimates. That is because during a bid process other factors, such as competitive pressure, current market conditions, risk position and specific bidding strategies adopted by bidding consortia play a more significant role in lowering the average bid price.

→ Although the first construction packages came in under engineers' estimates, they also faced a number of problems in execution and delivery.

→ Execution delays associated with Construction Package 1 may impact the expected cost and schedule for completing that package. However, we are making adjustments and managing the project to stay within budget contingencies:

- The right of way acquisition process was slow to start due to litigation-related delays and required some streamlining and heightened management. The program requires the acquisition of an unprecedented number of parcels of land. A more efficient process was implemented over time that has allowed us to significantly increase the rate of parcels acquired per month. We are on schedule with respect to the Construction Package 2-3 and Construction Package 4 contracts.

EXHIBIT 1.3 COMPARISON OF ENGINEER'S ESTIMATE AND BID PRICES*

SECTION	ENGINEER'S ESTIMATE	BID AVERAGE	BEST VALUE BID	PERCENT DIFFERENCE (BEST VALUE VS. ESTIMATE)
Construction Package 1	$1.2 - $1.8 billion	$1.25 billion	$985 million	-18/45%
Construction Package 2-3	$1.5 – $2 billion	$1.68 billion	$1.23 billion	-18/38%
Construction Package 4	$400 – $500 million	$442 million	$348 million	-13/30%

*Does not include contingencies or provisional sums.

unclear

- Negotiations for third party agreements (railroads, utilities and others) were more difficult than anticipated. Mitigation strategies were implemented successfully so that key agreements with the railroads and the utility companies (power, water and communications) were finally signed leaving free access for the contractors to start construction.

Section 2: *Guiding Principles and Core Values*

There are a number of guiding principles and commitments that we have established and that we will adhere to as we advance the California high-speed rail system.

GUIDING PRINCIPLES

We will continue to advance the statewide program on multiple fronts over the coming years within a flexible framework and guided by the following principles:

- → **Fulfill all commitments made to the citizens of California when they approved Proposition 1A to provide a true high-speed rail system**
- → **Evaluate new opportunities—and adapt to changing circumstances—so that a cost-effective, high-quality system can be delivered as quickly and efficiently as possible**
- → Reduce costs and construction time by using a blended implementation strategy in urban areas where appropriate and consistent with mandated performance goals to:
  - Enhance access and mobility
  - Minimize impacts
  - Reduce costs
  - Improve safety
  - Expedite implementation
- → Match projects with available funding and deliver them through appropriate business models:
  - Seek the earliest and best value private-sector participation with appropriate risk management and cost containment
  - Select an initial line for development (as described below), establish a funding plan for it and commit all resources necessary to build it and begin offering high-speed passenger service as quickly as possible
- → Advance other strategic early investments in collaboration with our partners in order to:
  - **Improve the speed, safety and efficiency of existing passenger rail services and prepare the way for high-speed rail**
  - Grow the market for passenger rail travel throughout California
  - **Deliver early economic, environmental, mobility, safety and community benefits**
  - Promote regional rail and bus connectivity projects
  - **Leverage funding by collaborating with local partners to advance high priority mutually beneficial projects**

Sustainable Infrastructure - Comparing early operations, 2025-2033

By 2028, diversions of air and auto travel to train travel on the Silicon Valley to Central Valley line cumulatively results in 700,000 metric tons carbon dioxide equivalent (MTCO2e) net reduction while the extended line to San Francisco and Bakersfield results in 1 million MTCO2e net reductions. In other words, capturing more riders, sooner, results in greater net emissions savings in the near term. Cumulatively by 2030, comparatively, the extended line saves 2.5 MTco2e which is 500,000 MTCO2e more than the Silicon Valley to Central Valley line in the same time-frame. By 2033 each option achieves the same annual savings rate, reflecting full system ridership.

"High-speed rail will take cars off the road, boosting California's economic productivity as more people take a fast, efficient train. By 2040, the system will reduce vehicles miles in the state by almost 10 million miles every day, a game-changer."

- Mayor of the City of Palmdale
Jim Ledford

Sustainable Infrastructure

We will be a leader in delivering sustainable infrastructure in the state of California through our commitments to:

- → Operate our system on 100% renewable energy for which we will contract for 400 to 600 megawatts of renewable power
- → Develop net zero energy buildings and water conservation strategies
- → Achieve net zero greenhouse gas emissions in construction and recycle 100 percent of the steel scrap and concrete refuse generated in project construction.
- → Utilize the most environmentally-friendly construction equipment available to reduce emissions
- → **Implement mitigation strategies to create long-term benefits including:**
  - Working with partner agencies to modernize systems that use renewable energy
  - Enhancing sustainable practices utilized by planning, engineering and construction teams
  - Reducing vehicle miles travelled – and subsequently reducing statewide emission levels
  - Building a sustainable travel alternative to support California's growing population

Workforce Development

We will create training and employment opportunities for Californians, including disadvantaged workers by:

- → Building the system and directly employing thousands of Californians while indirectly providing job opportunities throughout the surrounding communities and in the larger economy.
- → Generating more than 3,500 permanent jobs around the state as high-speed rail opens and expands service from the Bay Area to the Los Angeles Basin. These workers will be responsible for operating and maintaining the high-speed rail system.
- → **Assisting job seekers in finding jobs by promoting and advancing training opportunities for all individuals, including those often left behind by economic opportunities**
- → Implementing our Disadvantaged Worker Program, which ensures that 30 percent of project work hours are performed by National Targeted Workers and 10 percent of all hours are performed by Disadvantaged Workers

Small Business Participation

Maintain our commitment to small businesses making major contributions to building the statewide project by:

- → Meeting our aggressive 30 percent goal for small business participation
- → Meeting specific goals for Disadvantaged Business Enterprises (DBEs) and Disabled Veteran Business Enterprises (DVBEs) of 10 percent and 3 percent, respectively
- → Conducting extensive outreach, including workshops and events to encourage businesses to get certified, meet prime contractors, and learn about upcoming opportunities
- → Collaborating with the Business Advisory Council, which works with us to refine our approach to meeting our small business goals

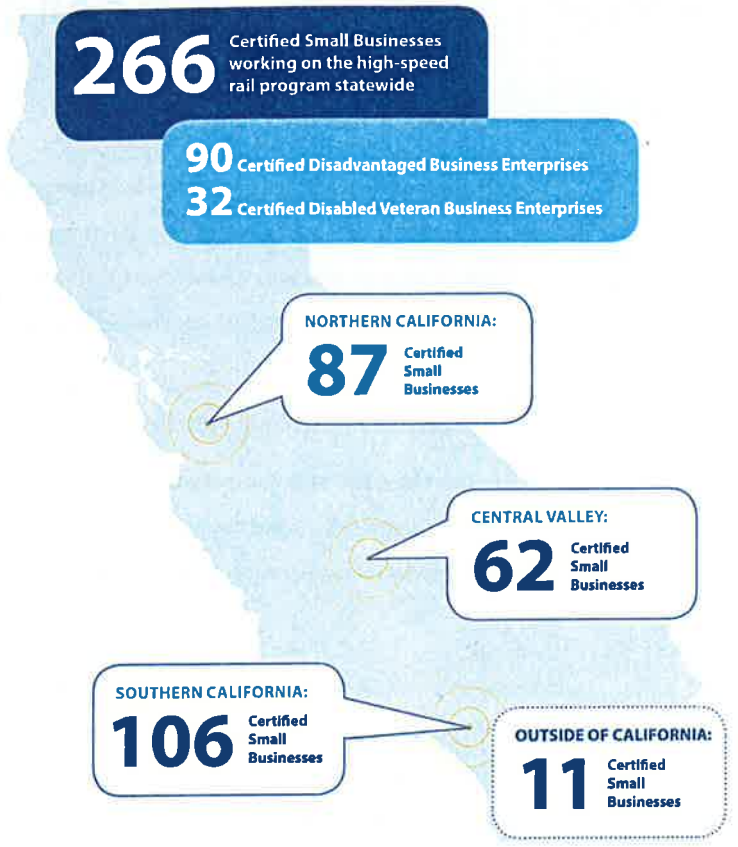
Sustainable Land Use

Support sustainable land use and economic development around high-speed rail stations by:

- → Connecting the state's mega-regions to spur economic development, create a cleaner environment and preserve agricultural and protected lands.
- → Minimizing impacts to the natural and built environments, developing policies that encourage efficient land development around stations, and helping California manage pressing issues with climate change, highway and airport congestion and energy use.

Our commitment to these values is reflected in the work we do every day and the progress we have made to date in delivering the system.

EXHIBIT 1.2 SMALL BUSINESS PARTICIPATION
As of November 2015



"This forward-looking initiative will employ thousands of construction workers and eventually create generations of well-paying rail operations, maintenance, and manufacturing jobs here in the U.S."

- Ed Wytkind
President of the Transportation Trades Department AFL-CIO

Section 5: *Capital Cost Estimates*

This section presents the program's updated capital cost estimates factoring in the lessons learned from the bids we've received and the progress we have made in design and construction to date. These updated estimates reflect and incorporate design refinements, contractors' viewpoints and other reviews, more advanced and detailed engineering and design work and other changes. The new estimates show an eight percent cost reduction for the equivalent scope shown in the 2014 Business Plan (from $67.6 billion to $62.1 billion in YOE$). The updated cost estimates also include a scope change, specifically a higher level of investment in the Los Angeles to Anaheim segment (this scope change adds $2.1 billion). This higher level of investment is designed to enhance capacity, speed and reliability in this already high demand passenger rail corridor. Even when accounting for this additional investment, our cost estimate has been reduced from $67.6 billion to $64.2 billion (YOE$).

- → Since 2013, we have received competitive design-build bids for the three construction contracts in the Central Valley, demonstrating the high level of interest within the industry to be part of building the first high-speed rail system in the country.
- → The best value bids for Construction Package 1, Construction Package 2-3 and Construction Package 4 have come in between 13 and 45 percent below engineer's estimates.
- → Several reasons can explain the differences between estimates and final contractor bids, including:

EXHIBIT 5.1 COMPARISON OF ENGINEER'S ESTIMATE AND BID PRICES*

SECTION	ENGINEER'S ESTIMATE	BID AVERAGE	BEST VALUE BID	PERCENT DIFFERENCE (BEST VALUE VS. ESTIMATE)
Construction Package 1	$1.2 - $1.8 billion	$1.25 billion	$985 million	-18/45%
Construction Package 2-3	$1.5 – $2 billion	$1.68 billion	$1.23 billion	-18/38%
Construction Package 4	$400 – $500 million	$442 million	$348 million	-13/30%

*Does not include contingencies or provisional sums.

Confusing

Using Monte Carlo

Monte Carlo simulations are an analytic technique used by many decision-makers, both public and private. The goal of a Monte Carlo simulation is to quantify the chances that risks that might impact future costs, revenues or other aspects of a program will occur and, if they did occur, what their impact would be. This allows decision-makers to make informed choices and/or develop strategies and plans to prevent, manage, or mitigate potential future risks.

Monte Carlo analysis involves running thousands of simulations where each of the risks may occur with a given probability; the simulation develops an overall probability distribution of potential cost or schedule outcomes. This distribution can be used to describe how likely it is that any given outcome might happen and what the chances are for the results to be above or below a given threshold. This allows decision-makers to thoroughly understand the level of confidence associated with a specific forecast.

These methods are used for a variety of purposes. For example, the banking and finance sector uses Monte Carlo simulations to help make investment decisions in an uncertain environment where risks have been identified and estimated. The decision reflects how much risk the financial institution is willing to take and how costly the risk would be based on the probability that this risk could actually occur.

that offers a one-seat ride to Anaheim; ridership and revenue forecasts in the 2014 Business Plan assumed a Phase 1 southern terminal in Los Angeles.

- Forecasts reflect an enhanced travel demand model that incorporates the latest available input data, new variables that better reflect travel behavior and adjustments to the transit access network and station locations.
- The above changes and model enhancements results in Phase 1 ridership increases of approximately 25% depending on the forecast year.
- The ridership risk analysis considers new risk variables and was conducted separately for each model analysis year and system implementation assumption (Silicon Valley to Central Valley line and Phase 1).
- At the same time, many elements of the ridership forecasts remain consistent with the 2014 Business Plan:
  - High and low ridership forecasts were developed through a rigorous risk analysis that provided a forecast range and associated probabilities for each Business Plan scenario through Monte Carlo simulations. The risk analysis model includes a range of assumptions relating to various risk factors having the greatest combination of uncertainty and impact on the results.
  - The ridership forecasts employ the same ramp-up methodology as the 2014 Business Plan, which assumes 40% ramp-up in year one, 55% ramp-up in year two, 70% ramp-up in year 3, 85% ramp-up in year 4 and 100% ramp-up in year 5. Separate ramp-up calculations are applied to each phase based on its assumed opening date.

For more information on the ridership and revenue forecasts, please refer to the Draft 2016 Business Plan Technical Supporting Document: Ridership and Revenue Forcasting.

2016 Business Plan RECORD DETAIL

Submission Date :	3/23/2016
Submission Method :	Project Email
First Name :	Robert
Last Name :	Allen
Stakeholder Comments/Issues :	Your Draft 2016 Business Plan is a vast improvement over those in the past Choice of the IOS from San Jose to near Bakersfield was especially wise. It gives you time to reconsider running between Bakersfield and Burbank generally along I-5, with Palmdale on the leg of a wye toward Las Vegas, making the main stem much shorter and direct. Tejon Pass would be much better than the dog-leg. Sorely missing, though, are "Safe" and "Reliable", the first two words in the title of 2008 Prop. 1A. Neither word is even mentioned in Page 3 (Preface) Page 4 (History) Page 5 (Table of Contents) Pages 6-7 (Statutory Requirements) use them only once, in the Prop 1A title. The five-page Executive Summary mentions "safety" only four times, (without emphasis) and "Reliabililty" once. .The four-page Introduction mentions "Safety" only twice and "Reliability" not at all.(It does say "predictable" once.) I did not find "California Public Utilities Commission" or "CPUC" even mentioned until the bottom of Page 93, and that was not in their role safety oversight. CPUC has exercised that oversight aggressively with BART, a publicly-owned rail property like yours, and governed by an elected Board of Directors. One example: In January, 1979, after a power pick-up paddle broke on a BART car, resulting in a power surge that caused a train fire in the trans-Bay tube, CPUC made BART halt trans-Bay service for well over three months. From my experience with three Class 1 railroads (C&NW, D&RGW, and SP) all now part of UP, such a shut-down of so critical a service would seem unwarranted. Another example: after two experienced track workers failed to follow normal safety rules and were killed by a train, CPUC required BART to do away with "Simple Approval", which is like what railroad people have used for generations. We would get line-ups and be responsible for our own safety, and it worked well. The CPUC edict has added needless cost to BART operations. At BART's inception, CPUC exercised stiflingly rigid controls on BART operations over things like braking profiles, train separations, merging, etc. (Even so, we had the Fremont Flyer.) Expect them to be very demanding. Your "blended rail" operations on Caltrain tracks could (and should) gain similar CPUC attention. Caltrain, with 79 mph track now, has several dozen grade crossings. They propose to raise that speed to 110 mph or higher. At Bourbonnais, Illinois, Amtrak on 79 mph track hit a heavy truck at a grade crossing, derailing two locomotives and 11 of 13 cars, with many casualties. All it takes is one truck loaded with steel, gasoline, or chlorine to cause devastation. Trains are vulnerable to accidents, suicides, and sabotage. Don't think that CPUC would subordinate safety so you can have a one-seat ride. Ending your Bay Area reach to San Jose for now is a wise move. You might let Caltrain operate your rolling stock on the Peninsula, and let them handle any problems with CPUC. A score of factors - only one of which is train speed - enter into CPUC analysis of crossing safety. Their Rail Crossings and Engineering Branch

(RCEB) has many decades of experience dealing with grade crossings. High Speed Rail needs secure, fenced and grade separated track just as freeways need to control access and cross traffic.

Notes :

2016 Business Plan RECORD DETAIL

Submission Date :	3/9/2016
Submission Method :	Project Email
First Name :	Robert
Last Name :	Allen
Stakeholder Comments/Issues :	At Tuesday's CHSRA Board meeting in Sacramento I used your incident in my plea for them to consider safety and the CPUC in the Business Plan 2016. Train speeds are critical, as Amtrak learned at Bourbonnais, IL. I started my remarks: I never thought that we would see A train get derailed by a tree. A tree uprooted in the rain Was all it took to wreck that train. They tell us now 'twas just a slide; The train was slow, and no one died. I hope that it made them think about what could happen with high speed trains at Caltrain grade crossings. Robert S. Allen 925-449-1387<tel:925-449-1387> BART Director, District 5, 1974-1988 Retired, SP (now UP) Western Division, Engineering/Operations
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	3/24/2016
Submission Method :	Project Email
First Name :	Thomas
Last Name :	Dorsey
Stakeholder Comments/Issues :	On paper it looks like a straiter route bypassing Sylmar and San Fernando. Does that suggests 1-2 minute time savings? Be sure to trumpet shorter travel time and lower cost to build to the media. Thomas Dorsey http://www.soulofamerica.com/blog/california_high_speed_rail/ <http://www.soulofamerica.com/blog/california_high_speed_rail/>

Notes :

2016 Business Plan RECORD DETAIL

Submission Date :	3/25/2016
Submission Method :	Website
First Name :	Robert
Last Name :	Strickland
Stakeholder Comments/Issues :	Why is your agency insisting on perpetrating fraud and wasting billions in California Taxpayer money on this project that will never work. Why are you ok with theft of public funds and public trust? You'really agency is a gross example of government waste and abuse. You should be ashamed of yourselves!
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	3/21/2016
Submission Method :	Letter
First Name :	Michael
Last Name :	Brady
Stakeholder Comments/Issues :	
Notes :	Flash drive included with letter. Contents available upon request.
Attachments :	Brady_Biz_Plan_Letter_March 21.pdf (457 kb)

Michael J. Brady
1001 Marshall Street, Fifth Floor
Redwood City, CA 94063
650-780-1724
March 21, 2016

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

Subject – Comment Regarding Draft 2016 Business Plan

Topic – Plaintiff's Records and Documents from the Tos – CHSRA Lawsuit

The primary purpose of this Comment is to submit to the California High Speed Rail Authority (CHSRA) a complete set of the documents and records that were submitted by the Plaintiffs, John Tos, Aaron Fukuda, and County of Kings, and that were accepted by the Attorney General (AG), to be part of the Administrative Record (AR) of the case John Tos et al v.CHSRA et al. (Sacramento County Superior Court case No.34-2011-00113919) lawsuit.

These documents contain a wealth of information regarding a number of issues that the Authority needs to consider and needs to address as part of the development of the Final 2016 Business Plan. These issues relate to the use of Proposition 1A bond funds for system construction and the requirements contained in that ballot measure, notably: 1) the minimum time that will be required to travel from San Francisco to San Jose and to Los Angeles, 2) the minimum achievable headway requirement for the system, 3) the prohibition on an operating subsidy, 4) the overall financial viability of the chosen alignment, and 5) the availability of funds to fully construct the IOS as well as the complete Phase 1.

These documents are stored on the "Thumb Drive" that is included with this cover letter. There are 323 documents, each as an independent PDF file. Each PDF file has been assigned, by the AG, a Leading Bates Number, and a "Document Title/Topic" description, part of which is a portion of the name of the PDF file.

Also included on the Thumb Drive is a copy of the PDF file which is the Index published in September 2015, by the AG which includes all of the documents and records provided to the AG by the Plaintiffs and by the CHSRA. Referring to the Index, if a given row, which represents a specific document or record, has a "P" followed by 3 digits in the "Old Doc. Number" column, then this document or record was provided by the Plaintiffs,

and it is included on the Thumb Drive. Also included is a one page Supplemental Index that added two documents to the AR in the October 2015 time period.

If a given row in the Index does not have a "P" followed by 3 digits, the document or record was part of the Authority's files and records. We have not included these items as we presume you have copies of these items readily available to you. If you do not, and you would like us to provide them to you, please let us know by April 4th 2016, and we will have them delivered to you by April 18th 2016. By reference to these documents and records, which were provided by the Authority, we are incorporating them to be part of this Comment as they address the same issues mentioned above, and need to be considered in your preparation of the Final 2016 Business Plan.

On the last page of the Index, page 67 of 67, the AG included a Section "U. HIGH-SPEED RAIL AUTHORITY EIRS". These documents were included in response to several specific requests which have been included as P223 through P227. We have not included these documents, even though they relate to requests made by us, as they represent an additional approximately 740 documents, all of which were prepared by the Authority and presumably are readily available to the Authority in its files. We will consider these to be your documents and that they are also incorporated into this Comment, by this reference. Again, if you do need additional copies of any of these documents, please let me know by April 4th, 2016 and we will send them to you.

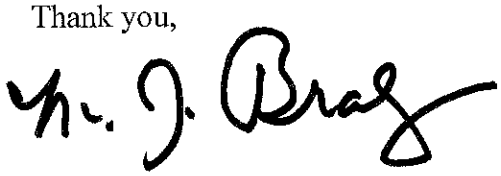
In addition to the documents included in Section U of the enclosed index, we are also asking that the Authority include in the record for the 2016 Business Plan one additional set of documents: the Final Project-level EIR/EIS for the Merced to Fresno segment of the proposed high-speed rail system. As with the other referenced EIR/EIS documents, this EIR/EIS was prepared by the Authority and is presumably readily available to it. If you need additional copies of any of these documents, please respond by April 4th, 2016 and we will send them to you.

As a minor administrative matter, on page 10 of the Index the AG shows, for the Leading Bates number AG004099, the AR number 125. It should also show our reference of P197, as the AG included AR125 in response to our request P197. We have included the PDF file for this document on the attached Thumb Drive.

Also on page 16 of the Index the AG shows, for the Leading Bates numbers AG005697 and AG005698, the AR numbers 179 and 180. A major portion of this video and transcript was struck by the AG from the copy we submitted, as P126 and P127, and these modified versions were submitted to the Court. We will be addressing this matter

separately, but please note that AG005697 and AG005698 are not all of the material we requested be incorporated in the Administrative Record as P126 and P127.

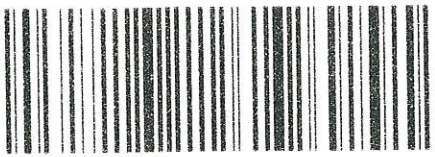
Thank you,



Michael J. Brady

PEEL LABEL AT DOTTED LINE FOR ENHANCED SECURITY. PEEL RIGHT ON THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL™



7010 0290 0001 6490 7624

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

RETURN RECEIPT
REQUESTED

2016 Business Plan RECORD DETAIL

Submission Date :	3/28/2016
Submission Method :	Website
First Name :	Daniel
Last Name :	Stahl
Stakeholder Comments/Issues :	Connecting California's major population centers as soon as possible should continue to be the overall goal. However; I am concerned that targeting operation in 2025 will find competition from Electric Automated Highway vehicles. Please consider the impact that automated highway travel on future ridership as I find the thought of having a car drive me at high-speed on a freeway between major cities preferable due to flexibility.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	3/28/2016
Submission Method :	Website
First Name :	Joseph
Last Name :	Shelfo
Stakeholder Comments/Issues :	The high speed rail project should be laid to rest. It was stupid from the beginning, and seems to be getting worse.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	3/29/2016
Submission Method :	Project Email
First Name :	Carl
Last Name :	Iannalfo
Stakeholder Comments/Issues :	The focus on a high speed rail project in earthquake prone California is misplaced and, in my opinion ignores the fact that Water is the main issue in Southern California. We do not see the benefit for the Rail Project versus supplying the need to keep California as an agricultural and growing area. It's ironic that the Governors father first proposed solving the water needs of Southern California in 1958 and nothing has been done since then. Squandering Taxpayer Dollars on this project (HSR)is not good government in action. Carl Iannalfo
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	3/29/2016
Submission Method :	Letter
First Name :	William
Last Name :	Grindley
Stakeholder Comments/Issues :	
Notes :	Submitted book entitled, "The Economics and Politics of High-Speed Rail," by Daniel Albalate and Germa Bel.
Attachments :	Grindley_BP_032916.pdf (24 kb) Cover of book submitted.pdf (369 kb)

Attn: California High-Speed Rail Authority 2016 MAR 29 AM 9 07
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

March 28, 2016

Subject – Receipt of one copy of a hand-delivered book

The purpose of this letter is to submit by hand to the California High Speed Rail Authority (CHSRA) a gifted copy of the book – The Economics and Politics of High-Speed Rail, Lessons From Experiences Abroad by the authors Daniel Albalate and Germa Bel.

This book contains a wealth of information regarding a number of issues that the CHSRA needs to consider and address as part of the development of its Final 2016 Business Plan. I hope these authors' findings are considered carefully, as they differ in many cases from those of the CHSRA.

As I am transmitting this book by hand to the CHSRA's headquarters, (770 L Street, Suite 1160, Sacramento, CA) I ask the person receiving the book to acknowledge, along with me, that The Economics and Politics of High-Speed Rail, Lessons From Experiences Abroad, has been received by him/her.

Thank You

William Grindley

151 Laurel Street
Atherton, CA 94027

29/3/2016.

Printed Name of Recipient
California High-Speed Rail Authority
770 L St. Suite 1160
Sacramento, CA

THE ECONOMICS AND POLITICS OF HIGH-SPEED RAIL

LESSONS FROM EXPERIENCES ABROAD

DANIEL ALBALATE
GERMÀ BEL

2016 Business Plan RECORD DETAIL

Submission Date :	3/30/2016
Submission Method :	Project Email
First Name :	Cindy
Last Name :	Bloom
Stakeholder Comments/Issues :	>

>
> Dear California High Speed Rail Authority:
>
> Please see the attached reports (one of which is revised); consider them my comments.

> 1. Analysis of 2016 Draft Business Plan Capital Cost Basis of Estimate
> 2. 2016 Draft Business Plan Ridership/Revenue and Projected Cashflow REVISED
>
> In summary, the capital cost projection is incomplete as it leaves out many presumably expensive components and compares the 2016 figure to the 2014 figure, when instead, it should be comparing the 2016 figure to, at minimum, the 2008 figure which was the basis for voters' marginal approval of Prop 1A. Additionally, the revenue projections are just pure bunk.
>
> One issue which I have never seen addressed is: If private investor(s) do provide equity to the project, in what proportion or priority do they recoup their investment? Do they keep 100% of operating revenue or it is based on the amount of their equity stake? Do the taxpayers recoup any sunk costs?
>
> Your agency frequently boasts of its transparency and this 2016 draft business plan is just that: Transparent. It is easy to recognize when a fiscal target is set and then input variables are manipulated. Your 2016 draft business plan is a textbook case of fudging numbers. Congratulations!
>
> Thank you.
>
> Cindy Bloom, M.B.A.
> 818-445-5602
> 9800 La Canada Way
> Shadow Hills, CA 91040
>

Notes :	
Attachments :	2016 Draft Business Plan Ridership & Cashflow.Rev.Final.pdf (1 mb) Analysis of 2016 Draft Bus Plan Capital Cost.Final.pdf (1 mb)

ANALYSIS OF CALIFORNIA HIGH SPEED RAIL AUTHORITY'S

RIDERSHIP/REVENUE AND PROJECTED CASH FLOW

Draft 2016 Business Plan
and
Technical Supporting Document

March 9, 2016 Revised March 28, 2016
By Cindy Bloom

TABLE OF CONTENTS

ABSTRACT

On February 18, 2016, the California High Speed Rail Authority (CHSRA) released its draft 2016 Business Plan (2016 Draft BP), which is comprised of several documents, including *Ridership and Revenue Forecasting* and *High, Medium and Low Cash Flows*. These documents are vital in convincing private investors to provide equity capital for the venture as soon as possible so that the California State Legislature can approve the sale of the $9 billion in bonds to help fund the $64.2 billion project. CHSRA is in a catch-22: They need the Prop 1A bond money to build the system to attract private investors but in order to be in compliance with Prop 1A, they need private investors to issue the bonds to build the system. The ridership revenue projections and cash flow models must provide enough of a return on investment to assuage potential private investors' fears and persuade them to invest. This analysis suggests the CHSRA has exercised liberties in inflating the 2016 Draft BP revenue numbers in order to achieve this goal.

EXECUTIVE SUMMARY

CHSRA has essentially turned their statewide high-speed train into a high-cost commuter train for the revised IOS although few people could afford it (a commuter from Fresno to San Jose would spend $27,000 annually on train fare).

When dissected, the 2016 Draft BP's first year of operation breaks down to 11,233 (high), 7,794 (medium), and 6,027 (low) passengers riding *daily* within the IOS which runs from one metropolitan area (San Jose) to the Central Valley, California's agricultural area.

Average ridership increases from the 2014 BP to the 2016 Draft BP range from 22% to 29%--double-digit increases--with no legitimate explanation. CHSRA merely states, "Forecasts reflect an enhanced travel demand model."

The ridership farce flows through to its cash flow projections. There is no explanation why the 2016 Draft BP net cash flow increased 66% to 132% over the 2014 BP. It is even loftier based on a 5% discounted cash flow, ranging from 83% to 150%. While the 2014 BP includes the capital cost as part of it cash flow, it is suspiciously absent from the 2016 Draft BP's cash flow projection.

If CHSRA actually meets their incredibly aggressive ridership targets, they will be forced to purchase and operate more train sets at a cost of $49 million each beyond the budgeted 70 at full build-out.

It is clear that in CHSRA's desperation, they inflated their ridership/revenue figures in order to present a picture of fiscal viability to (1) prospective investors and (2) taxpayers.

INTRODUCTION

The *Ridership and Revenue Forecasting* is a very statistical, and difficult to follow document. It was prepared by Cambridge Systematics, Inc., a transportation modeling and analytics firm for Parsons Brinckerhoff. Rather than using straight-forward and verifiable traditional financial forecasting models, it instead relied exclusively on multiple input variables through multiple regression analyses; the last step was running the data through a simulation program 50,000 times. These tools, while helpful, only add to the convoluted ridership and resultant revenue figures that became the basis for the cash flow document. While probabilities can be useful, it is similar to forecasting the weather. If there is a 30% chance of rain, the end result ultimately is that it either rained or it didn't. The same can be said for the revenue and ridership projections. Even if there is a 95% chance that the project will achieve break-even or surplus in any given year: either it will – or it won't.

Operating revenue is the backbone of every company. Every company at minimum is measured by its revenue, profit and cash flow. It uses these key ratios to compare its own earnings year over year, and to other companies within the same industry. If any of these items are deficient or trending downwards, a company cannot sustain its operations and will eventually be faced with the daunting and difficult decision of how to proceed. The most immediate strategy is to reduce expenses but if this solution is insufficient, a company may seek a buyer, merge with another company, declare bankruptcy, or in the worst case, go out of business.

CHSRA is not a privately held company, but instead is a governmental agency that is managing the construction of the largest infrastructure project in the history of the United States and is not held to the rigorous universally accepted accounting standards imposed in private industry. There are other governmental public works projects, such as freeways, road and bridges, that are also not subject to profit and loss or cash flow measurements as they provide the infrastructure for others to utilize. There are, however, other projects' whose operations are sustained by user fees, for example water reclamation plants, power plants, etc. These projects intend to be self-sustaining and have the ability to raise rates in order to cover their costs. Most public works projects during the construction phase are funded in large part by debt (bonds) and are subject to reporting requirements in order to maintain their bond rating and other compliance issues. For CHSRA to successfully complete the high-speed train project, it must present positive cash flow, otherwise: (1) it cannot attract private investment dollars to assist the funding of construction; (2) without these private investment dollars, it also cannot unlock the balance of the $9 billion in Prop 1A bonds in order to fund construction; and (3) it will be unable to sell the concession once the infrastructure is built. It is also required to provide matching funds for several federally funded grants and could potentially lose several billion dollars if it fails to meet its deadlines. If any of these criteria are not met, the project is doomed.

PURPOSE

The purpose of this report is to scrutinize the 2016 Draft BP's ridership revenue and resultant cash flow projections while also attempting to answer the following questions:

1. Are the ridership (number of passengers) projections attainable and/or reasonable?
2. Are the ridership revenue projections attainable and/or reasonable?
3. Is the projected cash flow attainable and/or reasonable?

SCOPE AND METHODOLOGY

The 2016 Draft BP is comprised of several documents:

- Connecting and Transforming California (100 pages, main document)
- Capital Cost Basis of Estimate Report (49 pages)
- High, Medium, Low Cash Flows (12 pages)
- 50-Year Lifecycle Capital Cost Model Documentation (74 pages)
- Service Planning Methodology (18 pages)
- Ridership and Revenue Forecasting (62 pages)

This analysis examines the revenue portion of the *Connecting and Transforming California*, *Ridership and Revenue Forecasting*; and *High, Medium, Low Cash Flows*. This report will not address the Initial Operation Section Extended because it is contingent upon CHSRA securing additional federal funding to complete.

DRAFT 2016 BUSINESS PLAN CORRIDOR SUMMARY

Section	Length in Miles	From/To	Operational	Cumulative Cost (billions) 2015$ / YOE[1]
IOS[2]	250	San Jose and North of Bakersfield (aka Valley to Valley/ Silicon Valley to Central Valley)	2025	$18.7 / $20.7
Initial Operation Section Extended	321	San Francisco to Bakersfield (aka Valley to Valley Extension/ Silicon Valley to Central	2025	Unk / $22.7

[1] Year of Expenditure, adjusted for future inflation

[2] Formerly was Merced to San Fernando Valley

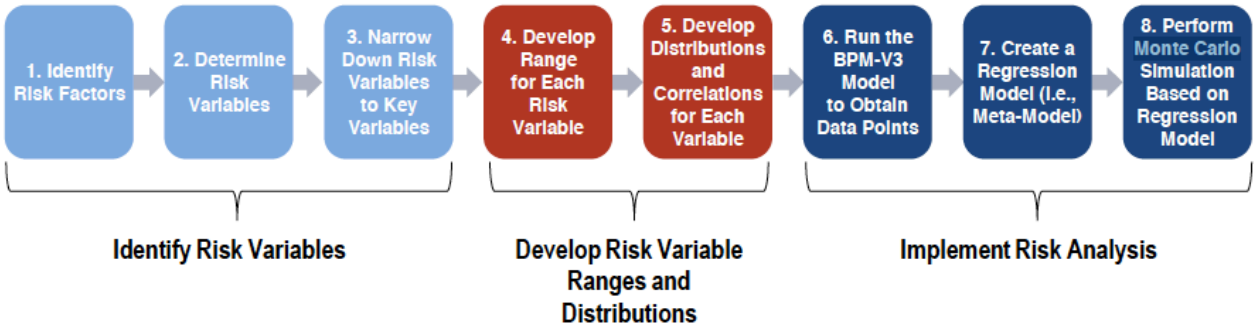
		Valley Extension)		
Phase 1	***520***	***San Francisco/Merced to Anaheim***	***2029***	***$55.3 / $64.2***
Phase 2	280	Merced to Sacramento; Los Angeles to San Diego		

2014 ADOPTED BUSINESS PLAN CORRIDOR SUMMARY

Section	Length in Miles	From/To	Operational	Cumulative Cost (billions) YOE
IOS	300	Merced to San Fernando Valley	2022	$31
Bay to Basin	410	San Jose and Merced to San Fernando Valley	2026	$51
Phase 1 Blended	***520***	***San Francisco to Los Angeles/Anaheim***	***2028***	***$68***

CHSRA utilized a very complex methodology to arrive at their ridership, revenue, and cash flow estimates as illustrated in Figure 7.1. Although it appears to be a very comprehensive approach, the problem is that it is over-complicating the process and over calculating by averaging averages. The final process, the Monte Carlo Simulation, was run 50,000 times. It is unclear whether or not CHSRA or its contractor, Cambridge Systematics, Inc., kept running the simulation until they came up with projections that met their goals or whether 50,000 is considered a standard number of times to run the simulation model.

Figure 7.1 Risk Analysis Approach



The 2016 Draft BP contains projections in 2015 dollars (2015$) and Year of Expenditure dollars (YOE$)[3]. For easy comparison and familiarity to today's travel fares, unless otherwise stated,

[3] The familiar $64.2 or $68 billion figure for capital costs is in YOE$

this report uses 2015$ instead of YOE$. CHSRA uses two sets of forecasts and cost estimates below:

- Silicon Valley to Central Valley line – (Valley to Valley) - One scenario assumes that operations begin on the Silicon Valley to Central Valley line from San Jose to a station north of Bakersfield in 2025 (construction completed in 2024) and on the entire Phase 1 system from San Francisco and Merced to Los Angeles and Anaheim in 2029.

- Silicon Valley to Central Valley Extension (not included in the scope of this study) - A second scenario runs from Silicon Valley to Central Valley to San Francisco and Bakersfield. This scenario also assumes operations starting in 2025 and the Phase 1 system opening in 2029. Together these extensions would provide a one-seat ride from Bakersfield to San Francisco. Because this scenario is dependent upon securing additional funding, it is not examined in this report.

Ridership and revenue forecasts in the 2016 Draft BP reflect an "enhanced" travel demand model and changes to some key assumptions. There are several key differences between the forecasts presented in the 2014 BP and the forecasts presented in the 2016 Draft BP including:

- The 2016 Draft BP assumes that service will start on the line from San Jose to north of Bakersfield (to an interim facility that functions as a temporary station) and evaluates an additional scenario extending service to San Francisco and Bakersfield that had not been analyzed in the 2014 BP (not within the scope of this report). It also assumes a Phase 1 system that offers a one-seat ride to Anaheim; ridership and revenue forecasts in the 2014 BP assumed a Phase 1 southern terminal in Los Angeles.

- Forecasts reflect an "enhanced" travel demand model that incorporates the latest available input data, new variables that better reflect travel behavior and adjustments to the transit access network and station locations.

VALLEY TO VALLEY MAP

Figure 3.1 Silicon Valley to Central Valley Line

PROJECTED HIGH SPEED TRAIN FARES AND REVENUE

While other comparisons were utilized in order to estimate projected fares, airfare prices were the governing basis and CHSRA used 77% to 80% of these current prevailing airfare prices within or close to the same travel corridors. The following chart contains the presumed fares in 2015 dollars. Although the IOS is actually "North of Bakersfield," the following chart has no fare for this as a terminus station[4]. According to Table 3.1, for the IOS, a one-way fare from San Jose ranges from a low of $19 (Gilroy) to a high of $83 (Bakersfield).

[4] This will be a temporary station

Table 3.1 Assumed High-Speed Rail Fares

2015 Dollars

High-Speed Rail Stations	San Francisco (Transbay)	Millbrae	San Jose	Gilroy	Merced	Fresno	Kings/Tulare	Bakersfield	Palmdale	Burbank Airport	Los Angeles Union Station	Gateway Cities/ Orange County	Anaheim
San Francisco (Transbay)		$18	$23	$25	$59	$70	$78	$89	$89	$89	$89	$89	$89
Millbrae			$20	$24	$59	$70	$77	$89	$89	$89	$89	$89	$89
San Jose				$19	$56	$63	$68	$83	$89	$89	$89	$89	$89
Gilroy					$52	$59	$65	$78	$89	$89	$89	$89	$89
Merced						$45	$52	$67	$85	$86	$89	$89	$89
Fresno							$40	$56	$74	$75	$78	$81	$84
Kings/Tulare								$51	$67	$68	$74	$76	$78
Bakersfield[9]									$51	$52	$56	$58	$60
Palmdale										$32	$33	$34	$36
Burbank Airport											$27	$30	$32
Los Angeles Union Station												$27	$30
Gateway Cities/ Orange County													$27
Anaheim													

Source: Cambridge Systematics, Inc.

The following is the projected revenue that was used to calculate average fares. For example, year 2025: $255,000,000 (revenue) divided by 4,100,000 (ridership) = $62.20.

FAREBOX REVENUE: SAN JOSE - NORTH OF BAKERSFIELD (2015 dollars)

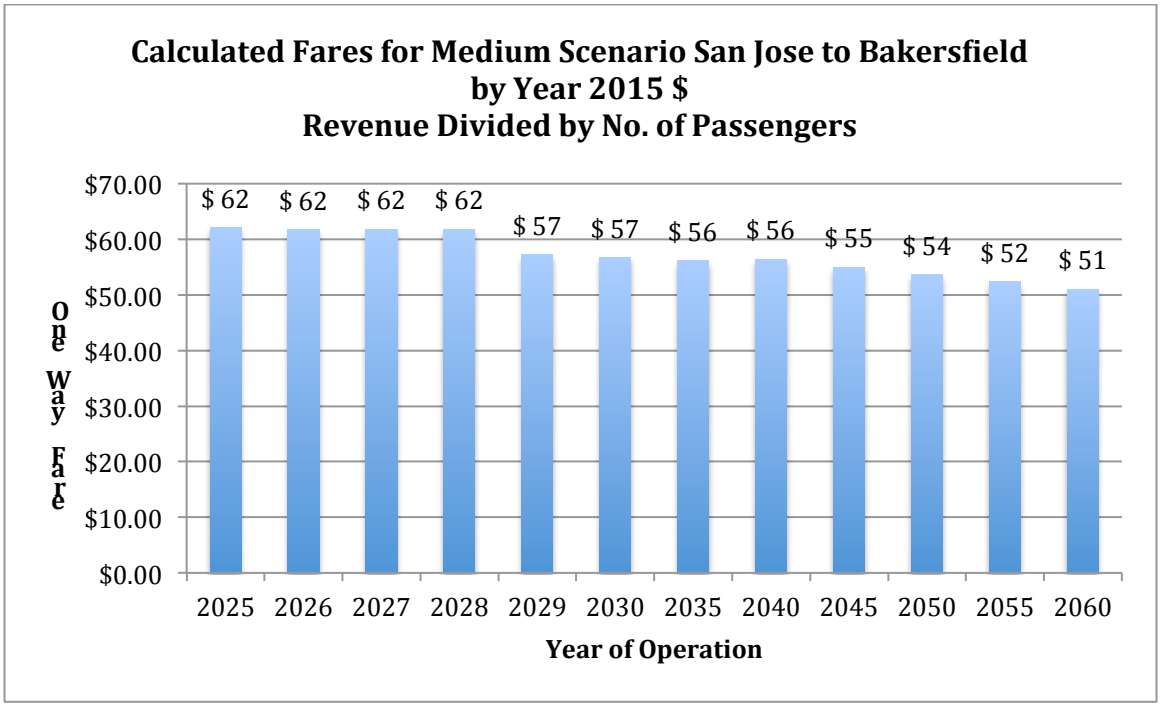
(SILICON VALLEY TO CENTRAL VALLEY LINE) THROUGH PHASE 1 (IN MILLION OF 2015 $)

	2025 VALLEY TO VALLEY	2026 VALLEY TO VALLEY	2027 VALLEY TO VALLEY	2028 VALLEY TO VALLEY	2029 PHASE 1	2030 PHASE 1	2035 PHASE 1	2040 PHASE 1	2045 PHASE 1	2050 PHASE 1	2055 PHASE 1	2060 PHASE 1
High	$255	$351	$447	$543	$1,460	$1,793	$2,927	$3,139	$3,218	$3,299	$3,383	$3,468
Medium	$180	$247	$315	$383	$1,098	$1,360	$2,250	$2,413	$2,474	$2,537	$2,601	$2,666
Low	$140	$193	$246	$299	$859	$1,064	$1,761	$1,889	$1,936	$1,985	$2,035	$2,087

When backing into an average fare based on total revenue and ridership, the average fare comes to around $62 for the IOS (2025 through 2028). This implies that Fresno would be the most common origin or destination. As the years progress, the fare prices trend downwards, meaning that more passengers are opting for shorter routes. There are several station-to-station permutations that fall within $50 - $57 fare range.

AVERAGE TICKET PRICE (CALCULATED: RIDERSHIP DIVIDED BY REVENUE)

	2025 VALLEY TO VALLEY	2026 VALLEY TO VALLEY	2027 VALLEY TO VALLEY	2028 VALLEY TO VALLEY	2029 PHASE 1	2030 PHASE 1	2035 PHASE 1	2040 PHASE 1	2045 PHASE 1	2050 PHASE 1	2055 PHASE 1	2060 PHASE 1
High	$62.20	$61.58	$61.23	$61.01	$56.37	$55.86	$55.02	$55.26	$53.90	$52.62	$51.34	$50.04
Medium	$62.07	$61.75	$61.76	$61.77	$57.19	$56.67	$56.11	$56.38	$54.98	$53.64	$52.33	$50.98
Low	$63.64	$62.26	$63.08	$62.29	$57.65	$57.20	$56.62	$56.90	$55.47	$54.09	$52.86	$51.53



Since there is limited air service between many of the cities, the train would fill that gap, however, at a relatively high cost when compared to taking a bus or driving. While conventional trains are also an alternate mode of transportation, they are not addressed.

RIDERSHIP VOLUME

The 2016 Draft BP uses three scenarios for ridership: high, medium and low, starting in 2025. Phase 1 (San Francisco to Anaheim) becomes operational in 2029. In each scenario, the annual increase in ridership is aggressive through 2035. From 2025 to 2028, the average annual increase over the prior year ranges from 22% to 41%. Then, in 2029 when Phase 1 becomes operational, the increase over 2028 ranges from 191% to 210%.

RIDERSHIP: SAN JOSE - NORTH OF BAKERSFIELD
(SILICON VALLEY TO CENTRAL VALLEY LINE) THROUGH PHASE 1 (IN MILLIONS OF RIDERS)

	2025	2026	2027	2028	2029	2030	2035	2040	2045	2050	2055	2060
	VALLEY TO VALLEY	VALLEY TO VALLEY	VALLEY TO VALLEY	VALLEY TO VALLEY	PHASE 1	PHASE 1	PHASE 1*	PHASE 1*	PHASE 1*	PHASE 1*	PHASE 1*	PHASE 1*
High Ridership	4.1	5.7	7.3	8.9	25.9	32.1	53.2	56.8	59.7	62.7	65.9	69.3
Yrly Increase in volume		1.6	1.6	1.6	17.0	6.2	4.2	0.7	0.6	0.6	0.6	0.7
Increase in %		39%	28%	22%	191%	24%	13%	1%	1%	1%	1%	1%
Medium Ridership	2.9	4.0	5.1	6.2	19.2	24.0	40.1	42.8	45.0	47.3	49.7	52.3
Yrly Increase in volume		1.1	1.1	1.1	13.0	4.8	3.2	0.5	0.4	0.5	0.5	0.5
Increase in %		38%	28%	22%	210%	25%	13%	1%	1%	1%	1%	1%
Low Ridership	2.2	3.1	3.9	4.8	14.9	18.6	31.1	33.2	34.9	36.7	38.5	40.5
Yrly Increase in volume		0.9	0.8	0.9	10.1	3.7	2.5	0.4	0.3	0.4	0.4	0.4
Increase in %		41%	26%	23%	210%	25%	13%	1%	1%	1%	1%	1%

*divided by 5 due to projection changing from annual to every 5 years

The daily ridership seems unattainable, especially in the "High" scenario. CHSRA asserts that over 11,000 passengers will ride the IOS the first year of operation, increasing to nearly over 24,000 by year 2028. When Phase 1 becomes operational, their estimate soars to almost 71,000 daily passengers.

In comparison, Bob Hope Airport served nearly 2 million outbound passengers (5,479 per day) and nearly 2 million inbound (5,400 per day) for 2015. CHSRA is claiming that it will serve more passengers in its first year of operation for a segment that is only 250 miles long and only serves one metro area (San Jose). The other terminus station isn't even in Bakersfield—it is 20 miles north of Bakersfield in the town of Shafter, population of 17,000. In contrast, Bob Hope Airport is a regional airport with service to the entire country, including Hawaii and Alaska.

RIDERSHIP IN MILLIONS

	VALLEY TO VALLEY	VALLEY TO VALLEY	VALLEY TO VALLEY	VALLEY TO VALLEY	PHASE 1	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7
Scenario	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2035**	**2040**	**2045**	**2050**	**2055**	**2060**
High	4.1	5.7	7.3	8.9	25.9	32.1	53.2	56.8	59.7	62.7	65.9	69.3
Medium	2.9	4.0	5.1	6.2	19.2	24.0	40.1	42.8	45.0	47.3	49.7	52.3
Low	2.2	3.1	3.9	4.8	14.9	18.6	31.1	33.2	34.9	36.7	38.5	40.5

RIDERSHIP PER DAY (WEEKDAYS AND WEEKENDS)

Scenario	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2035**	**2040**	**2045**	**2050**	**2055**	**2060**
High	11,233	15,616	20,000	24,384	70,959	87,945	145,753	155,616	163,562	171,781	180,548	189,863
Medium	7,945	10,959	13,973	16,986	52,603	65,753	109,863	117,260	123,288	129,589	136,164	143,288
Low	6,027	8,493	10,685	13,151	40,822	50,959	85,205	90,959	95,616	100,548	105,479	110,959

How do these ridership estimates compare to the ridership estimates in the 2014 BP? In order to compare apples to apples, this analysis will examine Phase 1 because both business plans have Phase 1 running from San Francisco to Anaheim and covering 520 miles. In order to be further comparable, the "matching" is based on year of operation, not calendar year.

2016 Draft Business Plan Ridership Estimates (Millions) - PHASE 1									
Operation Year No.	**Year 1**	**Year 2**	**Year 7**	**Year 12**	**Year 17**	**Year 22**	**Year 27**	**Year 32**	**Average**
Year of Operation	**2029**	**2030**	**2035**	**2040**	**2045**	**2050**	**2055**	**2060**	
High Ridership	25.9	32.1	53.2	56.8	59.7	62.7	65.9	69.3	**53.2**
Medium Ridership	19.2	24.0	40.1	42.8	45.0	47.3	49.7	52.3	**40.1**
Low Ridership	14.9	18.6	31.1	33.2	34.9	36.7	38.5	40.5	**31.1**

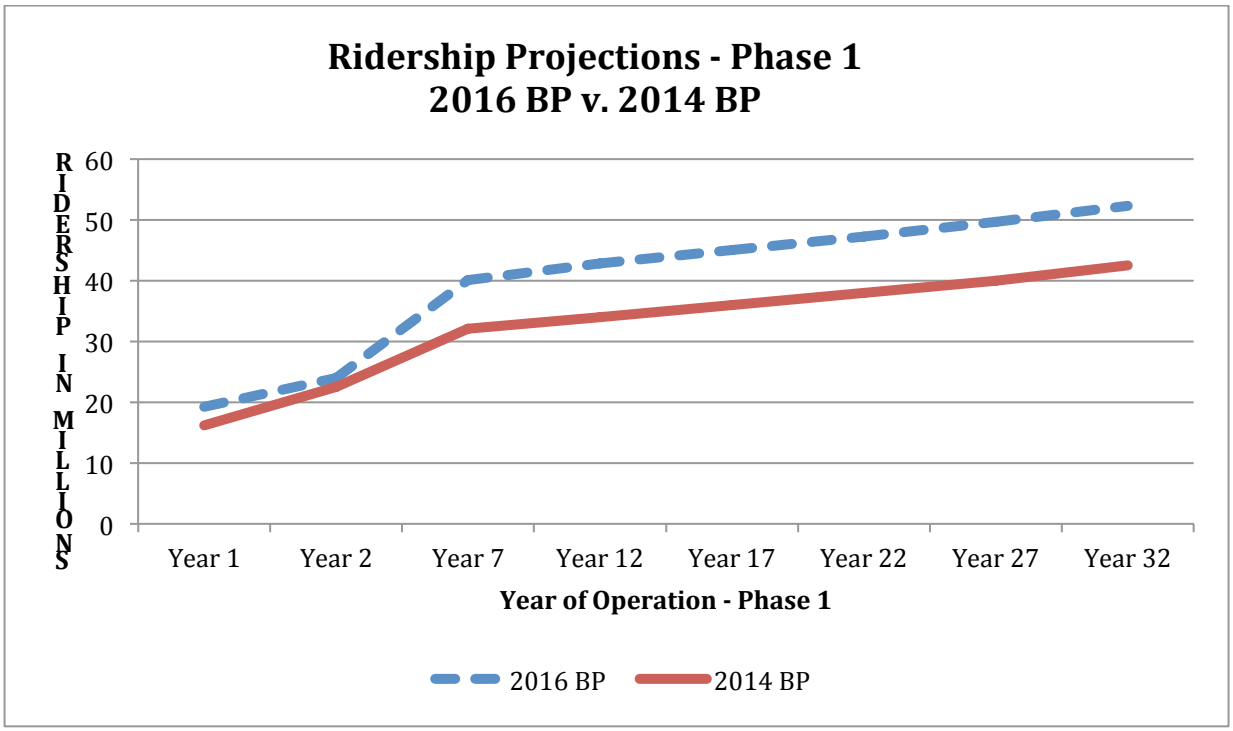
2014 Adopted Business Plan Ridership Estimates (Millions) - PHASE 1									
Operation Year No.	**Year 1**	**Year 2**	**Year 7**	**Year 12**	**Year 17**	**Year 22**	**Year 27**	**Year 32**	**Average**
Year of Operation	**2028**	**2029**	**2034**	**2039**	**2044**	**2049**	**2054**	**2059**	
High Ridership	23.0	28.0	41.4	44.9	47.0	49.5	52.0	54.9	**42.6**
Medium Ridership	16.2	22.5	32.1	34.0	36.0	38.0	40.0	42.5	**32.7**
Low Ridership	13.0	12.5	24.1	26.0	27.0	28.0	30.0	31.9	**24.1**

Change in Ridership Figures (Millions) 2016 versus 2014 - PHASE 1									
	Year 1	**Year 2**	**Year 7**	**Year 12**	**Year 17**	**Year 22**	**Year 27**	**Year 32**	**Average**
Year of Operation 2016	**2029**	**2030**	**2035**	**2040**	**2045**	**2050**	**2055**	**2060**	
Year of Operation 2014	**2028**	**2029**	**2034**	**2039**	**2044**	**2049**	**2054**	**2059**	
High Ridership	2.9	4.1	11.8	11.9	12.7	13.2	13.9	14.4	**10.6**
2016 +/- 2014 %	13%	15%	29%	27%	27%	27%	27%	26%	**24%**
Medium Ridership	3.0	1.5	8.0	8.8	9.0	9.3	9.7	9.8	**7.4**
2016 +/- 2014 %	19%	7%	25%	26%	25%	24%	24%	23%	**22%**
Low Ridership	1.9	6.1	7.0	7.2	7.9	8.7	8.5	8.6	**7.0**
2016 +/- 2014 %	15%	49%	29%	28%	29%	31%	28%	27%	**29%**

With no plausible explanation except for the word "enhanced," the 2016 Draft BP increased its ridership figures over the 2014 BP for Year 1 of operation by 2.9 million, 3 million, and 1.9 million for the high, medium, and low scenarios respectively. The average increase ranges from 22% (medium scenario) to 29% (low scenario) (note that these are done in 5 year increments with the exception of years 1 and 2).

The increase in daily ridership for 2016 Draft BP over 2014 BP is aggressive. Even the "low scenario" of an increase of 5,205 is nearly the same number of Bob Hope Airport's daily outbound passenger figure of 5,479.

Change in Ridership Figures 2016 versus 2014 - PHASE 1 DAILY									
Operation Year No.	**Year 1**	**Year 2**	**Year 7**	**Year 12**	**Year 17**	**Year 22**	**Year 27**	**Year 32**	**Average**
Year of Operation	**2028**	**2029**	**2034**	**2039**	**2044**	**2049**	**2054**	**2059**	
High Ridership	7,945	11,233	32,329	32,603	34,795	36,164	38,082	39,452	**29,075**
Medium Ridership	8,219	4,110	21,918	24,110	24,658	25,479	26,575	26,849	**20,240**
Low Ridership	5,205	16,712	19,178	19,726	21,644	23,836	23,288	23,562	**19,144**



According to CHSRA's incredible ridership projections, it would not have enough trains to satisfy demand. The 2016 Draft BP states it will have 70 trains at full build-out, which is consistent with the number of trains per hour during peak (3 hours in the morning and 3 hours in the evening) and non-peak (10 hours). According to the Request For Expressions of Interest (RFEI) for train sets, each train must have a minimum of 450 passenger seats.

RIDERSHIP PER DAY (WEEKDAYS AND WEEKENDS)												
Scenario	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2035**	**2040**	**2045**	**2050**	**2055**	**2060**
High	11,233	15,616	20,000	24,384	70,959	87,945	145,753	155,616	163,562	171,781	180,548	189,863
Medium	7,945	10,959	13,973	16,986	52,603	65,753	109,863	117,260	123,288	129,589	136,164	143,288
Low	6,027	8,493	10,685	13,151	40,822	50,959	85,205	90,959	95,616	100,548	105,479	110,959
No. of Runs	44	44	44	44	196	196	196	196	196	196	196	196

Passengers per train												
High	255	355	455	554	362	449	744	794	834	876	921	969
Medium	181	249	318	386	268	335	561	598	629	661	695	731
Low	137	193	243	299	208	260	435	464	488	513	538	566
% Train Capacity Based on 450 Seats per Train												
High	57%	79%	101%	123%	80%	100%	165%	176%	185%	195%	205%	215%
Medium	40%	55%	71%	86%	60%	75%	125%	133%	140%	147%	154%	162%
Low	30%	43%	54%	66%	46%	58%	97%	103%	108%	114%	120%	126%

To meet this astonishing demand, and assuming that each train has exactly 450 seats, additional train sets would need to be purchased at a cost of $49 million each. Not only will additional train sets have to be purchased, but also they will require additional recurring O&M including operating personnel expense. At an average fare of $57, it would require 860,000 tickets to pay for 1 train set, excluding recurring O&M.

Additional Number of Trains Needed to Satisfy Demand												
High	-	-	1	1	-	-	1	1	1	1	2	2
Medium	-	-	-	-	-	-	1	1	1	1	1	1
Low	-	-	-	-	-	-	-	1	1	1	1	1
Additional Capital Cost to Purchase Train Sets @ $49 million each (2015 $)												
High	$0	$0	$49	$49	$0	$0	$49	$49	$49	$49	$98	$98
Medium	$0	$0	$0	$0	$0	$0	$49	$49	$49	$49	$49	$49
Low	$0	$0	$0	$0	$0	$0	$0	$49	$49	$49	$49	$49

Comparison to Eurostar service from London to Paris. In 1996, London and Continental Railways (which have true expertise in forecasting ridership figures) predicted that passenger numbers would reach 21.4 million annually by 2004, 10 years after its opening in 1994, but only 7.3 million (34%) was achieved. This is particularly important to realize because, unlike the CHSRA high-speed train, the only transportation competition that the Eurostar has is air service. As airlines reduced their fares, the Eurostar had to reduce theirs in order to maintain competitive.

Only 2 of the 99 current high-speed lines in the world are fiscally self-sustaining, Tokyo-Osaka and Paris-Lyon, and they required considerable subsidies at the beginning.

WHO ARE THESE PASSENGERS?

CHSRA assumes that their passengers will include business travelers, commuters, and recreational travelers. The noted variables that affect ridership include auto operating costs, high-speed rail fares, frequency of service, bus connections, high-speed train station proximity to passengers' points of origin and destination, and airfares. CHSRA contends that the initial operating section from San Jose to North of Bakersfield[5] (Valley to Valley) will allow residents in the now affordable Central Valley to commute to jobs in Silicon Valley, providing them with a relatively short commute when compared to driving. It is true that travel time is greatly reduced, but it is an expensive mode of transportation for commuting. Additionally, once one arrives at his/her destination, additional transportation may be needed in order to get to one's place of employment. The time "savings" could be greatly reduced if the passenger has to endure additional time getting to/from the HSR station on either or both ends of their journey.

The following chart illustrates how much it would cost for a commuter to travel from/to San Jose to/from various stations along the Valley to Valley segment.

[5] 20 miles north of Bakersfield which means a passenger must somehow get there to catch a high-speed train

COST OF COMMUTING USING HIGH SPEED TRAIN - IOS

No. of weeks (assumes 2 vacation weeks/yr and 10 holidays/yr): 48

Round trip; assumes 10% discount for a pre-paid pass for monthly and annual[6]

San Jose to/from:	Gilroy	Fresno	Kings/Tulare	Bakersfield
Daily	$38	$126	$136	$166
Weekly	$190	$630	$680	$830
Monthly	$735	$2,438	$2,632	$3,212
Annually	$8,208	$27,216	$29,376	$35,856
Annual Median Income	$81,056	$45,201	$42,863	$48,574
After-tax	$71,329	$37,517	$35,576	$40,316
HSR Cost as % after tax	12%	73%	83%	89%

It becomes clear that using the high-speed train is *not* an affordable commute. It is possible that an employer would provide a commuting subsidy but that is outside the scope of this report. Let us further assume that the commuter who lives in the Central Valley is traveling to San Jose because he/she secured a higher paying job in Silicon Valley:

COST OF COMMUTING USING HIGH SPEED TRAIN – IOS – ASSUMING HIGH PAID JOB IN SILICON VALLEY

No. of weeks (assumes 2 vacation weeks/yr and 10 holidays/yr): 48

Round trip; assumes 10% discount for a pre-paid pass for monthly and annual

San Jose to/from:	Gilroy	Fresno	Kings/Tulare	Bakersfield
Daily	$38	$126	$136	$166
Weekly	$190	$630	$680	$830
Monthly	$735	$2,438	$2,632	$3,212
Annually	$8,208	$27,216	$29,376	$35,856
Annual Median Income*	$81,056	$93,854	$93,854	$93,854
After-tax	$71,329	$82,592	$82,592	$82,592
HSR Cost as % after tax	12%	33%	36%	43%

*Santa Clara County (Silicon Valley) median income for Central Valley commuters only; no adjustment for Gilroy

Even if commuters now earned a Silicon Valley salary, the high-speed train commute is still unaffordable for most commuters.

With the exception of to/from San Jose to/from Gilroy, a high-speed train will be faster than a bus or car[7] and it is doubtful that one would spend $19 one-way for a 33-mile trip:

[6] Not included in CHSRA documents but it is common to offer discounted passes for public transportation

[7] "Car" includes SUVs, trucks and other motorized vehicles

TRAVEL SAVINGS IN MINUTES BY USING HIGH SPEED TRAIN

San Jose to/from:	Gilroy	Fresno	Kings/Tulare	Bakersfield
Bus	9	173	344	435
Car	2	127	171	208

The main factor for choosing a high-speed train for transportation is how it compares in terms of cost, convenience, and time saved to other modes of transportation. CHSRA is attempting to schedule its service times to coincide with bus and conventional rail schedules so that passengers can link to these if they need to continue their travels beyond high-speed rail stations and/or to get to their final destination within a short distance of the high-speed train station.

It is uncertain if passengers would be willing to pay $83 each way ($53[8] more than driving) to/from Bakersfield to/from San Jose, and then deal with the inconvenience and additional cost of finding short-distance transportation from point of origin and again at the destination, to save less than 2 hours (and less than that if additional transportation is needed to travel to/from the high speed rail station).

San Jose to/from:	Gilroy	Fresno	Kings/Tulare	Bakersfield
HSR No. Minutes	32	72	93	128
Cost	$19.00	$63.00	$68.00	$83.00
Cost per Minute	*$0.59*	*$0.88*	*$0.73*	*$0.65*
Bus No. Minutes	41	205	376	467
Cost	$10.50	$33.00	$45.00	$55.00
Cost per Minute	*$0.26*	*$0.16*	*$0.12*	*$0.12*
Car	34	159	203	240
Cost	$4.00	$19.50	$24.50	$30.00
Cost per Minute	*$0.12*	*$0.12*	*$0.12*	*$0.13*
HSR Cost above in $				
Bus	$9	$30	$23	$28
Car	$15	$44	$44	$53
HSR Cost above %				
Bus	81%	91%	51%	51%
Car	375%	223%	178%	177%
HSR Cost Per Minute above in $				
Bus	$0.34	$0.71	$0.61	$0.53
Car	$0.48	$0.75	$0.61	$0.52
HSR Cost above %				

[8] This is on the high end, assuming peak prices for gasoline

San Jose to/from:	Gilroy	Fresno	Kings/Tulare	Bakersfield
Bus	132%	444%	511%	451%
Car	405%	613%	506%	419%

CASH FLOW ANALYSIS

The 2016 Draft BP's cash flow unashamedly excludes the capital investment/cost while the 2014 BP included it. Why? Simple: It scared off potential investors. At several community outreach meetings, CHSRA representatives stated that it does not include any investment cost as part of their return on investment (ROI) calculation; it is no wonder that CHSRA refuses to perform an ROI measured as an internal rate of return (IRR), as this is the result:

	IRR
High Revenue	0.64%
Medium Revenue	-1.18%
Low Revenue	-3.09%

Since the core reason for CHSRA to provide an attractive cash flow projection is to entice private investors to (1) become an equity partner during the construction phase and (2) to take over operations once the infrastructure has been completed, it is a certain project failure if that the cash flow projections fail to deliver satisfactory rates of return on investment.

According to CHSRA, even the "low" forecast will show positive cash flow from 2025 to 2060. The 2016 Draft BP cash flow projections also include ancillary revenue (1% of the total), which includes on-board sales, advertising, asset and right-of-way utilization and transit-oriented development opportunities[9]. Note that operation and maintenance (O&M) and capital replacement costs vary between the scenarios. It is presumed that the variance is due to the number of trains increasing or decreasing based on passenger demand.

2016 Draft Business Plan

Scenario	High	Medium	Low
Revenue in Millions	$100,572	$77,151	$60,376
Less: O&M	-$31,411	-$28,704	-$27,505
Net Cash Flow from Operations	$69,161	$48,447	$32,871
Capital Replacement	-$6,043	-$5,549	-$5,033
Net operating cash flow after Capital Replacement	**$63,118**	**$42,898**	**$27,838**
Breakeven or Profit Occurs	*2025*	*2027*	*2029*
Ancillary Revenue only	*$1,006*	*$772*	*$604*

[9] A type of community development that includes a mixture of housing, office, retail and/or other amenities integrated into a walkable neighborhood and located within a half-mile of quality public transportation.

In order to make a meaningful analysis, the 2016 Draft BP must be compared to the 2014 BP. Note that the 2014 BP *includes* the capital cost investment wherein the 2016 Draft BP *excludes* it.

2014 Business Plan-Adjusted to 2015$

Scenario	High	Medium	Low
Revenue in Millions	$82,359	$63,922	$47,650
Less: O&M	-$36,385	-$32,318	-$29,019
Net Cash Flow from Operations	$45,974	$31,604	$18,631
Capital Replacement	-$7,965	-$7,313	-$6,634
Net operating cash flow after Capital Replacement	**$38,009**	**$24,291**	**$11,998**
Breakeven or Profit Occurs w/o Capital Cost	*2022*	*2022*	*2024*
Capital Cost	-$57,239	-$57,239	-$57,239
Net Cash Flow After Capital Cost	**-$17,208**	**-$30,925**	**-$43,217**
Breakeven or Profit Occurs	*Never*	*Never*	*Never*

It is shocking to see that the 2016 Draft BP's revenue estimates range from $12.7 to $18.2 billion *higher* (22% to 27%) than the 2014 BP which was prepared *only two years previously*. The net operating cash flow ranges from nearly $16 to $25 billion higher (66% to 132%).

2016 Draft Business Plan +/- 2014 Business Plan

Scenario	High	Medium	Low
Revenue in Millions	$18,213	$13,229	$12,726
Less: O&M	$4,974	$3,614	$1,514
Net Cash Flow from Operations	$23,187	$16,843	$14,240
Capital Replacement	$1,922	$1,764	$1,601
Net operating cash flow after Capital Replacement	**$25,109**	**$18,607**	**$15,840**
2016 +/2014 Business Plan	**66%**	**77%**	**132%**
Breakeven or Profit Occurs	3 yrs later	5 yrs later	5 yrs later

Another useful measurement is to compare 2016 Draft BP to the 2014 BP in discounted cash flow or Net Present Value (NPV). This measurement takes into account the time value of money, based on the assumption that a dollar today is worth less than a dollar next year, the year after, and so on. For example, if two competing projects ultimately bring in $50,000, but one provides positive cash flow earlier, that is the better investment. Typically, assessing discounted cash flow is one of the items that potential investors examine in making a decision whether or not to invest in a project.

The following chart illustrates that CHSRA has inflated discounted its cash flow (assuming a 5% discount rate) for the 2016 Draft BP to the extent that is nearly double of that in the 2014 BP

(ranging from 83% to 150% [versus non-discounted 66% to 132%]). Assuming the "low scenario," it is no surprise that potential investors ran away from this project based on the 2014 BP. Their return would be a pitiful $4.3 billion (*excluding* their initial investment). If they had been foolish enough to invest $9 billion (matching the Prop 1A bond issue), they would have lost $4.6 billion ($9 billion minus $4.4 billion). Although the 2016 Draft BP is more palatable, the "low scenario" only returns a net $10.9 billion (again, excluding an initial investment).

Cash Flow NPV at 5% ($ in Millions)			
Scenario	**High**	**Medium**	**Low**
2016 Draft Business Plan NPV	**$24,745**	**$16,777**	**$10,869**
Non-Discounted 2016 Draft BP	*$63,118*	*$42,898*	*$27,838*
Cost of Time	*$38,373*	*$26,121*	*$16,969*
2014 Draft Business Plan NPV	**$13,533**	**$8,687**	**$4,355**
Non-Discounted 2016 Draft BP	$38,009	$24,291	$11,998
Cost of Time	*$24,476*	*$15,604*	*$7,643*
2016 Draft BP +/- 2014 BP	**$11,212**	**$8,089**	**$6,514**
2016 +/2014 Business Plan	**83%**	**93%**	**150%**

CONCLUSION

In order for the high-speed train project to survive, it is imperative that CHSRA demonstrate positive cash flow within a few short years of the start of operation to secure private investment—both as equity capital partners for construction and for operation of the train concession once construction is completed. CHSRA was shrewd to exclude the capital investment as part of their presentation, especially to potential investors, because the IRR ranges from .64% (high) to -3% (low). In order to achieve its goal, CHSRA has turned their high-speed train into a high-cost commuter train for the revised IOS. While on its face this appears to be a good strategy, the reality is that very few, if any, people could afford it (a commuter from Fresno to San Jose would spend $27,000 annually on train fare). The average one-way fare of $62 skews close to the San Jose and Fresno route fare of $63 and supports the "commuter train" designation. Then as Phase 1 comes online, the calculated fares trend downwards, meaning that the bulk of ridership will be for shorter trips as time progresses.

CHSRA has omitted some key inputs, for example, excluding passenger fares in Table 3.1 for San Jose to North of Bakersfield that is part of the IOS. Also, some of their assumptions are inconsistent between the figures published in the *Ridership and Revenue Forecasting* document and their main 2016 Draft BP document.

CHSRA utilized a convoluted methodology to arrive at its ridership and revenue projections. Incorporating key input variables, using multiple regression analysis, and then running a Monte Carlo simulation 50,000 times in order to arrive at its ridership, revenue, and resultant cash flow, the financial models' components become nearly impossible to scrutinize. It is hubris to believe that in year 1 of operation that 11,233 (high), 7,794 (medium), and 6,027 (low)

passengers will ride *daily* within the IOS which runs from one metropolitan area (San Jose) to the Central Valley, California's agricultural area.

Average ridership increases from the 2014 BP to the 2016 Draft BP range from 22% to 29%--double-digit increases--with no legitimate explanation. CHSRA merely states, "Forecasts reflect an enhanced travel demand model."

The farce continues to its cash flow projections. There is no reasonable explanation as to why the 2016 Draft BP net cash flow (after capital replacement but excluding capital investment) increased from 66% to 132% over the 2014 BP. On a discounted cash flow basis, the increase is even larger: 83% to 150%.

If CHSRA meets their projected ridership targets, they will have to purchase and operate more train sets[10] beyond the budgeted 70 at full build-out to meet their incredible passenger demand. These additional train sets require increased operating costs for O&M, including employees' salaries, benefits, etc.

In conclusion, in CHSRA's desperation, they inflated their ridership/revenue figures in order to present a picture of fiscal viability of the high-speed train project to potential private investors and taxpayers.

[10] The RFEI for train sets specifies a minimum of 450 passenger seats per train

HIGH-SPEED RAIL SYSTEM MAP

ANALYSIS OF CALIFORNIA HIGH SPEED RAIL AUTHORITY'S CAPITAL COST BASIS OF ESTIMATE REPORT

Draft 2016 Business Plan: Technical Supporting Document

By Cindy Bloom
March 9, 2016

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ABSTRACT

From 1996 through 2016, there have been eleven publicly available budgets[1] prepared by the California High Speed Rail Authority ("CHSRA") (formerly known as the California Intercity High Speed Rail Commission) and/or the California Legislative Analyst's Office. These cost estimates range from a low of $16.5 billion (1996) to a high of $98.1 billion (2011). The aforementioned $98.1 billion cost estimate was published in November 2011 as a precursor to the 2012 Draft Business Plan and plummeted by $29.7 billion to $68.4 billion by the time the 2012 Revised Business Plan was revealed—only a few short months later. While CHSRA attempted to explain this significant drop, it served to aim a spotlight on CHSRA's planning process. Also, the $81.6 billion variance from this 2012 Draft Business Plan over the 1996 Business Plan, and CHSRA's "moving target" cost estimates is a symptom of an underlying problem and strongly suggests the CHSRA's management team and Board of Directors are tasked with a project for which they do not possess the core competency to successfully plan, build, and implement this project--the largest infrastructure project in U.S. history.

EXECUTIVE SUMMARY

On February 18, 2016, CHSRA released its draft 2016 Business plan ("2016 BP"). The 2016 BP plan's cost now stands at $64.2 billion versus $67.6 billion, a reduction of $3.4 billion (5%) compared to the 2014 Adopted Business Plan ("2014 BP"). However, while on its face this reduction appears to be legitimate, when analyzing the details, this "cost reduction" seems to be a distraction in order to switch attention away from the fact that a $64.2 budget is *billions* more than what was presented as recently as May 2011. For example, rather than compare its 2016 BP to historical figures, it uses the 2014 BP as its only basis for comparison. Further, it continues to mix 2015 dollars with Year of Expenditure dollars (YOE$), which are adjusted for future inflation, in order to confuse and convince its readers that it is transparent and honest in its assessment of the project's true cost. It is worth mentioning that the savings could have been $5.5 billion instead of $3.4 billion had the agency had decided not to use some of its "savings" to add $2.1 billion worth of elements to the Los Angeles to Anaheim project section.

Although the CHSRA has properly included several contingency margins, at the same time it has also failed to include many necessary line items which could consume their $3.4 billion "savings" and possibly push the project's cost back up and possibly beyond the 2014 BP's estimate of $67.6 billion. Additionally, the 2016 BP states that CHSRA will seek to secure loans and financing, yet it has *excluded any interest or finance charges in its 2016 BP estimate*. For example, interest expense on a $5.3 billion loan[2] will incur approximately $5 – $5.2 billion in interest expense. The Prop 1A bond of $9.95 billion will incur $9.4 billion in interest charges that will be repaid from the General Fund. It is unclear where the interest charges on any debt

[1] The terms "budget," "cost," and "cost estimates" are used interchangeably in this document

[2] The loan amount mentioned in its main business plan which is expected to be repaid by cap and trade proceeds; Director Rossi acknowledges that cap and trade sunsets in 2020: https://www.youtube.com/watch?v=MxeSHZ9DoxQ&feature=em-subs_digest

beyond the Prop 1A bond issue will be budgeted; the only true known is that there will be billions of dollars in interest and the taxpayers will be held accountable for repayment.

Another item of concern is that these costs are the *capital costs only*—they exclude overhead, administrative costs, and a portion of planning costs. For total expenditures, CHSRA is on track to spent $2.5 billion from inception through June 30, 2016. Of this, $138 million for administrative costs[3] is not part of the capital costs/budget.

SCOPE

The 2016 BP is comprised of several documents:

- Connecting and Transforming California (100 pages)
- Capital Cost Basis of Estimate Report (49 pages)
- 50-Year Lifecycle Capital Cost Model Documentation (74 pages)
- Service Planning Methodology (18 pages)
- Ridership and Revenue Forecasting (62 pages)
- High, Medium, Low Cash Flows (12 pages)

This analysis examines the Capital Cost Basis of Estimate document that is the basis for the project's capital costs as of 2016.

ANALYSIS OF OVERALL PROJECT COST ESTIMATES[4]

Amount	Year	Description
$16.5 billion	1996	September 1996 Final Report of the California Intercity High Speed Rail Commission
$25 billion	2000	2000 California High Speed Train Business Plan
$37 billion	2005	August 2005 California High Speed Train Final Program Environmental Impact Report/Environmental Impact Statement
$45 billion	2008	July 7, 2008 Senate Appropriations Committee Fiscal Study of Assembly Bill 3034
$45 billion	2008	Analysis by the Legislative Analyst in the Official Voter Information Guide for the November 4, 2008 Election – Prop 1A – Safe, Reliable High Speed Passenger Train Bond Act
$33.6 billion	2008	November 2008 California High Speed Train Business Plan
$43 billion	May 2011	Report of the California Legislative Analyst's Office
$98.1 billion	2011	November 1, 2011 California High Speed Rail Program Draft 2012 Business Plan
$68.4 billion	2012	April 12, 2012 California High Speed Rail Authority Revised 2012

[3] It is unclear whether the administrative budget includes CHSRA staff salaries

[4] Source: California High Speed Rail Authority

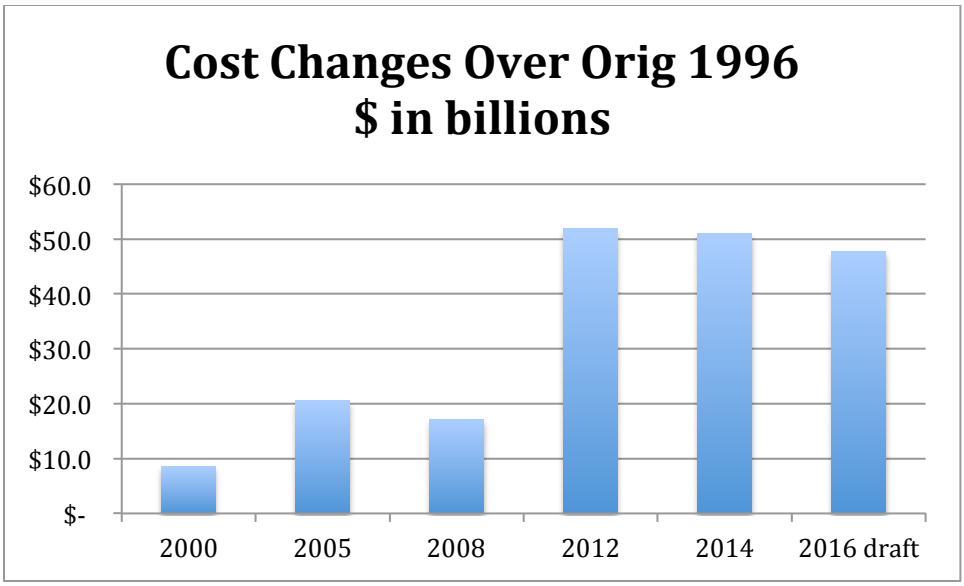
Amount	Year	Description
		Business Plan
$67.6 billion	2014	California High Speed Rail Authority's Adopted 2014 Business Plan
$64.2 billion	2016	California High Speed Rail Authority's Draft 2016 Business Plan

Although the costs have declined slightly from the most recent business plan, when compared to the original estimate put forth in 1996, the 2016 BP is over by 289%. These increases are not due to inflation, and the CHSRA frequently states that the majority of their business plan numbers is already inflation-adjusted and uses the "Year Of Expenditure" ("YOE$") figures. According to the U.S. Bureau of Labor Statistics, the original 1996 budget of $16.5 billion, when adjusted for inflation in 2016, would be $24.9 billion—certainly *not* $64.2 billion.

When 2016 is compared to 2008 estimates published in the text of the Prop 1A ballot initiative, it is 43% over that estimate; when compared to the subsequent 2008 Business Plan, it is 91% above--or nearly double—in less than a 10 year period. What is important to remember is that the electorates who voted in favor of Prop 1A approved a project estimated to cost $45 billion.

The following chart lays out each business plan budget and calculates the change in cost compared to the previous business plan, and then to the original $16.5 billion. For example, 2012's budget increased $34.8 billion over the prior business plan in 2008, and $51.9 billion over 1996.

Business Plan Capital Costs Comparison							
Business Plan Year	**1996**	**2000**	**2005**	**2008**	**2012**	**2014**	**2016 draft**
Cost (billions)	$ 16.5	$ 25.0	$ 37.0	$ 33.6	$ 68.4	$ 67.6	$ 64.2
$ Change over Prior BP (billions)		$ 8.5	$ 12.0	$ -3.4	$ 34.8	$ -0.8	$ -3.4
% Change over Prior BP		52%	48%	-9%	104%	-1%	-5%
$ Change over Original BP (billions)		$ 8.5	$ 20.5	$ 17.1	$ 51.9	$ 51.1	$ 47.7
% Change over Original BP		52%	124%	104%	315%	310%	289%



When further broken down into "cost per mile," the story is similar and just as troublesome. The cost per mile increased 558% 2016 BP versus 1996:

Cost per Mile (millions)							
Business Plan Year	**1996**	**2000**	**2005**	**2008**	**2012**	**2014**	**2016 draft**
Miles	880	700	520	520	520	520	520
Cost per mile (millions)	$ 18.8	$ 35.7	$ 71.2	$ 64.6	$ 131.5	$ 130.0	$ 123.5
$ Change over Prior BP (billions)		$ 17.0	$ 35.4	$ -6.5	$ 66.9	$ -1.5	$ -6.5
% Change over Prior BP		90%	99%	-9%	104%	-1%	-5%
$ Change over Original BP (billions)		$ 17.0	$ 52.4	$ 45.9	$ 112.8	$ 111.3	$ 104.7
% Change over Original BP		90%	279%	245%	602%	593%	558%

COMPARISON OF DRAFT 2016 BUSINESS PLAN TO 2014 BUSINESS PLAN

The capital costs overall decreased by a nominal 5%, a rate commonly used for allowances and returns in other industries, yet CHSRA claims this to be a major victory:

	$ in Billions	
2014 Business Plan	*$67.6*	
Design Refinements	$-3.5	
Lessons learned from bids	$-1.3	
Allocated contingencies	$-0.7	
LA to Anaheim	$2.1	
	$64.2	<---2016 Biz Plan YOE $
	$-3.4	<---Net change 2016 v. 2014
	-5%	<---Net change 2016 v. 2014 %
	$55.3	<---2016 Biz Plan 2015 $
	$8.9	Cost of Time

Further, their estimates could be grossly inaccurate. The CSHRA is using an Association for the Advancement of Cost Engineering Class 3 estimate process which currently which has a swing of -10% to 20% and +10% to 30%. In YOE$ terms, this could conceivably inflate their 2016 BP figure from $64.2 to $83.5 billion:

$ in billions	COST RANGE BASED ON CLASS 3 ESTIMATE			
2016 Est.	-10%	-20%	10%	30%
$ 64.20	$ 57.78	$ 51.36	$ 70.62	$ 83.46

EXCLUDED ITEMS FROM THE 2016 BUSINESS PLAN

It is essential to note that there are many items excluded from the cost estimates that could conceivably push the project way beyond its current projection of $64.2, even with all the built-in contingencies:

- Finance charges (entire project)
- CHSRA administration costs (entire project)
- Five mile track from Santa Clara to San Jose for UPRR (SF to SJ)
- Structural modifications to 4 existing tunnels (SF to SJ)
- Conversion of Caltrain platforms to level boarding except for stations shared with HSR (SF to SJ)
- Platform extension to 1400 feet (SF to SJ)
- Blast protection zone (Bakersfield to Palmdale)
- Metro/UPSS agreements for shared used (Burbank to Union Station)
- Burlington North Santa Fe Railroad's Hobart yard expansion (Burbank to Union Station)

ANALYSIS OF COST ESTIMATES BY PROJECT SECTIONS

There is a wide cost variation between project sections and it becomes apparent why CHSRA decided to change direction and select the Central California to Northern California as the initial operating section.

The following chart illustrates the cost per mile by project section. Not surprisingly, the Palmdale to Burbank segment is the most expensive, nearly 2.5x more than its nearest "competitor," San Jose to Gilroy.

COST PER MILE BY PROJECT SECTION SORTED DESCENDING

Project Section	$ Millions	Miles	Cost Per Mile	+/- Avg Cost
Palmdale to Burbank	$ 11,877.0	33.0	$ 359.9	$ 244.2
San Jose to Gilroy	$ 4,376.0	30.0	$ 145.9	$ 30.2
Burbank to LA	$ 1,593.0	13.0	$ 122.5	$ 6.8
Bakersfield to Palmdale	$ 9,746.0	80.0	$ 121.8	$ 6.1
Merced to Wye Legs 1	$ 1,032.0	9.0	$ 114.7	-$ 1.0
Wye Legs 1	$ 1,183.0	11.0	$ 107.5	-$ 8.2
Gilroy to Carlucci Road	$ 5,483.0	54.0	$ 101.5	-$ 14.2
Poplar Avenue to Bakersfield**	$ 2,030.0	23.0	$ 88.3	-$ 27.4
LA to Anaheim	$ 2,319.0	30.5	$ 76.0	-$ 39.7
San Francisco to San Jose	$ 3,136.0	48.0	$ 65.3	-$ 50.4
Madera Acres to Poplar Ave**	$ 6,908.0	118.0	$ 58.5	-$ 57.2
Carlucci Road to Madera Acres (Wye Leg 2)	$ 960.0	37.0	$ 25.9	-$ 89.8
TOTAL - CORRIDORS*	**$ 50,643.0**	**486.5**	***$ 115.7***	
Maintenance Facilities	$ 1,242.0			
Trainsets	$ 3,399.0			
TOTAL (unadjusted for inflation)	**$ 55,284.0**		**Average Cost**	

*does not tie to CHSRA's 520 mile figure

**new segment based on adding in an interim stop in Shafter

Although the Southern California operating segments represent only 16% of the total miles, they consume 31% of the budget:

SOUTHERN CALIFORNIA ROUTES ONLY

Project Section	$ Millions	Miles
Palmdale to Burbank	$ 11,877.0	$ 33.0
Burbank to LA	$ 1,593.0	$ 13.0
LA to Anaheim	$ 2,319.0	$ 30.5
TOTAL SOUTHERN CALIFORNIA ONLY	**$ 15,789.0**	**$ 76.5**
% of Total	31%	16%

PALMDALE TO BURBANK SECTION

The project section S.A.F.E. is most interested in is the Palmdale to Burbank operating segment. The 2016 BP is quite vague as it specifically refers to E1a, and "a new alternative defined in … adopted in June 2015." Note that they have eliminated smoke control shafts and instead are using a "compartmentation strategy" for smoke control, which sounds neither safe nor desirable. Also note that it is eliminating any third bore service tunnel for tunnels over six miles long so one can assume it applies to tunnels along the SR14 route. It certainly can be implied from this statement that in the event any of the East Corridor routes are selected, CHSRA *is*

planning on building three tunnels through the Angeles National Forest: Two for trains and one for service. The following is copied directly from their document:

Palmdale to Burbank

Table 16. Palmdale to Burbank Cost by SCC

STANDARD COST CATEGORY	2014 BP COST (2015 $, millions)	2016 BP COST (2015 $, millions)
10 TRACK STRUCTURES & TRACK	$5,994	$7,580
20 STATIONS, TERMINALS, INTERMODAL	$246	$313
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	$149	$19
40 SITEWORK, RIGHT-OF-WAY, LAND, EXISTING IMPROVEMENTS	$2,367	$1,609
50 COMMUNICATIONS & SIGNALING	$88	$214
60 ELECTRIC TRACTION	$278	$450
80 PROFESSIONAL SERVICES	$1,106	$1,247
90 UNALLOCATED CONTINGENCY	$372	$446
SUBTOTAL	**$10,599**	**$11,877**

Estimate assumes a new segment based on the east corridor tunnel alignment option E1a terminating just south of Burbank Airport station, and also reflects a new alternative defined in the Palmdale to Burbank Supplemental Alternative Analysis adopted in June 2015. The 2014 Business Plan estimate for this section was based on a SR-14 West alignment alternative resulting in comprehensive revision to earthwork, viaducts, and tunneling and grade separation quantities. The right-of-way requirements were also reevaluated to reflect the new east corridor tunnel alignment.

Assumptions

- Based on an alignment section length of 33 route miles
- An allowance is being carried for mechanical ventilation in tunnels due to the length of the tunnel segments
- Based on compartmentation strategy for smoke control in tunnels that would eliminate shafts to the surface within Angeles National Forest
- Third bore service tunnel was assumed not to be required in tunnels over six miles in length

Figure 1 Report on The Capital Cost Basis of Estimate Report, p. 40

The most notable change from 2014 to the 2016 BP is the addition of the Angeles National Forest corridor; overall, the incremental increase is only $14 million:

Palmdale to Los Angeles	$13,456	$13,470	$14	• Reflected Supplemental Alternative Analysis East Corridor alignment under the Angeles National Forest • Increase in tunneling costs due to increase in tunnel length (+$0.8B) • Increase in retaining walls due to constrained right-of-way (+$1.4B) • Increase in Los Angeles Union Station costs with shared tracks into station and dedicated platform faces for high-speed rail (+$0.6B) • Decrease in aerial guideway due to increase in tunneling (-$0.7B) • Decrease in grade separations costs by implementing shared use of existing corridor south of Burbank (-$0.7B) • Decrease in right-of-way costs (-$0.7B) • Reduced utility relocation costs due to increase in tunneling (-$0.2B) • Moved cost of LMF to HMF (-$0.2B)

Figure 2 Report on the Capital Cost Basis of Estimate Report, p.16

CHSRA appears to have intentionally excluded the incremental cost increase for solely the tunneling portion in its 2016 BP. However, due to the magic of math, it was easy to figure out, as follows:

$ in Millions	**Palmdale to Los Angeles**
$1.4	retaining walls
$0.6	LA-US
-$0.7	Less aerial, more tunnel
-$0.7	shared corridor
-$0.7	ROW
$0.2	utility reloc due to tunnel
$0.2	LMF to HMF
$13.7	*SAA East Corridor Tunnel**
$14.0	**Total Net Change**

*calculated number; includes $.8 billion for increased tunnel length

Using the numbers above, the incremental increase in costs due to tunneling through the Angeles National Forest is $13.7 million. This amount seems faulty since there is approximately 33 miles of tunneling and this would equate to roughly $415 million per mile. This figure seems low, particularly since it is inferred that there will be 3 tunnels bored through 33 miles of mountains. It also appears to be low compared to other projects' cost per tunnel mile with some estimates being as high as $1 billion per mile. However, the shorter the tunnel, the lower

the cost per mile due to amortizing the fixed costs (i.e., boring machine) over more miles. Even so, the $415 million per mile seems suspiciously under-budgeted.

MISCELLANEOUS

The CHSRA did include some reasonable assumptions such as their contractor mark-ups and overhead; and future CPI inflation rates.

Fun facts:

- Each train set is about 72 feet long and will cost $49 million each
- Phase 1 assumes 54 train sets; full build out will have 70
- Full build out construction is expected to be completed by 2028 and start of revenue operations is 2029
- Palmdale to Burbank[5] is at "conceptual" design stage, meaning it's only about 5% complete
- To date, the California Legislature has appropriated $3.71 billion in restricted Prop 1A bond funds although they have not been issued. If the bond funds are lost for any reason, the funds will be unencumbered (unappropriated).

CONCLUSION

The 2016 BP plan's cost now stands $64.2 billion versus $67.6 billion, a reduction of $3.4 billion (5%) over the 2014 BP. Although the CHSRA has properly included several contingency margins, it has also failed to include many necessary line items that could consume their $3.4 billion "savings" and possibly push the project's cost back up and perhaps beyond the 2014 BP's estimate of $67.6 billion. Additionally, the 2016 BP states that it will seek loans and financing, yet it has *excluded any interest or finance charges in its estimate*. Other risks include: (1) relying solely on cap and trade for capital investment and loan payments, and which revenue stream is scheduled to sunset in 2020; (2) depending heavily on securing dubious federal and other agency grants; (3) appropriating Prop 1A bond funds which are being legally challenged and are burdened with stringent requirements for issuance; and (4) 2016 ballot initiatives and pending legislation proposing to repurpose the Prop 1A bond funds for other state projects. Based on a plethora of recent negative press and intense public scrutiny, it appears that the 2016 BP's goal was to come in less than the 2014 BP by excluding several key items and under budgeting others, while simultaneously ignoring very genuine risks.

[5] The document does not identify when the Palmdale to Burbank operating segment will be operational

APPENDIX A
SOURCE OF FUNDING
From Draft 2012 Business Plan (page 60)

Federal Grants

$3.48 billion in Federal grants, including funds available through the American Recovery and Reinvestment Act and Fiscal Year 2010 funds are available for the program:

- $315 million is dedicated for Phase 1 planning activities
- $3.165 billion is dedicated for construction in the Central Valley

Proposition 1A Bond Proceeds

- 9.95 billion in bond funds are available to pay for the planning and construction of the system, including regional services which will connect to the system:
    - $2.609 billion has been appropriated for and committed to matching the Federal grant funds in the Central Valley
    - $1.1 billion has been appropriated for and committed to "bookend" improvements in Caltrain electrification and improvements in Southern California
    - $950 million was appropriated for regional connectivity projects, as laid out in Proposition 1A
    - Up to $1.125 billion can be set aside for preconstruction activities and administration costs, as spelled out in Proposition 1A
- This leaves approximately $4.166 billion of bond funds available to help fund capital costs for the first high-speed rail line

Cap & Trade Proceeds

- In 2014, the Legislature approved appropriation of funding including 25% of the annual Cap and Trade proceeds on a continuous basis beginning in FY15/16 along with two one-time appropriations:
    - $250 million, one-time appropriation in FY14/15
    - $600 million in the Governor's budget for FY15/16 based on the continuous appropriation
    - $500 million in the Governor's budget for FY16/17 based on the continuous appropriation plus $100 million of a $400 million one-time appropriation, for a total of $600 million in FY16/17
- In making the continuous appropriation, the Legislature determined that we could use these funds to pay for planning and construction costs for the system and/or to repay loans made to the Authority.

2016 Business Plan RECORD DETAIL

Submission Date :	3/30/2016
Submission Method :	Project Email
First Name :	Morris
Last Name :	Brown
Stakeholder Comments/Issues :	Attached in PDF format are more comments to the 2016 Draft Business plan. Thanks, morris brown
Notes :	
Attachments :	COMMENTS-BIZ-PLAN-3-30-2016-MORRIS-BROWN.PDF (31 kb)

3/30/2016

California High Speed Rail Authority

Re: Comments on the draft 2016 Business plan

Use of Cap and Trade revenue to partially fund the project

Any possibility that the new IOS north or the full Phase I of the project can be constructed, for sure rests on the use of Cap and Trade revenues to fund the capital costs of construction.

1. There is currently a legal challenge in the courts about the whole issue of Cap and Trade revenues. The Legislation (AB-32), was passed without a 2/3 majority in the Legislature. Although a lower court has ruled this was legal, this decision has been appealed and at the current time, this appeal has yet to be ruled upon. Thus if the Appeals court over rules the lower court, these funds disappear.

2. Many experts have examined AB-32 and concluded the Cap and Trade funds will expire in 2020. The Draft business relies on these funds well beyond 2020. Indeed on a pay as you go basis, the Cap and Trade funding will be required through 2025. If this funding is "bonded" after that date, the funding will be needed through 2050 to provide a source to pay interest and principal on any such bonds sold.

Now even at the Authority board level, there is disagreement on whether Cap and Trade revenues "sunset" in 2020. Thus Chair Richard maintains they do not expire in 2020. Yet Director Rossi, the financial expert on the board, clearly states these revenues do expire by law in 2020. (Board meeting 5-12-2015).

See video: https://www.youtube.com/watch?v=MxeSHZ9DoxQ (41 seconds)

The issue arose again at the March 28th, 2016, Assembly Transportation Committee. At that hearing the bipartisan Legislative Analyst made the statement that indeed Cap and Trade revenues expire in 2020.

See video: https://www.youtube.com/watch?v=qxDZAiThuY8 (2 minutes)

At the very least the Authority should secure and publish a legal opinion on this issue. This could be done by the AG, or perhaps also by the Legislative Counsel Bureau.

Morris Brown,PhD
A founder of Derail (the first grass roots group against the HSR project)
Stone Pine Lane
Menlo Park

2016 Business Plan RECORD DETAIL

Submission Date :	3/30/2016
Submission Method :	Letter
First Name :	William
Last Name :	Warren
Stakeholder Comments/Issues :	
Notes :	Flash drive included with letter. Contents available upon request.
Attachments :	Warren_2016_DRAFT_Biz_Plan_Comment_033016.pdf (301 kb) William_Envelope_033016.pdf (349 kb)

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

March 30, 2016

Subject – Comment Regarding Draft 2016 Business Plan

Topic – Ridership Model Auto Group Factor Could Be Overstating Auto Market

The primary purpose of this Comment is to submit to the California High Speed Rail Authority (CHSRA) a complete set of analysis and the NHTS database to shown how the use of the Auto Group Factor may not be incorporating the implications of the Group portion of the auto market.

Summary

I believe the Ridership Model has added a costing parameter adjustment to divide auto costs by an assumed average auto occupancy of 2.5 for those who travel in "Groups". This is discussed in Section 2.1, on page 2-1, of the Ridership and Revenue document supporting the 2016 Business Plan. This adjustment appears to be in response to the Comment we made regarding the 2014 Business Plan where it appeared that all auto users were viewed as having a cost equal to the cost of a driver "only' auto, ever if there were 1 to 3 additional people (passengers) in the car.

This adjustment would appear to mean that if a driver is in a car by him/her self then that driver is viewed as having the projected cost per mile of 26 cents per mile in 2025 through 2029 and dropping to 24 cents per mile by 2040, per Table 4.4 on page 4-4 of the Ridership and Revenue document supporting the 2016 Business Plan. However, if there is 1 or more passengers (in addition to the driver) all of these people are considered to be a "Group", and the driver and the passengers would each have a auto cost of about 11 cents (26/2.5) in the 2025 to 2029 time period, and about 10 cents (24/2.5) in the 2014 time period.

For the driver without passengers his cost is roughly comparable to the High Speed Rail ticket prices on a per mile basis that can be computed from the Ridership and Revenue pricing Table 3.1 on page 3-3. For the Groups of a driver and one or more passengers, their effective auto cost is less than half of the HSR ticket prices on a per mile basis.

This, in effect is defining two tremendously different sub-markets of the "auto" market: the "Driver Only" sub-market and the "Group" sub-market. I can find no market forecasts for these two dramatically different sub-markets, in terms of the size of these sub-markets and the projected penetration of these two sub-markets. As the overall auto market is the primarily source of customers, the lack of these details shows something is not supposed to be apparent to the reader of the Business Plan.

To investigate this issue in more debt, I have attempted to see why the Authority chose the 2.5 "divider" for the Group potential customers; and at the same time I wanted to see what is the relative size of these two sub-markets.

I preformed two different analyses, which are discussed detail in the remained of this Comment.

First, I analyzed a US Department of Transportation data base to determine the average number of people (drivers and additional passengers) in autos, as a function of the length of the auto trip. The net of this analysis is that across the US, in 2009, there were 1.67 people in every auto trip of 50 miles or more.

Second, I created and then analyzed three different distributions of people per car trip (greater than 50 miles) that would produce an average of 1.67 people per trip, with the goal of determining what percent of the people are in a auto by themselves (the Driver only sub-market), and what percent of the people are in autos with two or more people (the Group sub-market). The net of this analysis is that only about 36% of all the people are in an auto by themselves, and 64% of all of the people are in a Group. In addition, the average number of people in a Group auto is 2.65, which is within 6% of the ratio of 2.5 that the Authority is using to reduce the cost of people in Group cars. It is good to see that the two conclusions validate the Authority's ratio.

What is striking is that these conclusions show that the mix of people in the auto market place are: 1) 36% in a car with just a driver, at a cost of 28 cents per mile, and 2) 64% are in cars that have an average of 2.5 people per car, with an average cost of about 11 cents per mile. Clearly the Authority has a chance to capture a share of the 34% of the market, that is a single person driving a car, and have some of these people choose to ride HSR. But how can the Authority penetrate the 64% of the market, who are in autos with other people, where the HSR price in the 25 cents per passenger mile range is more than two to three times the Group auto cost per passenger mile of about 11 cents per passenger mile? It does not appear that this significant problem is recognized or addressed in the Draft 2016 Business Plan. If these conclusions are correct, it is possible that the forecast of riders coming from the automobile market is overstated by a factor of about 3 times.

Detailed Discussion Of The Two Analysis

1. Analysis of a US Department of Transportation data base

The U.S. Department of Transportation, Federal Highway Administration provides a NHTS Home Page (National Household Travel Survey) Web site that has a tremendous amount of information regarding travel within the United Sates. This Web site asks that the following Citation be included when information from their site is referenced.

Citation

To recognize the valuable role of National Household Travel Survey (NHTS) data in the transportation research process and to facilitate repeatability of the research, users of NHTS data are asked to formally acknowledge the data source. Where possible, this acknowledgement should take place in the form of a formal citation, such as when writing a research report, planning document, on-line article, and other publications. The citation can be formatted as follows:

U.S. Department of Transportation, Federal Highway Administration, 2009 National Household Travel Survey. URL: http://nhts.ornl.gov.

The Home Page for this Web site is at: http://nhts.ornl.gov/index.shtml There are two ways to access and use this body of information. First, their data base can be downloaded and studied using software tools that are available to the person studying the database. Second, the person studying their database can utilize data extraction tools provided on the NHTS Web site which can be used to summarizes the results of various searches of the database.

Option One – Downloading the Database.

The data base to be downloaded is located at: http://nhts.ornl.gov/download.shtml
The current version of the database is: ***2009 NHTS - Version 2.1, February 2011***

Also, the user can access the "2009 Publications" web page for additional documentation.

The Database formats that are available are:

File Format	Download Size (MB)	Installed Size (MB)
SAS Windows Binary (.sas7bdat)	100	670
SAS Transport	100	600
DBase .dbf	90	990
ASCII .csv	100	620

Finally, an online "Codebook Browser" is available which provides definitions of the various columns in the different data sets. This Browser is available at: http://nhts.ornl.gov/tables09/CodebookBrowser.aspx

The ASCII .csv version of the NHTS database has been downloaded, and is attached to this Comment on the accompanying Thumb Drive in the folder marked "Data Sets". The Authority may wish to study these data sets using software tools at their disposal.

Option Two – Utilizing the NHTS Online Analysis Tools

The NHTS offers a group of online tools which are located at:
http://nhts.ornl.gov/tools.shtml

One of the available tools is the "Data Extraction Tool"

This data extraction tool allows users to obtain data from the 1995, 2001, or 2009 National Household Travel Surveys (NHTS) to examine total travel (i.e., person trips, person miles traveled, vehicle trips, and vehicle miles traveled). This tool also allows users to extract data from all three surveys for trends analysis. The user can select one or more elements using selection criteria to generate a customized data set. This customized data set can be downloaded in CVS format for additional analyses.

For the add-ons, the user can extract data from a specific add-on. Note: the samples sizes used to generate area-specific travel can be extremely small. Users are advised to use these data with caution.

The customized data set will include the user-selected criteria (e.g., household income), total travel (i.e., person trips, person miles traveled, vehicle trips, and vehicle miles traveled), and the corresponding sample size used to estimate total travel.

To start extracting NHTS data, the user needs to select one of the following options:

- Total Travel by Survey Year and Selected Household Characteristics
- Total Travel by Survey Year and Selected Person Attributes
- Total Travel by Survey Year and Selected Trip Characteristics
- Trends Analysis (1995, 2001 and 2009 surveys)

My Analysis

I chose not to utilize these downloaded data sets (Option One), but rather I elected to use the NHTS Online tools (Option Two). I selected the "Total Travel by Survey Year and Selected Trip Characteristics" process to collect information regarding the use of automobiles in the United States in 2009.

I performed four Extractions, as shown in the Folder on the Thumb Drive marked "Data Extraction Requests". These four query requests generated the output shown on the last row of the request page. For example, to gather data on all passenger trips using Private Owned Vehicles, for trips of 100 miles or more, I selected Year to be "2009", Mode to be "POV", and Miles to be "100+ miles". For the other parameters of Household Incomes, Age, Gender, Worker, and Purpose I selected "Combine Total". The result was 3,114 Million Person trips, covering 661,163 Million Person Miles.

I downloaded the results as CVS files, and they are included in the "Data Extraction Results" folder on the Thumb Drive.

My analysis of the data provided by these four extractions is shown on Exhibit 1, which is attached to this Comment. For Rows 6 to 9, Columns A to G are the information shown in the "Data Extraction Results" folder. Row 5 is the result of subtracting Rows 6

through 8 from Row 9. Column H is calculated by dividing Column D by Column F. Note that the average number of people in an auto for a trip of 100 or miles is 1.9, substantially higher than the overall average of 1.4, which is due to the smaller number of people per trip in the shorter distances between 0 and 74 miles,

Rows 15 through 19 is the same information as Rows 6 through 9, just presented as percentages.

Rows 24 through 28 Shows the Average length per trip for the different mileage groups, above, by dividing Miles by Trips for both People (Columns E by D) and Vehicles (Column G by F). Note the average length of all trips is 10 miles, but for the group of trips at 110 miles or more, the average is in the 212 to 216 range (about half the distance between San Francisco and Los Angeles).

Rows 32 to 34 summarize the information shown above in Rows 6 through 8, in terms of what defines the HSR market place. If the market is viewed as just serving the long distances, of 100 or more miles, then the average number of people per vehicle trip is 1.88 as shown on Row 32 and Row 8, in Column H. If the market is expanded to include trips in the 75 to 99 miles the average number of people drops to 1.82. See Row 33 Column H. Finally if the market is expanded to include all trips of 50 or more miles, the average number of people per vehicle trip is 1.67 as shown in Row 34, Column H. This is a summary of the information presented in Rows 6 through 8, above.

2. Analysis of three different distributions of the number of people per auto trip.

I created and analyzed three different possible distributions of people per car trip (greater than 50 miles) that would center on an average of 1.67 people per trip, with the goal of determining what percent of the people are in a auto by themselves (the Driver only), and what percent of the people are in autos with two or more people (the Groups). This would allow for gaining an understanding of the mix of Driver only and Group auto users.

This is a significant problem for the Authority as the reliable national data presented in my first analysis, above, shows that the average number of people per auto trip, if the trip is over 50 miles, is in the range of 1.67

This analysis is shown as Exhibit 2, attached. I created a group of 4 rows, shown in Rows 6 through 9 that represent auto trips with 1 to 4 people in an auto trip, as shown in Column A.

I then created and estimated 3 possible distributions of cars and people in Rows 6 to 9, Columns C to E.. The Medium case, Column D, shows that 60% of the autos have 1 person, the driver; 22% have the driver and one additional passenger; 10% have 3 people; and 8% have 4 people. I then created a Best case, Column C, which shows that 70% of the autos have just the driver. This is better for the Authority as a larger segment of the population would be in the Driver Only situation and fewer would be in the Group

situation where the cost of operating the auto is being divided over multiple people. Lastly I created a Worst case, Column E, that puts a larger share of the people in cars with other people, which makes the Group submarket a larger share of the total market, and the Driver submarket smaller.

In Columns G through I, for Rows 6 through 9, I computed the average number of people per trip by multiplying the number of people in Column A and the percentage distributions in Columns C through E, The results are in Columns G through I. The results as shown in Row 10, Columns G through I, is the weighed average number of passengers in an auto trip. Note that Medium case total in Row 10, Column H is 1.66 people per trip. This is the target I was trying to reach, as the NHTS database tells me that 1.67 is the national average of people per auto trip, for 50 miles and more. To achieve this target of 1.67, I had to change Column D, rows 6 to 9, until I achieved the desired result. I also decided that as the number of people in the auto goes up, the frequency of this auto with more people goes down. So while 22% may have just two people in the Medium case, the auto with 3 people must have a frequency of less than 22%, such as the 10% which I selected.

The distribution of people for each of the three cases is shown in Rows 6 through 9, Columns K to M.

It is important to note the difference between the distribution of autos with different numbers of people per auto, as shown in Rows 6 through 9, Columns C to E, and the distribution of the people across the autos, as shown in Rows 6 through 9, Columns K to M. For example, for the Medium case, to achieve the desired result of 1.67 people per trip, in Cell H10 (Column H, Row10), the distribution of the autos with just a driver needs to be in the range of 60% of the autos, see Cell D6. But while 60% of the autos are carrying just one person, that one person only represents 36% of all of the people in all of the autos, see Cell L6. Therefore, 64% of the people are in autos with 2 or more people (Column L, Rows 7 through 9). This 64% of all the people in autos are what the Authority define as "Groups"

This analysis is consistent with the Authority's view that there are 2.5 people in any car that is a Group (more that one person). Rows 21 shows that 40% of the cars in the Medium case have more than just the driver (Column D, Rows 7 through 9), and these autos contribute 1.06 of the weighted average of people per trip, as shown in Cell H21, which is the sum of Column H, Rows 7 through 9. When the weighted average contribution of 1.06 is divided by the 40% of the autos carrying more than just the driver, the result is 2.65 average number of people in any auto that has more than just the driver. The difference between this projection of 2.65 people in a Group auto (Greater than one person), and the Authority's projection of 2.5 is a 7% difference; certainly acceptable for this level of analysis.

My Conclusions

I conclude there is the one passenger per auto sub-market where the auto operating cost of 20 to 30 cents can be in the range of the long haul HSR pricing of 22 to 28 cents per mile. In this sub-market HSR has a chance to win the customer. Once there is a Group, with a second, third, and even a fourth person in the car, the auto operating costs, per person, drop to half, a third, or even a quarter of the 20 to 30 cents. Unless speed is critical to the people in a car, the multi-passenger per car sub-market will be extremely hard to penetrate. I have seen no survey data that shows this to be the case. I have also not seen any survey data that compares the preferences of people in Driver only autos compared to the preferences of people in Group autos.

This then raises the question of what is the size of the single passenger sub-market, where the Authority can be financially competitive. The analysis above leads me to believe that the true market for HSR to capture automotive passengers is about 36% of the over all auto market place. I see nothing in the 2012, or the 2014, or the 2016 Ridership Reports that recognizes this limitation to penetrate this overall auto market. If this conclusion is correct, it is possible that the forecast of riders coming from the automobile market is overstated by a factor of about 3 times.

William H. Warren
williamhwarren@sbcglobal.net
c/o Michael J. Brady
1001 Marshall Street, Suite 500
Redwood City, CA 94063-2052

Exhibit 1

	A	B	C	D	E	F	G	H
1								
2				**Analysis of NHTS Database**				
3								
4	Year	Mode	Miles	Person Trips (in millions)	Person Miles (in millions)	Vehicle Trips (in millions)	Vehicle Miles (in millions)	Average People per Vehicle
5	2009	POV	0-49 miles	318,713	2,291,177	228,805	1,669,279	1.39
6	2009	POV	50-74 miles	3,882	227,027	2,561	149,126	1.52
7	2009	POV	75-99 miles	1,409	118,800	826	69,340	1.71
8	2009	POV	100+ miles	3,115	661,163	1,658	357,366	1.88
9	2009	POV	All Distances	327,118	3,298,168	233,849	2,245,111	1.40
10								
11								
12			**Distribution of People and Vehicle Traffic**					
13								
14				% of Total	% of Total	% of Total	% of Total	
15			0-49 miles	97.4%	69.5%	97.8%	74.4%	
16			50-74 miles	1.2%	6.9%	1.1%	6.6%	
17			75-99 miles	0.4%	3.6%	0.4%	3.1%	
18			100+ miles	1.0%	20.0%	0.7%	15.9%	
19			All Distances	100.0%	100.0%	100.0%	100.0%	
20								
21			**Distribution Of Average Length per Trip**					
22								
23					Person Miles per Trip		Vehicle Miles per Trip	
24			0-49 miles		7		7	
25			50-74 miles		58		58	
26			75-99 miles		84		84	
27			100+ miles		212		216	
28			All Distances		10		10	
29								
30			**Definition of HSR Marketplace**					
31								
32		Limited to:	100+ miles	3,115	661,163	1,658	357,366	1.88
33		Including:	75-99 miles	4,523	779,963	2,484	426,706	1.82
34		Also Including:	50-74 miles	8,405	1,006,991	5,044	575,832	1.67

Exhibit 2

Impact Analysis of More Than One Passenger Per Auto Trip

Number of People Per Auto Trip	Distributon of Cars with People Per Trip			Average People Per Trip			Distribution of All People		
	Best*	Medium	Worst*	Best	Medium	Worst	Best	Medium	Worst
1	70%	60%	50%	0.70	0.60	0.50	48%	36%	26%
2	19%	22%	21%	0.38	0.44	0.42	26%	27%	22%
3	7%	10%	18%	0.21	0.30	0.54	14%	18%	28%
4	4%	8%	11%	0.16	0.32	0.44	11%	19%	23%
	100%	100%	100%	1.45	1.66	1.90	100%	100%	100%

* - for the Authority

Market

Driver only — 60% are cars with =1 person — 0.60 people in = I person cars — 36% of all people (drivers plus No passengers)

Summary: 1.00 person in a car with 1 person

Multiple people — 40% are cars with >1 person — 1.06 people in > I person cars — 64% of all people (drivers plus passengers)

2.65 people in a car with >1 person

Ratio of cars with > 1 person to cars with just 1 person is 67%

In other words for every car with 1 person there is 67% of a car with > 1 person in the car,

2.5 Authority's number of people in a Group (> 1 person)

NHTS Travel by Auto for 50 miles and greater, per Auto 1.67

The Authority's number is within 6% of our number.

In Summary :

36% of all people (who are in cars) are in cars with just the Driver (one person)

64% of all people (who are in cars) are in cars that are a Groups (more than one person)

William Warren
C/O Michael Brady.
1001 Marshall Street
Suite 500
Redwood City, CA 94063-2052

UNITED STATES POSTAL SERVICE

1020

95814

CERTIFIED MAIL

7015 1730 0001 0704 7962

Attn: Draft 2016 Business Pl
California High-Speed Rail Authe
Suite 620 MS-1
770 L Street
Sacramento CA.
95814.

2016 Business Plan RECORD DETAIL

Submission Date :	3/28/2016
Submission Method :	Letter
First Name :	William
Last Name :	Warren
Stakeholder Comments/Issues :	
Notes :	Flash drive included with letter. Contents available upon request.
Attachments :	Warren_DRAFT_2016_Bipz_Plan_Comment_032816.pdf (420 kb)

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

March 28, 2016

Subject – Comment Regarding Draft 2016 Business Plan

Topic – Plaintiff's Declarations from the Tos – CHSRA Lawsuit

The primary purpose of this Comment is to submit to the California High Speed Rail Authority (CHSRA) a complete set of the declarations and supplemental declarations that were filed with the Court by the Plaintiffs, John Tos, Aaron Fukuda, and County of Kings in conjunction with the Opening and Closing Briefs for the case John Tos et al v.CHSRA et al. (Sacramento County Superior Court case No.34-2011- 00113919) lawsuit.

These declarations contain a wealth of information and analysis regarding a number of issues that the Authority needs to consider and needs to address as part of the development of the Final 2016 Business Plan. These issues relate to the use of Proposition 1A bond funds for system construction and the requirements contained in that ballot measure, notably: 1) the minimum time that will be required to travel from San Francisco to San Jose and to Los Angeles, 2) the minimum achievable headway requirement for the system, 3) the prohibition on an operating subsidy, 4) the overall financial viability of the chosen alignment, and 5) the availability of funds to fully construct the IOS as well as the complete Phase 1.

These declarations are stored on the "Thumb Drive" that is included with this cover letter. There are 16 declarations in one consolidated PDF file. As shown on Table 1, below, each declaration has been assigned a Declaration Number. The first 13 are associated with the Plaintiffs' Opening Briefs and the last 3 are Supplemental Declarations associated with the Plaintiffs' Closing Briefs.

Table 1

Declaration Number	Name	Type of Declaration
1.	Michael G. Brownrigg	Declaration
2.	Wendell Cox	Declaration
3.	William C. Grindley	Declaration
4.	Kathy A. Hamilton	Declaration
5.	Jason W. Holder	Declaration
6.	Paul S. Jones	Declaration
7.	Quentin L. Kopp	Declaration
8.	Adrian Moore	Declaration
9.	James Elliott Moore II	Declaration
10.	Randal O'Toole	Declaration
11.	Robert W. Poole	Declaration
12.	Richard F. Tolmach	Declaration
13.	William H. Warren	Declaration
14.	Paul S. Jones	Supplemental Declaration
15.	Kathy A. Hamilton	Supplemental Declaration
16.	William H. Warren	Supplemental Declaration

Also, please note, the Attorney General (AG) prepared the Administrative Record (AR) for the Tos vs CHSRA lawsuit. (Sacramento County Superior Court case No.34-2011-00113919) In that AR there is a Declaration by Mr. Frank Vacca, as AR Document Number 356, and which has a Leading Bates Number of AG013542.

We have not included this document as it was prepared by the Authority and presumably is readily available to the Authority in its files. We will consider this to be your document and that it is also incorporated into this Comment, by this reference. If you need additional copies of this document, please let me know by April 4th, 2016 and we will send them to you.

Thank you,

William H Warren

William H. Warren
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c/o
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1001 Marshall Street, Suite 500
Redwood City, CA 94063-2052

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Attn Draft 2016 Business
California High-Speed Rail
Suite 620 MS-
770 L Street
Sacramento,
9581

FIRST CLASS

2016 Business Plan RECORD DETAIL

Submission Date :	3/28/2016
Submission Method :	Letter
First Name :	Andrew
Last Name :	Chesley
Stakeholder Comments/Issues :	
Notes :	
Attachments :	San Joaquin_COG_Biz_plan_March 28.pdf (920 kb)

SAN JOAQUIN COUNCIL OF GOVERNMENTS

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www.sjcog.org

March 28, 2016

Mr. Dan Richard
Chairperson, California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

SUBJECT: SJCOG Comments on California High-Speed Rail Authority (CHSRA) Draft 2016 Business Plan

Dear Chairperson Richard:

The CHSRA Draft 2016 Business Plan presents a major change for where high-speed rail (HSR) service will be initiated. This new plan focuses on delivering a HSR line connecting the Silicon Valley to the Central Valley in 2025 instead of between Merced and the San Fernando Valley in 2022. While the Silicon Valley to Central Valley segment may be cheaper to construct, it is not what the legislature voted for in 2012 to enable HSR construction to begin. Nor is it consistent with Senate Bill 862 (2014), which provided the substantial ongoing Cap & Trade funding required for the HSR project to be viable. Without significant changes to the Draft Business Plan, the San Joaquin Council of Governments (SJCOG) will be forced to take a position of opposition towards the Business Plan, and by extension the HSR project.

The new plan greatly delays closing the gap between Northern and Southern California which your 2012 Revised Business Plan stated was "the state's highest priority for intercity rail". It also delays providing benefit to the Northern San Joaquin Valley, Sacramento, and the rest of Northern California by eliminating the initial connection to Merced. The promise of the early connection to Merced has been essential for support from SJCOG for the HSR project for many years. CHSRA's commitment to Merced's inclusion as part of the initial HSR implementation goes back to before Proposition 1A was passed by the voters in 2008.

The CHSRA's 2012 Revised Business Plan not only promised the initial HSR service to be between Merced and Southern California, but it also committed to providing funding support for investments in conventional services which would connect to the HSR Initial Operating Segment. The Budget Act of 2012, as amended by SB 1029, included the appropriation of $53.9 million of Proposition 1A funding for planning work in the Merced to Sacramento Corridor. These funds are needed to enable the planning, environmental, and engineering work needed to provide improved passenger rail service between the future Phase 1 HSR service and Sacramento, and to provide the foundation for full Phase 2 HSR implementation.

The legislative intent behind the inclusion of the Merced to Sacramento planning funding in SB 1029 was to do the planning needed to support near-term passenger rail improvements that will benefit both the Amtrak San Joaquin service and the Altamont Corridor Express service. While Page 23 of the CHSRA Draft 2016 Business Plan asserts that "Phase 2 corridor studies and planning are ongoing including the connections and opportunities for early investments between Merced and Sacramento and between Los Angeles, the Inland Empire, and San Diego", this is not accurate. Despite the unwavering support and high level of interest from the region, there has been no progress over the last several years made in the planning for early investments for improving rail service between Merced and Sacramento.

The CHSRA 2016 Business Plan should be revised to specify that the majority of these planning funds (allocated in SB 1029) will be used to plan near-term conventional improvements and to highlight that this work will be done in partnership with the San Joaquin Joint Powers Authority, coordinated with the Central Valley Rail Working Group, and will be completed as quickly as possible.

The CHSRA Draft 2016 Business Plan includes a commitment to invest $2.1 billion between Burbank and Anaheim. The Executive Summary states that CHSRA will reinvest savings from its cost estimates for the Phase 1 HSR project to pay for this service enhancement in Southern California. However, Section 6 ("Funding and Financing") only specifies the $500 million commitment CHSRA already made in 2012 and lists a number of potential sources (most of which are not HSR funds). Rather than providing new funds through Phase 1 HSR savings to the Burbank to Anaheim Segment, CHSRA appears to be mostly promising their support for future Transit and Intercity Rail Capital Program (TIRCP) Cap & Trade and federal grant applications for this segment.

While SJCOG is not opposed to near term improvements in the Burbank to Anaheim corridor, SJCOG must stress that the system as proposed in the Draft 2016 Business Plan will not provide any meaningful benefit to the Northern San Joaquin Valley and Sacramento for years if not decades. As part of the "cost savings" for the Phase 1 HSR project, CHSRA must revise the Draft 2016 Business Plan to include an enforceable commitment for investing in near-term conventional rail connectively improvements between the Northern San Joaquin Valley, Sacramento, and the San Francisco Bay Area. CHSRA will need to specify where this funding will come from and that it will be a priority of the CHSRA to have improved conventional rail service between Fresno and Sacramento as an important "feeder" service to the Phase 1 HSR system. It is imperative for the state to fulfill the promise of the CHSRA's Revised 2012 Business Plans by supporting this improved conventional rail connectivity to the Phase 1 HSR service through the following:

- CHSRA must include the Central Valley Wye connection to the Merced Station as part of the Phase 1 HSR in the 2016 Business Plan.

- CHSRA must immediately release the $53.9 million of Proposition 1A funding authorized by the Budget Act of 2012, as amended by SB 1029 to the San Joaquin Joint Powers Authority (SJJPA) for planning work in the Merced to Sacramento Corridor.

- CHSRA must include a commitment for a $1.0 billion investment in near-term conventional rail connectively improvements between Fresno and Sacramento in the 2016 Business Plan.

- CHSRA must include a commitment for a $1.0 billion investment in near-term conventional rail connectively improvements between Merced and San Jose through the Altamont Pass in the 2016 Business Plan.

In addition, the Draft 2016 Business Plan does not include any commitment for funding near-term conventional rail improvements to the Capitol Corridor rail service. The Capitol Corridors provide a vital direct connection to the San Joaquin service in Sacramento, and share right of way and stations between Martinez and Oakland with the San Joaquin service, and between Fremont and San Jose with the Altamont Corridor Express service. We request that funding be provided to improve the Capitol Corridor service as follows:

- CHSRA must include a commitment for a $1.0 billion investment in near-term conventional rail connectively improvements between Sacramento and San Jose in the 2016 Business Plan.

We appreciate the opportunity to comment on the CHSRA Draft 2016 Business Plan. CHSRA has received significant support from SJCOG, the Northern San Joaquin Valley, and Sacramento for many years – even though the Pacheco Pass route selected by CHSRA between the Bay Area and San Joaquin Valley does not effectively serve the Northern San Joaquin Valley or Sacramento. Support from these regions helped pass Proposition 1A and members of the legislature from these regions provided key votes for CHSR in 2012 and 2014 (in addition to authoring Proposition 1A). We hope that the final version of your 2016 Business Plan will be a plan which can be supported by SJCOG. However, if these requested changes to the 2016 Business Plan are not made, SJCOG will be forced to adopt a position of opposition towards the Business Plan, and by extension the HSR project.

Sincerely,

ANDREW T. CHESLEY
Executive Director
San Joaquin Council of Governments

cc Senator Kathleen Galgiani
Senator Lois Wolk
Senator Anthony Cannella
Senator Jim Beall
Assemblymember Adam Gray
Assemblymember Susan Eggman
Assemblymember Kristin Olsen
Assemblymember Jim Cooper
Assemblymember Jim Frazier
Mayor Anthony Silva, SJCOG Chair
Supervisor John Pedrozo, SJJPA Chair
Councilmember Bob Johnson, SJRRC Chair
Mr. Mike McKeever, Executive Director, SACOG
Ms. Rosa Park, Executive Director, StanCOG
Ms. Marjie Kirn, Executive Director, MCAG
Ms. Stacey Mortensen, Executive Director, SJRRC
Mr. Mark Watts, Smith, Watts & Hartmann

2016 Business Plan RECORD DETAIL

Submission Date :	4/4/2016
Submission Method :	Project Email
First Name :	Leland
Last Name :	Jue
Stakeholder Comments/Issues :	
Notes :	
Attachments :	SKMBT_C284e16040408591.pdf (192 kb)

Bakersfield F Street Station Alignment - RECORD #107 DETAIL

Status :	Action Pending
Record Date :	3/31/2016
Response Requested :	
Submission Date :	3/31/2016
Affiliation Type :	Individual
Interest As :	Individual
Submission Method :	Website
First Name :	Leland
Last Name :	Jue
Professional Title :	Automation Engineer
Business/Organization :	
Address :	
County :	Kern
Apt./Suite No. :	
City :	Bakersfield
State :	CA
Zip Code :	93311
Telephone :	661 477 3959
Email :	lwjue@bak.rr.com
Fax :	
Cell Phone :	
Email Subscription :	Fresno - Bakersfield
Add to Mailing List :	Yes
Comment Type :	
Stakeholder Comments/Issues :	

You are using Bakersfield's tax dollars to build a station in Tim Buck Too!

Subscription Request/Response :	URL: http://sites.focalbeam.com/chsra.gov/pb_commentSubmit.php?fn=Leland&ln=Jue&em=lwjue%40bak.rr.com&city=Bakersfield&state=CA&zip=93311&interest=Individual&sections[]=Fresno+-+Bakersfield Response: *OK*
EIR/EIS Comment :	No
Attorney or Law Firm? :	No
Need PI Response :	
Form Letter :	
Submisison in Language other than English :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/3/2016
Submission Method :	Letter
First Name :	James
Last Name :	Moore
Stakeholder Comments/Issues :	Hard copy is en route.
	James E. Moore, II, Professor, Vice-Dean for Academic Programs, USC Viterbi School of Engineering UNIVERSITY OF SOUTHERN CALIFORNIA President, Institute of Industrial and Systems Engineers (IISE) Olin Hall of Engineering (OHE) Room 200M, Mail Code 1450 3650 McClintock Avenue, Los Angeles, CA 90089-1450 Direct: (213) 740-0595 (email contact will draw a more timely response) Cell: (213) 663-8146 Staff: (213) 740-2751, Elena Camarena, ecamaren@usc.edu<https://ppdpost.sppd.usc.edu/owa/redir.aspx?C=nZ62uEaSxkCRJRkM8dH0sB0wbjP0_c8IfXFh3r85GgLrUDhYmUjpFc_oNdwN-HYyOFwf3qu_KlE.&URL=mailto%3aecamaren%40usc.edu> Fax: (213) 740-8493 Email: jmoore@usc.edu<mailto:jmoore@usc.edu>
Notes :	
Attachments :	Moore_040316_Biz_Plan.pdf (999 kb)

USC Viterbi
School of Engineering

OFFICE OF THE DEAN

MEMORANDUM

TO: Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814
FROM: Professor James E. Moore, II, Vice Dean for Academic Programs
DATE: April 3, 2016
SUBJECT: Comment Regarding Draft 2016 Business Plan
TOPIC: Operational and Financial Deficiencies in the 2016 Business Plan

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The purpose of this Comment is to submit to the California High Speed Rail Authority (CHSRA) a list of issues that should be dealt with before the approval of the 2016 Business Plan. I offer this Comment as an independent area expert. My positions are my own and do not reflect the opinions or position of the University of Southern California, its leadership, its trustees, or its faculty.

These issues include use of Per Passenger Mile (PPM) and Per Seat Mile (PSM) metrics, inadequate ridership survey data, and the misuse of Monte Carlo modeling.

My Qualifications to speak on these matters

I hold Bachelor of Science degrees in Industrial Engineering and in Urban Planning (1981, Technological Institute at Northwestern University); a Masters of Science in industrial Engineering (1982, Stanford University); a Masters of Urban and Regional Planning (1983, Northwestern University); and a PhD in Civil Engineering - Infrastructure Planning and Management (1986, Stanford University).

University of Southern California
OHE 200, Los Angeles, California 90089-1450 • Tel: 213 740 7832 • Fax: 213 740 8493

I am presently the Vice Dean of the Viterbi School of Engineering at the University of Southern California (USC), and have been a member of both the USC public policy and engineering faculties since January 1988. Prior to joining USC, I was a faculty member in Northwestern University's McCormick School of Engineering and Applied Science (then called the Technological Institute). I received tenure in what is now USC's Price School of Public Policy (formerly USC's School of Urban and Regional Planning) in 1993; in USC's Astani Department of Civil and Environmental Engineering in 1998; and in USC's Epstein Department of Industrial and Systems Engineering in 2003. I serve as Director of the Transportation Engineering program in the USC Astani Department of Civil and Environmental Engineering, and served for six years as Chair of the USC Epstein Department of Industrial and Systems Engineering. I have served as Vice Dean for Academic Programs in the USC Viterbi School of Engineering for the past five years.

My fundamental and applied research focus is on the engineering and economic aspects of large-scale transportation and land use systems. My specific research interests include risk management of infrastructure networks subject to natural hazards and terrorist threats; infrastructure investment and pricing policies, especially in California; economic impact modeling; transportation network performance and control; and large scale computational models of metropolitan land use/transport systems. I have published extensively in the transportation planning and engineering literatures. I have closely followed the course of the California high-speed rail project since spending a sabbatical year at in the California State Library's California Research Bureau in 1998, and have followed the project closely since 2003, reading materials from the California High-Speed Rail Authority (CHSRA) and its critics; and occasionally lecturing on the project.

PPM and PSM - Why are the Per Passenger Mile (PPM) metrics particularly important?

The key to any comparative financial analysis of different business activities around the world is to define a common dominator that allows apples to-apples comparison of how resources relate to the delivery of outcomes. The Authority would like this common dominator to be the Per Seat Mile (PSM) metric. For strictly operationally oriented questions, this is a reasonable choice. PSM measures revenues and expenses for every seat moved, regardless whether the seat is empty or occupied. The alternative common dominator is the Per Passenger Mile (PPM) metric, which is used in the Grindley and Warren "To Repeat" report. PPM provides an overall business level financial analysis perspective that incorporates a view of the passengers in terms of the prices they are paying, per mile, and how many passengers are actually traveling on the railroad and what it is costing the railroad to move these passengers. This contrasts with the number of seats being moved.

In practice, use of either PPM or PSM comparisons leads to the same conclusion about the *relative* relationship between revenues and costs. For example, if costs on a PPM basis are 70% of PPM revenues, then costs on a PSM basis will be 70% of PSM revenues. It can be difficult to obtain comparative data in consistent units from other public transportation companies and agencies from around the world. Sometimes it is possible to acquire comparative information that is PPM-based. Sometimes comparative data is PSM-based. If the Load Factor (LF) is available, it is possible to derive the one measurement from the other, as Passenger Miles divided by Seat Miles equals Load Factor.

Amtrak's Acela system is the logical domestic system against which to benchmark the anticipated performance of the Authority's California system. Amtrak publishes monthly reports that provide revenue and cost data for each of its operational routes, including the Acela line in the Northeast Corridor. With these published operational data, it is possible to compute both revenues and costs on a PPM and PSM basis. The Acela does not operate at the 200 MPH speeds the Authority is projecting, and the Authority should be able to show how their projected costs on a PPM and PSM basis will be different from the Acela data, because of these higher speeds. This comparison does not appear to be included in the Authority's 2016 Business Plan.

Much of this projected operational data was available in the Authority's 2012 Business Plan, but less was available in the 2014 Plan, and it appears that almost none is available to the public with the release of the Draft 2016 Business Plan. Comparative data defined on a PSM- and PPM-basis, for the Amtrak Acela route and the existing international operators of HSR systems has been lacking in the 2012, the 2014 and the 2016 Business Plans and their supporting documents. These basic comparisons are of obvious and great relevance, and their omission is glaring. This lack to transparency and comparative analysis is a disservice to the public interest and breeds distrust.

Ridership – No survey data has been used to validate Authority projections

It appears that the Cambridge Systematics Ridership and Revenue forecasting model focuses on the ridership during the Phase I period of operations by assuming a mature existence of the HSR program in those years. The estimated 50% probability of 38 Million riders in 2029 and 41 Million riders in 2040 presumes a mature Phase I system.

It is unclear how the similar projections for the Initial Operating Segment (IOS) North period of operations were created. These projections should not be predicated on the mature market penetration characterizing the Phase I system. Specifically, the supporting documents show a ridership projection of about 7.6 Million in 2025, but this appears to reflect a mature penetration of this marketplace. These values appear to have been extrapolated from the Cambridge Systematics Ridership and Revenue forecasting results for a period in which the assumptions that underlie these results do not apply.

There do not appear to have been any surveys of potential customers to estimate the level of interest in riding the HSR system between San Jose and Bakersfield in combination with the bus and conventional rail services that would be required to complete the journey into the LA Basin and the San Francisco Bay Area. Given the lack of such a survey or further model estimation efforts based on such a survey, how was the mature penetration forecast for the IOS North marketplace developed? Who developed these "mature penetration" projections? What are these individuals' track record with respect to accurate forecasts in prior studies? It appears the public is being asked to trust an unknown group to make a complicated projection that has been extracted from a modeling exercise defined for quite different conditions, and that no prospect customer or user data has been collected nor any other efforts made to validate this projection.

The 2016 Business Plan provides a reduced ridership projection, below the mature penetration rates, as HSR starts begins operation and must acquire market share by successfully competing for riders from the auto, bus, and conventional train options. This reduced ridership projection appears to have been based entirely the mature penetration expected for the IOS North. Instead the Authority should estimate a new model that

incorporates survey data accounting for the traveler tastes and resources in the existing markets. What evidence does the Authority have that riders are interested enough in switching to HSR that there is a 50% probability of 2.9M riders in 2025, and this penetration will double in three years and grow to 6.2 Million in 2028 and then, in a single year, triple to 19.2 Million in 2029? The 2092 forecast of 19.2 Million is a full 50% of the mature marketplace forecast of 37.5 Million. If the Authority could credibly justify a forecast that their business that would actually grow like this, private capital would flow to this project like a river. Unfortunately, there is no credible rationale for Authority's forecast, and unless or until the Authority can provide such support for their forecast, capital markets will continue to treat this project with skepticism.

Monte Carlo Method – There is insufficient data on to base Monte Carlo bottom up cost projections

Use of Monte Carlo techniques to estimate total cost distributions requires existing, validated, and documented data that represent the range and the distribution within the range of various cost elements. The Authority lacks these data, and so estimates must be made to be able to apply these tools. Every effort should be made to validate or otherwise account for the quality of these estimates. However, it does not for example, appear, that this the case with the Authority's cost inputs for Operational and Maintenance labor. The 2016 Business Plan includes many pages of projected costs per position, and the projected staffing levels. However there is no data from Acela or International HSR operations such as the French and Spanish HSR operators that can be used to validate the staffing levels projected in the Plan. The absence of any comparative validation of the projected labor head counts, for example, leaves the staffing cost estimates a guess at best, even if

embedded in an assumed distribution. Such crude use of such useful and powerful modeling tool reflects badly on the Authority's analysis, and risks giving the tool a bad name.

Monte Carlo Method – There is insufficient data on which to base Monte Carlo top down cost projections

Reference class analysis could help validate the 2016 Business Plan's "Bottom Up" approach to estimating cost distributions. However, it is not correct to presume that the aggregate experiences of other agencies are directly transferable to the Authority's project. For example, it was inappropriate, from a methodological perspective to use the LGV cost variances, at an average of 5%, as good guidance for the Authority to adjust their own midrange cost projections. This comparison first appeared in the 2014 Plan, which stated that "Most Likely parameter was taken as the Medium cost scenario + 5% based on the two most 'on-point' cases in the reference set—the LGV Rhone-Alps and LGV Nord, both high-speed rail systems." It is very important to note that these two sections of the French HSR system went into operation in 1994 and 1993, over ten years after the French HSR system initially went into operation.

With at least 10 years of internal operational cost data at their disposal, the French still constructed an operations cost plan for these two new sections that proved to deviate from experience by 4% to 6%. The Authority has no such internal operational data or externally-validated data, only guesses and distributions of guesses. It would be more appropriate to assign a much, much, higher variance percentage to be used to adjust the Medium cost scenario to the Most Likely cost value. We are not dealing with differences

that appear due to statistical variations occurring randomly around a recognized, well understood mean, but rather trying to cobble together guesswork without the benefit of any external validation. Constraining the Authority's guesses to only a small portion of the possible cost spectrum is wildly optimistic.

Analysis based on the Monte Carlo tool – Correlations have been handled inconsistently.

Comments about the Draft 2014 Business Plan include a comment submitted by Professor Evan Porteus of the Stanford University Business School. This Authority Record #182 is on PDF page 721 of the 825 page PDF file. His points were valid for the 2014 Business Plan and they remain valid for the 2016 Plan. It appears that nothing has been done to correct the situation, which Professor Porteus described as being "intellectually dishonest." At a minimum, the Authority's mix of assumptions is methodologically inconsistent. Dishonesty would require a degree of intention.

In the Monte Carlo simulations that Prof. Porteus reviewed, the quantities simulated were assumed to be statistically independent. But in Section 6 of the 2014 Business Plan (pp 51-52), the scenarios for revenue and O&M costs were assumed to be perfectly positively correlated. This dictated, as he pointed out, that if the revenues were low, then so were the O&M costs. Enforcing the statistical independence the Authority claims on this portion analysis requires accounting for the possibility of low or medium revenue along with high O&M costs, or high revenue along with low or medium O&M costs. Professor Porteus pointed out that it is not intellectually honest to assume that

(i) different O&M cost categories in the same year and O&M costs in the same category, but in different years, are statistically independent; and

(ii) ridership on different routes within a year and revenues between years are statistically independent, while,

(iii) assuming total O&M costs in a year are perfectly correlated with total revenues in that year.

Professor Porteus recommended enriching the analysis in Section 6 (Financial Analysis and Funding) of the Draft 2014 Business Plan by displaying outcomes that involve uncorrelated instances of revenues and costs. In particular, he believed that the 2014 Plan should include, among other scenarios, the outcomes of

(i) high revenue along with low O&M costs and

(ii) low revenue along with high O&M cost, along with the likelihood of each outcome.

This analysis should probably be a executed as a decision tree. For example, if ridership is higher than expected in the current month, this indicates that ridership is likely to be higher than expected in the following month, so increasing staffing (and O&M costs) would be appropriate to ensure acceptable levels of service.

The implication of Professor Porteus' recommendations is that the model would likely lead to substantially different results in the break-even analysis, as the model captures more realistic outcomes. It appears that this work has not been done as part of the 2016 Business Plan. Given that the Authority has been informed by Professor Porteus of the inconsistency in their methods, and given that they persist in their modeling practices, I conclude that the current use of the modeling tools in the Draft 2016 Business Plan still

conform to Professor Porteus' definition of intellectual dishonesty. It certainly conforms to mine.

James E. Moore, II, Vice Dean for Academic Programs, USC Viterbi School of Engineering

Professor Industrial and Systems Engineering, USC Viterbi School of Engineering
Professor of Civil and Environmental Engineering, USC Viterbi School of Engineering
Professor Urban Planning and Spatial Analysis, USC Price School of Public Policy
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James Moore II
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Office of the Dean

Attn: Draft 2016 Business Plan
California High-Speed Rail
Authority
770 L St., Suite 620 MS-1
Sacramento CA 95814

2016 Business Plan RECORD DETAIL

Submission Date :	3/28/2016
Submission Method :	Letter
First Name :	Mark
Last Name :	Powell
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Powell_Paper_2_Pushing_Back_on_HSRs_Myths_About_HSR_032816.pdf (1 mb)

Mark R. Powell
27840 Mount Triumph Way
Yorba Linda, CA 92887

March 28, 2016

California High-Speed Rail Authority
Attn: Draft 2016 Business Plan
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

To Whom it May Concern:

Attached for the Authority's consideration is a Word document submitted as a comment on their Draft 2016 Business Plan . It is entitled *Pushing Back on the California High-Speed Rail Authority's Myths About High-Speed Rail: Paper 2- 4300 Miles of Highway Lanes as an Alternative to High-Speed Rail* . It has been sent "Return Receipt" so that I will have proof of date of delivery and the name of the person to whom it was delivered.

This same document was also submitted by e-mail to the Authority at:
2016businessplancomments@hsr.ca.gov
It was sent via email as a Word document because it is heavily footnoted with links to my sources making it easy for anyone to check my facts.

Sincerely,

Mark R. Powell

enclosures: 1 Comment on the Authority's Draft 2016 Business Plan: *Pushing Back on the California High-Speed Rail Authority's Myths About High-Speed Rail: Paper 2- 4300 Miles of Highway Lanes as an Alternative to High-Speed Rail*

Pushing Back on the California High-Speed Rail Authority's Myths About High-Speed Rail

Paper 2

4,300 Miles of Highway Lanes as an Alternative to High-Speed Rail

by Mark R. Powell
October 30, 2015

Paper 2

4,300 Miles of Highway Lanes as an Alternative to High-Speed Rail

Abstract

The Authority's most recent hyping of the need for high-speed rail, a June 2015 brochure entitled *California High-Speed Rail Big Picture,* makes the claim that Phase 1 Blended, connecting San Francisco and Los Angeles, provides a transportation capacity equivalent to 4,300 new highway lane miles, 115 additional airport gates, and four new airport runways costing $158 billion. A second claim is that high-speed rail provides this capacity at half the cost.

This paper dissects these deceptive claims where the Authority uses "capacity" instead of "ridership" knowing full well that the theoretical capacity of Phase 1 Blended will dwarf its ridership and that the itemized highway lane miles will not be necessary this century, if ever, whether Phase 1 Blended is built or not built.

The paper then traces the evolution over two decades of the asserted highway benefits of high-speed rail from the thousands of miles of highway lanes reported in the Authority's 2005*California High-Speed Train Final Program EIR/EIS* back to earlier minimal assertions made in its first business plan and those made by its predecessor, the Intercity High-Speed Rail Commission.

Lastly, this paper looks at California Department of Transportation (Caltrans) traffic data and Caltrans long range planning documents. The data and planning documents prove how the Authority grossly overestimated future highway infrastructure needs for the year 2016 in its 2005 *California High-Speed Train Final Program EIR* and attempts to give readers information sufficient to see for themselves high-speed rail's true impact on future highway needs over the next 20 years.

Pushing Back on the Authority's Myths About High-Speed Rail

California High-Speed Rail Authority Myth #2

"HIGH-SPEED RAIL MORE COST EFFECTIVE THAN ALTERNATIVES
Providing the equivalent new capacity on the state's highways and airports would cost more than double the investment required to develop a high-speed rail system between San Francisco and Los Angeles. If it was even possible, that would mean building 4,300 new highway lane miles, 115 additional airport gates, and four new airport runways at an estimated cost of $158 billion. While the high-speed rail system will operate without subsidies, Caltrans estimates operations and maintenance costs on those new highway lanes at $132.8 billion for over 50 years."[1]
(Source: *California High-Speed Rail Big Picture* brochure, dated June 2015)

Part I – Claims Made Recently by the Authority:

The quotation cited above, first written into the Authority's 2012 Business Plan[2], is cleverly crafted not to enlighten, but rather to confuse a public who would likely equate "capacity" with "ridership" and view construction of a high-speed rail system as a means of avoiding double the investment in roads and airports. But capacity and ridership are distinctly different.

Parsons Brinkerhoff, the Authority's prime contractor, makes this clear in their report entitled *Comparison of Providing the Equivalent Capacity to High-Speed Rail through Other Modes*, dated April 2012. Quoting directly:

> "This analysis was designed to answer the following questions:
> 1. What is the people-carrying capacity of the 520-mile Phase 1 HSR system?
> 2. What would be the composition and cost of providing this same capacity increase through freeways and airports?
>
> However, this is <u>not</u> an assessment of the whether the state would *need* to or *choose* to build this infrastructure if it did not build high-speed rail."[3] (emphases on <u>not</u>, *need*, and *chose* were made in the source document)

"Capacity" for the purpose of the Parsons Brinkerhoff report assumed construction of the Full Build Phase 1 system with northbound trains capable of seating 1000 passengers, but only 70% full, leaving Los Angeles every 5 minutes and identically loaded southbound trains leaving San Francisco at the same frequency.[4] Parsons Brinkerhoff avoided specifying how many hours per day or days per year the trains would operate and by doing so avoided reporting the system's capacity in terms of persons transported per year. However, Parsons Brinkerhoff identified additional airport infrastructure as supplying 25% of the alternate capacity and specified that this would require 115 new gates. Furthermore, Parsons Brinkerhoff placed the annual capacity of a new gate at 525,000 passengers.[5] A passenger utilizes two gates, one to board and a second to deplane. Therefore, it appears Parsons Brinkerhoff was envisioning new airport capacity for 30 million (115/2 x 525,000) passengers per year and additional highway infrastructure for

90 million new passengers traveling by automobile between San Francisco and Los Angeles.

As far as highway infrastructure was concerned, Parsons Brinkerhoff reported the 90 million new highway travelers would require an additional 6 lanes added to every major highway along multiple routes from Los Angeles to San Francisco. Table 5 *Summary of Highway Segments* in their report itemizes the impacted routes totaling a distance of 775.3 miles. (Attachment 1) It is only about 500 highway miles from Los Angeles to San Francisco along the proposed route of the train, but Table 5 segments include 275 additional miles because widening by 6 lanes of both SR-99 and I-5 through the Central Valley are included. Multiplying 775.3 by 6 lanes yields a result of 4652 highway lane miles. Parsons Brinkerhoff then adjusted this result downward to 4300 miles to account for Phase 1 Blended's capacity being lower than that of Full Build Phase 1.[6] No date was provided for the completion of these additional lanes, but the Authority's implied date for their need is 2029, the completion date for Phase 1 Blended.

Highway traffic count data acquired by Caltrans monitoring equipment helps to put the current and future situations in perspective. The prime automobile route between Los Angeles and San Francisco for persons interested in a short travel time, and therefore good candidates for diversion to high-speed rail, is Interstate 5 through the Central Valley. According to Caltrans, the lowest traffic volume on I-5 occurs between its junctions with Hwy 41 and Hwy 165. Along this 83 mile stretch of I-5 the sum of the traffic in both directions averages 32,600 vehicles per day.[7] Truck traffic (excluding 4 wheel light pickup trucks) amounts to 9,300 vehicles per day leaving only 23,300 automobiles and light trucks . Traffic is spread across four lanes or about 5800 automobiles and light trucks per lane per day. This represents the highest number of automobiles and light trucks on I-5 that could possibly be traveling between the end points of San Francisco and Los Angeles. Of course much of this traffic is headed elsewhere. Northbound traffic may be traveling locally or to Fresno or headed to Sacramento or further points north and it may have originated in San Diego or be from out of state. The same discussion can be made about southbound traffic. But for the sake of argument, the assumption will be made that all these automobiles and light trucks have endpoints of only San Francisco or Los Angeles. The Parsons Brinkerhoff cited occupancy of 1.4 persons per car is also assumed. This equates to, at most, approximately 6 million persons traveling annually each direction or 12 million traveling annually between San Francisco and Los Angeles along I- 5.

The Parsons Brinkerhoff report made the following assumptions for estimated highway capacity at any location:[8]

1,817 cars per lane per hour
1.4 passengers per car

Using 6 such lanes16 hours a day 365 days per year for travel between Los Angeles and San Francisco equates to the 90 million annual highway people carrying capacity of the Phase 1 Blended high-speed rail system . Assuming that automobile and light truck traffic along I-5 between its junctions with Hwy 41 and Hwy 165 is essentially nil between midnight and 8am, the Caltrans data indicates the current lane usage of 5800 automobiles and light trucks/day equates to 363 per hour. Yet Parsons Brinkerhoff, on behalf of the Authority, spent taxpayer money to prepare a report outlining a rationale for building three new lanes in each direction and each capable of accommodating more than 1800 cars per hour.

Clearly 6 new lanes are not necessary along I-5 and they will not be needed for the foreseeable future. Constructing the 120 million annual people moving capacity of Phase 1 Blended might be preferable to building alternative infrastructure with the same capacity, but this is a false choice. Even the Authority's annual ridership projections show only 26 million riders in 2040[9], roughly 1/5 of the people moving capacity of the Phase 1 Blended. Moreover, California's Department of Finance Demographic Research Unit currently predicts there will be only a 20% increase in the state's population between now and 2040.[10] This implies there would be about 21 million in ridership if the train were in service today. These 21 million potential riders are making due with today's infrastructure of highways and airports. By 2040 the state's highway and airport infrastructure needs to accommodate only 5 million more travelers between San Francisco and Los Angeles, not 120 million!

Part II Claims Made in the Authority's 2005 *California High-Speed Train Final Program EIR/EIS*:
Following the issuance of its 2000 Business Plan the Authority embarked on the first step in the environmental planning process, the development of the 2005 *California High-Speed Train Final Program EIR/EIS* (HST Program EIR) meeting the requirements of the federal NEPA and California's CEQA environmental regulations. Here the protection of the environment is paramount and state agencies are to regulate activities affecting the environment "so that major consideration is given to preventing environmental damage while providing a decent home and satisfying living environment for every Californian." [11]In attempting to strike a balance between protecting the environment and necessary economic development CEQA "declares that it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects".[12]

The Authority complied with these requirements when their HST Program EIR compared the environmental impacts and benefits of a statewide HST System to a No Project Alternative (no extraordinary transportation infrastructure construction efforts) and a Modal Alternative (construction of more than 2970 freeway lane miles, 90 new airport gates, and 5 new runways, most of which was projected to be needed and in service by January 1, 2016[13] [14]) and judged the Statewide HST System Alternative as preferable. Projected population growth made the No Project Alternative "neither a viable nor realistic alternative"[15] and the Modal Alternative was judged to be environmentally and structurally inferior to the HST system while costing more than twice as much to build.[16]

The Authority's Modal Alternative as it relates to highways is illustrated on the following page by the Figure 2-D-1 taken from Appendix 2-D of the Authority's HST Program EIR.
Table 2-D-1 accompanied the figure and listed each segment of highway and the lanes to be added. (Attachment 2)

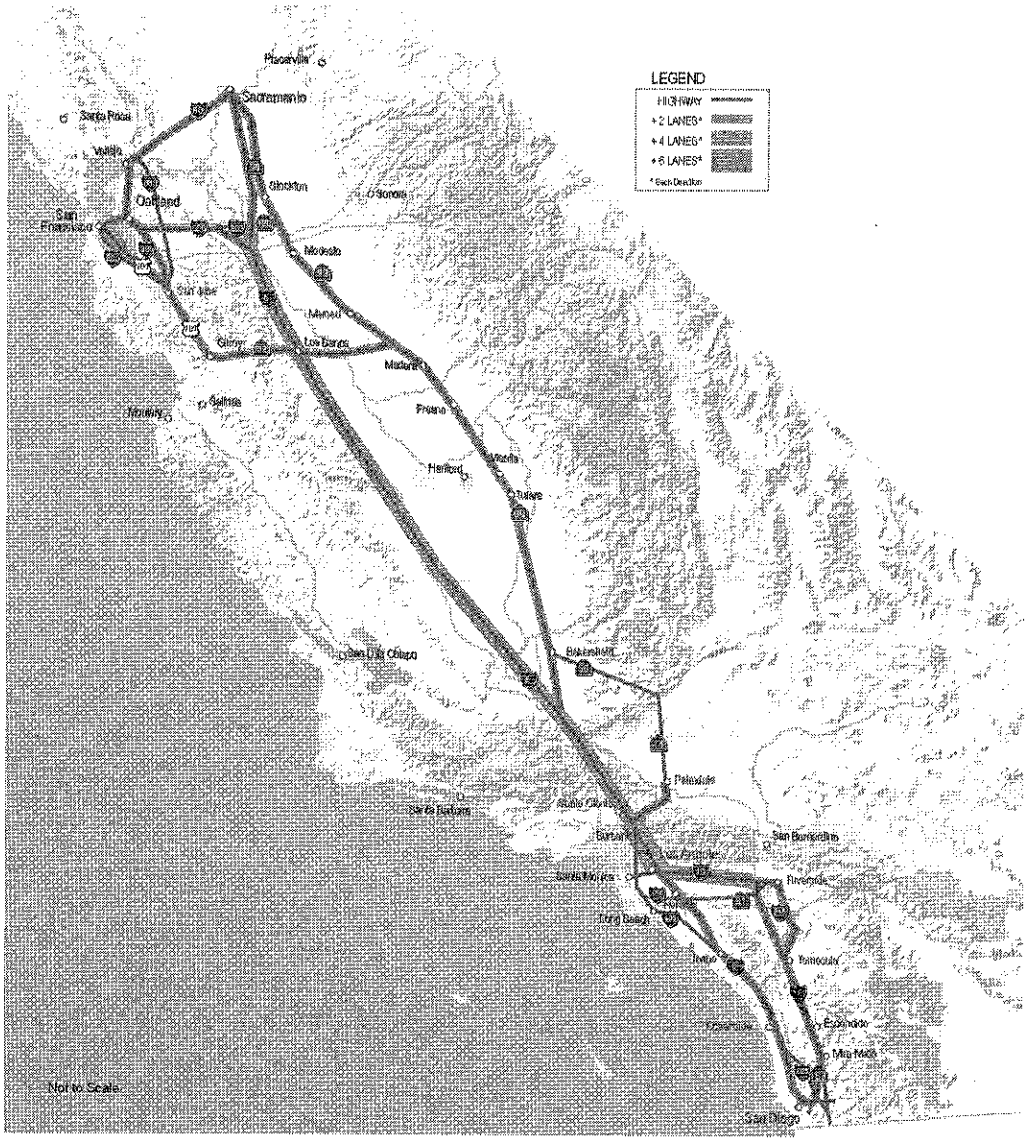

Figure 2-D-1
Highway Capacity Improvement Options—Year 2020
(2020 Intercity Travel Demand with Highway Expansion only)

The Modal Alternative was based on projected ridership on the high-speed train as opposed to the people carrying capacity of the train. Moreover, it was an alternative to the statewide high-speed rail system proposed in the HST Program EIR. As a result, the highway alternative shown in Figure 2-D-1 details routes south of Los Angeles and north of Stockton not included in the 4,300 miles of highway lanes currently being pushed by the Authority as an alternative to Phase 1 Blended. Ignoring these lane additions still leaves 2155 highway lane miles in Figure 2-D-1. These are itemized in Attachment 2. Focusing again on I-5 north of Los Angeles, the required additional lanes include 6 lanes running north to SR-14 and 4 additional lanes north from this point across the Tehachapis and through the Central Valley to I-580.

The decade between the development of the Authority's HST Program EIR and the issuance of its 2012 Revised Business Plan brought to light two important facts. First, Phase 1 Blended's costs would be at least twice that originally envisioned for the entire statewide system of high-speed rail. Second, I-5 had not been widened and traffic was still flowing over the Tehachapis and up the Central Valley at less than the highway's capacity.[17] With 2016 rapidly approaching, the No Project Alternative could be viewed as quite feasible and even the Authority's consultants would have been hard pressed to make a convincing case that the Modal Alternative as described in the HST Program EIR was now necessary or feasible. With the environmental and economic justification outlined in the HST Program EIR quickly disappearing, the Authority stopped making comparisons between high-speed rail and alternative infrastructure based on ridership. Instead, it began making comparisons base on capacity, whether that capacity was needed or not. Quoting directly from the April 2012 Parsons Brinkerhoff report:[18]

> "There are two fundamental changes to assumptions that make this a different study than the one conducted for the 2005 Program EIR/EIS.
>
> - The scope of the analysis is the 520-mile Phase 1 system, unlike the original analysis, which looked at the Full 800-mile System, including both Phase 1 and Phase 2. Although the Full System remains the complete plan for the HST program, the updated cost estimates in the Business Plan are for the Phase 1 system. This analysis was designed to provide a more direct comparison with the Phase 1 system and its costs.
> - The second major change in assumptions was a switch from estimating the needed capacity based on ridership to estimating it based on equivalent "people-carrying" capacity of the HSR system whereas the 2005 analysis was prepared based on a ridership projection."

This change in assumptions allowed the Authority to make the claim that Phase 1 Blended, costing twice what the statewide system was estimated to cost in the HST Program EIR, would cost only half what alternative highways and airport infrastructure of the same capacity would cost. It went unstated that this was a false choice in that alternative infrastructure of the same capacity was not necessary.

Part III - Earlier Attempts at Estimating Avoided Infrastructure Costs Related to Highways:

California High-Speed Rail Authority 2000 Business Plan:

The Authority's 2000 Business Plan showed capital costs of $25 billion (in 1999 dollars) for the entire statewide system.[19] The plan also laid out a sixteen-year project development and construction schedule for the statewide system.[20]

The 2000 Business Plan did not identify any highway infrastructure construction costs that would be avoided due to the construction of high-speed rail. However, it found urban and rural highway benefits associated with the construction of the statewide high-speed rail system in the form of fewer automobile accidents, fewer road delays, and less air pollution.[21]

Intercity High-Speed Rail Commission (1993-1996)

Formed in 1993, a time when the state's population was expected to increase from its current 32.7 million to 48.8 million by 2020, the Authority's predecessor agency, the Intercity High-Speed Rail Commission, worked through 1996 to develop a 20 year plan for implementing a statewide high-speed rail plan and to determine if such a plan was economically feasible. The Commission's findings were detailed in their *High-Speed Rail Summary Report and Action Plan* published in December 1996 The Commission determined the route of the statewide system, later adopted by the Authority, and found the statewide system to be economically feasible at a cost of 18.2 billion (1996 dollars) because the net present value of the benefits of the system over the 50 year period from 2000 to 2050 exceeded the net present value of its costs. Of some importance today is the fact that the Commission, for the same reason, found the "trunk line" connecting only San Francisco and Los Angeles to be not feasible.[22]

However, the Commission found zero benefits associated with the avoidance of highway infrastructure costs out to the year 2034 for the statewide high speed rail system. The Commission found that even though diverted highway trips would account for between 30% and 50% of all high-speed rail travel, the Los Angeles to Bay Area System would divert only 2.3% of trips to rail. With extensions to Sacramento and San Diego the system would divert 5.0% of intercity automobile trips. The Commission then looked at all the highway segments impacted by drivers diverting to a statewide high-speed rail system and determined that the construction of the statewide system would result in the avoidance or postponement of highway construction by more than one year in only two cases. The future need to widen by two lanes I-5 between Los Angeles and Bakersfield would be postponed from 2034 to 2038 and the widening of I-5 between Bakersfield and Stockton could be put off indefinitely.[23]

Attachment 3 provides some of the Commission's data showing HSR's minimal effect on highway volume to capacity ratios projected for the year 2020 associated with merely a Los Angeles to San Francisco system and with a system of high-speed rail including extensions to Sacramento and San Diego. A comparison of the two tables in Attachment 3 indicates that while the statewide high-speed rail system may put of widening of I-5 between Los Angeles and Bakersfield from 2034 to 2038, high-speed rail connecting only Los Angeles and San Francisco is of less benefit and pushes the need for expansion out to only 2036.

The Commission did identify less tangible benefits associated with the system connecting only Los Angeles and San Francisco amounting to $226 million[24] (in 1995 dollars) in the form of fewer automobile accidents, fewer road delays, and less air pollution for highway users in the year 2020. (Attachment 4)

Current State of Highway Travel Between Los Angeles and San Francisco

As it was with the Commission in 1996, the primary interest today to Californians relates to Phase 1 Blended's impact on travel along I-5 between the north end of the San Fernando Valley and the intersection of I-5 and I-580 south of Stockton. Caltrans Districts 7, 6, and 10 are involved with this route. Only Districts 6 and 10 are referenced in this paper because these two include portions of I-5 crossing the Tehachapis as well as representative portions of I-5 in the Central Valley north of the I-5/SR-99 junction where travel significantly decreases.

Caltrans uses six Level of Service (LOS) classifications ranging from A to F and Caltrans "endeavors to maintain a target LOS at the transition between C and D on State highway facilities, or whichever LOS is feasible to attain."[25] South of the I-5/SR-99 junction Caltrans currently rates the LOS along I-5 between C and D. North of the I-5/SR-99 junction and south of I-580 Caltrans rates the LOS along I-5 between B and D with most sections receiving a LOS of C. In other words, these sections of I-5 are currently operating within design capacity. Caltrans Traffic Count data along this route indicates that going back to 2002 there has been minimal change in overall traffic. Some locations show a slight increase and others a slight decrease. This is in line with Caltrans overall statewide traffic counts that indicate overall state highway traffic has risen at an annual rate of only .60%/year since 2002.

Thus the Commission's finding that high-speed rail would have little impact on infrastructure needs between Los Angeles and San Francisco by the year 2020 seems to be confirmed. In contrast, the Authority's forecast for an additional 4-6 lanes, reported in its HST Program EIR as being necessary by 2016, seems to be groundless. Finally, the Authority's more recent attempts to portray to the public that 4,300 miles of highway lanes are a reasonable alternative to Phase 1 Blended is at best a lie and at worst a criminal fraud being perpetrated on Californians.

Attachment 1

Table 5 Summary of Highway Segments
(Source: Parsons Brinkerhoff, *Comparison of Providing the Equivalent Capacity to High-Speed Rail through Other Modes*, dated April 2012, page 17)

Highway Corridor	Segment (From–To)	Urban/Rural	Miles
Bay Area to Merced			
US-101	San Francisco to SFO	Urban	11.3
US-101	SFO to Redwood City	Urban	13.8
US-101	Redwood City to I-880	Urban	19.7
I-880	US-101 to San Jose	Urban	0.9
US-101	San Jose to Gilroy	Urban	31.2
US-101	Gilroy to SR-152	Urban	1.4
SR-152	US-101 to I-5	Rural	40.8
SR-152	I-5 to SR-99	Rural	42.8
I-80	San Francisco to I-880	Urban	9.2
I-880	I-80 to I-238	Urban	13.8
I-580	I-880 to I-5 (via I-238)	Rural	52.7
I-880	I-238 to Fremont/Newark	Urban	14.5
I-880	Fremont/Newark to US-101	Urban	12.4
Merced to Bakersfield			
I-5	SR-152 to SR-99	Rural	186
SR-99	Merced to SR-152	Rural	21.5
SR-99	SR-152 to Fresno	Urban	33.4
SR-99	Fresno to Tulare/Visalia	Urban	46.4
SR-99	Tulare/Visalia to SR-58	Urban	68.9
Bakersfield to Los Angeles			
I-5	SR-99 to SR-14	Rural	65
I-5	SR-14 to I-405	Urban	2.5
I-5	I-405 to Burbank	Urban	15.3
I-5	Burbank to Los Angeles Union Station (LAUS)	Urban	7.4
SR-14	Palmdale to I-5	Urban	34.8
Los Angeles to Anaheim			
I-5	LAUS to I-10	Urban	0.8
I-5	I-10 to Norwalk	Urban	20.7
I-5	Norwalk to Anaheim	Urban	8.1
			775.3*

*Note included in original Table 5

Attachment 2

Table 2-D-1 Highway Capacity Improvement Options—Year 2020
(2020 Intercity Travel Demand with Highway Expansion only—Both Directions)

Bay Area to Merced		**Lanes**	**Miles****
US-101	San Francisco to San Francisco Airport (SFO)	2	11.3
US-101	SFO to Redwood City	2	13.8
US-101	Redwood City to I-880	2	19.7
I-880	US-101 to San Jose	2	.9
US-101	San Jose to Gilroy	2	31.2
US-101	Gilroy to SR-152	2	1.4
SR-152	US-101 to I-5	2	40.8
SR-152	I-5 to SR-99	2	42.8
I-80	San Francisco to I-880	2	9.2
I-80	I-880 to I-5 (Sacramento)	2	
I-880	I-80 to I-238	2	13.8
I-580	I-880 to I-5 (via I-238)	2	52.7
I-880	I-238 to Fremont/Newark	2	14.5
I-880	Fremont/Newark to US-101	2	12.4
Sacramento to Bakersfield			
I-5	I-80 to Stockton 2		
I-5	Stockton to I-580/SR-120	2	
I-5	I-580/SR-120 to SR-152	4	
I-5	SR-152 to SR-99	4	186
SR-99	I-5 to SR-58	2	
SR-99	Sacramento to SR-120	2	
SR-99	SR-120 to Modesto	2	
SR-99	Modesto to Merced	2	
SR-99	Merced to SR-152	2	21.5
SR-99	SR-152 to Fresno	2	33.4
SR-99	Fresno to Tulare/Visalia	2	46.4
SR-99	Tulare/Visalia to SR-58	2	68.9
Bakersfield to Los Angeles			
I-5	SR-99 to SR-14	4	65
I-5	SR-14 to I-405	6	2.5
I-5	I-405 to Burbank	6	15.3
I-5	Burbank to LA Union Station	6	7.4
SR-58/SR-14	SR-99 to Palmdale	0	
SR-14	Palmdale to I-5	2	34.8
Los Angeles–Orange County–San Diego			
I-5	Los Angeles Union Station to I-10	4	.8
I-5	I-10 to Norwalk	2	20.7
I-5	Norwalk to Anaheim	2	8.1
I-5	Anaheim to Irvine	2	
I-5	Irvine to I-405	2	
I-5	I-405 to SR-78	2	
I-5	SR-78 to University Town Center	2	
I-5	University Town Center to San Diego Airport	2	
I-8	SR-163 to I-5	2	

Notes:
US-101 = U.S. Highway 101
SR = State Route
I-5 = Interstate 5
* Represents the number of through lanes, in addition to the total number of lanes in the no-project highway network that approximate an equivalent level of capacity to serve the representative demand.
** Miles are shown for segments related to Phase 1 Blended and are the same as those shown in Attachment 1

Attachment 3
Source: Final Report – Economic Impact and Benefit/Cost of High Speed Rail[26]

The projected impact on highway congestion of only a trunk line system connecting Los Angeles to San Francisco (now termed Phase 1 Blended) or the Statewide System with Extensions to Sacramento and San Diego was summarized as follows:

Table I-3

	I-5 Bakersfield* to Stockton	**SR-99** Bakersfield to Stockton	**I-5** LA to Bakersfield*	**I-580** SF to I-5
No HSR	.75	1.20	.77	1.32
VHS LA to SF	.71	1.18	.74	1.30

Volume/ Capacity Ratios
Los Angeles to Bay Area HSR---Year 2020

Table I-4

	I-5 Bakersfield* to Stockton	**SR-99** Bakersfield* to Stockton	**I-5** LA to Bakersfield*	**I-580** SF to I-5	**I-5** San Diego to LA	**I-5** Stockton to Sacramento	**SR-99** Stockton to Sacramento	**I-80** SF to Sacramento
No HSR	.75	1.20	.77	1.32	1.18	1.14	1.39	1.39
VHS LA to SF Plus Extensions	.68	1.18	.72	1.29	1.15	1.12	1.37	1.39

Volume/ Capacity Ratios
Los Angeles to Bay Area HSR + Extensions---Year 2020

* Bakersfield is interpreted as the junction of I-5 and SR-99
VHS or Very High Speed was the term used by the Commission for what is now termed High-Speed Rail

Attachment 4

Source: Intercity High-Speed Rail Commission High-Speed Rail Summary Report and Action Plan, December 1996

Table 7-2

Basic System L.A. to S.F.	**Highway Savings**
Highway User Delay	$75
Automobile Operating Costs	$81
Accidents	$61
Air Pollution	$9
	$226

Highway Cost Savings Summary (Year 2020)

(Expressed in $1995 Million

Endnotes:

[1] California High-Speed Rail Authority brochure dated June 2015 entitled *California High-Speed Rail Big Picture* http://www.hsr.ca.gov/docs/newsroom/fact%20sheets/Big_Picture_FINAL_060515.pdf

[2] Revised 2012 Business Plan, Chapter 3 Capital Costs, page 3-15 http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2012_rpt.pdf

[3] Parsons Brinkerhoff report entitled *Comparison of Providing the Equivalent Capacity to High-Speed Rail through Other Modes*, dated April 2012, page 2 http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2012CompareEquivalentCapacity.pdf

[4] Parsons Brinkerhoff report entitled *Comparison of Providing the Equivalent Capacity to High-Speed Rail through Other Modes*, dated April 2012, page 6

[5] Parsons Brinkerhoff report entitled *Comparison of Providing the Equivalent Capacity to High-Speed Rail through Other Modes*, dated April 2012, pages 7 and 9

[6] Parsons Brinkerhoff report entitled *Comparison of Providing the Equivalent Capacity to High-Speed Rail through Other Modes*, dated April 2012, page 18

[7] Caltrans 2013 Annual Average Truck Traffic on the California State Highway System, pages 19-20 This is the most current year for which truck and total traffic is available on the Caltrans website http://traffic-counts.dot.ca.gov/docs/2013_aadt_truck.pdf

[8] Parsons Brinkerhoff report entitled *Comparison of Providing the Equivalent Capacity to High-Speed Rail through Other Modes*, dated April 2012, pages 15

[9] Revised 2012 Business Plan, Chapter 5, Exhibit 5-10. Ranges of ridership and revenue across all Business Plan Scenarios and phases, page 5-16

[10] California Department of Finance Demographic Research Unit, Report P-1 (Total Population, State and County Population Projections, July 1 2010-2060 (5 year increments), dated Dec. 15, 2014 http://www.dof.ca.gov/research/demographic/reports/projections/P-1/documents/P-1_Total_CAProj_2010-2060_5-Year.xls

[11] California Environmental Quality Act as amended 2013, page 1 http://resources.ca.gov/ceqa/docs/2014_CEQA_Statutes_and_Guidelines.pdf

[12] California Environmental Quality Act as amended 2013, page 2

[13] *California High-Speed Train Final Program EIR/EIS*, Summary section, page S-4 http://www.hsr.ca.gov/docs/programs/eir-eis/statewide_final_EIR_vol1summary.pdf

[14] *California High-Speed Train Final Program EIR/EIS*, Economic Growth and Related Impacts section, page 5-5 http://www.hsr.ca.gov/docs/programs/eir-eis/statewide_final_EIR_vol1ch5.pdf

[15] *California High-Speed Train Final Program EIR/EIS*, Summary section, page S-8

[16] *California High-Speed Train Final Program EIR/EIS*, Summary section, page S-9

[17] Caltrans Interstate 5 Transportation Concept Reports for Districts 6 and 10 dated February 2013 and September 2012 respectively http://www.dot.ca.gov/dist6/planning/tcrs/i5tcr/i5tcr.pdf http://www.dot.ca.gov/dist10/divisions/Planning/advancedplanning/docs/TCR's/I-5webFinalsigned09182012.pdf

[18] Parsons Brinkerhoff report entitled *Comparison of Providing the Equivalent Capacity to High-Speed Rail through Other Modes*, dated April 2012, page 3

[19] 2000 Business Plan, Section 2.3, Table 2.1, Capital Cost by Segment. See 2000 Business Plan http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2000_FullRpt.pdf

[20] 2000 Business Plan, Section 2.2, Figure 2.3, Implementation and Construction Schedule

[21] 2000 Business Plan, Economic Benefits section

[22] Intercity High-Speed Rail Commission *High-Speed Rail Summary Report and Action Plan*, December 1996, Section 7 Economic Impact of High-Speed Rail, Benefit Cost Methodology, pages 7-24 and page 7-27 http://www.hsr.ca.gov/docs/programs/eir-eis/Archives/statewide_EIR_vol2_attachD6_archive.pdf

[23] Intercity High-Speed Rail Commission *High-Speed Rail Summary Report and Action Plan*, December 1996, Section 7 Economic Impact of High-Speed Rail, Benefit Cost Methodology, page 7-5

[24] Intercity High-Speed Rail Commission *High-Speed Rail Summary Report and Action Plan*, December 1996, Section 7 Economic Impact of High-Speed Rail, Benefit Cost Methodology, page 7-4

[25] Caltrans District 6 Transportation Concept Report for I-5, February 2013

[26] Final Report Economic Impact and Benefit/Cost of High Speed Rail for Californian, Submitted to the Intercity High-Speed Rail Commission, Prepared by Economics Research Associates, Sept. 1996, page 34

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CalSonic High Speed Rail A
Attn: Draft 2016 Business Pl
770 L St., Suite 620 MS
Sacramento, CA
95814

2016 Business Plan RECORD DETAIL

Submission Date :	3/25/2016
Submission Method :	Letter
First Name :	Mark
Last Name :	Powell
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Powell_10-General_Comments_on_biz_plan_033816.pdf (370 kb)

Mark R. Powell
27840 Mount Triumph Way
Yorba Linda, CA 92887

March 28, 2016

California High-Speed Rail Authority
Attn: Draft 2016 Business Plan
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

To Whom it May Concern:

Attached for the Authority's consideration is a Word document containing 10 general comments on their Draft 2016 Business Plan. It has been sent "Return Receipt" so that I will have proof of date of delivery and the name of the person to whom it was delivered.

This same document was also submitted by e-mail to the Authority at:
2016businessplancomments@hsr.ca.gov
It was sent via email as a Word document because it is heavily footnoted with links to the footnotes to make it easy for anyone to check my sources.

Sincerely,

Mark R. Powell

enclosures: 1 Comments on the Authority's Draft 2016 Business Plan

Comments on the Authority's Draft 2016 Business Plan

Submitted by Mark R. Powell
Yorba Linda, CA 92887
March 25, 2016

Issue 1: Ridership On IOS –North Between Bakersfield and San Francisco

Comment:

Please explain in your Final 2016 Business Plan the 600% variance between the Bakersfield to San Francisco Bay Area high-speed train ridership as forecast by your first ridership consultant and that of your current consultant.

Discussion:

The perceived need for a statewide high-speed rail system was conceived shortly following the issuance of a grossly inaccurate May 1993 report by the California Department of Finance's Demographic Research Unit (DRU) projecting that the state's population would rise from 30 million in 1990 to 49 million in 2020 and more than double to over 63 million by 2040. The Intercity High-Speed Rail Commission, established in 1993, and its successor agency, the California High-Speed Rail Authority, established in 1996, were charged with developing and implementing a 20 year plan for a statewide high-speed rail system to meet the needs of California's rapidly growing projected population.

Both the Commission and the Authority used the services of Charles River Associates (CRA) to conduct ridership studies on the proposed statewide HSR system. CRA's first study was completed in July 1996, *Independent Ridership and Passenger Revenue Projections for High Speed Rail Alternatives in California* (1996 CRA Study). Writing about their study, CRA said, "these forecasts and sensitivity analyses represent the most advanced state-of-the-art, comprehensive HSR ridership and passenger revenue forecasts and analyses ever carried out in California, and possibly anywhere."[1] The Commission added, "to ensure investment grade results, the forecasts were subjected to extensive peer review."[2] To date, the 1996 CRA Study is the only ridership and revenue study that either the Commission or the Authority has dubbed "investment grade".

In making their forecast CRA first broke up the path along the proposed HSR alignment into Origin/Destination Pairings (O/D Pairings). Origin and Destination Areas are referred to as "Catchment Areas" in the following table.

Area	Geographic Definition of Catchment Area
Los Angeles	Los Angeles-Riverside-Orange County, CA CMSA
San Francisco	San Francisco-Oakland-San Jose, CA CMSA
Sacramento	SACOG Planning Area
San Diego	San Diego, CA MSA
Bakersfield	Bakersfield, CA MSA
Fresno	Fresno, CA MSA
Merced	Merced, CA MSA
Modesto	Modesto, CA MSA
Monterey	Salinas, CA MSA
Stockton	Stockton-Lodi, CA MSA
Visalia	Visalia-Tulare-Porterville, CA MSA

Areas of Origin or Destination for Potential Users of a High-Speed Train
CMSA is a Combined Metropolitan Statistical Area
MSA is a Metropolitan Statistical Area

CRA then estimated the annual number of person-trips by various modes between the O/D Pairings along the route of the high-speed train and then factored in expected growth rates to arrive at an estimate of total person-trips between these O/D Pairings in 2015, a year when they believed the entire statewide system would have been in service for a few years. When making their forecast CRA was working with DRU's May 1993 population forecast predicting that California's population would be 45.7 million in 2015. In their most recent forecast the DRU now predicts that a population of 45.7 million will not be reached until 2035. In other words, the table below, assembled from O/D Pairings found in the 1996 CRA Study, might have been labeled "Forecast Trips in 2035" if CRA had been working with a more accurate population projection. Results from the 1996 CRA Study are shown below.

Forecast Trips in 2015					
O/D Pairing	Person Trips by Private Vehicle	Local Air Trips	Connect Air Trips	Amtrak Rail Trips	O/D Pairing Total
SFBA - Merced	1,618,146	3,704	17,345	16,291	1,655,487
SFBA - Fresno	3,734,266	64,636	216,051	53,965	4,068,918
SFBA - Visalia	167,460	1,723	7,005	19,192	195,380
SFBA - Bakersfield	850,206	9,900	43,671	31,827	935,604
Total SFBA to CV	6,370,079	79,963	284,071	121,276	6,855,388
Within Central Valley	3,492,123	249	-	59,438	3,551,810
Total	**9,862,202**	**80,212**	**284,071**	**180,713**	**10,407,198**

1996 CRA Study of Forecasted Travel by Mode in 2015 w/o High-Speed Rail

CRA forecast a percentage of travel from each existing mode diverted to the high-speed train and then added induced travel to arrive at a forecast of HST ridership. Results are shown below.

O/D Aggrigated Pairings	2015 Ridership (M)
LA Basin - Bay Area	6.4
San Joaquin Valley - LA Basin	1.7
San Joaquin Valley - SF Bay Area	1.4
Within San Joaquin Valley	0.5
Other	1.2
Total Base System SFBay Area - LABasin	**11.2**

CRA Forecast Ridership on Basic System
Millions of Riders in 2015

Note: Valley-LA Basin and Valley-SF Bay Area Prorated per Authority's Split in 2008 Business Plan as only a single figure for LA Basin/SF Bay Area to the Central Valley was contained in the 1996 CRA Report.

The Authority's Draft 2016 Business Plan forecast of 11.0 million riders on IOS-North (Bakersfield to San Francisco) in 2028[3] is nearly identical to the forecast ridership along the entire LA Basin to SF Bay Area alignment as forecast in the investment grade 1996 CRA Study. It is nearly six times CRA's forecast ridership of 1.9 million for a stretch of track running from the San Joaquin Valley to the SF Bay Area (i.e. IOS-North-Extended). Moreover, it is more than 100% of CRA's forecast ridership for ALL modes of travel forecast for 2015 (a reasonable proxy for 2035 given new population growth data) along the route of the Authority's Bakersfield to San Francisco initial operating segment.

Please explain in your Final 2016 Business Plan why your current ridership forecast is credible when it is so clearly at odds with the earlier forecast, the only forecast ever dubbed "investment grade".

Issue 2: Growth of Ridership On Phase 1 Blended

Comment:

Please explain in your Final 2016 Business Plan why you expect ridership growth on Phase 1 Blended connecting the Los Angeles Basin to the San Francisco Bay Area to increase at a rate of 1.1% per year in the years 2035-2060 (i.e. well after the initial ramp-up period), a rate more than twice the rate at which California's population is expected to grow during the same period.

Discussion:

Your Draft 2016 Business Plan shows ridership increasing at a rate of 1.1%/year[4] during the period 2035 to 2060. However, the California State Department of Finance's Demographic Research Unit (DRU), currently forecasts a declining rate of population growth from .75%/year to .33%/year during this same period or an average annual rate of population growth of .49%[5]. Moreover, the DRU is designated as the single official source of demographic data for state planning and budgeting[6]. Therefore, you must be using DRU's projections.

Please explain why your ridership numbers are expected to increase at more than twice the rate of population growth.

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Notes :	
Attachments :	Powell_Paper 3_The Green Train.pdf (707 kb)

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March 28, 2016

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To Whom it May Concern:

Attached for the Authority's consideration is a Word document submitted as a comment on their Draft 2016 Business Plan . It is entitled *Pushing Back on the California High-Speed Rail Authority's Myths About High-Speed Rail: Paper 3- The Green Train.* It has been sent "Return Receipt" so that I will have proof of date of delivery and the name of the person to whom it was delivered.

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Sincerely,

Mark R. Powell

enclosures: 1 Comment on the Authority's Draft 2016 Business Plan: *Pushing Back on the California High-Speed Rail Authority's Myths About High-Speed Rail: Paper 3 - The Green Train*

Pushing Back on the California High-Speed Rail Authority's Myths About High-Speed Rail

Paper 3

The Green Train

by Mark R. Powell
December 8, 2015

Paper 3

The Green Train

Abstract

This paper focuses on claims made by the Rail Authority in its June 2013 report, *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels*. One claim is that there will be "zero net greenhouse gas emissions during construction" and the second is a "commitment to 100% renewable energy during operations".

This paper begins with the assertion that a new Supplemental HST Program EIR/EIS is called for at this time to address in an open and transparent way the claims being made about the train's "greenness".

In examining the first claim this paper seeks to roughly estimate total emissions (direct plus indirect) from the construction of the statewide high-speed rail system and concludes that the Authority's tree planting scheme to mitigate construction emissions would require more than 5 million trees, living in perpetuity, or roughly $1/6^{th}$ of all the trees in Oregon's private and public forests. However, without its own future operating profits capitalized in advance of construction activities, the paper concludes that the Rail Authority lacks any means to fund the GHG emission credit schemes mentioned in its report, however inadequate they may be.

The second part of this paper discusses the likely possibility that the Authority's train will not initially run on 100% renewable energy, but will in fact run on power generated entirely from fossil fuels, including coal. The paper then lays out steps the Authority would need to undertake, namely funding the construction of nearly 500 MW of new solar generating capacity at a cost of $2.2 billion, during the construction period and out to the year 2030 to make its claim a reality and concludes that a 30 cent/kWh "green power" electrical surcharge, as opposed to the Authority's 3 cent/kWh offer, might result in the train running on green power.

Pushing Back on the Authority's Myths About High-Speed Rail

California High-Speed Rail Authority Myth #3

This is a Green Train

According to the California High-Speed Rail Authority there will be "zero net greenhouse gas (GHG) emissions during construction" and the Authority is making a "commitment to (use) 100% renewable energy during operations"[1].

Introduction

The millions of tons of CO2e (carbon dioxide equivalent) in GHG emissions that will result from its construction and the actual use of coal and other fossil fuels to power the trains' operation are currently being hidden from the public. The Authority's 2005 *Final Program EIR/EIS for the Proposed California High-Speed Train System* predated California's Global Warming Initiative (AB 32). As a result, this important aspect of the high-speed rail program was never studied in a thorough and transparent way. This has opened the door for the Authority to make wild claims about its project's "greenness" that to date have largely gone unchallenged by the legislature, the public, and the media. It is just one more reason why all work should be halted on this project until a new statewide supplemental EIR/EIS is conducted and the truth about the greenness of this project, or lack-there-of , can be brought to light.

Part I – Net Construction Emissions:

Construction Emissions

The Authority has provided only limited information regarding construction emissions. Its June 2013 report, *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels* (2013 Emissions Report), itemizes 30,107 metric tons $CO2e^2$ of direct emissions "from off-road equipment used to build the infrastructure, GHG emissions from on-road vehicles transporting workers or material, and used load factors to account for the actual performance of equipment in the field"[3] for the first 29 mile construction segment (Construction Package 1). However, this figure does not include indirect GHG emissions associated with the manufacture and transport to the construction site of construction materials, primarily concrete, steel, and ballast, because the precise quantities, sources, and suppliers are not known[4]. This is at best a flimsy excuse for failing to report indirect GHG emissions.

The final deadline for contractors to submit proposals for Construction Package 1 was January 18, 2013. On April 17, 2013 Tutor-Perini announced:

> "Its joint venture's bid, valued at approximately $985 million, was recently identified by the California High-Speed Rail Authority (Authority) as the 'apparent best value' for the design and construction of the initial Madera to Fresno segment of the California high-speed rail system. The Authority's Board of Directors is expected to approve the design-build contract for this project in the coming weeks."[5]

It is not credible that a world class engineering firm would submit a $985 million bid without first estimating the tons of concrete, steel, and ballast that would be required to construct the

project. Furthermore, in preparing their in-house cost estimate of the project, Tutor-Perini would have had to assume sources and suppliers of the construction materials so as to estimate their delivered cost. In choosing to not disclose this emission source, one that must have been known to Tutor-Perini ten weeks before the Authority issued its 2013 Emissions Report, Tutor-Perini and the Authority are hiding from the public the main source of GHG emissions associated with construction of the first 29 miles of their project. Worse yet, Item 2665-306-6043 of the Budget Act of 2012 demanded of the Authority that it shall prepare a report before June 30, 2013 that "provides an analysis of the net impact of the high-speed rail program on the state's greenhouse gas emissions."[6] The plain language of the Budget Act requires the Authority to estimate total construction emissions from their entire project, direct and indirect emissions for both Phase 1 and 2. Yet the Authority publishes only "direct emissions" from the first 29 miles of Phase 1. The question of how much in the way of construction emissions is being hidden needs to be asked and answered.

No literature could be found giving the percentages of direct and indirect GHG emissions associated with the construction of high-speed rail systems throughout the world. However, a report prepared by the World Bank entitled *Introduction to Greenhouse Gas Emissions in Road Construction and Rehabilitation* concluded that the fabrication and transport of construction materials (i.e. indirect sources) accounted for approximately 90% of the GHG emissions associated with the construction of expressways and national roads.[7] Were this relationship to hold for construction of high-speed rail with its massive steel reinforced concrete viaducts, then total emissions of GHG associated with the first 29 mile construction section would be 301,000 metric tons CO2e or approximately 10,400 metric tons CO2e/mile. This extrapolates out to 5.2 million metric tons CO2e for the 500 mile long Phase 1 Blended system; an amount higher than what the Authority calculates as the cumulative GHG reduction due to operation of the system out to the year 2030[8]. When extrapolated out to 800 miles of construction to account for Phase 2, total construction emissions reach 8.3 million metric tons CO2e or 275 times the number provided by the Authority in their 2013 Emissions Report.

Mitigating Construction Emissions

With regard to the first 29 miles of construction, the Authority plans to mitigate construction emissions with a "multi-faceted forestry program (that) will introduce enough trees into the region where construction is taking place to honor the Authority's commitment to offset the direct GHG emissions associated with construction."[9] The Authority does not answer the question: How many trees is "enough"? However, the Authority does cite the California Air Resources Board, *Compliance Offset Protocol for Urban Forest Projects 2011*.

The cited protocol provides an example of the gross carbon sequestered by a 15.6m (51 foot) hackberry (*Celtis occidentalis*) tree; .477 metric tons of carbon[10]. Converting carbon to carbon dioxide yields 1.749 metric tons CO2e. Therefore, the gross carbon sequestration of 17,200 fifty-one foot tall hackberry trees would be "enough trees" to sequester the 30,107 metric tons CO2e of direct construction emissions calculated by the Authority for the first 29 miles of the system. However, 172,000 such trees would likely be needed to sequester total (direct plus indirect) construction emissions and 3 million such trees would be needed to sequester the

total emissions along the 500 miles of construction for Phase 1 Blended. Of course more trees would still be needed because against "gross sequestration" the protocol mandates that CO2 emissions from motor vehicles related to tree planting, care, and monitoring as well as CO2 emissions from equipment related to tree planting and care be subtracted from the amount of gross carbon sequestered. Lastly, more trees must be continually planted to account for the mortality of trees so that the Authority's forest of 3 million 51 foot tall hackberry trees could live in perpetuity. The additional 300 miles of construction associated with Phase 2 raises to total to nearly 5 million such trees living in perpetuity, an amount equal to 1/6th of all the trees in all of Oregon's privately and publicly owned forests. [11]

Certainly the planting of trees is an absurd means to mitigate total construction emissions and so the Authority has other plans to augment its tree planting program. Its Voluntary Emissions Reduction Agreement with the San Joaquin Air Pollution Control District involves the Authority providing funds for the "replacement of fossil fuel burning irrigation pumps with electric pumps, and the replacement of, or retrofit of vehicles with more efficient engines (that) have a GHG emissions benefit".[12] The number of engines to be replaced is of course not specified.

A larger question left unanswered involves the funds the Authority will use to pay for tree planting and engine replacement. Private industry must mitigate the environmental impact of a given project with the profits derived from that project. If mitigation makes the project unprofitable, then the project is not built. The Authority's mitigation efforts must be treated in the same fashion. Therefore, the only legitimate funds spent on mitigation efforts would be those derived from its anticipated operating profits, capitalized and provided upfront by private investment; a source of funds that does not exist. Worse yet, the Authority seeks to spend funds on mitigation that are derived from Cap-and-Trade fees whose sole purpose in the first place is to provide funds for the very same type of projects (i.e. GHG reduction projects) that the Authority claims it will provide. There is no reason to pass these funds through the hands of the Authority and then allow the Authority to claim it has mitigated its GHG emissions...even if it could.

Part II – The Illusion of a Train Powered by Renewable Energy Sources

The Authority claims that it will purchase power for the operation of its trains from a "renewable power mix of 20 percent solar, 40 percent wind, 35 percent geothermal, and 5 percent biogas converted to electricity."[13] It claims it can assure this supply by paying a 3 cent/Kwh premium for "green power". Again, this claim is absurd. Electric power generation accounts for 31% of all U.S. GHG emissions.[14] Assuming the same ratio hold true in California, then California could today meet its GHG reduction goals mandated by its Global Warming Act by merely asking each person and business to pay a 3 cent/KWh "green power" premium. For an average household this would only amount to about $20/month. Unfortunately, just paying more for power won't make the power any greener.

Electric power, aside from a small amount contained in batteries, cannot be stored for future use. Transmission lines don't store power. Rather, they nearly instantaneously move power

from a generator to a user. Electric power is consumed at the moment it is generated. Perhaps someday California's high-speed trains will be built and need electric power. On that day a new demand will be created instantaneously with the throwing of large circuit breakers and the starting up of high-speed train electric engines. At that exact moment the new demand must be met by a power provider. Some electric generator, idle at that moment, must come on line to meet the new demand. The generator coming on line may be a peaking power unit in California powered by natural gas or a coal burning power plant in Utah. The exact source is unknowable. But one thing is known. It will not be a wind or solar powered electric plant. Those plants are always running when wind or sunshine is available because they operate with almost no variable costs and because they are mandated to run whenever they can. Wind and solar sources will already be generating all the power they can produce when the train first requires power.

According to the Authority its trains will consume 253 million kWh during their first year of operation in 2022[15] and this will ramp up to 1,204 million kWh by 2030 when Phase 1 Blended is in service. Solar generated electrical energy is the fastest growing new source of renewable energy in California[16] and for that reason this paper will use solar generated electricity as a proxy for the Authority's "renewable sources".

The high-speed train's power requirements between 2022 and 2030 are best put in perspective by comparing the trains' usage to the generating capacity of a new utility scale solar generating plant. California Valley Solar Ranch, a single-axis photo-voltaic generating plant capable of generating 650 million kWh/year of electrical power built with a $1.2 billion dollar federal loan guarantee, was started up in San Luis Obispo County in 2013.[17] Nearly 40% of the capacity of a similar generating plant will be required by the Authority's trains in 2022 and nearly two such plants dedicated to the high-speed train system will be required by 2030 as the trains' need for power grows.

If the Authority is to make good on its claim that it will power its trains on 100% renewable electrical energy, then the Authority needs to be able to fund the construction of the necessary renewable power plants. A 3 cent/kWh premium for "green power" will not be enough. Again using the Authority's data, high-speed trains are projected to cumulatively consume 6,300 million kWh of electricity between the start of 2022 and the end of 2030. Using the example of California Valley Solar Ranch, $2.2 billion (2010$) must be raised in the form of a green premium so that the necessary solar generating capacity can be built. $2.2 billion spread out over 6,300 million kWh equates to a green premium of 30 cents/kWh after adjusting downward by 5 cents/kWh to account for solar generated power's lower variable costs compared to fossil fuel sources. This is still 10 times the 3 cent/kWh green premium offered by the Authority. Worse yet, more than 20% of this solar generating capacity costing almost a half a billion dollars must be constructed before the first trains run and the capital for this generating capacity must come from private investment in the high-speed rail system. This is of course a source of funds that does not exist.

Conclusion

The Authority's contractors have a vested interest, perhaps even more of an interest than the Authority Board Members themselves, in keeping this project alive and the accompanying cash flow that fills their corporate coffers. The high-speed train has been their gravy-train for nearly 2 decades. It is time for the Authority to ask their contractors some hard questions. What are the estimated direct and indirect CO2e construction emission that will result from one of the largest infrastructure programs undertaken in the United States? A program that according to the Authority's 2012 Revised Business Plan "includes installing potentially up to 2,200 miles of rail weighing 276,000 tons; 3.5 million square feet of buildings and facilities; 6,500 miles of electrical wires and cables; and approximately 190 grade separations. A significant portion of the project—approximately 190 miles—may be constructed on elevated structures or in tunnels."[18] And this is merely the scope of Phase 1 Blended.

Additionally, the Authority's contractors need to spell out where all the green energy to power the train will be sourced and when ,or if, it will become available. The Authority's contractors understand commodity pricing and the economics of supply and demand. They understand that the significant electrical power demand of high-speed trains will result in an immediate incremental supply of new power and they know that incremental source cannot be green.

It's time the Authority's highly paid contractors told the Authority and all Californians the unpleasant truth about their dirty train.

attachments (1)

Attachment 1 to Paper 3 The Green Train

Ridership, Revenue and O&M Costs taken from Medium Ridership Case -PB April 2012 Estimated Cost for CHSRA 2012 Business Plan

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030		
Ridership (millions)	4	5.4	6.7	8.1	9.6	12.9	14.2	19.3	21.4		
Revenue (millions 2010$)	278	372	467	564	663	941	1040	1242	1380		
O&M Costs (millions 2010$)	196	247	258	334	358	480	503	568	627		
Ops. and Maint. of Equipment (See Note 1)	82	124	133	196	216	265	280	344	391		
Variable Costs/TSM (2009$)	20	20	20	20	20	20	20	20	20		
Variable Costs/TSM (2010$) (See Note 2)	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5		
TSM (Millions) (See Note 3)	4.0	6.0	6.5	9.6	10.5	12.9	13.7	16.8	19.1		
Trainset Elec. Consumption (millions of Kwh) (See Note 4)	236	357	383	564	622	763	806	990	1125	5845.3	
Station Electical Cosumption (millions of kWh) (See Note 5)	17	25	27	39	44	53	56	69	79	409.2	
Total Yearly Electrical Consumption (millions of kWh)	253	382	410	604	665	816	862	1059	1204	6254.5	
Capital Cost to Generate Needed millions of kWh in Millions of 2010$ (See Note 6)	455	688	738	1087	1198	1470	1553	1908	2169	2169	
Equivalent California Valley Solar Ranch Facilities	0.39	0.59	0.63	0.93	1.02	1.26	1.33	1.63	1.85		
Incremental Use of Electric Power (Millions of kWh)	253	129	28	194	62	151	46	197	145		
Incremental Capitalization Costs in Millions (2010$)	455	233	50	349	111	272	83	355	261	2169	
Average Green Charge Needed to Build Solar Generating Capacity ($/kWh) (See Note 7)										0.35	
Average Green Charge Needed After Adjusting for Variable Cost Differential Between Solar and Fossil Fuels										**0.30**	

Notes:

1 Authority treats Ops. and Maint. of Equipment as a variable cost at $20/Trainset Mile (TSM) in Tables 5 and 7 of April 2012 PB report *Estimating High-Speed Train Operating and Maintance Cost for the CHSRA 2012 Business Plan*

2 Adjust Variable Costs upward by 2.5% to convert from 2009$ to 2010$

3 Dividing Ops. And Maint. Of Equipment costs by total variable costs yields the driver of Ops. And Maint. Of Equipment Costs, Trainset Miles.

4 Electrical Consumption of 59 kWh/TSM found on page 7 of April 2012 PB report *Estimating High-Speed Train Operating and Maintance Cost for the CHSRA 2012 Business Plan*

5 7% allowance for station and maintenance facilities electricity consumption found on page 7 of April 2012 PB report *Estimating High-Speed Train Operating and Maintance Cost for the CHSRA 2012 Business Plan*

6. Use California Valley Solar Ranch as Proxy. Facility built with $1.2 billion federal loan guarantee awarded in 2011 adjusted downward by 2.5% to reflect 2010$. Facility expected to generate 650 million kWh per year.

7 A $.35/kWh surcharge for green energy could concievably pay for construction of the solar facilities.

8 Solar has a lower variable cost than fossil fuel of approximately $05/kWh according to a Penn State Engineering Department study. https://www.e-education.psu.edu/eme801/node/530

Endnotes

[1] *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels*, June 2013, page 6
http://www.hsr.ca.gov/docs/programs/green_practices/HSR_Reducing_CA_GHG_Emissions_2013.pdf
[2] *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels*, June 2013, page 13
[3] *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels*, June 2013, page 18
[4] *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels*, June 2013, page 14
[5] Tutor-Perini press release dated April 17, 2013
http://investors.tutorperini.com/press-releases/press-releases-details/2013/Tutor-Perini-Joint-Venture-Selected-for-985-Million-California-High-Speed-Rail-Design-Build-Contract/default.aspx
[6] SB 1029 Budget Act of 2012, SEC. 9
http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_1001-1050/sb_1029_bill_20120718_chaptered.pdf
[7] Introduction to Greenhouse Gas Emissions in Road Construction and Rehabilitation - Executive Summary, page 13
http://siteresources.worldbank.org/INTEAPASTAE/Resources/GHG-ExecSummary.pdf
[8] *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels*, June 2013, page 11
[9] *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels*, June 2013, page 13
[10] *Compliance Offset Protocol for Urban Forest Projects 2011*, Appendix B, page 35
http://www.arb.ca.gov/regact/2010/capandtrade10/copurbanforestfin.pdf
[11] Oregon Forest Facts& Figures 2015-16 published by the Oregon Forest Resources Institute, page 1
http://oregonforests.org/sites/default/files/publications/pdf/OFRI_FactsFigures_2015-16.pdf
[12] *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels*, June 2013, page 15
[13] *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels*, June 2013, page 10
[14] EPA website: Sources of Greenhouse Gas Emissions
http://www3.epa.gov/climatechange/ghgemissions/sources/electricity.html
[15] See Attachment 1 to this paper
[16] California Energy Commission's Energy Almanac website
http://energyalmanac.ca.gov/electricity/electricity_generation.html
[17] Energy.Gov Loan Programs Office, California Valley Solar Ranch
http://energy.gov/lpo/california-valley-solar-ranch
[18] Revised 2012 Business Plan, page 3-3
http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2012_rpt.pdf

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2016 Business Plan RECORD DETAIL

Submission Date :	3/29/2016
Submission Method :	Letter
First Name :	Mark
Last Name :	Powell
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Powell_A_Reading_of_The_DRAFT_Biz_Plan_Makes_for_Compelling-Argument_for_Supplemental_STatewide EIR-EIS.pdf (2 mb)

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March 29, 2016

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To Whom it May Concern:

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Sincerely,

Mark R. Powell

enclosures: 1 Comment on the Authority's Draft 2016 Business Plan: *A Reading of the Draft 2016 Business Plan Makes a Compelling Argument for a Supplemental Statewide HST Program Level EIR/EIS*

A Reading of the Draft 2016 Business Plan Makes a Compelling Argument for a Supplemental Statewide HST Program Level EIR/EIS

by Mark R. Powell
March 29, 2016

Argument for a Supplemental Statewide HST Program Level EIR/EIS

1. Environmental Statutes:

Both NEPA and CEQA Call for a Supplemental Program EIR of the Current HST Project

Both the Federal Government, through NEPA (National Environmental Protection Act), and the California State Government, through CEQA (California Environmental Quality Act), encourage the use of a tiered environmental analysis for large programs such as California's proposed statewide high-speed rail project. The Tier I level of analysis was provided by the *California High-Speed Train Final Program EIR/EIS* (Program EIR) certified in 2005. It broadly looked at the proposed project, compared it to alternatives (the No Project Alternative and the Modal Alternative) and certified that the High-Speed Train Alternative was the least damaging to the environment while still providing acceptable levels of transportation to the residents of California. Today, all the environmental damage caused by track alignments detailed in Tier II Project Level EIRs (the taking of homes and businesses, the destruction of farmland, emissions of greenhouse gasses due to construction itself, etc.) is justified by the findings in the Program EIR.

However, both CEQA and NEPA place limits on the continued use of an EIR and these limits are particularly applicable to the continued use of program level EIRs (or associated EIS in the case of NEPA). Section 21166 of CEQA discusses these limitations as does Section 1502.9 of NEPA. A February 2014 joint publication the Federal Government and the State of California entitled *NEPA and CEQA: Integrating Federal and State Environmental Reviews* concisely summarized these limitations and the need for supplemental statements.[1]

> **"Opportunities for Coordination:**
> Under both NEPA and CEQA, recirculation/supplementation is needed when any of the following occur:
> • substantial changes to the proposal itself;
> • a new alternative arises outside the range of those already analyzed; or
> • any other new information arises that would significantly change the analysis of impacts."

It is a supplemental program EIR that is clearly called for at this time, if not years ago, because of the significant changes to the project itself in timing and scope. Additionally, new information has arisen which would significantly change the analysis of impacts and the selection of alternatives to the proposed project if it were being studied today.

California's actual population is now known in years where the Program EIR could only speculate and new information has arisen regarding future population growth. All of this new data indicates a smaller population growing slower than the data available at the time the Program EIR was certified. The No Project Alternative to the high-speed rail project, deemed infeasible in the Program EIR because of population growth, has actually been implemented over the past decade by virtue of the fact that neither high-speed rail nor its modal alternative were built and Californians still travel with ease by either airplane or automobile between the Los Angeles Basin and the Bay Area.

Beginning in 2006 with passage of the Global Warming Initiative, Californians, through the legislative process, cited a need to limit GHG emissions. This concern was never dealt with in the Program EIR because it predated the new concern. Additionally, new technologies such as hybrid and electric vehicles, mandated by federal emission standards enacted after certification of the Program EIR, were not considered as alternatives to the high-speed train and yet their GHG footprint may less than that of the train. We just don't know for sure because they were never studied.

The following pages elaborate on these significant changes to the project, new alternatives that have arisen, and new information that has become available in an attempt to convince the reader that this project should be halted until a supplemental program EIR makes a convincing case that high-speed rail is currently right for California.

2. Changes Made to the Statewide High-Speed Rail Proposal

2.1 The Original Statewide Plan

The Authority started its environmental permitting efforts in 1998[2]. The formal environmental process began on April 6, 2001[3]. The final document, entitled *California High-Speed Train Final Program EIR/EIS* (Program EIR), was completed and approved at the federal[4] and state levels in November 2005.

In the years between 1998 and 2001 the Authority approved and published its 2000 Business Plan. It was this plan that deemed feasible a "700 mile-long high-speed train system capable of speeds in excess of 200 miles per hour on dedicated, fully-grade separated tracks with state-of-the-art safety, signaling and automated train control systems. The system would serve the major metropolitan centers of California in 2020."[5] Contained in the plan was a recommendation that the Governor and the Legislature take actions to "initiate a formal environmental clearance process with a state-level program environmental impact report (EIR)/federal-level Tier I environmental impact statement (EIS) on the high-speed train network described in the plan."[6]

The statewide high-speed train proposal approved in the Program EIR did closely resemble that which had been described in the 2000 Business Plan. A comparison of the two visions is shown below.

	2000 Business Plan	**HST Proposal Approved in Program EIR**
Completion Date	2020[7]	2020[8]
Cost	$25 Billion (1999$)[9]	$33-37 Billion (2003$)[10]
Travel Times[11] [12]		
SF to LA	2hr. 30min.	2hr. 25min.
Sacramento to LA	2hr. 9min.	2hr. 0min.
SF to San Diego	3hr. 29min.	3hr. 30min.

Comparison of Key Elements of 2000 Business Plan and the Program EIR

The 2000 Business Plan and Program EIR were consistent in one other important aspect. That is, both considered the proposed statewide HST system as one project that would be in full revenue service by the year 2020 at the latest. The Economic Growth and Related Impacts section of Program EIR was more specific with regard to completion of the statewide HST system.

> "For the HST Alternative, HST service along a trunk line between San Francisco and LAUS would begin on January 1, 2016, for all alignment options. Service to San Diego and Sacramento would begin on January 1, 2019, for all alignment options. For the Irvine alignment scenario, service from LAUS and Irvine would begin on January 1, 2019. For the East Bay alignment scenario, service between San Jose and Oakland would begin on January 1, 2016." [13]

A word search of the Summary section alone of the Program EIR finds more than two dozen references to the "HST System". The word "Phase" is never found as a proper noun referring to Phase 1 or Phase 2 of the HST System. To further stress the point that the Program EIR was for a statewide HST system one need only point to the numerous comparisons between the statewide HST system and the statewide No Project Alternative and statewide Modal Alterative. For instance, the Program EIR Summary section discusses the Modal Alternative as only a statewide alternative as illustrated below:

> "Overall, the highway improvements assumed under the Modal Alternative represent a total of over 2,970 additional lane miles (mi) (4,780 lane kilometers [km]). Two additional highway lanes would be required on most intercity highways, and as many as four additional lanes would be needed to meet forecasted demand in certain segments. Projected airport improvements would include over 90 new gates and five new runways statewide."[14]

The Program EIR could only present the building of high-speed rail as one statewide project because the Program EIR followed the project as outlined in the 2000 Business Plan. Nowhere in the 2000 Business Plan, not in the single cost estimate for the project[15], nor the construction schedule[16], or anywhere else, is there a discussion of building anything less than the statewide system.

2.2 The Possibility of Constructing Less than the Statewide System Becomes Apparent

Provisions of AB 3034 enacted into law with the voter approval of Proposition 1 A, *The Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century,* certainly do contemplate the possibility of building less that the statewide HST system envisioned in the 2000 Business Plan and more importantly as presented in the Program EIR. AB 3034 is replete with references to Phase 1," as adopted by the Authority in May 2007"[17], linking the San Francisco Transbay Terminal and Los Angeles Union Station and Anaheim. Moreover, the language in AB 3034 gives priority to building Phase 1 and specifically states that bonds authorized by the passage of Proposition 1A could only be used for other corridors after a finding by the Authority that such usage "would not have an adverse impact on the construction of Phase 1" [18]. AB 3034 even allows the use of bond funds on a project smaller than Phase 1, a "usable segment". This is defined as a "portion of a corridor that includes at least two stations".

Federal Grants were received by the Authority following the passage of Proposition 1A. These grants are/were tied to the construction of possibly a section smaller than a "usable segment", simply a project that upon completion possessed "operational independence"[19].

AB 3034 also contains language stating that it is the intent of the Legislature by enacting this chapter and the people of California by approving the bond measure to initiate construction of the of a high-speed train system that links the state's major population centers, including Sacramento and San Diego, consistent with the Authority's certified EIRs[20] of 2005 and 2008.

However, opening possibilities for construction of a very small project as long as it possessed "operational independence", or a slightly larger project deemed a "usable segment" of high-speed rail, or even Phase 1, are all at odds with the Program EIR as none of these options were ever studied or approved. Once these possibilities were opened up with the passage of Proposition 1A, and later by the receipt of federal grant money, a supplemental program EIR became necessary because any of these possibilities represent a significant change to the project approved in the Program EIR. The current shortage of funding to complete even the first usable segment, let alone all of Phase 1, coupled with the Authority's failure since the passage of Proposition 1A to even provide estimated costs and a completion date for the statewide system, make the possibility of an incomplete statewide system all the more likely and the need for a supplemental program EIR all the more pressing.

3. New Information Affecting Analysis of Impacts and Selection of Alternatives:

3.1 Actual Population Growth is Significantly Lower than Projected in the Project EIR

In the first pages of the Summary section of the Program EIR in subsection S.3 entitled Purpose of and Need for a High-Speed Train System in California the following passage is found:

> "The number of passengers traveling between cities in California is forecasted to increase up to 63% over the next 20 years, from 155 million passengers to as many as 253 million passengers. **The state's population is projected to increase by 31% by 2020**, with the highest growth rate expected in the Central Valley and the greatest increase in population expected in the Los Angeles metropolitan area."[21](emphasis added)

Mindful of the fact that the Authority began formally working on its Program EIR in April 2001 and in the context of the paragraph which seems to speak of a 20 year period from 2000 to 2020, it appears the Authority was using the State Department of Finance's Demographic Research Unit's (DRU) December 1998 P-1 Report (Total Population)[22] projecting a 31% increase from 34.7 million in 2000 to 45.4 million in 2020. See Attachment 1. Certainly the need for a high-speed rail project, as well as its eventual ridership and profitability, hinges on actual population growth. However, the latest population projection issued by the DRU in December 2014 now projects a population of 40.6 million in 2020, only a 16% increase over the population in 2000 or roughly one-half the population growth anticipated in the Program EIR.

Later in the Summary section of the Program EIR, in a subsection entitled Summary of Key Environmental Impacts and Benefits for System Alternatives[23], the Authority writes that the state's population under the No Project Alternative is expected to grow by 54% between 2002 and 2035. Once again this data fits well with the DRU report issued in December 1998. However, the most recent DRU report now projects only a 30% increase in the state's population over the same period resulting in a population nearly 10 million less than the train's need and ridership were based upon.

An even more striking comparison between DRU's December 1998 report and their December 2014 report is found in the 20 year period between the years 2020 and 2040, the first two decades when the Program EIR assumed the statewide high-speed train system would be in service.

Report	**Projected 2020 Population**	**Projected 2040 Population**	**% Change**
Nov.1989	39.6	-	
May 1993	49.0	63.3	+29
Dec. 1998	45.4	58.7	+29
Dec. 2014	40.6	47.2	+16

Summary of Population Projections Prepared by the DRU

Here we see that the population envisioned in the Program EIR for the year 2020 is now projected to arrive nearly two decades later. DRU's Nov. 1989 and May 1993 projections are shown in the above table to highlight two other facts.

First, population projections have been trending downward for more than two decades.

Second, the May 1993 report can now be seen as an anomaly.

However, it appears to have been viewed differently in 1993 when two months following DRU's 1993 report, Senate Concurrent Resolution 6, citing that the "population of the state and the travel demands of its citizens are expected to continue to grow at a rapid rate", was approved by the State's Assembly and Senate in July 1993 giving birth to the high-speed rail program and its first governing body, the Intercity High-Speed Rail Commission.

One final comment on DRU's current projection, it shows a declining rate of growth, particularly harsh in the years 2030 to 2060 (the last year projected) where the projected rate of growth declines from .80%/yr. to .33%/yr. as the population grows to 51.7 million. See Attachment 2. Even if the projected rate of population growth were to hold steady beginning in 2060, it would take until the end of this century before the DRU 1998 Report's projected 2040 population would be reached and it would be more than 100 years from now before the DRU 1993 Report's projected 2040 population of 63.3 million would be reached. See Attachment 1. The new data shows that a train originally envisioned in the past century as needed by early in this century may not be needed until the next century, if ever.

3.2 The Modal Alternative has Proven Unnecessary and the No Project Alternative has Proven Feasible

Focus on Freeway Lane Miles:

The Program EIR was written to meet the requirements of the federal NEPA and California's CEQA environmental regulations. Here the protection of the environment is paramount and state agencies are to regulate activities affecting the environment "so that major consideration is given to preventing environmental damage while providing a decent home and satisfying living environment for every Californian."[24] In attempting to strike a balance between protecting the environment and necessary economic development CEQA "declares that it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects".[25]

The Authority complied with these requirements when their Program EIR compared the environmental impacts and benefits of a statewide HST System to a No Project Alternative (no extraordinary transportation infrastructure construction efforts) and a Modal Alternative (the construction of 2970 freeway lane miles, 90 new airport gates, and 5 new runways, most of which was projected to be needed and in service by January 1, 2016[26] [27]) and judged the statewide High-Speed Train System Alternative as preferable. Projected population growth made the No Project Alternative "neither a viable nor realistic alternative"[28] and the Modal Alternative was judged to be environmentally and structurally inferior to the HST system while costing more than twice as much to build.[29]

The Authority's Modal Alternative, as it relates to highways, is illustrated on the following page by the Figure 2-D-1 taken from Appendix 2-D of the Authority's Program EIR.
Table 2-D-1 accompanied the figure and listed each segment of highway and the lanes to be added. (Attachment 3)

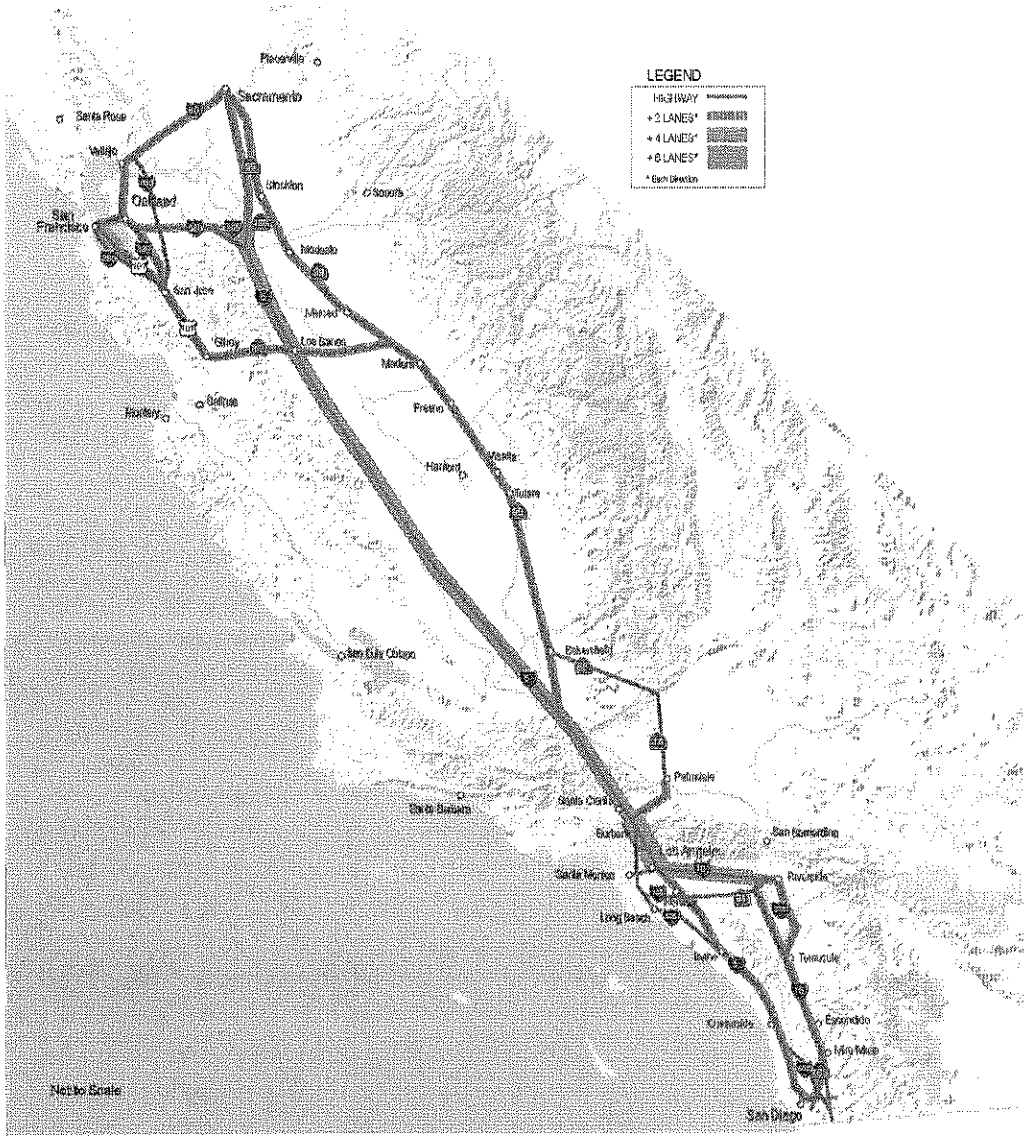

Figure 2-D-1
Highway Capacity Improvement Options—Year 2020
(2020 Intercity Travel Demand with Highway Expansion only)

The Modal Alternative was based on projected ridership on the high-speed train as opposed to the people-carrying capacity of the train. Moreover, it was an alternative to the statewide high-speed rail system proposed in the Program EIR. As a result, the highway alternative shown in Figure 2-D-1 details routes south of Los Angeles and north of Stockton that would not be impacted by the Authority's current project, Phase 1 Blended. Ignoring these lane additions still leaves 2155 highway lane miles in Figure 2-D-1. These are itemized in Attachment 3. Focusing again on I-5 north of Los Angeles, the required additional lanes listed in the Modal Alternative included 6 lanes north to SR-14 and 4 additional lanes north from this point across the Tehachapis and through the Central Valley to I-580.

The decade between the development of the Authority's Program EIR and the issuance of its 2012 Revised Business Plan brought to light two important facts.

First, Phase 1 Blended's costs would be at least twice that originally envisioned for the entire statewide system of high-speed rail.

Second, I-5 had not been widened and traffic was still flowing over the Tehachapis and up the Central Valley at less than the highway's capacity.[30]

With 2016 rapidly approaching, the No Project Alternative could be viewed as quite feasible and even the Authority's consultants would have been hard pressed to make a convincing case that the Modal Alternative as described in the Program EIR was now necessary or feasible. With the environmental and economic justification outlined in the Program EIR quickly disappearing, the Authority stopped making comparisons between high-speed rail and alternative infrastructure based on actual ridership. Instead, it began making comparisons base on the people-carrying capacity of the high-speed train system (trains with a double set of passenger cars, 70% occupied, leaving SF and LA every 5 minutes[31]), whether that capacity was needed or not. Quoting directly from the April 2012 Parsons Brinkerhoff report:[32]

> "There are two fundamental changes to assumptions that make this a different study than the one conducted for the 2005 Program EIR/EIS.
>
> - The scope of the analysis is the 520-mile Phase 1 system, unlike the original analysis, which looked at the Full 800-mile System, including both Phase 1 and Phase 2. Although the Full System remains the complete plan for the HST program, the updated cost estimates in the Business Plan are for the Phase 1 system. This analysis was designed to provide a more direct comparison with the Phase 1 system and its costs.
> - The second major change in assumptions was a switch from estimating the needed capacity based on ridership to estimating it based on equivalent "people-carrying" capacity of the HSR system whereas the 2005 analysis was prepared based on a ridership projection."

This change in assumptions allowed the Authority to make the claim that Phase 1 Blended, costing twice what the statewide system was estimated to cost in the Program EIR, would cost only half what alternative highways and airport infrastructure of the same people-carrying capacity (4300 miles of new freeway lanes[33], 5 new runways, and 115 new airport gates) would cost. Essentially every major highway between Los Angeles and San Francisco would need to be widened by 6 lanes for the equivalent people-carrying capacity of Phase 1 Full Build resulting in 4652 miles of highway lanes. See Attachment 4. This number was pared down to 4300 to equate to Phase 1 Blended's people carrying capacity. It went unstated that this was a false choice in that alternative infrastructure of the same capacity was not necessary.

Earlier attempts at studying how high-speed rail could reduce the need for transportation infrastructure had been completed both by the Authority and its predecessor, the Intercity High-Speed Rail Commission. These studies had correctly predicted that high-speed rail would have a much more modest impact on alternative transportation infrastructure needs.

The Authority's 2000 Business Plan did not identify any highway infrastructure construction costs that would be avoided due to the construction of high-speed rail. However, it found urban and rural highway benefits associated with the construction of the statewide high-speed rail system in the form of fewer automobile accidents, fewer road delays, and less air pollution.[34]

Formed in 1993, a time when the state's population was expected to increase from its current 32.7 million to 49 million by 2020 and to 63.3 million by 2040, the Authority's predecessor agency, the Intercity High-Speed Rail Commission, worked through 1996 to develop a 20 year plan for implementing a statewide high-speed rail plan and to determine if such a plan was economically feasible. The Commission's findings were detailed in their *High-Speed Rail Summary Report and Action Plan* published in December 1996 The Commission determined the route of the statewide system, later adopted by the Authority, and found the statewide system to be economically feasible at a cost of 18.2 billion (1996 dollars) because the net present value of the benefits of the system over the 50 year period from 2000 to 2050 exceeded the net present value of its costs. Of some importance today is the fact that the Commission, for the same reason, found the "trunk line" connecting only San Francisco and Los Angeles to be not feasible.[35]

However, the Commission found zero benefits associated with the avoidance of highway infrastructure costs out to the year 2034 for the statewide high speed rail system. The Commission found that even though diverted highway trips would account for between 30% and 50% of all high-speed rail travel, the Los Angeles to Bay Area System would divert only 2.3% of intercity automobile trips to rail. With extensions to Sacramento and San Diego the system would divert 5.0% of intercity automobile trips. The Commission then looked at all the highway segments impacted by drivers diverting to a statewide high-speed rail system and determined that the construction of the statewide system would result in the avoidance or postponement of highway construction by more than one year in only two cases. The future need to widen by two lanes I-5 between Los Angeles and Bakersfield would be postponed from 2034 to 2038 and the widening of I-5 between Bakersfield and Stockton could be put off indefinitely.[36] Benefits of a rail system connecting just Los Angeles and San Francisco would be even smaller. See Attachment 5. Interestingly, the Commission could only find these minimal infrastructure benefits in the timeframe of the year 2040 and the Commission was working with DRU data showing a population of 63.3 million in 2040. The current DRU projection indicates a population of only 47.3 million Californians in 2040 and a reasonable extrapolation of the current data indicates that a population of 63.3 million will not be reached until the year 2120!

The Commission did identify less tangible benefits associated with the system connecting only Los Angeles and San Francisco amounting to $226 million[37] (in 1995 dollars) in the form of fewer automobile accidents, fewer road delays, and less air pollution for highway users in the year 2020. (Attachment 6)

As it was with the Commission in 1996, the primary interest today to Californians relates to Phase 1 Blended's impact on travel along I-5 between the north end of the San Fernando Valley and the intersection of I-5 and I-580 south of Stockton. Caltrans Districts 6, 7, and 10 are involved with this route. Only Districts 6 and 10 are referenced in this paper because these two include portions of I-5 crossing the Tehachapis as well as representative portions of I-5 in the Central Valley north of the I-5/SR-99 junction where travel significantly decreases.

Caltrans uses six Level of Service (LOS) classifications ranging from A to F and Caltrans "endeavors to maintain a target LOS at the transition between C and D on State highway facilities, or whichever LOS is feasible to attain."[38] South of the I-5/SR-99 junction Caltrans currently rates the LOS along I-5 between C and D. North of the I-5/SR-99 junction and south of I-580 Caltrans rates the LOS along I-5 between B and D with most sections receiving a LOS of C. In other words, these sections of I-5 are currently operating within design capacity. Caltrans Traffic Count data along this route indicates that going back to 2004 there has been minimal change in overall traffic. Some locations show a slight increase and others a slight decrease. This is in line with Caltrans overall statewide traffic counts that indicate overall state highway traffic has been stable since the Authority certified its Program EIR, rising by only .6% in the last 10 years. See Attachment 7.

Thus the Commission's finding that high-speed rail would have little impact on infrastructure needs between Los Angeles and San Francisco by the year 2020 seems to be confirmed. In contrast, the Authority's forecast for an additional 4-6 lanes, reported in its HST Program EIR as being necessary by 2016, has been proven untrue. Finally, the Authority's more recent attempt to portray to the public that 4,300 miles of highway lanes are a reasonable alternative to Phase 1 Blended was best a cleverly-crafted misleading statement and at worst a fraud being perpetrated on Californians by the Authority.

Focus on New Airport Runways and Gates:

The avoidance of building new runways and gates are two areas where neither the Commission in its Summary Report or the Authority in its 2000 Business Plans saw any impact resulting from the proposed high-speed rail system. However, both documents saw some ancillary benefits such as reduced delay and improved air quality.

It was in the Authority's Program EIR where it was first postulated that 5 new runways and 90 new gates, most of which would be opened by January 1, 2016,[39] [40] were necessary components of the Modal Alternative if the High-Speed Train Alternative was not chosen. As was stated earlier with regard to highway lane miles, this type of comparison was necessary so that the High-Speed Train Alternative could be shown to be environmentally superior to the Modal Alternative. However, once again the Modal Alternative has not proven to be necessary and the No Project Alternative has proven quite adequate. The following table illustrates the change in enplanements at California's 10 largest airports serving the Bay Area, the Los Angeles Basin, and San Diego in the base year 2000 as well as the three most recent years for which data is available.

Airport Name	CY 2000 Enplanements	CY 12 Enplanements	CY 13 Enplanements	CY 14 Enplanements	% Change 2000-2014	Enplanement Change 2000-2014
Los Angeles International	32,167,896	31,326,268	32,425,892	34,314,197	6.7	2,146,301
SF International	19,556,795	21,284,236	21,704,626	22,770,783	16.4	3,213,988
San Diego International	7,898,360	8,686,621	8,878,772	9,333,152	18.2	1,434,792
Oakland International	5,196,451	4,926,683	4,770,716	5,069,257	-2.4	-127,194
Orange County	3,914,051	4,381,172	4,540,628	4,584,147	17.1	670,096
San Jose International	6,170,384	4,077,654	4,315,839	4,621,003	-25.1	-1,549,381
Sacramento International	3,979,043	4,357,899	4,255,145	4,384,616	10.2	405,573
Ontario International	3,197,795	2,142,393	1,970,538	2,037,346	-36.3	-1,160,449
Bob Hope Burbank	2,380,531	2,027,203	1,918,011	1,928,491	-19.0	-452,040
Long Beach Field	335,225	1,554,846	1,438,756	1,368,923	308.4	1,033,698
Total	84,796,531	84,764,975	86,218,923	90,411,915	6.6	5,615,384

Summary of Enplanements at California's 10 Major Airports CY 2000-2014[41]
Source: FAA Passenger Boarding (Enplanement) and All-Cargo Data for U.S. Airports

Total Enplanements are up 6.6% when comparing CY-2014 to CY-2000, but all of this increase can be attributed to one airport, Long Beach Field. Moreover, all of this increase took place due to a decision made in August 2001 when Jet Blue chose to make Long Beach Field its west coast hub, more than 4 years before the Program EIR was certified. Even with the increase of 1 million enplanements at Long Beach Field, Total Enplanements in CY-2012 and CY-2013 are almost identical to the base year. Additionally, Total Enplanements in CY-2014 at Oakland, San Jose, Ontario, and Burbank are down 3,288,000 from their totals in CY-2000. It therefore should come as no surprise to critics of the Authority and the contractors writing their environmental documents that these four airports were the same four airports mentioned in the Program EIR as NEEDING nearly $13 billion of the $16 billion cited in the Modal Alternative for airport infrastructure improvements[42].

The figures cited in this paper prove there must today be surplus capacity in existing infrastructure to accommodate over 3 million additional enplanements. To this unused capacity one still needs to consider the unused capacity of Palmdale Regional Airport, a facility shut down to commercial aviation in January of 2009 due to "difficulty developing air service in the high-desert city, where eight airlines have come and gone since 1971."[43]

Clearly the Modal Alternative with its massive and costly infrastructure additions to California's highways and airports was not necessary. And as January 1, 2016 passed into history, the date when much of this infrastructure was postulated to be in service if the Modal Alternative to high-speed rail had been chosen, it became clear that the No Project Alternative should have been the chosen alternative in the Program EIR instead of the High-Speed Train Alternative.

The Authority's Draft 2016 Business Plan, as was their 2014 Business Plan, is now silent on the issue of alternative transportation infrastructure that will be avoided if high-speed rail is built. The Draft 2016 Business Plan provides no benefit-cost analysis of their current proposals. Instead, it makes the statement that "benefit-cost analysis is not a requirement for the Business Plan" and refers the reader back to a source document for their 2014 Business Plan that performed a benefit-cost analysis[44]. The benefits in that analysis largely stemmed from alleged savings in travel time[45]. No benefit associated with avoided infrastructure costs was itemized. Thus, even the Authority itself now seems to agree that the "No Project Alternative" is a feasible alternative to its high-speed rail alternative.

3.3 Greenhouse Gas Emissions have Become a Serious Concern in California After the 2005 Program EIR was Certified

According to the California High-Speed Rail Authority there will be "zero net greenhouse gas (GHG) emissions during construction" and the Authority is making a "commitment to (use) 100% renewable energy during operations"[46]. These claims, originally made in their June 2013 report entitled *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels* (2013 Emissions Report), continue to be made in the Draft 2016 Business Plan[47].

Even the Authority's Peer Review Group has taken issue with the claim that the Authority's trains will run on 100% mix of renewable energy. In their August 14, 2013 letter, attached to the 2014 Business Plan, the Peer Review Group addresses the Authority's claim.

> "The current project does not include an allowance for the investment needed to construct and operate the necessary additions to generating and transmission capacity and there is no clear way that the Authority can ensure that the planned mix actually happens."[48]

In fact, the millions of tons of CO2e (carbon dioxide equivalent) in GHG emissions that will result from its construction and the actual use of coal and other fossil fuels to power the trains' operation are currently being hidden from the public. The Authority's Program EIR predated California's Global Warming Initiative (AB 32). As a result, this important aspect of the high-speed rail program was never studied in a thorough and transparent way. This has opened the door for the Authority to make wild claims about its project's "greenness" , such as the one quoted above, that to date have largely gone unchallenged by the legislature, the public, and the media. It is just one more reason why all work should be halted on this project until a new supplemental program EIR is conducted and the truth about the greenness of this project, or its lack-there-of , can be brought to light.

Focus on Construction GHG Emissions:

The Authority has provided only limited information regarding construction emissions. Its June 2013 report, *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels* (2013 Emissions Report), itemizes 30,107 metric tons $CO2e$[49] of direct emissions "from off-road equipment used to build the infrastructure, GHG emissions from on-road vehicles transporting workers or material, and used load factors to account for the actual performance of equipment in the field"[50] for the first 29 mile construction segment (Construction Package 1). However, this figure does not include indirect GHG emissions associated with the manufacture and transport to the construction site of construction materials, primarily concrete, steel, and ballast because the Authority said the precise quantities, sources, and suppliers were not known[51]. This is at best a flimsy excuse for failing to include indirect GHG emissions. While the Authority's reasoning may have been true when the 2013 Emissions Report was issued, recent testimony by the Authority's CEO clearly indicates that it is no longer true.

Speaking before the Assembly Budget Committee responsible for High-Speed Rail Oversight on January 27, 2016 the Authority CEO, Jeff Morales, spoke at length on how cost estimates are arrived at. The budget process he described includes the assemblage of 200,000 individual line items. These include line items for concrete, steel, dirt, electrical, etc. and each line item includes a unit cost which is multiplied by the units required to build the system.[52] Concrete and steel rails were specifically cited by Mr. Morales.

The Authority is proposing to build one of the largest infrastructure projects ever built in the world. Much of the project will be built on raised concrete viaducts and every mile will require tons of steel rebar embedded into the concrete and steel rails resting on the concrete. According to the EPA, roughly one ton of carbon dioxide is emitted into the atmosphere for every ton of concrete produced making concrete production responsible for nearly 2% of all the carbon dioxide emissions in the United States.[53] This figure does not take into account the carbon dioxide emissions from vehicles transporting concrete between the production facility and the construction site. And yet, without ever quantifying total GHG emissions associated with construction, the Authority makes the bold claim that there will be "zero net greenhouse gas (GHG) emissions during construction".

With regard to the first 29 miles of construction, the Authority plans to mitigate construction emissions with a "multi-faceted forestry program (that) will introduce enough trees into the region where construction is taking place to honor the Authority's commitment to offset the direct GHG emissions associated with construction."[54] The Authority does not answer the question: How many trees is "enough"? However, in a recent interview televised on KCRA News in Sacramento CEO Morales did provide the exact number of trees planted since construction activities began one year ago…ZERO.[55]

The Authority does promise other means to mitigate construction emissions. Its Voluntary Emissions Reduction Agreement with the San Joaquin Air Pollution Control District involves the Authority providing funds for the "replacement of fossil fuel burning irrigation pumps with electric pumps, and the replacement of, or retrofit of vehicles with more efficient engines (that) have a GHG emissions benefit".[56] The number of engines to be replaced is of course not specified. The Draft 2016 Business Plan does however make the embarrassing claim that is has

mitigated 26 tons of pollution through the replacement of 35 engines[57]. This amount is less than 1/10th of 1 percent of the 30,107 metric tons of CO2 in simply the direct emissions due to the construction of the first 29 miles of the system. In other words, the Authority's Draft 2016 Business Plan touts emissions mitigation that is not even up to the level of a rounding error. It amounts to nothing.

A larger question left unanswered involves the funds the Authority will use to pay for tree planting and engine replacement. Private industry must mitigate the environmental impact of a given project with the profits derived from that project. If mitigation makes the project unprofitable, then the project is not built. The Authority's mitigation efforts must be treated in the same fashion. Therefore, the only legitimate funds spent on mitigation efforts would be those derived from its anticipated operating profits, capitalized and provided upfront by private investment, a source of funds that does not exist. Worse yet, the Authority seeks to spend funds on mitigation that are derived from Cap-and-Trade fees whose sole purpose in the first place is to provide funds for the very same type of projects (i.e. GHG reduction projects) that the Authority claims it will provide. There is no reason to pass these funds through the hands of the Authority and then allow the Authority to claim it has mitigated its GHG emissions…even if it could.

Focus on Operations GHG Emissions:

This is also an area never studied thoroughly and transparently in the Program EIR making it possible for the Authority to make wild claims about their proposed train's operation. The Authority claims that it will purchase power for the operation of its trains from a "renewable power mix of 20 percent solar, 40 percent wind, 35 percent geothermal, and 5 percent biogas converted to electricity."[58] It claims it can assure this supply by paying a 3 cent/kWh premium for "green power". This claim is absurd. Electric power generation accounts for 31% of all U.S. GHG emissions.[59] Assuming the same ratio hold true in California, then California could today meet its GHG reduction goals mandated by its Global Warming Act by merely asking each person and business to pay a 3 cent/kWh "green power" premium. For an average household this would only amount to about $20/month. Unfortunately, just paying a little more for power won't make the power any greener.

Electric power, aside from a small amount contained in batteries, cannot be stored for future use. Electric power is consumed at the moment it is generated. Perhaps someday California's high-speed trains will be built and will need electric power. On that day a new demand will be created instantaneously with the throwing of large circuit breakers and the starting up of high-speed train electric engines. At that exact moment the new demand must be met by a power provider. Some electric generator, idle at that moment, must come on line to meet the new demand. The generator coming on line may be a peaking power unit in California powered by natural gas or a coal burning power plant in the Southwest. The exact source is unknowable. But one thing is known. It will not be a wind or solar powered electric plant. Those plants are always running when wind or sunshine is available because they operate with almost no variable costs and because they are mandated to run whenever they can. Wind and solar sources will already be generating all the power they can produce when the first train requires power.

According to the Authority its trains will consume 253 million kWh during their first year of operation in 2022 and this will ramp up to 1,204 million kWh by 2030 when Phase 1 Blended is in service. See Attachment 8. Solar generated electrical energy is the fastest growing new source of renewable energy in California[60] and for that reason this paper will use solar generated electricity as a proxy for the Authority's "renewable sources".

The high-speed train's power requirements between 2022 and 2030 are best put in perspective by comparing the trains' usage to the generating capacity of a new utility scale solar generating plant. California Valley Solar Ranch, a single-axis photo-voltaic generating plant capable of generating 650 million kWh/year of electrical power built with a $1.2 billion dollar federal loan guarantee, was started up in San Luis Obispo County in 2013.[61] Nearly 40% of the capacity of a similar generating plant will be required by the Authority's trains in 2022 and nearly two such plants dedicated to the high-speed train system will be required by 2030 as the trains' need for power grows.

If the Authority is to make good on its claim that it will power its trains with 100% renewable electrical energy, then the Authority needs to be able to fund the construction of the necessary renewable power plants. A 3 cent/kWh premium for "green power" will not be enough. Again using the Authority's data, high-speed trains are projected to cumulatively consume 6,300 million kWh of electricity between the start of 2022 and the end of 2030. Using the example of California Valley Solar Ranch, $2.2 billion (2010$) must be raised in the form of a green premium so that the necessary solar generating capacity can be built. $2.2 billion spread out over 6,300 million kWh equates to a green premium of 30 cents/kWh after adjusting downward by 5 cents/kWh to account for solar generated power's lower variable costs compared to fossil fuel sources. This is still 10 times the 3 cent/kWh green premium offered by the Authority. Worse yet, more than 20% of this solar generating capacity costing almost a half a billion dollars must be constructed before the first trains run, and the capital for this generating capacity must come from private investment in the high-speed rail system. This is of course a source of funds that does not exist.

The Authority and its contractors would probably disagree with the analysis of their train's "greenness" as presented in this paper. They could not disagree with the assessment that its construction "includes installing potentially up to 2,200 miles of rail weighing 276,000 tons; 3.5 million square feet of buildings and facilities; 6,500 miles of electrical wires and cables; and approximately 190 grade separations. A significant portion of the project—approximately 190 miles—may be constructed on elevated structures or in tunnels.(Authority 2012 Business Plan)"[62] And this is merely the scope of Phase 1 Blended. Nor could they disagree with the statement that GHG emissions from construction and operation of the train were not thoroughly and transparently addressed in the Program EIR. This issue alone probably warranted a supplemental Program EIR at the moment AB 32, California's Global Warming Initiative, was enacted. The fact that this issue was not studied in 2006 makes it long overdue for a study in 2016.

3.4 CAFE Standards Will Soon be Twice the Efficiency of Those Analyzed in the Program EIR

High-Speed Train ridership assumptions detailed in the 2012 Business Plan showed 75%[63] of the train's ridership coming from passengers switching from automobile ridership and the Program EIR showed energy savings of the HST Alternative equivalent to between 2.0 and 5.2 million barrels of oil annually when compared to the No Project Alternative.[64]

GHG Emissons from Trains and Cars							
				CO2 Emissions per Passenger Mile (Nat. Gas Elec.)			
Today's Cars		MPG	Mi/Kwh	1 Passenger	1.4 Passenger	2.4 Passenger	4 Passenger
Electric							
2016 Ford Focus All Electric			3.13	0.387	0.276	0.161	0.097
2016 Tesla S (70 kwh battery)			2.63	0.460	0.329	0.192	0.115
Hybrid							
2016 Prius Hybrid		50		0.393	0.281	0.164	0.098
2016 Lexus 300H Hybrid		40		0.491	0.351	0.205	0.123
2025 Passenger Vehicle							
Car Meeting New CAFE Standards		56		0.351	0.251	0.146	0.088
				25% Capacity	40% Capacity	63% Capacity	75% Capacity
High-Speed Train				0.678	0.424	0.269	0.226

Comparison of CO2 Emissions per Passenger Mile
Electric and Hybrid Automobiles vs High-Speed Train
MPG and Mi./Kwh Data from EPA Website

The calculations involved in developing the above table are explained fully in Attachment 9, but it is worth noting here that all electricity used by both electric automobiles and the electric train are assumed to be generated by natural gas fired electric power plants. The column for 1.4 passengers corresponds with assumptions in the Authority's 2012 Business Plan[65]. The column for 2.4 Passengers and a train at 63% capacity corresponds with Authority assumptions regarding intercity travel in their Program EIR[66] [67].

The table above indicates that even with a load factor of 75% of its capacity (338 passengers on a trainset with a maximum capacity of 450[68]), the high-speed train has more CO2 emissions/passenger mile than all the modern automobiles shown carrying 2.4 or more passengers. The train operating with load factor of 63% is a bigger CO2 polluter than an automobile meeting the 2025 CAFE Standards carrying 1.4 passengers. Operating at a load factor of 40% causes he train to become a bigger polluter per passenger mile than some 1 passenger vehicles on the road today as well as all the average of all cars and light trucks meeting the new CAFE Standard in 2025, four years before Phase 1 Blended will be in service. The plain truth of the matter is that the train, as studied in the Program EIR, was only marginally less polluting than the 2.4 passenger car meeting the then current CAFE Standards.[69] Newer cars and the cars that must meet the new CAFE Standards adopted in 2012 and to be fully in effect by 2025, effectively doubling the standard, will be much less polluting than the train using load factors contained in the Program EIR.

One final comment, the Program EIR saw most HST passengers switching from airline travel and the Authority now sees most passengers switching from automobile travel…at least according to the Draft 2016 Business Plan where riders of the train on the "Valley-to-Valley"

segment will be traveling between regions where there is essentially no local air travel at present. This is just one more reason why a supplemental program EIR is required and why all work should be halted on this project until that study is completed and Californians can decide if the high-speed train is right for California.

4. Conclusion

The 2005 Program EIR studied ONLY a statewide high-speed rail system connecting the Bay Area to the Los Angeles Basin with extensions to Sacramento and San Diego and, based on assumptions made while writing the 2005 Program EIR, found the statewide high-speed rail system preferable to the Modal Alternative and the No Project Alternative. However, all of the Authority's business plans written over the past decade, including the Draft 2016 Business Plan, are completely silent on how the approved statewide system would be financed, how much it would cost, and when it might be completed. Lacking even committed funds to build from Bakersfield to San Francisco, the Authority must know, but refuses to admit, that it lacks the funds and the will to ever build the approved statewide high-speed train system.

Moreover, every key assumption made in justifying the statewide high-speed train system over the No Project and Modal Alternatives has proven to be false…and false in a way that destroys the rational for justifying the statewide high-speed train project in the first place. Projected population growth has not materialized and future growth rates are expected to decline further. The Modal Alternative was not built and the No Project Alternative has proven satisfactory in meeting the needs of California's intercity travelers. New technology may make the train dirtier in terms of greenhouse gas emissions than the new cars of the 2020's and greenhouse gas emission due to construction of the system, never studied in the 2005 Program EIR, may never be mitigated.

A supplemental program level EIR is long overdue that looks at what high-speed train system might credibly be built, compares that system to today's transportation alternatives, weighs the benefits and impacts of each and in an open and transparent fashion concludes what is right for Californians in the coming decade. Any doubters as to whether a supplemental program level EIR is long overdue need only read the Summary section of the 2005 Program EIR and then read the Draft 2016 Business Plan. The contrasts are indeed stark.

Attachment 1

Forecast and realized population: California, 1990--2060

Publication date:	SEP 83	DEC 86	NOV 89	APR 91	MAY 93	APR 97	DEC 98	JUN 01	MAY 04	JUL 07	MAY 12	JAN 13	DEC 14**
Most recent Census:	1980	1980	1980	1990	1990	1990	1990	2000	2000	2000	2010	2010	2010
1980	23,771	23,775											
1985	25,998	26,365											
1990	27,990	28,771		29,976	29,976		29,942						
1995	29,820	30,956		33,373									
2000	31,414	32,853		36,259	36,444	34,704	34,653	34,480	34,043	34,105	34,001		
2002							35,714			35,246			35,246
2005	32,838			38,980				37,474	36,854	36,957			
2010	34,248				42,408	40,939	39,958	40,262	39,247	39,136	37,313	37,309	37,342
2015	35,615							42,711	41,571	41,573	38,926	38,801	38,897
2020	36,861	39,619	39,619		48,977	47,507	45,449	45,822	43,852	44,136	40,818	40,644	40,619
2025			41,720						46,041	46,720	42,722	42,452	42,373
2030			43,218		56,100		51,869		48,111	49,241	44,575	44,279	44,086
2035			44,543				55,300		49,875	51,747	46,330	46,083	45,748
2040					63,343		58,731		51,539	54,266	47,984	47,690	47,233
2045									53,161	56,846	49,514	49,109	48,574
2050									54,778	59,508	51,014	50,365	49,779
2055												51,552	50,818
2060												52,694	51,664
2065													52,524
2070													53,398
2075													54,288
2080													55,191
2085													56,110
2090													57,045
2095													57,994
2100													58,960
2105													59,942
2110													60,940
2115													61,954
2120													62,986

Notes:

* Census result is April 1 population forecasted (by DRU) to July 1 of the same year.
* Population counts are 1000s
* Data not checked for typos or definitiveness; additional data may exist.

Inferences and Interpolations Shown in Purple

Extrapolations shown in Red

** Link to Dec 2014 DRU Report

http://www.dof.ca.gov/research/demographic/projections/documents/P-1_Total_CAProj_2010-2060_5-Year.xls

Attachment 2

5 Year Period	Annual Growth Rate
2010-2015	.82
2015-2020	.87
2020-2025	.85
2025-2030	.80
2030-2035	.75
2035-2040	.64
2040-2045	.56
2045-2050	.49
2050-2055	.41
2055-2060	.33

Annual Growth Rates Calculated from
California Department of Finance December 2014 Report P-1 State and County Total Population Projections for the period 2010-2060 (5-year increments)[70]

Attachment 3

Table 2-D-1 Highway Capacity Improvement Options—Year 2020
(2020 Intercity Travel Demand with Highway Expansion only—Both Directions)

Bay Area to Merced		**Lanes***	**Miles****	**Lane-Miles****
US-101	San Francisco to San Francisco Airport (SFO)	2	11.3	22.6
US-101	SFO to Redwood City	2	13.8	27.6
US-101	Redwood City to I-880	2	19.7	39.4
I-880	US-101 to San Jose	2	.9	1.8
US-101	San Jose to Gilroy	2	31.2	62.4
US-101	Gilroy to SR-152	2	1.4	2.8
SR-152	US-101 to I-5	2	40.8	81.6
SR-152	I-5 to SR-99	2	42.8	85.6
I-80	San Francisco to I-880	2	9.2	18.4
I-80	I-880 to I-5 (Sacramento)	2		
I-880	I-80 to I-238	2	13.8	27.6
I-580	I-880 to I-5 (via I-238)	2	52.7	105.4
I-880	I-238 to Fremont/Newark	2	14.5	29.0
I-880	Fremont/Newark to US-101	2	12.4	24.8
Sacramento to Bakersfield				
I-5	I-80 to Stockton	2		
I-5	Stockton to I-580/SR-120	2		
I-5	I-580/SR-120 to SR-152	4		
I-5	SR-152 to SR-99	4	186	744
SR-99	I-5 to SR-58	2		
SR-99	Sacramento to SR-120	2		
SR-99	SR-120 to Modesto	2		
SR-99	Modesto to Merced	2		
SR-99	Merced to SR-152	2	21.5	43.0
SR-99	SR-152 to Fresno	2	33.4	66.8
SR-99	Fresno to Tulare/Visalia	2	46.4	92.8
SR-99	Tulare/Visalia to SR-58	2	68.9	137.8
Bakersfield to Los Angeles				
I-5	SR-99 to SR-14	4	65	260
I-5	SR-14 to I-405	6	2.5	15.0
I-5	I-405 to Burbank	6	15.3	91.8
I-5	Burbank to LA Union Station	6	7.4	44.4
SR-58/SR-14	SR-99 to Palmdale	0		
SR-14	Palmdale to I-5	2	34.8	69.6
Los Angeles–Orange County–San Diego				
I-5	Los Angeles Union Station to I-10	4	.8	3.2
I-5	I-10 to Norwalk	2	20.7	41.7
I-5	Norwalk to Anaheim	2	8.1	16.2
I-5	Anaheim to Irvine	2		2155.3
I-5	Irvine to I-405	2		
I-5	I-405 to SR-78	2		
I-5	SR-78 to University Town Center	2		
I-5	University Town Center to San Diego Airport	2		
I-8	SR-163 to I-5	2		

Notes:
US-101 = U.S. Highway 101
SR = State Route
I-5 = Interstate 5
* Represents the number of through lanes, in addition to the total number of lanes in the no-project highway network that approximate an equivalent level of capacity to serve the representative demand.
** Miles are shown for segments related to only Phase 1 Blended and are the same length as those shown in Attachment 4

Attachment 4

Table 5 Summary of Highway Segments
(Source: Parsons Brinkerhoff, *Comparison of Providing the Equivalent Capacity to High-Speed Rail through Other Modes*, dated April 2012, page 17)

Highway Corridor	Segment (From–To)	Urban/Rural	Miles
Bay Area to Merced			
US-101	San Francisco to SFO	Urban	11.3
US-101	SFO to Redwood City	Urban	13.8
US-101	Redwood City to I-880	Urban	19.7
I-880	US-101 to San Jose	Urban	0.9
US-101	San Jose to Gilroy	Urban	31.2
US-101	Gilroy to SR-152	Urban	1.4
SR-152	US-101 to I-5	Rural	40.8
SR-152	I-5 to SR-99	Rural	42.8
I-80	San Francisco to I-880	Urban	9.2
I-880	I-80 to I-238	Urban	13.8
I-580	I-880 to I-5 (via I-238)	Rural	52.7
I-880	I-238 to Fremont/Newark	Urban	14.5
I-880	Fremont/Newark to US-101	Urban	12.4
Merced to Bakersfield			
I-5	SR-152 to SR-99	Rural	186
SR-99	Merced to SR-152	Rural	21.5
SR-99	SR-152 to Fresno	Urban	33.4
SR-99	Fresno to Tulare/Visalia	Urban	46.4
SR-99	Tulare/Visalia to SR-58	Urban	68.9
Bakersfield to Los Angeles			
I-5	SR-99 to SR-14	Rural	65
I-5	SR-14 to I-405	Urban	2.5
I-5	I-405 to Burbank	Urban	15.3
I-5	Burbank to Los Angeles Union Station (LAUS)	Urban	7.4
SR-14	Palmdale to I-5	Urban	34.8
Los Angeles to Anaheim			
I-5	LAUS to I-10	Urban	0.8
I-5	I-10 to Norwalk	Urban	20.7
I-5	Norwalk to Anaheim	Urban	8.1
			775.3*

*Note included in original Table 5
775.3 x 6 = 4652 to equal people-carrying capacity of Phase 1 Full Build
4652 adjusted downward to 4300 to account for Phase 1 Blended's slightly reduced capacity

Attachment 5
Source: Final Report – Economic Impact and Benefit/Cost of High Speed Rail[71]

The projected impact on highway congestion of only a trunk line system connecting Los Angeles to San Francisco (now termed Phase 1 Blended) or the Statewide System with Extensions to Sacramento and San Diego was summarized as follows:

Table I-3

	I-5 to Stockton	**SR-99** Bakersfield* to Stockton	**I-5** Bakersfield to Bakersfield*	**I-580** LA SF to I-5
No HSR	.75	1.20	.77	1.32
VHS LA to SF	.71	1.18	.74	1.30

Volume/ Capacity Ratios
Los Angeles to Bay Area HSR---Year 2020

Table I-4

	I-5 Bakersfield* to Stockton	**SR-99** Bakersfield* to Stockton	**I-5** LA to Bakersfield*	**I-580** SF to I-5	**I-5** San Diego	**I-5** Stockton to to LA	**SR-99** Stockton to Sacramento	**I-80** SF to Sacramento
No HSR	75	1.20	.77	1.32	1.18	1.14	1.39	1.39
VHS LA to SF Plus Extensions	68	1.18	.72	1.29	1.15	1.12	1.37	1.39

Volume/ Capacity Ratios
Los Angeles to Bay Area HSR + Extensions---Year 2020

* Bakersfield is interpreted as the junction of I-5 and SR-99
VHS or Very High Speed was the term used by the Commission for what is now termed High-Speed Rail

Attachment 6

Source: Intercity High-Speed Rail Commission High-Speed Rail Summary Report and Action Plan, December 1996

Table 7-2

Basic System L.A. to S.F.	**Highway Savings**
Highway User Delay	$75
Automobile Operating Costs	$81
Accidents	$61
Air Pollution	$9
	$226

Highway Cost Savings Summary (Year 2020)
(Expressed in $1995 Million

Attachment 7

Increase in Traffic Volumes on California State Highways Over the Past 10 Years

Year	% Inc. Over Previous Year	Increase as a Decimal	Traffic per 100 in Base Year 2004
2014	2.64	1.0264	100.614
2013	1.86	1.0186	98.02608
2012	0.24	1.0024	96.23609
2011	-1.1	0.9890	96.00568
2010	-0.2	0.9980	97.07349
2009	-0.6	0.9940	97.26802
2008	-3.5	0.9650	97.85515
2007	0.1	1.0010	101.4043
2006	0.3	1.0030	101.303
2005	1	1.0100	101.000
2004			100.000

Sources:

2014 Traffic Volumes on California State Highways reported by Caltrans,

5 Year Traffic Trend, page ii

http://traffic-counts.dot.ca.gov/docs/2014_aadt_volumes.pdf

2009 Traffic Volumes on California State Highways reported by Caltrans,

5 Year Traffic Trend, page ii

http://traffic-counts.dot.ca.gov/docs/2009_aadt_volumes.pdf

Note: An error was reported on the Traffic Volumes on California State Highways Years 2009, 2010, 2011, and 2012. Located in the Preface (Page ii), Traffic Trend on Year 2008 over 2007 reads +3.5%. This Note is found on the Caltrans website linking to the Year Traffic Volumes cited above. Instead, this number should be reported as -3.5%.

Attachment 8 Power Requirements of the HST

Operations and Maintenance of Equipment costs taken from Medium Ridership Case -PB April 2012 Estimated Costs for CHSRA 2012 Business Plan

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	
Ops. and Maint. of Equipment (See Note 1)	82	124	133	196	216	265	280	344	391	
Ops. and Maint. of Equipment/TSM (2009$) (See Note 2)	20	20	20	20	20	20	20	20	20	
Ops. and Maint. of Equipment/TSM (2010$) (See Note 3)	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	
TSM (Millions) (See Note 4)	4.0	6.0	6.5	9.6	10.5	12.9	13.7	16.8	19.1	
Trainset Elec. Consumption (millions of KWh) (See Note 5)	236	357	383	564	622	763	806	990	1125	5845.3
Station Electical Cosumption (millions of kWh) (See Note 6)	17	25	27	39	44	53	56	69	79	409.2
Total Yearly Electrical Consumption (millions of kWh)	**253**	**382**	**410**	**604**	**665**	**816**	**862**	**1059**	**1204**	6254.5
Capital Cost to Generate Needed millions of kWh in Millions of 2010$ (See Note 7)	455	688	738	1087	1198	1470	1553	1908	2169	2169
Equivalent California Valley Solar Ranch Facilities	0.39	0.59	0.63	0.93	1.02	1.26	1.33	1.63	1.85	
Incremental Use of Electric Power (Millions of kWh)	253	129	28	194	62	151	46	197	145	
Incremental Capitalization Costs in Millions (2010$)	455	233	50	349	111	272	83	355	261	2169
Average Green Charge Needed to Build Solar Generating Capacity ($/kWh) (See Note 8)										0.35
Average Green Charge Needed After Adjusting for Variable Cost Differential Between Solar and Fossil Fuels										**0.30**

Notes:

1 Authority calculates Ops. and Maint. of Equipment by Multiplying Op. and Maintenance of Equipment/TSM by TSM. Values shown were found Medium Case Service Parameters found on page 12 of April 2012 PB report *Estimating High-Speed Train Operating and Maintance Cost for the CHSRA 2012 Business Plan* (Plan Costs)

2 Op. and Maint. Of Equipment/TSM (2009$) found in Table 7, page 8 of Plan Costs

3 Adjust Variable Costs upward by 2.5% to convert from 2009$ to 2010$

4 Dividing Ops. And Maint. Of Equipment costs by the associated variable cost yields the driver of Ops. And Maint. Of Equipment Costs, Trainset Miles.

5 Electrical Consumption of 59 kWh/TSM found on page 7 of Plan Costs. Multiply 59kWh/TSM by TSM

6 7% allowance for station and maintenance facilities electricity consumption found on page 7 of Plan Costs

7 Use California Valley Solar Ranch as Proxy. Facility built with $1.2 billion federal loan guarantee awarded in 2011 adjusted downward by 2.5% to reflect 2010$. Facility expected to generate 650 million kWh per year.

8 A $.35/kWh surcharge for green energy could concievably pay for construction of the solar facilities.

9 Solar has a lower variable cost than fossil fuel of approximately $05/kWh according to a Penn State Engineering Department study. https://www.e-education.psu.edu/eme801/node/530

Attachment 9 Greenhouse Gas Emissions from Cars and Trains

GHG Emissons from Trains and Cars							
				CO2 Emissions per Passenger Mile (Nat. Gas Elec.)			
Today's Cars		MPG	Mi/Kwh	1 Passenger	1.4 Passenger	2.4 Passenger	4 Passenger
Electric							
2016 Ford Focus All Electric			3.13	0.387	0.276	0.161	0.097
2016 Tesla S (70 kwh battery)			2.63	0.460	0.329	0.192	0.115
Hybrid							
2016 Prius Hybrid		50		0.393	0.281	0.164	0.098
2016 Lexus 300H Hybrid		40		0.491	0.351	0.205	0.123
2022 Hybrid							
Car Meeting New CAFE Standards		56		0.351	0.251	0.146	0.088
				25% Capacity	40% Capacity	63% Capacity	75% Capacity
High-Speed Train				0.678	0.424	0.269	0.226
Pounds of CO2/Kwh Generated							
Natural Gas Power Plant	1.21						
Distillate Oil (No. 2)	1.67						
Bituminus Coal	2.07						
50/50 DO/BC	1.87						
Pounds of CO2/Gallon of Gasoline	19.64						
Train Energy in KWh/TSM	63						
TS Capacity	450						

Sources:
US Energy Information Administration
Pounds of CO2/kWh Generated
https://www.eia.gov/tools/faqs/faq.cfm?id=74&t=11
Pounds of CO2/Gallon of Gasoline (burned)
http://www.eia.gov/tools/faqs/faq.cfm?id=307&t=11
Train Energy in Kwh/TSM (Trainset Mile)
See Attachment 8
Trainset Capacity
Estimating High-Speed Train Operating & Maintenance Cost for the 2012 Business Plan

Calculations:
Electric Car CO2 Emissions: [1.21 pounds of CO2/kWh]/Appropriate Miles/kWh Value
Hybrid Car CO2 Emissions: [19.64 pounds of CO2/Gal. of Gasoline]/Appropriate MPG

Endnotes:

[1] *NEPA and CEQA: Integrating Federal and State Environmental Reviews*, page 36
http://energy.gov/sites/prod/files/2014/03/f9/NEPA_CEQA_FinalHandbook_February2014_0.pdf
[2] *California High-Speed Train Final Program EIR/EIS*, Summary section, page S-2
http://www.hsr.ca.gov/docs/programs/eir-eis/statewide_final_EIR_vol1summary.pdf
[3] *California High-Speed Train Final Program EIR/EIS*, Summary section, page S-2
[4] *California High-Speed Train EIR/EIS Record of Decision*, U.S. Department of Transportation, Federal Railroad Administration, November 18, 2005
http://www.hsr.ca.gov/docs/programs/eir-eis/Federal%20Railroad%20Administration%20Record%20of%20Decision%20for%20Final%20Program%20EIR_EIS.pdf
[5] 2000 Business Plan, Executive Summary, page 1
http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2000_FullRpt.pdf
[6] 2000 Business Plan, Executive Summary, page 3
[7] 2000 Business Plan, Executive Summary, page 1
[8] Highlights of California HST System Final Program EIR/EIS, page 4
http://www.hsr.ca.gov/docs/programs/eir-eis/statewide_EIR_EIS_brochure.pdf
[9] 2000 Business Plan, Section 6.2, Table 6.1
[10] *California High-Speed Train Final Program EIR/EIS*, Chapter 4 – Costs and Operations, Section 4.2.2, page 4-3
http://www.hsr.ca.gov/docs/programs/eir-eis/statewide_final_EIR_vol1ch4.pdf
[11] 2000 Business Plan, Route and Alignment section, Table 2.2 Express Travel Times
[12] *California High-Speed Train Final Program EIR/EIS*, Chapter 4 - Costs and Operations, Table 4.3-1 Optimal Express Trip Times
[13] *California High-Speed Train Final Program EIR/EIS*, Economic Growth and Related Impacts section, page 5-5
http://www.hsr.ca.gov/docs/programs/eir-eis/statewide_final_EIR_vol1ch5.pdf
[14] *California High-Speed Train Final Program EIR/EIS*, Summary Section, page S-4
http://www.hsr.ca.gov/docs/programs/eir-eis/statewide_final_EIR_vol1summary.pdf
[15] 2000 Business Plan, Section 2.3 Capital Costs
[16] 2000 Business Plan, Section 2.2 Implementation Process and Construction Phases, Figure 2.3 Implementation and Construction Timeline
[17] AB 3034 paragraph 2704.04(b)(2)
http://www.leginfo.ca.gov/pub/07-08/bill/asm/ab_3001-3050/ab_3034_bill_20080826_chaptered.pdf
[18] AB 3034 paragraph 2704.04(b)(3)
[19] Federal grant FR-HSR-0009-10-01-00 as amended, Attachment 3A, Background and Key Assumptions section, page 47
http://www.hsr.ca.gov/docs/about/funding_finance/funding_agreements/FRA-HSR-0009-10-01-01.pdf
[20] AB 3034 as Chaptered, Article 2, section 2704.04. (a)
[21] *California High-Speed Train Final Program EIR/EIS*, Summary section S.3 Purpose of and Need for a High-Speed Train System in California, page S-2
[22] No links were found to older DRU Reports. A summary of reports was received from the DRU and is shown in Attachment 1 along with a link to their most recent report, December 2014. Data incorporated into Attachment 1 was received via email from Ethan Sharygin of the DRU on Sept. 14, 2015 (not and official document)
[23] *California High-Speed Train Final Program EIR/EIS*, Summary section, page S-16
[24] California Environmental Quality Act as amended 2013, Section 21000(g), page 1
http://resources.ca.gov/ceqa/docs/2014_CEQA_Statutes_and_Guidelines.pdf
[25] California Environmental Quality Act as amended 2013, Section 21002, page 2
[26] *California High-Speed Train Final Program EIR/EIS*, Summary section, page S-4
http://www.hsr.ca.gov/docs/programs/eir-eis/statewide_final_EIR_vol1summary.pdf
[27] *California High-Speed Train Final Program EIR/EIS*, Economic Growth and Related Impacts section, page 5-5
http://www.hsr.ca.gov/docs/programs/eir-eis/statewide_final_EIR_vol1ch5.pdf
[28] *California High-Speed Train Final Program EIR/EIS*, Summary section, page S-8

[29] *California High-Speed Train Final Program EIR/EIS*, Summary section, page S-9
[30] Caltrans Interstate 5 Transportation Concept Reports for Districts 6 and 10 dated February 2013 and September 2012 respectively
http://www.dot.ca.gov/dist6/planning/tcrs/i5tcr/i5tcr.pdf
http://www.dot.ca.gov/dist10/divisions/Planning/advancedplanning/docs/TCR's/I-5webFinalsigned09182012.pdf
[31] 2012 Business Plan Source Document: Comparison of Providing the Equivalent Capacity to High Speed Rail through Other Modes, page 6
http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2012CompareEquivalentCapacity.pdf
[32] Parsons Brinkerhoff report entitled *Comparison of Providing the Equivalent Capacity to High-Speed Rail through Other Modes*, dated April 2012, page 3
[33] Parsons Brinkerhoff report entitled *Comparison of Providing the Equivalent Capacity to High-Speed Rail through Other Modes*, dated April 2012, page 18
[34] 2000 Business Plan, Economic Benefits section, Table 4.2, page 32
[35] Intercity High-Speed Rail Commission *High-Speed Rail Summary Report and Action Plan*, December 1996, Section 7 Economic Impact of High-Speed Rail, Benefit Cost Methodology, pages 7-24 and page 7-27
http://www.hsr.ca.gov/docs/programs/eir-eis/Archives/statewide_EIR_vol2_attachD6_archive.pdf
[36] Intercity High-Speed Rail Commission *High-Speed Rail Summary Report and Action Plan*, December 1996, Section 7 Economic Impact of High-Speed Rail, Benefit Cost Methodology, page 7-5
[37] Intercity High-Speed Rail Commission *High-Speed Rail Summary Report and Action Plan*, December 1996, Section 7 Economic Impact of High-Speed Rail, Benefit Cost Methodology, page 7-4
[38] Caltrans District 6 Transportation Concept Report for I-5, February 2013
[39] *California High-Speed Train Final Program EIR/EIS*, Summary section, page S-4
[40] *California High-Speed Train Final Program EIR/EIS*, Economic Growth and Related Impacts section, page 5-5
[41] FAA Website, Passenger Boarding (Enplanement) and All-Cargo Data for U.S. Airports
http://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/passenger/
[42] *California High-Speed Train Final Program EIR/EIS*, Appendix 4-B Capital Cost: Aviation Component of Modal Alternative, page 4-B-1
http://www.hsr.ca.gov/docs/programs/eir-eis/statewide_final_EIR_vol3appendix4.pdf
[43] Los Angeles Times, January 27, 2009, *Commercial operations to close at Palmdale Regional Airport*
http://articles.latimes.com/2009/jan/27/local/me-palmdale27
[44] Draft 2016 Business Plan, section entitled Comparison of 2014 Business Plan to Draft 2016 Business Plan, pg. 99
[45] 2014 California High-Speed Rail Benefit-Cost Analysis, pages 28-30
http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2014_Sec_7_CaHSR_Benefit_Cost_Analysis.pdf
[46] *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels*, June 2013, page 6
http://www.hsr.ca.gov/docs/programs/green_practices/HSR_Reducing_CA_GHG_Emissions_2013.pdf
[47] Draft 2016 Business Plan, page 32
[48] August 14, 2013 Letter from PRG Chairman Lou Thompson to Senators Steinberg and Huff, Assemblymen Perez and Assemblywoman Conway, attachment entitled Comments on Presentation, final page
http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2014_Business_Plan_Final.pdf
[49] *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels*, June 2013, page 13
[50] *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels*, June 2013, page 18
[51] *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels*, June 2013, page 14
[52] Authority CEO Jeff Morales testimony before the Assembly Budget Committee responsible for High-Speed Rail Oversight on January 27, 2016, YouTube Video 25-27 minutes into the video
https://www.youtube.com/watch?v=gg-lRSn-QVg
[53] Concrete CO2 Fact Sheet February 2012© Copyright, National Ready Mix Concrete Association, page 6
http://www.nrmca.org/sustainability/CONCRETE%20CO2%20FACT%20SHEET%20FEB%202012.pdf

[54] *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels*, June 2013, page 13

[55] KCRA New Sacramento YouTube video, December 8, 2015
https://www.youtube.com/watch?v=IclcPa9z5_E

[56] *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels*, June 2013, page 15

[57] Draft 2016 Business Plan, page 27

[58] *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels*, June 2013, page 10

[59] EPA website: Sources of Greenhouse Gas Emissions
http://www3.epa.gov/climatechange/ghgemissions/sources/electricity.html

[60] California Energy Commission's Energy Almanac website
http://energyalmanac.ca.gov/electricity/electricity_generation.html

[61] Energy.Gov Loan Programs Office, California Valley Solar Ranch
http://energy.gov/lpo/california-valley-solar-ranch

[62] Revised 2012 Business Plan, page 3-3
http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2012_rpt.pdf

[63] 2012 Business Plan Source Document, *Comparison of Providing the Equivalent Capacity to High-Speed Rail through Other Modes*, Parsons-Brinkerhoff, April 2012, page 7
http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2012CompareEquivalentCapacity.pdf

[64] *California High-Speed Train Final Program EIR/EIS*, Summary section, Table of Key Environmental Findings, Energy Use, page S-13

[65] 2012 Business Plan Source Document, *Comparison of Providing the Equivalent Capacity to High-Speed Rail through Other Modes*, Parsons-Brinkerhoff, April 2012, page 15

[66] *California High-Speed Train Final Program EIR/EIS*, Energy Section 3.5, Footnote b on Table 3.5-4, page 3.5-15
http://www.hsr.ca.gov/docs/programs/eir-eis/statewide_final_EIR_vol1ch3part2.pdf

[67] *California High-Speed Train Final Program EIR/EIS*, Energy Section 3.5, Footnote d on Table 3.5-5, page 3.5-16

[68] 2012 Business Plan Source Document, *Estimating High-Speed Train Operating & Maintenance Cost for the CHSRA 2012 Business Plan*, Parsons-Brinkerhoff, April 2012, Table 9-Capacity, Load-factor, and Service Level Assumptions, page 9
http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2012EIREstimateOperatMaintCost.pdf

[69] *California High-Speed Train Final Program EIR/EIS*, Energy Section 3.5, page 3.5-1

[70] California Department of Finance December 2014 Report P-1 State and County Total Population Projections for the period 2010-2060 (5-year increments)
http://www.dof.ca.gov/research/demographic/reports/projections/P-1/documents/P-1_Total_CAProj_2010-2060_5-Year.xls

[71] Final Report Economic Impact and Benefit/Cost of High Speed Rail for Californian, Submitted to the Intercity High-Speed Rail Commission, Prepared by Economics Research Associates, Sept. 1996, page 34

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2016 Business Plan RECORD DETAIL

Submission Date :	3/28/2016
Submission Method :	Letter
First Name :	Mark
Last Name :	Powell
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Powell_paper_4_The Truth_About_Public_and_Private_Financing_for_HSR.pdf (628 kb)

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March 28, 2016

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To Whom it May Concern:

Attached for the Authority's consideration is a Word document submitted as a comment on their Draft 2016 Business Plan . It is entitled *Pushing Back on the California High-Speed Rail Authority's Myths About High-Speed Rail: Paper 4- The Truth About Public and Private Financing for the California HSR System.* It has been sent "Return Receipt" so that I will have proof of date of delivery and the name of the person to whom it was delivered.

This same document was also submitted by e-mail to the Authority at:
2016businessplancomments@hsr.ca.gov
It was sent via email as a Word document because it is heavily footnoted with links to my sources making it easy for anyone to check my facts.

Sincerely,

Mark R. Powell

enclosures: 1 Comment on the Authority's Draft 2016 Business Plan: *Pushing Back on the California High-Speed Rail Authority's Myths About High-Speed Rail: Paper 4 - The Truth About Public and Private Financing for the California HSR System*

Pushing Back on the California High-Speed Rail Authority's Myths About High-Speed Rail

Paper 4

The Truth About Public and Private Financing for the California HSR System

by Mark Robert Powell
January 25, 2016

Paper 4

The Truth About Public and Private Financing for the California HSR System

Abstract

For the better part of two decades the California High-Speed Rail Authority has promised Californians that the California High-Speed Rail System would be funded substantially by the Federal Government and by private funding.

This paper traces the likelihood of federal and private funding for California's high-speed rail project going back nearly twenty years to the days of the Intercity High-Speed Rail Commission in the 1990's and forward to today's quest for funding. It details how the Commission recognized that federal and private funds would not be a significant funding source as well as the Commission's outgoing recommendations to the incoming California High-Speed Rail Authority on how best to proceed towards securing a prime funding source.

The paper then discusses how the Authority disregarded the advice of the Commission and the warnings of its own financial consultants, never secured a prime funding source, and by continuing to mislead Californians about funding prospects has brought all Californians to the brink of a high-speed rail construction quagmire.

Lastly, the paper summarizes monies spent to date, the huge unspent remaining costs, and suggests a way out of the current predicament.

Pushing Back on the Authority's Myths About High-Speed Rail

Paper 4 - The Truth About Public and Private Financing for the California HSR System

1993-1996 The Commission's Honest Appraisal of Funding Sources:
Twenty-three years ago Senate Concurrent Resolution 6 (Kopp) created the Intercity High-Speed Rail Commission. It cited the need for *"the preparation of a 20-year high-speed intercity rail plan similar to California's former freeway plan"* and *"an entity with stable and predictable funding sources to implement the plan"*.[1] SCR 6 tasked the Commission with preparing a financing plan that would include, but not be limited to, private funds, state general obligation bonds, revenue bonds backed by incremental increases in the gasoline tax, airport funds, and potential alternative public funding sources.[2]

The nine members of the Commission with backgrounds in construction, finance, banking, law, engineering, railroads, and some experience in the public sector[3] completed five technical studies and a Public Participation Program[4] in addition to a report summarizing the Commission's work; *The High-Speed Rail Summary Report and Action Plan*, released December 13, 1996. The Commission recommended a network of high-speed rail similar to the one presented to the voters nearly 12 years later; a segment linking the centers of San Francisco and Los Angeles, mostly following State Highway 99 through the Central Valley before swinging southeast to run through Palmdale and with additional segments connecting to Sacramento and San Diego. It was estimated to cost between $12.1 and $16.5 billion for the San Francisco to Los Angeles segment and between $19.8 and $24.6 billion (in 1996 dollars) for the entire statewide system.[5]

The Commission sought to establish a "base funding source" that could reliably furnish 70-85%[6] of the capital required for construction. Quoting from the Summary Report:

> "In order to qualify as a base funding source, the source must be able to substantially finance the construction of the system, secure debt against the revenue source, and provide funding irrespective of the construction status or operational readiness of the system. In addition, the source must have a stable and reliable revenue growth potential." [7]

After analyzing sales taxes, gas taxes, airport taxes, highway tolls, federal funding, and state funding, the Commission found that only a 5 cent increase in the state's gasoline tax, or a ¼% increase in the state sales tax levied statewide, or a ½% increase in the state sales tax levied only in counties served by high speed rail met the Commission's criteria to "provide a realistic means of funding the project".[8] Of these options, the Commission seemed to favor a sales tax because of their concern over Section 1(b) of Article 19 of the California Constitution limiting the purposes for which gasoline taxes may be used.[9] However, the Commission left it up to the incoming California High-Speed Rail Authority to make the final decision.

Private funding was not considered a possibility because of the project's risk, but was thought of as a way to finance extensions to Sacramento and San Diego once the San Francisco to Los Angeles portion was shown to be profitable.[10] In other words, future profits of a proven operating line could be sold to investors in return for a portion of the capital needed to construct the extensions. The Commission also noted that federal high-speed rail programs amounted to only $15 to $25 million per year under the then-current authorizations that were scheduled to end in 1997 and therefore could not be considered a significant or predictable funding source.[11]

With no private or federal support for the initial Los Angeles to San Francisco route, the Commission recognized an obvious fact; if Californians wanted a high-speed rail system, they would have to pay for it themselves. To implement the system, the Commission's first recommendation was that the Authority secure the statutory authority and the base funding source for the system. Quoting from the Commission's 1996 report: "There can be no significant progress on high-speed rail implementation nor can a private partner be selected until the voters have approved a source of base funding." [12]

1997 – 1999 The California High-Speed Rail Authority:
Beginning in 1997 and continuing through 1999 the Authority, using many of the same contractors used by Commission, repeated the Commission's work and came to largely the same conclusions. With the December 1999 deadline for release of the 2000 Business Plan approaching, the Authority was forced to select a preferred funding strategy. It did not choose wisely. Resolution HSRA 99-8 *Motions on Recommendations to the Authority to Become Part of the Business Plan* detailing a preferred funding strategy was brought up at the November 17th Board Meeting and approved unanimously (9-0).[13] The motion "recommended to the Governor and the Legislature that California not proceed to fund the project fully in 2000, either through legislative action or by placing a full-funding proposal on the November 2000 ballot for the voters to decide." Instead, it called for "incremental development and funding of the project" coupled with "an aggressive statewide effort to increase federal funding for both conventional and high-speed trains in California."

Notably missing from HSRA 99-8 was any mention of the prospect of private funding. However, this should come as no surprise as the Authority's financial consultant, Public Financial Management Inc., wrote in 1999, "as impressive as the HSR operating surpluses are (projected to be)....private equity would insist upon a minimum return of between 15% and 20%. This effectively reduces the equity that can be supported (by operating surpluses) to approximately $808 million[14]. Only parking facilities at station sites and concessionaire and vendor areas within the stations were identified as areas were private vendor financing might be appropriate[15].

A potential state sales tax to fund the project was mentioned in the 2000 Business Plan, but only the recommended strategy of incremental funding has been followed by the Authority since 2000. Stating that Californians would perhaps need to pay for "only about one-third of the total project cost"[16], although totally unsupported in the plan, fit well with subsequent legislation scheduling a vote on the issuance of $9 billion in high-speed rail bonds in November 2004.[17] The Authority's hoped-for significant private funds or grants from non-existent federal programs to create a "phased-funding plan" ignored the Authority's mandate still found in Section 185010 of the Public Utilities Code[18], which reads as follows:

> "185010(h) *In order for the state to have a comprehensive network of high-speed intercity rail systems by the year 2020, it must begin preparation of a high-speed intercity rail plan similar to California's former freeway plan and designate an entity with stable and predictable funding sources to implement the plan."*

Leery of levying more taxes on Californians, Governor Gray Davis never supported a sales tax that could have created a stable and predictable funding source to pay for high-speed rail. Instead, he would support the "car tax" to help solve the state's fiscal woes and be recalled from office in 2003.

The Authority's 2008 Business Plan:

In March of 2008, eight months prior to the issuance of the 2008 Business Plan, the Authority's financial consultant, Infrastructure Management Group, Inc., issued a *Request for Expressions of Interest for Private Participation in the Development of a High-Speed Train System in California*. The primary purpose of this RFEI "was to better understand how the private sector could assist in developing and financing all or portion(s) of the project."[19] Thirty responses were received and summarized in IMG's *Report of Responses to the RFEI* and also rolled into IMG's *Financial Plan for the CHSRA San Francisco to Anaheim Segment* which was also published in October 2008. In this financial plan IMG concluded:

Private funds would most likely come after the initial operating portions (i.e. SF to LA) were showing a profit.[20] Furthermore, private funds were in general conditioned upon a "revenue guarantee" or "availability payments"[21]

IMG's Financial Plan dealt with possible federal funding by stating that "new funding sources specifically for high-speed rail, along with an expansion of existing transit programs, will need to be created in order to provide adequate support for the HSR Project"[22]

In the face of these sobering statements made by its own financial consultant, the Authority's 2008 Business Plan was released shortly thereafter touting a financial plan for the San Francisco to Anaheim Segment (Phase 1 of the statewide system) projected to cost $33.6 billion (2008$) that showed roughly a third of the necessary funding coming from private sources, a third from non-existent federal programs, and the remaining third from the recently passed Proposition 1A bond measure.[23]

2008-2015 The Authority's Attempts at Securing Federal and Private Funding:
No new federal programs to support the high-speed rail project, other than one-time funds allocated as part of a nearly trillion dollar federal stimulus spending bill passed by Congress in 2009, were enacted. The one-time federal funds allocated to California's project, about $4 billion, did not even cover projected cost increases since 2008 as the cost of Phase 1 ballooned to $98-$118 billion before the project was trimmed back to "Phase 1 Blended" shown in the 2012 Business Plan as costing between $68 and $80 billion.[24]

Private funding also failed to materialize. Still searching for private funds in 2015 the Authority issued a second *RFEI for Delivery of an Initial Operating Segment* on September 28, 2015[25]. Thirty-six replies were received and none showed a willingness to provide private funding. It is worth noting that of the thirty-six respondents, only nine had also responded to the Authority's 2008 RFEI. Twenty-seven were new respondents and now brought to fifty-seven the total number of private firms to publicly decline to invest in California's high-speed rail project.

A Path Out of Today's High-Speed Rail Quagmire:
There is still a substantial minority of California's population that would like to see a high-speed rail system built in California. However, many of these people and the groups who represent them (ex. Californians Advocating Responsible Rail Design – CARRD) want to see high-speed rail "built right" and may have lost faith that the current effort will lead to a successful system. Moreover, a recent Hoover Institution Golden State Poll shows that "continuing the state's high-speed rail project" polls last of twenty-one issues surveyed when Californians are asked if this should be a "top priority" of the state[26].

It has been nearly eleven years since the Authority certified its 2005 *Final Program EIR/EIS for the Proposed California High-Speed Train System* (2005 Program EIR) which openly and transparently studied the need for, and the benefits and costs (monetary and environmental) of the proposed statewide system. To date, nearly $1.5 billion[27] has been expended with very little to show for it. Project Level environmental clearances for Phase 1 Blended are still years in the offing[28] and as this paper is being written the public is learning that the Authority is reversing nearly four years of planning and will now seek to build its Initial Operating Section north from Bakersfield to the Bay Area rather than south from Merced to the Los Angeles Basin.

The $1.5 billion spent to date will not have been wasted if Californians someday reconstruct this project on a more stable financial and environmental footing. But before that can happen and before more funds are spent, the new information gained about the need for, and costs of, a high-speed rail system need to be examined in a new statewide program EIR.

Much has been learned since the 2005 Program EIR was certified by the Authority. California's population failed to increase at the rate envisioned in the 2005 Program EIR. Consequently the projected need for additional freeway lanes and airport infrastructure failed to materialize. In the 2005 Program EIR it was envisioned that the "core segment" connecting Los Angeles and San Francisco would be completed by January 1, 2016 with the remainder of the system completed by January 1, 2019[29]. In the last ten years the former date has been pushed off thirteen years and the Authority does not even know by how much the latter date has been delayed. Increased construction costs coupled with the lack of federal or private funding now may result in Californians' expenditure for HSR rising to the level of our state's currently unfunded state employee pension liability, and Californian's may wish to reconsider their decision to invest in HSR. But one new need for a high-speed rail system has come to light. That need stems from today's increased awareness of the potential cost of greenhouse gas emissions from automobiles and airplanes. Unfortunately this concern has come to the forefront after 2005 and was never studied in the 2005 Program EIR nor was the proposed train system designed to minimize GHG emissions.

Surely it would take immense political courage for the Authority, or an individual board member, to call for a suspension of work coupled with a proposal for a new statewide program EIR, but in light of today's financial and environmental questions about high-speed rail this may be the best option for moving forward and the best hope for the eventual construction of a high-speed rail system in California.

[1] Senate Concurrent Resolution 6, Filed with Secretary of State July 20, 1993, Whereas Section, paragraph 9. See http://www.leginfo.ca.gov/pub/93-94/bill/sen/sb_0001-0050/scr_6_bill_930720_chaptered

[2] Senate Concurrent Resolution 6, Filed with Secretary of State July 20, 1993, Resolved Section, paragraph 13, items 1-5

[3] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Appendix B, Document available at Claremont Colleges, Honnold/Mudd Library, Claremont, CA.

[4] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Executive Summary, page 1

[5] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Capital Cost Summary Tables, pages 3-25 and 3-27

[6] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Major Secondary and Supplemental Funding Sources, pages 5-7 to 5-10, Secondary Funding Sources expected to each contribute less than 2% to the construction costs and Supplemental Funding Sources each expected to contribute less than 1% to the construction costs, the total was expected to close the funding gap left by the base or "primary funding source".

[7] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Overview of Funding Sources, page 5-2

[8] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Base Funding Options, page 5-3

[9] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Base Funding Options, page 5-5

[10] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Financing the System – Introduction, page 5-1

[11] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Base Funding Options, page 5-6

[12] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Executive Summary, page ES-16

[13] FAX from Executive Director Mehdi Morshed to Congressman Jim Costa, Resolution HSRA 99-8 *Motion on Recommendations to the Authority to Become Part of the Business Plan.* Located in California State Archives and not found on the Authority's website.

[14] Financial Plan Prepared by Public Financial Management Inc, November 2, 1999, page 4 http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2000_TS_FinPlan.pdf

[15] Financial Plan Prepared by Public Financial Management Inc, November 2, 1999, page 15

[16] Cover Letter to 2000 Business Plan http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2000_FullRpt.pdf

[17] Senate Bill 1856 (Costa), Safe Reliable High-Speed Passenger Train Bond Act, Division 3 of Streets and Highway Code, Chapter 20, Article 3, SEC. 4(a) See: http://www.leginfo.ca.gov/pub/01-02/bill/sen/sb_1851-1900/sb_1856_bill_20020919_chaptered.pdf

[18] California Public Utilities Code, Section 185010(h) http://codes.findlaw.com/ca/public-utilities-code/puc-sect-185010.html

[19] Report of Responses to the Request for Expressions of Interest for Private Participation in the Development of a High-Speed Train System in California, prepared by IMG, Inc., October 2008, page 1 http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2008_SRC_ExpressInterest.pdf

[20] Financial Plan prepared by Infrastructure Management Group, Inc., Oct. 27, 2008, page 12 http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2008_SRC_FinPlan.pdf

[21] Financial Plan prepared by Infrastructure Management Group, Inc., Oct. 27, 2008, page 11

[22] Financial Plan prepared by Infrastructure Management Group, Inc., Oct. 27, 2008, page 5 http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2008_SRC_FinPlan.pdf

[23] 2008 Business Plan, page 21, Figure 26 http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2008_FullRpt.pdf

[24] 2012 Revised Business Plan, page 3-11, Exhibits 3-7 and 3-8 http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2012_rpt.pdf

[25] Expression of Interest in the Delivery of an Initial Operating Segment, Sept. 28, 2015 http://www.hsr.ca.gov/docs/about/doing_business/EOI/EOI_Barclays_Bank_PLC.pdf

[26] Hoover Institution Golden State Poll, conducted Nov. 30-Dec.13, pages 25-26 http://www.hoover.org/sites/default/files/hoover_gsp_january_2016_release_public_results_final_011216.pdf

[27] Authority Finance Committee Exhibit, Total Project Expenditures with Forecasts, Dec. 2015

[28] Authority Finance Committee Exhibit, Environmental Milestones Schedule, Dec. 2015

[29] *California High-Speed Train Final Program EIR/EIS*, Economic Growth and Related Impacts section, page 5-5 http://www.hsr.ca.gov/docs/programs/eir-eis/statewide_final_EIR_vol1ch5.pdf

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2016 Business Plan RECORD DETAIL

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Notes :	
Attachments :	Powell_Paper_1_Population-growth_and_the_Need_for_HSR.pdf (517 kb)

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March 28, 2016

California High-Speed Rail Authority
Attn: Draft 2016 Business Plan
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

To Whom it May Concern:

Attached for the Authority's consideration is a Word document submitted as a comment on their Draft 2016 Business Plan . It is entitled *Pushing Back on the California High-Speed Rail Authority's Myths About High-Speed Rail: Paper 1- Population Growth and the Need for High-Speed Rail.* It has been sent "Return Receipt" so that I will have proof of date of delivery and the name of the person to whom it was delivered.

This same document was also submitted by e-mail to the Authority at:
2016businessplancomments@hsr.ca.gov
It was sent via email as a Word document because it is heavily footnoted with links to my sources making it easy for anyone to check my facts.

Sincerely,

Mark R. Powell

enclosures: 1 Comment on the Authority's Draft 2016 Business Plan: *Pushing Back on the California High-Speed Rail Authority's Myths About High-Speed Rail: Paper 1- Population Growth and the Need for High-Speed Rail*

Pushing Back on the California High-Speed Rail Authority's Myths About High-Speed Rail

Paper 1 - Population Growth and the Need for High-Speed Rail

by Mark R. Powell
October 5, 2015

Paper 1-Population Growth and the Need for High-Speed Rail

Abstract

The Authority's most recent hype touting of the need for high-speed rail, a June 2015 brochure entitled *California High-Speed Rail Big Picture,* makes indefensible claims about population growth, airport capacity constraints, thousands of miles of new freeway lanes that will be needed if high-speed rail is not built, California's geography being perfect for high-speed rail, and high-speed rail's effect on greenhouse gas emissions.

Predicting population growth correctly is critical in terms of planning for new infrastructure and so Paper 1 in this series focuses on this issue. The work of the California Department of Finance's Demographic Research Unit, solely responsible for estimating and predicting California's population, is used throughout the paper. Going back nearly 40 years the paper traces how underestimating population growth in the 1980's resulted in a vast over prediction of population growth in DRU's reports of the early 1990's. Within two months of DRU's issuance of its May 1993 Report, which predicted California's population would expand by 19 million between 1990 and 2020 and would more than double between 1990 and 2040, the State Legislature authorized a commission to begin studying high-speed rail and to develop a twenty-year plan for its implementation; work which has been carried on since 1997 by the California High-Speed Rail Authority.

Ensuing reports issued by the DRU over the last 22 years have consistently revised downward the estimated population growth of California. DRU's latest report, issued in December 2014, now predicts a population growth of only 10.7 million between 1990 and 2020 and a growth to only 47.2 million in the year 2040, more than 16 million below the 63.3 million envisioned in the May 1993 Report. This paper documents this trend and illustrates how the California High-Speed Rail Authority has been slow to accept the newer findings of the DRU while preferring to use older DRU reports to create a perceived need for high-speed rail.

Paper 1- Population Growth and the Need for High-Speed Rail

California High-Speed Rail Authority Myth #1

"Over the next 30 to 40 years, California will add the current population of New York state to its current 38 million residents. Meeting the transportation demands associated with that growth will require major infrastructure investments. The question is not if those investments need to be made, but how those investments can provide the greatest benefits. It's clear that California cannot provide an effective transportation system for 50 million to 60 million residents with a 'more of the same' approach."[1] (Source: CHSRA's *California High-Speed Rail Big Picture* brochure dated June 2015)

Background

For decades the California Department of Finance (DOF) has been charged with estimating the state's population annually, statewide and by county, to fairly allocate state funds, and with making long term population projections for state planning and budgeting (see table on next page). The Demographic Research Unit (DRU) of the DOF is designated as the single official source of this demographic data[2]. The DRU publishes long term projections every few years beginning with the last official U.S. Census. In the 1980's their projections went out as far as 40 years from the last census. The 1980's saw California's population rise sharply at more than 2%/year and DRU began seeing a trend develop where their model underestimated population in the near term while remaining unaware that it did predict population fairly accurately in the distant years.

In 1993 DRU over corrected their model causing it to over predict population even in the near term and to unknowingly vastly over predict population in the distant years. Simultaneously, DRU began for the first time to project out 50 years from the most recent census. In the more than two decades that have passed since 1993 the DRU has continually refined their model and brought downward the predicted population in the decades to come. For instance, the 1993 model's prediction of 49.0 million and 63.3 million souls residing in California in the years 2020 and 2040 has plummeted by more than 8 million in 2020 and by more than 16 million in 2040. Two months following DRU's 1993 report, Senate Concurrent Resolution 6, citing that the "population of the state and the travel demands of its citizens are expected to continue to grow at a rapid rate" was approved by the State's Assembly and Senate in July 1993 giving birth to the Intercity High-Speed Rail Commission.

Year Issued	1980	1990	2000	2010	2020	2030	2040	2050	2060
Sept 1983	23.8	28.0	31.4	34.2	36.9				
Dec 1986	23.8	28.8	32.9		39.6				
Nov 1989					39.6	43.2			
May 1993		**30.0**	**36.4**	**42.4**	**49.0**	**56.1**	**63.3**		
April 1997			34.7	40.9	47.5				
Dec 1998		29.9	34.7	40.0	45.4	51.9	58.7		
June 2001			34.5	40.3	45.8				
May 2004			34.0	39.2	43.9	48.1	51.5	54.8	
July 2007			34.1	39.1	44.1	49.2	54.3	59.5	
May 2012			34.0	37.3	40.8	44.6	48.0	51.0	
Jan 2013				37.3	40.6	44.3	47.7	50.4	52.7
Dec 2014				37.3	40.6	44.1	47.2	49.8	51.7

Projected State Population (millions)[3]
Per Reports Issued by California Department of Finance, Demographic Research Unit

High-Speed Rail Agencies Use of Population Projections

The Intercity High-Speed Rail Commission, the precursor to the California High-Speed Rail Authority, worked from 1993 through 1996 and was tasked with creating a 20 year plan for high-speed rail development and assessing whether such a plan was economically feasible. Using the most recent DRU report, the Commission's *Summary Report and Action Plan* published in December 1996 stated, "California's population is projected to grow from the current 32.7 million to 48.8 million by 2020, representing a 49 percent increase."[4] It is worth noting that even with this rapid growth in expected population of 1.68%/year the Commission found that only the statewide system of high-speed rail estimated to cost $18.2 billion (1996 dollars) was economically feasible and it could not justify what the Commission termed the "Basic System" merely connecting the Bay Area to the Los Angeles Basin[5].

The California High-Speed Rail Authority in publishing its 2000 Business Plan in December 1999 appeared to be looking at the same population growth as had the Commission when it wrote about meeting "the intercity travel needs of 45 to 50 million Californians in 2020"[6] even though two more recent reports had the 2020 population prediction trending down to only 45.4 million.

With DRU reports trending downward in terms of projected population growth, the Authority chose to use DRU's 1998 report rather than its May 2004 report in its November 2005 certified statewide *California High-Speed Train Final Program EIR/EIS*. By using older data the Authority could claim that statewide population was expected to grow by about 54% between 2002 and 2035[7] or from 35.7 million to 55.3 million while the newer DRU report predicted only 49.9 million residents in 2035.

Using DRU's most recent report the Authority's 2008 Business Plan cited California Department of Finance forecasts showing the state's population would grow by 40% to 50 million by 2030[8] in line with a DRU report issued in July 2007 predicting 49.2 million residents in 2030.

In its 2012 Business Plan the Authority would have still been accessing the DRU's 2007 report when it wrote "to put this additional demand in perspective, by 2050 California will add more people than now live in New York state."[9] In making this statement the Authority was claiming that California's population would exceed 57.7 million in 2050. This is in line with the 2007 DRU report predicting 59.5 million Californians in 2050. DRU's 2007 report, issued in the year prior to passage of Proposition 1A, can now be seen as being at odds with the previous report and with subsequent reports where the projected population in 2050 dropped to 51.0 million, 50.4 million , and 49.8 million in DRU's May 2012, January 2013, and December 2014 reports respectively. It is worth noting that state agencies can request timely reports from the DRU and this appears to be done somewhat routinely by the Department of Water Resources. It appears the Authority chose to use the old 2007 DRU report in its 2012 Business Plan because of the ongoing downward trend in DRU's predictions of population growth.

The Authority's 2014 Business Plan, which could have referenced the 2013 DRU report, was silent on the issue of population growth. Other promotional literature published by the Authority is not silent, but today still uses DRU's 2007 report when in their *California High-Speed Rail Big Picture* brochure dated June 2015 they again claim that "over the next 30 to 40 years, California will add the current population of New York state (20 million) to its current 38 million residents." [10]

The table on the following page summarizes all of these claims about population growth and notes by how many years each claim precedes the date most recently predicted by the DRU of when that population will be reached. For example, the first row of data details how the Intercity High-Speed Rail Commission in their *High-Speed Rail Summary Report and Action Plan* issued in December 1996 anticipated a state population of 48.8 million in the year 2020 whereas the Demographic Research Unit of the California Department of Finance now predicts that a population of 48.8 million will not be reached until the year 2046, twenty-six years later than anticipated by the Commission.

Agency/Document	Population(M)	Agency Assumption Year	Current DRU Prediction Year	Difference (Yrs.)
Commission/Summary Report 1996	48.8	2020	2046	26
Authority/2000 Business Plan	45-50	2020	2033-51	13-31
Authority/2005 Program EIR	55.3	2035	2081*	46*
Authority/2008 Business Plan	50	2030	2051	21
Authority/2012 Business Plan	57.7	2050	2093*	43*
Authority/2015 Big Picture Brochure	58	2045-2055	2095*	40-50*

Agency Over-Prediction of California's Population

*Beginning in the year 2020 the DRU of the California Department of Finance predicts a declining growth rate down to .33% annually in the last 5 year period predicted (2055-2060). Years marked with an asterisk are beyond the DRU's last predicted year and assume growth rate holds steady at .33% annually. If the growth rate is allowed to trend down in the years 2060-2100 as it does in the years 2020-2060 the population prediction would never be reached. California would reach a maximum population of 54 million in the year 2080. See table below.

5 Year Period	Annual Growth Rate
2010-2015	.82
2015-2020	.87
2020-2025	.85
2025-2030	.80
2030-2035	.75
2035-2040	.64
2040-2045	.56
2045-2050	.49
2050-2055	.41
2055-2060	.33

Annual Growth Rates Calculated from
California Department of Finance December 2014 Report P-1 State and County Total Population Projections for the period 2010-2060 (5-year increments)[11]

It is now a near certainty that California will only realize 8 million of the 16 million persons envisioned by the Commission in 1996 to be added to California's population by 2020. Likewise, it is now predicted that only about 10 million of the additional 20 million persons predicted in the Authority's *California High-Speed Train Final Program EIR/EIS* will actually be living in California in 2035. In other words, the population envisioned by the Commission to exist in 2020 is now not likely until 2046. Worse yet, the most current DRU report indicates that the population envisioned by the Authority in 2005 in its statewide *California High-Speed Train Final Program EIR/EIS* to exist in 2035 may never materialize. It is no wonder that the future infrastructure needs of Californians as envisioned by the Authority in their *California High-Speed Train Final Program EIR/EIS* have not materialized. This new infrastructure, exaggerated by the Authority in the first place, is now clearly not needed in California because many of the people once expected to live in California are now, or will soon be, living elsewhere. Paper 2 in this series builds on this paper and exposes the Authority's myth about new highway lane miles that would be needed in the absence of a high-speed rail alternative.

Endnotes

[1] California High-Speed Rail Authority brochure dated June 2015 entitled *California High-Speed Rail Big Picture* http://www.hsr.ca.gov/docs/newsroom/fact%20sheets/Big_Picture_FINAL_060515.pdf

[2] California Department of Finance website http://www.dof.ca.gov/research/demographic/dru/index.php

[3] California Department of Finance, Demographic Research Unit Reports

[4] Intercity High-Speed Rail Commission *High-Speed Rail Summary Report and Action Plan*, December 1996, Executive Summary, page ES-4

[5] Intercity High-Speed Rail Commission *High-Speed Rail Summary Report and Action Plan*, December 1996, Section 7 Economic Impact of High-Speed Rail, Benefit Cost Comparison, pages 7-24 and 7-27

[6] 2000 Business Plan, Cover Letter addressed to Governor Davis http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2000_FullRpt.pdf

[7] *California High-Speed Train Final Program EIR/EIS*, Summary section, page S-16 http://www.hsr.ca.gov/docs/programs/eir-eis/statewide_final_EIR_vol1summary.pdf

[8] 2008 Business Plan, page 6 http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2008_FullRpt.pdf

[9] Revised 2012 Business Plan, Chapter 1High-Speed Rail's Place in California's Future, page 2 http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2012_rpt.pdf

[10] *California High-Speed Rail Big Picture* brochure June 2015 http://www.hsr.ca.gov/docs/newsroom/fact%20sheets/Big_Picture_FINAL_060515.pdf

[11] California Department of Finance December 2014 Report P-1 State and County Total Population Projections for the period 2010-2060 (5-year increments) http://www.dof.ca.gov/research/demographic/reports/projections/P-1/documents/P-1_Total_CAProj_2010-2060_5-Year.xls

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2016 Business Plan RECORD DETAIL

Submission Date :	4/4/2016
Submission Method :	Website
First Name :	Simon
Last Name :	Choi
Stakeholder Comments/Issues :	Please build top-notch railroad systems that will make California look like Germany or France. Allow passengers to transport their cars at the rear end of the train. Also, build more subways and light rails that can connect major airports such as LAX, SFO, SJC, and SNA with the main high-speed lines. Build more light rails that can transport commuters from Inland Empire to LA and OC. Connect major UC Campuses with rails, so college kids won't have to buy cars to move around within California. I have a very high hope, please build decent public transportation systems throughout the state.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/5/2016
Submission Method :	Website
First Name :	Rob
Last Name :	Greer
Stakeholder Comments/Issues :	cool cool cool cool I love this state!
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/1/2016
Submission Method :	Letter
First Name :	Steve
Last Name :	Heminger
Stakeholder Comments/Issues :	
Notes :	
Attachments :	MTA_Comment_Letter_040116.pdf (557 kb)

METROPOLITAN
TRANSPORTATION
COMMISSION

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April 1, 2016

Dan Richard, Chair
California High-Speed Rail Authority
770 L Street, Suite 1160
Sacramento, CA 95814

Dear Mr. Richard:

Please find attached MTC's comments on the California High-Speed Rail Authority's (CAHSRA) Draft 2016 Business Plan, which were approved by the Commission at its March 23, 2016 meeting.

Most significantly, we applaud the Authority for the achievement of a number of important milestones not the least of which is your transition from a planning agency to a project delivery/construction management organization.

Overall, MTC applauds the 2016 Draft Plan's direction as the Bay Area welcomes the opportunity to work closely with you and your board, with the High-Speed Rail Authority staff, and with other agencies to realize the full potential of the project and its important local transit connections.

We have focused specific comments on key areas where we are hopeful that the Authority can strengthen the 2016 Plan in order to achieve its outlined objectives.

Please do not hesitate to contact me if we at MTC can assist you in your work in any way.

Sincerely,

Steve Heminger
Executive Director

SH: rr
J:\COMMITTE\Legislation\Letters\2016\Ltr SH CAHSRA 3-31-16.docx

Our proposed comments on the Draft Plan are focused in the following nine areas:

1. We strongly support the Bakersfield to San Jose line as the first operational segment.
2. We urge the CAHSRA to seek additional alternative revenue sources to advance the initial operating segment into San Francisco and to the new Transbay Transit Center.
3. We believe that additional investment in all three stations from San Jose to San Francisco (Diridon, Millbrae, and the Transbay Transit Center) will be critical to the success of High Speed Rail.
4. We ask that that CAHSRA redouble its effort to engage the Bay Area on the efforts needed to complete the Caltrain Electrification project, including securing full funding for that project and addressing other managerial issues. It is vital that this project enter construction in 2016.
5. We request that CAHSRA strengthen connections to the BART system to ensure that east bay connectivity is achieved. In particular, the underground connection from the Transbay Transit Center to Embarcadero Station will be a key Bay Area connection.
6. We recommend that CAHSRA continue its role and strengthen its efforts in assisting station site communities all along the initial segment, with respect to the important land use decisions that will certainly emerge as the rail line forges new transportation connections. This effort should support California's economic development while revitalizing communities, and preserving agricultural lands and open space.
7. We recommend that CAHSRA expand efforts to strengthen relationships between the regions and Metropolitan Planning Organizations (MPOs) along the corridor – so that lessons learned, impacts and synergies related to land use and station area planning – key to building strong communities and retaining farmland and open spaces – can be understood, shared and implemented in a positive manner.
8. We support the expeditious construction of the line to the Los Angeles Basin to achieve the CAHSRA vision of connecting California's two largest mega-regions.
9. We recommend additional refinement and sensitivity analysis with respect to the capital and operating cost assumptions, based on Bay Area experience in building and operating large capital transit systems.

First Operational Segment: Bakersfield to San Jose

Seeking to connect high-speed rail to the vibrant economy of the Silicon Valley and the San Francisco Bay Area, with its large and growing transit ridership and the existing and future transit connectivity features of the San Jose Diridon station, will best position the initial segment for strong ridership. In addition, the much lower construction cost supports the CAHSR's recommendation to build the first segment to San Jose as the best option to achieve the most successful service as soon as possible for California.

Among future California high-speed rail stations, the Diridon Station in San Jose is already a major transit hub with Amtrak, Altamont Commuter Express (ACE), Caltrain and Santa Clara Valley (VTA) light-rail and bus service. With the addition of Bay Area Rapid Transit (BART) and High Speed Rail Service – both anticipated in 2025 – and expanded Caltrain, ACE and Capitol Corridor service, Diridon Station will become one of the busiest multi-modal stations in North America. MTC, the City of San Jose, VTA, CAHSRA and Caltrain staff are already

working cooperatively on planning efforts, including environmental clearance under CEQA to pave the way for a broad mix of transit-supportive, high-intensity land uses in and around the station area. Investment in Diridon Station should be prioritized to ensure that the new station is positioned to be a pre-eminent transportation hub and is fully operational when High Speed Rail Service commences.

Connecting to San Francisco's Transbay Transit Center

We agree that connecting the initial operating segment to San Francisco should be the goal. We also recognize that relying primarily on federal funds may be risky. We therefore urge the Authority to consider an alternative funding plan for the San Francisco connection, should anticipated federal rail funds not materialize as expected. This alternative could be a combination of private investment, additional Cap-and-trade funds, local funds and other state support.

In recent years, the travel patterns between San Francisco and Silicon Valley have grown steadily in each direction. Major corporations have developed multiple locations from Downtown San Francisco to the South Bay and many locations in between. Caltrain is breaking ridership records each month, and Highway 101 and I-280, the main routes of travel on the San Francisco Peninsula, are each burdened by growing congestion. Continuing high speed rail service to San Francisco and ensuring high quality connections to the San Francisco International Airport through investments at the Millbrae Station will provide CAHSRA with a certainty of growing consumer demand and success.

And, the connection in San Francisco eventually must go all the way to the Transbay Transit Center. This transit hub is currently under construction, and already includes a federally-funded "train box" platform level that will allow for connection to Caltrain and High Speed Rail. The region has already invested close to $2 billion in the Transbay Transit Center and its long-term future should include high speed rail. The Transbay Transit Center, located in the heart of downtown San Francisco, will also afford connections to other key regional transit systems such as BART, San Francisco Muni, and numerous other regional bus services. In particular, the Transbay Transit Center will be a primary connection point to High Speed Rail from Oakland and the East Bay. A new underground pedestrian link between the Transbay Transit Center and Embarcadero Station will be key to this connectivity. The Downtown Extension of the Caltrain line from its current terminus at 4th and King streets to the Transbay Transit Center is one of the Bay Area's key regional projects and is a federal New Starts priority for the region.

We look forward to the state's support of the Downtown Extension project and related connections to the BART system and the East Bay as key to supporting a successful high-speed rail line into San Francisco.

Funding Plan for Electrification

Building on the comment above it is critical that full funding for the Caltrain electrification project be secured, and quickly, so that the project can move ahead in time to meet the arrival of high-speed rail.

Our region's Regional Transportation Plan/Sustainable Communities Strategy, Plan Bay Area, assessed hundreds of transportation projects. High performing projects were defined as projects with high benefit-cost ratios and strong performance target scores related to measures such as greenhouse gas reduction. Caltrain Electrification, which will provide electrified service for high-speed rail blended with expanded Caltrain service, was a high scoring project in our regional plan, and is one of MTC's highest priorities in terms of regional funding and as a candidate for federal Core Capacity/New Starts funding

We applaud the strong and longstanding partnership of the CAHSRA, formalized in 2012 through a nine-party memorandum of understanding, and underscored through its $600 million commitment to the electrification project, currently estimated to cost $1.8 billion. The Draft Plan provides new urgency to start construction on this important project before the close of 2016. There remain a number of outstanding issues related to costs, funding, and service integration, and we look forward to the CAHSRA playing an important role, alongside the regional partners, to resolve these matters and close the funding gap.

Station Area Planning

As pointed out in the Draft Plan, "connecting the Silicon Valley to the Central Valley will usher in a new era of transportation and have a transformative effect as it creates new connections and access. The impact of this line will be inestimable in terms of the economic impacts within each region."

To that end, we recommend that CAHSRA continue its role and strengthen its efforts in assisting station site communities all along the initial segment, with respect to the important land use decisions that will certainly emerge as the rail line forges new transportation connections. This effort should support California's economic development while revitalizing communities, and preserving agricultural lands and open space.

Today, the Bay Area and the Central Valley have dramatically different economic strengths and challenges. While the Bay Area is the global center of technological innovation, the Central Valley is the nation's single most important agricultural region. Prioritizing the development of the Bay Area to Bakersfield HSR segment has the potential to provide tremendous economic benefits to both regions. Reducing the trip time between San Jose and Fresno from three hours in a car today to one hour via high-speed rail in 2025 will usher in a new era of connectivity between the Bay Area and the Central Valley.

The actions to-date by the CAHSRA – establishing high speed rail station principles and guidelines and providing station area planning grants – are laudable. To fully realize the benefits of high-speed rail, communities that will serve as locations for stations should be supported through a comprehensive station area planning program, appropriately scaled and funded at a level commensurate with the transformative nature of the planned service. It would also be highly beneficial for CAHSRA to engage MPOs and regions along the corridor in an effort to foster communication between regions to share best practices related to economic development and focused growth. We recommend that the CAHSRA continue to engage with local

communities and regional agencies well in advance of the launch of High Speed Rail Service in 2025, and MTC stands ready to assist in this regard as needed.

Cost Analysis

The following preliminary comments are offered on the operating and capital cost assumptions contained in the Draft Plan and its supplemental reports. There is much detail summarized in these reports, and we look forward to working with CAHSRA staff to fully review and understand the basis for the estimates.

Capital Costs and Funding:

We commend the Authority for the extensive value engineering that they have done to reduce the overall cost of the project. Cost containment is important both at the outset of the project as well as throughout construction. In its technical supporting document detailing capital costs used in the Draft Plan, the CAHSRA estimates a cost of $3.1 billion for the San Francisco to San Jose segment, and $4.4 billion for the San Jose to Gilroy segment. These estimates include small amounts (<5%) of general contingency, and varying levels of contingency (10-25%) for the specific cost categories. Based on other large construction projects in the region that MTC staff is familiar with, the level of general contingency seems low given the complexity of the project and the fact that it is the nation's first high-speed rail line.

We also observe that the capital cost figures include significant proposed scope and funding changes, which include a reduction of funding support for the Transbay Transit Center/Downtown Extension project from $2 billion to $0.5 billion, the removal of aerial guideways at the San Jose station, and the removal of dedicated guideway at Millbrae. Additionally it appears that all of the high-speed rail cap-and-trade funds are being used for the high-speed rail line itself. We would like to better understand these decisions and the potential impacts on the high-speed rail project as well as on the related Caltrain Electrification project, the Diridon Station, and the Downtown Extension. We acknowledge the challenge of building an infrastructure project of the scope and scale of high speed rail in a constrained revenue environment. However, we believe that the high speed rail system itself would benefit from the completion of the Transbay Transit Center/Downtown Extension project, and that the benefits warrant an increased CAHSRA investment in that project more on the order of $2 billion than $0.5 billion.

Finally, regarding potential funding sources, it appears that the Authority intends to consider or seek funding from the competitive and formula freight programs that were enacted in the FAST Act. There will almost certainly be strong competition for these funds, from within the state and from other states. It also appears that the Authority may seek a loan from the federal Transportation Infrastructure Finance and Investment Act (TIFIA) program. The region has some experience with this program, and we would advise the Authority to learn from the region's experience and to enter into the program carefully so as not to hinder their financial capacity in the future.

Operating Costs:

The Draft Plan assumes a very low rate of operations cost growth after the first five years of operations. For Phase 1 (2030 – 2060), the annual real growth (not including inflation) in operating costs is less than one-half percent per year. In MTC's experience, this may be an optimistic assumption. Over the last five years, real growth in operations costs per service mile for heavy-rail operators in the MTC region has averaged 2.6 percent per year.

Given the disparity in cost growth assumed in the Draft Plan versus the Bay Area's actual cost growth, MTC recommends that CAHSRA consider refining the assumptions related to real growth for several components of the Plan, or increasing the allocated contingency assumed in the "medium" forecast of operations cost.

Additionally, ridership and fare revenue are exceedingly difficult to project past a five-year horizon. The Draft Plan attempts to estimate ridership and farebox revenue over many decades. Factors such as fuel price, fuel economy and high-speed rail ticket prices will have a significant effect on ridership rates and fare revenue potential.
The Draft Plan currently combines the "Medium Revenue" scenario with the "Medium Cost" scenario as the basis of its break-even analysis. To address uncertainty in both the operating costs and forecasted revenue from operations, MTC recommends additional sensitivity analysis that uses either a "Low Revenue"/"Medium Cost" scenario or a "Medium Revenue"/"High Cost" scenario in order to provide for a more conservative break-even point.

Conclusion

MTC staff applauds the 2016 Draft Plan's overall direction, and looks forward to continuing to work in close cooperation with CAHSRA and other involved agencies to realize the full potential of the project and its connections.

2016 Business Plan RECORD DETAIL

Submission Date :	4/6/2016
Submission Method :	Website
First Name :	Mike
Last Name :	Montgomery
Stakeholder Comments/Issues :	I support the business plan. It seems reasonable and will ultimately lead to greater prosperity for Californians economically, socially and environmentally.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	3/25/2016
Submission Method :	Letter
First Name :	John
Last Name :	Pedrozo
Stakeholder Comments/Issues :	
Notes :	
Attachments :	SJJPA Comments Ltr on CHSRA Draft 2016 Business Plan.pdf (254 kb)

San Joaquin
Joint Powers Authority

March 25, 2016
Mr. Dan Richard
Chairperson, California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

RE: Comments on California High-Speed Rail Authority (CHSRA) Draft 2016 Business Plan

Dear Chairperson Richard,

SJJPA appreciates the opportunity to comment on the CHSRA Draft 2016 Business Plan.

The CHSRA Draft 2016 Business Plan presents a significant change for where high-speed rail (HSR) service will be initiated. This new plan focuses on delivering a HSR line connecting the Silicon Valley to the Central Valley (north of Bakersfield) in 2025 instead of between Merced and the San Fernando Valley in 2022. While this is a major change for the phasing of HSR, it does not change the need for coordination and integration between the San Joaquin Rail Service and the HSR system.

With the exception of the Burbank to Anaheim improvements, the CHSRA Draft 2016 Business Plan places much less emphasis on "blended" service improvements than CHSRA's 2014 and 2012 Business Plans. Throughout the CHSRA's 2012 Revised Business Plan the importance of early investments to conventional services (including the San Joaquin Rail Service) which would connect to the HSR system was strongly emphasized. For example, page ES-6 of that document states, "Bringing high-speed rail to Sacramento, San Diego, and the Inland Empire through the blended approach to Phase 1. These areas will see improvements in rail service and access to high-speed rail service far earlier than previously planned." Page 2-1 of the CHSRA 2012 Business Plan states, "Making **early investments** in the "bookends," or Bay Area and Los Angeles Basin regions, and north from the San Joaquin Valley, to upgrade existing services, increase regional connectivity, improve safety, build ridership, and lay the foundation for expansion of the high-speed rail system." Having near-term improvement of the San Joaquin Rail Service between Fresno and Sacramento/Oakland should continue to be identified as important for increased regional connectivity and as a "feeder" service to HSR in the CHSRA Final 2016 Business Plan.

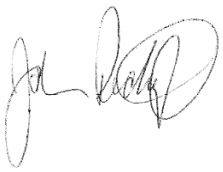
There has been no state funding made available to enable the planning, environmental, and engineering work needed to provide improved passenger rail service between the future Phase 1

HSR service and Sacramento. Without any funding, there has been no real progress in the planning for improved early investment for connecting the San Joaquin Rail Service from Sacramento through the San Joaquin Valley to the proposed HSR service. SJJPA is ready to work in partnership with CHSRA to best utilize the Prop 1A funding allocated for planning in this region through SB 1029 in 2012 for determining how best to provide near-term improvements to the San Joaquin service to improve connectivity to HSR.

As part of our Joint Policy Statement signed in 2013, SJJPA agreed to work with CHSRA and Caltrans to "protect the state investment in the San Joaquin Corridor, and work together to develop viable strategies and solutions to meet the needs of the high-speed rail system, the San Joaquin Rail Service and the stakeholder community." SJJPA remains committed to working with CHSRA, CalSTA, and Caltrans to determine how the San Joaquin service can best support the phased implementation of HSR. This would include how best to connect the San Joaquin service and Thruway bus network to HSR at a temporary station north of Bakersfield and at the ultimate Bakersfield station.

The SJJPA looks forward to working with CHSRA to implement a coordinated, complementary, and integrated intercity rail network which will help California's economy and will enable our State to grow in a more sustainable manner which protects the environment.

Sincerely,



John Pedrozo, Chair
San Joaquin Joint Powers Authority

cc Chad Edison, CalSTA, Jeff Morales, CHSRA, Ben Tripousis, CHSRA

2016 Business Plan RECORD DETAIL

Submission Date :	4/6/2016
Submission Method :	Letter
First Name :	Ahron
Last Name :	Hakimi
Stakeholder Comments/Issues :	Colleagues: Attached to this E-mail is Kern Council of Governments comments to the Authority's Draft 2016 Business Plan. We appreciate the opportunity to comment on this Plan and look forward to working with your staff to ensure the on-time completion of the Plan. Please fill free to call or E-mail Rob Ball, Director of Planning of Kern COG should you have any questions or require additional information. Sincerely,
Notes :	
Attachments :	Kern_Council_of_Governments_040616.pdf (1 mb)

Kern Council
of Governments

April 6, 2016

Chairman Dan Richard and Members of the Board of Directors
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

Re: Draft 2016 Business Plan Comments from Kern Council of Governments

Dear Mr. Richard and Members of the Board of Directors:

Thank you for the opportunity for Kern Council of Governments (Kern COG) to provide its comments and recommendations regarding the Authority's Draft 2016 Business Plan (Draft Business Plan). As you know, Kern COG and its staff has been working cooperatively with this project for over twenty-five years and our staff will continue to do so to ensure the best possible planning practices are achieved.

With respect to the Draft Business Plan, Kern COG staff has coordinated our response with the City of Bakersfield, County of Kern, and numerous stakeholders within our jurisdiction to ensure not only concerns of the Draft Business Plan are identified, but also recommended solutions to address those concerns.

Kern COG staff looks forward to working with your staff to complete the Draft Business Plan on-time and with local concerns addressed of not only Kern County but other communities impacted by the Initial Operating Segment.

Sincerely,

Ahron Hakimi,
Executive Director

Enclosure

Kern Council of Governments
1401 19th Street, Suite 300, Bakersfield, California 93301 (661) 861-2191 Facsimile (661) 324-8215 TTY (661) 832-7433 www.kerncog.org

Kern Council of Governments Comments
Draft 2016 High-Speed Rail Business Plan

A. Page 11, second paragraph, the plan proposes to early invest $2.1 billion in existing funds for an additional track connecting Burbank-Los Angeles-Anaheim to accommodate future Phase I one-seat service all the way to Anaheim. This Business Plan also states that it would take an additional $2.9 billion to extend the IOS from north of Shafter to downtown Bakersfield and on the other end from San Jose to San Francisco, providing a one-seat high-speed rail connection Bakersfield to San Francisco. The draft business plan focuses on travel from the Valley to San Francisco. This proposal can be improved to enhance potential ridership and an earlier delivery date for the IOS.

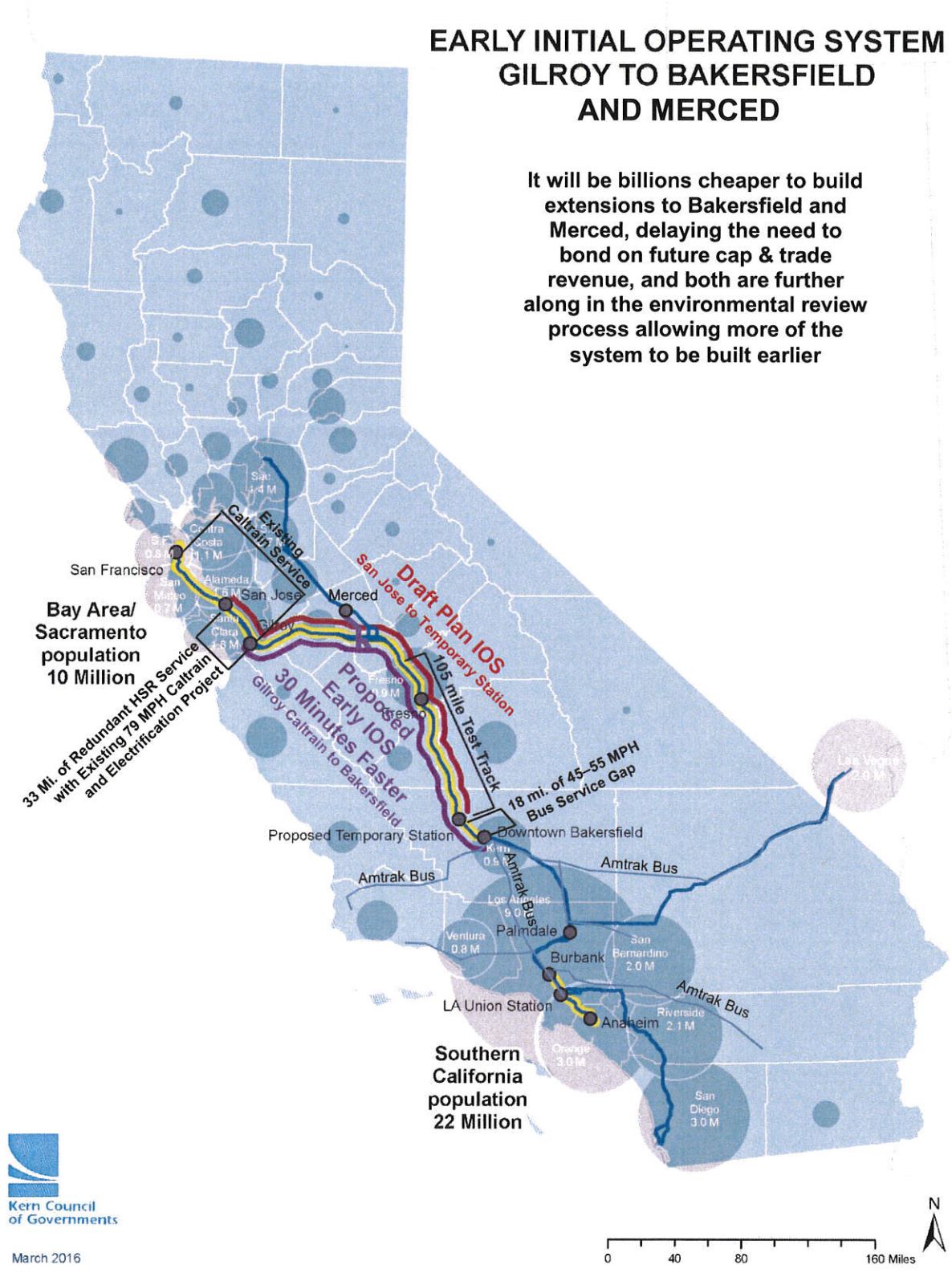
Recommend Alternative "Early IOS" – Bakersfield to Gilroy Caltrain Station (Basin-to-Bay 3-seat-ride competitive with Car Travel Times)

California Public Utilities Code 185033 sec. 8. (f) states: ***"It is the intent of the Legislature that the entire high-speed train system shall be constructed as quickly as possible in order to maximize ridership and the mobility of Californians, and that it be completed no later than 2020, and that all phases shall be built in a manner that yields maximum benefit consistent with available revenues."*** *An alternative Early IOS connecting downtown Bakersfield to Gilroy's Caltrain Station would accelerate implementation of revenue service and increase ridership faster than the Draft 2016 Business Plan proposal – San Jose to North of Bakersfield – consistent with the intent of the Legislature. Construction funding should go to which ever segment can be made ready first.*

Benefits of an Early IOS – Bakersfield to Gilroy Caltrain and Merced

1) ***Save 30 Minutes Basin-to-Bay Travel Time Sooner*** *- The San Joaquin Valley rural segments will allow travel at 200+ miles per hour. The segment through urbanized Santa Clara Valley will be less than 160 mph. An Early IOS connecting downtown Bakersfield to Gilroy (18 miles) with High Speed Train Service decreases the amount of slow 55 mph uncongested bus travel by 18 miles, resulting in a 20+ minute time savings on Basin-to-Bay travel over the Draft Business Plan, including the elimination of an additional 10 minute temporary stop North of Bakersfield. The 2016 Draft Business Plan proposes Building Gilroy to San Jose (33 miles) ahead of this higher-speed 18 mile segment. The 33 mile segment results in little time savings over an express Caltrain service (which is already immune to heavy vehicle congestion in the corridor) except for moving a 10 minute transfer layover from Gilroy further up the line to San Jose. The Draft Plan only benefits San Jose travelers and does nothing for travel times to the rest of the system. Giving construction priority to the 18 mile Bakersfield to North of Bakersfield segment clearly maximizes the benefit of IOS as intended by the Legislature. In addition, it adds 1.6M potential riders from the regions of Merced and Bakersfield.*

Figure 1 – An Early IOS Basin-to-Bay, 3-Seat-Ride that is 30 Minutes Faster and Billions Cheaper than the Draft Proposed in the 2016 Business Plan



2) ***Save 10 Minutes by Eliminating a Temporary Station Stop*** – *A temporary station stop with no services would require a minimum of 10 minutes to transfer luggage between trains and busses. This option would eliminate 1 unnecessary on the Basin-to-Bay 3 seat ride.*
3) ***Costs Less Than Half Gilroy to San Jose*** – *Almost the entire 18 mile Bakersfield to North of Bakersfield segment is rural or low density industrial and the segment is nearly half the length and less than half the cost of the Gilroy to San Jose segment through suburban neighborhoods. Similar cost advantages can be found on the Merced spur. Funding the 33 mile segment prior to the 18 mile segment is contrary to the intent of the Legislature.* ***In addition, the HSR project is helping fund the electrification of Caltrain all the way to Gilroy resulting in redundant rail electrification projects between Gilroy and San Jose.*** *Commuters to South San Jose would have to double back using Caltrain or other service, further degrading the travel time savings over vehicle travel.*
4) ***Better Leverages Both Basin-to-Bay and Valley-to-Valley Travel*** – *The Bakersfield to Gilroy Early IOS leverages State-wide travelers, in addition to those from the San Joaquin Valley to the Silicon Valley as discussed in the draft business plan. Potential Southern California riders make up more than half of the state population. This Alternative Early IOS would reduce current Amtrak travel time from Burbank to San Jose from 10 hours to 5.5 providing service faster than uncongested car travel. Greatly increasing early profit potential, consistent with the Legislature's intent.*
5) ***Better Leverages Amtrak Bus/Riders in Bakersfield*** – *The 18 mile segment leverages 9 existing Amtrak Thruway Bus connectors from Southern California and to the proposed high-speed rail and Amtrak stations in downtown Bakersfield allowing for more train traveling opportunities throughout Southern California to destinations such as Santa Barbara, Burbank Airport, Palmdale, Victorville, Palm Springs and Las Vegas.*
6) ***Better Leverages Ridership and Revenue from the High Desert Corridor/Las Vegas High Speed Train****. The Las Vegas to California corridor is considered by the federal rail administration to be one of the most financially viable HSR routes in the nation. So much so, the corridor anticipates to finance the construction of the system by bonding on future ridership revenue. This potential for high ridership could greatly benefit the revenue model for the California HSR system, providing an untapped new revenue source for expanding the system and fulfilling the intent of the legislature. The closer the system gets to Palmdale, the sooner this revenue source becomes viable.*
7) ***Frees Up Funding for New Electric Connector Buses -*** *Leverages existing state investment Amtrak Thruway Bus service which could be upgraded to use electric over-the-road coaches exclusively and would also keep the blended service at near net-zero emissions.*
8) ***Cheaper HMF*** *- Building the Early IOS all the way into Downtown Bakersfield allows for the most cost efficient heavy maintenance facility sites (both construction and operation) to be built sooner and for less.*
9) ***Further Along Environmentally*** *- An alternative Early IOS connecting Gilroy to downtown Bakersfield, and the Merced spur, is further along in the*

environmental process and, reduces potential delays created by environmental litigation on segments not as far along in the process and in close proximity to suburban neighborhoods.

10) ***No Sprawl Inducing Temporary Station*** *- Reduces potential for sprawl in a rural area of Kern County North of Bakersfield, inconsistent with the Regional Transportation Plan Sustainable Community Strategy.*

B. Page 12, second paragraph states that it will take approximately one hour to reach San Jose from Fresno using the high-speed rail initial operating segment (IOS).

Less than 1 million people live in Fresno, CA. Since approximately 22 million Californians live south of Bakersfield and only 10 million live north of Bakersfield, the business plan should emphasize the travel time reduction from the most populated area of California (So Cal Basin) to San Francisco Bay Area (that is the ultimate purpose and need for providing service in phase 1). An improved Early IOS (Bakersfield to Gilroy), Basin-to-Bay (Burbank Metrolink to San Jose Diridon Station), 3-seat-ride as depicted by the purple line in Figure 1 would take a 5.5 hours, faster than non-stop congested car travel (most cars stop for food and gas), and faster than Megabus by more than 1 hour:

Trip Segment A – Burbank Metrolink to Downtown Bakersfield by Bus – 2hrs. 10min. (congested speed) - *Providing an electric bus bridge from Burbank to downtown Bakersfield station would take approximately 2 hours and 10 minutes connecting the Early IOS with the Southern California Metrolink System. The bus bridge would provide no time savings over vehicle travel on this segment, but when uncongested the time would be reduced to 1 hour and 35 minutes from Burbank to Bakersfield. Traveling by bus to a temporary station North of Bakersfield would take an additional 30-40 minutes assuming an added 10 minute layover at the Amtrak station in Bakersfield to pick up additional passengers. Traveling by HST from Bakersfield and bypassing a temporary station near Shafter or Wasco would save 20-30 minutes travel time on the Basin-to-Bay run, and the additional 10 minute stop at the temporary station.*

Trip Segment B – Downtown Bakersfield to Gilroy Caltrain Station by HST – 1hr. 30 min. - *Boarding an express high-speed train in downtown Bakersfield and traveling to Gilroy is estimated to be 90 minutes. This is a 1 hour and 40 minute time savings over uncongested travel by car covering the distance in less than half the time! A Fresno to San Jose 1 hour trip by HSR saves 1 hour and 30 minutes or 10 minutes less than the 18 mile segment, and does not eliminate a temporary station, adding a total of 20 minutes to the Basin to Bay trip when you build the Gilroy to San Jose segment before the Bakersfield to North of Bakersfield Segment.*

Trip Segment C – Gilroy to San Jose by Caltrain – 2 hrs. 30 min. - *Connecting with Caltrain in Gilroy and traveling on to San Jose Diridon Station requires an estimated travel time of 40 minutes with a possible express Caltrain service. The*

proposed Gilroy to San Jose HSR track in the Draft 2016 Business plan would provide minimal time savings over an express Caltrain service, resulting in an early expenditure that does NOT benefit the bulk of California's traveling public. In addition, this segment has well known environmental opposition to the alignment and the environmental process has barely started and will not likely be ready in time for IOS construction. Funding the Bakersfield to North of Bakersfield segment will have a 30 minute time savings over travel by car and should be prioritized for construction in the IOS. Building the Merced spur will increase potential riders from the northern San Joaquin Valley, and not simply provide duplicate service to existing passenger rail like the Gilroy to San Jose segment.

***Total Estimate Travel Time Basin-to-Bay 3 Seat Ride for Early IOS** – Travel time from Union Station using a bus bridge to Bakersfield, high-speed rail service from Bakersfield to Gilroy (with a ten minute dwelling time in Bakersfield and Gilroy) and connecting with Caltrain service to downtown San Jose and points north, may be done in 5 hours and 30 minutes. Using this Early IOS proposal may create a savings of or equal to the uncongested travel time by car. To encourage ridership, rather than setting ticket prices with air travel, the train could price its Early IOS service cost based on car travel. The travel estimates provided by the high-speed train are guaranteed during the high-speed train travel. Car travel time is dependent upon road, traffic, and weather conditions. Rail travel provides other premiums such as the ability to walk around, and work while traveling. Ridership numbers, especially during congested holiday weekends would be substantial.*

C. *General environmental issues with proposed 2016 Business Plan*

The site identified for the interim high-speed rail station in the Draft Plan is currently a rural, farm site with one owner and one residential structure. The site is between two rural cities: Shafter and Wasco. This site is not mentioned in any of CHSRA approved or proposed environmental documents which may delay the project implementation even further. Additionally, using this site for an interim station may introduce a level of sprawl growth which contradicts adopted land use plans in Kern County. Using this site to transfer thousands of passengers per hour creates an unnecessary environmental problem. Additionally, the site for the North-of-Bakersfield interim high-speed rail station is not consistent with the State accepted Kern COG 2014 Regional Transportation Plan Sustainable Communities Strategy (SCS). Below is a list of other environmental concerns:

1. The establishment of an interim station at Poplar Avenue (instead of downtown Bakersfield) does not comply with multiple provisions of Proposition 1A and reduces the stand-alone value of the IOS.

2. The environmental impacts of an interim station at Poplar Avenue have not yet even begun to be identified or evaluated; the speculative environmental impacts are substantial.

3. The establishment of an interim station at Poplar Avenue is incompatible with the Sustainable Community Strategy and greenhouse gas reduction requirements of SB 375.

4. The establishment of an interim station at Poplar Avenue is impracticable from a business perspective.

5. While the Business Plan does not identify a specific site for the interim station, there is virtually no urban development nor infrastructure within a mile of the proposed station. Additionally, the site would be serviced by SR-43 (a rural highway). According to the Proposition 1A (Streets and Highways Code Section 2704) ***Sec. 2704.08(f)****: "In selecting corridors or usable segments thereof for construction, the authority shall give priority to those corridors or usable segments thereof that are expected to require the least amount of bond funds as a percentage of total cost of construction. Among other criteria it may use for establishing priorities for initiating construction on corridors or usable segments thereof, the authority shall include the following: (1) projected ridership and revenue, (2) the need to test and certify trains operating at speeds of 220 miles per hour, (3) the utility of those corridors or usable segments thereof for passenger train services other than high-speed train service that will not result in any unreimbursed or maintenance costs to the authority, and (4) the extent to which corridors include facilities contained therein to enhance the connectivity of the high-speed train network to other modes of transit, including but not limited to , conventional rail (intercity rail, commuter rail, light rail, or other rail transit), bus, or air transit."*

Sec. 2704.09(h)*: Stations shall be located in areas with good access to local mass transit or other modes of transportation,*

Sec. 2704.09(i)*: The high-speed rail system shall be planned and constructed in a manner that minimizes urban sprawl and impacts the natural environment.*

7. The proposed interim station site has no existing transportation connectivity other than an inter-city forty-passenger bus service operated by Kern Transit.

D. Page 15, second paragraph, second bullet states: "Train stations that are conveniently located in or near city centers for easy connections – arrive in town, hop on a bus or a local light rail line, hail a taxi or a ridesharing service, rent a bike or walk to your final destination".

Since the southern terminus of the Draft Plan is north of Bakersfield, there are no "easy connections". The Authority will be required to provide bus service from north of Bakersfield to Bakersfield, Los Angeles, and connecting cities to the west and east of Kern County. The Authority will be responsible for building an interim multimodal station north of Bakersfield. Given that as many as 1,000 riders will be one each train, the Authority will need to build an interim station capable of

providing easy access to as many as twenty-five over-the-road coaches per hour. The savings of not building the interim station could be applied for a five-mile track to a combination interim station at the existing Wasco Amtrak station, Shafter HMF site or applied toward reaching the downtown Bakersfield station. ***A throwaway interim station that will be used for a few years and has no other use afterwards may be an expensive waste of critical funds and contrary to the intent of the Legislature.***

E. Page 16, first paragraph, first bullet states: "Vibrant station areas where new residential, retail and commercial development clusters around high-speed rail stations, helping to reduce sprawl and slowing conversion of farmland to development."

The site identified as the southern terminus north of Bakersfield is currently rural farmland zoned for farming. The Authority may be forced to provide funding for the County of Kern to re-zone this area as an interim vibrant high-speed rail station area. We are assuming your ridership records later in the Business Plan are accurate and will ultimately lead to unwanted sprawl development.

F. Page 18, third paragraph, Title: "We will continue to work with our partners and local communities to obtain environmental clearance of the entire system."

The 2016 High-Speed Rail Business Plan contradicts the message of the Bakersfield to Palmdale Authority staff's public outreach message given to the residents of Edison, Tehachapi, Mojave, and Rosamond as recently as October 2015. At that time, we were assured that the Authority would reach Palmdale by 2022. ***There has been no formal discussion of this major change in project scope to any Kern County governmental planning staff until the 2016 Business Plan release.***

G. Page 20, last bullet states: "We have selected an alignment and station locations between Fresno and Bakersfield, certified the environmental document and received approval to begin construction".

There is no mention of a station north of Bakersfield in the certified environmental document. A public facility of this nature and magnitude cannot avoid producing substantial direct and indirect impacts: but not limited to:

- ***Traffic and Circulation:*** *These impacts will be greatly heightened given the limited nature and capacity of the existing circulation system in the area of the interim station.*
- ***Land Use:*** *As stated, the area around the interim station is completely rural in character and mostly comprised of productive farmland. The interim station and its future demand for ancillary uses will constitute a complete and dramatic change from the existing nature and character of the area.*
- ***Agricultural Resources:*** *The Poplar Avenue station is situated directly in the middle of an area of productive farmland. Either this farmland will be*

permanently lost to urban development, or there will be substantial costs to converting it and placing it back into agricultural production after the interim station is abandoned.

- ***Air Quality:*** *The cumulative added vehicle miles traveled for the Bakersfield area passengers to travel to and from this remote station will have a considerably exacerbating effect on air quality emissions compared to a downtown Bakersfield station.*

Moreover, the certified environmental document for the locally generated station alternative in Bakersfield is scheduled to be completed by December 2017 and not used presumably, until 2027 at the earliest. There is no mention of where a new MOI site will be located if the north of Bakersfield terminus is selected. Please clarify where the MOI will be placed if the IOS stops north of Shafter.

H. Page 32, first paragraph, fifth bullet, first sub-bullet states: "Working with partner agencies to modernize systems that use renewable energy".

The Authority may be required to fund an electric bus fleet (at minimum) of 100 over-the-road coaches to transport high-speed train riders from north of Bakersfield to other desired travel locations. The Authority staff has not contacted Kern County agencies to propose how it will move as many as 1,000 train passengers per hour from a station located in rural Kern County. ***A discussion on how to move this many train riders should begin immediately.***

I. Page 33, second paragraph, first bullet states that sustainable land use will be supported by: "Connecting the state's **mega-regions** to spur economic development, create a cleaner environment and preserve agricultural and protected lands."

This Business Plan IOS intends to drop thousands of high-speed train riders along a rural highway in a rural agricultural zone. The establishment of an interim station at Poplar Avenue is impracticable from a business and cost perspective. In addition, the following would be needed for an interim station:

- *A very large amount of (assumed) surface parking, increased by the fact that this would as the southerly terminus of the IOS.*
- *Bus facilities to accommodate an estimated 72 bus trip ends per day to provide feeder bus service to southern California.*
- *Improving and widening access roads and approaches. Merced Avenue, the most direct route from the Poplar Avenue interim station to State Route 99, currently does not cross the Friant-Kern Canal.*
- *Extending needed utilities and infrastructure for an unknown distance to an isolated rural location.*
- *While the sum of all of these costs will be considerable, the effective cost is even more compounded when considering: (1) that all of these facilities will only have an estimated functional life of four years; and (2) the added cost*

of removing the majority of the facilities or converting them to an alternative use upon the extension of the HSR system to downtown Bakersfield.

Other strategies may be employed to remove the unnecessary costs noted above in comment I. Kern COG recommends that you consider should the Early IOS proposal be rejected:

1. ***Blended System to Bakersfield (Electrified)*** *– Double track and electrify the adjacent BNSF/Amtrak rail line in order to allow HSR trains to continue to the existing Bakersfield Amtrak station on an interim basis.*

2. ***Blended System to Bakersfield (Ultra Clean Diesel)*** *– Same as 1 above but instead of electrification, use ultra-clean diesel engines that could be used to propel HSR trains from a staging point at Poplar Avenue to the Bakersfield Amtrak station on an interim basis, double tracking the current BNSF line. While this would lengthen travel times from Poplar Avenue to Bakersfield compared to the first option, it would be substantially less costly. It would also be much less costly and impactful than constructing and abandoning a Poplar Avenue interim station. In addition to providing a one-seat ride on the IOS to downtown Bakersfield, it would also make the proposed feeder bus service to southern California more efficient and effective by being able to use the existing feeder bus terminal adjacent to the Bakersfield Amtrak station.*

3. Kern COG has prepared a passenger rail study that identifies local intercity Amtrak platform stops in northwest Bakersfield, Shafter, in addition to the existing one at Wasco. One of the sites is at the Shafter HMF site. Any of these sites could serve as an interim stop location preferable to the Poplar site, leveraging Amtrak ridership. However, getting the train all the way into downtown Bakersfield is the best solution. Once demand for these service stops materializes, the Amtrak ridership along the SR-43 corridor may enhance and increase ridership to the HSR service as it is projected to complement and connect with the downtown Bakersfield HSR station. You may access this study at the following link:
http://www.kerncog.org/images/docs/studies/KernCOG_Commuter_Rail_Draft_Report_20120720.pdf

J. Page 40, second paragraph, first bullet states: "We will start by purchasing the rolling stock that we need to begin running our service on the initial segment."

Since one of the purposes of high-speed rail is to reduce vehicle emissions, there is no mention of the Authority purchasing of contracting with an electric over-the-road coach company to purchase or contract with bus services that operate electric buses only to offset the emissions generated by busing riders to and from the north of Bakersfield station (estimated to be at least 1,000 passengers per hour).

K. Page 43, second paragraph, first sentence states: "Over the next twelve months, we plan to begin procurement for rolling stock and an early operator."

There is no mention *of the Authority purchasing electric buses or contracting with an electric bus service provider to mitigate bus service from the interim high-speed rail station north of Bakersfield to other travel destinations.*

L. Page 43, fourth paragraph states: "Tunneling contracts will need to be procured before civil works contracts."

Given that you are providing funding for the LOSSAN corridor years before it is needed, tunneling contracts should also include tunneling through Kern County (Tehachapi Mountains) to keep the IOS Phase 1 on-schedule.

M. Page 57, Exhibit 5.4 – On March 15, 2016, Diana Gomez, CHSRA, Central Valley Director stated in a presentation to the Golden Empire Transit (GET) District Board that the Authority will acquire properties that are in distress that are in segments that are already environmentally cleared but may not be in the IOS construction segments.

Line item 40 in Exhibit 5.4 should include the cost of properties that are in distress. In Kern that includes the GET maintenance facility and offices, the Bakersfield Homeless Center and the Golden Empire Gleaners facility.

N. Page 61, Exhibit 6.2 – *The two footnote references appear to be switched.*

O. Page 76, 4th bullet states – "Light Maintenance Facilities in Northern and Southern California – similar personnel make-up but a lesser workforce than the heavy maintenance facility."

Fails to mentions a Light Maintenance or Terminal Storage and Maintenance Facility in addition to the Heavy Maintenance Facility in the Central Valley.

Note that if the Heavy Maintenance Facility is located in Kern, the HMF site could act as an Interim Light Maintenance Facility for the system, eliminating the cost to build of a Light Maintenance Facility for the Early IOS. Additional Light Maintenance Facilities, for Fresno, Gilroy and Palmdale could be added as the system expands.

It is noted that ending the HSR IOS at Poplar Avenue would by default preclude the opportunity to locate the HSR Heavy Maintenance Facility (HMF) at the proposed site just south of Shafter. The Authority prepared an evaluation matrix of 12 proposed HMF sites. Based on the eight separate criteria, the Shafter site received the highest possible rating in 6 of 8 criteria. To eliminate the Shafter HMF site from consideration simply and solely because it was located a few miles beyond the established end of the IOS would hinder the operating efficiency and profitability of the entire HSR system.

Summary and Conclusion

In conclusion, Kern COG is appreciative of the opportunity to comment and respond to the HSR Authority's Draft 2016 Business Plan. Kern COG staff has worked closely with HSR staff, the cities of Bakersfield, Shafter, and Wasco, County of Kern, COG member agencies, and numerous local organizations and residents. Kern COG has provided these comments and responses to encourage the Authority's staff in following Kern COG adopted Regional Transportation Plan strategies and concerns raised by our residents and member agencies. Kern COG looks forward to continuing a cooperative and effective planning relationship with the Authority staff and Board.

2016 Business Plan RECORD DETAIL

Submission Date :	4/1/2016
Submission Method :	Letter
First Name :	William
Last Name :	Warren
Stakeholder Comments/Issues :	
Notes :	Flash drive included with letter. Contents available upon request.
Attachments :	William_Warren_Biz_Plan_040116.pdf (382 kb)

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

April 1, 2016

Subject – Comment Regarding Draft 2016 Business Plan

Topic – Plaintiff's Public Record Act Requests and Responses from the Tos – CHSRA Lawsuit

The primary purpose of this Comment is to submit to the California High Speed Rail Authority (CHSRA) a complete set of the Plaintiff's Public Record Act (PRA) Requests and the CHSRA's Responses which were prepared for the Court by the Plaintiffs, John Tos, Aaron Fukuda, and County of Kings for the case John Tos et al v.CHSRA et al. (Sacramento County Superior Court case No.34-2011- 00113919) lawsuit.

These PRA Requests and the CHSRA's responses contain a wealth of information and analysis regarding a number of issues that the Authority needs to consider and needs to address as part of the development of the Final 2016 Business Plan. These issues relate to the use of Proposition 1A bond funds for system construction and the requirements contained in that ballot measure, notably: 1) the minimum time that will be required to travel from San Francisco to San Jose and to Los Angeles, 2) the minimum achievable headway requirement for the system, 3) the prohibition on an operating subsidy, 4) the overall financial viability of the chosen alignment, and 5) the availability of funds to fully construct the IOS as well as the complete Phase 1.

These PRA Requests and Responses are provided on the "Thumb Drive" that is included with this cover letter. There are 6 Requests, from 6 different individuals in one consolidated PDF file. The last Request Number 6 is in two parts (A and B) due to file size, as shown on Table 1, below.

Table 1

Request Number	Name	Area of Information Requested
1	Robert Prantis	Projected Operating Costs
2	Leslie King	Projected Seat and Passenger Mile Data
3	William Warren	Existing Worldwide HSR Operating Cost Data
4	Kathy Hamilton	Travel Time Projections
5	Arthur Ringham	Travel Time Simulation Model
6A and 6B	William Grindley	Ridership Forecasts and Model

Thank you,

William H. Warren

William H. Warren
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c/o
Michael J. Brady
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7015 1730 0001 [illegible] 94 7573

Attn: Draft 2016 Busines
California High-Speed Rail
770 L Street, Su
Sacramento, CA 9

2016 Business Plan RECORD DETAIL

Submission Date :	4/7/2016
Submission Method :	Website
First Name :	Tim
Last Name :	Burch
Stakeholder Comments/Issues :	Please end the ill-conceived and unnecessary high speed rail project before it gobbles up resources better spent elsewhere. End the project now to release funds for needed water storage and water delivery projects. Use future funds to address traffic in the SF and LA areas and elsewhere. California is in the middle of a terrible drought with a statewide mandate to reduce and conserve. Aquifers are being depleted and even when rains return it will take years to before the water supply is back to normal. At the same time, California's once excellent system of freeways is crumbling under inattention and growing populations. If there are any funds remaining, then address prison overcrowding to keep convicted offenders behind bars to serve their terms instead of administrative early releases. High speed rail does not address the priorities of California residents or business. It will end up costing far more than projected while serving far fewer than needed. End the fantasy and serve the real needs now.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/8/2016
Submission Method :	Project Email
First Name :	Arthur
Last Name :	Ringham
Stakeholder Comments/Issues :	Below are my comments to the 2016 Business Plan. Consider the following: 1. Exhibit 7.27 on page 81 shows that, for year 2025 Medium Scenario, the San Jose - North of Bakersfield line would have Net Cash Flow from Operations of ($32) million or a $32 million Operating Deficit. This means that anOperating Subsidy of $32 million would be required. 2. Exhibit 7.28, also on page 81 shows that for years 2025 .and 2026 Low Scenario, Operating Deficits would be $74 million and $33 Million respectively. 3. In any Scenario, Operating Deficits could occur if (a): Ridership is significantly below forecasts, (b) Operating and Maintenance costs are significantly above estimates, or (c) a combination of both (a) and (b). Also: 4. Proposition 1A Article 2, High-Speed Passenger Train Financing Program, 2704.04 (d) states: "Proceeds of bonds authorized pursuant to this chapter shall not be used for any operating or maintenance costs of trains or facilities." 5. Proposition 1A Article 2, 2708 (c) (2) (J) states, "The planned passenger service by the authority in the corridor or usable segment thereof, will not require a local, state, or federal operating subsidy." In view of items 1 through 5, the 1016 Business Plan should explain how the above, or any other Operating Deficits which occur would be funded. Thank you for addressing these comments. Arthur J. Ringham
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/8/2016
Submission Method :	Project Email
First Name :	Morris
Last Name :	Brown
Stakeholder Comments/Issues :	I attach to this email submission, in PDF format, lists of links and some text to video excerpts that were part of the Legislature's recent meetings in reviewing the Draft Business Plan. These are to be made part of the record for the Authority Board in considering the 2016 Draft Business Plan. Thanks for your consideration: morris brown 140 Stone Pine Lane Menlo Park, CA 94025 ==========
Notes :	
Attachments :	Video Links from meetings by the Legislature.pdf (25 kb)

Video Links to meetings by the Legislature focusing on the Draft 2016 Business Plan:

Links from State Senate Transportation and Housing Committee hearing
Of April 4th 2016…

https://youtu.be/xTK8-13P7iY

Lois Wolk -D (13 min)

Concerns

1 Cap and trade securitizing risks
2.Expires in 2020
3.Costs of Financing
4.Legal problems

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https://youtu.be/rYq34TFI75Y

Richard Roth -D (22 min)

Only 1 billion allocated to So. CA.
Legal challenge of Prop 1A
About LA Times Articles
PB powerpoint
dispute with URS

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https://youtu.be/ebxdrSkUWbo

Jim Nielsen -R (10 min)
Financing very shaky

---

https://youtu.be/N89xw1YaLNk

Cathleen Galgiani -D (6 min)

Promoting moving funds from Fresno South
to Madera North and on to Merced

---
https://youtu.be/kuB2ECon1hc

Ted Gains -R (9 minutes)

Stability of Cap and Trade
$44 Billion Gap for Phase I
Very negative on project

---
https://youtu.be/Iy9BaL-ubAk

Ben Allen -D (12 min)

How to tell voters the cost is justified

---
https://youtu.be/iCnPn36NSu8

Bob Huff -R (11 min)

Take it back to the voters

---
https://youtu.be/7gZvvW4Jmvc

Lou Thompson (8 min)
Peer Review Group

---
https://youtu.be/FXI3GHg3OLM

Jessica Peters (17 min)
Leg Analyst

---
https://youtu.be/yBnVW-0jHuw
Dan Richard (17 min)

Senator Gains 4-4-2016 --- Auto generated transcript of Senator Gains input from the State Senate Transportation and Housing Committee meeting of April 4 2016:

Gains:

Yeah thank you very much and I was wondering if I could ask a couple of. Questions of Jessica Peters in terms your report. I want to focus on the stability. A cap and trade revenue has been brought up but. My fear my concern is that. Just because of revenue there now doesn't mean it's going to be there through 2050. And. It was in the purpose of cap and trade to get. emitters to change their ways. And if they change their ways. They're not really paying a tax. Permitting so can you address the question of the stability of cap and trade revenue for me.

Jessica

Sure. And we also have Ross Brown in our office who is our cap and trade expert so if you coming up to the table I think in the short term we think the authority in there assuming about five hundred million dollars coming in from cap and trade on through their twenty five percent appropriation and then in the short term that appears to be a reasonable estimate over the longer term there are many factors that are included in the price of allowances number of allowances on and and how successful other programs are at reducing greenhouse gas emissions that would all affected the amount of revenue into it's much harder to to predict over the long term but I'll let Ross speak to that a little bit more Mr brown.

Ross Brown (LAO)

Great that's great nd this issue of static you know static analysis versus dynamic so we take a look at the at the flow of revenue over the next thirty. Plus years is the revenue going be there. Prosper on whatever you know and I mean assuming again the continuation of the program over that time period than at my colleague ms Peters mentioned there's. A lot of different factors night I think sort of the two biggest factors to consider when you think about the overall pot of of revenue that might be generated through the cap and trade program it's one the number of allowances they're auctioned off and I think that you're referring to that number allowances assuming the cap declines in Walton likely decline over time as well. The other factor is that the price and sort of and what what the price of allowances will be over the long term and how those two balance each other out is difficult to predict

there's a lot of uncertainty and as miss Peters mention a lot of those factors that contribute to the uncertainty of very very difficult to. To protect on. And that's just the overall pot of money in the news you get into the issue again of what portion of the overall amount of revenue generated from cap and trade will be going to high speed rail that's a decision of course for the legislature to make.

Gain:

Now do you know to what degree the emitters are exiting the State of California. I matters. I mean I I'm seeing a lot of evidence is when I talk to my colleagues in the state of Nevada colleagues that are now in Texas about how their cell migration manufacturing capacity that emits. A certain pollutants so keeps you touch on that a little bit in terms of what's happening within a. Our economy.

Brown:

Yeah I mean I I think it's a it's a question that I'm not aware of a lot of great information and through very rigorous studies on it right now and so I I can't really say exactly I do know that the air resources board. Has been working with some researchers to try and get a sense of this issue of leakage in the extent to which the program is not encouraging businesses to move production out of state and so on might be happy to to chat with them a little bit more to sort of get to get a better understanding of when the timelines of the studies are that's great.

Gain:

Thank you and. Back to Jessica if I could about this forty billion dollar gap. How was that filled.

Jessica:

Though in the draft business plan and the authority does not I mean identify away to fully fill I believe it's about a forty four billion dollar cap on the plan does contemplates seeking federal funds for about a three billion dollars of that. To extend the initial operating segment into Bakersfield as well as San Francisco go on and that would leave I think the forty billion dollar gap that you're referring to on the authorities draft business plan I'm contemplate

using securitizing operating profit once there is an operable portion of the system up and running but based on -- first of all it's not clear to us that whether the system will generate a profit that could be securitized on but even if you I'm assume that their estimates are correct in that it will generate a profit to the magnitude and that the authority identified in its plan and that the the amount of funding that they could securitized from that I'm is still you know only around seven billion dollars until it falls significantly short of the amount that would be needed I think the peer review group in their analysis goes a step further and said okay if you can somehow count and securitized thing the operating profits from the entire phase one system that get you even a little bit further but that would still leave you with about a twenty billion dollar gap. We didn't include that the full phase one securitization because I if an issue of timing you can't Securitate you can't. Securitized the revenues from a system that hasn't been built yet and so you know in terms of trying to table she's one would generate a certain amount of time as other operating profit you could securitized that we have to build it in the first place info I it it's it's very unclear and we think that's one of the issues for the legislature to consider and and they need a comprehensive incredible funding plan and for all of Phase I one and you get in the information you have right now you have a much stronger funding plan for the initial operating segment. And because that would exhaust all of those identified funding source that you're going to want to consider the scope of what is built initial operating segment on because that might be all that you get I'm if additional funding is not identified

Gain:

okay and if you done the analysis on profitability. I mean is there a property in in your perspective in your opinion. Is our profit there to be securitized.

Jessica:

We have not done an analysis I think it's it's very uncertain that Peer review group may have looked into a little bit more some of the issues are the technical issues of of ridership and revenue and the things that even even for an infrastructure asset that is familiar like a toll lane or something like that where you know people are used to driving and here you know used to taking that particular highway on it can it can be very challenging to estimate the revenues from from some sort of user pay facility and so yet we

don't have any specific concerns that were racing with that that specific then they're in their assignments but he's very uncertain at that stage

Gains:

okay that's great thank you and I just. One of remind everybody about we're all familiar with Moore's law. And how computer power would double every two years. Well there's also an Edwards law and my full name is Edward I don't claim that. But I am going to recite it because I think it's very interesting Edward's law. States that from start to finish are a government project will double in cost. And so if we take a look at the bay bridge. The start of that and I don't know what do you want to use one billion or two billion but it ended up. Being I think over six billion dollars. And I'm very concerned about the financial capacity of the state of California to actually execute on this project and just having a fun time with numbers and other sounds ridiculous but. If we take a look at Tom the Tesla model three and over about twenty four to thirty six hours they had two hundred thousand orders. If you took a seventy billion dollar estimate. We could buy two million new Tesla model threes. And give you could literally give those to individuals that needed transportation and some of the more rural parts. Of our state. And I think what's really interesting about this is that we look at technology that's going to the self driving car. And I I think that technology is actually passing up what is proposed with high speed rail and that. I'm not advocating that we spend our tax dollars that way. But I'm saying that I don't think we can get the project done I think it is gong to tremendously over budget. And we'll be looking at that subsidizing this forever and it's not the right policy decision. For the state of California as we move forward. So thank you.

Assembly Budget Sub #3 hearing 4-6-2016 video links

Jessica Peters - LAO
https://youtu.be/PhuWAclk0zI

Rep Jim Patterson
https://youtu.be/iBziL_H0xOc

Dave DePinto
https://youtu.be/3Xuz0BvdLes

Frank Oliveira
https://youtu.be/J9DeiYsyxYE

Mike Brady
https://youtu.be/QiHX1IGyXZY

David Schonbrunn
https://youtu.be/-jYy0F2cevM

William Grindley
https://youtu.be/t9KEffvGG34

Cindy Bloom
https://youtu.be/OyB6UUaf6bY

2016 Business Plan RECORD DETAIL

Submission Date :	4/8/2016
Submission Method :	Letter
First Name :	Mark
Last Name :	Powell
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Pushing Back on the Authority's Myths About High-Speed Rail Myth 3 The Green Train December 8 as Submitted for Public Comment on Draft 2016 Business Plan.docx (0 bytes)

2016 Business Plan RECORD DETAIL

Submission Date :	4/4/2016
Submission Method :	Public Hearing - Written Comment
First Name :	Joint Oversight Hearing
Last Name :	Senators Jim Beall and Lois Wolk, Chairs
Stakeholder Comments/Issues :	
Notes :	Agenda and notes from Joint Hearing on the Draft 2016 Business Plan held by the Senate Transportation and Housing Committee and Senate Subcommittee 3 on Resources, Environmental Protection, Energy and Transportation. More information on this subcommittee, agendas and other materials can be found here: http://sbud.senate.ca.gov/subcommittee2.
Attachments :	Sen. Transportation and Housing and Sen. Budget Sub. 3 - 4.4.2016.pdf (148 kb)

CALIFORNIA LEGISLATURE

Senate

STATE CAPITOL
SACRAMENTO, CALIFORNIA
95814

SENATE TRANSPORTATION AND HOUSING COMMITTEE AND SENATE SUBCOMMITTEE 2 ON RESOURCES, ENVIRONMENTAL PROTECTION, ENERGY AND TRANSPORTATION

JOINT OVERSIGHT Hearing
Senators Jim Beall and Lois Wolk, Chairs

High Speed Rail: An Overview of the 2016 Draft Business Plan

Monday, April 4, 2016
10 a.m. — John L. Burton Hearing Room (4203)
State Capitol Building

AGENDA

I. Opening Remarks

- Senator Beall
- Senator Wolk

II. High Speed Rail Authority

- Dan Richard, Chair — High Speed Rail Authority
- Jeff Morales, Chief Executive Director — High Speed Rail Authority

III. High Speed Rail Peer Review Group and Legislative Analyst's Office

- Lou Thompson, Chair — Peer Review Group
- Jessica Peters, Principal Fiscal & Policy Analyst — Legislative Analyst's Office

IV. Local Agencies

- Art Leahy, CEO — Metrolink
- Jim Hartnett, CEO — Caltrain
- Stephanie Wiggins, Deputy Chief Executive Officer — Los Angeles Metropolitan Transportation Authority

V. Public Comment

High Speed Rail: 2016 Draft Business Plan

The purpose of this hearing is to review the draft 2016 Business Plan prepared by the California High-Speed Rail Authority (HSRA) and provide an opportunity to hear feedback from the public on the contents of the draft plan within the 60-day comment period. Ultimately, the intent of this hearing is to create a forum to help HSRA with development of the final 2016 Business Plan, which aims to serve as the funding plan to deliver a world-class passenger rail system in California.

Background:

Introduction:

State law requires that the 2016 Business Plan be published, adopted, and submitted to the Legislature no later than May 1, 2016. The current draft plan is the third biennial edition, but the first since the HSRA began to award contracts for construction of the first phase of the project in the Central Valley. In many respects, the current draft builds on the 2014 plan, providing refined cost, schedule, and ridership projections as well as increased detail with regard to funding strategies. However, in other respects, the 2016 plan departs from earlier plans.

Brief history of HSRA and prior business plans:

The HSRA was established in 1996 (SB 1420, Kopp, Chapter 796, Statutes of 1996) for purposes of planning and constructing a high-speed train system to connect the state's major population centers. However, until voters approved Proposition 1A in 2008, authorizing the state to sell up to $9.95 billion in general obligation bonds for the project, HSRA lacked a significant source of funding. Proposition 1A imposed specific requirements on the project as a condition of using the funds, including that it be capable of achieving specified operating speeds and travel times between certain cities. Proposition 1A also limited funding to no more than 50% of the construction cost of any corridor or usable segment of the system, and further required that the system operate without a public subsidy.

Subsequently, the project has received approximately $3.5 billion in federal funds, including $2.6 billion in federal stimulus funds which must be expended by September 30, 2017. Furthermore, in 2014, the Legislature authorized a portion of the state's annual cap-and-trade auction proceeds to be used for the project.

Construction of the project was to begin in the Central Valley with a 130-mile segment — the Initial Construction Segment (ICS) running from Madera to an area north of Bakersfield. HSRA intended to

construct the remainder of the Initial Operating Segment (IOS) in segments, though high-speed trains would not operate on the system until the entire IOS was complete. In July 2012, the Legislature appropriated $5.85 billion ($2.61 billion from Proposition 1A and $3.24 billion in federal funds) to complete the ICS. At the same time, the Legislature also appropriated $1.1 billion for investment in the "bookends" — the San Francisco Bay Area and Los Angeles Basin regions — including electrification of Caltrain between San Francisco and San Jose and various projects to improve travel times along Metrolink's Antelope Valley corridor between Palmdale and the San Fernando Valley. HSRA originally planned to complete the ICS by 2017. However, due to litigation and other delays, groundbreaking for the ICS did not occur until January 6, 2015. HSRA now expects to complete the ICS in 2020 or shortly thereafter. This segment of the project is being constructed using a series of design-build contracts.

HSRA Business Plan:

Pursuant to state law, beginning in 2012 and every two years thereafter, HSRA is required to prepare and submit to the Legislature a business plan outlining key elements of the high-speed rail project. At minimum, the plan must include project development information, including a description of the type of service being developed, the timing and sequence of project phases and segments, and estimated capital costs. It must also include estimates and descriptions of the total anticipated federal, state, local, and other funds that HSRA intends to access to construct and operate the system; forecasts of financial scenarios based on projected ridership levels; and maintenance and operations costs. Additionally, it must identify all reasonably foreseeable risks to the project and outline HSRA's strategies for managing those risks.

HSRA has always planned to develop the project in phases, with Phase I connecting San Francisco to Anaheim over a distance of approximately 500 miles. A subsequent Phase II would extend the system to San Diego in the south and add a separate link to Sacramento in the north. When the HSRA adopted its 2012 Business Plan, it outlined a framework for development of Phase I at a cost of approximately $68 billion, including an IOS that would connect the Central Valley with the Los Angeles Basin within 10 years. The 2012 plan proposed to accelerate the benefits of high-speed rail through a "blended approach," which utilizes and upgrades existing rail infrastructure wherever possible, combined with increased early investment in the bookends. The purpose of this early investment was to enhance regional rail service in two major population centers while simultaneously paving the way for future high-speed rail service. At that time, the primary rationale for a southern-oriented IOS (as opposed to a northern connection to San Francisco) was that the densely populated San Fernando Valley could provide the high levels of ridership needed to operate the system without a subsidy. The intent was to complete the northern connection to

San Francisco once the IOS was operational and ridership levels could be demonstrated. However, the 2012 plan did not specifically identify funding for this portion of the project.

HSRA's next business plan, presented and adopted in 2014, updated the project's cost estimates and revised HSRA's ridership and revenue forecasts, but did not significantly alter the construction plan. The 2014 plan continued to peg total costs of Phase 1 at $68 billion. It proposed a number of potential revenue sources to fund the project but did not definitively identify any new funds beyond the Proposition 1A and federal resources previously identified.

The draft 2016 Business Plan:

As noted above, the draft 2016 Business Plan (draft plan) is the first provided by HSRA since construction has commenced on the ICS. It provides updated cost and schedule information informed by lessons learned through the work completed to date. In addition, it proposes significant changes to the construction plan and sequencing originally outlined in the 2012 Business Plan. Key elements of the plan include the following:

- Change to northern orientation for IOS
- Full funding plan for northern IOS
- Updated cost and schedule estimates for Phase 1 (including projected savings)
- Expanded project scope in Burbank-to-Anaheim corridor (using projected savings)
- Concepts for full funding of the total Phase 1

<u>Changes the IOS to a northern orientation:</u>

The most notable new element of the draft plan is the change in implementation strategy. Although the 2012 Business Plan had planned to construct the IOS south, under the draft plan, the IOS will now instead extend north, from the ICS currently under construction to Gilroy and then to Diridon Station in San Jose. Because the ICS is currently planned to terminate in an agricultural area near Shafter (north of Bakersfield), HSRA is proposing to construct an interim station at that location. The draft plan indicates that the primary reason for the change in implementation strategy is that the proposed northern IOS can be constructed with currently identified funding as opposed to the more costly construction of the southern IOS. Additionally, because the northern IOS has fewer engineering challenges, it can be constructed more quickly than could the more technically challenging connection to the Los Angeles region. The draft plan estimates that the northern IOS will cost $20.7 billion (including $7.3 billion for the ICS) and be complete by 2025. The draft plan estimates that in its first year, IOS north will carry at

least 2.2 million riders and potentially as many as 4.1 million. By 2028, it anticipates that the route will carry at least 3.9 million and potentially as many as 8.9 million riders annually.

Full funding for northern IOS:

The draft plan proposes to fund the $20.7 billion cost of the northern IOS as shown in the table below. Approximately $10 billion will come from currently allocated federal and state funds and the remaining unappropriated Proposition 1A funds. The draft plan identifies an additional $5.4 billion that would come from annual allocations of cap-and-trade proceeds through 2024. The remaining estimated $5.2 billion would be generated through an as-yet-unspecified financing instrument backed by $500 million annually in cap-and-trade proceeds through 2050. It should be noted that, because this final $5.2 billion would be financed, the true cost, including debt service, could be substantially higher.

Funding Plan for Northern IOS

$5.8 billion	Currently Allocated to fund ICS construction ($3.165 federal; $2.609 Prop. 1A)
$4.2 billion	Remaining unappropriated Prop. 1A funds
$5.4 billion	Cap-and-trade proceeds through 2024
$5.2 billion	Financed (backed by cap-and-trade proceeds through 2050)
$20.6 billion	**Total Construction Funds**

The draft plan acknowledges that, while the identified funding is only sufficient to complete the IOS to San Jose, ridership would be significantly enhanced by the ability to provide one-seat service north to San Francisco and by extending the southern end of the IOS to Bakersfield. The plan indicates that HSRA intends to pursue new federal funding to complete these extensions.

Updated cost and schedule estimates for Phase 1:

The draft plan also includes updated cost and schedule estimates for the Full Phase I. The plan indicates that HSRA has been able to reduce estimated costs by $5.5 billion, from the $67.7 billion identified in the 2014 plan to $62.1 billion in the current plan. These savings were the product of several factors. One technique used by HSRA, known as Alternative Technical Concepts (ATC), allowed bidders on the ICS projects to offer innovative proposals not included in the engineers' estimates that could reduce costs or improve efficiency. Bidders were compensated for these ATCs, which became the property of HSRA and

could be utilized regardless of which bidder was chosen. The innovations could also be applied to other areas of the system, further reducing costs. In addition, the plan identifies favorable economic conditions and a healthy competitive environment in the industry as factors that have driven cost estimates down.

The plan indicates that this substantial savings will enable HSRA to enhance service levels in the Burbank-to-Anaheim corridor (additional details provided below). HSRA plans to apply $2.1 billion of the projected cost reductions described above to an expansion of the project scope "intended to increase speeds, improve reliability, and add capacity" in that corridor. Thus, according to the draft plan, the expected savings combined with the expanded scope will result in a revised Phase 1 cost estimate of $64.2 billion.

According to the 2014 Business Plan, the IOS was projected to be complete by 2022, the Bay-to-Basin connection (San Jose to the San Fernando Valley) by 2028, and the full extension of Phase I to Anaheim by 2028. The 2016 draft plan projects completion of Phase I by 2029, only one year later than the earlier plan. However, the new northern IOS is now projected to come online in 2025.

Expanded project scope in Burbank-to-Anaheim corridor:

Another significant feature of the 2016 draft plan is a $2.1 billion increase in project funding directed to the Anaheim-Burbank corridor. The draft plan indicates that this expanded scope was made possible due to the overall cost savings anticipated elsewhere on the project. The plan emphasizes that this is a shared corridor, which means that improvements benefit not only high-speed rail but immediately improve freight and commuter rail operations as well. The draft plan does not identify funding for specific improvements in this corridor, but generally indicates that HSRA intends to accomplish this work by "leveraging existing funds and attracting new funding sources, forging stronger partnerships, and working through the State's programmatic, holistic approach being developed for the 2018 State Rail Plan." The plan does suggest several potential funding sources which are discussed below.

Funding for completion of Phase I:

While the draft plan does not provide a full funding plan for Phase I (beyond the northern IOS), it does outline several strategies that HSRA intends to pursue. As noted above, HSRA plans to seek additional federal funds specifically to facilitate extension of the IOS north to San Francisco and south to Bakersfield. In addition, the draft plan proposes that once the northern IOS is operational, system operating revenue could be monetized to fund future construction. The draft plan asserts that "as the system develops over time, it will generate financial value through positive net operating cash flow," and

that this future revenue stream "is projected to have material value to a potential private sector investor as a stand-alone service." In short, the plan suggests that HSRA could use this cash flow to secure private investment to fund future phases of system expansion. Such financing would "likely be structured as a combination of private-debt financing, federally subsidized loans, or other financing tools and private equity."

In addition, to provide early investment in Southern California that will pave the way for future high-speed service, HSRA is proposing to invest up to $4 billion in a range of improvements. The draft plan outlines a package of projects, including multiple grade separations, track improvements, and platform modifications, as well as technical studies that it says will set the stage for future shovel-ready projects. In order to advance these projects quickly, the plan proposes pursuing funds from a number of sources. According to the draft plan, these might include the new National Highway Freight Program (NHFP) and the Nationally Significant Freight and Highway Program (NSFHP), both created in the federal Fixing America's Surface Transportation (FAST) Act. NHFP is a formula program dedicated to funding priority projects included in the State Freight Plan, whereas NSFHP is a national competitive grant program. Additionally, the draft plan suggests pursuing funding from two cap-and-trade funded programs, the Transit and Intercity Rail Program and the Intercity Rail Capital Program. These programs also are competitive, and funds directed to HSR projects could impact funding for projects elsewhere in the state.

Project risks:

The draft plan does in fact identify a number of risks associated with the funding and construction of the project. Project risks assessed in the draft plan include program level, construction, and technical risks. Both the Peer Review Group and Legislative Analyst's Office have released reports providing a thorough analysis of the project risks and also provided recommendations to be considered by the Legislature (both documents are provided for the hearing).

Conclusion:

As mentioned, the intent of this hearing is to provide members of the Legislature with information and feedback on the draft 2016 Business Plan. This hearing is not structured to discuss the construction of the high-speed rail project in its entirety. Hearing panelists will include state departments and government entities that are required to submit analyses of the draft plan to the Legislature or that will have a direct impact relative to the modifications made in the draft plan. A public comment portion will be placed on the agenda to provide members of the public an opportunity to comment on the draft plan.

2016 Business Plan RECORD DETAIL

Submission Date :	3/28/2016
Submission Method :	Public Hearing - Written Comment
First Name :	Oversight Hearing
Last Name :	Jim Fraizer, Chair
Stakeholder Comments/Issues :	
Notes :	Agenda and notes from Oversight Hearing on the Draft 2016 Business Plan held by the Assembly Transportation Committee. More information on this committee, agendas and other materials can be found here: http://atrn.assembly.ca.gov/informationaloversighthearings.
Attachments :	Asm Transportation Committee - 3.28.2016.pdf (917 kb)

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FAX: (916) 319-2193

Assembly
California Legislature

ASSEMBLY TRANSPORTATION COMMITTEE
JIM FRAZIER, CHAIR

OVERSIGHT HEARING

Review of the Draft 2016 Business Plan for the California High-Speed Rail Authority

Monday, March 28, 2016
2:30 P.M. ♦ State Capitol, Room 4202

I) Welcome and Opening Remarks
Jim Frazier, Chair
Assembly Transportation Committee

II) Update on the Draft 2016 California High-Speed Rail Business Plan

- Dan Richard, Chair, Board of Directors
  California High-Speed Rail Authority
- Jeff Morales, Executive Director
  California High-Speed Rail Authority
- Brian P. Kelly, Secretary
  California State Transportation Agency
- Jessica Peters, Principal Fiscal and Policy Analyst
  Legislative Analyst's Office
- Louis S. Thompson, Chair
  California High-Speed Rail Peer Review Group
- Hasan Ikhrata, Executive Director
  Southern California Association of Governments
- Jim Hartnett, Executive Director
  Caltrain

III) Public Comment

IV) Closing Remarks

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Assembly
California Legislature

ASSEMBLY TRANSPORTATION COMMITTEE
JIM FRAZIER, CHAIR

OVERSIGHT HEARING

Review of the Draft 2016 Business Plan for the California High-Speed Rail Authority

Monday, March 28, 2016
2:30 P.M. ♦ State Capitol, Room 4202

Background

Introduction and Purpose of Hearing

The purpose of today's hearing is to review the California High-Speed Rail Authority's (Authority's) recently released Draft 2016 Business Plan. The Authority is statutorily required to adopt and submit a business plan to the Legislature every two years. At least 60 days prior to the publication of the plan, the Authority is required to release a draft for legislative and public review and comment.

The draft plan was released on February 18, 2016. With that release, the Authority signaled a major shift in its proposed planning and construction of the high-speed rail system. Rather than pursue a south-oriented Initial Operating Segment (IOS) from the City of Merced in the Central Valley through the Tehachapi Mountains to the San Fernando Valley in Los Angeles County, the Authority is now proposing a north-oriented IOS, from the Central Valley to San Jose. Moreover, for the first time, the business plan presents a fiscally constrained funding plan that sets forth a clear vision of how to proceed to construct the IOS, an extension of the IOS to Bakersfield and to San Francisco, and corridor improvements between Burbank and Anaheim.

Despite a more definitive plan for an IOS and despite actual construction experience, clearer funding expectations, and a lower estimated budget, the road from construction to operation of high-speed rail service is far from guaranteed. Significant prerequisites must be met and the level of risk for the project remains high.

Today's hearing is not intended to be a comprehensive review of the high-speed rail project. Instead, the purpose of today's hearing is to provide an opportunity for legislators and the public to gain a full understanding of the costs, necessary preconditions, and associated risks in completing the newly proposed IOS, the extension to Bakersfield and to San Francisco, and the planned investments in the Burbank to Anaheim corridor.

Background

Development of high-speed rail in California began more than 20 years ago. SB 1420 (Kopp), Chapter 796, Statutes of 1996, created the Authority to direct development and implementation of intercity high-speed rail service that would be fully coordinated with other public transportation services. The Authority reports to the California State Transportation Agency and is governed by a nine-member Board of Directors. The Governor appoints five members of the board, the Senate Rules Committee appoints two, and the Assembly Speaker appoints two.

Assembly Bill 3034 (Galgiani), Chapter 267, Statutes of 2008, directed the Safe, Reliable High Speed Passenger Train Bond Act for the 21st Century (Proposition 1A) to be placed before the voters in the fall of 2008. California voters approved the initiative, which authorized $9.9 billion in general obligation bonds for two distinct purposes: $9 billion to develop and construct a high-speed rail system connecting San Francisco Transbay Terminal to Los Angeles Union Station and Anaheim; and $950 million for connecting intercity and commuter rail systems that would enhance those systems' capacity, safety, or connectivity to the high-speed rail system.

Proposition 1A prescribes specific route and design requirements for the high-speed rail system including that it must be electrified, be capable of sustaining speeds of no less than 200 miles per hour, and have the capacity to achieve travel times between San Francisco and Los Angeles of 2 hours and 40 minutes. Additionally, Proposition 1A requires a 50% match of all bond funds and lays out specific requirements the Authority must meet in order to access and spend the bond funds, including submission of detailed funding plans to the Legislature and Department of Finance. Furthermore, Proposition 1A requires high-speed rail to operate without government subsidies.

In July 2012, the Legislature approved SB 1029 (Committee on Budget and Fiscal Review), Chapter 152, Statutes of 2012, that appropriated nearly $8 billion in federal and state funds to begin the construction between Madera and Bakersfield. SB 1029 funded three components envisioned in the April 2012 revised business plan, as follows:

1) Initial Operating Segment: SB 1029 provided $5.8 billion to fund construction of the high- speed rail "backbone" in the Central Valley with approximately 130 miles of right-of-way and track bed from Madera to the northern outskirts of Bakersfield to be constructed. Of this amount, $3.2 billion was from federal grants and $2.6 billion was from Proposition 1A bonds.

2) Connectivity: SB 1029 appropriated $819 million of Proposition 1A bonds for "connectivity" projects on existing regional and inter-city rail systems throughout California to improve the connectivity to the future high-speed rail system.

3) Bookends: SB 1029 also appropriated $1.1 billion of Proposition 1A funds for improvements in the Los Angeles Basin and in the San Francisco Peninsula, referred to as the "bookends." These funds were for near-term improvements to these existing rail

segments that will facilitate the eventual use of the segment for high-speed rail and also improve service for existing riders.

Of this amount, $500 million was dedicated to fund projects in the Los Angeles Basin as reflected in the 2012 Memorandum of Understanding (MOU) signed with the Southern California Association of Governments (SCAG) and its regional transportation members, and $600 million for electrification of the Caltrain system in the San Francisco Bay Area.

Furthermore, the 2014-15 state budget [SB 862 (Committee on Budget and Fiscal Review), Chapter 36, Statutes of 2014], continuously appropriated 25% of the revenues derived from the cap and trade program to the project. This equates to roughly $500 million annually.

Draft 2016 Business Plan

With the release of the Draft 2016 Business Plan, the Authority set forth its updated proposal to build the IOS. It also updated its plans, cost estimates, and schedule for the remainder of Phase I (San Francisco to Los Angeles/Anaheim by 2029) and eventually Phase II (Sacramento and San Diego). Additionally, the Authority announced its intentions to accelerate environmental review on eight remaining project sections with the aim to have all projects environmentally cleared by 2017 in case any new revenue becomes available for the project.

Many of the project elements discussed in the business plan, such as where funding will come from to build out the rest of Phase I, are still unknown. These elements are important and worthy of consideration, but will not likely require direct legislative involvement in the near future. Other aspects, however, are much more tangible and immediate, such as the Authority's plan to build the IOS north, the extension to Bakersfield and to San Francisco, and projects in the Burbank-Anaheim corridor. These elements will require direct legislative action in the near term; consequently, the remainder of the discussion will focus on these elements.

Initial Operation Section North

The Draft 2016 Business Plan refocuses the high-speed rail project on completing an IOS from San Jose to north of Shafter, dubbed the Silicon Valley to Central Valley line. The Authority expects construction to be completed by 2024 and service to be started on the line in 2025. The IOS includes the current construction underway in the Central Valley from Madera to Wasco in Kern County. The IOS would continue to Gilroy and end at Diridon Station in San Jose.

The funding estimate for the Silicon Valley to Central Valley line is $20.8 billion and includes everything needed to construct the line and start revenue service, including rolling stock, maintenance facilities, stations, and all necessary rail systems. The Authority stipulates they can build the Silicon Valley to Central Valley line with existing revenue and

existing sources of Proposition 1A bonds, federal funds, and continued cap and trade funding, as follows:

- $2.60 billion in state Proposition 1A bonds (appropriated in SB 1029);
- $3.16 billion in federal stimulus and Federal Railroad Administration grants (also appropriated in SB 1029);
- $338 million planning funds (from a mix of federal funds and Proposition 1A provided for in SB 1029);
- $4.16 billion in remaining Proposition 1A bonds that have not yet been appropriated;
- $5.34 billion in cap and trade proceeds, to be used on a pay-as-you go basis through 2024; and,
- $5.23 billion in financing proceeds using cap and trade funding for 25 years, from 2025 to 2050.

Bakersfield to San Francisco Extension

To boost the ridership potential on the IOS, the Authority has committed to seeking an additional $2.9 billion in federal funding to extend the IOS south to downtown Bakersfield and north to the Caltrain terminal at 4th and King Streets in San Francisco. The Authority notes that transportation projects of this magnitude traditionally rely on the federal government for at least 50% of the funding. Federal participation in this project, however, is roughly 25% of the amount already appropriated, which represents only about 5% of the amount needed to build the IOS and the extension. The Authority reasons then, that expecting greater federal participation is reasonable and justified.

The $2.9 billion in estimated costs is in addition to the $600 million in Proposition 1A bonds that the Authority committed to provide to electrify Caltrain.

Burbank to Anaheim Corridor

The Authority commits to advancing projects in the Burbank to Anaheim corridor to prepare for the integration with the high-speed rail system. Overall, the Authority is committing to pursue $4 billion in early investments in the corridor through a combination of federal, state, and local funds, including funds previously committed for Southern California as a part of the SB 1029 appropriation for "bookend" projects.

It is not clear how the Authority's plans in this area reconcile with the pre-existing MOU that the Authority entered into with SCAG and its regional transportation members. The MOU called for the Authority to invest $1 billion in projects to be prioritized jointly by

signatories to the MOU. It is also not clear how the Authority expects to contribute to the corridor, beyond the $500 million included in SB 1029, although the business plan lists numerous possible funding sources, including:

- Cap and trade proceeds not committed to building the IOS.

- Fixing America's Surface Transportation (FAST) Act Section 1116, which allocates formula funds for a National Highway Freight Program, of which California is expected to get $600 million over the next 5 years. Highway-rail grade crossings are an eligible use.

- FAST Act Section 1105, which created the new Nationally Significant Freight and Highway Program (FASTLane), a nationally competitive grant program with $4.5 billion over the next 5 years and for which highway-rail grade crossings are an eligible use.

- Transit and Intercity Rail Capital Program which receives 10% of cap and trade proceeds, estimated at $200 million per year, for statewide rail modernization.

How certain is the funding?

The Authority suggests that the Draft 2016 Business Plan illustrates how it can successfully get high-speed rail service running in California with existing revenues. The funding outlined by the Authority, however, is far from guaranteed and associated risks remain high, as discussed below:

Cap and Trade Funds

Currently, 25% of cap and trade funds are continuously appropriated for the high-speed rail project. Historically, this has equated to about $500 million annually. The business plan assumes both direct pay-as-you-go funding through 2024 and financing, by way of loans and/or bonds financed with future cap and trade revenues through 2050. Risks associated with relying on this source of funds include the following:

1) Cap and trade financing is not secure: In June 2015, the Authority issued a "Request for Expressions of Interest (EOI) for the delivery of an Initial Operating Segment" to get input from potential private sector partners. The EOI posed questions about the roles potential partners might be willing to play in the construction, financing, and operation of the project. In January 2016, the California High-Speed Rail Peer Review Group (PRG), whose statutorily directed purpose is to independently review work of the Authority, outlined the private sector responses in a letter to the Legislature. Overall, the PRG noted that there is strong private sector interest in the project; however, there are financial and investment risks the private sector will not be willing to take because the existing funding sources face varying degrees of uncertainty.

Of particular note related to the use of cap and trade funds for financing, the PRG reported that respondents to the EOI expressed the following concerns regarding cap and trade funds for this project:

- The legal foundation of the overall program is arguably not established beyond 2020;
- The Authority's future share could be changed by the Governor and the Legislature in the face of stiff competition from other potential claimants; and,
- Estimates of future cap and trade total income are uncertain.

As a result of these concerns, the PRG advised the Legislature that cap and trade income cannot be effectively securitized as it is currently constituted. To remedy this, the Legislature will need to do the following, at a minimum:

- Authorize continuation of cap and trade program, at least through 2050.
- Appropriate a fixed dollar amount for high-speed rail, rather than a percentage.

2) State needs to pledge its full faith and credit: The PRG also advised the Legislature that responses to the EOI also indicate that potential private sector investors question the ability of the Authority to make or to fulfill major investment commitments, such as availability payments, without access to the backing of the State. The PRG suggests that this is important because there are no other currently available significant federal or state grant programs. Consequently, were the state to pledge its full faith and credit it would have to be against existing funding sources.

Proposition 1A Bonds

The Authority plans to use all of the bond proceeds from Proposition 1A to construct the Silicon Valley to Central Valley line. The use of the funds, however, is conditioned on some very specific requirements, many which could be challenging to meet, including:

1) Funding Plan (c): Pursuant to Proposition 1A, the Authority must submit a "detailed funding plan for the corridor or usable segment," referred to as a Funding Plan (c), to the Administration and the Legislature prior to a request for an appropriation. Funding Plan (c) is to include the following:

- A description of the corridor;
- A description of any lease or franchise agreements;
- Estimated full cost for construction of the corridor;

- The sources of all funds for the corridor;
- The projected ridership and operating revenue estimate on the corridor;
- Possible risks for the corridor;
- A certification by the Authority that construction of the corridor can be completed as proposed in the plan and that the corridor would be sustainable and ready for high-speed train operations;
- An identification of one or more passenger rail service providers that can begin using the tracks or stations for passenger rail service;
- A certification by the Authority that any service in the corridor will not require an operating subsidy; and,
- A commitment that the Authority has completed all project level environmental clearances.

The Authority submitted a Funding Plan (c) to the Legislature preceding the 2012 appropriation and was sued in a case that challenged the merits of the plan. The lower court found that the plan did not meet the requirements set forth in Proposition 1A. However, the appellate court found that the purpose of the funding plan was to inform the Legislature and if the Legislature acts on the plan, the plan is presumed to have been sufficient.

Only a portion of Proposition 1A bonds have been appropriated to date. The Legislature will be asked to appropriate the remaining $4 billion in Proposition 1A bonds, presumably in the next few years. At that time, the Authority will need to submit a subsequent Funding Plan (c) that may, or may not be litigated (although it seems likely that any subsequent litigation would be as unsuccessful as the earlier complaint).

2) Funding Plan (d): Prior to spending bond proceeds, the Authority must again submit detailed funding plan, referred to as Funding Plan (d), to the Department of Finance and the Legislature. Funding Plan (d) must include similar requirements of Funding Plan (c), with an additional report to be completed by an independent financial services firm confirming the contents on the plan and that the corridor can be completed and will operate without a subsidy. The funding plan must then be reviewed by the Director of Finance and the Joint Legislative Budget Committee and the Department of Finance has 60 days to approve the plan.

The Authority has awarded a contract in November 2015 for independent financial services to provide an independent review of the funding plan. Whether or not the firm will find that the system can operate without a subsidy is uncertain. Furthermore,

based on experiences with Funding Plan (c), it is likely the merits of Funding Plan (d) will be litigated. If there is litigation, the Authority's ability to use the bond proceeds will likely be delayed until the lawsuit is resolved. It is unclear what impacts those potential delays will have on the project schedule or other funding plans.

Additionally, any delays in selling bonds will likely result in delays in constructing "bookend" projects.

Federal Stimulus and Already Appropriated Funds

As mentioned previously, the Authority has received roughly $3.2 billion in federal grants to build the Central Valley section of the IOS. Of this amount, federal stimulus funds, amounting to $2.6 billion, must be committed by September 30, 2017, as required by statute. According to a recent report by the Legislative Analyst's Office, less than $700 million of these funds have been spent to date. This deadline to expend is statutorily set by Congress and is not likely be amended.

Federal Grants or Loans

The Authority anticipates applying for federal grants and loans from various existing programs to fulfill both the construction of the IOS and the Burbank to Anaheim improvements. The business plan lists possible options for this financing the IOS as federal programs like the Transportation Infrastructure Finance and Innovation Act (TIFIA) administered by the Federal Highway Administration, the Railroad Rehabilitation and Improvement Financing (RRIF) administered by the Federal Railroad Administration, or revenue bonds. Additionally, as mentioned above, numerous federal programs such as FAST Act freight funding or Transportation Investment Generating Economic Recovery (TIGER) grants could help fund the Burbank to Anaheim improvements.

The state or local agencies would have to apply to the federal government for the various grants and loan programs, and grant awards are not guaranteed. Furthermore, high-speed rail projects will most likely be competing with other transportation priorities around the state, such as major freight projects.

State Transit and Intercity Rail Programs

Similar to competition for limited federal grants, the Authority's commitment to pursue $4 billion in additional investments in the Burbank to Anaheim corridor could significantly increase competition for already over-subscribed state programs that support transit and intercity rail, such as Transit and Intercity Rail Capital Program that is funded with cap and trade revenue.

Conclusion

Unquestionably, the Authority's task - to build a high-speed passenger rail system - is a daunting one. The sheer size the program combined with uncertain funding, rigidly

prescribed design criteria, constant legal threats, weighty environmental concerns, and difficult engineering challenges seemingly jeopardize accomplishment of the task at every turn.

Nonetheless, the Authority has, indeed, made progress in implementing the project. As detailed in the business plan, the Authority has, to date, more than 100 miles of construction-related activities underway with almost $3 billion in contracts that came in lower than estimates; more than 200 construction craft laborers have been dispatched to work on the Construction Package 1; over 170 people have graduated from a Pre-Apprenticeship Training Program established by the Fresno Workforce Investment Board; and over 260 small businesses are working on the project statewide.

In its Draft 2016 Business Plan, the Authority lays out its recommended course of action that reflects the greatest opportunity for success. Success will, at a minimum, require the full support of the Governor's Administration, the full support of the Legislature, and some luck.

At today's hearing, representatives of the Administration and the Authority will discuss the details of the draft business plan. A consultant with the Legislative Analyst's Office will discuss that office's findings and recommendations regarding the draft plan, as will the chairman of the high-speed rail Peer Review Group. Next, the committee will hear from the Authority's regional partners who will discuss the implications of the draft business plan on their regions and to the existing MOUs. Finally, members will have an opportunity to hear from the public regarding the draft business plan.

California High-Speed Rail Funding Picture

Project	Sources	Terms and Conditions	Risks
Silicon Valley to Central Valley (San Jose to North of Bakersfield) **$20.6 billion total** **Construction complete 2024, Service begins 2025**	**$3.165 billion in federal grants** • $2.5 billion ARRA • $665 million FY 2010 appropriations Current Central Valley construction (Madera – North of Shafter)	Appropriated by SB 1029 (2012) ARRA funds must be spent by Sept. 30, 2017. ARRA required no match, but Prop 1A requires 50%. FRA funding agreement reflects a match.	Authority can 2017 and wou funds. Authority can and state has other revenu
	$2.609 billion in Prop 1A bonds Current Central Valley construction (Madera-North of Shafter)	Appropriated by SB 1029 (2012) Prop 1A requires 50% match. Proposed match with federal funds per FRA funding agreement. Authority must submit a funding plan (d) to DOF and Joint Legislative Budget Committee prior to committing bond proceeds. According to the LAO, total debt service for Prop 1A is estimated to be $19.4 billion over 30 years, roughly $647 million/year.	Litigation will funding plan months/years
	$4.166 billion in Prop 1A bonds Remainder of Central Valley to Silicon Valley Line (North of Shafter – San Jose)	Prop 1A requires 50% percent match. Proposed match with Cap and Trade funds. Authority must submit a funding plan (c) to the Legislature and Governor 90 days prior to a request for appropriation. Legislature has to appropriate bond funds. Timing of request unclear. Authority must submit a funding plan (d) to DOF and Joint Legislative Budget Committee prior to committing bond proceeds.	Litigation will funding plan months/years Litigation will funding plan months/years Matching req Environmenta than planned expected litig
	$5.341 billion – Cap and Trade (Pay-Go) Cap and Trade proceeds on a pay-as-you-go basis through 2024. ($250 million FY14/15, $600 million FY 15/16, $600 million/year through FY 19/20, then $500 million/year through 2024)	Cap and Trade program must be extended beyond 2020.	Court case pe Program. Court case pe funds being u Cap and Trad and may decr

Chart based on the California High-Speed Rail Authority Draft 2016 Business Plan and conversations with the Authority

California High-Speed Rail Funding Picture

Project	Sources	Terms and Conditions	Risks
Silicon Valley to Central Valley (San Jose to North of Bakersfield) **$20.6 billion total** **Construction complete 2024, Service begins 2025** **(cont.)**	**$5.237 billion – Cap and Trade (Financed)** Cap and Trade proceeds of $500 million/year to be financed from 2025-2050. Options include revenue bonds and federal programs such as TIFIA (FHWA) and RRIF (FRA)	Cap and Trade program must be extended beyond 2020. Legislature may need to pledge full faith and credit of the state. Authority will apply to federal government for grants or loans. Authority or state would pay for any financing and repayments costs associated with loans or bonds, roughly $11.7 billion.	Court case pe Program Court case pe funds being u "No Blank Ch on the Noven would require revenue bond TIFIA program FAST Act from million. Cap and Trad and may decr
Silicon Valley to Central Valley Extension (Bakersfield to San Francisco) **$2.9 billion total**	**$2.9 billion in future federal funds**	Authority will pursue new federal funding.	Congress has funding for th
Burbank to Anaheim Corridor Improvements **$4 billion total**	**$4 billion in combined federal, state and local funds:** • $500 million in Prop 1A "bookends" or other funds appropriated in SB 1029. • Authority Cap and Trade revenue allocation if above anticipated level or savings realized in construction contracts *(amount unknown).* • Local agency funds, including local tax measure funds, already programmed for listed projects *(amount unclear).* • State grant programs such as TIRCP. • State funds such as unspent Prop 1B. • Federal formula and grant funds such as new FAST Act freight programs, FASTLane grants, TIGER grants.	Projects detailed in draft Business Plan, but unclear total project costs or how projects were selected or prioritized. Authority would provide only partial funds for projects. Project sponsors would apply for state and federal grants.	State and fed projects unce Could have n areas of the s Projects may region.

Chart based on the California High-Speed Rail Authority Draft 2016 Business Plan and conversations with the Authority

2016 Business Plan RECORD DETAIL

Submission Date :	4/6/2016
Submission Method :	Public Hearing - Written Comment
First Name :	Informational Hearing - Update on the California High-Speed Rail Program
Last Name :	Assemblymember Richard Bloom, Chair
Stakeholder Comments/Issues :	
Notes :	Agenda and notes from Information Hearing on an update on the Draft 2016 High-Speed Rail Draft Business Plan, and update on System Construction, and update on Bookend Investments and opportunity for public comment held by the Assembly Budget Subcommittee No. 3 Resources and Transportation. More information on this subcommittee, agendas and other materials can be found here: http://abgt.assembly.ca.gov/sub3resourcesandtransportation.
Attachments :	Asm Budget Sub 3 on Resources and Transportation - 4.6.2016.pdf (661 kb)

AGENDA

ASSEMBLY BUDGET SUBCOMMITTEE NO. 3 RESOURCES AND TRANSPORTATION

ASSEMBLYMEMBER RICHARD BLOOM, CHAIR

WEDNESDAY, APRIL 6, 2016
9:00 A.M. - STATE CAPITOL, ROOM 447

ITEMS TO BE HEARD

ITEM	DESCRIPTION	
	SUBJECT MATTER: EXIDE CLEAN-UP PACKAGE	**1**

ITEMS TO BE HEARD

ITEM	DESCRIPTION	
2665	**HIGH SPEED RAIL AUTHORITY**	
ISSUE 1	UPDATE ON THE 2016 HIGH SPEED RAIL DRAFT BUSINESS PLAN	4
ISSUE 2	UPDATE ON SYSTEM CONSTRUCTION	10
ISSUE 3	BOOKEND INVESTMENTS	15
ISSUE 4	PUBLIC COMMENT	21

ITEMS TO BE HEARD

Exide Clean-up Package

BACKGROUND

Exide Technologies is located in the City of Vernon, about five miles southeast of downtown Los Angeles. The facility occupies 15 acres in a heavily industrial region with surrounding residential areas. Facility operations included recycling lead-bearing scrap materials obtained from spent lead-acid batteries. This facility operated under an interim status for over 30 years. During that time, inspectors documented more than 100 violations, including lead and acid leaks, an overflowing pond of toxic sludge, enormous cracks in the floor and hazardous levels of lead in the soil outside.

The Department of Toxic Substances Control (DTSC) permanently suspended operations at Exide in 2014 and the facility closed in 2015 after the Department notified Exide that its application for a new permit would be denied. The DTSC then ordered Exide to set aside $9 million to test and clean up soil contaminated with lead at residential properties in areas immediately around the facility and conducted its own testing.

The DTSC's preliminary analysis indicates that releases from the facility may have deposited lead dust across an area of southeast Los Angeles County, resulting in contamination extending up to 1.7 miles from the facility and impacting up to 10,000 properties, including residences, parks, and schools. The South Coast Air Quality Management District also cited the facility numerous times, and reported that arsenic emissions from Exide created an elevated risk of cancer for as many as 11,000 people in the area stretching from Boyle Heights to Huntington Park.

In August 2015, the Legislature and the Governor approved $7 million of emergency funding to test the soil at residential properties, parks, schools, and daycare centers in the surrounding community and cleanup the highest priority sites based on the level of lead contamination and the potential for exposure. To date, the DTSC and local governments have sampled 714 properties and DTSC has overseen the cleanup of 208 properties. The Department has also established an Advisory Group of community leaders, local residents, business leaders, scientists, and elected officials to help guide closure and cleanup efforts.

SB 93 BUDGET BILL JR.

SB 93 includes the following key changes:

1) Transfers $176.6 million as a loan from the General Fund to the Toxic Substances Control Account for the Department of Toxic Substances Control to use for any of the following purposes:

    a) Activities related to the cleanup and investigation of properties contaminated with lead in the communities surrounding the Exide Technologies facility in the City of Vernon, California.

b) Job training activities related to the cleanup and investigation of the properties contaminated with lead in these communities.
c) Actions taken to pursue all available remedies against potentially responsible parties, including, but not limited to, cost recovery actions against entities that are potentially responsible, for the costs related to the cleanup and investigation of properties contaminated with lead in these communities.

2) Stipulates that all funds received through cost recovery efforts from responsible parties associated with the hazardous substance contamination in the communities surrounding the Exide Technologies facility in the City of Vernon shall be used to repay the General Fund loan.

3) Specifies that, to the extent cost recoveries are not sufficient to fully repay the loan, the Director of Finance may forgive any remaining balance provided the Director submits a notice and report of that action to the Joint Legislative Budget Committee.

AB 118 TRAILER BILL

AB 118 includes the following key changes:

1) Appropriates $176.6 million (Toxic Substances Control Account) for activities related to the cleanup and testing of contaminated properties in the communities surrounding the Exide Technology facility.

2) Directs DTSC to engage the impacted community and provide meaningful opportunities for the public to participate in the Department's cleanup plan preparation process, which shall include at a minimum, a quarterly public meeting.

3) Stipulates that DTSC shall prepare and make available a Public Participation Plan that specifies the Department's commitments to engage and involve the community in the cleanup plan preparation process.

4) Specifies that the DTSC meet all applicable public participation and notification requirements outlined in the Carpenter-Presley-Tanner Hazardous Substance Account Act (state Superfund law, California Health and Safety Code Section 25300).

5) Requires DTSC to develop a Job and Development Training Program with the goals of providing environmental skills, health and safety training, and support for job placement related to the cleanup for community members living near the Exide Technologies facility.

6) Specifies that the DTSC post on its website the number of access agreements signed, the number properties sampled, and the number of properties cleaned up and shall updated these numbers at least twice a month.

7) Directs the DTSC to provide an annual report to the Budget Committee's of the Senate and Assembly that address the following:

a) An update on the cleanup activities near the Exide Technologies facility in Vernon, including a summary of the environmental review of the cleanup activities;
b) The number of properties sampled and a summary of the findings (this can be broken down in the approximate number of homes in priority 1, 2 and 3);

c) The number of properties that have been remediated (cleaned up); and
d) The number of access agreements signed.

STAFF COMMENTS

This bill package would provide additional funding from the Toxic Substances Control Account to test the remaining properties, schools, daycare centers, and parks in the 1.7 mile radius and remove contaminated soil at the properties that have the highest lead levels and greatest potential exposure to residents. In addition, the DTSC will conduct specialized tests and analyses to conclusively identify the source of the contamination and hold Exide – and any other responsible parties – accountable.

The plan provides resources to expand community engagement in the testing and cleanup process, enhance coordination and job training for community residents, and promote the use of local business and labor for contracting purposes.

The $176.6 million appropriation from the Toxic Substances Control Account will be supported by a loan from the General Fund. This loan will enable the Department to address the significant public health concerns in the communities surrounding the Exide Technologies facility in an expedited manner. However, cleanup costs initially incurred by the State will ultimately be sought from the parties responsible for the lead contamination.

Staff Recommendation: Informational Item

2665 HIGH SPEED RAIL AUTHORITY

ISSUE 1: UPDATE ON THE 2016 HIGH SPEED RAIL DRAFT BUSINESS PLAN

The Subcommittee will discuss the Draft 2016 Business Plan.

BACKGROUND

On February 18, 2016, the High Speed Rail Authority released the 2016 Draft Business Plan. The High Speed Rail Authority is required to submit an update business plan biannually. The High Speed Rail Authority is accepting public comments on the draft plan, with the intent of submitting a final version to the Legislature on May 1, 2016.

In many ways the 2016 Draft Plan has not diverged much from the blended system first proposed in the 2012 Business Plan. Overall, the entire project's completion date remains 2029 and route remain unchanged from the 2012 and 2014 plans. However, this latest draft reflects the start of actual construction, certainty regarding significant segments of the system alignment, and the continuous appropriation of Cap and Trade revenues for the project, which has brought substance and more certainty to the plan.

There are four major differences between the Draft 2016 plan and the 2014 Plan:

1. Overall Projected Construction Costs are Lower

The projected budget for the entire project has decreased from $67.6 billion to $64.2 billion, reflecting updated construction figures and design changes. The High Speed Authority provided the following chart to outline the differences in costs. Issue 2 of this agenda will cover update construction costs in more detail.

2. Proposed Initial Operations are proposed to begin in Northern California, to Start Later

Based on existing funding sources, the Draft Business Plan envisions Initial Operations (sometimes called the Initial Operating Segment (IOS)) beginning in Northern California, from San Jose to Bakersfield, in 2025. This is a change from the initial plans to start service between Merced and Burbank, starting in 2022.

3. Reflects Funding Proposal

The 2016 Draft Business Plan is the first update to the High Speed Rail plan since Cap and Trade funding was continuously appropriated for construction of the system. This significant additional revenue has brought more certainty to the overall financing of the system and the draft business plan projects that it provides sufficient funding to move to system to the initial operations phase.

4. The Draft Business Plan Contains More Backup Information.

Last year, the Legislature adopted language that removed several reporting requirements for High Speed Rail which were producing several stand-alone reports that would describe the project at different points in time and cost estimates and instead and consolidated reporting into fewer, larger reports. The 2016 Draft Business Plan is the first plan since the change in reports and as a result the 2016 Draft Business Plan contains six back up reports on construction, ridership, cash flow, operational costs, and capital lifespan.

LAO COMMENTS

The Legislative Analyst has published a review of the draft business plan and produced the following reaction:

Given the significant cost of the planned high–speed rail project and the level of investment that the state has thus far made on the project, it will be important for the Legislature to ensure that the final version of the authority's business plan is aligned with its priorities. In this report, we identify three major issues that merit legislative consideration. First, there are several uncertainties regarding the funding plan for Phase I, such as uncertainty regarding the future availability of cap–and–trade auction revenues to fund the project as planned. Second, the Legislature will want to ensure that the change in the scope of the IOS meets its priorities. To the extent that the Legislature concurs with the proposed IOS North, it will want to consider whether the IOS has stand–alone value. Third, in order for the Legislature to maintain oversight of the project, it needs detailed information about the cost, scope, and schedule of each segment HSRA is planning to construct in order to easily track changes over time.

STAFF COMMENTS

The 2016 Draft Business Plan provides a realistic pathway for the High Speed Rail System to begin operations within the existing resources identified to date. The Authority has chosen to prioritize establishing a fully-funded northern Initial Operating Corridor in the 2016 plan as opposed to beginning initial operations in the south where ridership is more prevalent, concluding that it could not fully fund the southern segment within existing resources.

North Versus South Initial Operations

The Authority has sketched out a realistic plan that funds Initial Operations in the North, but does not have the funding in-hand if the Legislature would like to start operations in the South instead. According to the Authority, over $10 billion of additional funds would need to be identified to start operations in the Merced to Burbank corridor.

Either alignment would start service later than expected in previous business plans. In the 2016 Draft Business Plan, Initial Operations start in the Northern part of the system

in 2025, 3 years later in the earlier Business Plans. The Authority comments that even if the Southern alignment identified in the 2012 Business Plan Initial Operations proposal were used, operations could begin no sooner than 2025.

While Initial Operations are scheduled to begin in 2025, the overall system is still scheduled for 2029, so if funding can be identified, the South would still see service four years after the Initial Operations begin.

The Draft Business Plan Is Both Solid and Squishy

The 2016 Draft Business Plan has been describe as both the most realistic and detailed plan to date while also being described as containing significant uncertainties. It is both of these at the same time.

In many ways the 2016 Draft Business Plan is really a "Draft Northern Initial Operating Segment Plan". The plan contains detailed analyses of the construction plans, scope, expenditures, and milestones, and ridership forecasts between San Jose and the Bakersfield-area. It also highlights concurrent improvements intended along the Burbank to Anaheim and San Francisco to San Jose blended corridors. This plan still contains a substantial amount of risk to realize operations. However, with the remaining federal funding, Prop 1A bond funds, and continuously appropriated Cap and Trade, private funding, and leveraging other funding on blended corridors, it is plausible that there is sufficient funding to get the system operational by 2025.

After 2025, the 2016 Draft Business Plan provides less detail regarding the next steps beyond initial operations. For the remaining gap between Burbank and Bakersfield, there are no project milestones identified and less details regarding ridership, operation costs, and revenues are available. The proposed plan also does not specify timelines for the "wye" service to Merced that is expected to start in 2029. Finally, initial operations are proposed to begin at a temporary station in Shafter, about 18 miles North of Bakersfield, and not move to Bakersfield until a later unspecified time, although ridership and other information is presented for a scenario with extensions to Bakersfield and San Francisco , assuming the availability of funding. Unsurprisingly, with the entire sum of identified bond funding and federal fund expended by that point, the plan is unspecific and aspiration regarding funding for completing Phase 1 of the project.

One assumption that has attracted attention is that federal funds would materialize at some future date. The draft plan does not require new federal funds to achieve initial operations, but suggests that the Authority will seek federal support for extension of the system beyond the initial. Much has been said about the Authority's assumption of additional federal funding to complete the system, given recent agitation against the system from certain federal officials. However, if no additional federal support is provided for the system over the entire project's implementation, it would represent a historic low level of federal investment in a major infrastructure project.

If the Draft Business Plan remains unchanged, the Subcommittee may wish to consider bifurcating the plan in future years to allow the necessary focus on Initial Operations changes, which will be very tangible, with the plan to bridge the remaining gap, which will have to remain more abstract.

Total Project Costs Could Be Lower

Unlike most budget items which are described in current year funds, the High Speed Rail project is typically described in "Year of Expenditure" funding. The Tables below compare the costs for the Initial Operating Segment and the complete Phase 1 of the project:

Table 1. Silicon Valley to Central Valley Cost Estimate by SCC (millions, 2015 and YOE)

Standard Cost Category (SCC)	2015 $	YOE $
10 TRACK STRUCTURES & TRACK	$7,038	$7,851
20 STATIONS, TERMINALS, INTERMODAL	$279	$308
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	$193	$219
40 SITEWORK, RIGHT-OF-WAY, LAND, EXISTING IMPROVEMENTS	$4,910	$5,309
50 COMMUNICATIONS & SIGNALING	$468	$528
60 ELECTRIC TRACTION	$1,108	$1,258
70 VEHICLES	$774	$865
80 PROFESSIONAL SERVICES (applies to Cats. 10-60)	$2,994	$3,249
90 UNALLOCATED CONTINGENCY	$985	$1,091
100 FINANCE CHARGES	—	—
Total	**$18,749**	**$20,679**

Table 2. Phase I Capital Cost Estimate by SCC (millions, $2015 and $YOE)

Standard Cost Category (SCC)	2015 $	YOE $
10 TRACK STRUCTURES & TRACK	$22,782	$26,848
20 STATIONS, TERMINALS, INTERMODAL	$2,345	$2,630
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	$993	$1,212
40 SITEWORK, RIGHT-OF-WAY, LAND, EXISTING IMPROVEMENTS	$11,286	$12,581
50 COMMUNICATIONS & SIGNALING	$1,158	$1,370
60 ELECTRIC TRACTION	$3,021	$3,574
70 VEHICLES	$3,400	$4,192
80 PROFESSIONAL SERVICES (applies to Cats. 10-60)	$6,375	$7,250
90 UNALLOCATED CONTINGENCY	$2,133	$2,509
100 FINANCE CHARGES	—	—
Sub-Total (San Francisco – Los Angeles Union Station)	**$53,491**	**$62,167**
Enhanced Design Los Angeles – Anaheim Corridor	**$1,804**	**$2,072**
Total	**$55,295**	**$64,238**

Using Year of Expenditure data inflates the overall cost estimates by close to $9 billion, which means inflation represents the third largest cost-driver for the project.

The Authority uses the following assumptions regarding inflation:

Fiscal Year	2015-2016	2016/2017 to 2024/2025	2025/2026 to 2028/2029
Inflation Factor	2.00%	2.25%	3.0%

This inflation adjustment is higher than the expected rate of inflation on several forecasts, several of which predate the recent slowdown in Asian economies which has reduced the cost of raw materials used in construction on the world market. Therefore, it is very possible that the overall cost of the system could continue to decline to reflect the lower inflation levels.

Staff Recommendation: No Action, Information Item

ISSUE 2: UPDATE ON SYSTEM CONSTRUCTION

The Subcommittee will discuss updated construction data

BACKGROUND

The 2016 Draft Business Plan contains updated construction data that reflects the experience from Construction Package 1-4.

Construction Segment Costs Lower, But There Are No Immediate Savings.

The Draft Business Plan contains data that looks like it contradicts itself, but actually explains the overall costs reductions projected for the project.

The Authority has highlighted the following data several times, illustrated savings in construction costs achieved to date:

EXHIBIT 1.3 COMPARISON OF ENGINEER'S ESTIMATE AND BID PRICES*

SECTION	ENGINEER'S ESTIMATE	BID AVERAGE	BEST VALUE BID	PERCENT DIFFERENCE (BEST VALUE VS. ESTIMATE)
Construction Package 1	$1.2 - $1.8 billion	$1.25 billion	$985 million	-18/45%
Construction Package 2-3	$1.5 – $2 billion	$1.68 billion	$1.23 billion	-18/38%
Construction Package 4	$400 – $500 million	$442 million	$348 million	-13/30%

*Does not include contingencies or provisional sums.

But the detail in the Business Plan provides a different picture of overall funding for the initial construction segment to date, with the overall expenditures roughly on-budget:

Madera Acres to Poplar Avenue

Table 13. Madera Acres to Poplar Avenue Cost by SCC

STANDARD COST CATEGORY	2014 BP COST (2015 $, millions)	2016 BP COST (2015 $, millions)
10 TRACK STRUCTURES & TRACK	$2,607	$1,484
20 STATIONS, TERMINALS, INTERMODAL	$218	$174
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	$1	—
40 SITEWORK, RIGHT-OF-WAY, LAND, EXISTING IMPROVEMENTS	$2,237	$2,506
50 COMMUNICATIONS & SIGNALING	$228	$268
60 ELECTRIC TRACTION	$733	$572
80 PROFESSIONAL SERVICES	$582	$1,447
90 UNALLOCATED CONTINGENCY	$234	$457
SUBTOTAL	**$6,841**	**$6,908**

As illustrated in the chart above, the Authority expects a savings of approximate 9 percent on construction activities, represented by track structures and professional services. However, the Authority has increased the expected costs of Right of Way and Contingency due to slow acquisition of right-of-way.

The Authority explains that these additional costs may be mitigated in through the management steps the Authority is implementing. However, the Authority expects some savings in construction to continue in future segments due to the improved designs and methods that were suggested by the bidders on the first contracts that can be applied elsewhere on the system. The flow chart below illustrates this trend:

SCOPE CHANGES

The Draft Business Plan details changes in construction costs by segment. Many of these changes are associated with scope changes along the entire system. The next two pages of the agenda contain the detail provided by the Authority regarding the major changes by segment.

Table 3. 2014 to 2016 Business Plan Capital Cost Comparison

Environmental Section	2014 BP (2015 $, Millions)	2016 BP (2015 $, Millions)	Change (2015 $, Millions)	Comments
San Francisco to San Jose	$6,094	$3,136	$(2,958)	• Reduced Transbay Transit Center contribution (-$1.5B) • Added upgrades to existing Caltrain stations to be shared with high-speed rail (+0.5B) • Removed dedicated guideway at Millbrae and aerial approach to San Jose Station (-$1.7B) • Upgraded existing track to Class 6 track; grade crossing and right-of-way safety improvements (+$0.1 B) • Moved cost of Light Maintenance Facility (LMF) to Heavy Maintenance Facility (HMF) (-$0.2B)
San Jose to Merced	$14,718	$9,859	$(4,859)	• Reduced San Jose station costs by changing from aerial to at-grade (-$0.5B) • Reduction in tunneling costs per value engineering (-$1.4B) • Increase in aerial guideway (+$0.2 B) • Reduction in earthwork and walls due to increase in aerial guideway (-$0.4B) • Decrease in grade separations costs due to increase in aerial guideway (-$0.6B) • Reduction in utility relocations due to increase in aerial guideway (-$0.2B) • Reduction in right-of-way costs due to increase in aerial guideway (-$0.2B)
Merced to Fresno	$4,139	$3,797	$(342)	• Reduction in grade separations costs per input from final design on CP 1 (-$0.3B) • Increase in right-of-way costs (+$0.1B)
Fresno to Bakersfield	$7,270	$8,317	$1,047	• Reflects selected alignment alternative per Final Environmental Impact Report/Statement • Reduction in aerial guideway per CP 2-3 ATC (-$0.5B) • Increase in retaining walls due to decrease in aerial guideway (+$0.2B) • Increase in utility relocation costs (+$0.9B) • Increase in grade separations costs due to decrease in aerial guideway in CP 2-3 (+$0.3B)

Environmental Section	2014 BP (2015 $, Millions)	2016 BP (2015 $, Millions)	Change (2015 $, Millions)	Comments
Bakersfield to Palmdale	$8,287	$9,746	$1,458	• Reflected Supplemental Alternative Analysis Oak Creek alignment • Increase in earthwork in lieu of viaducts and tunnels (+$2.0B) • Increase in right-of-way costs (+$1.0B) • Decrease in aerial guideway due to increase in embankments (-$0.9B) • Decrease in tunneling due to increase in cuts (-$0.4B)
Palmdale to Los Angeles	$13,456	$13,470	$14	• Reflected Supplemental Alternative Analysis East Corridor alignment under the Angeles National Forest • Increase in tunneling costs due to increase in tunnel length (+$0.8B) • Increase in retaining walls due to constrained right-of-way (+$1.4B) • Increase in Los Angeles Union Station costs with shared tracks into station and dedicated platform faces for high-speed rail (+$0.6B) • Decrease in aerial guideway due to increase in tunneling (-$0.7B) • Decrease in grade separations costs by implementing shared use of existing corridor south of Burbank (-$0.7B) • Decrease in right-of-way costs (-$0.7B) • Reduced utility relocation costs due to increase in tunneling (-$0.2B) • Moved cost of LMF to HMF (-$0.2B)
Los Angeles to Anaheim	$556	$2,329	$1,773	• Dedicated passenger tracks and additional grade separations
HMF/LMF	$690	$1,242	$552	• Moved cost of LMFs to HMF
Trainsets	$3,399	$3,399	—	—
Total Phase 1:	**$58,610**	**$55,295**	**$(3,314)**	—

**Numerical values indicating cost increases/decreases are not representative of the total cost variances. Other costs including allowances based on percentages also contribute to the total difference but are not listed in this table.*

The graph below helps compare the overall cost, by segment, as projected by the 2016 Draft Business plan, as compared to the 2014 Business Plan.

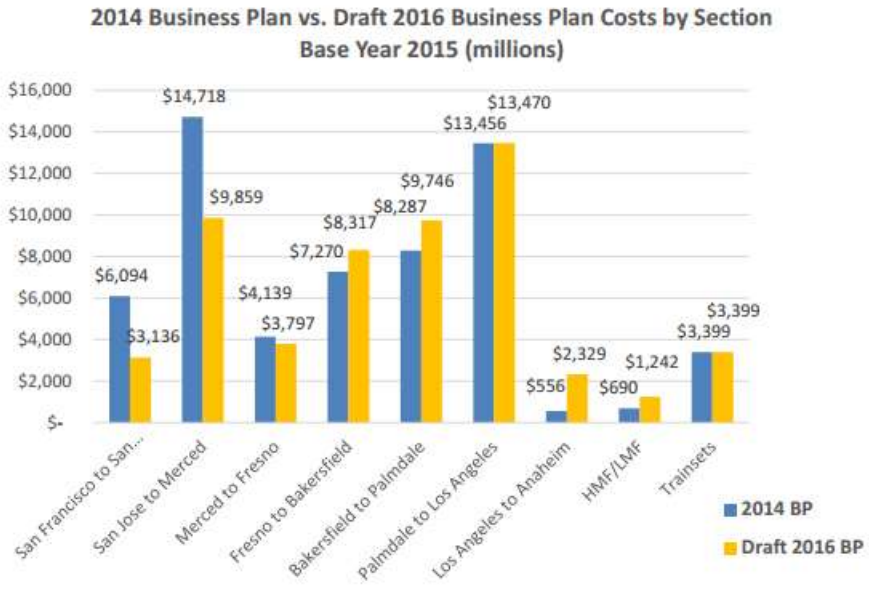

Figure 3 - Capital Cost Comparison by Environmental Section

STAFF COMMENTS

The key assumption made by the Authority is that it will be able to avoid the one-time costs it experienced in the first construction segment. The Subcommittee may want to explore this assumption, as the proposed savings from construction could evaporate if the State incurs delays in future segments.

The 2016 Draft Business Plan is framing the scope of the overall projects in significant ways that have not been discussed in other forums. These scope changes will especially important on blended segments, where the benefits from the system will be shared by other transit systems. The next issue of this agenda discusses the "bookends" in more detail.

Staff Recommendation: Informational Item, No Action

ISSUE 3: BOOKEND INVESTMENTS

The Subcommittee will explore investments in the "Bookends", the blended segments of the system in Los Angeles and the San Francisco Peninsula.

PANELISTS

- Michael Turner, Los Angeles County Metropolitan Transportation Authority
- Jeff Gee, Redwood City Councilmember
- Jim Hartnett, Caltrain

BACKGROUND

The 2012 Business Plan created two major features of the High Speed Rail Project. First, the Authority decided to use a “blended” approach in the San Francisco Peninsula, where the tracks would be shared with the Caltrain system, rather than having a dedicated High Speed Rail right-of-way, this blended approach is now also envisioned for the Burbank to Anaheim corridor. Secondly, the Authority created the concept of “Bookend” investments, which were improvements along the segments from Anaheim to Burbank and San Francisco to San Jose that would appear earlier than the expected service from High Speed Rail so that local rail systems could realize the co-benefits from these projects.

The blended system and bookends were codified by the Legislature in 2012 through the enactment of SB 1029, which appropriated funds for the program. For the "bookend investment", $1.1 billion of Proposition 1A Bond Funds, which fund the High Speed Rail Project, were appropriated. Of this amount, $600 million is for Caltrain electrification project and an additional $500 million was for improvements in the Los Angeles Basin, which was part of $1 billion MOU with Los Angeles transportation agencies for improvements pledged by the State.

Very little of the bookend appropriation has been expended to date, as legal challenges have prevented the sale of Proposition 1A bonds, which would provide the funding for these projects. Recent court decisions may pave the way for this funding to be allocated to local agencies so the bookend projects can begin.

The 2012 budget also includes $819 million of Proposition 1A bond funding earmarked for "connectivity" that is dedicated for improvements to existing regional and inter-city rail systems, this was in addition to some small appropriations made in earlier budget years. Of this amount, close to $800 million has been allocated to local projects and over $500 million has been expended so far.

The table below illustrates the use of these funds to date:

Connectivity Project	Programmed Amount	Funding Allocated	Proposition 1A Expended
Metrolink Positive Train Control	35,000	35,000	24,546
LA Regional Connector Transit Corridor	114,874	114,874	103,386
Metrolink High-Speed Readiness Program	68,500	68,500	12,052
Sacramento Intermodal Facility High Speed	$ 25,223	$ 1,752	$353
Caltrain Advanced Signal System	105,445	105,445	99,737
San Francisco Center Subway	61,308	61,308	61,308
Millbrae Station Track Improvements and Car Purchase	140,000	140,000	65,605
Stockton Passenger Track Extension	10,974	395	395
SANDAG Blue Line Light Rail Improvement	57,855	57,855	57,779
San Diego North County Transit District Positive Train Control	17,833	17,833	14,052
BART Maintenance Shop and Yard Improvements	78,639	78,639	1,148
Positive Train Control San Onofre to San Diego	24,010	24,010	18,122
Positive Train Control LA to Fullerton, Triple Track	2,940	2,940	2,940
San Joaquin Corridor Merced to Le Grand, Segment 1	40,750	40,750	16,130
Positive Train Control Moorpark to San Onofre	46,550	46,550	30,553
Total	**$ 829,901**	**$ 795,851**	**$ 508,106**

In addition to these amounts, the High Speed Rail project itself contains proposed improvements to these existing rail corridors. These are detailed below:

San Francisco to San Jose

The 2016 Draft Business Plan includes funding to improve the existing track along this 48 mile-long corridor to allow for service up to 110 miles-per-hour. These improvements include:

- $590 million for grade separations, with $90 million of this for three grade separations associated with a high-speed rail passing tracks between Hayward Park and Hillsdale. The project assumes installation of 40 at-grade crossing with quad gates.
- $200 million for station upgrades.
- $550 million for Transbay Terminal connection costs
- $600 million for costs associated with electrification of Caltrain
- Includes funding for existing track structure rehabilitation including replacement of wood ties, new running rail where confirmed by inspection reports, rail grinding & surfacing, upgrade of interlockings and access control fencing

The total costs of the segment in the 2016 Draft Business Plan is lower than previous estimates, mostly due to the reduction in Transbay Terminal connection costs associated with the project.

San Francisco to San Jose

Table 7. San Francisco to San Jose Cost Breakdown

STANDARD COST CATEGORY	2014 BP COST (2015 $, millions)	2016 BP COST (2015 $, millions)
10 TRACK STRUCTURES & TRACK	$1,659	$119
20 STATIONS, TERMINALS, INTERMODAL	$1,987	$1,006
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	$171	—
40 SITEWORK, RIGHT-OF-WAY, LAND, EXISTING IMPROVEMENTS	$798	$835
50 COMMUNICATIONS & SIGNALING	$142	$163
60 ELECTRIC TRACTION	$488	$586
80 PROFESSIONAL SERVICES	$640	$351
90 UNALLOCATED CONTINGENCY	$209	$75
SUBTOTAL	**$6,094**	**$3,136**

The current cost estimate for this segment has several unknowns that could increase the overall cost:

- Five mile track from Santa Clara to San Jose for Union Pacific Railroad (UPRR) freight use is under review and not included in the estimate
- Structural modifications to the four existing tunnels are not included
- Conversion of existing Caltrain platforms to level boarding is not included except for the stations shared with high-speed rail
- Improvements to existing at-grade vehicular and pedestrian crossings are limited to safety and environmental mitigation as noted above
- Future platform extension to 1400 feet to accommodate two high-speed rail trainsets is not included

Burbank to Los Angeles

The 13 mile Burbank to Los Angles segment assumes Metrolink and High-Speed Rail will share tracks from approximately Metrolink's Central Maintenance Facility to Los Angeles Union Station. The 2016 Draft Business Plan modifies the approach for the Burbank to Los Angeles to includes relocation of existing at-grade double track in the Metrolink corridor right-of-way and constructing two new high speed rail tracks from West Alameda Avenue to Fletcher Drive (5.3 miles). According to the Authority, this new approach utilizes retaining walls increasing the guideway costs, but also minimizing project footprint and reducing right-of-way acquisitions costs. Other improvements for this segment include:

- Provides three high-speed rail grade separations at Sonora, Grandview and Flower and one roadway grade separation at Chevy Chase Drive. Provides funding contribution for Doran roadway grade separation
- Includes allowance for work at LA Union Station plus funding contribution for SCRIP project (run-through tracks).

- Includes an allowance for impacts to the Metro Gold Line realignment and minor impacts to Chinatown aerial structure
- Includes an allowance for curve realignment and additional right-of-way through throat area into Los Angeles Union Station. Assumes all tracks with a minimum 650 feet radius in throat area as validated by the Authority's Regional Consultant
- Shares track over the existing bridge over Los Angeles River at Figueroa Street
- To account for the cost of staged construction of Metrolink tracks, an allowance is added to cover the loss of efficiency and premium pay for work beyond normal hours

The total costs of the segment in the 2016 Draft Business Plan is lower than previous estimates, as detailed below:

Burbank to Los Angeles Union Station

Table 17. Burbank to Los Angeles Union Station Cost by SCC

STANDARD COST CATEGORY	2014 BP COST (2015 $, millions)	2016 BP COST (2015 $, millions)
10 TRACK STRUCTURES & TRACK	$572	$536
20 STATIONS, TERMINALS, INTERMODAL	$275	$514
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	—	—
40 SITEWORK, RIGHT-OF-WAY, LAND, EXISTING IMPROVEMENTS	$1,572	$216
50 COMMUNICATIONS & SIGNALING	$23	$42
60 ELECTRIC TRACTION	$77	$85
80 PROFESSIONAL SERVICES	$231	$171
90 UNALLOCATED CONTINGENCY	$107	$29
SUBTOTAL	**$2,857**	**$1,593**

Los Angeles to Anaheim

The Los Angeles to Anaheim section cost included in the Draft 2016 Business Plan is based on a conceptual definition of improvements. According to the Authority, this estimate is a placeholder and is based upon early investment projects and a simplified section developed by the Authority and its consultants in 2014 for an alternative delivery plan approach.

This segment is divided into three sections:

- A first section (about 3.4 miles) out of the Los Angeles Union station which is owned by LA Metro. The section starts adjacent to the Southern California Regional Interconnector Project (SCRIP) project, which will build through tracks and enhancements at the Los Angeles Union Station. Operations will be shared between Metrolink and high-speed rail
- A second section (about 22.1 miles) owned by BNSF. Currently three mainline tracks used throughout most of the section and shared between freight and Metrolink. Triple tracking by BNSF will not be finished until completion of key grade separations like Rosecrans/Marquardt. The final build project includes the construction of two additional tracks dedicated for high-speed rail (and electrified)

in the south of BNSF tracks. BNSF main tracks will be moved to the North to provide the capacity for the new tracks and minimize right-of-way impact. BNSF has requested provision for a fourth mainline track for traffic growth and preserve the two dedicated tracks for high-speed rail

- A third section (about 5 miles) is made of two existing tracks owned by Orange County Transportation Authority leading into the new Anaheim Regional Transportation Intermodal Center (ARTIC) station. Operations here will be shared between high-speed rail and Metrolink. Freight traffic will turn off before this section but have operating rights on this section. Electrification of both tracks will be required.

The 2016 Draft Business Plan reflects the additional costs associated with the additional investments envisioned in this segment:

Los Angeles to Anaheim

Table 18. Los Angeles to Anaheim Cost

STANDARD COST CATEGORY		2014 BP COST (2015 $, millions)	2016 BP COST (2015 $, millions)
	SUBTOTAL	$538	$2,319

STAFF COMMENTS

A "blended" corridor means that not only are the facilities shared by multiple entities, including High Speed Rail, but the financial responsibilities for improvements should also be shared. However, such improvements require reaching agreements with multiple parties and securing funding sources from multiple locations, which complicate the process for moving forward.

The Subcommittee could explore options to accelerate the use of funds already pledged for the project that are awaiting the sale of Proposition 1A Bonds. Such options could facilitate the start of some bookend projects that have are shovel-ready.

There is a long wish list of improvements that the project could make to the three bookend segments, which would ultimately benefit High Speed Rail passengers. Given the limited funding for the project, it is not possible to fund all of these improvements within this projects existing scope. It is also not clear if local partners are in a position to match state funds for such improvements. However, to the extent these improvements could be made before High Speed Rail Services has begun, they would reduce the possibility of service delays and disruptions.

The Subcommittee could explore asking the High Speed Rail Authority to meet with local partners to develop a bookend investment plan, which could help solidify additional improvements to the three bookend rail corridors in the near term. This would allow the co-benefit envisioned with this project to be identified so work can begin on securing the agreements to move these projects forward.

Staff Recommendation: Staff recommends no formal actions, but suggests the Subcommittee ask the Administration to provide options for funding bookend investments as part of the Assembly's 2016 Budget plan by May 1, 2016.

ISSUE 4: PUBLIC COMMENT

The Subcommittee will hear feedback from groups that are critical of the High Speed Rail project.

PANELIST

The Subcommittee will hear from two panels, followed by public comment.

1. **Panel 1, Panelists Critical of the High Speed Rail Project**

   - David DePinto, Save Angeles Forest for Everyone
   - Frank Oliveira, Citizens for California High-Speed Rail Accountability
   - Mike Brady, Community Coalition
   - David Schonbrunn, Train Riders Association of California
   - William Grindley

2. **Panel 2, Panelists Supportive of the High Speed Rail Project**

   - Paul Katchodourian, Katch Environmental, Inc.
   - Cesar Diaz, State Building Trades
   - Keith Dunn, California Association of High-Speed Trains
   - Paul Dyson, Rail Passenger Association of California and Nevada
   - Lee Ann Eager, Fresno County Economic Development Commission

3. **Public Comment**

STAFF COMMENTS

When the Subcommittee held a High Speed Rail oversight hearing on January 27, 2016, the Assembly was called into Session that day, resulting in a shortened public-comment period. The Chair has requested that time be set aside at this hearing to allow for public comment on the High Speed Rail plan.

Staff Recommendation: Informational Item Only

2016 Business Plan RECORD DETAIL

Submission Date :	4/4/2016
Submission Method :	Letter
First Name :	Alan
Last Name :	Tandy
Stakeholder Comments/Issues :	
Notes :	
Attachments :	City of Bakersfield_040416.pdf (809 kb)

B A K E R S F I E L D
Alan Tandy • City Manager

April 4, 2016

Chairman Dan Richard and Members of the Board of Directors
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

Attn: Draft 2016 Business Plan

Dear Mr. Richard and Members of the Board of Directors:

Thank you for the opportunity for the City of Bakersfield (City) to provide its comments regarding your draft 2016 Business Plan (Draft Business Plan). As the ninth largest city in the State of California and 1 of 12 station cities on Phase I of the High-Speed Rail (HSR) system, we believe that our comments should be of heightened interest and significance.

The City has sincerely appreciated the substantially improved working relationship with the High-Speed Rail Authority (HSRA) under the leadership of Mr. Jeff Morales. In particular, HSRA's efforts to evaluate and consider the Bakersfield F Street Station Alignment (BFSSA Alignment) have been appreciated. The City sincerely believes that the BFSSA Alignment will be a more advantageous and less impactful alignment for the City and the community as a whole.

With respect to the Draft Business Plan, the City's primary concern is the addition of an "interim" station at Poplar Avenue. Prior to the public release of the Draft Business Plan, it had been commonly anticipated that a change to the Initial Operating Segment (IOS) would be forthcoming, with Bakersfield becoming the new southerly terminus of the IOS. What was wholly unexpected and highly disconcerting was the Draft Business Plan proposes the IOS might in fact terminate at the end of Construction Package (CP) 4 at Poplar Avenue, which is approximately 23 miles short of downtown Bakersfield.

<u>Reasons for Opposing Poplar Avenue Interim Station</u>

It is acknowledged and appreciated that the Draft Business Plan also states that the IOS should and will extend to downtown Bakersfield if additional federal funding is obtained, but for the following reasons, the City adamantly opposes terminating the IOS at a Poplar Avenue station:

City of Bakersfield • City Manager's Office • 1600 Truxtun Avenue
Bakersfield • California • 93301
(661) 326-3751 • Fax (661) 324-1850

1. **The establishment of an interim station at Poplar Avenue (instead of downtown Bakersfield) does not comply with multiple provisions of Proposition 1A and reduces the stand-alone value of the IOS.**

2. **The environmental impacts of an interim station at Poplar Avenue have not yet even begun to be identified or evaluated; the speculative environmental impacts are substantial.**

3. **The establishment of an interim station at Poplar Avenue is incompatible with the Sustainable Community Strategy and greenhouse gas reduction requirements of SB 375.**

4. **The establishment of an interim station at Poplar Avenue is impracticable from a business perspective.**

5. **Other options exist to bring HSR service to downtown Bakersfield as part of the IOS on an interim basis if additional funding to construct beyond CP 4 does not materialize.**

Caveats

While the City is opposed to an interim station being located at Poplar Avenue under any circumstance, it is important to note two critical caveats regarding the City's position.

Firstly, in discussions with HSRA staff since the release of the Draft Business Plan, the City has been informed that even if the IOS ultimately does end at Poplar Avenue, that this will not stall, delay, or in any other way negatively affect the ability and timing of HSRA's acquisition of property and relocation of affected businesses along the balance of the adopted Fresno to Bakersfield alignment any differently than if it was included as part of the IOS.

Secondly, it is represented in the Draft Business Plan and has been reinforced through discussions with HSRA staff that an interim station at Poplar Avenue, if constructed, would only be an interim facility until the further extension of Phase I. Furthermore, there are no plans or intentions to retain the Poplar Avenue interim station as a permanent station upon extension of Phase I to Bakersfield, either in addition to or in place of the planned permanent station in downtown Bakersfield.

Both of these caveats are absolutely critical to the City and any deviance or departure from them will be adamantly challenged and opposed.

Information Regarding Poplar Avenue Station Site

In order to help understand some of the City's reasons for opposing the Poplar Avenue station location, the following information is offered:

- The proposed interim station is located at the end of CP 4, which is located at the point where the adopted HSR alignment (generally adjacent to the BNSF Railroad) intersects Poplar Avenue, approximately four miles northwest of central Shafter. While the Draft Business Plan does not attempt to identify any more precise location for the station, there is virtually no existing urban development within over a mile of this point. Other than an agricultural trucking/warehousing facility, the area surrounding this location is privately-owned farmland.

- There is no urban infrastructure that exists within the vicinity of the proposed Poplar Avenue interim station. Other than State Highway 43 (a four-lane highway between Shafter and Wasco), the only streets in the surrounding area are two-lane rural roads.

- The Poplar Avenue station site has virtually no existing transportation connectivity. The only form of public transit available to the site is Kern Transit, which runs small intra-regional busses six times per day to and from Bakersfield. Even by car, the site is approximately seven to eight miles to the nearest freeway (State Route 99 via Lerdo Highway).

- Note attached Figure 1, which shows the relative locations of the proposed Poplar Avenue interim station and the Bakersfield F Street Station. Particular attention is drawn to the urbanization in proximity to each station location.

Supporting Information

The following information is provided in support of the City's reasons for opposing this proposal.

1. **The establishment of an interim station at Poplar Avenue (instead of downtown Bakersfield) does not comply with multiple provisions of Proposition 1A.**

Among the provisions of Proposition 1A (Streets and Highways Code Section 2704) are the following:

> **Sec. 2704.08(f):** In selecting corridors or usable segments thereof for construction, the authority shall give priority to those corridors or usable segments thereof that are expected to require the least amount of bond funds as a percentage of total cost of construction. Among other criteria it may use for establishing priorities for initiating construction on corridors or usable segments thereof, the authority shall include the following: (1) projected ridership and revenue, (2) the need to test and certify trains operating at speeds of 220 miles per hour, (3) the utility of those corridors or usable segments thereof for passenger train services other than high-speed train service that will not result in any unreimbursed operating or maintenance costs

to the authority, and (4) the extent to which corridors include facilities contained therein to enhance the connectivity of the high-speed train network to other modes of transit, including, but not limited to, conventional rail (intercity rail, commuter rail, light rail, or other rail transit), bus, or air transit.

Sec. 2704.09(h): Stations shall be located in areas with good access to local mass transit or other modes of transportation.

Section 2704.09(i): The high-speed rail system shall be planned and constructed in a manner that minimizes urban sprawl and impacts on the natural environment.

For the reasons cited above, the Poplar Avenue station location clearly does not meet the cited requirements of Proposition 1A. The station location has no meaningful connectivity to any mass transit of other modes of transportation. The negative impacts of this circumstance become even more acute and relevant when taking into consideration the fact that the Poplar Avenue station would function as the southerly terminus of the IOS.

One of the essential supporting purposes of locating a station in downtown Bakersfield and the core areas of other HSR station cities is to help in facilitating more dense and compact urban forms in core areas and conversely to help alleviate more accelerated urban sprawl (see Sec. 2704.09(i) above). Even as an interim facility, the Poplar Avenue station will have the opposite effect of this goal.

It will delay and diminish efforts (currently being planned via the Bakersfield Station Area Plan) to focus new development in downtown Bakersfield leveraged off of the Bakersfield HSR station. Conversely, it will have an inducing effect on the predominately rural/suburban urban form in the general vicinity of the Poplar Avenue station location. Even after the interim station is abandoned, a portion of the ancillary development attracted by the Poplar Avenue station will remain, possibly inducing the premature conversion of productive farmland and/or producing urban decay.

2. **The environmental impacts of an interim station at Poplar Avenue have not yet even begun to be identified or evaluated; the speculative environmental impacts are substantial.**

To the City's knowledge, no CEQA or NEPA review, or any preliminary environmental screening has been conducted for the Poplar Avenue station. For a considerable public improvement with considerable associated impacts to be located in a remote and rural location, it can only be rationally concluded that the environmental impacts will be substantial. Conducting such formal CEQA/NEPA review would be involved and time consuming and vulnerable to legal challenge when considering the substantial change and impact to a rural location. Insofar as one of the tenants for proposing the interim Poplar

Avenue station is to help ensure that the IOS can begin operating as soon as possible, the distinct possibility of environmental complications, challenges, and delays would be counter to that objective.

While it is acknowledged that the Poplar Avenue station is proposed to be an interim station only, a public facility of this nature and magnitude cannot avoid producing substantial direct and indirect impacts; including, but not limited to:

- **Traffic and Circulation:** These impacts will be greatly heightened given the limited nature and capacity of the existing circulation system in the area of the station.

- **Land Use:** As stated, the area around the station is completely rural in character and mostly comprised of productive farmland. The station and its future demand for ancillary uses will constitute a complete and dramatic change from the existing nature and character of the area.

- **Agricultural Resources:** The Poplar Avenue station location is situated directly in the middle of an area of productive farmland. Either this farmland will be permanently lost to urban development, or there will substantial costs to converting it and placing it back into agricultural production after the station is abandoned.

- **Air Quality:** The cumulative added vehicle miles traveled for Bakersfield area passengers to travel to and from this remote station location will have a considerably exacerbating effect on air quality emissions compared to a downtown Bakersfield station.

3. The establishment of an interim station at Poplar Avenue is incompatible with the Sustainable Community Strategy and greenhouse gas reduction requirements of SB 375.

The Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, SB 375, Chapter 728, Statutes of 2008) supports the State's climate action goals to reduce greenhouse gas (GHG) emissions through coordinated transportation and land use planning with the goal of more sustainable communities.

Under the Sustainable Communities Act, each of California's Metropolitan Planning Organizations (MPOs) must prepare a "sustainable communities strategy" (SCS) as an integral part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region.

In July 2014, the Kern Council of Governments (KernCOG) adopted the RTP/SCS for Kern County, which includes Bakersfield.

The SCS identifies specific implementation strategies that local governments, KernCOG, and other stakeholders may consider in order to successfully implement the SCS. This includes construction and upgrades to transit facilities within the metropolitan area, identification of transit-priority areas within Metropolitan Bakersfield, encouragement of infill along major transit corridors that is consistent with the Central Core Area of Bakersfield, and other implementation strategies.

These strategies facilitate future development that efficiently moves the public and goods throughout the region while connecting homes to major regional employment centers. The SCS demonstrates that placement of the HSR Station within Metropolitan Bakersfield would be consistent with the goals and polices of SB 375, and ensures that the City and Kern County continue to meet the Greenhouse Gas Emissions and Vehicle Trip reduction targets established by the California Air Resources Board.

4. **The establishment of an interim station at Poplar Avenue is impracticable from a business and cost perspective.**

Table 6.3 in the Ridership and Revenue Forecasting Technical Supporting Document attempts to forecast ridership for various operating scenarios, including differences between the Valley to Valley (VtoV) IOS (San Jose to Poplar Avenue) and the Valley to Valley Extended (VtoV Ext.) IOS (San Francisco to Bakersfield).

The City contends that HSR ridership between the Bakersfield area and other San Joaquin Valley stations in particular (Kings/Tulare and Fresno) will be dramatically different between a station located at Poplar Avenue and downtown Bakersfield. At an established fare of $40 for the 33-mile trip between the Fresno and Kings/Tulare stations, it must be assumed that ridership on this segment will be relatively limited. Since the only other San Joaquin Valley station on the IOS is in the Bakersfield area, the majority of travel within the San Joaquin Valley (based on cost and time efficiency) would be between the Bakersfield area and the other two stations.

For travel within the San Joaquin Valley, Table 6.3 estimates 2025 annual ridership on the VtoV segment (Poplar Avenue station) at 700,000 passengers with annual revenues at $37.04 million. By contrast, intra-San Joaquin Valley travel on the VtoV Ext. segment (Bakersfield station) is estimated at 1,000,000 passengers (43% greater) with revenues of $55.47 million (50% greater). For the minimum four year difference between the completion of the IOS and Phase I, this is at least $73.72 million ($18.43 million/year) viewed as a missed opportunity by not extending the IOS to downtown Bakersfield.

While these differences are substantial, the City contends that the differences in ridership (and revenue) estimates for these two scenarios would actually be greater than forecasted. The reason for this is not based on complicated modeling, but rather simple math. Using the established fare between Bakersfield and Fresno of $56, the estimated time and cost of driving from Bakersfield to the Poplar Avenue station, and the estimated time and cost of driving from Bakersfield to Fresno, a passenger taking a HSR train all the way from downtown Bakersfield to Fresno would be paying about the same as driving (based on total driving costs) while saving about 40 minutes in travel time.

By comparison, a Bakersfield resident taking HSR from the Poplar Avenue station to Fresno would be paying an additional cost of $10 compared to driving (additional $45 based on gas costs only) to save only about 20 minutes in overall travel time. To the average consumer, the differences in value are significant and would lead one to assume that only a limited number of consumers would chose the HSR option for travel between Fresno and the Bakersfield area with the station at Poplar Avenue.

To our knowledge, the Draft Business Plan does not contain a separate estimate of the direct and indirect costs of constructing an interim station at Poplar Avenue. It is reasonably assumed that as an interim station, facilities would be limited to only those nominally needed, but even with that, the costs cannot be insubstantial. In addition to the basic cost of rail platforms and station facilities, the following would be needed for an interim station:

- A very large amount of (assumed) surface parking, increased by the fact that this would serve as the southerly terminus of the IOS.

- Bus facilities to accommodate an estimated 72 bus trip ends per day to provide feeder bus service to southern California.

- Improving and widening access roads and approaches. Merced Avenue, the most direct route from the Poplar Avenue station to State Route 99, currently does not cross the Friant-Kern Canal.

- Extending needed utilities and infrastructure for an unknown distance to an isolated rural location.

- While the sum of all these costs will be considerable, the effective cost is even more compounded when considering: (1) that all of these facilities will only have an estimated functional life of four years; and (2) the added cost of removing the majority of the facilities or converting them to an alternative use upon the extension of the HSR system to downtown Bakersfield.

5. **Other options exist to bring HSR service to downtown Bakersfield as part of the IOS on an interim basis if additional funding to construct beyond CP 4 does not materialize.**

As noted, the Poplar Avenue station is 23 miles northwest of downtown Bakersfield. Not only is the interim station remote and inconvenient to potential HSR riders from the Bakersfield area, the station location is perhaps even more unattractive to potential HSR riders arriving at Bakersfield. Unlike the proposed bus feeder service to southern California, there is no proposed feeder service to central Bakersfield and no significant existing transit service. Passengers arriving at the Poplar Avenue station and destined for the Bakersfield area would essentially be "stuck" if they did not have access to a waiting vehicle.

As noted above, the Poplar Avenue interim station poses numerous disadvantages and negative impacts, and the direct and indirect costs of constructing (and ultimately abandoning) an interim station at that location would be very substantial. If funding is unavailable to construct the 23-mile segment of the HSR system from CP 4 to Bakersfield as part of the IOS, please consider these other less costly options to bring HSR service to Bakersfield on an interim basis, as follows:

1. Electrify the adjacent BNSF/Amtrak rail line in order to allow HSR trains to continue to the existing Bakersfield Amtrak station on an interim basis.

2. Utilize ultra-clean diesel engines that could be used to propel HSR trains from a staging point at Poplar Avenue to the Bakersfield Amtrak station on an interim basis. While this would lengthen travel times from Poplar Avenue to Bakersfield compared to the first option, it would be substantially less costly. It would also be much less costly and impactful than constructing and abandoning a Poplar Avenue interim station. In addition to providing a one-seat ride on the IOS to downtown Bakersfield, it would also make the proposed feeder bus service to southern California more efficient and effective by being able to utilize the existing feeder bus terminal adjacent to the Bakersfield Amtrak station.

Impacts to Shafter Heavy Maintenance Facility Site

As a separate, but also significant final concern regarding the possibility of ending the IOS at the end of CP 4, it is noted that doing so would by default preclude the opportunity to locate the HSR Heavy Maintenance Facility (HMF) at the proposed site just south of Shafter. The City is supportive of establishing the HMF at one of the two proposed sites in Kern County (Shafter or Wasco).

The HSRA has prepared an evaluation matrix of 12 proposed HMF sites. Based on eight separate criteria used to evaluate the sites, the Shafter site received the highest possible rating in 6 of 8 criteria. None of the other 11 sites received the highest rating in more than three criteria categories. To eliminate the Shafter HMF site from consideration simply and solely because it was located a few miles beyond the established end of the IOS would be doing a disservice to Kern County and, ultimately, the efficiency of the entire HSR system.

Summary and Conclusion

In conclusion, it is reiterated that the City is appreciative of the efforts that Mr. Morales and the HSRA have made to address and respond to the City's HSR-related issues and concerns. The City is also appreciative of the Draft Business Plan's stated goal to attempt to extend the IOS to downtown Bakersfield. However, for the aforementioned reasons, the City must go on record stating its firm opposition to the possibility of locating an interim station at Poplar Avenue, and requesting that the Draft Business Plan be modified to eliminate this option, or, at a minimum, evaluate and consider the identified options to extend IOS service to downtown Bakersfield through interim means.

Thank you for thoughtful and meaningful consideration of the City's comments, which were approved by a vote of the Bakersfield City Council on March 30, 2016.

Sincerely,

Alan Tandy
City Manager

cc: *Steven Teglia, Assistant City Manager*
Andrew Heglund, Deputy City Attorney
Nick Fidler, Public Works Director
Doug McIsaac, Community Development Director

2016 Business Plan RECORD DETAIL

Submission Date :	4/5/2016
Submission Method :	Letter
First Name :	Paul
Last Name :	Jones
Stakeholder Comments/Issues :	
Notes :	Flash drive included with letter. Contents available upon request.
Attachments :	Jones_Biz_Plan_Comment_040516.pdf (777 kb)

Paul S. Jones PE, Ph.D.

99 Moulton Drive

Atherton, CA 94027

April 5, 2016

Attention: Draft 2016 Business Plan

California High Speed Rail Authority

770 L Street, Suite 620 MS-1

Sacramento, California 95814

Subject: Comments Regarding Design and Engineering Issues with the Draft 2016 Draft Business Plan

Attachments:

1. Professional Resume, Paul S. Jones, PE, Ph.D.

2a Memorandum from Frank Vacca to Jeff Morales, dated February 11, 2013; subject: "Phase 1 Blended Travel Time". This document is in the Administrative Record of the Tos et al vs. CHSRA et al. (Sacramento County Superior Court case No.34-2011- 00113919) lawsuit as AR 407.

2b. Declaration to the Superior Court by Frank Vacca, dated April 11, 2013. This document is in the Administrative Record of the Tos et al vs. CHSRA et al. (Sacramento County Superior Court case No.34-2011- 00113919) lawsuit as AR 356. This document incorporates AR 407 (see Attachment 2a, above).

3a. "Independent Determination that Travel Time Requirements of Proposition 1A/AB3034 Cannot Be Met", dated March 13, 2015, by Paul S. Jones, PE, Ph.D.

3b. "Footnote Cross References" for the "Independent Determination that Travel Time Requirements of Proposition 1A/AB3034 Cannot Be Met" document.

3c. Declaration to the Superior Court by Paul S. Jones, dated April 24, 2015. The Attorney General did not allow this document into the Administrative Record of the Tos et al vs. CHSRA et al. (Sacramento County Superior Court case No.34-2011- 00113919) lawsuit. This document incorporated the report " Independent Determination that Travel Time Requirements of Proposition 1A/AB3034 Cannot Be Met", dated March 13, 2015, as Exhibit A (see Attachment 3a, above).

4. A group of 10 sets of 1:24,000 Scale U. S. Geological Survey Maps (a total of 74 maps) on which a Minimal Distance route from San Francisco's TransBay Transportation Center to Los Angeles' Union Station is illustrated that serves the cities selected by the High Speed Rail Authority and follows the Major Route Designations made by the Authority. These maps are referenced by the report provided in Attachment 3a and the Declaration provided in Attachment 3c.

Gentlemen and Women:

I am writing as a professional engineer who has spent a large portion of his career working with railroads on a variety of problems. In particular, I have participated in the design of three high speed rail systems: Madrid-Saville, Spain, Madrid-Barcelona, Spain, and Seoul-Pusan, Korea. I was responsible for and in charge of the first design study for the Madrid-Barcelona line in Spain. That work determined, among other things, that the line could not be financed with private capital alone. The cost and revenue structure dictated that public support would have to be used for most, or all, of the infrastructure. When built, the infrastructure was financed by the Spanish government. In addition, the revenue passenger counts for the first year's operation were within five percent of the passenger traffic that we had estimated for the first year's operation. Additional details about my background and qualifications are included in Attachment 1.

The primary purpose of this comment is to submit to the California High Speed Rail Authority (CHSRA) an extensive list of issues that need to be dealt with before the approval of the 2016 Business Plan.

These issues include Travel Time, Capital Costs, Environmental Studies, the Caltrain Corridor, San Francisco's TransBay Transportation Center, Interchanges, Positive Train Control, Jobs, Operation and Maintenance Costs, and Station Sidings.

Overview

The California High Speed Rail Authority's (Authority's) 2016 Draft Business Plan (Plan) is an upbeat, optimistic view of post high speed rail in California. Unfortunately, most of the benefits claimed by the Authority are largely or completely outside of the Authority's control.

High density urban development around high speed rail stations will be influenced by the degree to which the Authority can reduce and control station noise from through and stopping trains. However, high density development will be more heavily influenced by good public transportation service for residents throughout the urban area and managed automobile traffic, both outside of the Authority's control. Further, high-density urban development around high speed rail stations depends on reaching binding agreements with surrounding local jurisdictions to: 1) increase zoning densities in the immediate vicinity of the station and along transit lines leading to the station, and 2) prohibit further expansion of urban boundaries and continued lower density ("sprawl") development on the outskirts of urban areas. Thus far, the Authority has been notably unsuccessful in reaching binding agreements on either of these two goals.

Creating housing on a scale and at costs sufficient to make long distance commuting by high speed rail a viable opportunity for residents is influenced by both the services provided and the fares charged by the Authority. But, the cost and availability of housing are outside the Authority's control. Furthermore, the Authority's need to earn an operating profit eliminates its ability to offer incentive fares to encourage commuting. The proposed fares listed on P25 of the Ridership and Revenue addendum of the Plan serve as a major roadblock to any person seeking to establish a long term commute using high speed rail. For example, the one way fare between Fresno and San Jose is $63. This would cost a commuter $2,646 for an average month's commuting to and from work, or $31,752 for a year. That would take an enormous chunk out of the commuter's income, far more that the average worker could afford, despite any saving

on the cost of a home. High speed rail might be a viable commute mode for highly paid corporate executives, but there are far too few such people to make the line profitable, and such highly salaried executives can generally afford to live close-in to their work, which would be far more convenient than a high speed rail commute.

The Plan presents current travel volumes for Metrolink and Amtrak of 50,000 passengers per average work day, and 60,000 for Caltrain as significant volumes. In fact, these volumes represent very small fractions of total weekday travel in any of the areas served, indicating how difficult it will be to capture a reasonable share of the automobile market.

Because of the limited amounts of quantitative information provided in the Plan, it is difficult to make meaningful comments about many aspects of the Plan. However, questions can be raised and concerns expressed. Thorough responses to these questions and concerns would give considerably more confidence in the viability and credibility of the Authority's Plan. A number of these questions and concerns are enumerated below.

Travel Times

Proposition 1A/AB3034 requires that the Authority provide service that meets very specific maximum travel times. Specifically, it states that nonstop travel time between Los Angeles' Union Station (LAU) and San Francisco's TransBay Transportation Center (TTC) shall be no more than 2 hours 40 minutes, and nonstop travel time between San Francisco's TTC and San Jose's Diridon Station shall be no more than 30 minutes. While the Superior Court recently ruled that this requirement only comes into play when bond funds start being used, the Authority's Business Plan calls for such use. Therefore, the bond's standards must be met.

The Plan provides no information to even suggest that these travel time requirements can be met. Instead, the Plan has sprinkled through it casual, and factually unsupported, statements that the requirements of Proposition 1A will be met. The Plan does say that LAU to TTC travel will be less than 3 hours, but this does not meet the Proposition 1A/AB3034 requirements. It also states that travel between San Jose and Fresno will take about an hour, which represents an average speed of 150 mph. This would necessitate an average speed of 206 mph for the trip between Fresno and LAU to meet the travel time requirement. Without evidence, this does not appear credible considering the rough mountain terrain and the number of urban areas to be traversed. The Authority has repeatedly stated that trains would run no faster that 125 mph through urban areas. If the Authority intends to honor this commitment, it should say so. If it plans not to honor the commitment, it should say so. The sample service plan shows no nonstop LAU to TTC travel, or nonstop TTC to San Jose travel. Modifying the sample service plan by eliminating station dwell times and time lost braking and accelerating to make the stop still does not yield travel times that meet the Proposition 1A/AB3034 requirements.

The only claim that has been furnished by the Authority during the past four years to support its contention that the Proposition 1A travel times can be met is a set of speed-distance charts provided by Mr. Frank Vacca on February 11, 2013, Attachment 2a to this letter. This document was entered into the Tos vs. CHSRA lawsuit as part of a Declaration, see Attachment 2b. These charts were widely distributed to the Authority's Board, the Peer Review Group and other audiences. These Charts contain a great many errors, whose correction negates the ability to meet the travel time requirements. "The Independent Determination that the Travel Time Requirements of Proposition 1A/AB3034 Cannot be

Met" (Attachment 3a) was prepared by me in response to the Vacca Charts to correct evident errors in the Charts and to provide a careful analysis of the shortest route available to the Authority that would serve all of the intermediate stops designated by the Authority. After a careful study of the Draft 2016 Business Plan and its supporting documents, I find nothing that impacts the accuracy of my analysis or the validity of my conclusions which are contained in Attachment 3a. My Declaration of April 24. 2015 (Attachment 3c) provides a good summary of the results of my analysis and conclusion found in Attachment 3a. I believe the conclusions shown on the small table on page 6 of the Declaration remain valid.

The Authority has already made firm decisions that preclude the possibility of achieving the statutorily required travel times. The Authority's route selection is final between Fresno and Bakersfield because the Authority is actively buying property for its right of way over that route. By making that decision, the Authority has increased its route length by 40 to, 60 miles in order to traverse the Central valley from Gilroy to Madera and back from Bakersfield to Palmdale. These distances cannot be avoided so long as the Fresno, Bakersfield, and Palmdale route is fixed. Travel time is also grossly affected by the Authority's decision to place intermediate stations in Fresno, Bakersfield, and Palmdale. Necessary speed reductions through densely populated urban areas add further to travel time. Work has already begun on the Fresno Station.

The length of the Los Angeles to San Francisco route, as taken from a supporting page in a Peer Review report[1] that was made part of the Administrative Record in the Tos lawsuit, is 439.85 miles, compared with a highway mileage, via Interstate 5, of 382 miles, a difference of 55.85 miles, which adds a substantial increment of travel time irrespective of speed. By adopting the "Blended System", around which the Business Plan is built, high speed trains are required to use Caltrain tracks between San Francisco's Fourth and King Street Station and San Jose's Diridon Station, a distance of 47.5 miles. The addition of a 1.3 mile tunnel between the Fourth and King Street Station and the TTC will add additional travel time, particularly due to the two sharp curves required by the alignments of the two stations. By "Blending" high speed and commuter trains on these tracks, high speed trains will be limited to the same top speeds as commuter trains to avoid delays and congestion. Even with the addition of passing tracks, curve straightening, and grade separations along the Caltrain route, it will be extremely difficult, if not impossible to meet the mandated 30 minute travel time between TTC and San Jose.

The length of urban area through which the high speed trains pass is still in doubt. In particular, the route between Palmdale and LAU is still under intensive review. The route could follow the Soledad Canyon to Newhall or it could tunnel close to Burbank. If high speed trains slow only through the urban area between San Jose and Gilroy, through Fresno and Bakersfield, and through the corridor from the outskirts of Burbank to LAU, speeds will have to be reduced to 125 mph for some 75 miles of the route. This would require high speed trains to average over 200 mph over the balance of the route. Mountain passages must be made up the Tehachapi grade, over the Pacheco Pass, and through the San Gabriel

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[1] California High-Speed Rail Authority, "Update to Peer Review Group of Work in Progress on Train Performance Calculation (TPC) Trip Time Analysis", July 9, 2013. This report is document AR411 in the Administrative Record of the Tos et al vs. CHSRA et al. (Sacramento County Superior Court case No.34-2011- 00113919) lawsuit. See page 8. The total of all the distances on the right most column show 440 miles from San Francisco to Los Angeles Union Station.

Mountains. Grades, curves and tunnels through this mountainous terrain will require speed reductions to perhaps 150 mph, adding appreciably to travel time.

The Authority cannot brush aside the physical challenge of the mountainous terrain. It has not yet selected a final route over the Tehachapi Grade, from Tehachapi to Palmdale, or through the San Gabriel Mountains. Looking only at the Tehachapi Grade, any route selected by the Authority must ascend from the Central Valley floor, at an elevation of 800 ft. to the 4,000 ft. summit at Tehachapi City. The straight line distance is 20 miles. The Authority's data file[2] from a Public Records Request has 20.2 miles of this rise with grades of 2.5 percent to 2.8 percent. The only way that the grade can be reduced is to increase its length by building a long, very high, structure out into the Valley or by digging a very long tunnel to extend beyond Tehachapi City. The added route length would need to be 10 miles to meet the Authority's design criteria.

A more detailed development of travel times over the Authority's chosen route is presented in the paper "Independent Determination That the Travel Time Requirements of Prop. 1A/AB3034 Cannot Be Met", dated March 13, 2015, which is Attachment 3a to this Comment letter. Also included as Attachment 4 is a group of 10 sets of Geological Survey maps (total of 74 maps) that illustrate the alignment followed in the more detailed analysis. Attachments 3a and 4 were also prepared by the undersigned. The careful analysis illustrated in Attachment 3a produced minimum travel times from Los Angeles' Union Station to San Francisco's TransBay Transportation Center of 3 hours 13 minutes, and from San Francisco's TTC to Los Angeles' Union Sta. of 3 hours 16 minutes. These times will be difficult to shorten. It should also be noted that Exhibit 1 of Attachment 3a shows a distance of 466 miles from San Francisco to Los Angeles, which can be directly compared to the 440 miles projected by the Authority in Footnote 1 (see prior page). It is my professional judgment that the route studied in Exhibit 1 (and 2) of Attachment 3a and as represented in Attachment 4 is the shortest safe segment routes possible over the major route the Authority has selected. Therefore, there is a 26 mile "gap" which needs to be explained, or the travel times the Authority is presenting need to be adjusted upward, due to a longer "minimum distance".

To regain credibility, and meet the requirements to be able to use bond funds, the Authority must provide sound, defensible evidence that the travel times required by Proposition 1A can be met.

Capital Costs

It is unreasonable for the Authority to reduce its Capital Cost Estimate for Phase 1 on the strength of low bids for the first three construction contracts. None of these construction contracts have been completed. On Page 87, the Plan even admits that the first contract, CP1, may exceed its bid price. Experience around the world reveals that projects of the size and scope of the high speed rail

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[2] Comment to the Draft 2016 Business Plan, by William Warren, April 1, 2016, "Plaintiff's Public Record Act Requests and Responses from the Tos – CHSRA Lawsuit". See PRA Request Number 5 by Arthur Ringham (at PDF page 138), then see Exhibit 6 and 7 (at PDF pages 173 to 220). The specific data for the Bakersfield – Palmdale Section is in Document 5 of Exhibit 6 on PDF pages 205 to 208. Also note that the New ARs 357 to 362 are a subset of the documents in this Exhibit 6 and 7.

construction invariably exceed estimated costs by very large margins. The new eastern span of the San Francisco Bay Bridge is an outstanding example, well known to the Authority's CEO. Instead of lowering the capital cost estimates, the Authority should raise its estimates substantially based on evidence from other similar projects and go about raising the money that will surely be needed.

Some of the capital costs listed in the Plan appears to be inconsistent. For example, the cost per mile for signaling, communication, and electrification should be reasonably uniform throughout the project. However, the cost per mile for signaling, communication, and electrification for the full Phase 1 build out, P56 of the Plan, is $11 million per mile, while that for the Initial Operating Segment, Page 57 of the Plan, is only $6.5 million per mile. This is strange. Could the Authority have trimmed its cost estimates for the Initial Operating Segment to meet the estimated availability of funds? This would be a serious and unprofessional act.

Environmental Studies

On Page 26, the Plan states that all remaining environmental studies will be completed and certified by the Board by the end of 2017. With only 100 of the 450 route miles certified over the past five years, this seems unrealistically ambitious, particularly when the Bakersfield to Palmdale and Palmdale to Burbank alignments have not yet been selected, and face considerable physical challenges as well as opposition from residents and land owners along the proposed routes. In addition, a supplemental EIR will be required to address the still undetermined "wye" south of Merced.

On Page 85, the Plan states that, for the 2015 to 2020 period, the Authority will be working with the State Public Utilities Commission to eliminate grade crossings throughout the state. Because all new construction must be fully grade separated, this comment must apply only to the "Bookends ", where existing track will be used by high speed trains. The nature and location of grade crossings where grade separations are to be constructed will have significant environmental impacts. To certify the environmental documents before these changes are fully understood would be a grave disservice to the effected population, and likely to evoke further legal challenges. Conversely, waiting for full planning of the grade separations would significantly delay environmental certification.

On Page 60, the Plan identifies environmental costs to date as $643 million, with only the Fresno to Bakersfield segment and portions of the Merced to Fresno segment certified. The Plan estimates a cost of only $403 million to complete all of the remaining environmental studies. Regardless of the work completed to date, this is hardly a credible estimate for all of the work remaining, which includes some of the most challenging segments in Phase 1.

Caltrain Corridor

When the Authority last addressed joint operations with Caltrain on the Caltrain tracks between San Francisco and San Jose, there was a great deal of local resistance to the plan put forward by the Authority. This resistance has not gone away. Palo Alto is pushing to have the Caltrain tracks, south of California Avenue, depressed into a trench. Other trenching schemes have been put forward. If any of these schemes are accepted by the Authority, the cost reductions claimed on Page 54 of the Plan will very quickly disappear.

There are two other serious problems facing the Authority on the Caltrain Corridor. These are:

1. If high speed trains are to operate at 110 mph, as has been proposed, all 42 grade crossings on the corridor must have quad gates installed. These gates are promised on Page 31 of the Plan. Where will the money to install the gates come from?
2. With 20 trains per peak hour passing the grade crossings in both directions, and minimal gate down time through an efficient positive train control system, gate down times at crossings adjacent to stations could still be as high as 40 minutes per hour. At non station adjacent crossings, gate down times could be 20 minutes per peak hour. Blocking important arterial streets to this extent will impose unacceptable traffic delays and congestion, not to mention impeding access by emergency vehicles. These impacts have yet to be addressed by the Plan, but are likely to require major revisions.

Any and all changes made to Caltrain's route alignment to accommodate high speed rail will have a profound impact on Caltrain's electrification project, which is proceeding on the basis of the existing alignment. The cost of these changes would be significant. One should not assume that the Peninsula Corridor Joint Powers Board will be willing to agree to changes, let alone pay for any part of the cost involved. Have these extra costs (paying to modify the Caltrain infrastructure) been factored into the cost estimates for the Blended System?

San Francisco's TransBay Transportation Center

Proposition 1A/AB3034 specifies San Francisco's TTC as the San Francisco terminus for all high speed trains. TTC is under construction with a considerable amount of concrete and steel in place. Some decisions have already been made that have a serious impact on high speed rail operations. In particular, the number of platforms has been reduced from twelve to six. This reduction will make it difficult, if not impossible, to manage the four high speed trains and six Caltrain trains per hour expected to originate and terminate at the TTC each peak hour, even with minimal cleaning and turn around activities. Caltrain can be expected to resist efforts to reduce the number of Caltrain trains using the TTC. Furthermore, even at ten trains per hour originating at the TTC, the Blended System would not meet the five minute headway requirement of Proposition 1A/AB3034. If the Authority expects to use bond funds for construction, it needs to provide substantial evidence to support its ability to meet the required headway.

Rail operations into and out of TTC are based on the existence of a tunnel between Caltrain's Fourth and King Street terminal and the TTC. The tunnel, which has yet to be designed, would be about 1.3 miles long, as noted in the Plan. To date, no route has been selected by the Authority nor has its cost been estimated. Due to the orientation of the two stations, two sharp curves will be required in the tunnel, which will limit train speed and add to the difficulty of clearing the tunnel between trains. It is not clear who has the necessary funding to build this tunnel, San Francisco, Caltrain, or the Authority.

Interchanges

On Page 21, and elsewhere, the Plan refers to the ease of transferring among high speed rail and a number of other travel modes and systems, including Metrolink, Amtrak, Caltrain, BART, Los Angeles Airport (LAX), San Francisco Airport (SFO), San Francisco's Central Subway, and other services. Many of these connections are not convenient. BART would have only two convenient connections with high speed rail, Millbrae and San Jose's Diridon Station. BART is striving to reach the Diridon Station with its current extension. SFO could be well served with a redesigned Millbrae station and BART schedule

changes to accommodate high speed travelers. BART's Montgomery Street or Embarcadero Stations are 1/2 mile from TTC, a long walk with a suitcase. A futuristic "people mover" has been proposed to transport people the several blocks between the TTC and the BART Montgomery or Embarcadero Station. Has the cost of this "people mover" been factored into the costs in the Business Plan? Where will the money come from?

LAX is not convenient to high speed rail. It is 14 miles west of the LAU-Anaheim line, with no stop designated for a connecting service to LAX. Thus transfers between high speed rail and LAX would be inconvenient and time consuming unless a new subway or relatively rapid transit line is built to facilitate the transfer. Because of surface street congestion, bus service would be unacceptably slow and uncertain. There is no discussion in the Plan about how such a line would be funded. San Francisco's Central Subway is convenient to Caltrain's Fourth and King Street Station, but it is a full half mile from TTC.

While bus services and routes can be changed to accommodate high speed rail, they are captive to surface traffic which is an increasing problem in both cities. As a result, bus service is both slow and uncertain in both Los Angeles and San Francisco. San Francisco has been explicitly rejecting maintaining uncongested surface streets as a goal, intending to increase congestion with the aim of discouraging automobile use. The Plan should address how this change will affect the willingness of passengers to use high speed rail to access San Francisco.

Positive Train Control

With its commitment to a "Blended System", The Authority has introduced positive train control problems. On Page 30 of the Plan, under "Core Values", it states that the Authority embraces positive train control throughout its system. No mention is made of the fact that Caltrain is in the process of implementing its CBOSS positive train control system. This system is based on a General Electric development, which is no longer supported by General Electric. The result is a positive train control system that is unique to Caltrain's installation. Metrolink is also installing positive train control on its routes using a different technological approach. To operate on the Bookends, as well as on its own tracks, the Authority must have a single positive train control system throughout. This may involve selecting one of the Bookend train control systems and replacing the other, or replacing both to use a third positive train control system. Each option would involve substantial investment that does not appear to have been factored into the costs presented in the Plan.

Jobs

On Page 32, the Plan states that the high speed rail system will generate more than 3,500 permanent jobs. On Page 76, these jobs are broken down by region: Northern California, Central Valley, and Southern California. As now defined, the initial Operating Segment will include essentially all of the Central Valley and, perhaps, half of the Northern California jobs, or 1600 permanent employees. One expects that the Authority will honor its long time commitment to organized labor by paying union scale wages and benefits. Conservatively, the average annual wage and benefits would be $100,000 or more per employee. For 1600 permanent employees, this would amount to at least $160 million per year, or 76 percent of the operation and maintenance costs estimated on Page 74. For the full Phase 1 build out annual labor costs would be half of the total estimated operating and maintenance costs. For a capital intensive high speed rail system, the apparent high labor cost strongly suggests that either the number

of permanent employees is grossly overstated or the estimated operation and maintenance costs are grossly understated. The Plan needs to be modified to explain this discrepancy.

Operation and Maintenance Costs

There has been a very strong incentive for the Authority to minimize its operation and maintenance expenses in order to project and achieve maximized operating profit. This is a very dangerous game, particularly for an untried system seeking to operate its trains at higher speeds than any trains in service anywhere in the world today. In order to provide a safe and acceptable ride, the track alignment, horizontal and vertical, and gauge must be kept to very tight dimensional standards. To ensure that these standards are met, it will be necessary to conduct frequent inspections and it may well be necessary to increase the frequency of repairs particularly on curves taken at high speed. The very small differences between high and low cost estimates for operation and maintenance suggest a certainty of necessary maintenance that simply cannot be validated at this time.

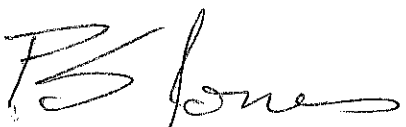
Station Sidings

Page 8 of the Service Planning Methodology states: "Mid-line stations are assumed to be 4 track stations with the two center tracks to be main line tracks and the two outside tracks to be station platform tracks. Station tracks will be siding tracks of approximately 1410 ft. adjacent to the station platforms. The switches to allow trains to diverge from the main tracks to the station tracks are currently designed to handle speeds of 110 mph." This statement is grossly in error. A 656 ft. long train that stops in the center of the station track would have a total stopping distance from the switch to the lead engine position stopped at the platform of only 1033 ft. To stop in this distance, while providing passenger comfort, the train would need to enter the switch at just over 35 mph. That means that the major deceleration from line speed would need to take place on the main line. The acceleration distance would be even shorter, 377 ft. The train would enter the switch at just over 23 mph. This practice would severely limit the minimum headways on the main line to avoid requiring the following train to slow to maintain a safe distance from the stopping train. Station sidings would need to be much longer to allow 8,000 ft. for stopping trains to enter the siding switches at 110 mph, and another 8,000 ft. to permit trains to accelerate to 110 mph before reaching the switch. The Business Plan needs to be modified to provide for realistic stopping distances and appropriate lengths of the four-track system around high speed rail stations. Construction costs need to be adjusted accordingly.

Close

I look forward to seeing the resolution of the problems enumerated above in the final Business Plan.

Cordially,



Paul S. Jones, PE, Ph.D.

OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL

7015 1730 0001 0704 7955

UNITED STATES POSTAL SERVICE

1020

Paul Jones
c/o Michael Brady
1001 Marshall Street, Suite 500
Redwood City, CA 94063

RETURN RECEIPT REQUESTED

Att. Draft 2016 Business
California High Speed Rail
Suite 620, MS-1
770 L Street
Sacramento, CA
95814

2016 Business Plan RECORD DETAIL

Submission Date :	4/10/2016
Submission Method :	Website
First Name :	Joe
Last Name :	Carton
Stakeholder Comments/Issues :	This project makes no sense. It is a total waste of money, taxes the environment and has no has value. We need reservoirs in California, not another train route. If you want to encourage the reductions in use of vehicles, we need more local commuting train and telecommuting. Stop being stupid with tax payer dollars.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/11/2016
Submission Method :	Project Email
First Name :	Judi
Last Name :	Tamasi
Stakeholder Comments/Issues :	To California High Speed Rail Authority, I support the California High-Speed Rail Project and the Draft 2016 Business Plan. I started an online petition and 14 people signed my petition to support the California High-Speed Rail Project and the Draft 2016 Business Plan. See below for the online petition link (petition now closed) and the list of supporters. We hope to see the completion of this project in the near future. Thank you. >From Judi Tamasi3815 Malibu Vista DriveMalibu, CA 90265 Link for online petition (now closed): http://www.thepetitionsite.com/takeaction/264/466/587/ List of supporters from this online petition:Natalie Taftian, CADee Gustavson, CAClaudia Giron, CAAnthony Choi, CASamantha Jorge, CANora Ulrich, CAGabor Tamasi, CAMichael Munro, CAMeighan Langlois, CARenee Hanson, NVKris Britton, CAYou-Gyoung Park, CASarah Lilley, CAColin Hoffmeister, CA
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date : 4/11/2016

Submission Method : Letter

First Name : Troy

Last Name : Hightower

Stakeholder Comments/Issues : Hello,

Please accept the attached scanned copy of my comments.

Below is a text copy.

Troy D. Hightower
****
April 9, 2016

Mr. Dan Richard, Chairman of the Board
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

RE: Comments on the Draft 2016 Business Plan

Dear Chairman Richard,

I appreciate the opportunity to provide comments in an effort to assist you and your organization in the monumental task of building a world class High-Speed Rail system in California. My first and foremost comment is to commend you for your leadership and you have my support.

My additional comments are in the form of recommendations. Please consider for adoption, or analysis establishing the existing Amtrak station in downtown Bakersfield as the interim HSR station mentioned in the draft business plan. There are a number of options as to how this can be accomplished such as electrifying track in the existing BNSF right-or-way, which is in the adopted Fresno-Bakersfield EIR.

The interim station at Amtrak could also provide connectivity to the numerous riders that transfer to/from Amtrak's Bus Connection service to all parts of southern California. I have discussed this with the San Joaquin Joint Powers Authority. They explained they are interested in discussing how to integrate their rail and bus connection service with HSR service at the Bakersfield interim station.

Should establishing the interim station downtown at the Amtrak station not be feasible at this time I recommend you consider extending Construction Package 4 (CP4) south as close as possible to 7th Standard Road. This could be done in a similar process as the recent extension of CP1 north. The interim station could be co-located at the site of the proposed Shafter Heavy Maintenance Facility. As 7th Standard Road is a main thoroughfare to both I-5 and the 99 Freeway this location would also support connectivity to Amtrak bus connections, a local multi-modal transit center, and provide easy access for travelers that will drive to/from southern California to Bakersfield to catch the HSR to all points north.

I have been involved professionally with the HSR project, and other transportation projects for many years. Riding the train and using public transit is my preferred method to travel up and down the State. In addition, I have been on the French TGV many times and can confirm it is enjoyable and works well. I believe my fellow Californians and people from around the world will agree when they ride the California HSR.

In conclusion, the recommendations I have submitted will help in two significant ways. Increase ridership/revenues for the Initial Operating Segment, and reduce the Vehicle Miles Traveled (VMT) generated by trips

that pass through Kern County and other Counties in the Central Valley. Thereby reducing GHG emissions and the harmful effects to residents of the Central Valley.

Respectfully,

Troy D. Hightower
Board Member
Californians for High-Speed Rail
Po Box 2493
Bakersfield, CA 93303

Notes :

Attachments : TDH_Comment_Letter_Scan_HSR_Draft_BP.pdf (513 kb)

April 9, 2016

Mr. Dan Richard, Chairman of the Board
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

RE: Comments on the Draft 2016 Business Plan

Dear Chairman Richard,

I appreciate the opportunity to provide comments in an effort to assist you and your organization in the monumental task of building a world class High-Speed Rail system in California. My first and foremost comment is to commend you for your leadership and you have my support.

My additional comments are in the form of recommendations. Please consider for adoption, or analysis establishing the existing Amtrak station in downtown Bakersfield as the interim HSR station mentioned in the draft business plan. There are a number of options as to how this can be accomplished such as electrifying track in the existing BNSF right-or-way, which is in the adopted Fresno-Bakersfield EIR.

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I have been involved professionally with the HSR project, and other transportation projects for many years. Riding the train and using public transit is my preferred method to travel up and down the State. In addition, I have been on the French TGV many times and can confirm it is enjoyable and works well. I believe my fellow Californians and people from around the world will agree when they ride the California HSR.

In conclusion, the recommendations I have submitted will help in two significant ways. Increase ridership/revenues for the Initial Operating Segment, and reduce the Vehicle Miles Traveled (VMT) generated by trips that pass through Kern County and other Counties in the Central Valley. Thereby reducing GHG emissions and the harmful effects to residents of the Central Valley.

Respectfully,

Troy D. Hightower
Board Member
Californians for High-Speed Rail
Po Box 2493
Bakersfield, CA 93303

2016 Business Plan RECORD DETAIL

Submission Date :	4/11/2016
Submission Method :	Project Email
First Name :	Morris
Last Name :	Brown
Stakeholder Comments/Issues :	At the April 6th, 2016 hearing of the Assembly Budget Sub-committee #3, the LAO gave detailed comments on the Draft 2016 Business plan. Considering all the obstacles needed at this time to over come funding issues for the proposed IOS north, it is pure folly to continue with this project. Even under the Authority's most optimistic projections, all available funding for this project will have been exhausted when the IOS north is competed in 2025. The HSR project as presented in Prop 1A (2008) was to be a 800 mile system extending from Sacramento to San Diego. Phase I of this project was to extend from San Francisco to Anaheim. The IOS north extends at best from north of Bakersfield to San Jose, yet all the funding will have been used. There will be no funding to extend the system south, through the mountains to Los Angeles, and Anaheim. No funding at all. Yet over 1/2 of the State's population are paying in taxes and Cap and Trade fees (taxes) to fund this truncated project. Yet the Authority continues to proclaim this is the project envisioned in Prop 1A. Now is the time to stop this non-sense, and stop the project. Attached to this email is the video link for the LAO testimony at the hearing, as provided by Jessica Peters. Also attached is the Auto translated (un-official text) of her testimony Morris Brown Stone Pine Lane Menlo Park, CA. Thanks for your consideration: morris brown 140 Stone Pine Lane Menlo Park, CA 94025 ==========
Notes :	
Attachments :	LAO Comments at 4 4 2016 ASSEMBLY BUDGET SUB #3 HEARING.pdf (22 kb)

April 8 2016

Submitted via email to:

2016businessplancomments@hsr.ca.gov

At the April 6th, 2016 hearing of the Assembly Budget Sub-committee #3, the LAO gave detailed comments on the Draft 2016 Business plan. (Video link and text of comments copied below)

Considering all the obstacles needed at this time to over come funding issues for the proposed IOS north, it is pure folly to continue with this project.

Even under the Authority's most optimistic projections, all available funding for this project will have been exhausted when the IOS north is competed in 2025. The HSR project as presented in Prop 1A (2008) was to be a 800 mile system extending from Sacramento to San Diego. Phase I of this project was to extend from San Francisco to Anaheim. The IOS north extends at best from north of Bakersfield to San Jose, yet all the funding will have been used. There will be no funding to extend the system south, through the mountains to Los Angeles, and Anaheim. No funding at all. Yet over 1/2 of the State's population are paying in taxes and Cap and Trade fees (taxes) to fund this truncated project.

Yet the Authority continues to proclaim this is the project envisioned in Prop 1A.

Now is the time to stop this non-sense, and stop the project.

Morris Brown
Stone Pine Lane
Menlo Park,CA

LAO Comments from 4-6-2016 Assembly Budget Sub-Committee #3 hearing.

Video Link: https://youtu.be/PhuWAclk0zI

Jessica Peters with the legislative analyst's office I'm I think my comments relate primarily to issues one and two on your agenda. The authority has explained the major features of their business plan I a couple of weeks ago

our office did put out a report with our review of the plan and re-high light what we identify the major features the three primary issues for a legislative consideration. And I won't repeat the presentation that you already heard from them but I did want to point out a couple of things to expand upon certain elements in the the draft business plan related to the funding for the project. And so first and the business plan does identify a full funding package for the proposed initial operating segment into San Jose and this is the more complete funding package for any segment of the project and that that would be operable then the legislature had seen in prior business plan. I specifically the plan identifies twenty eight billion dollars in order to pay the cost of this segment I'm as the authority mentioned - twenty point seven billion of that that really did the capital costs and then there's another roughly seven and a half billion dollars in financing costs and the draft business plan does assume that a portion of the cost of constructing the project would be financed. I'm specifically the plan assumes six point eight billion dollars from proposition one A bonds four point two billion of which has not yet been appropriated by the legislature into this would require a future action by the legislature to make these funds available. Three point two billion dollars in federal funds that have already been appropriated to the authority. and seventeen point eight billion dollars from cap and trade auction revenues I'm and this would include auction revenues through the year twenty fifty. In terms of how the authority would use the funds they would use the funds through twenty twenty four and a pay as you go basis that would cover about five point three billion dollars of the cost of that operating segment I then the authority also assumes about twelve and a half to thirteen billion dollars in funds from twenty twenty five through twenty fifty I and these funds would support the proposed financing I'm too to pay the remainder of the cost of beyond initial operating segment on specifically the authority estimated this would generate about five point two billion dollars in financing proceeds to pay for the capital costs and up front through a securitization of these revenues I and with the balance of about seven and a half billion dollars are being going for paying the financing costs are that would be required under such a securitization. I with regard to the the rent funding plan for the remainder of the system phase 1 from San Francisco to Anaheim and the the business plan does not identify a full funding plan for how the authority would and pay the roughly forty four billion dollars and cost. To complete the system beyond the initial operating segment as the authority has testified already there are some different source that the funding that are contemplated that might be available and that the plan does not identify a way to fully paid for the cost of completing phase one of the.

In terms of issues that we have identified for the legislature to consider and the first one is the uncertainties regarding the funding plan for phase one and I'll speak to this and two different components on first regarding the funding plan for the initial operating segment to San Jose as I said previously that there is a a more complete funding package for an operable segment of the system then the authority has presented in prior business plans and thought that up in the right direction. And but we would know that about half of the funding that the business plan rely finally come from cap and trade auction revenues after the year twenty twenty it is our understanding that the cap and trade program is not authorized beyond the year twenty twenty and so I did that appear to require legislative action in order to extend these fund and we think that that's something the legislatures gonna want to consider on the merits of the cap and trade program and not programs and goal of reducing greenhouse gas emissions and to the extent that you choose to expand that program the funds could be available for high speed rail it well I'm really think it should be considered on its own merits. And even if the are those legal uncertainties were resolved in the cap and trade program were extended we think the proposed securitization of cap and trade revenues over the longer term would require additional legislative action and the the way that we continue with the preparation to the authority is currently structured we don't think would be sufficient to provide the level I was at certainty that investors would need in order to facilitate securitization and that we think additional stops would be needed by the legislature and for example and you could. Change the appropriation to make the repayment of high speed rail financing the first call on cap and trade auction revenues I'm and or provide a certain minimum amount in order to provide certainty that would be necessary in order to securitized that revenue stream over the long run. The other point regarding uncertainties for the funding plan is that the authority has not identified a complete funding plan for the remainder of phase one. I'm under their plan and they would exhaust all the identified funding for sources. To build the initial operating segment into San Jose. This would leave a funding gap at about forty four billion dollars and no identified funding sources for how they would complete the system. Mister Richard had testified and the authority would plan to securitize operating revenues of the fifth time when they get out of a portion of the thumb up and running I it it uncertain to us at this point and I think even to the private sector out to what extent and how much how much operating revenues or net net revenue there would be our operating profit there would be I think Mr Richard indicated that the private sector it like I see some actual numbers and there's a lot of uncertainty around that and so it's unclear to us to what extent you

thought that would be an available funding source even if it did become available at the level that the authorities is estimating under their estimates they would have roughly three to seven billion dollars that they could securitized from my initial operating segment depending on the specific scope and that could be used to fund the rest to faith line that amount fall significantly shorter at the amount necessary to fill about forty four billion dollar funding gap to complete phase one of the system we think that not having a complete funding plan for phase one is critical and that that's going to be an issue that you want to consider I into the extent that the authority is is developing a plan for the rest of the system. The second issue for legislative consideration that we identified I'm ties into that the issue of funding and that the the scope of the initial operating segment and the legislature is going to want to weigh the trade off of the proposed scope change and the previously planned initial operating like man would have gone from the central valley into the Los Angela area and what a would have server a much more populous region of the state and according to the authorities estimates would have had a much higher level of ridership then the now proposed initial operating segment into San Jose. However the authority would have required at least another ten billion dollars for the much higher capital costs of that segment and they have not identified the funding needed to complete that I schedule. And so we think that to the extent the legislature wants to continue the development of high speed train system that the proposed scope change has some merit and because that is much more likely that a full funding package for the IOS north into San Jose could be achieved than the previous pre planned initial operating segment I into the locked into Los Angeles Basin. To the extent that the legislature and concurs with the scope change for and and I'm going into San Jose because I legislatures going to want to consider whether or not the IOS has standalone value and in as I said before the. Under the authorities plan building and operating segment would exhaust all of the identified funding sources for this project. And so it is unclear when additional funding would become available and and and perhaps unlikely that it will become available on the timeline authorities assuming to complete the remainder of phase one of the project and so to the extent that the funding does not become available I you're going to want to insure that whatever is bill I twenty to thirty billion dollar project that that had standalone value that that had the scope that meet your priorities and and and in particular I think Mister Richard already addressed that the issue of the southern terminus and we think that there's option there and in the legislature does not need to concur with stopping the project on in an agricultural area we think that could be problematic that's

not consistent with that the CEQA approval for the project would require additional I environmental review and also would end the train in an area that does not have the services nesessary to meet the needs of passengers in terms of transit connections rental cars parking lot from the types of facilities. And the legislature can direct the authority to have the last stop on the train system could be out one stop north at that which is if they planned permanent station I you could also make it a priority to identify the two million dollars in additional funding necessary to extend the line into Bakersfield and those are just some examples and but we think that insuring that the scope is something that meets your priorities and we thank this going to be an important issue for the legislature to consider. And lastly the issue the that remaining issue that we want to highlight for you is just ensuring that the project has adequate legislative oversight year I'm staff agenda and note that we have a reckoning or not a recommendation but I as sort of an issue to consider and that the legislature needs detailed information on the costs scope and schedule of the high speed rail project information that's provided in the business plan as well as other reports that come to the legislature can be extremely difficult to compare from one plan to another and it makes it very challenging to track changes and cost and schedule overtime on because that is the information reported in one plan may relate to a specific scope and at that scope changes over time it's very difficult to understand if the cost changed as well is that because of the change in scope or that because costs have gone up or gone down and and that we think that the legislature may want to require more detailed information and and specify certain scopes of work I'm in order to ensure the information compatible over time I think you also want to consider and requiring future business plans to include information on all of the costs not just capital costs and the authority if they do finance a portion of the construction of the system could have a very high financing costs and that's a significant factor for the legislature to consider I am would require funding to pay those until you may want to have a more complete picture of the total cost of the project. I'll end my comment there and happy to answer any questions.

2016 Business Plan RECORD DETAIL

Submission Date :	4/8/2016
Submission Method :	Letter
First Name :	Cecil Russel and Eric Tobias
Last Name :	Cecil Russel and Eric Tobias
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Modesto_Chamber_of_Commerce_BP_040816.pdf (494 kb)

MODESTO Chamber OF COMMERCE

April 8, 2016

Modesto Means Business

1114 J Street
Modesto, CA 95354
(209) 577-5757
FAX (209) 577-2673

MODESTO
CALIFORNIA

Mr. Dan Richard
Chairperson, California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento CA 95814

Re: CHSRA Draft 2016 Business Plan

We are writing to you on behalf of the Modesto Chamber of Commerce, its members and the entire Modesto business community.

We are strong supporters of the improvement and expansion of the ACE rail service and of the San Joaquin rail service which serve the Northern San Joaquin Valley. We greatly appreciated the importance that the CHSRA's 2012 Revised Business Plan placed on early investments to the San Joaquin Rail Service and the Altamont Corridor Express (ACE) rail service which would provide important connectivity to the HSR system.

We have very serious concerns regarding the CHSRA Draft 2016 Business Plan. It is breaking the promises made by CHSRA for "blended" service through Modesto and the Northern San Joaquin Valley in their 2012 Business Plan - service that is critical to improving our overall economy. Stanislaus, Merced and San Joaquin Counties were the most severely impacted by the Great Recession. For the most part, they have not recovered. It would seem that the primary intention of Federal Stimulus Act funding would be to help our three counties. However, the Draft Plan will, in fact, further inhibit our Counties from recovering and building back their economies. We cannot support the proposed modifications set forth in the Draft 2016 Business Plan.

We urge the CHSRA to make a strong commitment and give the highest priority to investments that connect HSR to Merced, that extend and enhance the ACE system to connect with HSR in Merced, and to make the connection to Sacramento through Amtrak. This connectivity will provide much greater ridership for HSR and better lifestyles for the tens of thousands of people who already commute every day from the Central Valley to the Bay Area. It will also create a connection between the Bay Area and the Central Valley that will lead to the type of economic development needed in Stanislaus, Merced and San Joaquin Counties.

There are many, many businesses and organizations that we speak for with this letter. They are very upset with the possible change in the Business Plan. We hope that the final version of the Business Plan can be one that does not breach the promises provided in the original plan - the plan that was voted on and supported by the people and the legislature.

Cecil Russell, CEO/President
Modesto Chamber of Commerce

Eric Tobias, Chairman of the Board
Modesto Chamber of Commerce

2016 Business Plan RECORD DETAIL

Submission Date :	4/11/2016
Submission Method :	Letter
First Name :	Daniel
Last Name :	Krause
Stakeholder Comments/Issues :	Please find the official comment letter from the San Joaquin Joint Powers Authority. Thank you.
Notes :	
Attachments :	SJJPACommentsLtronCHSRADraft2016BusinessPlan.pdf (254 kb)

San Joaquin
Joint Powers Authority

March 25, 2016
Mr. Dan Richard
Chairperson, California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

RE: Comments on California High-Speed Rail Authority (CHSRA) Draft 2016 Business Plan

Dear Chairperson Richard,

SJJPA appreciates the opportunity to comment on the CHSRA Draft 2016 Business Plan.

The CHSRA Draft 2016 Business Plan presents a significant change for where high-speed rail (HSR) service will be initiated. This new plan focuses on delivering a HSR line connecting the Silicon Valley to the Central Valley (north of Bakersfield) in 2025 instead of between Merced and the San Fernando Valley in 2022. While this is a major change for the phasing of HSR, it does not change the need for coordination and integration between the San Joaquin Rail Service and the HSR system.

With the exception of the Burbank to Anaheim improvements, the CHSRA Draft 2016 Business Plan places much less emphasis on "blended" service improvements than CHSRA's 2014 and 2012 Business Plans. Throughout the CHSRA's 2012 Revised Business Plan the importance of early investments to conventional services (including the San Joaquin Rail Service) which would connect to the HSR system was strongly emphasized. For example, page ES-6 of that document states, "Bringing high-speed rail to Sacramento, San Diego, and the Inland Empire through the blended approach to Phase 1. These areas will see improvements in rail service and access to high-speed rail service far earlier than previously planned." Page 2-1 of the CHSRA 2012 Business Plan states, "Making **early investments** in the "bookends," or Bay Area and Los Angeles Basin regions, and north from the San Joaquin Valley, to upgrade existing services, increase regional connectivity, improve safety, build ridership, and lay the foundation for expansion of the high-speed rail system." Having near-term improvement of the San Joaquin Rail Service between Fresno and Sacramento/Oakland should continue to be identified as important for increased regional connectivity and as a "feeder" service to HSR in the CHSRA Final 2016 Business Plan.

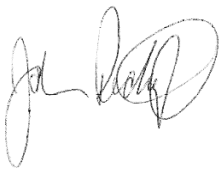
There has been no state funding made available to enable the planning, environmental, and engineering work needed to provide improved passenger rail service between the future Phase 1

HSR service and Sacramento. Without any funding, there has been no real progress in the planning for improved early investment for connecting the San Joaquin Rail Service from Sacramento through the San Joaquin Valley to the proposed HSR service. SJJPA is ready to work in partnership with CHSRA to best utilize the Prop 1A funding allocated for planning in this region through SB 1029 in 2012 for determining how best to provide near-term improvements to the San Joaquin service to improve connectivity to HSR.

As part of our Joint Policy Statement signed in 2013, SJJPA agreed to work with CHSRA and Caltrans to "protect the state investment in the San Joaquin Corridor, and work together to develop viable strategies and solutions to meet the needs of the high-speed rail system, the San Joaquin Rail Service and the stakeholder community." SJJPA remains committed to working with CHSRA, CalSTA, and Caltrans to determine how the San Joaquin service can best support the phased implementation of HSR. This would include how best to connect the San Joaquin service and Thruway bus network to HSR at a temporary station north of Bakersfield and at the ultimate Bakersfield station.

The SJJPA looks forward to working with CHSRA to implement a coordinated, complementary, and integrated intercity rail network which will help California's economy and will enable our State to grow in a more sustainable manner which protects the environment.

Sincerely,



John Pedrozo, Chair
San Joaquin Joint Powers Authority

cc Chad Edison, CalSTA, Jeff Morales, CHSRA, Ben Tripousis, CHSRA

2016 Business Plan RECORD DETAIL

Submission Date :	4/11/2016
Submission Method :	Website
First Name :	Arthur
Last Name :	Black
Stakeholder Comments/Issues :	NO, NO, NO Bullet ("High Speed Rail") Are we crazy? Spend the money on infrastructure or something worthwhile. The High Speed Rail is a Boondoggle that wil be a never ending Money-Pit!!
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/12/2016
Submission Method :	Project Email
First Name :	Morris
Last Name :	Brown
Stakeholder Comments/Issues :	April 12,2016 Please enter the attached PDF file as a comment on the 2016 Draft Business Plan. Morris Brown Stone Pine lane Menlo Park, CA.
Notes :	
Attachments :	IOS-North-Financial.pdf (615 kb)

April 12,2016

Sent via email.

Re: 2016 Draft Business Plan – Will the proposed IOS north operate at a project or need a subsidy?

At the April 6 2016 hearing of the Assembly Budget Sub committee #3, there was a discussion between Chair Richard and Assemblyman Jim Patterson. A video excerpt of that discussion is posted on Youtube at:

https://youtu.be/iBziL_H0xOc

at about 12 min 30 seconds into this video Chair Richard states the following.

(un-official transcript)

Patterson:

Okay. There is a. We try to look at do you know of any high speed rail operations in the world that make substantial profit

Richard:

Actually. All of them virtually all of them. Make an operating profit. Which means. That once the capital is expended. That they operate without any further subsidy and they throw off excess cash. A couple of them actually throw off enough excess cash to pay back some of their capital cost. We're not suggesting although we kind of think we might get there but we're not suggesting that's the case because of that fact Sir that is why the authors of the bond act put in the requirement that there would be no operating subsidy because they didn't think there needed to be because they looked at the experience around the world. And I would also finally on this point just. Just observe. The closest thing we have to high speed rail in the United States right now is the Acela service between Washington and Boston. That service. On its best day maybe gets to a hundred and thirty five miles an hour the track is terrible they need to operate it. That service throws off excess cash that subsidizes other Amtrak operations that's the closest thing we have today it is not ok a true high speed rail system but around the world once the capital is expanded. These systems generate positive operating cash flows and our business plan lays out. The operating costs. In the revenues and

shows that there is a positive net revenue what you would call profit even from this segment that's why we're saying we can build it.

Chair Richard statement here is a direct contradiction of studies which have been conducted on this issue. Indeed the response (copied below) from the Cintra group to the Authority's Request for Expression of Interest last year, has this excerpt: (page 15)

- o Comment: We have reviewed data from the International Union of Railways (Sept. 2014) which analyzed all 111 high speed rail lines in the world. Of the 111 train lines, only 3 make an operating profit and one breaks-even. The remaining 107 high-speed rail lines require large government subsidies from both general taxpayers and drivers. The HSR lines that break-even or turn an operating profit have a different dynamic than CHSR, in that these lines are 30-50 years old and have much higher density of population in the areas that the train would serve. We believe it is highly unlikely that the CHSR will turn on operating profit within the first 10 years of operation. More likely, CHSR will require large government subsidies for years to come.

(footnote 2 --Make an Operating Profit: France/TGV (Paris Sud), Japan (Shin Osaka), US (Acela Northeast Corridor). Break-even: Japan (Hakata)

I seems obvious that the proposed operating segment from north of Bakersfield to San Jose will not be profitable, but indeed will need a subsidy, which is illegal under the restrictions in Prop 1A.

CALIFORNIA HIGH-SPEED RAIL AUTHORITY
DELIVERY OF AN INITIAL OPERATING SEGMENT

RESPONSE TO EXPRESSION OF INTEREST – RFEI HSR#15-02

SEPTEMBER 14, 2015

RESPONDENT

CINTRA INFRAESTRUCTURAS, S.A.
FERROVIAL AGROMAN, US CORP.

Point of Contact

The Contact Person for any communications related to this Project is:

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Cintra and Ferrovial Agroman bring together a multi-disciplinary team and provide full end-to-end integration of all project stages.

Cintra – Transportation Infrastructure Developer

Cintra is a wholly-owned subsidiary of Ferrovial S.A. Ferrovial S.A. is one of the few companies with more than 40 years of experience developing, managing, operating and maintaining infrastructure projects. Cintra specializes in the development of complex PPP transportation projects. The group's first Design, Build, Finance, Operate, and Maintain ("DBFOM") project was awarded in 1968, and was recently handed-back to the grantor after successfully completing the 35-year concession term. Cintra-Ferrovial is recognized by Public Works Financing Bulletin/Magazine in 2012 and 2013 as the top transportation developer by invested capital internationally, with over $72 B in PPP contracts.

In the last 4.5 years Cintra has raised over $3.3 billion of committed financing for US roadway concession projects in addition to investing $798 million of its own equity. The LBJ and NTE projects (Texas) are two of the largest P3 projects in United States history and combined represent a total investment of nearly $5 billion. These financings included $1.5 billion in TIFIA funds, $1 billion in tax exempt private activity bonds ("PABs"), and over $1 billion in equity from private partners, all arranged under a financing plan managed by Cintra's financial team.

Cintra currently manages 20 projects in six countries comprising 1,280 miles of roadways and a cumulative investment of over $28 B. Cintra has invested more than $1.5 B of equity and manages $5.8 B of direct private investment in the United States, represented primarily by investments in the Indiana Toll Road, the Chicago Skyway, SH 130, Segments 5 & 6, the North Tarrant Express and the LBJ Express. Information on the SH 130, Segments 5 & 6, North Tarrant Express and LBJ Express is provided under relevant experience. In recognition of these successes, Infrastructure Investor named Cintra "2009 Global Infrastructure Developer of the Year," and "North American Infrastructure Developer of the Year" in 2009, 2010 and 2013, further establishing Cintra as a leading P3 infrastructure developer even during challenging financial times.

Ferrovial Agroman - Design-Build Contractor

Ferrovial Agroman will join Cintra on the Project as the Design-Build Contractor ("DB Contractor") within the Design-Build Team, managing the design and construction of the Project. The DB Contractor will not invest equity into this Project, but will be expected to have an at-risk security package to support the risks which will be transferred to them during the course of the Project. Ferrovial Agroman is one of the world's preeminent construction firms with more than 80 years of construction experience in design-bid-build, design-build, and public-private partnership projects in all types of infrastructure assets, specializing in large and complex transportation projects. Ferrovial Agroman has designed and constructed 2,700 miles of railways including 440 miles of high speed rail; 2,300 miles of highway concessions; 9,400 miles of new roads; 16,700 miles of rehab of roads; and 270 miles of tunnels. Ferrovial Agroman has been active in the North American transportation industry since 1999, and currently has five major design-build contracts in the U.S. totaling more than $6 B. Ferrovial Agroman was one of the first construction companies to achieve ISO 9001 certification. Ferrovial Agroman is OHSAS 18001:2007 Certified firm, ISO 14001 compliant and has a certified Health & Safety Risk Management Plan.

Cintra and Ferrovial Agroman have extensive experience in developing complex infrastructure projects in North America similar in complexity and magnitude as the California High Speed Rail ("the Project").

Assuming that the California High Speed Rail Authority ("CHSR") elects to proceed under a Public-Private Partnership model for the Project, Cintra would perform the role of lead developer/equity member retaining an interest in the project operations and maintenance.

We anticipate that, Cintra would form a Special Purpose Vehicle (Concession Company) that would enter into the Comprehensive Agreement with CHSR to design-build-finance-operate-maintain the Project. The equity members will provide the equity and the resources to this Concession Company. The Concession Company will enter into a lump-sum fixed price and fixed schedule contract with the Design-Build Contractor, a joint venture led by Ferrovial Agroman, for the design and construction of the Project. The Concession Company would also manage operations and maintenance as assigned in the Comprehensive Agreement for the term of the agreement.

Cintra is interested in participating in the Project if it comprises a concession regime that entails private financing (equity+debt) coupled with O&M performed by the private partner, and a construction element that requires advanced design and construction expertise, for a fixed price and schedule. Specifically, we are interested in the Project

being procured as, an availability payment concession or a minimum revenue guaranty, or a combination of both.

We are confident we can provide a very competitive proposal assuming that the delivery method ultimately chosen by the Authority is consistent with the feedback in our EOI response. The Cintra/Ferrovial Aroman team brings a unique combination of world-class Financial, Technical and Operational expertise and prior experience with financing.

Proof of this is the recent proposals won by our Group in North America involving different delivery methods:

- **NTE** and **LBJ** (Texas), demand risk concessions – TxDOT saved 20% ($237 million) of the public equity committed to fund both projects. A bundle of value engineering (i.e. innovative design concept) and financial innovation (first time unwrapped PABs for a managed lanes/toll road concession placed in the market) made this achievement possible;
- **407 East Extension** (Canada), availability payment concession – The design concept developed jointly by Ferrovial Agroman´s DBJV and Cintra´s OM&R teams which integrated O&M and life cycle considerations lead us to submit the most efficient long term OM&R strategy. This paved the way for the optimal project capital structure crafted by our project finance team which afforded Infrastructure Ontario estimated savings of $40 million; and

  We have a strong commitment to our clients and project stakeholders. We are long distance runners and we will work with CHSR to make the California High Speed Rail System a viable project and reality for the citizens of California.

Commercial Questions

1. Is the delivery strategy likely to yield innovation that will minimize whole-life costs and accelerate schedule? If so, please describe how. If not, please recommend changes to the delivery strategy and describe how those changes will better maximize innovation and minimize whole-life costs and schedule.

For a large complex infrastructure project, generally a public private partnership under a design-build-finance-operate-maintain (DBFOM or DBFM) delivery mechanism will result in the lowest whole-life cost, greatest project acceleration and schedule certainty.

Whole-Life Costs

Transferring the responsibility for maintenance and lifecycle costs to the private sector will incentivize bidders to design with future Operations, Maintenance and Rehabilitation (OM&R) work, (and costs) in mind. A concessionaire with responsibility for future OM&R work will focus during construction, to deliver an asset which requires a minimum level of future maintenance work. For example, it can be more cost-effective to build an asset with features that are more expensive at the outset, but will result in reduced maintenance costs over the whole life-cycle of the asset. A private firm that is responsible for only one phase of the project does not have an incentive to incur these additional costs, even if those costs would be more than offset on a present-value basis by the savings achieved in a subsequent phase.

Overall, integration of design and construction with operations and maintenance can achieve lifecycle cost savings in excess of 20%.

Integrating OM&R into a P3 provides enhanced innovation in the form of Advanced Technical Concepts (ATC's). While ATCs are common in DB procurements, in a P3 whole of life considerations are taken into account, resulting in better ATC's that generate savings during operations as well as in construction.

Project Acceleration

A P3 with private financing can accelerate some projects years ahead of when they might be delivered versus publically financed projects. A DBFOM delivery can also allow for schedule certainty which is driven by the fixed-price date-certain construction contract and the oversight role of the private sector financing with strong and liquid security to project against contractor default.

California High-Speed Rail (CHSR) Delivery Model

After a thorough and complete review of the CHSR Business Plan and other supporting documentation, in our view, the following delivery models should be considered for delivery of the Project:

- **DB**
  Using a design-build delivery model, a majority of the CHSR could be financed by the public sector and delivered under numerous design-build packages. This model transfers a majority of the design and construction risk to the private sector by selecting one private construction joint venture to perform both functions. Instead of relying exclusively on the lowest bid, design-build selections are usually based on the "best value" bid using preliminary design documents (around 30%). The public agency retains the obligation to fund the project, along with O&M. This model will provide significant benefits over traditional procurement with respect to certainty of price and schedule and provide some modest level of technical innovation. However there is no consideration of life-cycle costs with this model and savings and efficiencies will be significantly less than under a P3 model.

- **DBOM or DBM**
  This model is similar to the design-build approach (with multiple DB packages) but also includes a short to medium term operational and maintenance responsibility for the private partner. This structure promotes additional innovations during the construction and design process, as the private partner is motivated to produce a high quality asset that performs well the initial life of the contract and has manageable maintenance costs. The public agency retains the obligation to fund the project and any demand risk.

- **DBFOM or DBFM (Availability Payment)**
  This model is similar to the DBOM/DBM approach (with multiple DB packages) but, with the private partner also responsible for financing. The use of private financing can allow the project to be built faster. Under this model, the public sector is still responsible for the revenue stream to support the private financing, (collected first by the public agency) or public sources (such as annual appropriations or dedicated tax revenues). These revenues are then paid in annual installments (known as "availability payments") to the private partner, on the condition that the transportation facility is "available" and meets agreed-upon performance specification. The private partner then uses these payments to pay operating and maintenance costs, cover debt service, and

provide returns to equity investors. All demand risk is borne by the public sector.

Given the inherent risks in this project, an availability payment obligation from the CHSR, backed by its limited resources would likely be inadequate to finance the Project. It is our belief that an availability payment backed by the State of California would be required to fund this project. Also we do not believe that the private sector would find a DBFOM or DBFM delivery model with full revenue risk transfer attractive.

- **DBFOM or DBFM (Minimum Revenue Guaranty)**
  A Minimum Revenue Guaranty (MRG) which is a combination of a revenue risk and availability payment project. Under this scenario, the State of California would guarantee a minimum amount of revenue per period (e.g., 70%), regardless of the project's performance. If toll revenue is below the lower bound (say 70%), the State provides a subsidy to make up some of or the entire shortfall. Revenues in excess of the upper bound are shared with or turned over entirely to the State/Authority.

  The MRG provides a great deal of security to debt holders, and leaves the majority of the remaining risk to the equity, so the project could be leveraged further than before and additionally, the cost of the private debt would also be less expensive. The combination of more leverage and less costly debt will fund more project scope and/or lower the required subsidy from the Owner.

- **Multi Delivery Models**
  A hybrid approach could be undertaken, whereby some components of the Project could be financed by the Authority while others are financed through a DBFOM (Availability) or DBFOM (Minimum Revenue Guaranty).

We would recommend the delivery of the required civil works through a series of design-build sub-packages as more fully described in question 5. Many of these design-build sub-packages could be delivered through a P3 model, subject to capacity constraints within the P3 equity sector. Some of the packages and civil sub-packages may have to be delivered by a DB model.

With DBFOM, MRG or Multi Delivery models there would be significant residual integration risk that the private sector would not be in a position to retain. An analysis would need to be undertaken to determine how much of this integration risk should remain with the public sector.

2. Does the delivery strategy adequately transfer the integration and interface risks associated with delivering and operating a high-speed rail system?

The delivery strategy as proposed in this Expression of Interest we believe is not executable in the private market, and would transfer excessive integration/interface risk to the private sector.

We have examined IOS North & South as one project, and separate projects for the purposes of this EOI response. As reflected in Exhibit A, the estimated combined hard and soft costs[1] associated with the IOS using end-of-year dollars is $58.6 billion. We have looked at delivering the IOS using a P3 delivery model as shown in Exhibit B. The size and scale of the IOS is outside the delivery capacity of major industry participants, both locally and globally. These reasons include balance sheet capacity, bonding limitations, single risk limitations, human capital and other resource limitations. Contractors in the U.S. market have demonstrated abilities to delivery projects up to $4 billion. Using this $4 billion limitation we have broken the $58.6 billion IOS capital needs into 6 delivery packages as follows:

- Stations, terminals, intermodal & Support Facilities $2.4bn
- Signaling Systems + Rolling Stock $3.9bn
- Electric traction $3.4bn
- Track $2.6bn
- Train & Infrastructure Operations tbd
- Civil $38.7bn

We have broken the civil works in 10 sub-packages of $3.8bn each.

While breaking down the IOS needs into 15 packages/sub packages may work from a capacity perspective, it divides the project into too many pieces, which increases the number of interfaces among different sections of the rail line, leading to potential problems with coordination. Multiple packages may drive the best value solution, but this solution creates an increased interface risk. We do not believe the private sector will be willing to accept this much interface/integration risk. We believe that these major interface risks should be retained by the public sector irrespective of the chosen delivery model.

Interface Risk Defined: With multiple packages if a defect occurs for a particular section/package this could lead to complex claims against or between multiple contractors due to the difficulty in determining which party is at fault. This may result in claims between government, contractors, operator and maintainer in relation to the impact of these defects.

[1] Soft costs include interest during construction, development costs, lender required reserves, debt fees, taxes and SPV costs.

What are the key risks that will be borne by the State if such risk transfer is not affected?

As shown in the chart on the following page, assuming the State delivers CHSR under a design-build delivery model the key risks retained versus a P3 delivery would be: integration/interface, right of way, environmental for known conditions, O&M, financing and ridership/revenue

What are the key risks that are most appropriate to transfer to the private sector?

The following chart illustrates how major risks are generally allocated using various infrastructure delivery models.

INFRASTRUCTURE PROJECT DELIVERY
SUMMARY RISK ALLOCATION/TRANSFER

Risk	Design-Bid-Build	Design-Build	DBFOM - P3 (Availability)	DBFOM - P3 (Revenue)
Scope Changes (owner requested)	Public	Public	Public	Public
NEPA/CEQA Approvals	Public	Public	Public	Public
Permits & Approvals	Public	Shared	Shared	Shared
Right of Way	Public	Public	Shared	Shared
Utility Relocation	Public	Shared	Shared	Shared
Rail Relocation	Public	Public	Public	Public
Design (errors & omissions)	Public	Private (80%/20%)	Private	Private
Ground Conditions	Public	Shared	Shared	Shared
Environmental Contamination (pre-existing & unknown)	Public	Public	Public	Public
Environmental Contamination (other or known)	Public	Public	Private	Private
Construction Delays	Shared	Private (80%/20%)	Private	Private
Construction Cost Overruns	Shared	Private (80%/20%)	Private	Private
Rail Integration/Interface	Public	Public	Shared	Shared
Labor Disputes	Public	Private	Private	Private
Quality Assurance/Control	Public	Shared	Private	Private
Final Acceptance	Public	Private	Private	Private
O&M + CapEx/Lifecycle	Public	Public	Private	Private
Financing	Public	Public	Private	Private
Interest Rate/Credit Spread	Public	Public	Public	Public
Changes in Law	Public	Public	Shared	Shared
Force Majeure	Public	Shared	Shared	Shared
Ridership	Public	Public	Public	Private
Revenue	Public	Public	Public	Private
Fare Collection	Public	Public	Public	Private

3. Are there any other components of a high-speed rail system that should be included in the scope of work for each project?

Some of the components of the high-speed rail system could be bundled together to facilitate optimal packaging and procurement outcomes. As noted in our response to question #1, it could be possible to procure some, of all of CHSR as a DBFOM or a DBOM, thereby combining the design and construction with the maintenance and the operations. One of the key benefits of integrating components of the high speed rail system at key interfaces is the minimization of transaction costs and interface risks.

4. What is the appropriate contract term for the potential DBFM contract?

The proper duration for the concession will depend on the delivery method chosen by the Authority. Historically, projects procured under an availability payment model transfer less risk to the private sector, and, therefore, have a shorter payback period and require a shorter concession term. Availability payment projects can carry concession terms that commonly range from 30 to 40 years. Projects structured as revenue risk carry more uncertainty, thus require a longer concession term to compensate for this elevated level of risk assumed by the private sector. Due to the heightened risk profile of revenue risk projects, concession terms typically range from 50 to 99 years.

Will extending or reducing the contract term allow for more appropriate sharing of risk with the private sector?

Reducing the concession term from the above suggested ranges will impose additional risks on the private sector which will require some form of a higher equity required return and/or higher public subsidy. In an extreme case some private sector participants may not wish to bid a contract with a concession term that is too low. Extending the concession term may provide some marginal benefits to the public sector.

If the Respondent recommends a different delivery model, what would be the appropriate term for that/those contract(s)?

We are recommending a P3 availability model with a 30 to 40 year concession term or a MRG with a 50+ year concession.

5. What is the appropriate contact size for this type of contract?

As noted in our response to Question #2. We believe the maximum civil contract should be in the $3.8 billion range. The other contracts (stations, signaling/rolling stock, electric and track) could be in the $2.4 to $3.9 billion range.

What are the advantages and disadvantages of procuring a contract of this size and magnitude?

Using the above contract sizes as guidelines will provide the Authority with an appropriate amount of competition in procuring the Project, while also reducing interface risk and project construction duration.

Do you think that both project scopes should be combined into a single DBFM contact?

As stated earlier, we do not recommend combining all of the IOS project scope into one big $59 billion P3. The market will be unable to accommodate anything close to this size irrespective of whether CHSR elects a P3 or DB procurement. The project must be broken into manageable packages and sub-packages to achieve success for the Authority. In addition State Law would need to be modified to allow a lower level of bonding, since performance and payment bonds in this amount are likely beyond current and expected industry bonding capacities for a single contract.

6. Does the scope of work for each project expand or limit the teaming capabilities?

Generally for a DB or P3 project over $300 million, private companies team in the form of consortiums to diversify risk and allocate risk to the party best able to manage that risk. For a P3 project in the $3 billion range, a typical consortium will consist of 2 to 3 equity investors/concessionaires, 2 to 3 construction joint venture contractors, several local nominated construction sub-contractors, 2 to 3 designers and 2 to 3 O&M providers.

A mentioned earlier, each project (IOS-North and South) is too large to be considered as separate DB or P3 contracts. Attempting to procure either project above the recommended $3 to $4 billion contract size will limit teaming capabilities.

Again we recommend that the Authority pursue a project specific law that allows bonding at a lower level than required by current California law. We would suggest at a maximum the performance and payment bonds be 50% of the project value. Other

states have capped the performance and payment bonds lower percentages or at fixed dollar amounts for projects over a certain dollar amount.

Does it increase or reduce competition?

If each project is procured as stated in this EOI, competition will be seriously reduced.

Funding and Financing Questions

7. Given the delivery approach and available funding sources, do you foresee any issues with raising the necessary financing to fund the IOS-South project scope? IOS-North project scope? Both?

We do believe that the IOS (both North and South) as presented in this EOI is not achievable in the private market today for the reasons listed earlier.

We have reviewed the sources of funding for the California High Speed Rail project as listed below with our comments:

- **Federal Grants**
  - Comment: As indicated in the EOI, these funds are already fully committed for CP1-4.

- **Proposition 1A**
  - Comment: $4 billion is available for the System

- **Cap-and-Trade Proceeds**
  - Comment: The value of future Cap-and-Trade revenue for CHSR funding is uncertain for the following reasons:
    - Cap-and-Trade is valued on the free market in an auction process, thus it is impossible to know with any certainty the demand and value for this financing tool.
    - Cap-and-Trade is subject to political pressure. The Public Policy Institute of California conducted a poll in 2014 and found that a majority of California voters would not support Cap-and-Trade if it meant paying more for electricity or gas. There is no guaranty that this funding source will be available for 30 to 50 years in order to repay debt and equity holders their required return.
    - Based on publically available studies we have read, its appears as if the most optimistic projections for cap-and-trade proceeds available to fund construction would be in the $20 to $25 billion range.

- **Farebox/Operating Revenue**
  - Comment: We have reviewed data from the International Union of Railways (Sept. 2014) which analyzed all 111 high speed rail lines in the world. Of the 111 train lines, only 3 make an operating profit and one

breaks-even. [2] The remaining 107 high-speed rail lines require large government subsidies from both general taxpayers and drivers. The HSR lines that break-even or turn an operating profit have a different dynamic than CHSR, in that these lines are 30-50 years old and have much higher density of population in the areas that the train would serve. We believe it is highly unlikely that the CHSR will turn on operating profit within the first 10 years of operation. More likely, CHSR will require large government subsidies for years to come.

What are the limiting factors to the amount of financing that could be raised?

The first limiting factor is the amount of direct support/guarantees from the State of California for a P3 with private finance component. Without support from the State of California private financing is extremely unlikely.

The second factor is the amount of equity available in the market for greenfield P3's. There is a limited number of financial and industrial firms that have an appetite for investment in greenfield pre-operational infrastructure projects. We believe that the entire IOS will require in the neighborhood of $5.5 billion of equity capital, assuming that the entire project were able to be procured by a P3 concession and with a $18 billion assumed public/Authority subsidy. $5.5 billion of equity capital is well beyond the capacity of the infrastructure equity market today and in the near-term.

Lastly, funding the entire Project as a P3 may require up to $35.5 billion of private debt. It is doubtful that there is enough capacity in the debt markets for this type of project.

8. What changes, if any, would you recommend be made to the existing funding sources?

As stated earlier, we believe that private financing of some portion of the CHSR is only achievable subject to direct support from the State of California, through either an availability payment or minimum revenue guaranty.

It may be possible to privately finance some portion of the IOS over the next 10 years. The remainder of the scope could be publically financed, with a private finance take-out after construction completion and achieving certain operational income milestones.

What impact would these changes have on raising financing?

[2] Make an Operating Profit: France/TGV (Paris Sud), Japan (Shin Osaka), US (Acela Northeast Corridor). Break-even: Japan (Hakata)

If the State of California was able to provide availability payment or minimum revenue guaranty support for the Project, this would significantly increase the likelihood that some of the IOS's $58.6 billion of required financing could be raised. As indicated earlier, even with the full support of the State of California, the sheer size of the Project, and the estimated $5.5 billion of required equity make privately funding the entire project unlikely.

9. Given the delivery approach and available funding sources, is an availability payment mechanism appropriate?

As indicated in our response to Question #1, we believe an availability payment mechanism could be an appropriate financing tool; however the counterparty behind the payment guaranty should be the State of California, and not the Authority. The Authority's payment guarantee is only backed by its limited, and to a degree uncertain financing sources which include cap-and-trade proceeds.

Also as noted earlier in our response, even if the availability payment is backed by the State of California, it is uncertain that there is enough equity appetite in the P3 market today to fund the entire estimated $5.5 billion of required equity. In this case, some portion of the project may have to be financed by the public sector with the remainder being procured by an availability or MRG payment mechanism.

Could financing be raised based on future revenue and ridership (i.e., a revenue concession)?

We do not believe that the project could be financed as a pure revenue risk deal without some form of support, such as a minimum revenue guaranty. This MRG would have to be fully backed by the State of California and not the Authority.

Would a revenue concession delivery strategy better achieve the Authority's objectives?

Either availability or revenue based concessions can achieve much of the Authority's key project objectives. However, we believe that revenue risk concessions have some real strategic advantages over availability payment mechanisms. Such as:

- **Integration Efficiency**: Passing through to the developer revenue responsibility allows the developer to integrate design, construction, finance, operation and revenue management, finding synergies that the public sector will be unable to find.

- **Alignment of Interests**: Interests are better aligned under a revenue risk than AP project. Under demand risk, the developer's success only takes place when the road usage is maximized or when congestion is truly relieved, which is the main public sector objective for developing the project. An AP developer does not care if the project is used or not (in fact it can be argued he benefits from low usage because this drives costs down). Interests are misaligned.

- **Private Incentive**: Transferring revenue risk encourages an enterprising approach, taps private sector insights into customer preferences and priorities, and spurs radical new ideas for scope, design and financing of the most attractive projects

As stated in our response, a pure revenue concession for this project is not advisable. However, many of the benefits of the revenue concession can be achieved by using a minimum revenue guaranty (MRG). The key MRG benefit in addition to the ones listed above is:

Better Debt Financing/Lower Subsidy – With a MRG much of the extreme downside risk to the private sector would be limited, or hedged, by the State. Financing terms (interest rates, leverage) which would be closer to an availability payment project, and would result in a lower public subsidy.

10. **Based on the Authority's capital, operating, and lifecycle costs from its 2014 Business Plan, describe how the preferred delivery model could reduce costs, schedule or both. Please provide examples, where possible, of analogous projects and their cost and/or schedule savings from such delivery models.**

Larger projects will generally have lower total overhead costs; greater buying power; greater efficiencies in equipment and manpower use. The use of ATC's can also have greater impacts on larger projects. An example of this would be the elimination of the tunnel section on our LBJ project that saved one billion dollars.

The use of Design Build, a key component of the preferred and other recommended potential procurement methods has also proven to reduce total project timelines for design and construction. The majority of projects completed by our companies using P3 in the US are delivered significantly ahead of schedule. We have recently completed mega projects such as the LBJ project several months early and completed the North Tarrant Express project nine months early. These are from 10%-20% shorter than the contract time allowed

Examples of Cintra P3 Efficiencies

Cintra believes that the P3 model provides more savings and efficiencies than a DB or DBB procurement. P3's provide greater efficiencies (see examples below), which derives from developing projects with a lifespan perspective; from the transfer of public risks that can be better handled by the private sector; with incentivizes to innovate.

Cintra/Ferrovial Agroman Added Cost Efficiencies
3 managed lanes projects in the Dallas-Fort Worth area

Project	Estimated Cost Before Efficiencies	Implemented Efficiencies	Actual Investment
NTE 1&2W	$2.29 B	$480 M	$1.81 B
NTE 35W PDA	$1.49 B	$150 M	$1.34 B
IH 635ML (LBJ)	$3.52 B	$1.32 B	$2.20 B
Totals	**$7.30 B**	**$1.95 B**	**$5.34 B**

11. **How does this compare to separately procuring each high-speed rail component (i.e., separate contracts for civil works, rail systems, power separately)?**

The greatest savings in large complex infrastructure procurement generally happen with an integrated DBFOM. This model takes full advantages of the integration of design and construction with lifecycle and promotes the greatest quality and quantity of cost and schedule saving advanced technical concepts.

Procuring separately the civil, rail and power components can yield efficiencies provided this is coupled with some form of maintenance or maintenance and operations. Further savings can be achieved by the addition of private financing and the role of equity.

Please discuss design/construction costs, operating/maintenance/lifecycle costs, and schedule implications.

Separately procuring the different components during design and construction has both advantages and disadvantages. The advantages lie in larger more specific contracts with contractors who specialize in that particular type of work such as civil, rail, systems integration, or vehicles. These larger contracts will have greater buying power and cost efficiencies. The disadvantages lie in risk that the authority takes where these different scopes interface (civil works with tracks, tracks with systems and vehicles; systems with vehicles).

Separately procuring the components allows the specific experts to maximize total life cycle costs for their particular portion of the infrastructure – again the key difficulty will be managing the interface risk between the separate components. This risk would be certainly be a significant component in a Design-Bid-Build strategy where the Authority will absorb significantly all of this risk. In a P3 some of this risk could likely be transferred and the respective suppliers could be held responsible for their life cycle costs.

The schedule implications of separate procurements will be greatly affected by the dependent component construction. For example: Adjacent Civil packages could be constructed independently and achieve significant cost and schedule efficiencies. The rail and systems components will likely require that all of the civil be substantially complete prior to commencing construction in order to create the desired cost and schedule efficiencies. Thus one civil package that encounters difficulties or an extended schedule for unknown reasons could significantly delay follow on contracts and affect their costs and schedule..

12. **For each project, are there any technical changes to the respective scope of work that would yield cost savings and/or schedule acceleration while still achieving the Authority's objectives? Is so, please describe.**

An early review of the proposed alignment indicates that there will likely be design modifications that will optimize the tunnel, viaduct, lowered and embankment sections many general changes are being identified and modified during the current procurements. We do believe that early identification of hazardous materials, environmental constraints, and identification and acquisition of known ROW would yield significant cost and schedule acceleration. Additional Geotechnical technical investigations in tunnel and large viaduct sections and specifically near fault lines would also eliminate risk and the associated costs.

A. IOS Allocation of Costs by Segment

End of Year ($ millions)		Phase 1S IOS South Ctrl Valley to SFV	Phase 1S IOS South CP1-4 DB Contracts	Phase 1S Revised IOS South Merced to Burbank	Phase 1N IOS North San Jose to Bakersfield	Phase 1S & N San Jose/Merced to Burbank IOS
Track Structures & Track						
Civil	(civil)	$ 1,726	$ 1,727	$ (1)	$ 1,150	$ 1,149
Structures	(civil)	13,652	-	13,652	7,613	21,265
Track		1,418	-	1,418	657	2,075
Stations, terminals, intermodal		707	-	707	700	1,407
Support faciliites: yards, shops, admin bldgs		496	-	496	52	548
Sitework, row, land, existing improvements	(civil)	5,478	1,303	4,175	4,403	8,578
Communications and signaling		594	-	594	235	828
Electric traction		1,945	-	1,945	746	2,691
Vehicles		998	-	998	1,304	2,302
Professional services		3,087	-	3,087	2,015	5,102
Unallocated contingency		1,072	-	1,072	664	1,736
TOTAL HARD COSTS		31,172	3,030	28,142	19,537	47,679
TOTAL SOFT COSTS (@ 23%)		7,170	697	6,473	4,494	10,966
TOTAL COSTS TO FINANCE		$ 38,342	$ 3,727	$ 34,615	$ 24,030	$ 58,645
Multiplier to End of Year		1.122			1.325	1.363
Miles				300	110	410

B. IOS Packages Assuming a DBFM Delivery

IOS (North & South) PPP - Package Description ($ millions)	Add	Package	Sub-Package	Timing of Award	Phase 1S & N Package Value	(incl Soft Costs) Phase 1S & N Package Value
Stations, terminals, intermodal + Support Fac.	Main. + Lifecycle	1	n/a	?	$ 1,954	$ 2,404
Signaling Systems + Rolling Stock	Main. + Lifecycle	2	n/a	?	3,130	3,850
Electric traction	Main. + Lifecycle	3	n/a	?	2,691	3,310
Track	Main. + Lifecycle	4	n/a	?	2,075	2,552
Train and Infrastructure Operations	n/a	5	n/a	?	tbd	tbd
Civil - Package #1	n/a	6	1	?	3,099	3,812
Civil - Package #2	n/a	6	2	?	3,099	3,812
Civil - Package #3	n/a	6	3	?	3,099	3,812
Civil - Package #4	n/a	6	4	?	3,099	3,812
Civil - Package #5	n/a	6	5	?	3,099	3,812
Civil - Package #6	n/a	6	6	?	3,099	3,812
Civil - Package #7	n/a	6	7	?	3,099	3,812
Civil - Package #8	n/a	6	8	?	3,099	3,812
Civil - Package #9	n/a	6	9	?	3,099	3,812
Civil - Package #10	n/a	6	10	?	3,099	3,812
Other (prof. services + contingency)	n/a	1-6	n/a		6,837	8,410
Total Costs to Finance					$ 47,679	$ 58,645
Less: Assumed Public Subsidy (30%)						(17,594)
Total Private Capital (AP based P3)						41,052
Equity (13.4%)						5,501
Debt (86.6%)						35,551
Total Public Subsidy						17,594
Total Hard & Soft Costs						58,645

2016 Business Plan RECORD DETAIL

Submission Date :	4/12/2016
Submission Method :	Project Email
First Name :	Pattie
Last Name :	Barrett
Stakeholder Comments/Issues :	I am witting to tell you that I am totally against the HSR coming into our community and disrupting our lives. Tunneling through the Angels National Forest is something that should not be done, especially since at this time we are all trying to save our environment! Also building a bridge across the Big Tujunga Wash is ridiculous, I have lived here over 40 years and seen the floods that have come through, probably due for a big one again in the next few years. Our small community is one of the only horse communities left around here and is so cherished. E1 and E2 should be thrown out and go back to the drawing board to find another route. NO HIGH SPEED RAIL through our mountains and our neighborhoods. Lake View Terrace, Shadow Hills, Sunland and Kagel Canyon. Pattie Barrett
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date : 4/12/2016

Submission Method : Project Email

First Name : Lori

Last Name : Apthorp

Stakeholder Comments/Issues : The High Speed Rail Project is deeply flawed. One of the main problems is the idea of making tracks and tunnels though the huge San Gabriel Mountains. Terrible idea, considering the danger and cost of such a project. If tunnels are used, the scary idea of being inside one of these tunnels during an earthquake is a deal breaker. Think of all the ecological troubles, interfering with aquifers, and wildlife habitats. Going above ground is bad as well, considering noise pollution. Cutting towns in half with a train that isn't going to stop (if it did, no high speed value) is also a bad idea and not serving the voters.

The project is already rife with shady overages and out of control budget over-runs for various reasons. Somebody is lining their pockets with taxpayer money while nothing gets done. Such a tragedy must be stopped now, before it goes any further. The whole project stinks of corruption and I am very angry about this.

By the time the rail is finished, we will already have higher tech alternatives that will be less expensive, and easier for people to use. Just take a look at the rapid advances in Virtual Reality, and other internet communications that make being in person, face-to-face, not as important as it used to be. The younger people who will be the potential riders of this train might not even need to use it on a regular basis. They will just use their computers from their home office, or their super smart phones. The use of self driving vehicles could be used to link a series of cars together, in a special lane on existing highways, for a convoy that could travel at higher speeds than we currently travel in today's cars. Lots of options if people would just think about it a little bit more.

There are much better uses for our taxpayer money. It would be a better use of taxpayer money to improve the bandwidth for the internet infrastructure. This rail is not really wanted by the public. It is the golden goose for a few lucky business people who have used their shady influence to get rich. STOP IT NOW, PLEASE.
Lori Apthorp
10120 Parr Ave
Sunland CA 91040

Notes :

2016 Business Plan RECORD DETAIL

Submission Date :	4/12/2016
Submission Method :	Project Email
First Name :	Tracey
Last Name :	Adams
Stakeholder Comments/Issues :	To whom this may concern I was born and raised in Lake View Terrace Ca. I grew up riding my horses, biking, hiking in the Hansen Dam and foothills of Lake view Terrace. The streams and trails filled with wildlife and native plants. This was my playground as a child. I came back her as a widow and bought a home almost 3 years ago to raise my children and grand children here. For them to enjoy the natural surroundings. Now I am facing the possibility of HSR being within yards of my home. How is this even possible? Who is going to be riding this train? No one in my community that I have spoken to wants this nor will they ride this train. Who benefits from this? We do not want it here coming through our community. Stick to your plan to follow the hwy as it was voted for. Lake view terrace residents do not want this! Tracey Adams Sent from my iPhone
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/12/2016
Submission Method :	Letter
First Name :	Michael
Last Name :	Fuller
Stakeholder Comments/Issues :	To Dan Richard, Chair - California High-Speed Rail Authority Please see subject letter attached here.
Notes :	
Attachments :	City_Of-Mountain_View_041216_Biz_plan.pdf (825 kb)

CITY OF MOUNTAIN VIEW

PUBLIC WORKS DEPARTMENT
500 Castro Street • Post Office Box 7540 • Mountain View • California • 94039-7540
650-903-6311 • Fax 650-962-8503

April 12, 2016

Mr. Dan Richard, Chair
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

DRAFT 2016 CALIFORNIA HIGH-SPEED RAIL BUSINESS PLAN

Dear Chair Richard:

The City of Mountain View appreciates the opportunity to provide comments on the Draft 2016 Business Plan released by the California High-Speed Rail Authority (CHSRA) on February 18, 2016.

The Draft 2016 Business Plan (Business Plan) updates the previous funding plan developed for the high-speed rail project and also proposes a new initial operating segment (IOS) for the project. The City of Mountain View's comments regarding the updated funding plan and proposed change to the IOS for the rail project are detailed below.

Updated Funding and Financing Plan

The City of Mountain View has the following concerns pertaining to how the high-speed rail system will be funded based on its review of the updated Business Plan:

- Although the Business Plan identifies funding sources to complete the proposed IOS North of Phase 1, as well as pay for some of the additional bookend improvements, the Business Plan does not outline a specific funding plan to pay for the construction of the remaining improvements (estimated at $43.5 billion) planned for Phase 1.

- Approximately one-half of the funding identified in the Business Plan for the new IOS North (Central Valley to Silicon Valley) portion of the rail system is expected to come from cap-and-trade auction revenues after 2020. However, the future availability of this funding source is uncertain and reliance on this funding source for such a large portion of the IOS North may be considered speculative and risky.

Legislative action to continue the cap-and-trade program beyond 2020 will be required to ensure these funds as a viable funding source for the rail project.

- While the draft Business Plan discusses the possibility of securitizing the net operating revenues once the proposed IOS North is complete to support part of the costs to complete the remainder of Phase 1, it is unclear whether the system will actually generate an operating surplus. The Business Plan does not address how Phase 1 will be completed if the net operating revenues generated fall short of estimates or do not materialize at all.

City Comment: To ensure that Phase 1, as well as all future phases, of the high-speed rail system is completed as planned, it is imperative that the CHSRA develop a detailed, comprehensive, and less-speculative funding plan for the project.

New IOS/Impacts to the Peninsula Rail Corridor

The decision to shift the IOS for the rail project northward from the Central Valley to the Silicon Valley will impact the scope and timing of improvements needed within the Peninsula rail corridor between San Jose and San Francisco. The initiation of high-speed rail operations within the Peninsula corridor without these improvements in place could have significant negative impacts on rail service and traffic conditions along the Peninsula corridor.

The City of Mountain View applauds the Business Plan's commitment to contribute $600 million in support of Caltrain electrification and make other capital investments along the Peninsula rail corridor. However, the City is concerned about the reductions, elimination, and/or deferral of funding for other important rail investments along the Peninsula corridor outlined in the Business Plan.

The City of Mountain View also supports the Business Plan's inclusion of as much as $500 million for grade separations in its funding and capital plan, but notes that this funding, even when combined with other local and regional funding, will not be enough to adequately address the need for rail grade separations in the Peninsula corridor. Mountain View is also concerned by the Business Plan's call to defer the availability of these funds until some time after 2025 or 2030.

The timing of implementing grade separations and other needed improvements in the Peninsula corridor (e.g., passing tracks) will be critically important to ensure the blended Caltrain/high-speed rail service operates effectively in the Peninsula rail

corridor and does not result in further degradation of cross-traffic conditions at rail crossings because of more frequent and longer gate down times.

***City Comment:** The Business Plan must provide more detail regarding the timing and certainty of needed rail improvements in the Peninsula corridor between San Jose and San Francisco to ensure both Caltrain and high-speed rail operations can be safely and efficiently accommodated in the Peninsula rail corridor.*

The City of Mountain View appreciates the opportunity to comment on the CHSRA's Draft 2016 Business Plan and looks forward to participating in future high-speed rail discussions and planning efforts.

Sincerely,

Michael A. Fuller
Public Works Director

MAF/LF/2/PWK
901-04-11-16L-E

cc: CM, PWD, TBM, TP, F/c

CITY OF MOUNTAIN VIEW
Public Works Department
500 Castro Street, Post Office Box 7540
Mountain View, CA 94039-7540

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2016 Business Plan RECORD DETAIL

Submission Date :	4/12/2016
Submission Method :	Letter
First Name :	Chris
Last Name :	Morrisey
Stakeholder Comments/Issues :	
Notes :	
Attachments :	2016 San Jose Arena Authority HSR.pdf (2 mb)

San Jose Arena Authority

P.O. BOX 90207
SAN JOSE, CA 95109-3207
FAX 408.977.4784
TEL 408.977.4780
TTY 408.977.4779

April 12, 2016

California High-Speed Rail Authority
Attn: Draft 2016 Business Plan
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

To the California High-Speed Rail Authority:

The San Jose Arena Authority appreciates the opportunity to respond to the Draft 2016 Business Plan for the California High-Speed Rail project. Please be advised that the items included in this correspondence specifically relate to the impacts the California High-Speed Rail project will have on SAP Center at San Jose and the adjacent residential and commercial neighborhoods.

As this project continues to move forward, the Arena Authority respectfully requests that the items listed below be considered at the forefront of discussions with the California High-Speed Rail Authority, the City of San Jose, the San Jose Arena Authority, and Sharks Sports & Entertainment (SAP Center Management). Acknowledging the magnitude of this unprecedented transit project in the western section of Downtown San Jose and the anticipated, significant impacts on the areas at and adjacent to SAP Center at San Jose, the Arena Authority requests that the following points receive serious consideration:

Project Planning and Design

- Prior to any specific planning and design activities undertaken on the High-Speed Rail project, the California High-Speed Rail Authority should establish a local, standing community stakeholders committee to engage in the identification and oversight of construction planning and design issues in the vicinity of SAP Center at San Jose. The committee should be comprised of representatives from the following organizations (preliminary list): the City of San Jose; the San Jose Arena Authority; Sharks Sports & Entertainment; vicinity residential neighborhood associations; the San Jose Downtown Association; the Alameda Business Association; Caltrain; Bay Area Rapid Transit; the Santa Clara Valley Transportation Authority; and other critical stakeholders impacted by this significant statewide project.

- That prior to any action taken on the planning or design of the project, a coordinated effort with the appropriate representatives and stakeholders be undertaken to address the design of the intermodal High-Speed Rail station in relation to the other transit options expected to be utilized at the station, including, but not limited to: BART; Caltrain; VTA light-rail and bus services; private vehicle access and parking; taxi service; and pedestrian and bicycle access. Knowing that the station design is one of the more critical elements of the plan, a thoughtful, inclusive effort must be undertaken to ensure that the design promotes the safe and successful operations of the many intermodal transit options that will utilize the station and provides safe, efficient access to SAP Center at San Jose.

- That through the planning and design phases of the High Speed Rail project in San Jose, all mitigation efforts are identified and employed to ensure the uninterrupted operation of SAP Center at San Jose, including addressing that vehicular, public transit, pedestrian, and bicycle access routes and parking options to the Center remain accessible and operational.

- There are terms in the Arena Management Agreement between the City of San Jose and Sharks Sports & Entertainment that identify specific levels of agreed-upon parking inventories in and around SAP Center at San Jose. With that in mind, please ensure that a cooperative effort is undertaken to evaluate all vicinity on-site and off-site parking inventories (both public and private) prior to, during, and following the completion of project construction to uphold the specific parking levels as identified in the management agreement.

- That the project planning and design phases include a comprehensive analysis of public safety features, which will be incorporated into the final construction plans.

- That both the planned construction of the rail route and the multimodal station be given extensive analysis in relation to the unique elements of the western portion of Downtown San Jose. As you know, the western end of Downtown San Jose consists of both single-family and high-density residential housing, many distinctive commercial properties, parks, rivers and river pathways, SAP Center at San Jose, and a number of critical vehicular arteries that lead from the area roads and freeways to SAP Center at San Jose.

Project Construction

- That in cooperation with the area stakeholders, construction mitigation issues be identified and addressed prior to the commencement of construction including, but not limited to: vicinity parking space replacement; neighborhood access and integrity issues; agreed-upon construction vehicular routes; construction equipment staging areas; surface street access and parking; street/lane closures coordination; pedestrian and bicycle access in and around the construction area; and specific construction mitigation measures to support the uninterrupted operations at SAP Center at San Jose.

- That a comprehensive analysis of additional construction mitigation measures be specifically implemented to support the uninterrupted operations of SAP Center at San Jose, including but not limited to the following: vehicular traffic access; vehicular parking (at both on-site and off-site locations); public transit; patron access; day-to-day staff access; staging areas for large vehicle events; staging and/or parking areas for event support and police vehicles; limited or complete street closures and street access; as well as other pertinent issues that may come forward and impact the day-to-day operations of SAP Center at San Jose.

- That all potential construction issues that will impact the adjacent residential and commercial neighborhoods be identified and prioritized with the appropriate stakeholders prior to the commencement of project construction.

High-Speed Rail Operations

- In preparation for the regular operation of the California High-Speed Rail, the California High-Speed Rail Authority continues to engage a standing local stakeholders committee to ensure the operation of the transit system does not negatively impact the ongoing operations of SAP Center at San Jose or the integrity of the adjacent residential and commercial neighborhoods and Downtown San Jose.

- That once the rail system has begun operation the California High-Speed Rail Authority continues to monitor the safety and effectiveness of the system and the operational impacts on SAP Center at San Jose, Downtown San Jose, and the adjacent residential and commercial neighborhoods.

I appreciate your consideration on the items listed above and look forward to continuing to work cooperatively on this significant statewide rail project. Please feel free to contact me with any comments or questions. I can be reached at 408-977-4783 or at morrisey@sjaa.com.

Sincerely,

Chris Morrisey
Executive Director

c: Members of the Arena Authority Board of Directors
Members of the Arena Events Operations Committee
Jim Goddard, Sharks Sports & Entertainment
Jim Ortbal, City of San Jose Department of Transportation

2016 Business Plan RECORD DETAIL

Submission Date :	4/7/2016
Submission Method :	Letter
First Name :	William
Last Name :	Warren
Stakeholder Comments/Issues :	
Notes :	Flash drive included with letter. Contents available upon request.
Attachments :	Warren_Biz_Plan_040716.pdf (829 kb)

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

April 7, 2016

Subject – Comment Regarding Draft 2016 Business Plan

Topic – Amtrak Actual and CHSRA Projected Operating Results

The primary purpose of this Comment is to submit to the California High Speed Rail Authority (CHSRA) a complete set of analysis and the source Amtrak documents to shown how radically different are the projected operating results of the CHSRA from the actual operating of several different Amtrak routes. There are five Exhibits at the end of this Comment letter. There are seven Attachments included on the Thumb Drive appended to this Comment letter.

Summary

I believe the Amtrak operating results, on several different routes, are a good basis to look at the CHSRA's projected operating results, and to evaluate if the CHSRA's projection are reasonable and can be validated by these Amtrak results. My conclusion is that the CHSRA's projections are not reasonable, and the Amtrak data, in fact, invalidates these CHSRA projections.

Sources of Information

Amtrak produces, on a monthly basis, operating results for all of its routes in the United States. Amtrak keeps 12 months of reports available on their Web site. The best one they publish is the one for the month of September of each year, as September is the end of Amtrak's Fiscal Year (FY). This report provides cumulative operating results for the past 12 months (the Fiscal Year which has just ended) and the previous Fiscal Year. Currently the September 2015 report is on their Web site. Sometime in October or November of 2016, that report will be removed, when the September 2016 report will be posted, which will have the operating results for the Fiscal Years 2016 and 2015 (the

prior Fiscal Year). For clarity when I use the term operating costs, I mean all Operations Costs and all Maintenance Costs of all equipment, facilities, and right of way.

Three Different Amtrak Routes

Based on the September 2015 Monthly Report for FY 14 and FY 15[1], I have summarized the information for three different Amtrak routes in Exhibit 1 to 3:

Acela – running from Boston through New York to Washington DC. Fast, but not high speeds like the European market place, as they are constrained by a very out of date infrastructure. Exhibit 1 shows the operating results for FY 2014 and FY 2015. A review of pages C – 1 and 2, in the Monthly Performance Report, in Attachment 1, provides information on Acela at the top of the page, on the first row. Note that both a Per Passenger Mile (PPM) and a Per Seat Mile (PSM) measurement of the "Contribution" are provided on the two right most columns. "Contribution" is effectively an Operating Margin for each route, but it excludes any depreciation, freight, and interest charges. See the notes at the bottom of the page.

Observations – Note in Exhibit 1 the very high revenue PPM, in the range of 85 to 90 cents. Clearly this is a route that is selling first class/premium seats. Note their operating costs in the 44 to 47 cents PPM, and 28 to 30 cents on a PSM basis. Note the low number of passengers per year, 3 to 4 Million, clearly serving the luxury/business class market place, with average prices of the tickets in the $165 to $170 range. The Load Factor is in the 60 to 65% range, not very high, but probably one of the highest of Amtrak's routes.

Northeast Regional Route – also serving the Boston to New York to Washington marketplace. This is the commuter rail service operating in parallel with Acela. Exhibit 2 shows the operating results for FY 2014 and FY 2015.

Observations – Note the revenues PPM are much less than Acela, but in the range of 45 to 50 cents PPM, these prices are still much higher than the CHSRA is planning to charge. Note that their operating costs are in the range of 35 cents PPM and 19 cents PPM, much less than the costs for Acela, but still higher than what the CHSRA is projecting. Note the higher passenger volumes at about 8 Million per year, and a lower average ticket price, in the $75 range, which is still higher than the CHSRA projections. Note the lower Miles per Ticket, and the lower Load Factor, in the 50% range, which is consistent with serving a commuter marketplace.

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[1] Included with this Comment Letter, as Attachment 1. Also available at the Amtrak Web site Folder "Monthly Performance Reports" at:
https://www.amtrak.com/servlet/ContentServer?c=Page&pagename=am%2FLayout&cid=1241245669222
This specific report may be downloaded at:
https://www.amtrak.com/ccurl/322/821/Amtrak-Monthly-Performance-Report-September-2015-Preliminary-Unaudited.pdf
This report will be available until late 2016 when it will be replace by the next September report, for September, 2016.

San Joaquin Route – serving the Northern California to the Central Valley down to Bakersfield, with connecting bus service to the Los Angeles. Exhibit 3 shows the operating results for FY 2014 and FY 2015.

Observations – Note that more than half of the revenue being reported is a subsidy from the State of California, at about $40 Million per year. The ticket revenue is in the range of 23 cents PPM, and the subsidy is in the range of 25 to 27 cents PPM. This ticket revenue range, of 23 cents, is the same range the CHSRA plans to operate at, over the long term. The operating costs are in the 50 to 55 cents PPM, and 20 to 21 cents PSM, which explains why the State has to subsidize about half of the cost of the operations. Also note that the ridership volumes are very low, at about 1 Million per year, and with a very low Load Factor of 35 to 40 %, it is not surprising a state subsidy is needed – not a lot of customers and a lot of empty seats.. Note that the stated plans of the Authority are for the San Joaquin to stop service at the northern most Central Valley CHSRA station, once the IOS is in operation.

The CHSRA Projections

Over the past three versions of the Business Plans, the amount of useable, meaningful projections has gone from good, to a little, to none. While the Authority maintains it is very transparent, that is simple not the case. Even Public Record Act Requests are met with excuses that the modeling tools simply do not provide what ever information is being requested. Consequently, the following paragraphs are based on the projections provided in the time period of the 2012 Business Plan. However, since the Authority has stated that the 2014 Plan was built on the 2012 Plan, and the 2016 Plan is built on the 2014 Plan, the projections below are, most probably, reasonable. If the projections from the 2012 Plan are no longer useable, it would be reasonable to expect the Authority to publicly provide corrected projections, since national entities, such as Amtrak, make such information available, monthly, for every route in the US. A good place to start would be to place these projections in the Final version of the 2016 Business Plan.

The IOS South and Phase 1 – Following the same format used in Exhibits 1 through 3, Exhibit 4 shows the 2012 projections for the IOS South in 2025 and the built out Phase 1 in 2035. The sources are noted at the bottom of Exhibit 4.

Observations –

1. Revenue - The revenue the CHSRA projects for the IOS a few years after starting service will be in the same range as Acela is today, about $600M per year, and once Phase 1 is in operation, the revenue will exceed the combination of Acela and the Northeast Corridor by about 40%. However, the ability to charge customers a high marketplace competitive ticket price is dramatically less for the CHSRA. The CHSRA projects revenues of about 30 cents PPM during the IOS period and this rate will drop to

about 23 cents when Phase 1 is in operation. This is stark contrast to Amtrak's revenues of 50 to 90 cents PPM between Boston and Washington DC.

2. Operating Costs - At the same time, the CHSRA projects that operating costs will be in the range of 17 cents PPM, 11 cents PSM during the IOS period, and these costs will drop to 10 cents PPM, 8 cents PSM, during Phase 1 operations. This means that the Authority's projections, on a PSM basis, will be dramatically less than current Amtrak costs in the Northeast Corridor. See Table 1, CHSRA costs are projected to be just 35% to 55% of existing Amtrak costs.

Table 1
CHSRA Operating Costs, PSM, as a Percent of Northeast Corridor Costs, PSM

	IOS South 2025	Phase 1 2035
Acela	37%	27%
Northeast Regional	56%	42%

Nothing I can find in the 2014 or the 2016 Business Plan explains how the CHSRA can project operating costs substantially below the current costs in the Northeast Corridor. There simply is no "top down", side by side, comparison of the Authority's line item by line item cost projections, on a PSM or PPM basis, compared to any Amtrak service. In fact, there is not a similar comparison to European HSR operators either.

I think it is also important to point out that the Acela and Northeast Regional operating costs are, on a PSM basis, in the range of 19 to 30 cents. However, because of the Authority's low marketplace competitive pricing strategy, the revenues projected, on a PSM basis, are in the 17 to 18 cents range. This means that if costs actually approach the costs in the Northeast Corridor (19 to 30 cents PSM), the Authority will require a subsidy, and the ability to finance construction beyond the IOS, by selling future streams of positive operating margins, will be impossible.

3. Operating Efficiency – Note that the ridership projections grow dramatically from 8 Million on the IOS to 25 Million in Phase 1. At the same time the projected Load Factor is projected to grow from the 60% range up to 75%. The 2014 Business Plan says that Load Factors of 85% are the planning assumption, and the 2016 Plan is silent on this assumption. I have seen no publicly available reports that show that Load Factors of 85% are occurring in Europe. And clearly the Amtrak data does not reflect such a high degree of efficiency.

Historic Amtrak Operating Results

Over the past few years I have been downloading and saving Monthly Performance Reports. A quick review of these documents shows that as far back as 2011, Amtrak has been consistently reporting operating margins on both a PPM and a PSM basis, and the

dollar value of the revenues, the costs, and the operating margin, plus actual ridership numbers.

These can be seen in:

Attachment 2 – The monthly Performance Report, 4 months, January, 2011
Attachment 3 - The monthly Performance Report, FY 11 and FY 12, September, 2012
Attachment 4 - The monthly Performance Report, 5 months, February, 2014

These reports are no longer available on the Amtrak Web site, due to their policy of just making the last 12 months of reports available, as discussed above. The Authority might want to review these reports to see actual revenue and cost trends over time, on both a PPM and a PSM basis, across the United States. It is certainly a serious, and intentional, lack of transparency, or a desire to hide inconvenient truths, that is precluding the availability of such projections for the largest public works project in the history of California, and maybe the United States.

Amtrak Financial Statement

The Amtrak Audited Consolidated Financial Statement for FY 2014, dated October 1, 2015 is the most recent corporate financial statement. It is included as Attachment 5, and is also available on the Amtrak Web site in the 2014 Folder, under "Annual Reports"[2]. The important point to observe is that as a corporation, Amtrak reports depreciation as part of its corporate Profit and Loss. The reason it is important is that it is a very large annual expense, amounting to about 23% of total revenues, as shown on page 5 of the report, PDF page 7. Not only is it a large percentage of revenue, it is the largest line item of expenses on the report and is even greater than the sum of "Salaries, wages, and benefits" plus "Train operations".

A review of the Monthly Performance Reports shows that there is a column set up to show a depreciation charge by route, but it has not yet been implemented. Note the 4th column from the right is labeled "APT Asset Allocation", but this charge is still empty. (See pages C -1, 2, and 3) The footnote at the bottom of the pages states that this charge is "Under development and will be included once it is completed."

Clearly Amtrak is trying to get a fully allocated cost structure in place for all of its routes. It appears that the CHSRA is heading in exactly the other direction. The Authority has no intention to allocate a cost for the use (consumption) of the train sets, or the other pieces of capital equipment, over their useful life. This tactic reduces annual operating expenses, and therefore helps reduce the risk of needing a subsidy. But the consequence of such an act is to "kick the can down the road" on the hope and the prayer that there

[2] See:
https://www.amtrak.com/servlet/ContentServer?c=Page&pagename=am%2FLayout&cid=1241245669222
This specific report may be downloaded at:
https://www.amtrak.com/ccurl/927/760/Amtrak-Audited-Consolidated-Financial-Statements-2014-rev1.pdf

will be enough cash available from operations when these capital assets need replacement, in the 2050 to 2060 time period. But this strategy does not work, as shown by the situation BART (Bay Area Rapid Transit) is in, with worn out equipment and no cash reserve that should have been built up over prior years, and which should be available to purchase new equipment.

Consolidated Financial Reporting

The most recent CHSRA Business Plans speak extensively about the intent to engage one firm to be the operator of the HSR service, and a different company to manage the infrastructure. This is consistent with the European model of HSR operations. Given this intent, what appears to be lacking is a clearly defined intent by the Authority to consolidate the financial costs of these two business entities when measuring the CHSRA operating results against the provision of Prop 1A/AB3034 that the Authority will not require a subsidy.

It is my opinion that the intent of the voters was to require the entire CHSRA operation be able to sustain itself without a subsidy, not just the "operator of the HSR service", while the "infrastructure operator" is able to get infusions of cash from some other part of the State of California government. I can see very clearly that the "infrastructure operator" could get some annual fees from some group in California's Department of Transportation "for services rendered", which would be argued to be outside the restriction of "no operating subsidy".

There is such a lack of financial transparency in the Business Plans that it is not clear as to how the financial results of these two business entities will be consolidated and measured against Prop 1A/AB3034.

The reason I raise this point is because this is exactly what Amtrak has reported to be the circumstances surrounding the financial arrangements supporting the European HSR providers. Attachment 6 is a 2008 report by Amtrak's Office of Inspector General (OIG) regarding "Public Funding Levels of European Passenger Railroads"[3]. On page 2 of the report, PDF page 5, the chart shows how the "Infrastructure Manager" can avoid requiring that all of its costs be paid by the Train Operating Company, in the form of "user fees", because of public funding flowing into the "Infrastructure Manager". The amount of the "user fees" is therefore not equal to all of the Infrastructure Manager's costs, but just enough so that the Train Operating Company continues to report a positive Operating Margin. The shortfall the Infrastructure Manager incurs, of insufficient "user fees" to cover all of its costs, is made up by fees paid by some other government entity directly to the "Infrastructure Manager". Note that this process is across all passenger rail operations, it does not appear to be limited to just high speed rail as some of the countries listed do not have "high-speed" rail systems.

[3] This report is also available at: https://www.amtrakoig.gov/sites/default/files/reports/E-08-02-042208.PDF

Note the OIG points out there are actually two places where public funds flow to the European HSR systems. First, the fees flowing to the Infrastructure Manager, as discussed above, seen on the second row from the bottom of the chart. The second place public fees flow to the European HSR Systems is in the form of "revenue equivalents", such as the block purchases of tickets which are never used. This is shown on the top row of the chart. Given the complexity of the CHSRA's financial situation and restrictions, it would be in everyone's best interest if the Authority showed in its Business Plans its projected financial results such that the amount of public fees projected to be flowing to the "Train Operating Company" and to the "Infrastructure Manager" would be visible for all to see. Also note that Appendix II of the OIG report, which appears to have had detailed financial funding amounts by country, is not available for public review. That tells me that the numbers were large and no one would talk to Amtrak, without this degree of privacy.

For example, referring back to Exhibit 4, in the 2012 Business Plan the Authority showed Operating Costs of $334M in the Medium case for the IOS South in 2025. This translates to an operating cost of 17 cents PPM, or an operating cost of 11 cents PSM. It is not clear if this is referring to all of the costs shown, in yellow, on the chart in the OIG report, on page 2 (PDF page 7) on both the second and the fourth rows. Or are they just what is shown as the yellow on the second row, or some combination of the two? I am very sure that there are a number of independent financial accounting firms who would like some of the millions of dollars the Authority is currently spending on consulting fees to provide such an analysis. Since the Authority refers to possibly using European HSR financial planning and tracking tools and systems[4], some clarity on this issue is very necessary.

The Ongoing Battle Over Subsidies

There is no end to the national battle over how much subsidy is being paid to support public transportation, and if that is a proper expenditure of public funds raised by the process of taxation and fees. There was an extensive US Senate Hearing on September 20, 2012, on exactly this issue, with respect to Amtrak. This Hearing's report is included as Attachment 7[5]. In that Hearing they tried to determine how much subsidy was being paid, and they could not even agree how to measure the amount of subsidy. See page 53 (PDF page 63). What is note worthy is that no one maintained that there were no subsidies being paid to Amtrak, it was just how much.

The exception (no subsidy) was the Acela operation which was characterized as a high price service, predominately for business men and women, and which was capacity constrained. See page 155 (PDF 165). The lesson to be learned is that to avoid subsidies it is necessary to charge very high ticket prices on a PPM basis. And this implies that the market will pay a premium for this HSR service. For Acela, see Exhibit 1, this is at about

[4] See discussion of "Mainline" on the top of page 37 of the CHSRA 2014 Business Plan. Available at: http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2014_Business_Plan_Final.pdf

[5] This report is also available at: http://www.gpo.gov/fdsys/pkg/CHRG-112hhrg76148/pdf/CHRG-112hhrg76148.pdf

90 cents PPM. If the rail service can not serve such a narrow, but high demand, market, subsidies are an ongoing risk. See Exhibit 2, where the Northeast Regional, serving the same geography as does Acela, but at lower prices, is at just about break even. Lastly, look at Exhibit 3 where the San Joaquin has about the same operating cost PSM as the Northeast Regional (Exhibit 2), but the ability to charge high prices is just not possible and the State of California has it on life support.

Conclusion

The Authority is attempting to enter a market where it will have no commanding presence, which would allow it to charge commanding prices, but instead it must be price competitive against automobiles carry multiple people per trip[6]. In other words, it is going to be a commodity marketplace. The odds of requiring a subsidy is very high and this is in conflict with the provisions of Prop 1A and AB3034.

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[6] See page 1 and 7 of Comment letter regarding Draft 2016 Business Plan, by William Warren, "Ridership Model Auto Group Factor Could Be Overstating Auto Market", dated March 30, 2016, and received by the Authority on April 4, 2016.

Exhibit 1

Amtrak - Acela Route

	Year Ending Sept 30, 2014			Year Ending Sept 30, 2015		
	Millions	PPM	PSM	Millions	PPM	PSM
Amtrak Total Revenue - Reported (1)	$602.9	$0.898	$0.577	$599.2	$0.911	$0.574
Revenue - Tickets Reported (2)	$585.8	$0.873	$0.561	$584.9	$0.890	$0.561
Non Ticket Revenue	$17.1	$0.026	$0.016	$14.3	$0.022	$0.014
Amtrak Margin - Reported with non Ticket Revenue (3)	$306.0	$0.456	$0.293	$288.0	$0.438	$0.276
Operating Margin	$306.0	$0.456	$0.293	$288.0	$0.438	$0.276
Ridership - Reported (4)	3.55			3.47		
Passenger Miles	671			658		
Seat Miles	1,044			1,043		
Operating Costs	$296.9	$0.442	$0.284	$311.2	$0.473	$0.298
	(not Millions)			(not Millions)		
Revenue per Passenger (per Ticket)	$165.24			$168.42		
Miles per Passenger Ticket	189			189		
Load Factor	64.3%			63.0%		

(1) See Pages C -1 and C - 2, Amtrak Monthly Performance Report For September 2015, available at: https://www.amtrak.com/ccurl/322/821/Amtrak-Monthly-Performance-Report-September-2015-Preliminary-Unaudited.pdf

(2) See Page A - 3.3, Amtrak Monthly Performance Report For September 2015

(3) See Pages C -1 and C - 2, Amtrak Monthly Performance Report For September 2015

(4) See Page A - 3.3, Amtrak Monthly Performance Report For September 2015

Exhibit 2

Amtrak - Northeast Regional Route

	Year Ending Sept 30, 2014			Year Ending Sept 30, 2015		
	Millions	PPM	PSM	Millions	PPM	PSM
Amtrak Total Revenue - Reported	$624.3	$0.496	$0.261	$633.1	$0.492	$0.249
Revenue - Tickets Reported	$603.5	$0.480	$0.252	$611.7	$0.475	$0.241
Non Ticket Revenue	$20.8	$0.017	$0.009	$21.4	$0.017	$0.008
Amtrak Margin - Reported with non Ticket Revenue	$174.8	$0.139	$0.073	$175.1	$0.136	$0.069
Operating Margin	$174.8	$0.139	$0.073	$175.1	$0.136	$0.069
Ridership - Reported	8.08			8.22		
Passenger Miles	1258			1288		
Seat Miles	2,395			2,538		
Operating Costs	$449.5	$0.357	$0.188	$458.0	$0.356	$0.180
	(not Millions)			(not Millions)		
Revenue per Passenger (per Ticket)	$74.67			$74.46		
Miles per Passenger Ticket	156			157		
Load Factor	52.5%			50.7%		

Note: Sources of this information are the same as Exhibit 1

Exhibit 3

Amtrak - San Joaquin Route

	Year Ending Sept 30, 2014			Year Ending Sept 30, 2015		
	Millions	PPM	PSM	Millions	PPM	PSM
Amtrak Total Revenue - Reported	$82.1	$0.501	$0.200	$79.2	$0.482	$0.179
Revenue - Tickets Reported	$38.1	$0.232	$0.093	$37.4	$0.228	$0.085
Subsidy from California	$44.0	$0.268	$0.107	$41.8	$0.254	$0.095
Amtrak Margin - Reported with Subsidy	-$4.1	-$0.025	-$0.010	-$11.5	$0.070	$0.026
Adjust down for Subsidy	-$44.0			-$41.8		
Operating Margin	-$48.1	-$0.293	-$0.117	-$53.3	-$0.324	-$0.121
Ridership - Reported	1.19			1.18		
Passenger Miles	164			164		
Seat Miles	410			442		
Operating Costs (ignoring Subsidy)	$86.2	$0.526	$0.210	$90.7	$0.552	$0.205
	(not Millions)			(not Millions)		
Revenue per Passenger (per Ticket)	$32.07			$31.78		
Miles per Passenger Ticket	138			140		
Load Factor	40.0%			37.1%		

Note: Sources of this information are the same as Exhibit 1

Exhibit 4

CHSRA Projections from 2012 Business Plan

	IOS South in 2025			Phase 1 in 2035		
	Millions	PPM	PSM	Millions	PPM	PSM
Projected Total Revenue (1)	$564.0	$0.293	$0.174	$1,655.0	$0.234	$0.176
Operating Margin	$230.0	$0.120	$0.074	$931.0	$0.132	$0.099
Ridership - Projected (1)	8.14			25.71		
Passenger Miles - Projected (1)	1,922			7,079		
Seat Miles - Projected (1)	3,125			9,396		
Operating Costs - Projected (1)	$334.0	$0.174	$0.107	$724.0	$0.102	$0.077
	(not Millions)			(not Millions)		
Revenue per Passenger (per Ticket)	$69.29			$64.37		
Miles per Passenger Ticket	236			275		
Load Factor	61.5%			75.3%		

(1) Projected dollar amounts, ridership and miles taken from "To Repeat - California's High Speed Rail Will Require A Subsidy - Forever", A. Enthoven, et al., Second Edition, December 17, 2012. See Medium case, Figure A-4, on Page 2 of Appendix 4, PDF page 56. This document is AR 273 in the Adminstrative Record of the Tos et al vs. CHSRA et al. (Sacramento County Superior Court case no 34-2011-00113919) lawsuit.

Exhibit 5

The following pages are copies of page 2 and page 3 (PDG page 5 and 6) of the report:

A 2008 report by Amtrak's Office of Inspector General (OIG) regarding "Public Funding Levels of European Passenger Railroads"

This report is available at:

https://www.amtrakoig.gov/sites/default/files/reports/E-08-02-042208.PDF

FINDINGS:

Finding No. 1 - European Passenger Train Operations are typically organized into two separate business entities (operating companies and infrastructure managers) whose financial performance and public funding are closely intertwined with each other.

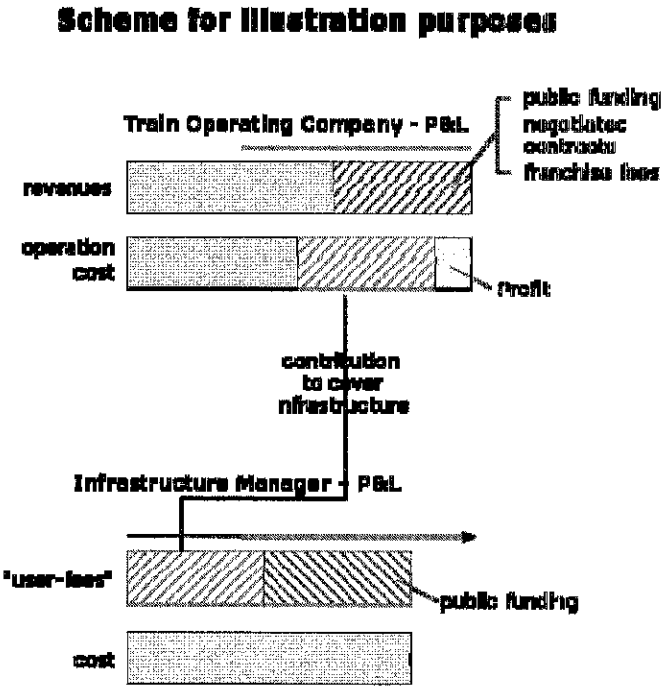
Discussion:

The methods used to provide Public Funding for European Passenger Train Operations are, in large part, based upon the organizational structure of these railroads. In contrast to Amtrak, European Passenger Train Operations are typically organized as two separate corporate entities:

1. a passenger train operator (i.e. "above the rail" train operations), and
2. an infrastructure maintainer (i.e. maintenance and operation of tracks, facilities, etc.).

The methods and levels of Public Funding have a direct impact on the profitability reported for each of these corporate entities.

As illustrated in the following exhibit, the Public Funding and financial performance of these two corporate entities are closely inter-related. This exhibit also illustrates how the combination of this business model and the methods of Public Funding support can lead to a misinterpretation of financial reports. For example, the financial performance of the Train Operating Company is a function of not only its direct operating expenses and transportation related revenues, but also the public funding levels it receives and the "user fees" it is charged by the infrastructure manager. Consequently, a train operating company is able to report a profit even when its total operating expenses, which include full infrastructure costs, exceeds its transportation



(i.e. passenger, freight, etc.) related revenue. Profits by the Train Operating Companies can sometimes be grossly overstated because:

- Public Funding to the Train Operating Companies may be accounted for as revenue, and

- Public Funding to the Infrastructure Managers enables them to charge "user fees" to the Train Operating Companies that may be significantly lower than the actual infrastructure maintenance expenses.

A valid assessment of European Passenger Train profitability must take into consideration the levels of Public Funding that are being provided to both the Train Operating Company and the Infrastructure Manager.

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Attention: Draft 2016 Business Plan
California High-Speed Rail Authority
Suite 620 MS-1
770 L Street.
Sacramento, CA

FIRST CLASS

APR 12 2016

2016 Business Plan RECORD DETAIL

Submission Date :	4/6/2016
Submission Method :	Letter
First Name :	Mark
Last Name :	Powell
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Powell_Biz_Plan_040616.pdf (501 kb)

Mark R. Powell
27840 Mount Triumph Way
Yorba Linda, CA 92887

April 6, 2016

California High-Speed Rail Authority
Attn: Draft 2016 Business Plan
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

To Whom it May Concern:

Attached for the Authority's consideration is a Word document submitted as a comment on their Draft 2016 Business Plan . It is entitled *The Future of Transportation and the Shrinking Case for Building High-Speed Rail.* It has been sent "Return Receipt" so that I will have proof of date of delivery and the name of the person to whom it was delivered.

This same document was also submitted by e-mail to the Authority at:
2016businessplancomments@hsr.ca.gov
It was sent via email as a Word document because it is heavily footnoted with links to my sources making it easy for anyone to check my facts.

Sincerely,

Mark R. Powell

enclosures: 1 Comment on the Authority's Draft 2016 Business Plan: *The Future of Transportation and the Shrinking Case for Building High-Speed Rail*

The Future of Transportation

and

the Shrinking Case for Building High-Speed Rail

By Mark R. Powell
April 5, 2016

People Will Travel Less in the Future…and the Future is Already Here.

Travel by Conventional Automobile:

Per Capita Vehicle Miles Traveled (VMT) by automobile has been declining in the United States since 2004[1]; one year before the California High-Speed Rail Authority (Authority) released its *California High-Speed Train Final Program EIR/EIS* (Program EIR) citing a need for nearly 3000 miles of new highway lanes by January 1, 2019 with 2100 miles of these needed by January 1, 2016 if their proposed statewide high-speed rail system was not built. Moreover, the decline in Per Capita VMT for the entire United States has caused Total VMT to remain flat for this same time period as shown in the graph below. This situation has been duplicated in California over the last decade where Total VMT has also been essentially flat. See Attachment 1. This is a fact that the Authority continually refuses to acknowledge in its ridership forecast and in its overall justification for building the largest transportation infrastructure project in the United States.

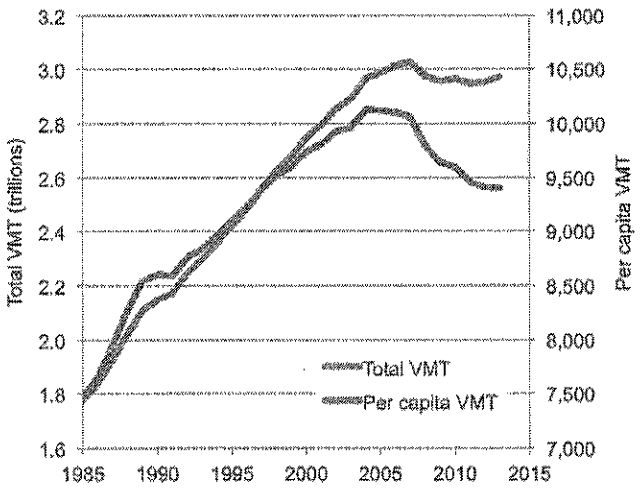

Figure 1. VMT trends for the United States through 2013. Source: FHWA and Census Bureau.

The article accompanying the above graph found on the State Smart Transportation Initiative (SSTI) website explains the observed phenomena as follows:

> "Unlike other past dips in driving, this recent downward shift has had no clear, lasting connection to economic trends or gas prices. Evidence suggests that the decline is likely due to changing demographics, saturated highways, and a rising preference for compact, mixed-use neighborhoods, which reduce the need for driving. Some key factors that pushed VMT upward for decades – including a growing workforce and rising automobile ownership – have also slowed considerably. SSTI released a report last September outlining the many contributing factors, with references to supporting literature."

Although under-reported, or not reported on at all, in the mainstream media which prefers to report automobile chases, crashes, and instances of "carmageddon", this observed phenomena has been extensively written about by transportation professionals and academia. Writing about this phenomena in a paper published in July of 2015 entitled *Climbing Mount Next: The Effects of Autonomous Vehicles on Society* , David Levinson, Professor and RP Braun/CTS Chair in Transportation, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota, writes:[2]

> "Both car and transit (the passenger trains preceding the automobile) follow the classic lifecycle model or S-curve of birth, growth, maturity, and decline. The S-curve allows us to mathematically approximate the process of growth and decline of technologies."
>
> "History will tell us for sure, but the evidence for "Peak Travel" has been mounting. This does not mean there will never be a year in which per capita car travel again rises. The economy and gas prices still fluctuate, and a boom year with low gas prices following a recession with high gas prices might very well temporarily bump traffic upward, but that is really short-term noise. In the absence of external events (technological shifts, demographic shifts, social shifts), the curve appears to have peaked."

Travel by Automated Vehicles:

"Smart Cars", "Self-Driving Vehicles, or "Automated Vehicles", are already here and hold the promise to transform how we travel in the very near future because they are expected to be safer, more fuel efficient, and more efficient at using our existing highway infrastructure.

On the issue of safety, Volvo has already pledged to have "zero deaths or serious injuries in its new cars by 2020 (TIME magazine)"[3]. The TIME article goes on to quote a Morgan Stanley analysis that found "adoption of driverless cars in the U.S. could save $1.3 trillion a year- including $158 billion in fuel costs, productivity increases of $507 billion, and $488 billion in accident-related savings. Total worldwide saving: $5.6 trillion."

On the issue of highway capacity, a Rand Corporation report[4] cites research showing that the "platooning" (coordinated travel of a single line) of AVs (Automated Vehicles) could increase lane capacity (vehicles per lane per hour) by up to 500 percent. The reason given is straight forward:

> "In more congested travel conditions, AVs could help to avoid the inefficient start-and-stop traffic conditions—a result of exaggerated braking and acceleration responses of human drivers—that lead to a severe degradation in vehicle throughput. When plotted over time, observations of highway travel speeds and traffic volumes form a backward-bending curve."

In other words, the maximum number of cars that can pass a given point on a freeway ("throughput") increases significantly as the cars begin to slow down and travel closer together. Throughput is maximized at some speed marginally slower than the maximum allowed speed. However, any further slowing actually results in diminished throughput. That diminished throughput results in further slowing, less spacing between vehicles, and even less throughput. The process spirals downward resulting in very slow speeds and minimal throughput. The now congested freeway becomes, if effect, an expanding parking lot of cars queuing up to pass a congested point. This phenomena is shown graphically in the Rand Corporation report[5]. AV's operating without exaggerated braking and acceleration responses hold the promise to eliminate this type of congestion.

Phasing in of Benefits to Society Associated with Self-Driving Vehicles:

Prior to complete market penetration by the self-driving car, it is expected that the benefits of cars that simply have an advanced form of cruise control could significantly increase highway capacity. Once such forecast was developed at Columbia University and is quoted below:[6]

> "Several automobile manufacturers are offering assisted driving systems that use sensors to automatically brake automobiles to avoid collisions. Before extensively deploying these systems, we should determine how they will affect highway capacity. The goal of this paper is to compare the highway capacity when using sensors alone and when using sensors and vehicle-to-vehicle communication. To achieve this goal, the rules for using both technologies to prevent collisions are proposed, and highway capacity is estimated based on these rules. We show that both technologies can increase highway capacity. The increase in capacity is a function of the fraction of the vehicles that use a technology. If all of the vehicles use sensors alone (adaptive cruise control), the increase in highway capacity is about 43%. While if all of the vehicles use both sensors and vehicle-to-vehicle communication (platooning), the increase is about 273%."

The even more impressive benefits of greater safety and even greater highway capacity (without the need for more lanes) associated with fully self-driving vehicles are forecasted to come later… but not that much later. One study, similar to many others that could be cited, made by Fehr & Peers, a firm specializing in providing transportation planning and engineering services to public and private sector clients since 1985, predicts that market penetration of completely self-driving cars will exceed 50% in the 2040's and could reach nearly 100% by the year 2060.[7]

The consulting firm, KPMG and the Center for Automotive Research summarized the eventual impact of self-driving vehicles as follows[8]:

> "Research indicates that platooning of vehicles could increase highway lane capacity by up to 500 percent. It may even be possible to convert existing vehicle infrastructure to bicycle or pedestrian uses. Autonomous transportation infrastructure could bring an end to the congested streets and extra-wide highways of large urban areas. It could also bring the end to battles over the need for (and cost of) high-speed trains. Self-driving vehicles with the ability to "platoon"—perhaps in special express lanes—might provide a more flexible and less costly alternative."

Conclusion:

It is clear that many in academia and large transportation consulting firms see self-driving vehicles saving lives, travel time, fuel, and the environment by eliminating the need to expand highway infrastructure. Coupled with the fact that Americans are already driving less and expected to drive less in the future, one must question the worth of new high-speed rail infrastructure. At the very least, one must ask why the California High-Speed Rail Authority's Draft 2016 Business Plan fails to even mention the effect self-driving cars could have on the ridership and benefit-cost projections of their train.

Two years ago, in their 2014 Business Plan, the Authority stopped using avoided infrastructure costs (additional freeway lanes, airport runways and gates) as justification for their enormously costly project. Instead, they reverted back to claims made in their 2000 Business Plan about high-speed rail's benefits of reduced accidents and deaths, reduced travel delays, and fuel savings; the same benefits that will likely occur due to the advent of self-driving cars. The 2016 Draft Business Plan makes no benefit-cost analysis for their project other than to refer back to the 2014 Business Plan source documents. The early benefits of self-driving cars in terms of highway capacity improvements could be realized BEFORE the Authority could even complete Phase 1 of its proposed project. The prospect of self-driving vehicles becoming as ubiquitous as today's personal computer and the smart phones is likely to occur before the complete statewide high-speed rail project is built.

It's time the Authority addressed the twin issues of today's declining per capita vehicle miles traveled and tomorrow's use of self-driving vehicles in their Final 2016 Business Plan and allow the public to see why high-speed rail does not need to be built.

Attachment 1

Increase in Traffic Volumes on California State Highways Over the Past 10 Years

Year	% Inc. Over Previous Year	Increase as a Decimal	Traffic per 100 in Base Year 2004
2014	2.64	1.0264	100.614
2013	1.86	1.0186	98.02608
2012	0.24	1.0024	96.23609
2011	-1.1	0.9890	96.00568
2010	-0.2	0.9980	97.07349
2009	-0.6	0.9940	97.26802
2008	-3.5	0.9650	97.85515
2007	0.1	1.0010	101.4043
2006	0.3	1.0030	101.303
2005	1	1.0100	101.000
2004			100.000

Sources:

2014 Traffic Volumes on California State Highways reported by Caltrans,

5 Year Traffic Trend, page ii

http://traffic-counts.dot.ca.gov/docs/2014_aadt_volumes.pdf

2009 Traffic Volumes on California State Highways reported by Caltrans,

5 Year Traffic Trend, page ii

http://traffic-counts.dot.ca.gov/docs/2009_aadt_volumes.pdf

Note: An error was reported on the Traffic Volumes on California State Highways Years 2009, 2010, 2011, and 2012. Located in the Preface (Page ii), Traffic Trend on Year 2008 over 2007 reads +3.5%. This Note is found on the Caltrans website linking to the Year Traffic Volumes cited above. Instead, this number should be reported as -3.5%.

Endnotes:

[1] State Smart Transportation Initiative (SSTI) website citing data collected by the Federal Highway Administration and the United States Census Bureau
http://www.ssti.us/2014/02/vmt-drops-ninth-year-dots-taking-notice/

[2] Minnesota Journal of Law, Science and Technology, *Climbing Mount Next: The Effects of Autonomous Vehicles on Society*, Profession David Levinson, Civil Engineering Dept., University of Minnesota
https://conservancy.umn.edu/bitstream/handle/11299/172960/6%20MJLST_v162_Levinson_787-810.pdf?sequence=1&isAllowed=y

[3] Time magazine, *The Increasingly Compelling Case For Why You Shouldn't Be Allowed to Drive Your Car*, March 7, 2016

[4] Rand Corporation, *Autonomous Vehicle Technology- A Guide for Policy Makers*, page 21
http://www.rand.org/content/dam/rand/pubs/research_reports/RR400/RR443-2/RAND_RR443-2.pdf

[5] Rand Corporation, *Autonomous Vehicle Technology- A Guide for Policy Makers*, page 22

[6] *Highway Capacity Benefits from Using Vehicle-to-Vehicle Communication and Sensors for Collision Avoidance*, abstract section, Patcharinee Tientrakool, Ya-Chi Ho, and Nicholas F. Maxemchuk Department of Electrical Engineering, Columbia University
https://pdfs.semanticscholar.org/db00/a24d0980bd977dac7de7fed56b19785b6c68.pdf

[7] Fehr and Peers website
http://www.fehrandpeers.com/fpthink/nextgenerationvehicles/

[8] KPMG and the Center for Automotive Research, *Self-driving cars: The next revolution*, kpmg.com | cargroup.org, page 26
http://www.kpmg.com/Ca/en/IssuesAndInsights/ArticlesPublications/Documents/self-driving-cars-next-revolution.pdf

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California High-Speed Rail Authority
Attn: Draft 2016 Business Plan
770 L Street, Suite 620 MS-1
Sacramento, CA
95814

APR 12 2016

2016 Business Plan RECORD DETAIL

Submission Date :	4/7/2016
Submission Method :	Letter
First Name :	Michael
Last Name :	Brady
Stakeholder Comments/Issues :	
Notes :	Eight (8) separate comments were submitted as a single package for comment
Attachments :	Brady Comments 1_8_040716.pdf (2 mb)

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April 7, 2016

COMMENTS ON THE 2016 CHSRA DRAFT BUSINESS PLAN
COMMENT NO. 1

THE LEGISLATIVE APPROPRIATION OF $600,000,000 FOR THE PENINSULA HSR PROJECT IS ILLEGAL, AND THEREFORE, THERE IS NO PROPOSITION 1A MONEY AVAILABLE FOR THE PENINSULA HSR PROJECT

1. Under the detailed legislative scheme provided by Proposition 1A, intended to protect the State and its citizens from financial risk, a detailed funding plan is required first to be presented by the Authority to the Legislature. Next, the Legislature is to appropriate money for the segment of the HSR system dealt with in the first funding plan.

2. The first funding plan (required under Proposition 1A) submitted by the Authority to the Legislature dealt only with the Central Valley Project, not the Peninsula HSR Project. There was not, and never has been, any funding plan submitted by the Authority (as required by Proposition 1A) to the Legislature for the Peninsula HSR Project.

3. In July 2012, acting on the first funding plan for the Central Valley only, the Legislature appropriated approximately $2.7 billion of Proposition 1A bond funds for the Central Valley Project. Contemporaneously, the Legislature appropriated $600,000,000 in Proposition 1A bond funds for the Peninsula HSR Project.

4. But, as set forth above, no funding plan whatsoever had been submitted by the Authority to the Legislature for the Peninsula HSR Project.

5. Since a funding plan is a mandatory perquisite to a Legislative appropriation, the $600,000,000 appropriated for the Peninsula HSR Project was invalid. Proposition 1A at least

requires some funding plan to be submitted. The Legislature may have some discretion in how to deal with the funding plan, but when no funding plan is submitted, the Legislature is without power to make an appropriation since Proposition 1A (superior to any legislative statute appropriating money) precludes such a procedure. Therefore, concerning the Peninsula HSR Project, the Legislature was never provided any information whatsoever concerning the funding plans for the Peninsula HSR Project; accordingly, the Legislature had nothing on which to act and could not act appropriating any money under the bond fund for the Peninsula HSR Project.

Very truly yours,

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COMMENTS ON THE 2016 CHSRA DRAFT BUSINESS PLAN
COMMENT NO. 2

PROPOSITION 1A VIOLATION:
HEADWAY REQUIREMENTS CANNOT BE MET

1. Proposition 1A has a mandatory requirement that trains reach the Transbay terminal in San Francisco every five minutes. This means 12 trains per hour. This is called headway.

2. But, with the blended system plus other modifications made, without any legal authority, by the Authority, this mandatory requirement is impossible to meet, and the current plans are only for four high-speed trains and six Caltrain commuter trains per hour.

3. This will have a serious effect upon even the potential profitability (which is non-existent in any case).

4. This failure to achieve headway requirements makes other goals of Proposition 1A non-achievable, as the former chairman of the California High-Speed Rail Authority, Senator Quentin Kopp, has so indicated.

5. The Peninsula HSR Project is the center focus of the blended system for the 47 miles of the Peninsula corridor from San Francisco to San Jose. Since the blended system in and of itself violates Proposition 1A, the Peninsula HSR Project should not be allowed to commence construction since it is an integral part of the

statewide high-speed rail system, as admitted by the Authority.

6. In addition, the Trans Bay Terminal (the terminus and starting point for the entire HSR system) is physically and currently not being constructed to receive/accommodate the 12 trains per hour mandated by Proposition 1A, meaning that it will be impossible to comply with the mandatory headway requirements.

Very truly yours,

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COMMENTS ON THE 2016 CHSRA DRAFT BUSINESS PLAN
COMMENT NO. 3

THE PENINSULA HSR PROJECT CANNOT COMMENCE BECAUSE THE WRITTEN CONSENT OF UNION PACIFIC RAILROAD CORPORATION (UPRR) HAS NEVER BEEN OBTAINED

1. The right-of-way of the Peninsula corridor between San Francisco and San Jose is owned by the Peninsula Corridor Joint Powers Board ("PCJPB") and for the benefit of the citizens of the three counties (San Francisco, San Mateo and Santa Clara).

2. That right-of-way at one time was owned by Southern Pacific Railway. When it transferred ownership to the PCJPB, a complex "trackage agreement" was entered into. This trackage agreement gave Southern Pacific, and all its successors and assigns, the rights of an owner in fee simple concerning such right-of-way.

3. UPRR is a successor/assignee of all of Southern Pacific's rights.

4. Among those rights is the right, in perpetuity, to prevent any modification or alteration of the right-of-way by the Authority, or on its behalf, unless UPRR gives its written consent and permission. Furthermore, UPRR may establish any condition on the Authority before any such modification or alternation occurs. UPRR also has authority over all intercity service on the Peninsula corridor between San Francisco and San Jose.

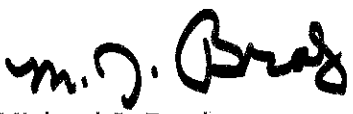
5. UPRR is currently protesting many activities of the Authority concerning the Peninsula HSR Project. It has not given its written consent or permission for modification or alteration of the Peninsula corridor, and such modification or alteration

is exactly what is called for by the plans for the Peninsula HSR Project.

6. Accordingly, no construction of the Peninsula HSR Project can be allowed to commence, and no public funds can be assigned for such use, until such written consent/permission has been obtained from Union Pacific. This is an absolute prerequisite to the commencement of any construction whatsoever of the Peninsula HSR Project.

7. In addition to these problems associated with UPRR, the defendants have also not obtained the required regulatory clearances from the State Public Utilities Commission for electrical and voltage requirements. UPRR is protesting electrical and voltage plans put forward by the defendants. All such approvals must be granted by the State Public Utilities Commission before the Peninsula HSR Project can even commence, and this mandatory prerequisite before construction can commence has not been obtained and must be obtained.

Very truly yours,



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COMMENTS ON THE 2016 CHSRA DRAFT BUSINESS PLAN
COMMENT NO. 4

FAILURE TO MEET MANDATORY STATUTORY REQUIREMENTS OF COSTS DISCLOSURE

A state-wide HSR system was in the planning stages for several years. In 2000, there was a business plan indicating a $25 billion cost STATEWIDE for the project.

On November 2, 2005, the Authority certified in its program level EIR that the STATEWIDE COST would be $33-37 billion .

When Proposition 1A was being voted on, November 4, 2008, almost 8 years ago, the voter information pamphlets and materials included information from the LAO provided to the LAO BY the Authority) indicating that the cost of the STATEWIDE PROJECT would be $45 billion.

Thereafter, and in November 2008, the Authority with a business plan inexcusably delayed under the requirements of Proposition 1A (meaning that this business plan was submitted AFTER Prop 1A was voted on, when the voters had no opportunity to assess it prior to the vote), indicated a $33.6 billion cost for Phase I ONLY (San Francisco to Los Angeles); this then established a permanent pattern on the part of the Authority, to wit, refusing to disclose to official bodies of the Legislature/voters the costs and the updated costs for the STATEWIDE PROJECT, AS DISTINGUISHED FROM A SMALLER PORTION OF THE PROJECT (Phase I from SF to Los Angeles).

The 2008 Authority Business Plan, containing the representation of $33.6 billion for Phase I (SF to LA), also indicated that the project would be financed from $9 billion in Prop 1A bond funds, $24 billion in Federal funds with the remainder to come from local and private investment sources.

In December 2008, the Authority submitted a report to the Legislature indicating a $42.8 billion estimated cost for Phase I only (SF to LA) and again had NO STATEWIDE estimate for the HSR project.

In November 2011, a business plan was produced, indicating that the cost of Phase I (SF to LA) had SOARED TO $98-115 BILLION.

In April 2012, the Authority, acting under instructions from the Governor, submitted a revised Business Plan indicating that the cost of Phase I (SF to LA) had been cut to $68-79.8 billion. Again, no STATEWIDE ESTIMATE was provided.

The STATEWIDE HSR project INCLUDES MORE THAN Phase I (SF to LA). Much of the project is in Phase II including San Diego, the Inland Empire, San Bernardino, Sacramento, and Oakland. This portion of the project is being totally ignored by the Authority with no reporting of estimated costs, cost escalations, or risks of non-completion.

Proposition 1A and its enabling and implementation statutes, require that the Authority and its business plans and its periodic reports to the Legislature provide estimates for the STATEWIDE PROJECT, INCLUDING ANY ESCALATION/CHANGES IN THOSE COSTS. THE Authority has failed to comply with these requirements. The law further requires that the Authority not only provide STATEWIDE ESTIMATES for the costs of the entire project, but, at the same time, cost estimates for EACH individual segment of the project. This also has never been done.

In fact, since 2008 the Authority has been repeatedly warned of escalating costs and cost overruns for various portions of the project including the central valley and crossing the Tehachapis and the San Gabriel Mountains with huge cost increases due to the difficulty associated with such endeavors; nor has the Authority evaluated properly the costs of its newest north segment, including ignoring of the San Jose /San Francisco corridor and the huge new cost escalations and problems faced by its partner, Cal Train; the Authority has also ignored the enormous cost increases associated with the terminus (and start) for the statewide project, namely the Trans Bay Terminal, which is not even being built to accommodate the number of trains per hour required by Prop 1A for the TBT to accommodate! Two years ago, some experts in the state estimated that the costs of the statewide project had soared to $200-250 billion!

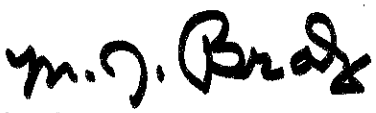
The Reporting Statute: one of the enabling and implementation statutes for Proposition 1A is P.U.C. section 185033 (a). This says that every time the Authority makes a report to the legislature, it is REQUIRED to provide updated cost estimates for the ENTIRE STATEWIDE SYSTEM, including updated cost estimates FOR EVERY INDIVIDUAL SEGMENT THEREOF.

This mandatory law has never been complied with—not in the 2012 revised business plan, not in the 2014 draft or final business plan, and not in the current 2016 draft business plan. None of these reports to the legislature show ANY EFFORT to comply with the reporting requirements on costs and cost overruns, or cost updates.

Public Policy: this is a matter of vital public policy. When California is engaged in the biggest public works project in American history, the public and the Legislature are entitled to know, very periodically, what the costs of the project are, whether there are cost overruns, whether there are difficulties—especially when the project has rigid/straightjacket financial controls built into it (Proposition 1A). How, otherwise, can the Legislature perform its vital oversight operations? This state has just been severely BURNED over the Bay Bridge cost scandal where the ultimate cost was SEVEN TIMES GREATER than the original estimate! All indications are that this project is headed in the same direction, and yet the Authority for eight years discloses nothing that the law requires/mandates.

CONCLUSION: the final Business Plan MUST address these mandatory cost disclosures; otherwise the Authority is in violation of the law and will be required (injunction) to do so.

Very truly yours,



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April 7, 2016

COMMENTS ON THE 2016 CHSRA DRAFT BUSINESS PLAN
COMMENT NO. 5

RIDERSHIP ISSUES

The 2016 draft business plan indicates that CHSRA contemplates that it will be using Prop 1A bond funds to construct and finance the project, including the newly selected IOS north from Shafter to San Jose.

To qualify to obtain bond funds, the CHSRA has to comply with the Proposition's requirements. One of these is that the ridership in the NEW USABLE SEGMENT must be adequate and profitable.

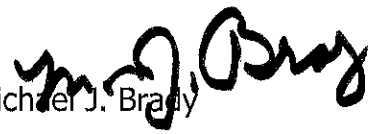
The Authority has totally failed to address this requirement. There is no FOCUSED ridership study on this new usable segment along called IOS north. The Authority cannot just rely on generalized and non-specific ridership studies (now quite dated and old) and use that data to satisfy the obligation to address specifically IOS north and only IOS north.

One of the central problems is this: more than 3 years ago, Dan Richard told the Senate Transportation committee (with Lowenstein and Simitian asking the questions) that the central valley alone was a money loser and a poor choice for adequate ridership and that THIS was the reason that the CHSRA chose to go to Los Angeles County where adequate ridership would be easier to show. This was backed up by the Authority's chief engineer, Mr. Van Winkle. Yet here, the new usable segment is quite similar to the one that Richard and Van Winkle found to be inadequate and defective. Adding San Jose to it makes no difference. Who is going to board in San Jose and go to Shafter—stranded there until a bus comes along for the long drive to LA!?

Also note that the peninsula, from San Jose to SF, is NOT part of the new IOS north and therefore cannot be considered in the analysis of adequate ridership. The peninsula has its own problems including the central one—there never was a funding plan presented to the Legislature in advance of the appropriation of $600 million for the peninsula corridor, not to mention that the estimated cost for the peninsula corridor has

almost DOUBLED in 3 years. These are all matters completely ignored in the 2016 Bus Plan.

Very truly yours,



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April 7, 2016

COMMENTS ON THE 2016 CHSRA DRAFT BUSINESS PLAN
COMMENT NO. 6

THE NEW IOS NORTH IS NOT ELIGIBLE TO RECEIVE CAP AND TRADE FINANCING; WHEN THE AUTHORITY SWITCHED FROM IOS SOUTH TO IOS NORTH, THE AUTHORITY FORFEITED ITS RIGHT TO RECEIVE CAP AND TRADE FUNDING

The 2012 Business Plan indicated that the Authority might choose either IOS south or IOS north; later that year the Authority made a final and definitive decision—to go with IOS north, a 300 mile route roughly from Merced to the San Fernando Valley; this route, according to the Authority, had particular appeal since it would serve a large population area (LA County) and because ridership and revenue would be superior to IOS north from the central valley to San Jose.

In fact, Proposition 1A specifies and REQUIRES that when an IOS is selected it MUST have adequate ridership (and revenue) to support itself. Dan Richard and the chief engineer for the Authority (Van Winkle) said that the central valley was never selected as an IOS because ridership wold be inadequate, it would be a money loser, an therefore IOS south was the preferred choice. This was stated more than 3 years ago before the Senate Transportation Committee in response to questions from Messrs. Lowenthaal and Simitian.

So, the decision was made with conscious intent to choose the route with the best ridership and revenue potential, according to the Authority.

AFTER that final decision on IOS south, the cap and trade legislation was adopted. See Health and Safety Code section 39719 (b) (2).

This section implementing cap and trade specifically referred to IOS south because it referred to the usable segment (IOS south) THEN in existence, and IOS south at that time was the only usable segment that had been chosen by the Authority. This legislation appropriated cap and trade funds to the Authority ". . . FOR THE FOLLOWING COMPONENTS of the INITIAL OPERATING SEGMENT and Phase I Blended

System as described in the 2012 business plan adopted pursuant to Section 185033 of the Public Utilities Code."

So, at the time that cap and trade was adopted as a funding method, the ONLY initial operating system that existed was IOS south; IOS north had not been selected; IOS south, land only IOS south, was the usable segment adopted pursuant to the 2012 Business Plan. The Authority should therefore be prohibited from using cap and trade funds to finance the construction/planning of the newly selected IOS north. Cap and trade is limited to financing of IOS south and only IOS south.

There simply is no support for the argument that the Authority can spend cap and trade funds for an "initial operating system" other than the one that HAD BEEN picked at the time of the cap and trade statute and the one that HAD BEEN SPECIFICALLY described in the 2012 Business Plan.

There is evidence to support the conclusion that the Authority itself assigned high priority to IOS south as the initial operating segment which would be concentrated on. These letters were designed to SECURE cap and trade funding, and the appeal to southern California interests and voters was apparent:

http://hsr.ca.gov/docs/brdmeetings/2014/brdmtg 031214 Item2 ATTACH CEO Morales Letter to Sen Pavley.pdf

http://hsr.ca.gov/docs/bradmeetings/2014/bradmtg 081214 Item2 ATTACH Sec Kelly Letter to Sen Galgiani.pdf

the Authority also took official board action to affirm this intent to give prioritization to IOS south and the Southern California plan when it ADOPTED RESOLUTION # 14-19:

http://hsr.ca.gov/docs/brdmeetings/2014/bradmtg 0812214 Item2 Final Resolution is HSRA14 19 Gen Dir Staff Regarding Cap Trade Proceeds. Pdf

Here is what the resolution said:

" The Authority Board concurs with the priority to move forward with the approach outlined in the CEO'S letter to State Senator Fran Pavley, including the prioritization of the Palmdale to Burbank project section for expenditure of cap and Trade proceeds as they become available and in accordance with provisions of the law."

There are also numerous press accounts documenting the decisions reached and the prioritization assigned to IOS south and southern California in order to secure cap and trade funds:

http://www.latimess.com /local/countygovernment/la-me-bullet-strategy-shift-20140701-story.hyml
http://www2.latimes.com/local/couontygovernment/la-me-bullet-strategy-shift-20140701-story.html

Therefore, there were commitments to accelerate spending in So California because of concerns by Senate Democrats and a desire to concentrate the funding on IOS south; this was also an attractive way to enhance the chances for passage of cap and trade funding because of the old adage, "So Cal is where the votes are!"

These Southern California legislators were vitally interested in helping commuters (on such impossible corridors as Highway 101) and in reducing greenhouse gases—possibilities infinitely more achievable in IOS south than in something like IOS north. The cap and trade law requires that the greenhouse gas emissions be reduced in the largest margins in the shortest period of time, and, again, Southern California and LA County is much preferred to IOS north.

In short, everything points to the fact that the Legislature intended that IOS south be the recipient of cap and trade funds and not some alternative selected at a later time, TO THE EXCLUSION OF IOS SOUTH. IOS south was priority, to be done first, not later; this would be consistent with the intent of the legislators who negotiated and approved the cap and trade funding.

CONCLUSION: the Authority is not being honest with the legislature or with the voters. The switch to IOS north is a humiliation after YEARS of planning IOS south and investing billions in such planning (environmental reports/analyses, etc). Already it is being reported that this switch will cause three additional years of delay in completing the project. The Authority has made NO EFFORT to cure the difficulties with going over the mountains OR to select an alternative route which might alleviate those difficulties and possibly reduce the mileage and the expense. The purpose of cap and trade will be undermined by allowing its funds to be used when that would undermine the objectives of cap and trade and the concentration on IOS south.

By using cap and trade for IOS north, the Authority has forfeited its right to use such funds for IOS north.

Very truly yours,

M.J. Brady

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April 8, 2016

COMMENTS ON THE 2016 CHSRA DRAFT BUSINESS PLAN
COMMENT NO. 7

PLAINTIFF'S RECORDS AND DOCUMENTS FROM THE TOS – CHSRA LAWSUIT

The primary purpose of this Comment is to submit to the California High Speed Rail Authority (CHSRA) a complete set of the documents and records that were submitted by the Plaintiffs, John Tos, Aaron Fukuda, and County of Kings, and that were accepted by the Attorney General (AG), to be part of the Administrative Record (AR) of the case John Tos et al v.CHSRA et al. (Sacramento County Superior Court case No.34-2011-00113919) lawsuit.

These documents contain a wealth of information regarding a number of issues that the Authority needs to consider and needs to address as part of the development of the Final 2016 Business Plan. These issues relate to the use of Proposition 1A bond funds for system construction and the requirements contained in that ballot measure, notably: 1) the minimum time that will be required to travel from San Francisco to San Jose and to Los Angeles, 2) the minimum achievable headway requirement for the system, 3) the prohibition on an operating subsidy, 4) the overall financial viability of the chosen alignment, and 5) the availability of funds to fully construct the IOS as well as the complete Phase 1.

These documents are stored on the "Thumb Drive" that is included with this cover letter. There are 323 documents, each as an independent PDF file. Each PDF file has been assigned, by the AG, a Leading Bates Number, and a "Document Title/Topic" description, part of which is a portion of the name of the PDF file.

Also included on the Thumb Drive is a copy of the PDF file which is the Index published in September 2015, by the AG which includes all of the documents and records provided to the AG by the Plaintiffs and by the CHSRA. Referring to the Index, if a given row, which represents a specific document or record, has a "P" followed by 3 digits in the "Old Doc. Number" column, then this document or record was provided by the Plaintiffs,

and it is included on the Thumb Drive. Also included is a one page Supplemental Index that added two documents to the AR in the October 2015 time period.

If a given row in the Index does not have a "P" followed by 3 digits, the document or record was part of the Authority's files and records. We have not included these items as we presume you have copies of these items readily available to you. If you do not, and you would like us to provide them to you, please let us know by April 4th 2016, and we will have them delivered to you by April 18th 2016. By reference to these documents and records, which were provided by the Authority, we are incorporating them to be part of this Comment as they address the same issues mentioned above, and need to be considered in your preparation of the Final 2016 Business Plan.

On the last page of the Index, page 67 of 67, the AG included a Section "U. HIGH-SPEED RAIL AUTHORITY EIRS". These documents were included in response to several specific requests which have been included as P223 through P227. We have not included these documents, even though they relate to requests made by us, as they represent an additional approximately 740 documents, all of which were prepared by the Authority and presumably are readily available to the Authority in its files. We will consider these to be your documents and that they are also incorporated into this Comment, by this reference. Again, if you do need additional copies of any of these documents, please let me know by April 4th, 2016 and we will send them to you.

In addition to the documents included in Section U of the enclosed index, we are also asking that the Authority include in the record for the 2016 Business Plan one additional set of documents: the Final Project-level EIR/EIS for the Merced to Fresno segment of the proposed high-speed rail system. As with the other referenced EIR/EIS documents, this EIR/EIS was prepared by the Authority and is presumably readily available to it. If you need additional copies of any of these documents, please respond by April 4th, 2016 and we will send them to you.

As a minor administrative matter, on page 10 of the Index the AG shows, for the Leading Bates number AG004099, the AR number 125. It should also show our reference of P197, as the AG included AR125 in response to our request P197. We have included the PDF file for this document on the attached Thumb Drive.

Also on page 16 of the Index the AG shows, for the Leading Bates numbers AG005697 and AG005698, the AR numbers 179 and 180. A major portion of this video and transcript was struck by the AG from the copy we submitted, as P126 and P127, and these modified versions were submitted to the Court. We will be addressing this matter

separately, but please note that AG005697 and AG005698 are not all of the material we requested be incorporated in the Administrative Record as P126 and P127.

Thank you,

M. J. Brady

Michael J. Brady

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April 7, 2016

COMMENTS ON 2016 CHSRA DRAFT BUSINESS PLAN
COMMENT NO. 8

Following are comments to the 2016 Authority CHSRA (hereafter Authority) Draft Business Plan.

THE SWITCH TO IOS NORTH FROM IOS SOUTH

Proposition 1A was adopted in November 2008. Starting in the year 2011, the Authority preliminarily started planning to pursue a route called IOS south which runs from Merced to San Fernando Valley – approximately 300 miles. By early 2012, the Authority had formally identified this route (called IOS south) as the chosen "usable segment" that it would be utilizing, to the exclusion of IOS north. The reason IOS south was chosen was because the ridership would obviously be higher when you reach into Los Angeles County, and Proposition 1A requires that when the Authority chooses a usable segment (IOS south), the ridership must be adequate and the usable segment must be profitable.

Four years later (2016) the Authority suddenly reversed its course and changes its mind after deciding to abandon IOS south and go IOS north! No plausible reason is given. The real reason appears to be the costs and difficulties and costs of traversing the Tehachapi Mountains and the San Gabriel Mountains have become simply too great and too complicated for the Authority to surmount. For example, 2½ years ago, the Authority was told by its own general contractor that the cost of surmounting the mountains would add $9 billion(!) to the then costs of IOS south, not to mention the serious difficulty in tunneling under two mountain ranges which contain one of the world's most complex collections of earthquake faults. This report was concealed from the public and the Legislature and only forced out of the Authority after court proceedings and pressure from Congress and the State Legislature. The concealment of this information can reasonably be classified as a cover up and a scandal disclosed and uncovered by the *Los Angeles Times*.

After more than four years of work, the abandonment of IOS south and the switch to IOS north will probably involve at least three additional years in the completion of the project. There is no plausible reason why such a prejudicial development should be tolerated, unless the route to Los Angeles over and under the mountain ranges has

become physically impossible (not to mention financially impossible) and there will never be a route to Los Angeles. If that proves to be the case, then the entire project has to be abandoned since Proposition 1A requires that there be a route between San Francisco (Transbay terminal) and Los Angeles (Union Station downtown).

The financial problems with IOS south cannot be ignored in the overall analysis. Back in 2012, the Authority itself estimated that the cost of IOS south would be approximately $31 billon. That amount has never been updated even though Public Utilities Code section 185033 mandates that this figure should have been updated. We have plenty of experience with the importance of updating estimates and how cost overruns can become phenomenal (Bay Bridge!). It is probably conservative to say that IOS south would today costs almost $40 billion.

Even when analyzing IOS south alone, the Authority totally flunked the "adequate financing test." Proposition 1A requires that before construction of IOS south could commence, the Authority had to have in the bank the $31 billion. This was part of the "financial straightjacket" in which the Legislature placed the Authority in order to avoid scandals and abandoned projects and to retain the confidence of the voters and the financial integrity of the project.

So, and again with respect to IOS south, what did the finances look like? From the beginning, the Authority was telling voters and residents that it would get $18 to $20 billion from the Federal government. This turned out to be totally false. The Federal government initially provided less than $3 billion for the project. Since then, Congress has affirmatively cut off all future Federal funding because of displeasure with the incompetence of the Authority in managing the project.

Private investment: Here again, the Authority from the beginning bragged that at least one-third of the project would be paid for by private investment. They made these predictions despite being informed by a prestigious investment group (Infrastructure Management Group – IMG) that no private investor would be likely to invest because the project was a money loser. Despite having this report, the Authority for years continued to maintain that the prospect of obtaining private investment was rosy. Only a few months ago, the Authority solicited 30 private investment sources, with zero success – indicating no one indicated any interest in putting up money.

Bond funds: Of course, these cannot be accessed unless the Authority has the money in the bank to pay for the entire IOS south, meaning bond funds plus matching funds. The matching funds would probably have to equal about $30 billion ($30 billion in non-bond funds, $9 in bond funds). Nothing like that has been put together.

The Authority speculates that cap and trade will be adequate, but this is speculative. In addition, there is a cloud on that source due to pending litigation in the trial court and

the Court of Appeal. So, the history of inadequate financing for IOS south cannot be ignored in the overall picture which is bleak, if not insurmountable.

Funding situation for the new IOS north: This is likewise impossible and does not satisfy the requirements of Proposition 1A. It is estimated to cost more than $20 billion; only $1.3 billion is left in Federal funds (granted way back in 2010); nothing is available from private investment sources; cap and trade is not only speculative, and under a cloud; bond funds cannot be released unless fully match; and the project cannot be commenced at all unless the full amount for the new IOS north is in the bank. Indeed, this requirement is even more strictly required under the second funding plan than under the first funding plan. The Authority has totally failed to explain why funding is adequate in its 2016 business plan.

IGNORING COSTS OF THE NEW IOS NORTH

The business plan fails to address the issue of the extensive electrical lines and power supplies needed to go through the Pacheco Pass and also fails to adequately address the extensive tunneling costs that will be required.

FAILURE TO OBTAIN ENVIRONMENTAL CLEARANCES

Proposition 1A clearly indicates that IOS north cannot even commence construction until all environmental clearances have been obtained. The Draft 2016 Business Plan indicates that there is no final environmental clearance for what is known as the Chowchilla Wye area; no final environmental clearance for Shafter to Bakersfield and, most importantly, no final environmental clearance for the longest portion of IOS north, Merced to San Jose, with all of the attendant special environmental issues about crossing and going through the Pacheco Pass all the way to San Jose. The completion of these environmental clearances under Proposition 1A is mandatory before any construction can commence on IOS north. This is not adequately addressed in the 2016 business plan, including the delay that will occur until these final environmental clearances have been obtained. And of course, no bond funds can be released for use or spending by the Authority until such environmental clearances have been obtained and until matching funds (to match the bond funds) are in the bank to create a total which is equal to the then estimated cost of construction (not in the past, but at the time construction will start).

FAILURE TO OBTAIN THE WRITTEN CONSENT OF UNION PACIFIC RAILWAY CORPORATION (UPRR) TO USE OF ITS RIGHT-OF-WAY

This is an issue which has been ignored for eight years. The Authority, of course, has to have the permission to use the right-of-way that it plans to use to build IOS north. That has been denied in part by UPRR. Originally, the Authority planned to use the Union Pacific right-of-way from Gilroy to San Jose. But Union Pacific vetoed that

request. The Authority has not given an adequate explanation of what it plans to do in the Draft 2016 Business Plan or the costs associated with not being able to use the existing Union Pacific route.

Similarly, the overall situation with Union Pacific is crucial to whether this state-wide project can ever be successful. This is also ignored in the Draft 2016 Business Plan. Here is the issue: a crucial element in the overall state-wide high speed rail system is what we call the San Francisco Peninsula Corridor (San Francisco to San Jose). Due to a trackage agreement between Union Pacific the present owner of that right-of-way (Peninsula Corridor Joint Powers Board), Union Pacific has, in perpetuity, the right to veto the use of the entire Peninsula corridor for use by the Authority for its high speed rail project (and that use has always been an integral part of the high speed rail system). It cannot be used by the Authority unless the Authority obtains the written consent/permission of Union Pacific. Nor can the Authority or CalTrain (its partner in the high speed rail project on the Peninsula) make any modifications or alterations in the Peninsula corridor unless Union Pacific consents. Union Pacific has never given this consent, and indeed, the situation continues to deteriorate; relations between the two are deteriorating in light of the fact that a high speed rail operation up the Peninsula will seriously interfere with Union Pacific's freight operations and service to customers on the Peninsula. Indeed, Union Pacific and the Authority are currently in litigation before the PUC concerning such difficulties. We might also mention that the Authority, which plans to go up the Peninsula, has allowed a positive train control (PTC) system to be installed from San Francisco to San Jose that is incompatible with the safety and positive train control system adopted for the rest of the entire state! How the project can be "successfully" implemented or safely implemented is therefore a serious question, not addressed in the Draft 2016 Business Plan. The plan, of course, is for passengers to get off the train in San Jose and go to San Francisco on CalTrain. But all of these difficulties have not been addressed and, therefore, those grandiose plans are very much in question.

NO PROOF OF ADEQUATE RIDERSHIP

Proposition 1A, which the Authority purportedly seeks to satisfy, requires that when the Authority chooses IOS north, it must prove that the ridership on that new usable segment will be adequate to produce a profitable operation. The Draft 2016 Business Plan totally fails to satisfy or address this requirement. The Authority has never done a specific ridership study on this new IOS north. Its old ridership studies, allegedly done on a state-wide basis, are outdated and inadequate to focus specifically on the one thing that must be proved; that ridership on THIS IOS NORTH will be adequate. This is totally ignored.

It is also very interesting to note that IOS north is predominately centered in the Central Valley. Years ago, in testimony before the Senate Transportation Committee, Dan Richard was asked why the Authority did not just pick a usable segment that was

in the Central Valley rather than picking IOS south all the way to Los Angeles County. His answer was that a segment that was predominately in the Central Valley would be a money loser and would have inadequate ridership and that when you took the train to Los Angeles County, with its larger population, this would satisfy the ridership issue. Well, what has changed?! The chief engineer for the Authority, Mr. Van Winkle, agreed with Richard that a Central Valley-based usable segment (IOS north) would not be able to satisfy the "adequate ridership" question. Nor, ironically, can the Authority argue that the ridership will be adequate if "hooked up to" San Jose to San Francisco. That concept is not in the Draft 2016 Business Plan at all and, therefore, is irrelevant when considering the adequate ridership question alone. Without adequate ridership, they can be no profitability. The Authority has chosen a usable segment (IOS north) which is much less likely to produce adequate ridership than the one which they abandoned, namely IOS south, went to the heart of Los Angeles County with its millions of residents.

THE PROJECT WILL REQUIRE A PROHIBITED GOVERNMENT SUBSIDY

Proposition 1A says that a federal, local or state subsidy for the project is absolutely prohibited. Despite the fact that this may be looked at as rather "strict," it was necessary to put in such language in order to attract the voters in 2008. It is there, and the prohibition is mandatory.

The Authority's Draft 2016 Business Plan ignores the fact that high speed rail systems throughout the world are heavily supported by government subsidies. In the United States, the Authority's "costs" figures indicate that their costs will be one-sixth of those of ACELA, the closet thing that America has to a high speed rail system. The Authority claims that it can operate at 10¢ a passenger mile compared to ACELA's 60¢ a passenger mile! These figures are ridiculous on their face. A similar situation exists with Amtrak which is heavily subsidized. ACELA operates at a profit, but its revenue is much greater than what high speed rail would ever be able to charge (since HSR revenue is tied to airfare).

Also, when you compare the HSR figures to Amtrak figures, it is readily apparent that Amtrak is heavily subsidized. All rail systems have basically the same expenses and costs and, therefore, the Authority has created a fictitious "O&M" chart, with figures supported by no evidence whatsoever, other than pure speculation.

THE BLENDED SYSTEM MAKES IT IMPOSSIBLE FOR THE SYSTEM TO ACHIEVE ITS MANDATORY GOALS

Proposition 1A originally contemplated that the system, from start to finish, would have two tracks devoted to the exclusive use of high speed rail, one going north and one going south. In 2012, the Authority unilaterally adopted the so-called "blended" system calling for, on the San Francisco Peninsula, two sets of tracks to be shared by high

speed rail and five other train systems (four operated by CalTrain, the commuter service, and one operated by Union Pacific, the freight service). This was completely contrary to the intent of Proposition 1A and its implementing statutes as attested to by the "father" of high speed rail, Senator Quentin Kopp. Senator Kopp's declaration is attached hereto. He indicates that this "track sharing" arrangement emasculates the original purpose of high speed rail and makes it impossible to achieve its travel time requirements and its headway requirements, and since those travel time requirements and headway requirements are essential to profitability; this has a grave effect upon its ability to be successful financially.

The track sharing agreement called for in the blended system makes it impossible to achieve the mandatory 2 hour and 40 minute non-stop trip time from Los Angeles to San Francisco; it also makes it impossible to achieve the 30 minute mandatory travel time between San Jose and San Francisco.

Furthermore, Proposition 1A requires that 12 trains per hour must enter the Transbay Terminal and, contemporaneously, leave the terminal heading south. This mandatory requirement can never be achieved. The Transbay Terminal is not even being physically built to accommodate that number of trains. Even if the headway requirement were met, it would mean that 24 trains an hour, 12 going south and 12 going north, would be coming down the Peninsula, paralyzing traffic on the entire 55 mile corridor, since no plans or money exist for grade separation and virtually all crossing would be "at grade." This is intolerable, not only because of the violation of Proposition 1A and the physical impossibility of complying with it, but also because of the environmental impact upon the Peninsula – a crucial fact also ignored in the Draft 2016 Business Plan.

FURTHER COMMENTS ABOUT THE INABILITY TO MEET THE MANDATORY 2 HOUR AND 40 MINUTE TRAVEL TIME REQUIREMENT

The Authority, through a memorandum called the Vacca memorandum, claims that it will be able to make the 2 hour and 40 minute mandatory non-stop trip from Los Angeles to San Francisco. But a crucial fact ignored in the Draft 2016 Business Plan is the fact that the Authority held more than 60 meetings throughout Southern California, promising cities and the attendees at those meetings from those cities that it would "slow down" in going through their urban areas. Yet the so-called "expert," Frank Vacca, when preparing his analysis, took no account of this promise to slow down and had the trains going approximately 220 mph through almost all of the "urban areas." The Vacca memo was prepared AFTER these meetings and the promises to slow down. Therefore, Vacca was aware of those promises. The promises have been to slow down to between 90 and 125 mph. This makes a huge difference and conclusively establishes that the travel time cannot be accomplished and that the Vacca memo is founded upon a completely false premise. In reality, the trip will take well over three hours, and the 2 hour and 40 minute mandatory requirement cannot be met.

M.J. Brady

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COUNTY IS EXEMPT FROM FILING FEES PER GOV. CODE SECTION 6103

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF SACRAMENTO

JOHN TOS, et. al.,

Plaintiffs,

v.

CALIFORNIA HIGH SPEED RAIL AUTHORITY, et al.,

Defendants.

CASE NO. 34-2011-00113919

DECLARATION OF QUENTIN L. KOPP

Trial Date: May 31, 2013

I, Quentin L. Kopp, declare and say:

1. I reside in the City and County of San Francisco. I was admitted to the State Bar of California in January, 1954, and am presently an inactive member. I engaged in trial practice in San Francisco and other California counties from approximately December 20, 1955, until December 31, 1998, prior to my appointment to the San Mateo County Superior Court. I retired from the San Mateo County Superior Court in February, 2004, entered and served in the Assigned Judges' Program of the California Judicial Council for over six years, and ended my participation in that program in December 2010. I am presently a member of the American Arbitration Association. I also served in the California State Senate from December 1, 1986, until November 30, 1998, and as a member of the Senate Transportation Committee for 12 years. From 1987 until 1998, I was Chairman of the Senate Transportation Committee. I also was a member of the Metropolitan Transportation Commission from 1977 until my election to the

California State Senate in 1986, and served as Chairman of such Commission for two years during that period of time. I was a member of the San Francisco Bay Area Rapid Transit District governing board, appointed by the San Francisco Board of Supervisors, from January, 1973 until such Board became an elected body in November, 1974, and was also a member and eventual Vice President of the Board of Directors of the Golden Gate Bridge, Highway and Transportation District from 1976 until election to the California State Senate in 1986. I have personal knowledge of the facts stated herein, and, if sworn as a witness, would and could competently testify thereto.

2. I have been involved with the planning and implementation of a California high speed train system since 1992, and served as a member of the California High Speed Rail Authority ("Authority") from June 2006 until March 2011.

3. I initiated the legislative action to establish high speed rail ("HSR") in California in 1992 with a bill creating the HSR Commission. Such bill was vetoed by then-Governor Pete Wilson. In 1994, I introduced, and there was enacted, a measure establishing a California HSR Committee to evaluate whether high speed rail was (1) desirable and (2) feasible in California. By the term "high speed rail," I refer to electrified trains capable of speeds as fast as 220 miles per hour.

4. The California HSR committee members were appointed by then-Governor Pete Wilson. Such committee analyzed the issues of desirability and feasibility, and reported to the Governor and Legislature in early 1996 that high speed rail was both desirable and feasible in California. That same year, I introduced legislation creating the present Authority.

5. In August 2006, I was elected Chairman of the Board of Directors of the Authority and served continuously in that responsibility through 2008 and until on or about July 1, 2009. During the period of such chairmanship, necessary legislative acts to implement a high speed train system occurred. In that period, Assembly Bill No. 3034 (AB 3034), involving provisions in the California Public Utilities Code and Streets and Highways Code, was developed as integral to submitting a $9,950,000,000 State General Obligation Bond to California voters for approval on November 4, 2008. Such General Obligation Bond had been authorized for voter action by the

Legislature and then-Governor in 2002, but because of external events, that ballot measure was postponed, first, to the 2004 State General Election, then to the 2006 State General Election, and, finally, to the 2008 State General Election, all without amendments of the type contained eventually in AB 3034.

6. As Authority Chairman, I appeared several times before legislative committees in the Assembly and the State Senate testifying on HSR plans. The Senate Transportation Committee, then under the chairmanship of State Senator Alan Lowenthal, particularly participated in developing the statutory language of AB 3034 and, hence, the language of the underlying ballot measure which became known thereafter as Proposition 1A. I was familiar with the concerns of various legislators and professed objectives and desires concerning language of Proposition 1A. I was also well-aware of the intent of the Authority in conforming its implementation of HSR plans to satisfy legislative concerns and the Authority's ability to fulfill promises that would be made and were made to California voters in the November 4, 2008, General Election.

7. In my opinion, the HSR project, as it has evolved in the 2012 Authority's Business Plan, is no longer a genuine HSR system, as covenanted to California voters and the Legislature. Instead, it has been distorted in a way directly contrary to the high speed rail plan the Authority attempted to implement while I was Chairman, namely, a true HSR system containing all the features, terms and protections desired by the Legislature and honoring restrictions placed upon use of Proposition 1A bond proceeds by the Legislature. Accordingly, it is my opinion the project is not lawfully eligible to receive Proposition 1A bond funds.

8. Proposition 1A was approved by a majority of California voters on November 4, 2008, as a bond measure designed to finance part of the cost of HSR in California in conjunction with federal funds, local public funds, regional public contributions and money from private investors. The vast proportion of the $9,950,000,000, to wit, $9,000,000,000, was for genuine HSR. The remaining $950,000,000 was allocated to eligible recipients for capital improvements only to inner-city and commuter rail lines and urban rail systems providing direct connection to HSR or that are part of construction of the HSR system or provide capacity enhancements and

safety improvements.

9. As pointed out by the Legislative Analyst in the Official Voter Information Guide, Proposition 1A requires "accountability and oversight of the authority's use of bond funds authorized by the measure for a high-speed train system." (Emphasis added.) The Legislative Analyst also noted that of the $950,000,000 for improving other passenger rail systems or allowing riders to connect to HSR, $190,000,000 was designated to improve inner-city rail services and $760,000,000 was specified for other passenger rail services including urban and commuter rail. No part of the $9,000,000,000 for HSR was designated for urban or commuter rail. The Legislative Analyst iterated that in 2006, the Authority estimated total costs of the entire HSR system would amount to approximately $45,000,000,000.

10. In May, 2007, the Authority had decided that Phase I of HSR is the corridor between San Francisco and Los Angeles and Anaheim. It also decided that Phase II would extend HSR from Los Angeles to San Diego on the south and from Merced to Sacramento on the north.

11. Both AB 3034 and Proposition 1A require the project to be built in usable segments. Streets and Highways Code section 2704.01(g) defines a "usable segment" as "a portion of corridor that includes at least two stations." The full meaning of "usable segment" is shown through its repeated use in the extensive statutory provisions in sections 2704.08(c) and (d) of AB 3034 (incorporated into Proposition 1A) that delineate the mandatory provisions of the detailed Funding Plans the Authority is required to approve. Thus, section 2704(c) requires the Authority to approve and submit to the Legislature, the Director of Finance, and the Peer Review Group, "a detailed Funding Plan for that corridor or a usable segment thereof" that meets the requirements of subsections (A) through (J) – each of which (except for subsection I) specifies that the requirement must be met for "the corridor or usable segment thereof." These mandatory provisions include:

> (D) 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.
>
> (E) The projected ridership and operating revenue estimate based on projected high-speed passenger train operations on the corridor

or usable segment.

. . .

(H) The corridor or usable segment thereof would be suitable and ready for high-speed train operation.

. . .

(J) The planned passenger service by the authority in the corridor or usable segment thereof will not require a local, state, or federal operating subsidy.

Essentially the same provisions are repeated in the Funding Plan required by subsection (d), the provisions of which must be met before the Authority can commit to the expenditure of Proposition 1A bond funds for construction.

Accordingly, at the meeting of the Authority's Board of Directors on December 2, 2010, Deputy Attorney General George Spanos advised the Board that the proposed construction of a section of track between north of Fresno to north of Bakersfield was not a "usable segment" within the meaning of Proposition 1A, but it would be a subset of a "usable segment." That legal advice conformed to my understanding of "usable segment," both then and at all times since.

Such definition is part of Proposition 1A.

12. A usable segment cannot be commenced in terms of construction until adequate funding for that usable segment is obtained or committed; such funding must be sufficient to ensure completion of that particular usable segment. The purpose of such provision is protection of the State from risks that a portion of the system would be abandoned or uncompleted because of lack of money to finish construction. Such rigid funding protections are an integral part of the statutory scheme and ballot measure. The present HSR plan does not contain those protections. The Authority itself describes the alleged usable segment it proposes to build in the Central Valley as running from Merced to the San Fernando Valley, and represents it will cost $31,000,000,000. That amount of money has not been secured by the Authority and is not committed by any state, federal, local or private investor source. The Untied States House of Representatives, in its most recent transportation bill, specifically eliminated California from further funds for HSR.

13. Streets and Highways Code section 2704.09(a) mandates that the high speed train system constructed under the Streets and Highways Code and Proposition 1A "shall be designed to achieve" certain characteristics, including electric trains capable of "sustained maximum revenue operating speeds of no less than 200 miles per hour." Streets and Highways Code section 2704.09(b), also incorporated in Proposition 1A, specifies maximum nonstop service travel times for seven different corridors, including San Francisco to Los Angeles Union Station in two hours, 40 minutes. Streets and Highways Code section 2704.09(c), also incorporated in Proposition 1A, mandates achievable operating "headway" (time between successive trains) of five minutes or less. Streets and Highways Code section 2704.09(f) requires that for each corridor described in section 2704.09(b), passengers shall be able to travel "from any station on that corridor to any other station on that corridor without being required to change trains." (Emphasis added.) Streets and Highways Code section 2704.08(c)(2)(J) effectively prohibits passenger service by the Authority in any usable segment which requires a local, state or federal operating subsidy. That provision is incorporated in Proposition 1A. Proposition 1A and its statutory predicate (AB 3034) require each usable segment to be suitable and ready for genuine HSR operation, electrified and containing all components of a genuine HSR system. As HSR is now planned, no electrification is provided for the first alleged usable segment in the Central Valley, (a 130-mile section of track from south of Merced to north of Bakersfield) predicted to cost approximately $6,000,000,000 and financed by Proposition 1A bond proceeds and federal funds from the American Recovery and Rehabilitation Act of 2009. I have never read an Authority explanation for building a conventional rail segment, or segments, without the components of a genuine HSR system. Such a tactic contravenes the Authority's intent in submitting Proposition 1A to California voters on November 4, 2008. Although the Authority's current business plans indicate it claims such conventional rail segment is only "preliminary" and that the Authority will at some unspecified time electrify such segment, there exists no legal justification for such a plan or claim, and such plan completely violates the Authority's intent and its representations to the Legislature and California voters. Furthermore, it appears wasteful to spend approximately $6,000,000,000 on a conventional rail segment, then return years later to modify it and replace it

with a fully compatible electrified genuine HSR segment. Finally, the aforementioned first construction segment cannot itself qualify as a "usable segment" because it is not electrified. Statutory schemes and the Authority's intent in 2008 were clear, to wit, build qualified (under statutory definition) usable segments, one at a time, and do not begin a new usable segment until funds are committed and sufficient for completion of the next usable segment, with electrification of every segment from the outset.

During all my time with the Authority I never participated in any discussions, agreements, authorizations, or understandings that would incorporate the concept of conventional rail segments into the definition of a "usable segment," even on an interim or preliminary basis; nor was there ever any agreement, intent, or understanding that conventional rail could come first as part of a blended or phased system with genuine high-speed rail to be built later. Such an inclusion would contravene the Authority's intent in submitting Proposition 1A to California voters on November 4, 2008. Statutory schemes and the Authority's intent in 2008 were clear, to wit, to build in qualified (under statutory definition) usable segments for high speed rail, and only high speed rail.

My comments above with respect to lack of legal authorization for conventional rail relate to the $9,000,000,000 portion of Proposition 1A bond funds, and not to the $950,000,000 portion of those bond funds. The $950,000,000 portion is allowed to be used to improve/modify conventional rail systems in California; that specific authorization for those funds to be used for conventional rail necessarily implies that the $9,000,000,000 portion was not to be used for that purpose, and this was always my intent and understanding as Chairman of the Authority in attempting to carry out the Legislature's intent, the Authority's then intent, and the intent of the voters in passing Proposition 1A.

14. Under the Authority's present business plan, the Authority has adopted a scheme to use Proposition 1A bond proceeds for a so-called "blended" system. It has effectively diverted approximately $2,000,000,000 of Proposition 1A bond funds and matching funds, with plans to deliver this amount to the Los Angeles Basin (to Metrolink and related rail agencies there) and to Caltrain on the San Francisco Peninsula, so that these Northern and Southern California

commuter operations (referred to as "bookends" in the legislation) can obtain various operational improvements and so that Caltrain can electrify itself. The Authority refuses to proceed with the plan approved by the pre-2012 Authority Board of Directors to obtain sufficient real property to build HSR on its own dedicated tracks. The "blended" system forces HSR and Caltrain to share existing right-of-way and tracks from San Francisco to Gilroy. That means the Authority will be unable to comply with Streets and Highways Code section 2704.09(c) in achieving operating headway time between successive trains of five minutes or less. It also means the Authority will violate Streets and Highways Code section 2704.09(f) which requires that passengers shall have the capability of traveling from any station on each corridor to any other station on that corridor "without being required to change trains." (Emphasis added.) Both of those provisions are incorporated in Proposition 1A, as noted above. The Authority's present business plan will require a rider from San Francisco to Los Angeles and Anaheim to board Caltrain in San Francisco, then leave Caltrain to board a theoretical HSR train from San Jose (or Gilroy) to a station in Los Angeles County such as Sylmar, and change trains again to a Metrolink train to arrive in Los Angeles or Anaheim, whichever is the rider's destination. Such a deviation from Proposition 1A's explicit requirement of no change of trains in the corridor from San Francisco to Los Angeles Union Station consequently renders it doubtful that Streets and Highways Code section 2704.09(b)(1) mandate of maximum "non-stop service travel" time for the San Francisco-Los Angeles Union Station corridor of two hours, 40 minutes can be performed.

15. On July 6, 2012, as stated above, the Legislature approved seizure of approximately $1,000,000,000 from Proposition 1A bond proceeds for use, as described above, for regional and commuter rail transit purposes on the San Francisco Peninsula and in Southern California. Such diversion of funds from the Central Valley undermines funding prospects for that area, rendering risk of non-completion much higher. Such diversion is also contrary to the Authority's own intentions in 2008 in presenting the proposed General Obligation Bond to voters on November 4, 2008, and contrary to the Legislature's concern about increasing financial risk from an uncompleted project.

16. The statutory scheme in Proposition 1A assured voters there would be no state,

local or federal operating subsidy for HSR. I repeatedly assured groups of voters of that statutory and bond measure prohibition. The current plan ignores that prohibition. For HSR to succeed financially, it must use dedicated trackage reserved exclusively for HSR as is the case in all countries with HSR. HSR will not succeed financially if it must share tracks with conventional or commuter rail. As noted, without its own dedicated tracks, not nearly as many HSR trains can operate per day. The "track-sharing" arrangement with Caltrain represents one example (Los Angeles to Anaheim represents another) of the Authority's current alteration of the project from a genuine HSR system to a distortion of such, using such terms as "blended system" to describe the present plan. Those concepts contravene the Authority's representations to the public that a true HSR system would be built with all $9,000,000,000 in bond money from Proposition 1A spent for exactly that. To me, the Authority Chairman during all the planning and pre-November 4, 2008 efforts regarding the bond measure, this constitutes the greatest betrayal of all in the context of the original intent and promises to voters. The project, as now planned rather than what was promised, constitutes a distortion and mangling of California's HSR project and promises to California voters.

17. The Authority has also participated by approval in another violation of Proposition 1A and Streets and Highways Code sections 2704.095(a)(1) and (d) which, as stated above, allocate $950,000,000 of bonds authorized by Proposition 1A to eligible recipients for direct connection to the HSR system. Section 2704.095(d) mandates that funds allocated pursuant to the subsection shall be used to pay or reimburse the cost of providing or improving "connectivity with a high speed train system." On or about June 8, 2012, the Authority was presented with information showing that $61,300,000 of such money was allocated to the so-called "Central Subway Project" in the City and County of San Francisco, based upon a planned HSR station stop at Fourth Street and King Street, San Francisco. Prior to 2012, the Authority's plans, while premised upon a HSR terminal at the so-called Transbay Terminal located at First Street and Mission Street in San Francisco, also provided for the aforementioned Fourth Street and King Street station (the present Caltrain San Francisco terminal location) because the Transbay Terminal could not physically accommodate 10-12 HSR trains per hour plus all arriving

Caltrain trains. Prior to the Authority's plan released publicly on April 2, 2012, the Authority's business plans were based upon 10-12 trains arriving in San Francisco during peak hours from 7:00 until 10:00 a.m. and 4:00 until 7:00 p.m. The present Caltrain terminal, which the Authority prior to April 2, 2012, had planned to utilize, will now be "connected" to HSR by the Central Subway. The Central Subway Project does not, however, connect with HSR or improve connectivity with HSR because the current plan of the Authority eliminates any station at Fourth Street and King Street in San Francisco.

Furthermore, the Central Subway Project changes the route of an existing San Francisco Municipal Railway light rail line (called the T Third Line) and by doing so eliminates the segment of that line which would connect to the HSR system at the San Francisco Transbay Terminal. In short, the $61,300,000 allocation of HSR Proposition 1A connectivity funds would finance a project which not only fails to connect to HSR, but disconnects an existing light rail line from HSR. Instead of providing or improving "connectivity with the high-speed train system," it destroys connectivity in degradation of section 2704.095(d). In fact, in June, 2011, $61,300,000 from the $950,000,000 of so-called connectivity funds described above were allocated to the Central Subway Project in San Francisco and included in the proposed State Budget Act of 2011-12 for distribution to the San Francisco Municipal Railway Central Subway Project only to be vetoed by Governor Edmund G. Brown Jr. who stated that the Central Subway Project appeared to be "unrelated to the high-speed rail project or an integrated rail plan." I am informed and believe that following the Authority's current business plan public release on April 2, 2012, the California Transportation Commission by electronic mail informed all applicants for money from the aforementioned $950,000,000 portion of Proposition 1A that new applications for any such funds must be received by May 1, 2012, and stated that the projects submitted must be consistent and have a direct connection to the HSR system. The California Transportation Commission thereafter allocated $61,300,000 to the San Francisco Municipal Railway Central Subway Project. The current Authority business plan which eliminates any station connecting in San Francisco to the Central Subway and provides $61,300,000 for the Central Subway Project constitutes an illegal expenditure under Proposition 1A.

18. I am informed and believe that the failure to proceed with dedicated tracks on the San Francisco Peninsula for HSR has caused the Authority business plan now to project that a maximum of four trains per hour will arrive in San Francisco during the peak hours mentioned above, which will have a resultant effect of reducing ridership and thereby preclude the Authority from operating without a state, local or financial operating subsidy, in violation of Proposition 1A and Streets and Highways Code section 2704.06(2)(J).

I declare under penalty of perjury pursuant to the laws of the State of California that the foregoing is true and correct.

Executed on this 5th day of February, 2013, at San Francisco, California.

QUENTIN L. KOPP

Michael J. Brady
1001 Marshall Street, Fifth Floor
Redwood City, CA 94063
650-780-1724
Michael.brady@rmkb.com

March 31, 2016

California High-Speed Rail Authority
Attn: Draft 2016 Business Plan
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

Dear Sir/Madam:

Attached for the Authority's consideration in preparing their Final 2016 Business Plan is a Word document entitled Pushing Back on the California High-Speed Rail Authority's Myths About High-Speed Rail: Paper 4 - The Truth About Public and Private Financing for the California HSR System.

Very truly yours,

M. J. Brady

Michael J. Brady

Enclosure

Pushing Back on the California High-Speed Rail Authority's Myths About High-Speed Rail

Paper 4

The Truth About Public and Private Financing for the California HSR System

by Mark Robert Powell
January 25, 2016

Paper 4

The Truth About Public and Private Financing for the California HSR System

Abstract

For the better part of two decades the California High-Speed Rail Authority has promised Californians that the California High-Speed Rail System would be funded substantially by the Federal Government and by private funding.

This paper traces the likelihood of federal and private funding for California's high-speed rail project going back nearly twenty years to the days of the Intercity High-Speed Rail Commission in the 1990's and forward to today's quest for funding. It details how the Commission recognized that federal and private funds would not be a significant funding source as well as the Commission's outgoing recommendations to the incoming California High-Speed Rail Authority on how best to proceed towards securing a prime funding source.

The paper then discusses how the Authority disregarded the advice of the Commission and the warnings of its own financial consultants, never secured a prime funding source, and by continuing to mislead Californians about funding prospects has brought all Californians to the brink of a high-speed rail construction quagmire.

Lastly, the paper summarizes monies spent to date, the huge unspent remaining costs, and suggests a way out of the current predicament.

Pushing Back on the Authority's Myths About High-Speed Rail

Paper 4 - The Truth About Public and Private Financing for the California HSR System

1993-1996 The Commission's Honest Appraisal of Funding Sources:
Twenty-three years ago Senate Concurrent Resolution 6 (Kopp) created the Intercity High-Speed Rail Commission. It cited the need for *"the preparation of a 20-year high-speed intercity rail plan similar to California's former freeway plan"* and *"an entity with stable and predictable funding sources to implement the plan".*[1] SCR 6 tasked the Commission with preparing a financing plan that would include, but not be limited to, private funds, state general obligation bonds, revenue bonds backed by incremental increases in the gasoline tax, airport funds, and potential alternative public funding sources.[2]

The nine members of the Commission with backgrounds in construction, finance, banking, law, engineering, railroads, and some experience in the public sector[3] completed five technical studies and a Public Participation Program[4] in addition to a report summarizing the Commission's work; *The High-Speed Rail Summary Report and Action Plan*, released December 13, 1996. The Commission recommended a network of high-speed rail similar to the one presented to the voters nearly 12 years later; a segment linking the centers of San Francisco and Los Angeles, mostly following State Highway 99 through the Central Valley before swinging southeast to run through Palmdale and with additional segments connecting to Sacramento and San Diego. It was estimated to cost between $12.1 and $16.5 billion for the San Francisco to Los Angeles segment and between $19.8 and $24.6 billion (in 1996 dollars) for the entire statewide system.[5]

The Commission sought to establish a "base funding source" that could reliably furnish 70-85%[6] of the capital required for construction. Quoting from the Summary Report:

> "In order to qualify as a base funding source, the source must be able to substantially finance the construction of the system, secure debt against the revenue source, and provide funding irrespective of the construction status or operational readiness of the system. In addition, the source must have a stable and reliable revenue growth potential." [7]

After analyzing sales taxes, gas taxes, airport taxes, highway tolls, federal funding, and state funding, the Commission found that only a 5 cent increase in the state's gasoline tax, or a ¼% increase in the state sales tax levied statewide, or a ½% increase in the state sales tax levied only in counties served by high speed rail met the Commission's criteria to "provide a realistic means of funding the project".[8] Of these options, the Commission seemed to favor a sales tax because of their concern over Section 1(b) of Article 19 of the California Constitution limiting the purposes for which gasoline taxes may be used.[9] However, the Commission left it up to the incoming California High-Speed Rail Authority to make the final decision.

Private funding was not considered a possibility because of the project's risk, but was thought of as a way to finance extensions to Sacramento and San Diego once the San Francisco to Los Angeles portion was shown to be profitable.[10] In other words, future profits of a proven operating line could be sold to investors in return for a portion of the capital needed to construct the extensions. The Commission also noted that federal high-speed rail programs amounted to only $15 to $25 million per year under the then-current authorizations that were scheduled to end in 1997 and therefore could not be considered a significant or predictable funding source.[11]

With no private or federal support for the initial Los Angeles to San Francisco route, the Commission recognized an obvious fact; if Californians wanted a high-speed rail system, they would have to pay for it themselves. To implement the system, the Commission's first recommendation was that the Authority secure the statutory authority and the base funding source for the system. Quoting from the Commission's 1996 report: "There can be no significant progress on high-speed rail implementation nor can a private partner be selected until the voters have approved a source of base funding." [12]

1997 – 1999 The California High-Speed Rail Authority:

Beginning in 1997 and continuing through 1999 the Authority, using many of the same contractors used by Commission, repeated the Commission's work and came to largely the same conclusions. With the December 1999 deadline for release of the 2000 Business Plan approaching, the Authority was forced to select a preferred funding strategy. It did not choose wisely. Resolution HSRA 99-8 *Motions on Recommendations to the Authority to Become Part of the Business Plan* detailing a preferred funding strategy was brought up at the November 17th Board Meeting and approved unanimously (9-0).[13] The motion "recommended to the Governor and the Legislature that California not proceed to fund the project fully in 2000, either through legislative action or by placing a full-funding proposal on the November 2000 ballot for the voters to decide." Instead, it called for "incremental development and funding of the project" coupled with "an aggressive statewide effort to increase federal funding for both conventional and high-speed trains in California."

Notably missing from HSRA 99-8 was any mention of the prospect of private funding. However, this should come as no surprise as the Authority's financial consultant, Public Financial Management Inc., wrote in 1999, "as impressive as the HSR operating surpluses are (projected to be)….private equity would insist upon a minimum return of between 15% and 20%. This effectively reduces the equity that can be supported (by operating surpluses) to approximately $808 million[14]. Only parking facilities at station sites and concessionaire and vendor areas within the stations were identified as areas were private vendor financing might be appropriate[15].

A potential state sales tax to fund the project was mentioned in the 2000 Business Plan, but only the recommended strategy of incremental funding has been followed by the Authority since 2000. Stating that Californians would perhaps need to pay for "only about one-third of the total project cost"[16], although totally unsupported in the plan, fit well with subsequent legislation scheduling a vote on the issuance of $9 billion in high-speed rail bonds in November 2004.[17] The Authority's hoped-for significant private funds or grants from non-existent federal programs to create a "phased-funding plan" ignored the Authority's mandate still found in Section 185010 of the Public Utilities Code[18], which reads as follows:

> "185010(h) *In order for the state to have a comprehensive network of high-speed intercity rail systems by the year 2020, it must begin preparation of a high-speed intercity rail plan similar to California's former freeway plan and designate an entity with stable and predictable funding sources to implement the plan."*

Leery of levying more taxes on Californians, Governor Gray Davis never supported a sales tax that could have created a stable and predictable funding source to pay for high-speed rail. Instead, he would support the "car tax" to help solve the state's fiscal woes and be recalled from office in 2003.

The Authority's 2008 Business Plan:

In March of 2008, eight months prior to the issuance of the 2008 Business Plan, the Authority's financial consultant, Infrastructure Management Group, Inc., issued a *Request for Expressions of Interest for Private Participation in the Development of a High-Speed Train System in California*. The primary purpose of this RFEI "was to better understand how the private sector could assist in developing and financing all or portion(s) of the project."[19] Thirty responses were received and summarized in IMG's *Report of Responses to the RFEI* and also rolled into IMG's *Financial Plan for the CHSRA San Francisco to Anaheim Segment* which was also published in October 2008. In this financial plan IMG concluded:

Private funds would most likely come after the initial operating portions (i.e. SF to LA) were showing a profit.[20] Furthermore, private funds were in general conditioned upon a "revenue guarantee" or "availability payments"[21]

IMG's Financial Plan dealt with possible federal funding by stating that "new funding sources specifically for high-speed rail, along with an expansion of existing transit programs, will need to be created in order to provide adequate support for the HSR Project"[22]

In the face of these sobering statements made by its own financial consultant, the Authority's 2008 Business Plan was released shortly thereafter touting a financial plan for the San Francisco to Anaheim Segment (Phase 1 of the statewide system) projected to cost $33.6 billion (2008$) that showed roughly a third of the necessary funding coming from private sources, a third from non-existent federal programs, and the remaining third from the recently passed Proposition 1A bond measure.[23]

2008-2015 The Authority's Attempts at Securing Federal and Private Funding:
No new federal programs to support the high-speed rail project, other than one-time funds allocated as part of a nearly trillion dollar federal stimulus spending bill passed by Congress in 2009, were enacted. The one-time federal funds allocated to California's project, about $4 billion, did not even cover projected cost increases since 2008 as the cost of Phase 1 ballooned to $98-$118 billion before the project was trimmed back to "Phase 1 Blended" shown in the 2012 Business Plan as costing between $68 and $80 billion.[24]

Private funding also failed to materialize. Still searching for private funds in 2015 the Authority issued a second *RFEI for Delivery of an Initial Operating Segment* on September 28, 2015[25]. Thirty-six replies were received and none showed a willingness to provide private funding. It is worth noting that of the thirty-six respondents, only nine had also responded to the Authority's 2008 RFEI. Twenty-seven were new respondents and now brought to fifty-seven the total number of private firms to publicly decline to invest in California's high-speed rail project.

A Path Out of Today's High-Speed Rail Quagmire:
There is still a substantial minority of California's population that would like to see a high-speed rail system built in California. However, many of these people and the groups who represent them (ex. Californians Advocating Responsible Rail Design – CARRD) want to see high-speed rail "built right" and may have lost faith that the current effort will lead to a successful system. Moreover, a recent Hoover Institution Golden State Poll shows that "continuing the state's high-speed rail project" polls last of twenty-one issues surveyed when Californians are asked if this should be a "top priority" of the state[26].

It has been nearly eleven years since the Authority certified its 2005 *Final Program EIR/EIS for the Proposed California High-Speed Train System* (2005 Program EIR) which openly and transparently studied the need for, and the benefits and costs (monetary and environmental) of the proposed statewide system. To date, nearly $1.5 billion[27] has been expended with very little to show for it. Project Level environmental clearances for Phase 1 Blended are still years in the offing[28] and as this paper is being written the public is learning that the Authority is reversing nearly four years of planning and will now seek to build its Initial Operating Section north from Bakersfield to the Bay Area rather than south from Merced to the Los Angeles Basin.

The $1.5 billion spent to date will not have been wasted if Californians someday reconstruct this project on a more stable financial and environmental footing. But before that can happen and before more funds are spent, the new information gained about the need for, and costs of, a high-speed rail system need to be examined in a new statewide program EIR.

Much has been learned since the 2005 Program EIR was certified by the Authority. California's population failed to increase at the rate envisioned in the 2005 Program EIR. Consequently the projected need for additional freeway lanes and airport infrastructure failed to materialize. In the 2005 Program EIR it was envisioned that the "core segment" connecting Los Angeles and San Francisco would be completed by January 1, 2016 with the remainder of the system completed by January 1, 2019[29]. In the last ten years the former date has been pushed off thirteen years and the Authority does not even know by how much the latter date has been delayed. Increased construction costs coupled with the lack of federal or private funding now may result in Californians' expenditure for HSR rising to the level of our state's currently unfunded state employee pension liability, and Californian's may wish to reconsider their decision to invest in HSR. But one new need for a high-speed rail system has come to light. That need stems from today's increased awareness of the potential cost of greenhouse gas emissions from automobiles and airplanes. Unfortunately this concern has come to the forefront after 2005 and was never studied in the 2005 Program EIR nor was the proposed train system designed to minimize GHG emissions.

Surely it would take immense political courage for the Authority, or an individual board member, to call for a suspension of work coupled with a proposal for a new statewide program EIR, but in light of today's financial and environmental questions about high-speed rail this may be the best option for moving forward and the best hope for the eventual construction of a high-speed rail system in California.

[1] Senate Concurrent Resolution 6, Filed with Secretary of State July 20, 1993, Whereas Section, paragraph 9. See http://www.leginfo.ca.gov/pub/93-94/bill/sen/sb_0001-0050/scr_6_bill_930720_chaptered

[2] Senate Concurrent Resolution 6, Filed with Secretary of State July 20, 1993, Resolved Section, paragraph 13, items 1-5

[3] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Appendix B, Document available at Claremont Colleges, Honnold/Mudd Library, Claremont, CA.

[4] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Executive Summary, page 1

[5] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Capital Cost Summary Tables, pages 3-25 and 3-27

[6] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Major Secondary and Supplemental Funding Sources, pages 5-7 to 5-10, Secondary Funding Sources expected to each contribute less than 2% to the construction costs and Supplemental Funding Sources each expected to contribute less than 1% to the construction costs, the total was expected to close the funding gap left by the base or "primary funding source".

[7] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Overview of Funding Sources, page 5-2

[8] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Base Funding Options, page 5-3

[9] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Base Funding Options, page 5-5

[10] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Financing the System – Introduction, page 5-1

[11] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Base Funding Options, page 5-6

[12] *High Speed Rail Summary Report and Action Plan*, Published by Intercity High-Speed Rail Commission December 13, 1996, Executive Summary, page ES-16

[13] FAX from Executive Director Mehdi Morshed to Congressman Jim Costa, Resolution HSRA 99-8 *Motion on Recommendations to the Authority to Become Part of the Business Plan.* Located in California State Archives and not found on the Authority's website.

[14] Financial Plan Prepared by Public Financial Management Inc, November 2, 1999, page 4 http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2000_TS_FinPlan.pdf

[15] Financial Plan Prepared by Public Financial Management Inc, November 2, 1999, page 15

[16] Cover Letter to 2000 Business Plan http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2000_FullRpt.pdf

[17] Senate Bill 1856 (Costa), Safe Reliable High-Speed Passenger Train Bond Act, Division 3 of Streets and Highway Code, Chapter 20, Article 3, SEC. 4(a) See: http://www.leginfo.ca.gov/pub/01-02/bill/sen/sb_1851-1900/sb_1856_bill_20020919_chaptered.pdf

[18] California Public Utilities Code, Section 185010(h) http://codes.findlaw.com/ca/public-utilities-code/puc-sect-185010.html

[19] Report of Responses to the Request for Expressions of Interest for Private Participation in the Development of a High-Speed Train System in California, prepared by IMG, Inc., October 2008, page 1 http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2008_SRC_ExpressInterest.pdf

[20] Financial Plan prepared by Infrastructure Management Group, Inc., Oct. 27, 2008, page 12 http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2008_SRC_FinPlan.pdf

[21] Financial Plan prepared by Infrastructure Management Group, Inc., Oct. 27, 2008, page 11

[22] Financial Plan prepared by Infrastructure Management Group, Inc., Oct. 27, 2008, page 5 http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2008_SRC_FinPlan.pdf

[23] 2008 Business Plan, page 21, Figure 26 http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2008_FullRpt.pdf

[24] 2012 Revised Business Plan, page 3-11, Exhibits 3-7 and 3-8 http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2012_rpt.pdf

[25] Expression of Interest in the Delivery of an Initial Operating Segment, Sept. 28, 2015 http://www.hsr.ca.gov/docs/about/doing_business/EOI/EOI_Barclays_Bank_PLC.pdf

[26] Hoover Institution Golden State Poll, conducted Nov. 30-Dec.13, pages 25-26 http://www.hoover.org/sites/default/files/hoover_gsp_january_2016_release_public_results_final_011216.pdf

[27] Authority Finance Committee Exhibit, Total Project Expenditures with Forecasts, Dec. 2015

[28] Authority Finance Committee Exhibit, Environmental Milestones Schedule, Dec. 2015

[29] *California High-Speed Train Final Program EIR/EIS*, Economic Growth and Related Impacts section, page 5-5 http://www.hsr.ca.gov/docs/programs/eir-eis/statewide_final_EIR_vol1ch5.pdf

Extremely Urgent

Page 1 of 1

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CALIFORNIA HIGH SPPED RAIL AUTH.
770 L STREET, SUITE 620 MS-1

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CA-US SMF

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2016 Business Plan RECORD DETAIL

Submission Date :	4/12/2016
Submission Method :	Website
First Name :	Mike
Last Name :	Hampson
Stakeholder Comments/Issues :	My Comments:

1) Top Priority:
We need high-speed rail lines along the coast (and inland) so that the rail lines are accessible to as many millions of people as possible. Ease of use.

The California High-Speed Rail should have been in place 30 to 40 or more years ago; therefore, we need to do it right the first time (to have coastal and inline rail lines), no matter what the cost. This is a rail system for millions of people, so it's better to spend the extra money now and not regret that you did not make high-speed rail along the coast line.

People come to live and visit California because of the coast and the weather. This is another reason why we need to make the rail lines along the coast.

2) Second Priority:
Install enough solar panels and install enough battery packs (which store energy for evening travel and days with less sun) to make the rail system a 100% solar powered rail system.

3) Third Priority:
Use a modern looking paint scheme for the trains. Dark blue and yellow already look outdated. The current paint scheme looks like something from the 1990s. You need a modern paint scheme. Hint: Lighter colors and a better design on the rail cars.

If one looks at the California High-Speed Rail Stations and compare these drawings to the paint scheme of the California High-Speed Rail trains - they don't match. This is a clear example of why the paint scheme on the trains needs to be more modern.

Please hire an experienced graphic design firm and tell them you want very modern and contemporary and classy look for the paint scheme for the train.

Do not allow members of the California High-Speed Rail Authority to have the final say on the paint scheme on the trains because there is a very good chance that the managers at the California High-Speed Rail system are NOT graphic designers. Use the expertise of a highly qualified graphic design firm and follow their advise.

4) Fourth Priority:
Avoid using acronyms on signage, tickets, access cards and brochures. Remember, English is not always the first language for many people and visitors will be in California from other countries and don't understand our acronyms.

Avoid using the two letter state code "CA" at all costs, instead, write out the word California. Remember, "CA" stands for Canada and "CA" also stands for dozens of other things or organizations.

The acronym "CA" means many things, such as:
* Canada
* Central Air
* Computer Associates International
* Columbia Association
* Central America
* Control Access
* Certificate Authority
* Cost Analysis

* Computer Animation
* Current Account
* Contract Administrator
* Court of Appeal
* Collective Agreement
* Construction Administration
* Commercial Activities
* Conference Agenda
* Contract Award
* Clinical Assistant
* Captain America
* Combat Arms
* Counter Attack
* Civil Aviation
* Consumer Alert
* College of Agriculture
* Cable Assembly
* Cocaine Anonymous
* Corporate Action
* Confidentiality Agreement
* Chemical Abstracts
* Certificate of Authenticity
* Corrective Action
* Collision Avoidance
* Cleaning Agent
* Citric Acid
* Combustion Air
* Control Account
* Community Adviser
* Combat Aircraft
* Chief Adviser
* Certified Arborist

You can test this online.
* Go directly to this webpage here: http://www.acronymfinder.com/CA.html
* Or type "CA acronyms" (without quotes) in Google.

Last Remarks:
* Your train stations look very good.
* Your inland rail lines look good.

Remember: You are making decisions for millions and millions of people. Please remember to make the California High-Speed Rail work for as many people and in as many California locations as possible.

Notes :

2016 Business Plan RECORD DETAIL

Submission Date :	4/12/2016
Submission Method :	Project Email
First Name :	Arthur
Last Name :	Ringham
Stakeholder Comments/Issues :	Below are my comments to the CAHSR 2016 Business Plan. Please consider the following: 1. Exhibit 7.27 on page 81 of the 2016 Plan shows that for year 2025 Medium Scenario, the San Jose - North Bakersfield line would have a Net Cash Flow from Operations of ($32 million) or a $32 million Operating Deficit. This means that an Operating Subsidy of $32 million would be required. 2. Exhibit 7.28 also on page 81, shows that for years 2025 and 2026 Low Scenario, Operating Deficits would be $74 million and $33 million respectively. 3 In any Scenario, Operating Deficits could occur if (a): Ridership is significantly below forecasts,(b): Operating and Maintenance costs are significantly above estimates or, (c) a combination of both (a) and (b). Also: 4. Proposition 1A, Article 2, High-Speed Train Financing Program, 2704.04 (d) states: "Proceeds of bonds pursuant to this Chapter shall not be used for any operating or maintenance costs of trains or facilities." 5. Proposition 1A, Article 2, 2708 (c) (2) (J) states: "The planned service by the Authority in the corridor or usable segment thereof, will not require a local, state, or federal operating subsidy." In view of items 1 through 5, the 2016 Business Plan should explain how the above, or any other Operating Deficits would be funded. Thank you for addressing these comments. Sincerely, Arthur J. Ringham
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/5/2016
Submission Method :	Letter
First Name :	Bob
Last Name :	Kellar
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Santa_Clarita_040516_Biz_plan.pdf (485 kb)

City of
SANTA CLARITA

23920 Valencia Boulevard • Suite 300 • Santa Clarita, California 91355-2196
Phone: (661) 259-2489 • FAX: (661) 259-8125
www.santa-clarita.com

April 5, 2016

Mr. Dan Richard, Chairman
Board of Directors
California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

SUBJECT: COMMENTS REGARDING CALIFORNIA HIGH-SPEED RAIL DRAFT 2016 BUSINESS PLAN

Dear Chairman Richard:

Thank you for the opportunity to comment on the California High-Speed Rail Authority's (CHSRA) Draft 2016 Business Plan. The Santa Clarita City Council recognizes and appreciates the efforts by CHSRA to be more responsive to our community's concerns over the past two years. We are grateful for the visits to Santa Clarita from yourself in January 2015, as well as the many community meetings hosted by CHSRA and led by Michelle Boehm, CHSRA Southern California Regional Director, to share project updates and learn firsthand of our community's concerns regarding the proposed project.

City staff has reviewed the Draft 2016 Business Plan and appreciate CHSRA's efforts to provide updated information regarding the project's construction timelines, financing information and cost estimates. The City is most concerned with the impacts the construction and operation of the high-speed train would have on local residents, as well as the other communities located within the Palmdale to Burbank Project Section. We thank CHSRA for the continued evaluation of the proposed alignments within the Palmdale to Burbank Project Section and for the revision of the SR 14 alignment, which has resulted in the proposed alignment traveling by tunnel under the eastern most portion of the City, eliminating previous impacts to a broader area of Santa Clarita, most notably the Sand Canyon neighborhood.

While the City remains appreciative of CHSRA's efforts to identify potential routes for the Palmdale to Burbank Project Section, we continue to retain the position adopted at the July 14, 2015, City Council meeting, in which the City Council supports only fully underground alignments in order to minimize negative impacts to the communities located within the Project Section. We ask that CHSRA continue to work with the impacted communities within the Palmdale to Burbank Project Section and

fully consider their concerns, as you have with concerns expressed by the residents of Santa Clarita. Furthermore, the City Council and City staff look forward to continuing to work with you and your colleagues on the CHSRA Board and your staff to thoroughly consider potential impacts to the City of Santa Clarita and properties owned by the City as you continue through the environmental review process.

As previously communicated to communities within the Palmdale to Burbank Project Section, and reiterated in the Draft 2016 Business Plan, we look forward to the completed environmental document to be released in 2017. The City Council requests that CHSRA continue to engage affected communities during the course of the environmental process, up to its culmination in 2017, so that any project updates or adjustments to alignments or timelines are communicated in an expeditious and transparent manner.

Lastly, as a result of the Memorandum of Understanding CHSRA has entered into with the Southern California Association of Governments (SCAG) and county transportation commissions to provide $1 billion in investments into existing regional and local commuter rail systems in Southern California, the City Council requests that CHSRA continue to work with SCAG and its regional partners to facilitate early investment in the region's rail infrastructure to increase interregional connectivity, speed, capacity and safety.

Thank you for your consideration of these comments. If you or your staff should require any additional information regarding this letter, please contact me or Michael Murphy, Intergovernmental Relations Manager, at (661) 255-4384, or email at mmurphy@santa-clarita.com.

Sincerely,

Bob Kellar
Mayor

BK:ML:sk
S:\MS\Matt\CHSRA\2016 Draft Business Plan Comments.doc

cc: Members of the City Council
Kenneth W. Striplin, City Manager
Frank Oviedo, Assistant City Manager
Robert Newman, Director of Public Works
Jeff Morales, CHSRA Executive Director
Michelle Boehm, CHSRA Southern California Regional Director
Michael P. Murphy, Intergovernmental Relations Manager
Matt Levesque, Management Analyst

2016 Business Plan RECORD DETAIL

Submission Date :	4/8/2016
Submission Method :	Letter
First Name :	Josh Bridegroom and David Gianelli
Last Name :	Josh Bridegroom and David Gianelli
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Modesto_partnership_BizPla_040816.pdf (394 kb)

April 8, 2017

Mr. Dan Richard
Chairperson, California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

Re: CHSRA 2016 Draft Business Plan

Dear Mr. Richard,

We are writing to you on behalf of the Downtown Modesto Partnership which manages the Downtown Modesto Community Benefit District. We represent over 270 property owners in downtown Modesto.

We were very excited and supportive of the plans to expand the ACE rail service through Stanislaus County and down to Merced. We greatly appreciated the importance that the CHSRA's 2012 Revised Business Plan placed on early investments to the Altamont Corridor Express (ACE) rail service which would provide important connectivity to the HSR system. We saw the downtown Modesto station as providing an important link to the Bay Area and a very important cog in the wheel toward providing future economic development to our struggling downtown. Our downtown community was hit very hard with the recent economic downturn and we have only slightly recovered. We still have many empty buildings, problems with homelessness and crime and other very significant issues. We see ACE as a way of attracting millennials to downtown, stimulating future development of downtown housing and facilitating business growth, all of which will help solve these issues.

Consequently, we have very serious concerns regarding the CHSRA Draft 2016 Business Plan. It is in direct conflict with the promises made by CHSRA for "blended" service through Modesto and the Northern San Joaquin Valley in its 2012 Business Plan – service that is critical to improving our overall economy. Stanislaus, Merced and San Joaquin Counties were the most severely impacted by the Great Recession. For the most part, we have not recovered. It would seem that the primary intention of Federal Stimulus Act funding would be to help our three counties. However, the Draft Plan will, in fact, further inhibit our counties from recovering and building back our economies. We cannot support the proposed modifications set forth in the Draft 2016 Business Plan.

We urge the CHSRA to make a strong commitment and give the highest priority to investments that connect HSR to Merced, that extend and enhance the ACE system to connect with HSR in Merced, and to make the connection to Sacramento through Amtrak. This connectivity will provide much greater ridership for HSR and better lifestyles for the tens of thousands of people who already commute every day from the Central Valley to the Bay Area. It will also create a connection between the Bay Area and the Central Valley that will lead to the type of economic development needed in Stanislaus, Merced and San Joaquin Counties.

Sincerely,

Josh Bridegroom, CEO
Downtown Modesto Partnership

David Gianelli, Chairman
Downtown Modesto Partnership

2016 Business Plan RECORD DETAIL

Submission Date :	4/13/2016
Submission Method :	Project Email
First Name :	Robert
Last Name :	Allen
Stakeholder Comments/Issues :	From: Robert Allen [mailto:robertseeallen@gmail.com] Sent: Wednesday, April 13, 2016 9:07 AM To: HSR info@HSR; Ko, Felix; Robert Allen Subject: Corrected copy re Business Plan 2016 "Safe reliable..." The first words in the title of 2008 Prop 1A - get scant mention in the Preface, History, Table of Contents, Statutory Requirements, and Executive Summary pages of the Draft Business Plan. California Public Utilities Commission, which has safety oversight responsibility, is not even mentioned until the bottom of Page 93. HSR road crossings at grade are vulnerable to accidents, suicides, sabotage, and ensuing delays. These tracks need grade separation. (Bourbonnais showed what can happen even at 79 mph when a track is obstructed.) We have fortunately had no 9/11 types of attack at grade crossings. Two Peninsula 65 mph corridors (I--280 & US-101) have no cross traffic. Trains take much longer than rubbertired vehicles to stop. Airplanes and motor vehicles have seat belts - missing on trains - for emergency deceleration. Yet train speeds of 110 mph or more are planned for Caltrain tracks on which you plan to operate. Trains over grade crossings at such speeds are neither safe nor reliable. Early in your Business Plan CHSRA needs to cite the CPUC jurisdiction, especially at grade crossings. Pending CPUC approval, you would wisely limit the speed at which your trains could cross roads and run through stations. While this may not be part of the Business Plan, it should be a part of your standard operating procedure. Making your planned IOS on new grade separated track south from San Jose was a prudent choice.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/13/2016
Submission Method :	Letter
First Name :	Gary
Last Name :	Davis
Stakeholder Comments/Issues :	Good afternoon, Attached is a comment letter from the City of Elk Grove regarding the California High Speed Rail Authority's Draft 2016 Business Plan. It is requested that these comments be made part of the official public record regarding the Draft 2016 Business Plan. I would greatly appreciate if you could please acknowledge the receipt of this comment letter. Thank you, Mike Mike Costa Transit Planner City of Elk Grove 8401 Laguna Palms Way Elk Grove, CA 95758 916.478.2264 (office) 916.691.3173 (fax) www.elkgrovecity.org<http://www.elkgrovecity.org/> _____ By sending us an email (electronic mail message) or filling out a web form, you are sending us personal information (i.e. your name, address, email address or other information). We store this information in order to respond to or process your request or otherwise resolve the subject matter of your submission. Certain information that you provide us is subject to disclosure under the California Public Records Act or other legal requirements. This means that if it is specifically requested by a member of the public, we are required to provide the information to the person requesting it. We may share personally identifying information with other City of Elk Grove departments or agencies in order to respond to your request. In some circumstances we also may be required by law to disclose information in accordance with the California Public Records Act or other legal requirements.
Notes :	
Attachments :	Elk Grove Comment Letter re California High Speed Rail Draft 2016 Business Plan.pdf (2 mb)

8401 Laguna Palms Way • Elk Grove, California 95758
Tel: 916.683.7111 • Fax: 916.627.4201 • www.elkgrovecity.org

April 13, 2016

Mr. Dan Richard
Chairperson, California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

Re: California High Speed Rail Authority (CHSRA) Draft 2016 Business Plan

Dear Chair Richard,

The City of Elk Grove has been an active participant on a number of working groups in Northern California that are coordinating passenger rail services along the Capitol Corridor, San Joaquin and ACE rail corridors. Among these groups are the newly formed MPO Mega-Region Partnership and the well-established Central Valley Rail Working Group (CVWRG).

The City of Elk Grove and its rail coalition partners have identified a number of concerns with the draft plan. Among the concerns is the fact that the draft business plan greatly delays closing the gap between Northern and Southern California. The 2012 Revised Business Plan stated the closing of this gap was "the state's highest priority for intercity rail". For many years the promise of the early high speed rail (HSR) connection and improvements to conventional inter-city rail, commonly called the "blended service concept" have been essential for support from the Sacramento region. Not only does the draft plan leave in doubt any real funding for connections between Sacramento to Merced, the draft plan also does not provide funds to support improved connections between Sacramento and San Jose.

The draft business plan includes a commitment to invest $2.1 billion between Burbank and Anaheim. But previously, the CHSRA was also committed to providing funding support for investments in "conventional" services which would connect to the Initial Operating Segment (IOS) of high speed rail. While staff recognizes there are investment needs in the Burbank to Anaheim corridor, the draft plan does not propose near-term blended service investment priorities that will benefit Sacramento, the Northern San Joaquin Valley, or portions of the Bay Area. In order to fulfil the commitment for blended service there is a strong case for significant inter-city rail funding to connect Sacramento to both Fresno and San Jose.

The City and its rail coalition partners request that the CHSRA fulfill the promise in the prior business plan to fund the blended service needs in Northern California and to extend HSR to Merced. Three intercity rail corridors in Northern California offer significant promise to increase ridership for the IOS of HSR. Investing in these corridors also offer significant promise for better connections across the Northern California Mega-region.

Specific investments along these three corridors would be developed through active rail corridor planning efforts that the City of Elk Grove and its coalition partners have been involved in over recent years:

- $1.0 billion in connectively improvements for San Joaquin Rail Service between Fresno and Sacramento
- $1.0 billion in connectively improvements, for the Altamont Corridor Express (ACE) Service between Merced and San Jose through the Altamont Pass
- $1.0 billion in connectively improvements along the Capital Corridor between San Jose and Sacramento
- Include an amount to be determined for the Central Valley Wye connection to the Merced Station that will improve Northern California high speed rail ridership prospects.

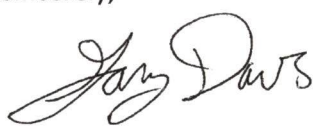
The CHSRA 2016 Business Plan should include an enforceable commitment for investing in near-term conventional rail connectively improvements between Sacramento, the Bay Area and Northern San Joaquin Valley. It is important for the CHSRA to specify where this funding will come from and that it will be a priority to have improved "conventional" intercity rail service. Intercity rail investments along the San Jose to Sacramento and Fresno to Sacramento corridors can become important "feeder" services to the Phase 1 HSR system.

A final recommendation from the City of Elk Grove and its rail coalition partners is that the CHSRA fulfill the earlier commitment for funds to support rail planning coordination in Northern California. As such, the Authority should release the $53.9 million of Proposition 1A Funding authorized by the Budget Act of 2012 for planning work along the Merced to Sacramento Corridor. These funds are needed to enable the planning/environmental/engineering work needed to provide improved passenger rail service between the future Phase 1 HSR service and Sacramento and to provide the foundation for full Phase 2 HSR implementation. The City believes the legislative intent behind the inclusion of the Merced to Sacramento planning funding in SB 1029 was to do the planning needed to support near-term passenger rail improvements. These near-term passenger rail improvements would greatly support the City's anticipated connection to the San Joaquin passenger rail service with a new multimodal station, which is currently in its planning phase. Despite the support and high level of interest from the Sacramento region, there has been no progress in the planning for improved early investment for connecting rail service between Merced and Sacramento.

The CHSRA has received important support from the City of Elk Grove and its rail coalition partners for many years. Support from our regions helped pass Proposition 1A and members of the legislature have provided key votes in 2012 and 2014 to advance high speed rail implementation activities. This support has come despite the fact that Sacramento is a late year Phase 2 corridor and the Pacheco Pass route selected by CHSRA between the Bay Area and San Joaquin Valley does not serve the corridor between Merced and Sacramento as effectively as the Altamont Pass route would have.

The City of Elk Grove and our Northern California rail coalition partners are hopeful that the final version of the CHSRA business plan can be one that benefits all of Northern California.

Sincerely,



Gary Davis
Mayor

2016 Business Plan RECORD DETAIL

Submission Date :	4/13/2016
Submission Method :	Project Email
First Name :	Emanuel
Last Name :	Yekutiel
Stakeholder Comments/Issues :	Hi there, My name is Emanuel Yekutiel - I run a donor advising firm in San Francisco which helps entrepreneurs with their charitable giving. I wanted to write in support of the 2016 California High Speed Rail Business Plan. I'm so excited for this project and proud that California will be the first in the nation to implement this. Like so many other aspects of our country's progress, California is getting it done first. Beyond all the jobs created, the time saved, and the pride we will have as a State - the building of this train system here and now will allow us to export the cutting edge technology and workforce to the rest of the country and the world. I'm proud of the State's commitment to do this with a net-zero carbon emission as well. Bravo! I can't wait to see this system built. -- Founder, ESY Strategies (415) 203-7122
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/13/2016
Submission Method :	Letter
First Name :	Marjie
Last Name :	Kim
Stakeholder Comments/Issues :	Please find the attached comment letter on the Draft 2016 Business Plan from Merced County Association of Governments (MCAG). Hardcopy is also being sent. Thank you. Matt Fell Transportation Planning Manager Merced County Association of Governments (MCAG) 369 West 18th Street, Merced CA 95340 209-723-3153 ext. 320 http://mcagov.org
Notes :	
Attachments :	Letter to CHSRA from MCAG April 13 2016.pdf (955 kb)

MERCED COUNTY ASSOCIATION OF GOVERNMENTS

PH: 209.723.3153
FAX: 209.723.0322
www.mcagov.org
369 W. 18th Street
Merced, CA 95340

April 13, 2016

Mr. Dan Richard
Chairperson, California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

Subject: Comments on California High-Speed Rail (CHSRA) Draft 2016 Business Plan

Dear Chairperson Richard,

Merced County Association of Governments (MCAG) is submitting this letter detailing our concerns with the proposed new routes in the CHRSA Draft 2016 Business Plan, the lack of support for the blended service concept, and our continued dismay with the outreach and coordination efforts between the CHRSA and its public sector partners. We stand in support of the concerns outlined by the Central Valley Rail Working Group, who has been involved in the coordinated planning for passenger rail service between Sacramento and Merced since 2006.

The new plan greatly delays closing the gap between Northern and Southern California which the 2012 Revised Business Plan stated was "the state's highest priority for intercity rail". For many years the promise of the early HSR connection at Merced and improvements to conventional intercity rail, commonly called the "blended service concept" have been essential for support from the Northern San Joaquin Valley and Sacramento region. Not only does the draft plan leave in doubt any real funding for connections between Merced and Sacramento, the draft plan also does not provide funding support for improved connections between Sacramento and San Jose or between Merced and San Jose.

The draft business plan includes a commitment to invest $2.1 billion between Burbank and Anaheim. But previously, the CHSRA was also committed to providing funding support for investments in "conventional" services which would connect to the Initial Operating Segment (IOS) of high speed rail. While we recognize there are investment needs in the Burbank to Anaheim corridor, the draft plan does not propose "blended service" investment priorities for Northern California that will benefit Sacramento or the Northern San Joaquin region for decades. In order to fulfill the commitment for "blended service" there is a strong case for significant intercity rail funding to connect Sacramento and the Northern San Joaquin Valley to both Fresno and San Jose.

MCAG requests that CHSRA fulfill the promise in the prior business plan to fund the blended service needs in Northern California and to extend HSR to Merced. Three intercity rail corridors in Northern California offer significant promise to increase ridership for the IOS of HSR. Investing in these corridors also offer significant promise for better connections for the Northern California Megaregion.

Specific investments along these three corridors that would be developed through active rail corridor planning efforts:

- $1.0 billion in connectively improvements for San Joaquin Rail Service between Fresno and Sacramento
- $1.0 billion in connectively improvements, for the Altamont Corridor Express (ACE) Service between Merced and San Jose through the Altamont Pass
- $1.0 billion in connectively improvements along the Capital Corridor between San Jose and Sacramento
- Include an amount to be determined for the Central Valley Wye connection to the Merced Station that will improve Northern California high speed rail ridership prospects.

The CHSRA 2016 Business Plan should include an enforceable commitment for investing in near-term conventional rail connectively improvements between Sacramento, the Bay Area and Northern San Joaquin Valley. It is important for the CHSRA to specify where this funding will come from and that it will be a priority to have improved "conventional" intercity rail service. Intercity rail investments along the San Jose to Sacramento and Fresno to Sacramento corridors can become an important "feeder" services to the Phase 1 HSR system.

A final recommendation is that the CHSRA fulfill the earlier commitment for funds to support rail planning coordination in Northern California. As such, the Authority should release the $53.9 million of Proposition 1A Funding authorized by the Budget Act of 2012 for planning work along the Merced to Sacramento Corridor. These funds are needed to enable the planning/environmental/engineering work needed to provide improved passenger rail service between the future Phase 1 HSR service and Sacramento and to provide the foundation for full Phase 2 HSR implementation. We believe the legislative intent behind the inclusion of the Merced to Sacramento planning funding in SB 1029 was to do the planning needed to support near-term passenger rail improvements. Despite the support and high level of interest from the region, there has been no progress in the planning for improved early investment for connecting rail service between Merced and Sacramento.

In closing, we request that CHSRA fulfil the promise in the prior business plan to fund the blended service needs in Northern California and to extend HSR to Merced. Thank you for your consideration in addressing our concerns.

Sincerely,

Marjie Kirn
Executive Director

2016 Business Plan RECORD DETAIL

Submission Date :	4/13/2016
Submission Method :	Letter
First Name :	William
Last Name :	Warren
Stakeholder Comments/Issues :	Please see attached PDF file.Thank you, William Warren
Notes :	
Attachments :	Warren_041316.pdf (953 kb)

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

April 13, 2016

Subject – Comment Regarding Draft 2016 Business Plan

Topic – Operations and Maintenance Measurements and Costs

The primary purpose of this Comment is to submit to the California High Speed Rail Authority (CHSRA) a set of Inconvenient Truths regarding their efforts to project Operations and Maintenance Costs, while ignoring information in their possession which should have been "Big Red Flags".

Summary

Since it is not possible to review the Draft 2016 projected operating costs or revenues on a PPM or a PSM basis, my only perspective is to view them as logical extensions of the 2012 and 2014 Plans, adjusted for inflation, as the 2016 Plan says the 2014 Plan was built on the 2012 Plan, and the 2016 Plan was built on the 2014 Plan. That being said, my conclusion is that the 2016 Plan continues to understate costs on a PPM and PSM basis, and continues to plan for low revenues, on a PPM and PSM basis, due to their need to take market share from the automobile marketplace. Unfortunately worldwide information they have had in their possession shows the Authority's cost projections are substantially understated, and future reality will be a need for ongoing financial subsidies by the California taxpayers.

Introduction

Since the Index of Second Amended Administrative Record for Tos, et al. v. California High-Speed Rail Authority, et al, Sacramento Superior Court No. 34-2011-00113919, created on November 30, 2015, by the California Attorney General is in the possession of the Authority, as are the records and documents that have been entered into this Index, I will refer in this Comment to various documents by their name and the five character Administrative Record number (AR xxx). I will also provide the eight character Bates number (AGxxxxxx) of the first page of that document, and the page number of a specific page I wish to refer to.

A – It is an Inconvenient Truth that Per Passenger Miles measurements are as important as Per Seat Mile measurements

A1. A Consistent Form Of Business Level Financial Measurement Is Lacking Within The CHSRA. The Infrequent Use Of Per Seat Mile (PSM) Measurements is Insufficient. A Per Passenger Mile (PPM) Measurement Is Equally Important.

Professor Moore of USC has submitted a Comment for the 2016 Business Plan, "Operational and Financial Deficiencies in the 2016 Business Plan", April 3, 2016. On page 3 of his Comment he states that: "The key to any comparative financial analysis of different business activities around the world is to define a common dominator that allows apples to-apples comparison of how resources relate to the delivery of outcomes." He goes on to say that: "PPM provides an overall business level financial analysis perspective that incorporates a view of the passengers in terms of ….". Clearly he believes PPM measurement hold an important place in any effort to provide rational consistent analysis across different passenger transportation providers.

As far back as 2012, we showed in Attachment 10 of "To Repeat", AG 273, at AG008720, that Amtrak provided both measurements at the bottom of their report of the San Joaquin route on page AG008721. In the Financial Averages at the bottom of the page, see Revenues, Expenses, and Losses Per Passenger Mile. Directly below, is the same information, shown as Revenues, Expenses, and Losses Per Train Mile (which is the same concept as Per Seat Mile). In both cases, expenses are 2.3 times revenues (230% of revenues). Then Figure A4-1 of "To Repeat", AG 273, see AG008591, also shows both a Per Passenger Mile and a Per Seat Mile view of the Authority's revenues and expenses projected in their 2012 Business Plan. This "investment level" or "business" level of financial analysis was never forthcoming from the Authority. It is still lacking, yet the Authority expects private investors to consider major financial commitments, lacking this information. I believe reality is starting to set in.

B – <u>There is an Inconvenient Truth that the Authority has, for years, had Amtrak's new Next Generation Acela projections and independent reports on current Acela financials.</u> They did not disclose them, or discuss the ramifications of them, in any of the Business Plans (2012, 2014, and 2016). It is probably because current and projected future Acela costs on a PPM and a PSM basis will greatly exceed the Authority's projected O & M cost on a PPM or a PSM basis.

<u>B1. The Authority Refused to Publically Analyze Acela O & M Costs information that is in the Administrative Record</u>

In July 2012, Amtrak published a new report regarding Acela, titled "The Amtrak Vision for The Northeast Corridor, 2012 Update Report, July 2012". This document regarding "Next Gen HSR Service" is available as AR 268 at AG008459. The report discusses plans to upgrade the current Acela service in the Northeast Corridor. The current Acela is a very successful service, and it is the fastest train in service in the United States. The plan discussed would upgrade the service to HSR. Some financial projections are included. See page AG008496. Without referencing this Amtrak report, the Authority's September 2012 document, AR 272 at AG008523, which reviewed the "To Repeat" Enthovan, Grindley, and Warren report, "To Repeat", AR 273, makes the following statement regarding the O & M costs of the Authority's project and the Acela Next Gen plan, on page AG008526: see row "f" – "The projected profit margin over direct operating costs for Next Gen is projected to be very similar to that projected for CHSR." But how did they make this comparison without access to the Next Gen documents?

Additionally, this statement is not technically correct, as the ratio of the 2012 Business Plan Medium Case, for the Phase 1 Blended, of Revenue less O & M Costs ($1,752M-$775M), divided by O & M Costs ($775M) is a ratio of about 1.3. In other words, the Authority is projecting an operating margin that is equal to 130% of their projected operating costs. In comparison, for Amtrak's Net Gen, this same ratio on page AG008496 ($4,912M-$3,262M) divided by ($3,262M) is about 0.5, meaning the Next Gen O & M cost projection is a higher percentage of revenue than the Authority's projection. Therefore,, Amtrak is projecting an operating margin that is equal to 50% of their projected operating costs (compared to the Authority's 130%). Since the Next Gen projections does included the revenues and O & M cost for the slower speed "commuter" rail service in the Northeast corridor, it is understandable that the Authority's ratio should be somewhat higher, but a difference between 1.3 and 0.5 also speaks to the very low O & M costs the Authority is projecting, on either a PPM or a PSM basis. It is also very important to note that nowhere in the Next Gen Vision document is there a discussion of lowering their current pricing strategies. Therefore, it is reasonable to conclude that as of 2013, their then current pricing of 73 cents PPM and their then current O & M costs of 48 cents PPM, as shown in Item B2, below, will continue. Note this current day O & M cost, at 65% of Revenues, is very close to the relationship of Next Gen O & M cost as a percentage of Revenues. ($3,262M is about 66% of $4,912M).

Therefore, it is reasonable to conclude Next Gen's O & M costs will be in the range of 45 to 50 cents PPM, remaining substantially higher than the Authority's Revenue projections in the range of 20 to 25 cents PPM, and dramatically higher than the Authority's projected O & M Cost 2012 projections in the range of 9 to 12 cents PPM, as shown on Figure A4-1, of the Enthovan, Grindley, and Warren report, "To Repeat", AR 273, at AG008563, specifically see page AG008591. Nowhere in the Administrative Record is this differenced resolved. It is also important to note that in the Authority's 2014 and 2016 Business Plans, there is a total lack of transparency into what are the CHSRA projected revenues and costs on either a PPM or a PSM basis.

On the other hand, note that the statement in the Authority's 2012 document AR 272 which uses the words "direct operating costs". If this was intended to mean that all fixed costs, and direct costs supporting the maintenance of the infrastructure are being ignored – the Authority must clarified its terms. But, since that level of detail is not visible in the Amtrak documents, and is certainly not publically available in the Authority's 2012, 2014, and 2016 Business Plans, the comparison in AR 272 is probably worthless.

B2. The Authority Had New Acela Data per the Administrative Record as of March 2013

The Authority did not mention this new source of Amtrak information in the 2014 or 2016 Business Plans or when they referred to Amtrak in their internal documents AR 271 and AR 272, see AG008518 through AG8535.

In the March 2013 time period, new Amtrak data became available to Authority. See Puentes, and all at Brookings, 'A New Alignment', March 2013, AG 291, at AG009022,

see page AG009042, referring to Appendix B: Amtrak Route Performance. Note two routes, just below half way down on this page.

(A) The "San Joaquin" segment, which the Authority will replace with HSR service, had 1.1 Million riders in 2012, ticket revenues of $38.3 Million, Operating Costs of $77.9 Million, and a State Subsidy of $32.8 Million. The average ticket purchased was about $35. This can be compared to the Authority's projected average ticket price of about $69, see To Repeat, AG 273, at AG008536. See Figure A4-1 at page AG008591, Medium Case IOS column, Total Revenues divided by Total Passengers. This Brookings data is also very comparable to the Exhibits 3 and 4 of my Comment to the Draft 2016 Business Plan titled "Amtrak Actual and CHSRA Projected Operating Results", dated April 7, 2016.

(B) The "Acela" segment, which are the fastest trains between Boston, New York, and Washington DC, had 3.4 Million riders in 2012, ticket revenues of $510 Million, Operating Costs of $332 Million (about 65% of revenues) and no Subsidy. The average ticket purchased was about $150. This data shows that the Acela operation was profitable in 2011, with an operating expense of 65% of revenues, excluding any allowance for depreciation (consistent with the Authority's position). Using this ratio and the average of the three Acela ticket prices, on a PPM basis, of about 73 cents PPM, as shown in Figure 1 of "To Repeat", AG 273 at AG008536, see page AG008553, it appears that Acela O & M costs are in the range of 48 cents PPM (73 cents times 65%), dramatically higher than the Authority's 10 cents PPM. See To Repeat, AG 273, at AG008536. See Figure A4-1 at page AG008591, Medium Case, right most column, "Phase 1B Average". This data is very comparable to the Exhibits 1 and 4 of my Comment to the Draft 2016 Business Plan titled "Amtrak Actual and CHSRA Projected Operating Results", dated April 7, 2016.

There does not appear to be any factual analysis by the Authority in the Administrative Record, or in the 2014 or the 2016 Business Plans documents, to rationalize this large difference with Acela. And this was a large difference that had to be apparent to the Authority when they entered the Brookings report into the Administrative Record sometime in 2013 or 2014. It is very important to understand that the differences being identified here are not a matter of "10% here, 20% there". The difference between Acela actual costs and the Authority's projected costs is dramatic; the Authority's position is that they can deliver operating and maintenance costs for the train operations and the support of the infrastructure for 1/3 of what Amtrak is spending on Acela on a PSM basis. As I noted above, the Next Gen version of Acela is going to have revenues and costs on a PPM and PSM basis that will be substantially the same as they are experiencing today with Acela. Therefore, the Authority is projecting that they can deliver operating and maintenance costs for the train operations and the support of the infrastructure for 1/3 of what Amtrak is planning to spend on the "Next Gen" version of Acela, on a PSM basis. Where is the independently verified data to back up these projections?

Moreover, comparing Amtrak's costs for conventional rail (on the Northeast corridor and on the San Joaquin route) to the Authority's projections, shows that they maintain they can deliver a cost structure that is 1/2 of the Amtrak conventional rail costs on a PSM basis. See Exhibits 2 and 3 compared to Exhibit 4 of my Comment to the Draft 2016 Business Plan titled "Amtrak Actual and CHSRA Projected Operating Results", dated April 7, 2016. If that is true, why are Acela's costs, on the same northeast corridor route, about 50% higher, not 50% lower, than the two conventional rail routes on a PSM basis? See Exhibit 1 compared to Exhibits 2 and 3 of my Comment to the Draft 2016 Business Plan titled "Amtrak Actual and CHSRA Projected Operating Results", dated April 7, 2016.

Internalizing all this information, on a PPM and a PSM mile is difficult, but to ignore it is at one's peril. Simply stating that "Acela makes money, so the Authority should be able to make money", is either naïve, or deceptive -- one or the other. It ignores the fact that Acela is commanding a revenue stream on a PPM basis that the Authority can only dream of achieving. Additionally, to argue that ratios of operating margins over operating costs ensure against the need for a subsidy is intentionally deceptive, because it is based on projected PSM operating and maintenance cost projections that are a fraction of Amtrak's existing data and Amtrak's projections of future results based in years of "real world" operating experience. To dismiss, or hide, this data is a really big mistake.

What is most disturbing is that there still is nothing in the Administrative Record, or the various Business Plans (2012, 2014, or 2016), and their supporting documents, that shows a break down of the various components of Operations & Maintenance costs, side by side (for train operations and maintenance, and infrastructure maintenance and support), between Amtrak's actual data and the Authority's projections, on an annualized dollar basis and a PPM and a PSM basis. Nothing.

C – The Inconvenient Truth of the Authority's response to our 'Forever" report was one minor and three serious misrepresentations, all to the Authority's benefit. Therefore I would say it is highly probable it was on purpose.

C.1. The Authority published a response to a submitted report. That response contained numerous misleading pieces of information and this response was released as a Press Release, see AR 264 AG008373.

In May 2012 the Authority made a public Press Release, see AR 264, in response to a report, by myself and Mr. William Grindley, which had been submitted to the Authority and members of the Legislature. This report, "The Authority Will Need a Subsidy Forever", see AR 260, at AG008305, maintained, based on information from and available to, the Authority, that it appeared that an Operating Subsidy would be needed. The "Forever" report called for a more in depth study of existing HSR systems to be undertaken, possibly by State organizations outside of the Authority. In response, the Authority issued AR 264, at AG008373.

The core of the issue was that we analyzed a third part report which had been footnoted in a the Draft 2012 Business Plan document and concluded that based on this third party report the Authority would need an Operating Subsidy. The 2012 Plan stated that "information was drawn from" a number of sources that were footnoted, including the document we used. After our report was issued the Authority discovered that this third party document was incorrect, and therefore the conclusions we had drawn from this data could not be relied upon. That is a valid point, but why did the Authority find this problem only after our report highlighted this data, and not before they referenced it in their Business Plan documents? And why is the Final version of this supporting document to the 2012 Business Plan still showing the same footnoted reference to the data the Authority then knew was incorrect?

This response was analyzed in our subsequent December 2012 "To Repeat" report, AR 273 at AG008536, see Appendix 8 at AG008608 through AG008621. The Press Release is available at AR 264. As part of this Press Release, Table 2 was provided; see the last page of AR 264 at AG8380. Unfortunately, there were multiple flaws in this Table, at discussed in detail in the December 2012 To Repeat report (See AG008608 through 8621).

First Row – "Note 1" – The Authority's cost projections were not 6.3 to 6.7 cents PSM, but, as reported in the 2012 Business Plan, were 7.8 to 8.7 cents PSM (see "To Repeat" AR 273, go to AG008591).

Second Row - "Note 2" – The Taiwan cost projection has not been adjusted to deal with the difference between the cost of Asian labor and labor in California. Therefore, the numbers are misleading.

Third Row – "Note 3" – The Spanish costs are 10 times higher than these numbers, as shown in "To Repeat" AR 273, at AG008601, see Figure A6-1.

Fourth Row – "Note 4" – The "Direct Cost" UIC study that is referenced, see AR 176, only deals with those costs that vary with the speed of the trains. Therefore, there are many O & M costs that were not considered in this UIC study, and the study makes this point very clearly on the Introduction page, AG005596. The referenced cost of 5.4 cents PSM is much less than the total O & M cost the Authority will have to incur, leading the reader to a false conclusion. This UIC report is analyzed in detail, in the "To Repeat" report, AR 273, at AG008640 through AG008644.

So, in the 2012, we saw a Business Plan process that was not managed from a quality control point of view on a very critical topic (the footnoted document that was later declared to be "flawed") and a public response that quoted four sources with incorrect or misleading conclusions. This 2012 Business Plan is also the last time detailed Operation and Maintenance information appeared in the Authority's Business Plans. One might say it was the end of transparency; it just was not going well.

D - The two Peer Review reports are an Inconvenient Truth. Both were unkind to the Authority, and raised issues that were not resolved in the 2014 or 2016 Plan

D-1. The Peer Review Group Recognized In 2012 The Authority Might Cover O & M Costs and The Authority Needed To Look At Acela O & M Costs

In May 2012, the Peer Review Group (PRG) published their Comments on the Revised 2012 Business Plan, AG 107 and took the position on AG003674 that regarding the Authority's O & M costs: "Our experience with HSR elsewhere and our review of the demand and cost sensitivity analyses performed by the Authority indicate that the HSR operator should be able to cover operating costs from revenues and thus not need a subsidy as defined in Prop 1A. Performance beyond the break-even point is less clear." Therefore, if Revenues are going to be in the range of 23 cents PPM, then the PRG expected in 2012 that the O&M cost to be in the range of 23 cents PPM as well. This is more than double the CHSRA's cost projection of 10 to 11 cents PPM, and clearly validating the argument that the Authority's 2012 Plan O & M cost projections were not valid. See our report "Assessment" AG 259, AG008253, AG008255 and AG008256, and our report "To Repeat", AG 271, Figure A4-1 on AG008591. The PRG continued by also stating, regarding the 2012 version of the model: "overall results of the model appear optimistic by comparison with readily available data on the closest comparable U.S. HSR operations (Amtrak's operations in the Northeast Corridor)", also known as Acela. And finally: "The Authority's comparisons with international operators tend to support the Authority's position, but the data are not fully subject to detailed verification and, in any event, there is no experience anywhere with the extremely high speeds that the Authority plans to operate."

D - 2. In 2013 The Peer Review Group Said The UIC O & M Cost Review Was Useful, But Not Fully Based On US Practices

In July and August of 2013 the Peer Review Group (PRG) met and analyzed the O & M cost projections and the cost model for the upcoming 2014 Business Plan. In July 2013 the Authority presented a report to the Peer Review Group which stated that the 2014 projection of O & M costs were in the range of 8 cents PSM (Per Seat Mile), as compared to the 2012 projection of 7 cents PSM. See Authority, Update to PRG of Work in Progress on O & M Modeling and Projections (July 2013) AG 409, at AG017468, see page AG017492. Note the Authority presented one footnote to validate their projection; the UIC Study (Direct Costs), AR 176. This UIC report is analyzed in detail, in our To Repeat report, AR 273, at AG008640 through AG008644. This analysis shows that the UIC stated that this report was not intended by UIC to be an estimate of fully burdened O & M costs, but rather just those costs that vary with the speed of the HSR train. See AR 176, at AG005602. Therefore the Authority is comparing their projected costs to a UIC cost PSM number which reports just some, but not all, of the O & M Costs. Note that the 2012 projection of 8 cents PSM was consistent with the O & M costs PSM reported in the To Repeat, report, AR 273, in Figure A4-1 on AG008591 which show over all three cases, for all years, the Authority's 2012 O & M cost PSM was in the range of 7.6 to 8.5 cents.

That implies that the O & M cost estimates in the 2012 Business Plan, in the 7 to 8 cents PSM, which is supposed to represent fully loaded, fully burden operating and maintenance costs, for the operation of the train and the maintenance and support of the train and the infrastructure, are projected to be in the same range of the UIC's costs for SOME, but not all of direct operating costs, and none of the fixed costs, or any of the direct/variable costs that do not vary with operational parameters such as speed. The conclusion is that the documented costs in the 2012 the Business Plan are not capturing all of the costs the Authority will incur, just some of them. If this implication is incorrect, the Authority needs to show how Direct Costs of 8 cents PSM in 2012 and 7 cents PSM in 2014 become part of the Operating Cost financial projections in the Business Plans. Lacking transparency (by choice), the only conclusion is that the Authority does not want to admit what the true fully loaded, fully burdened Operating and Maintenance costs amount to.

The PRG also reviewed the work done by the UIC in January 2013 (See the UIC Review at AR 408 at AG017391 to AG017435). The PRG subsequently noted that, *". . while the UIC analysis is quite useful, it is not fully based on methods, practices and cost levels typical of railways in the U.S. We believe the Authority should consider hiring an expert who can review the O&M cost modeling from the point of view of likely U.S. results".* In addition, see PRG comments of August 14, 2013 regarding the subsequently released 2014 Business Plan, contained in Authority, 2014 Business Plan (2014 Plan) (April 2014) AR 340 at AG011047, see pages AG011139 to AG011146, and see specifically AG011144. Clearly, as late as August 2013, the PRG was not comfortable with the Authority's O & M cost projections.

A review of the March 26 2016 and March 28 2016 Peer Review Group documents regarding the 2016 Business Plan and their Report to the Assembly Hearing revealed that these documents did not even mention operating and maintenance costs. So much for oversight.

E – There is an Inconvenient Truth that an early UIC letter and two sets of Spanish data show that revenues and costs are high and about the same.

E.1 - The UIC told the Authority in 2011 that Revenues were about equal to O & M costs – This letter was discussed in "To Repeat". Additionally, the 2013 review from the UIC, does not address, or dismiss, this earlier letter from the UIC

The UIC February 2011 letter to Mr. Van Ark, then Chief Executive Officer (CEO), see ("UIC Letter") in "To Repeat", AG 273, see Attachment 11, at AG008726, stated that its official UIC/IUR position on profitability was that HSR revenues and operating cost were roughly equated to one another. The letter stated: "generally speaking - farebox revenues cover O & M costs". This means, for example, if revenues are about 40 cents Per Passenger Mile (PPM), O&M costs must generally therefore be in the range of 40 cents PPM. (Or, if revenues are about 20 cents Per Seat Mile [PSM], O&M costs must generally therefore be in the range of 20 cents PSM.) It does not mean that "generally

speaking" O & M costs are about half of revenues. If the Load Factor for the HSR system is 50% (half of the seats are filled with revenue paying customers), and O & M costs are in the range of 40 cents PPM, then its O & M costs on a Per Seat Mile basis are in the range of 20 cents PSM. Note, the UIC is a world-wide organization of railroad operators and whose mission is to promote rail transport, for example by the sharing of information and best practices.

In addition to this UIC letter of 2011, there are two different sources which validate existing Spanish O & M costs on a PPM basis and show they far exceed the projected revenues of the IOS. The Authority had this information and chose to ignore it.

E.2 - In June 2011, Spain's RENFE made a 65 page presentation to Mr. Van Ark (CEO) and the Authority's Board of Directors at the Board Meeting on June 2, 2011, "RENFE Company Profile and Development of High Speed Rail Services", see AR 181, at AG005704. When Spain's AVE's revenues, profit margins, load factors, ticket prices and distances were analyzed, revenues Per Passenger Mile (PPM) could be estimated to be about 55 cents PPM, and costs could be estimated to be about 45 cents PPM. These results were first reported back to the Authority in the report "The CHSRA Knows Their Proposed High-Speed Train Will Forever Need an Operating Subsidy", W. Grindley, et al., March 17, 2012, AG 260, at AG008305. These results are also subsequently shown in the right hand column of Figure A6-1 of the "To Repeat - California's High Speed Rail Will Require A Subsidy – Forever", A. Enthoven, et al., Second Edition, December 17, 2012, AR 273, at AG008536. See pages AG008600 to AG008604.

In response to our "Forever" report, the Authority issued a Press Release defending their position (see prior in Section C, "Press Release", see AR 264). Part of that Press Release was a table with Costs on a Per Seat Mile basis. "Note 3" is a reference to a Sanchez-Borras report on the Spanish HSR System, "High-Speed Railways in Spain", M. Borras, et al., Transportation Research Record: Journal of the Transportation Research Board No. 2661, 2011, see AR 522, at AG022143. However the Authority's Note 3 states that the Spanish AVE system operates at 02.4 to 03.4 cents PSM, and this does not appear to be correct. The "To Repeat", report, in Appendix 6, on pages AG008600 to AG008604, analyzed this Sanchez-Borras report and found that the range of O & M costs were in the 23 to 30 cents PSM, see Figure A6-1. On the right hand side of this Figure A6-1 are the results of analyzing the Spanish RENFE Board presentation, and the projected O & M costs are in the 28 to 35 cents PSM. It is not clear how these two different sources can be so similar to each other, in O & M costs estimates, and the Authority's calculation can be 1/10 of these results.

<u>The Methodology of Projecting O & M Cost for Spain's RENFE from June 2, 2011 CHSRA Board Presentation, as shown on Exhibits 1 and 2</u>

Exhibit 1: RENFE O & M costs of 45 cents PPM were based on:

1) Data from the Madrid to Barcelona corridor, see Exhibit 1, and by projecting a ridership mix of 10% Club, 40% Business, and 50% Tourist (Classes of Service), see

Exhibit 2, based on the Slide Presentation at AR 181. See slide 59 (AG005762), and the prices shown on slide 34 (AG005737). These ticket classes for this corridor were selected as this corridor is the largest number of passengers per year and the highest number of trains per day in the Spanish system.

2) These weighted average ticket prices of 172.13 Euros for the Non-stop Ave and 145.86 Euros for the Ave with some intermediate stops were then converted to US dollars at an exchange rate of 1.35 (2012 conversion rate), and divided by the number of miles (390 miles) (see AG005737) between Madrid to Barcelona, resulting in revenues PPM of 59.4 cents and 50.3 cents with an average of 55 cents PPM. (center of Exhibit 2)

3) As the operating profit on this corridor is 19.3% (AG005753), the operating costs, at 80.7% of revenues, are 44.3 cents PPM for these two classes of trains (non-stop and with stops). (bottom of Exhibit 2)

Why Is This Important?

The To Repeat report, Figure 5, PDF page 37, (AG008572) shows that the Authority's 2012 Business Plan projects average revenues of 23 cents PPM and average projected O & M costs of 10 cents PPM. See Figure A4 -1 on AG008591 for data from the 2012 Plan that documents these projections.

In comparison, the Spanish HSR reports revenues of 44 to 55 cents PPM and costs of 32 to 45 cents PPM. See the Figure A6 – 1 for the RENFE presentation data on the far right, and the Spanish Report in the center of the page on AG008801.

The Authority has no alternative but to price their fares at 23 cents PPM to be competitive with airline fares and the low cost of gasoline (and multiple people per car). They also need to project a positive operating margin in order to show a positive cash flow that can be used to repay construction debt/loans that are intended to finance the Phase 1 stages of construction. Therefore, they have to defend an O & M cost projection of 10 cents PPM, well below the two sets of Spanish data, which they were well aware of during the development of the 2014 and 2016 Business Plans. There is no evidence to show why the Authority will be able operate at half of the Spanish reported data. If the Authority actually incurs costs in the range of the Spanish costs of 32 to 45 cents PPM, these costs will far exceed the Authority's projected revenues in the range 23 cents PPM.

At the end of the Spanish presentation in 2011, to the Board of Directors, one Board member asked what was the Load Factor that RENFE was achieving. The response was 70%. See the video and transcript included in a Comment for the Draft 2016 Business Plan, by William Warren, " Transcripts and Videos from the Tos – CHSRA Lawsuit", April 8, 2016. See transcript and video from Event #3. Additionally, an analysis of the Sanchez-Borras report will show that they also reported a Load Factor of 70%. See AG022143, and see specifically page AG022150. The Authority is planning for 85%, see: "2014 Service Planning Methodology", AR 334, at AG10817.

For those more comfortable measuring revenues and costs on a PSM basis, the Load Factor of 70%, for example, may be used to convert all the PPM values shown above, to PSM values. The comparisons and the conclusions will not change.

The existence and possession by the Authority of these two sets of Spanish data, in conjunction with the statement of the UIC about international HSR revenues (farebox) and operating cost is not in doubt. They have had this information since the 2011 and 2012 time period. However, there has never been a comparison of detailed CHSRA "bottom up" data to substantiate how and why the Authority will be successful in attempting to operate at a fraction of what these three facts would logically lead one to believe are more similar to the existing "top down" international costs.

F – The GAO report, which said the cost data was inadequate, is a very Inconvenient Truth.

The GAO Said in 2013 That The Authority Did Not Do An Independent Cost Estimate Nor Explained How International Cost Data Was Utilized, The GAO Did Not Sign Off On The Authority's O & M Projections

In March 2013, the United States Government Accountability Office (GAO) published a report regarding the 2012 Business Plan which said; "The Authority also did not compare its operating cost estimate to an independent cost estimate or conduct a risk and uncertainty analysis." See GAO, Report to Congressional Requesters; CHSPR, AG 487, see AG020385. In addition, the GAO said, "For example, we were unable to identify the basis for how the operating costs from analogous foreign high-speed rail projects were adjusted for use in California. Authority officials said that the operating cost estimate was used at a high level to determine whether or not the California system will operate with an operating surplus." See the GAO report, at AG 487, see AG020383.

Conclusion - What Does The Existence Of These Truths Mean?

There is no data in the Administrative Record to reflect meaningful comparisons of the Authority's projections and the existing cost records of Amtrak (Acela) and the international HSR operators such as the Spanish. Since the Authority ignored input from third parties, and knew about the existence of these different sets of information, and they chose to ignore them, and to sometimes incorrectly (intentionally or unintentionally) interpret them, the Authority is showing a gross overstepping of their responsibility to weigh all the facts in front of them to ensure a proper execution of their public powers.

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Exhibit 1

Spanish HSR "renfe" Pricing **Presented to CHSRA June 2, 2011**

		Madrid - Barcelona		Madrid - Sevilla		Madrid - Ciudad Real					
		KMs	Miles	KMs	Miles	KMs	Miles				
KM per Mile =	1.6093	628	390	471	293	171	106				
		Ave - Direct	Ave - Stops	Ave	Alvia	Ave	Alvia	Avant		Ave - Direct	Ave - Stops
Ticket Price in Euros											
Club		242.00	205.10	151.00		71.40				24.2	20.51
Business		201.70	171.00	125.90	98.00	59.60	53.60			80.68	68.4
Tourist		134.50	113.90	83.90	63.30	39.70	34.60	21.25		67.25	56.95
Discounted Tourist				29.10	25.30			14.14			
Deep Discount								8.81			
								Book of 20		Weighted Average	
$ per Euro =	1.3459								Euros	172.13	145.86
Ticket Price in Dollars									$	231.67	196.31
Club		325.71	276.04	203.23		96.10					
Business		271.47	230.15	169.45	131.90	80.22	72.14				
Tourist		181.02	153.30	112.92	85.20	53.43	46.57	28.60			
Discounted Tourist				39.17	34.05			19.03			
Deep Discount								11.86			
Ticket Price per Mile, in Dollars										Revenue PPM $s	Average
Club		0.835	0.707	0.694		0.904				0.59	0.50 0.55
Business		0.696	0.590	0.579	0.451	0.755	0.679				
Tourist		0.464	0.393	0.386	0.291	0.503	0.438	0.269			
Discounted Tourist				0.134	0.116			0.179			
Deep Discount								0.112			

Types of HSR Service

Ave - Long Distance, 3 classes of service, market prices, represented as profitable

Alvia - Long Distance, 2 classes of service, market prices, represented as profitable

Avant - Regional , 1 class of service, governemnt approved prices, multi-year government compensation

Exhibit 2

Analysis of Spanish HSR "renfe" Pricing

		Madrid - Barcelona		Madrid - Sevilla		Madrid - Ciudad Real			Ave - Direct	Ave - Stops
		KMs	Miles	KMs	Miles	KMs	Miles			
KM per Mile =	1.6093	628	390	471	293	171	106			
		Ave - Direc	Ave - Stops	Ave	Alvia	Ave	Alvia	Avant		
Projected Mix of Tickets Sold, per customer mix data (see pages 59 & 61)										
Club		10%	10%	10%		10%				
Business		40%	40%	40%	40%	40%	50%			
Tourist		50%	50%	40%	40%	50%	50%	40%		
Discounted Tourist				10%	20%			40%		
Deep Discount								20%		
Projected Weighted Average of Ticket Prices, per mile, per city pairs										
		0.594	0.503	0.469	0.320	0.644	0.559	0.202		

Project Weighted Average of System level ticket Price, per mile, based on mix of number of seats available per day (thousands) (see pages, 25, 27 & 28)

	# Data Points	Average $ per mile	Seats (K) per day	% of all seats	Contribution to System price	
Ave	4	0.552	49.6	52.7%	0.291	
Alvia	2	0.439	19.6	20.8%	0.091	
Avant	1	0.202	25.0	26.5%	0.054	
			94.2	100.0%	0.436	Average System ticket price in $ per mile

Projected Weighted Average of System level Operating Costs, per mile, based on Madrid - Barcelona Cost data (see page 50)

Assume Costs based on just Ave pricing		Assume Costs based on average System ticket price $				
	Weighted Ticket $					
Avia - Direct	0.594	All Data Points	0.436			
Avia - Stops	0.503					
Total, assume 50% - 50%	0.548	Total	0.436			Ave.
Less Profit 19.30%				19.30%	19.30%	Average
Operating Costs	0.443 (high)		0.352 (low)	0.479	0.406	0.443

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95814

2016 Business Plan RECORD DETAIL

Submission Date :	4/12/2016
Submission Method :	Letter
First Name :	Andrew
Last Name :	Chelsey
Stakeholder Comments/Issues :	
Notes :	Rosa Park presented this letter and provided public comment at the Board of Directors meeting on April 12, 2016 in Anaheim. Transcript of the remarks is also attached.
Attachments :	San Joaquin Valley Regional Planning Agency_Biz_Plan_041316.pdf (2 mb) Park_SJVRT_Biz_Plan_041216.pdf (9 kb)

Mr. Dan Richard
Chairperson, California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento CA 95814

April 12, 2016

RE: California High Speed Rail (CHSRA) Draft 2016 Business Plan

The San Joaquin Valley Regional Planning Agencies' Directors' Committee, representing the eight counties of the San Joaquin Valley, is submitting this letter detailing our concerns with the proposed new routes in the CHSRA Draft 2016 Business plan, the lack of support for the blended service concept, and our continued dismay with the outreach and coordination efforts between the CHSRA and its public sector partners. We stand in support of the concerns outlined by the Central Valley Rail Working Group, who has been involved in the coordinated planning for passenger rail service between Sacramento and Merced since 2006.

The draft business plan greatly delays closing the gap between Northern and Southern California. The 2012 Revised Business Plan stated the closing of this gap was "the state's highest priority for intercity rail". For many years the promise of the early HSR connection at Merced and improvements to conventional intercity rail, commonly called the "blended service concept" have been essential for support from the Northern San Joaquin Valley and Sacramento region. Not only does the current draft plan leave in doubt any real funding for connections between Merced and Sacramento, the draft plan also does not provide funding support for improved connections between Sacramento and San Jose or between Merced and San Jose.

The draft business plan includes a commitment to invest $2.1 billion between Burbank and Anaheim. But previously, the CHSRA was also committed to providing funding support for investments in "conventional" services, which would connect to the Initial Operating Segment (IOS) of high speed rail. While staff recognizes there are investment needs in the Burbank to Anaheim corridor, the draft plan does not propose "blended service" investment priorities for Northern California that will benefit the Northern San Joaquin region for decades.

Three intercity rail corridors in Northern California offer significant promise to increase ridership for the initial operating segment of HSR. Specific investments along these three corridors would be developed through active rail corridor planning efforts the Central Valley Rail Working Group has been involved in over recent years:

San Joaquin Council of Governments
Andrew Chesley - Chair

Tulare County Association of Governments
Ted Smalley - Vice Chair

Fresno Council of Governments
Tony Boren

Kern Council of Governments
Ahron Hakimi

Kings County Association of Governments
Terri King

Madera County Transportation Commission
Patricia Taylor

Merced County Association of Governments
Marjie Kirn

Stanislaus Council of Governments
Rosa Park

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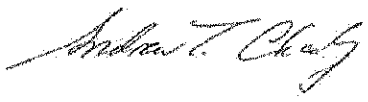
- $1.0 billion in connectively improvements for San Joaquin Rail Service between Fresno and Sacramento
- $1.0 billion in connectively improvements, for the Altamont Corridor Express (ACE) Service between Merced and San Jose through the Altamont Pass
- $1.0 billion in connectively improvements along the Capital Corridor between San Jose and Sacramento
- Include funding from the Central Valley Wye connection to the Merced Station in order to improve Northern California high speed rail ridership prospects

The CHSRA 2016 Business Plan should include an enforceable commitment for investing in near-term conventional rail connectively improvements between Sacramento, the Bay Area and Northern San Joaquin Valley. It is important for the CHSRA to specify where this funding will come from and that it will be a priority to have improved "conventional" intercity rail service. Intercity rail investments along the San Jose to Sacramento and Fresno to Sacramento corridors can become an important "feeder" service to the Phase 1 HSR system.

Finally, we request that the CHSRA fulfill the earlier commitment for funds to support rail planning coordination in Northern California. As such, the Authority should release the $53.9 million of Proposition 1A Funding authorized by the Budget Act of 2012 for planning work along the Merced to Sacramento Corridor. These funds are needed to enable the planning/environmental/engineering work needed to provide improved passenger rail service between the future Phase 1 HSR service and Sacramento and to provide the foundation for full Phase 2 HSR implementation

In closing, we request that CHSRA fulfill the promise in the prior business plan to fund the blended service needs in Northern California and to extend HSR to Merced. We also request that the southern portion of the alignment extend into the City of Bakersfield rather than a terminus 20 miles north at an almond orchard. The lack of consistent and ongoing communication and outreach between HSR staff and critical public partners like the metropolitan planning organizations continue to stymie and hinder our ability to proactively plan and coordinate for this significant public infrastructure project. Should you have any questions or need additional information, I can be reached at (209) 235-0600. Thank you in advance for your consideration in addressing our concerns.

Sincerely,



ANDREW T. CHESLEY

Executive Director, San Joaquin Council of Governments
Chair, San Joaquin Valley Regional Planning Agencies' Directors' Committee

CC Jeff Morales, Ben Tripousis, Chad Edison, Members of the Legislature

become all the more crucial.

SCAG appreciates the Authority's continuing commitment to the MOU projects as reiterated by Chairman Richard to the Regional Council last February. We urge the Authority to continue its partnership with the MOU agencies and take action to fund key MOU projects that are ready to advance.

Thank you for the opportunity to speak to you today.

CHAIRMAN RICHARD: Thank you, Mr. Law. And please give our respects to Mr. Ikhrata. Thank you.

Ms. Park followed by Douglas McIsaac.

CHAIRMAN RICHARD: Good morning.

MS. PARK: Good morning, Chair Richard and Members of the California High-speed Rail Authority. I am Rosa Park, the Executive Director for the Stanislaus Council of Governments. I am also a member of the San Joaquin Valley Regional Transportation Planning Authorities' called the RTPA Directors Committee, and the Central Valley Rail Working Group. I am here representing each of these entities.

The San Joaquin Valley RTPA Directors Committee represents the eight counties of the San Joaquin Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and Kern. The Central Valley Working Group includes

all of the regional transportation planning agencies, regional rail operators in major cities in the Sacramento to Merced Corridor. Both the RTPA Directors and the Central Valley Working Group unanimously approved the same comment letter of the Draft 2016 California High-Speed Rail Authority Business Plan. I have brought copies of this letter for you.

The San Joaquin Valley Regional Policy Council, which is made up of elected officials throughout the San Joaquin Valley is holding an emergency meeting to take action on this letter as well.

The San Joaquin Valley and Sacramento are very unhappy with the Draft Business Plan. For many years the promise of early high-speed rail connection to Merced, and improvements to conventional rail services commonly called the blended-service concept, have been essential for support from our region. The Draft 2016 Plan eliminates the early connection to Merced and has the initial southern terminus in an almond orchard north of Bakersfield.

The Draft Plan does not propose blended service, investment priorities for the San Joaquin's ACE Capitol Corridor services, which make up the Northern Unified Service, which was a key component of both your 2012 and 2014 Business Plans.

We request that the California High-Speed Rail

Authority fulfill the promise in the prior business plans and support funding for the blended services needs in Northern California and to extend the high-speed rail to Merced.

Support from Northern and San Joaquin Valley and Sacramento helped pass Proposition 1A. And members of our Legislature from these regions provided key votes for you in 2012 and 2014. We are hopeful that in short time remaining, you will work with us to make changes to your Business Plan, so that it can be supported by Sacramento, the San Joaquin Valley, and parts of the Bay Area not served by high-speed rail.

On a final note, the major changes in this Draft came without warning or any discussion with local or regional partners and elected officials who have stood by this project for many years. Thank you for the opportunity to speak.

CHAIRMAN RICHARD: Thank you, Ms. Park.

Douglas McIsaac followed by Lauren Skidmore and then Scott Hurlbert.

MR. MCISSAC: Good morning Chairman Richard and Members of Board. I am here today representing the City of Bakersfield, which will hopefully by the southern terminus of the initial operating segment. And before I begin my other comments I first want to send my thanks and

2016 Business Plan RECORD DETAIL

Submission Date :	4/8/2016
Submission Method :	Letter
First Name :	John Pedrozo, Vito Chisea, Bob Johnson, Patrick Hume
Last Name :	John Pedrozo, Vito Chisea, Bob Johnson, Patrick Hume
Stakeholder Comments/Issues :	Please find the attached letter, which is being submitted on behalf of the Central Valley Rail Working Group. Hard copies were submitted previously but several typos were discovered later. This version of the letter corrects those.
Notes :	
Attachments :	CVRWG-CommentLetteronCHSRADraft2016BusinesPlan.pdf (3 mb)

CENTRAL VALLEY RAIL WORKING GROUP

County of Sacramento
City of Sacramento
City of Elk Grove
City of Galt
Sacramento Area Council of Governments
Sacramento Regional Transit District
County of San Joaquin
City of Lodi
City of Stockton
City of Manteca
San Joaquin Council of Governments
San Joaquin Regional Rail Commission
San Joaquin Regional Transit District
County of Stanislaus
City of Modesto
City of Turlock
Stanislaus Council of Governments
County of Merced
City of Merced
Merced County Association of Governments

Member Agencies in a Memorandum of Understanding

April 8, 2016

Mr. Dan Richard
Chairperson, California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento CA 95814

RE: California High Speed Rail (CHSRA) Draft 2016 Business Plan

Dear Chairperson Richard and Board Members,

The Central Valley Rail Working Group (CVRWG) includes all the regional transportation planning agencies, regional rail operators, and major cities in the Sacramento to Merced Corridor. CVRWG has been a very good partner in the development of the high-speed rail project. Our 20-agency working group has been involved in the coordinated planning for passenger rail service between Sacramento and Merced since 2006.

CVRWG has a number of concerns with the CHSRA Draft 2016 Business Plan. Among the concerns is the fact that the draft business plan greatly delays closing the gap between Northern and Southern California. The 2012 Revised Business Plan stated the closing of this gap was "the state's highest priority for intercity rail". For many years the promise of the early HSR connection at Merced and improvements to conventional intercity rail, commonly called the "blended service concept" have been essential for support from the Northern San Joaquin Valley and Sacramento region. Not only does the draft plan leave in doubt any real funding for connections between Merced and Sacramento, the draft plan also does not provide funding support for improved connections between Sacramento and San Jose or between Merced and San Jose.

The draft business plan includes a commitment to invest $2.1 billion between Burbank and Anaheim. But previously, the CHSRA was also committed to providing funding support for investments in "conventional" services which would connect to the Initial Operating Segment (IOS) of high speed rail. While staff recognizes there are investment needs in the Burbank to Anaheim corridor, the draft plan does not propose "blended service" investment priorities for Northern California that will benefit Sacramento or the Northern San Joaquin region for decades. In order to fulfill the commitment for "blended service" there is a strong case for significant intercity rail funding to connect Sacramento and the Northern San Joaquin Valley to both Fresno and San Jose.

CVRWG requests that CHSRA fulfill the promise in the prior business plan to fund the blended service needs in Northern California and to extend HSR to Merced. Three intercity rail corridors in Northern California offer significant promise to increase ridership for the IOS of HSR. Investing in these corridors also offer significant promise for better connections for the Northern California Megaregion.

Specific investments along these three corridors would be developed through active rail corridor planning efforts CVRWG has been involved in over recent years:

- $1.0 billion in connectivity improvements for San Joaquin Rail Service between Fresno and Sacramento

- $1.0 billion in connectivity improvements for the Altamont Corridor Express (ACE) Service between Merced and San Jose through the Altamont Pass

- $1.0 billion in connectivity improvements along the Capital Corridor between San Jose and Sacramento

- Include an amount to be determined for the Central Valley Wye connection to the Merced Station that will improve Northern California high speed rail ridership prospects.

The CHSRA 2016 Business Plan should include an enforceable commitment for investing in near-term conventional rail connectivity improvements between Sacramento, the Bay Area and Northern San Joaquin Valley. It is important for the CHSRA to specify where this funding will come from and that it will be a priority to have improved "conventional" intercity rail service. Intercity rail investments along the San Jose to Sacramento and Fresno to Sacramento corridors can become an important "feeder" services to the Phase 1 HSR system.

A final CVRWG recommendation is that the CHSRA fulfill the earlier commitment for funds to support rail planning coordination in Northern California. As such, the Authority should release the $53.9 million of Proposition 1A Funding authorized by the Budget Act of 2012 for planning work along the Merced to Sacramento Corridor. These funds are needed to enable the planning/environmental/engineering work needed to provide improved passenger rail service between the future Phase 1 HSR service and Sacramento and to provide the foundation for full Phase 2 HSR implementation. CVRWG believes the legislative intent behind the inclusion of the Merced to Sacramento planning funding in SB 1029 was to do the planning needed to support near-term passenger rail improvements. Despite the support and high level of interest from the region, there has been no progress in the planning for improved early investment for connecting rail service between Merced and Sacramento.

CHSRA has historically received support from CVRWG for many years, even though the Pacheco Pass route selected by CHSRA between the Bay Area and San Joaquin Valley does not serve the corridor between Merced and Sacramento as effectively as the Altamont Pass route would have. Support from Northern San Joaquin Valley and Sacramento helped pass Proposition 1A and members of the legislature from these regions provided key votes for CHSRA in 2012 and 2014.

CVRWG and our rail coalition advocacy partners are hopeful that the final version of the CHSRA business plan can be one that benefits all of Northern California and can be supported by the CVRWG, our member agencies, and those that reside in our corridor.

Sincerely,

John Pedrozo
Merced County Board of Supervisors Merced
County Association of Governments

Vito Chiesa
Stanislaus County Board of Supervisors
Chair, Stanislaus Council of Governments

Bob Johnson
Lodi City Council
Chair, San Joaquin Regional Rail Commission

Patrick Hume
Elk Grove City Council
Sacramento Regional Transit District

On behalf of the Central Valley Rail Working Group

cc: Jeff Morales, Ben Tripousis, Chad Edison, Members of the Legislature

2016 Business Plan RECORD DETAIL

Submission Date :	4/13/2016
Submission Method :	Letter
First Name :	Tilly Chang, Ed Reiskin, John Rahaim
Last Name :	Tilly Chang, Ed Reiskin, John Rahaim
Stakeholder Comments/Issues :	
Notes :	
Attachments :	CCSF Comments on the 2016 CHSRA Business plan.pdf (196 kb)

April 13, 2016

Chairperson Richard and Members
Board of Directors
California High-Speed Rail Authority
770 L Street, Suite 1160
Sacramento, CA 95814

SUBJECT: City and County of San Francisco's Comments on the California High-Speed Rail Authority Draft 2016 Business Plan

Dear Chair Richard and Honorable Members of the Board:

Thanks for the opportunity to comment on the 2016 California High Speed Rail Authority's (CHSRA) Business Plan (Plan). The City and County of San Francisco has been and continues to be a champion of High Speed Rail (HSR) in California. We applaud the leadership of the CHSRA's efforts in making this much-needed service a reality. The City and County of San Francisco is committed to HSR, evidenced by the investment of $2 billion for the construction of the Transbay Transit Center (TTC), high-speed rail's legally mandated terminus in the city and the first element of HSR to get under construction in the country.

We are pleased to note that the CHSRA has recognized the benefits of a northern Initial Operating Segment (IOS). The IOS will be, in effect, a demonstration project and we strongly believe that the future of HSR in California and the nation hinges on its success. A successful IOS will demonstrate the benefits and viability of HSR and begin generating revenues which will attract private sector participation to help fund the rest of the system. That is why we encourage and support the CHSRA in its effort to focus on a strategy that maximizes ridership and revenue in order to make the strongest possible case about the viability of the program.

The 2016 Draft Business Plan improves on and provides new focus to the previous plan and sets the stage for the implementation of the first high-speed service in the nation. However, as is usually the case on plans of this breadth, there are aspects therein that could and should be improved for the good of the program.

The Initial Operating Segment should be from San Francisco to Bakersfield, not just Silicon Valley to Central Valley

At a cost of $20.68 billion, the IOS currently envisioned in the Plan is from San Jose to a point north of Bakersfield, where a temporary station will be built. The San Jose to San Francisco portion and the completion of the line to Bakersfield, estimated at an additional $2.9 billion, is not in the IOS scope or budget, and is considered an extension to the IOS. The Plan states "As we move forward, we will pursue additional funding to extend the Silicon Valley to Central Valley line north to make an initial investment in a one-seat ride to San Francisco and south to Bakersfield." We strongly recommend that the IOS include the extensions to San Francisco and Bakersfield.

The Plan states that private investment, secured by future operating cash flow, will be available once revenues are proven on the initial segment placed into operations. In other words, the amount of private money that can be secured for the project is dependent on and proportional to actual, not projected, cash flows. It goes on to say that "The extension of the Silicon Valley to Central Valley line to offer a one-seat ride from San Francisco to downtown Bakersfield adds significant ridership and would greatly increase net operating cash flow and the value of the system."

The above statements do not begin to do justice to the benefits to be realized from extending the line to San Francisco and Bakersfield. Based on information contained in the Plan, should the IOS be initially extended to San Francisco and Bakersfield:

- Ridership will increase by 76%. In 2025 ridership will increase from 2.9 million to 5.1 million. —*Exhibits 7.1 and 7.3, pages 69 and 70*
- Farebox revenue will increase by 55%. In 2025, revenue would go from $239 million to $371 million in 2025 dollars. —*Exhibits 7.6 and 7.9, pages 71 and 72*

- Net cash flow will increase 181%. In the medium scenarios for 2025, the net cash flow will increase from $32 million to $90 million for the first five years of operation. —*Exhibits 7.27 and 7.29, page 81*
- Private investment will increase by 132%. According to the Plan, the cash flows from the medium range and costs forecasts the program will be able to generate $3.2 billion in private investment in 2027. If the Silicon Valley to Central Valley IOS is extended to San Francisco and Bakersfield, the increases in ridership and cash flows could generate an additional $4.2 billion, for a total of $7.4 billion of private investment. —*Page 64, last two bullets and Exhibit 6.3*

With such overwhelming benefits resulting from extending the IOS to San Francisco and Bakersfield from the currently contemplated termini, it makes business and financial sense to include those extensions in the IOS, instead of having them relegated to an uncertain future. We exhort the CHSRA to take another look to determine if some aspects of the current scope that do not provide the same level of benefits can be deferred, while concurrently pursuing additional funding for this extension. The $2.9 billion must somehow be found. The future of high-speed-rail in California demands it.

The full $2 billion contribution to the Transbay Transit Center must be reinstated

The Plan states that, as a cost savings measure, the contribution to the Transbay Transit Center (TTC) will be reduced by $1.5 billion to $550 million *(Capital Cost Basis of Estimate, Table 3, page 15)*. This is an unfortunate decision. The TTC is a critical part of the California high-speed rail system and is its Proposition 1A-mandated northern terminus. At a cost of $2 billion, it was the first piece of the California high-speed rail system to be under construction. It will provide a one–million square foot regional transportation hub that will serve ten transit operators. In addition, studies conducted in support of the CHSRA's 2008 Bay Area to Central Valley Program EIR determined that service at the TTC will generate $19 million a year more than a station at 4th and King Streets.

With the completion of Phase 1 of the TTC project, the terminal building, anticipated for December 2017, the focus is now shifting to Phase 2, the Downtown Extension (DTX). The DTX will complete the last 1.3 miles of the rail line for Caltrain and HSR under the blended system to its ultimate terminus in downtown San Francisco. The TJPA and its funding partners are diligently working to secure funding for this important component, for which the CHSRA contribution is an integral part. We understand that there are limitations to what can be done with the available money in any given timeframe, so we urge the CHSRA to develop an action and advocacy strategy to assure that the $1.5 billion for the TTC is reinstated. This funding strategy should become part of the Business Plan.

We believe that the CHSRA is headed in the right direction with this Plan. It demonstrates a desire to move forward in a meaningful and realistic way. We encourage you, its Board, to embrace our recommendations and support including the extensions to San Francisco and Bakersfield in the IOS a means to the success of the California High Speed Rail Program.

We look forward to the continuation of a cooperative and successful planning effort to bring the benefits of high-speed rail to California and the San Francisco peninsula.

Respectfully,

Tilly Chang
EXECUTIVE DIRECTOR
SFCTA

Ed Reiskin
DIRECTOR OF TRANSPORTATION
SFMTA

John Rahaim
DIRECTOR
SF PLANNING

cc: Scott Wiener, Chair, San Francisco County Transportation Authority
David Campos, Commissioner, Metropolitan Transportation Commission
Jeff Morales, CEO, CHSRA
Ben Tripousis, Regional Director, CHSRA
Gillian Gillett, Director of Transportation Policy, CCSF

2016 Business Plan RECORD DETAIL

Submission Date : 4/14/2016

Submission Method : Project Email

First Name : Cindy

Last Name : Bloom

Stakeholder Comments/Issues : Dear CHSRA:

I already submitted comments, but I now have questions that I hope will be addressed at the 2016 Business Plan adoption hearing later this month.

1. Dan Richard has mentioned and the LAO has discussed “securitization of revenue” which is code for “revenue bonds.” It is also common knowledge that once the infrastructure is built, the intent is to sell off the concession to a private investor(s) who will then own, operate and maintain the actual train service. Please explain, if you sold the concession to a private company, how you will be able to secure their revenue in order to issue revenue bonds? Will there be some agreed-upon split based on investment or other percentages? Will you guarantee them a certain ROI and then secure any excess? What is the plan if there is an operating deficit or if the “no blank checks initiative" passes on the November 2016 ballot? Only 2 of the 99 high speed train systems worldwide operate without a subsidy, so why do you think this one will fall within this 2%?

2. This is related to #1 above. Based on the Authority’s own estimates of securing private investment of $8 to $10 billion for the IOS, how much of the operating revenue will the private investor retain? 100%? If so, is that fair to taxpayers who essentially paid for 84-88% of the total infrastructure? Will the private operator pay some type of franchise or operating fee to the state in addition to their equity investment? Will there be any cost recoupment remedies available to the taxpayers?

3. Dan Richard stated at the San Fernando Council of Governments meeting on 3/17/16 that they have 3 sources of funding for the IOS which totals about $20 billion: cap & trade, federal grant(s), and $8 billion in bond money. However, the $8 billion bond money cannot be unlocked unless there is private investment. He continues to say, “once the system is up and running, the private sector will be in a position to bid for the rights to operate it.” So, how can you count on the $8 billion (or ANY of it) bond money for construction of the IOS when private investors won’t even be bidding until AFTER revenue is being generated? I would find it more believable if Dan Richard stated that if private investors relied on a prospectus or pro forma or something like that—but he has said on multiple occasions private investors would invest after it’s up and running or it’s shown to generate revenue, etc. Is the Authority planning on borrowing money to cover the unlocked bond funds and then backfilling once the bonds are issued?

4. The Authority may use cap & trade money to leverage a loan in the amount of around $5.2 billion. Over 30 years, the interest will be around another $5.2 billion. Where will this interest be budgeted and repaid? It is not required to be included in the business plan, just as the $10 billion in interest on the Prop 1A general obligation bonds is not required to be included in the business plan. Is it reasonable to hit taxpayers with $15 billion just for the cost of money (which equates to 20% of the all-in cost estimate)?

5. I find it suspicious that ridership is estimated to be over 11,000 passengers daily to/from Shafter (population 17,000) to/from San Jose. This is more than Bob Hope Airport in Burbank which serves the entire country, including Alaska and Hawaii.

6. The high speed train is a high-cost commuter train. No one can afford an annual $32,000 to commute from the Central Valley to San Jose. If you could, you could afford to buy a house (using what you are currently paying in rent/housing plus the $2,666 in monthly high speed train commuting cost while also enjoying a nice mortgage interest tax deduction) much closer to

San Jose and forget commuting. Dan Richard's response is that many San Jose companies subsidize employees' commuting cost. Is there something in writing that could presented to prove this theory?

7. The capital cost was markedly absent from the 2016 draft business plan's cashflow while it was included in the 2014 business plan. Is this because the IRR in the "high scenario" is less than 1% (it's actually .64%) and the medium and low scenarios are negative IRRs?

8. Why does Dan Richard's script always state that the Authority is carrying out what the voters approved in 2008? The Prop 1A ballot measure clearly states that the budget is $45 billion (not $68, not $64.2, not even $46 billion). It is this $45 billion cost estimate that informed voters relied upon when voting "yes" on Prop 1A. Shouldn't all business plans do a variance analysis to the previous business plan AND the 2008 business plan?

Thank you for your consideration.

Cindy Bloom
Shadow Hills
818-445-5602

Notes :

2016 Business Plan RECORD DETAIL

Submission Date :	4/14/2016
Submission Method :	Website
First Name :	Fausto
Last Name :	Villanueva
Stakeholder Comments/Issues :	Can't wait to use it!
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/8/2016
Submission Method :	Letter
First Name :	William
Last Name :	Warren
Stakeholder Comments/Issues :	
Notes :	Flash drive included with letter. Contents available upon request.
Attachments :	Warren_040816.pdf (419 kb)

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

April 8, 2016

Subject – Comment Regarding Draft 2016 Business Plan

Topic – Transcripts and Videos from the Tos – CHSRA Lawsuit

The primary purpose of this Comment is to submit to the California High Speed Rail Authority (CHSRA) a set of the transcripts and their supporting video files that were prepared for the Court by the Plaintiffs, John Tos, Aaron Fukuda, and County of Kings in the case John Tos et al vs. CHSRA et al. (Sacramento County Superior Court case No.34-2011- 00113919) lawsuit.

These transcripts contain a great deal of information and analysis regarding a number of issues that the Authority needs to consider and needs to address as part of the development of the Final 2016 Business Plan. These issues relate to the use of Proposition 1A bond funds for system construction and the requirements contained in that ballot measure, notably: 1) the minimum time that will be required to travel from San Francisco to San Jose and to Los Angeles, 2) the minimum achievable headway requirement for the system, 3) the prohibition on an operating subsidy, 4) the overall financial viability of the chosen alignment, and 5) the availability of funds to fully construct the IOS as well as the complete Phase 1.

These transcripts and their videos are provided on the "Thumb Drive" that is included with this cover letter. There are 14 different events in which some portion of the video was converted to a transcript. In some cases, if the video is very large (and very long) a video clip is also included that covers the same time period as does the transcript. Each of the 14 events is a folder on the accompanying Thumb Drive.

Table 1 lists these 14 different events.

Table 1

Event Number	Description	Date
1.	Senate Sub Committee	April 28, 2011
2.	Senate Hearing	May 5, 2011
3.	CHSRA Board Meeting	June 2, 2011
4.	CHSRA Board Meeting	July 14, 2011
5.	US House Hearing	December 15, 2011
6.	Senate Hearing	March 13, 2012
7.	Senate Sub Committee	April 18, 2012
8.	Assembly Committee	April 30, 2012
9.	Senate Hearing	May 15, 2012
10.	Senate Hearing	July 5, 2012
11.	US House Hearing	December 6, 2012
12.	Larry Elder Show with Gov. Brown	January 8, 2013
13.	Assembly Hearing	February 25, 2013
14.	Senate Hearing	March 27, 2014

Thank you,

William H. Warren

William H. Warren
williamhwarren@sbcglobal.net
c/o
Michael J. Brady
1001 Marshall Street, Suite 500
Redwood City, CA 94063-2052

William Warren
C/O Michael Brady
Suite 500
1001 Marshall Street
Redwood City, CA
94063-2052

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Attention: Draft 2016 Busmess
California High Speed Rail A
Suite 620 - Mail Stop -
[redacted] 770 L Street
Sacramento
9581

2016 Business Plan RECORD DETAIL

Submission Date :	4/14/2016
Submission Method :	Letter
First Name :	Michael
Last Name :	Wiley
Stakeholder Comments/Issues :	Good afternoon, Please see the attached letter from Michael R. Wiley, RT's General Manager/CEO, regarding the CHSRA Draft 2016 Business Plan. Thank you, Roxanna Burgos Senior Administrative Assistant AGM of Engineering and Construction (916) 556-0515 rburgos@sacrt.com --- Mobile ticketing is here. Download the RideSacRT (http://sacrt.com/mobilefare.stm) app today! Available now in the App Store (https://geo.itunes.apple.com/us/app/ridesacrt/id1053462258?mt=8) and Google Play (https://play.google.com/store/apps/details?id=com.passportparking.mobile.transit.sacramento) .
Notes :	
Attachments :	Sac RT_041416.pdf (812 kb)

Regional Transit

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April 14, 2016

Mr. Dan Richard
Chairperson
California High-Speed Rail Authority
770 L Street
Suite 620 MS-1
Sacramento, CA 95814

RE: California High-Speed Rail (CHSRA) Draft 2016 Business Plan

Dear Chairperson Richard and Board Members,

Sacramento Regional Transit (RT) is a founding member of the San Joaquin Regional Rail Joint Powers Agency (SJJPA) and a member of the Capital Corridor JPA (CCJPA). We have and will continue to partner with the CHSRA in developing and delivering improved passenger rail services to Northern California.

RT has several concerns with the Draft 2016 Business Plan (Draft Plan). We know that you have heard these concerns from others including at the March 28, 2016 hearing at the State Assembly, as well as correspondence from the Central Valley Rail Working Group dated April 8, 2016. But to summarize, I want to specifically state our concerns and objections to the Draft Plan:

- The concept of the "blended service" which specifically has the goal of enhancing services between Sacramento and the Northern San Joaquin Valley has been replaced with "closing the gap between Southern and Northern California" and specific improvements are identified to accomplish this goal – to the exclusion of the "blended service" concept. This is an unacceptable goal change developed without stakeholder input and without any specific actions, strategies or funding options for achieving the previous goal clearly identified in the Draft Plan.
- The Draft Plan includes a proposed commitment of $2.1 billion for enhancing service between Burbank and Anaheim. Again, counter to the previous plans and developed without any stakeholder input, the previous Business Plan clearly was committed to funding investments in conventional rail to connect the Initial Operating Segment (IOS) with

those investments to the benefit of rail travelers throughout the entire state. This proposed commitment runs counter to the assumptions and decisions made previously and upon which rail providers have built their own plans. It must be changed.

The CHSRA must honor its commitments to regional rail providers as presented in the 2012 and 2014 Business Plans and extend HSR to Merced, as well as provide funding for blended service improvements that not only serve Northern California, but also optimize the near-term high-speed rail investment and ridership. Specifically, as our partners have also stated:

- $3.0 billion in connectivity and infrastructure investments in the San Joaquin Corridor Sacramento and Fresno ($1.0 billion), in the Capital Corridor between Sacramento and San Jose ($1.0 billion), and in the Altamont Corridor between Merced and San Jose ($1.0 billion) have essentially been eliminated and need to be added back into the Draft Plan;
- An investment in the Central Valley Wye connection to the Merced Station has been eliminated and must be added back into the Draft Plan to optimally serve the Central Valley communities; and
- Fulfilling the previous commitment of SB 1029 and the Budget Act of 2012 by releasing the $53.9 million of Proposition 1A funding for the necessary planning, environmental, and design work for the necessary infrastructure improvements in the Sacramento to Merced corridor is long overdue and is resulting in opportunities potentially being lost as the region's developments affect this corridor.

RT, the Sacramento region, and the northern San Joaquin Valley have been strong proponents of high-speed rail, have supported the CHSRA efforts and funding as necessary and requested, and continue to support the high speed rail program.

I strongly encourage you to revise the Draft 2016 Business Plan to include the elements noted herein and facilitate an engagement with the communities and your partners in Northern California and throughout California for the final Business Plan.

Sincerely,

Michael R. Wiley

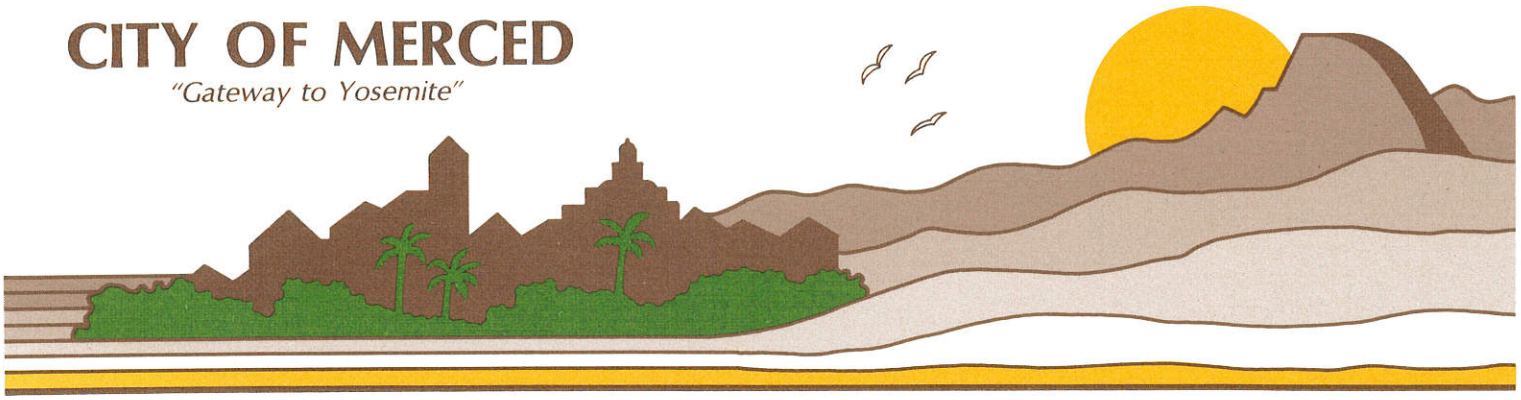
Michael R. Wiley
General Manager/CEO

2016 Business Plan RECORD DETAIL

Submission Date :	3/28/2016
Submission Method :	Letter
First Name :	Stanley
Last Name :	Thurston
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Merced_Biz_Plan_041416.pdf (489 kb)

CITY OF MERCED

"Gateway to Yosemite"



March 28, 2016

Mr. Dan Richard
Chairperson, California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

Dear Mr. Richard:

The CHSRA Draft 2016 Business Plan presents a major change for where high-speed rail (HSR) service will be initiated. This new plan focuses on delivering a HSR line connecting the Silicon Valley to the Central Valley in 2025 instead of between Merced and the San Fernando Valley in 2022. While the Silicon Valley to Central Valley segment may be cheaper to construct, it is not what the Legislature voted for in 2012 to enable HSR construction to begin or in 2014 to provide the substantial ongoing Cap & Trade funding required for the HSR rail project to be viable.

The Draft 2016 Business Plan describes CHSRA's "plan to deliver high-speed rail service connecting the Silicon Valley to the Central Valley, and offer high-speed passenger service between these two important economic regions within the next ten years". However, this newly proposed route between San Jose and north of Bakersfield does not benefit Merced, the Northern San Joaquin Valley, or Sacramento.

CHSRA's commitment to include Merced in the Initial Operating Segment was critical for passing Proposition 1A in 2008. The initial plan utilizes the Proposition 1A money for what it was intended for, this new plan promises to give that money to an area that does not face the same economic challenges as our city and region does. Merced was promised by CHSRA to be part of an initial test-track between Merced and Bakersfield. The city of Merced was awarded a station area planning grant of $600,000 in which $200,000 dollars came from the city's general fund. Not following through on the initial plan would mean the money spent out of the general fund would go to waste as this new plan would inevitably change the station area and disregard the work that has been done.

There is also almost no discussion of the connectivity improvements ("Blended" service, Northern California Unified Service) which dominated the 2012 Business Plan. Should this plan be approved CHSRA should include fulfilling the commitments made in the 2012 Revised Business Plan for Blended

service. Key elements of "blended" service improvements included conventional rail improvements to the San Joaquin service to Sacramento and the ACE service to increase connectivity of these systems to the future HSR service.

The CHSRA Draft 2016 Business Plan states CHSRA will "reinvest" some of the savings from cost reductions in Phase 1 to enhance service levels in the vital Los Angeles to Anaheim segment. The draft commits to a $2.1 billion investment in that corridor (but also mentions potentially $4 billion on page 12). However, Section 6 ("Funding and Financing") only calls out the $500 million that was committed to as part of SB 1029 in 2012, and states that they "can invest Cap & Trade proceeds not committed to building the initial operating line", and lists a number of other potential sources including FAST Act federal funds and Transit and the Intercity Rail Capital Program (TIRCP) funds from Cap & Trade.

CHSRA should also "reinvest savings" to provide near-term connectivity to Merced, and to Sacramento. The CHSRA Draft 2016 Business Plan is in effect promising a TIRCP funding priority for the Burbank to Anaheim segment. Funding near-term improvement of the San Joaquin service should also be a priority for the State as promised in the CHSRA Revised 2012 Business Plan.

"The implications for the Silicon Valley to Central Valley connection are tremendous," this point in the draft plan is incredibly important as it was what was sold to the voters when they approved the initial legislation. It is unfortunate however that the plan contradicts that statement. The route is being promoted as one which will help the Central Valley and promote long-distance commuting. But the HSR route via the Pacheco Pass does little for much of the Central Valley and is not the best alignment for serving long-distance commuters between the Central Valley and Bay Area. There are about 50,000 daily commuters going over the Altamont Pass to the Bay Area mostly from San Joaquin and Stanislaus counties. The three Central Valley counties that would be most likely to have commuters to the Silicon Valley interested in taking a high-speed passenger rail service would be from San Joaquin, Stanislaus and Merced counties – none of which are served by the current HSR route using the Pacheco Pass.

We appreciate the opportunity to comment on the CHSRA Draft 2016 Business Plan. CHSRA has received significant support from the Northern San Joaquin Valley and Sacramento even though the routing selected by CHSRA between the Bay Area and San Joaquin Valley does not well serve the Northern San Joaquin Valley or Sacramento. Support from these regions helped pass Proposition 1A and Representatives for these regions provided key votes for CHSRA in 2012 and 2014 because of the economic and environmental implications that the people in these regions will benefit from. As a historically underserved region we hope that this plan recognizes our concerns so that the final version of your 2016 Business Plan will be a plan which can be supported by the Northern San Joaquin Valley and Sacramento.

Sincerely,

Stanley P. Thurston, Mayor
City of Merced

2016 Business Plan RECORD DETAIL

Submission Date :	4/12/2016
Submission Method :	Public Hearing - Oral Comment
First Name :	Linda
Last Name :	Culp
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Culp_SANDAG_Biz_Plan_041216.pdf (9 kb)

It's noteworthy, as Councilmember Murray just noted, that part of the Business Plan that we'll be taking your comments on today does involve early investments here in the corridor between Burbank, Los Angeles Union Station, and Anaheim. Obviously, that's a key part of our Business Plan and so it's very appropriate that we be here today. And again appreciate -- I continually refer to her as Mayor Kris Murray. So welcome, but Councilmember, thank you.

COUNCILMEMEMBER MURRAY: Yes.

CHAIRMAN RICHARD: We have a number of business cards. It's our business practice to put elected officials first. Several of the elected officials have asked to be grouped with members of their community, so for today we're just going to go through the cards in the order in which they are received.

We do have a lot of speakers, but these are important issues. So I’m going to ask everybody to confine their comments to three minutes, which we will strictly enforce just so that we can make sure that all citizens have an equal opportunity to present their views.

So with that after the roll call we've been joined by Ms. Paskett. And so welcome.

All right, first Linda Culp from SANDAG followed by Phillip Law from Southern California Association of Governments, and then Rosa Park from San Joaquin Valley

Transportation Authority. And it looks -- I don't know if that is going to taken out of the holder or not, so do your best.

MS. CULP: Chairman Richard, Members of the Board, thank you for the opportunity to speak this morning and for holding your meeting in Anaheim. We always like to have you here in Southern California.

We in San Diego see the importance of both conventional and high-speed connections. We have an established market for rail along the LOSSAN Corridor that will provide feeder service here in Anaheim and in Los Angeles. And this happens to be right now the second busiest corridor in the nation and home to more than 21 million residents.

We continue to work with our other Southern California partners and the Authority to implement a Memorandum of Understanding between eight or our agencies to work cooperatively with the Authority on these improvements. We also see high-speed service along our Inland Empire corridor important not only to connect with L.A. and San Diego and Northern California, but also those important connections within the region between San Diego and the Inland Empire.

We'll continue to work with your staff on these details. And we appreciate your attention to make

improvements to both the Inland and the Coastal Rail Corridors.

Overall, our comments on the Draft Business Plan are to strengthen the language to fully implement the strategies and the projects in the MOU. We truly do have shovel-ready projects in San Diego. And to further detail plans for your Phase 2 corridors.

So with that, thank you for meeting in Southern California this morning and your consideration of the SANDAG comments.

CHAIRMAN RICHARD: Thank you, Ms. Culp.

Phillip Law and then Rosa Park and then Douglas McIsaac.

MR. LAW: Good morning, Chairman Richard, Board Members, Mr. Morales. I'm Phillip Law, with the Southern California Association of Governments or SCAG. Our Executive Director, Hasan Ikhrata, sends his regrets that he can't be here today to speak to you.

SCAG is the nation's largest metropolitan planning organization representing six counties, 191 cities and almost 19 million people; just under half of California's population. We are the 16th largest economy in the world with a regional gross domestic product of $1 trillion.

Last Thursday our Regional Council adopted the

2016 Business Plan RECORD DETAIL

Submission Date :	4/12/2016
Submission Method :	Public Hearing - Oral Comment
First Name :	Phillip
Last Name :	Law
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Law_SCAG_Biz_Plan_041216.pdf (9 kb)

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2016 Regional Transportation Plan Sustainable Community Strategy or RTPSCS, which identifies half a trillion dollars in multimodal investments through the year 2040. The RTPSCS balances the region's future mobility and housing needs with economic, environmental and public health goals. In adopting the RTPSCS, the Regional Council reaffirmed its support for the high-speed train by including Phase 1 in the financially-constrained plan.

SCAG has supported the high-speed train since 2012, when we entered into a Memorandum of Understanding or MOU with the Authority and other regional agencies. Through this MOU the Authority committed $1 billion of Prop 1A and other funding sources to implement near term rail improvements on the Phase 1 Corridor and on the feeder rail corridors including our existing Metrolink and Amtrak systems.

This program of early investments supports the blended approach to implementing the high-speed train through increased interregional connectivity of existing rail services. And is a significant component of the State's rail modernization priority.

By revising the initial operating segment to connect north rather than south as previously envisioned, the Business Plan delays the arrival of high-speed train to our region. But because of this, the MOU investments

become all the more crucial.

SCAG appreciates the Authority's continuing commitment to the MOU projects as reiterated by Chairman Richard to the Regional Council last February. We urge the Authority to continue its partnership with the MOU agencies and take action to fund key MOU projects that are ready to advance.

Thank you for the opportunity to speak to you today.

CHAIRMAN RICHARD: Thank you, Mr. Law. And please give our respects to Mr. Ikhrata. Thank you.

Ms. Park followed by Douglas McIsaac.

CHAIRMAN RICHARD: Good morning.

MS. PARK: Good morning, Chair Richard and Members of the California High-speed Rail Authority. I am Rosa Park, the Executive Director for the Stanislaus Council of Governments. I am also a member of the San Joaquin Valley Regional Transportation Planning Authorities' called the RTPA Directors Committee, and the Central Valley Rail Working Group. I am here representing each of these entities.

The San Joaquin Valley RTPA Directors Committee represents the eight counties of the San Joaquin Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and Kern. The Central Valley Working Group includes

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Submission Date :	4/12/2016
Submission Method :	Public Hearing - Oral Comment
First Name :	Douglas
Last Name :	McIsaac
Stakeholder Comments/Issues :	
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Attachments :	McIsaac_Bakersfield_Biz_Plan_041416.pdf (11 kb)

Authority fulfill the promise in the prior business plans and support funding for the blended services needs in Northern California and to extend the high-speed rail to Merced.

Support from Northern and San Joaquin Valley and Sacramento helped pass Proposition 1A. And members of our Legislature from these regions provided key votes for you in 2012 and 2014. We are hopeful that in short time remaining, you will work with us to make changes to your Business Plan, so that it can be supported by Sacramento, the San Joaquin Valley, and parts of the Bay Area not served by high-speed rail.

On a final note, the major changes in this Draft came without warning or any discussion with local or regional partners and elected officials who have stood by this project for many years. Thank you for the opportunity to speak.

CHAIRMAN RICHARD: Thank you, Ms. Park.

Douglas McIsaac followed by Lauren Skidmore and then Scott Hurlbert.

MR. MCISSAC: Good morning Chairman Richard and Members of Board. I am here today representing the City of Bakersfield, which will hopefully by the southern terminus of the initial operating segment. And before I begin my other comments I first want to send my thanks and

appreciation to Mr. Morales and his staff for the very good working relationship that the City has enjoyed with the Authority over the past few years. It's been very much appreciated.

But with that, I'm here today to personally communicate a very significant concern that the City of Bakersfield has regarding the Draft Business Plan and not surprisingly that relates to fact that the Business Plan established that because of funding limitations, the initial operating segment may not extend all the way to Downtown Bakersfield and may instead terminate at an interim station north of Bakersfield.

We do appreciate that the Business Plan states that the Authority will be seeking the additional funds that would be necessary to extend the IOS all the way to Downtown Bakersfield, but nevertheless the City is very much opposed to any scenario wherein the southerly terminus of the IOS would not be in Downtown Bakersfield, whether that be in a permanent or an interim station.

In our comment letter that has been submitted to you we identified a multitude of reasons why the City contends that an interim station at Poplar Avenue would not be appropriate, which I won't take my limited time to elaborate on right now. And I also understand that it now may be proposed to locate an interim station at Wasco

instead of Poplar Avenue, as this would presumably be less costly and less environmentally impactful. And while that could be the case, any interim station along CP4 still results in some disadvantages to the operational efficiencies of the southerly end of the IOS.

And if the funding is not available to extend the permanent alignment to the new Bakersfield high-speed rail station, the City has identified several alternatives in which high-speed rail service still could be extended to the current Amtrak station in downtown Bakersfield on an interim basis. And operationally, this achieves two important things that an interim station north of Bakersfield does not.

First, it would substantially increase the ridership on the initial operating segment to and from Bakersfield, particularly within the San Joaquin Valley. There is currently no proposal to transport passengers from the interim station to Bakersfield. And with the station 25 or 30 miles north of Bakersfield the viability of high-speed rail, as a transportation option for Greater Bakersfield becomes substantially diminished.

Secondly, and as you may be aware, the Bakersfield Amtrak Station is already the focus for bus feeder service to Southern California. And the convenience, the extent, and the physical facilities that

are available now to provide that high-speed bus feeder service to Southern California would be greatly improved and greatly enhanced, than it would be from any station north of Bakersfield.

So with that the City would strongly encourage and greatly appreciate it, if in the final Business Plan that at least a potential option of interim service to Downtown Bakersfield be included, even if that may be in addition to the option of an interim station at some other location. Thank you.

CHAIRMAN RICHARD: Thank you, sir. We will be taking these comments very seriously. Thank you.

Lauren Skidmore followed by Scott Hurlbert.

MS. SKIDMORE: Chairman Richard and Members of the Board of Directors. The members of Kern4HMF, a coalition of individuals, businesses, schools and government entities, who strongly support the location of the high-speed train system's heavy maintenance facility in Kern County are writing to express our opposition to the Authority's proposed termination of IOS at Poplar Avenue.

Truncating (phonetic) high-speed rail service in an undeveloped remote area presents large infrastructure and transportation connectivity challenges, guarantees the creation of urban sprawl with a substantial impact on farm land, traffic and air quality. And severely handicaps the

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Submission Date :	4/12/2016
Submission Method :	Public Hearing - Oral Comment
First Name :	Lauren
Last Name :	Skidmore
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Skidmore_Kern4HMF_Biz_Plan_041416.pdf (9 kb)

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Truncating (phonetic) high-speed rail service in an undeveloped remote area presents large infrastructure and transportation connectivity challenges, guarantees the creation of urban sprawl with a substantial impact on farm land, traffic and air quality. And severely handicaps the

system's ability to attract initial ridership, interim or not. Moreover, all of these outcomes violate Proposition 1A provisions, which would open the project to further legal challenges.

Terminating the IOS at Poplar Avenue would also preclude the location of the heavy maintenance facility at a proposed site near Shafter that offers cost, logistical and environmental advantages unmatched by any other potential sites. The Draft Business Plan presents a little to no justification for stopping the IOS not only short of Bakersfield, the system's gateway to the Southern California passenger market, but short of a competitive HMF site.

The plan also fails to address the challenges of creating a station in a rural area that is not included in the approved Fresno to Bakersfield EIR and whose development will present added infrastructure and environmental review costs. We respectfully urge the Authority to explore alternatives to the Poplar Avenue Terminus and north of Bakersfield station that will satisfy statutory requirements while fostering the immediate success of the system.

High-speed rail needs Los Angeles Basin ridership to promote the entire high-speed rail system. Instead of ending the IOS at Poplar Avenue other options will better

promote the initial success of high-speed rail and will enable its steady expansion. Kern4HMF desires to explore these alternatives with Authority Board Members and staff and we urge the Authority not to approve its Business Plan as is. Thank you.

CHAIRMAN RICHARD: Thank you, Ms. Skidmore. Scott Hurlbert, followed by Rob Ball.

MR. HURLBERT: Good morning Chairman and the Members of the Board. I am Scott Hurlbert, City Manager of the City of Shafter.

I think these two speakers really covered all of the points that are important today. I would strongly urge each of you to review the comment letters that are coming from those jurisdictions and agencies in Kern County. There is some important information, also some technical solutions to some of the impacts that Lauren in particular just cited: the urban sprawl, the lack of infra structure in the proposed Poplar's interim station area -- just not an optimum, less than optimum actually, location for an interim station.

So I would definitely ask that you consider the comments that you will be receiving, especially the report from Kern COG and then you consider an alternate location for that interim station. And then also give the Shafter HMF site a fair chance during the selection process. Thank

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Submission Date :	4/12/2016
Submission Method :	Public Hearing - Oral Comment
First Name :	Scott
Last Name :	Hurlbert
Stakeholder Comments/Issues :	
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Attachments :	Hurlbert_Shafer-Biz_Plan_041416.pdf (8 kb)

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you.

CHAIRMAN RICHARD: Thank you, sir.

Rob Ball followed by Richard Chapman.

MR. BALL: Thank you Chair, Committee Members. I'm Rob Ball, Planning Director for Kern Council of Governments.

And I wanted to thank your staff for the kickoff meeting that we had last Friday in Kern on Bid Segment 4, which is from North Kern County all the way to just north of Shafter, that 22-mile segment. We were hearing some very encouraging things from the consultant that's working on that where they're actually doing some changes that add additional undercrossing for both the high-speed rail line and the BNSF.

And it's that type of responsiveness to the comments that we at Kern COG and Kern County are looking for from the Authority. That when you can build something that benefit's and helps mitigate an existing problem along that BNSF Corridor it's very beneficial to the region, to the community. And it's not just focused on high-speed rail and its movement, but also the circulation within the region.

The other interesting thing that we noted is that we believe that that segment will likely be the first one that will be ready for ribbon cutting within your system,

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Submission Date :	4/12/2016
Submission Method :	Public Hearing - Oral Comment
First Name :	Rob
Last Name :	Ball
Stakeholder Comments/Issues :	
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2016 Business Plan RECORD DETAIL

Submission Date :	4/12/2016
Submission Method :	Public Hearing - Oral Comment
First Name :	Tom
Last Name :	Williams
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Williams_Sierra_Biz_Plan_041216.pdf (9 kb)

attitude, a proactive attitude that not just puts people to work, but keeps people working and develop this State, so people are going to be able to live here and have a good lifestyle for the next 20 years.

But anyway thank you everybody for coming and thank you for your service, Commissioners.

CHAIRMAN RICHARD: Thank you, Mr. Kelly.

(Applause.)

BOARD MEMBER CORREA: Mr. Chair? Mr. Chair?

CHAIRMAN RICHARD: Yes, go ahead.

BOARD MEMBER CORREA: Chairman Richard, I just wanted to thank Mr. Patrick Kelly for making the comments about making suggestions and possible funding sources for the project and being specific.

Thank you, Mr. Kelly.

CHAIRMAN RICHARD: Thank you, Director.

Tom Williams followed by Troy Hightower.

Dr. Williams?

DR. WILLIAMS: Good morning, Dr. Tom Williams, Sierra Club and Citizens Coalition for a Safe Community.

We're just about 50 years too late, but we're getting started now. But are we getting started correctly? I've built tunnels. I've built rail. I've built a lot of things over 45 years with URS Corporation, Parsons Corporation and Dubai Government. A lot of the stuff in

Dubai was built under the Dubai Ports Authority, McNeil ((phonetic) and a few others, so I've built things.

However, I've also worked with a guy named Carl Sauer who did high-speed rail in Austria. Where did they put them? They couldn't put them on the surface much like Downtown L.A. I helped build the red line Phase 1 subway.

Question for the risk for item number three, design and build tunnels. Tunnels need to have a design and build standard approach throughout the State for all California high-speed rail as an alternative, because you may find that it's a lot cheaper to go underground rather than having to negotiate with BNSF and UP Railroad for right-of-way. We had the problem at Union Station. We had five Class Ones there. So put an alternative to every contract, go underground. You can go into to Downtown Bakersfield quite easily underground. On ground it’s a little bit more difficult.

Then you have the inevitable 2016 Plan. My central issue there is lifecycle cost including replacement long-term maintenance, major maintenance and others. But also here you're trying to get a cheap ride, however will there be the revenues to support it? So overseas, we always had to do life-of-project costs including replacement.

We also had to do ability to pay. Will there be

enough revenue produced by what you are proposing in the 2016 Plan to pay for it. Not just operations and maintenance, but how about finance charges? How about long term, short term maintenance, maintenance, maintenance, because these require a lot of maintenance and a lot of moving parts. So we would highly recommend that you add a economic analysis, economic impact statement, the City of San Jose did that once.

CHAIRMAN RICHARD: Dr. Williams, thank you for your comments. Thank you.

Troy Hightower, followed by Mark Lehner, (phonetic) I'm probably mispronouncing it, I apologize.

MR. HIGHTOWER: Good morning Chairman Richard and Members of the Board.

I'm not here to make any comment about the Business Plan. My comment is about the ARTIC Center. I ride the train often and this is my first opportunity to see and be a part of the ARTIC Center. And I was very, very impressed. In fact, they have a branch of the Anaheim Public Library and so it gave me a feeling of future. And so I just wanted to thank you for coming to Anaheim and give me an opportunity to see what the future may be. Thank you.

CHAIRMAN RICHARD: Thank you, Mr. Hightower.

Sir, is it Mark Lehner?

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Submission Date :	4/12/2016
Submission Method :	Public Hearing - Oral Comment
First Name :	Mark
Last Name :	Lehner
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Lahner_Biz_Plan_041216.pdf (9 kb)

MR. LEHNER: Yeah, well pretty much right.

CHAIRMAN RICHARD: I apologize.

MR. LEHNER: No problem. Chairman Richard, CEO Morales and respective Authority Members, my name is Mark Lehner. I'd like to take advantage of this opportunity to comment on the 2016 Draft Business Plan.

Since I was a senior in high school, unfortunately 13 years ago, I have been a follower of this plan of High-Speed Rail Project. I come at this project with a unique point of view and vested interest. I moved to Southern California five years ago from Northern California where I spent the first 26 years of my life. So I look forward to the project in terms of it improving my new home and improving the lifestyle of my former home where most of my family lives.

I have a couple of concerns about this plan. One is that in your previous Business Plan, specifically 2014, you mentioned the selling and leasing of a station and air rights around station areas, especially utility corridors along the right-of-way. And this was not mentioned as a possible revenue source in the current Business Plan, or at least I didn't see it, if so it's there I apologize. But that could a potential funding source for the project.

Also, in terms of along with that in development of station areas, possibly working with developers and

cities to create tax areas where special provisions in property tax could be used to fund the project through new development in the areas.

I would also like to comment on Bakersfield along with everyone else, unfortunately for you. I do support Bakersfield's resolution against the temporary station north of Bakersfield. I implore you to make sure that the High-Speed Rail Project does go to Downtown, because that conforms with the Authority's strive for connectivity to other modes and Downtown.

I would also comment in terms of early investment. I know that you already have early investment in the current Business Plan, but a couple other things to note for further funding when it comes available. Two big connectors into your project are the Capitol Corridor and Pacific Surfliner. These are currently number two and three in terms of the busiest corridors, in terms of Amtrak. They will be very beneficial in terms of improving those corridors, especially the southern end of the LOSSAN Corridor -- which is currently mostly single-track -- and the current understudied double tracking of the Capitol Corridor from Oakland to San Jose.

Also work with your current partners in BART and Caltrain, because they will be the northern end of this section's connectivity to international airports.

CHAIRMAN RICHARD: Mr. Lehner, thank you very much for your comments, sir.

Doug Mangione followed by Douglas Robbins and then Alan Nishio.

(Colloquy regarding microphones.)

MR. MANGIONE: Mr. Chair and Committee Members, my name is Doug Mangione. I represent the International Brotherhood of Electrical Workers here in Orange County. We provide the skilled craft electricians that are going to be working this project. And we look forward to providing those men and women to work on this project.

Our sister Local in Fresno, they've experienced very high unemployment in the recession. They have now put 100 of men and women into the apprenticeship, especially veterans, giving them the opportunity to work on Phase 1 of this project. It's been a boon to that Local and a boon to the local economy. It's going give these folks a good start in a career in construction.

The other item here: I traveled to Europe, I've ridden the TGV, I've ridden the high-speed rails there. They're very efficient. They're very good. I think California needs to be the leader in this country, to provide the leadership to move forward and provide the first high-speed rail in the country. And we've always led this country in innovation. And we should not stop. We

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Submission Date :	4/12/2016
Submission Method :	Public Hearing - Oral Comment
First Name :	Laurie
Last Name :	Hunter
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Hunter_HDCJPA_Biz_Plan_041216.pdf (9 kb)

with me. Chair Member Richards, Tom Richards has been kind enough to meet with me, as well as Mr. Morales. And I do thank you both for that.

Since 2010 Chowchilla has supported the alignment along Avenue 21 and other routes that would not -- excuse me -- since 2010 it has been in support of the right-of-way of Avenue 21, as well as the Chamber of Commerce. And it's no secret that the relationship with High-Speed Rail and the City of Chowchilla has been tense. But the history is exactly what it is, is history.

And so I'm asking you again that we sit down and we discuss what is in the best interests of high-speed rail and the City of Chowchilla and minimize the effects of an already impoverished community. Thank you.

CHAIRMAN RICHARD: Thank you, Ms. Auston.

Laurie Hunter followed by Fran Inman and then Marvin Dean.

Thank you. Go ahead, Ms. Hunter.

MS. HUNTER: Thank you. I'm Laurie Hunter. I work for the High Desert Corridor Joint Powers Authority. And the High Desert Corridor is the orange line on the map that you see there. It has a high-speed rail connector between the station in Palmdale, the station in Victorville. It connects with XpressWest's line that goes up to Vegas.

And so I'm here to give you a status report. We had started an investment grade ridership and revenue study for the line that included high-speed rail. It's helped. As a matter of fact, funding is being provided by SANDAG, the JPA, XpressWest and your agency, California High-speed Rail Authority, to do this investment grade ridership and revenue study, to determine by connecting high-speed rail that you're developing up with the XpressWest line, to see what kind of revenue that we can expect to build the High Desert Corridor and XpressWest portions and what it can contribute financially to California High-Speed Rail.

That study was begun in February and we expect it to be done in June 30th. And it will, I think show, that what FRA's study initially on a nationwide high-speed rail regional network has shown, is that the Las Vegas to Los Angeles market is the most profitable market in the nation for high-speed rail.

So it could be a way to add to the revenue of your Business Plan, so we're asking you to hold open your attitude and see if maybe we can join Northern California, Southern California to go and seek revenue to be able to have an interim solution by using Metrolink, a blended solution, until your Business Plan -- to come down for Bakersfield -- is done between Palmdale and Burbank, to use Metrolink in an interim. You'd have to transfer from a

Burbank to a Palmdale station to go over the High Desert Corridor and up to Las Vegas. But it could be a way to prove to the public that high-speed rail is popular, people are going to ride it and that there's enough money to use for construction, operation and maintenance financing.

The market in Southern California is the reason I think that the nine million people in the Los Angeles area, the two million people in Las Vegas could connect into your line, go north and south.

Also, the other thing I wanted to point out, our EIS for the High Desert Corridor is due out in final form in two weeks. And we worked during that EIS with your engineers and XpressWest engineers on a wye intersection so you can have a smooth, nontransferrable one-seat ride from Las Vegas all the way up to San Francisco and all the way down to San Diego eventually.

So anyway, we'll keep in touch with your staff with that study. And hopefully you'll look forward to giving some thought of using that revenue.

CHAIRMAN RICHARD: Thank you very much, Ms. Hunter. I appreciate that.

Fran Inman, a friend of ours. And Ms. Inman is not only with Majestic Realty, but is one of the State's leading lights on the goods movements problem that we have from our ports, so Ms. Inman, welcome.

2016 Business Plan RECORD DETAIL

Submission Date :	4/12/2016
Submission Method :	Public Hearing - Oral Comment
First Name :	Marvin
Last Name :	Dean
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Dean_KCMCAB_Biz_Plan_041216.pdf (12 kb)

Thank you.

Marvin Dean followed by Keith Harkey.

Good morning, Mr. Dean.

MR. DEAN: Good morning, Board Members. I'm going to be very brief.

CHAIRMAN RICHARD: Marvin, I think you're going to have to pick that up.

MR. DEAN: Pick that up? Okay, I'm going to speak briefly on four items. Two items I've given a hand out on. First of all, I want to say I'm here representing the Kern County Minority Contractors Association out of Bakersfield. We represent subcontractors, WBE subcontractors, small business and also the environmental justice community.

I want to start off with a well thank you for having such a staff person such as Michelle Bowman (sic: Boehm), because she's doing an excellent job with her taskforce she put together from Bakersfield to Palmdale. She created a community group that brought all the sites together to make sure early on in the process all the voices are involved in this process, so there will not be a lot of opposition. And I think that ought to -- a model that you ought to use in these other regions. She's doing a really excellent job and so I want to commend her. I think when people are doing a good job they need to be

public acknowledged. She didn't ask for that. I just want to give it to her.

The second thing I want to talk about is this -- a decision the Board has made to go north instead of going south in the Business Plan. I would say that a lot of that has probably been on our community, Bakersfield, by -- and I tell I know there's a lot of Bakersfield here now, but we've been behind the curve. Instead of working in good faith with this Board and the staff we've been fighting in lawsuits and all the other things. And I've been championing this project for the longest in saying that we've got to get on a local initiative to work partnership with the Authority.

And I think a lot things will happen, because you guys have a deadline to get this project built. So but the only thing I would say is that you try to find a way to come into Bakersfield Downtown proper instead of having that temporary station out in the middle of nowhere. I'm sure some of the other members talked about that, because then we've got to look at how we're going to connect from Bakersfield to the station. And it may be years away before we go south, so if there's some kind of way we can come into Bakersfield I think that'd be a big help to those us that are disappointed it's going to go north instead of south.

Now the two things I handed out, and I want to speak to very briefly, is some of you know that I've been speaking -- first of all I want to be very clear. We support this project. You probably have no stronger advocate to support this project, bar none, in Bakersfield. I've been doing this for years from the start of this project. But there are some real concerns that we have and I'm a part of a taskforce that is looking at this environmental justice issue.

And I'm giving you a handout. It's a talking point. The person that was going to be here from San Francisco, our consultant, was going to make this presentation. But about midnight she emailed me some talking points. I won't go through it. It's all outlined here. But we're saying that something needs to be done, because there's a gap right now between the Small Business Program and even the Community Benefit Program that a lot of these smaller communities -- primarily along the corridor, these environmental justice communities -- they're being left out of the process. And I'm hearing it every day. I'm championing the project. I'm saying it's coming, give us time.

And I think when I met some of you -- when I first met Jeff -- I think you were at RFAA (phonetic) -- there was a group that talked about that environmental

justice. I said, "We don't want to stop this project, because of that." But I'm telling you if we don't address that concern there's going to be potentially somebody bringing litigation on that. And you're going to find a lot of your friends that support the project may join into that, because they feel like they're being left out of the process. So I'm trying to say we want to do something about it. And we want to work with this Board and work with staff to come in order to come in with some solutions. We think we can do that, but we've got to pay attention to it.

Then the last thing I'm going to say and I'll close, and I know the buzzer just went off --

CHAIRMAN RICHARD: Yes.

MR. DEAN: -- I don't know how clear this is, but I understand that you're going to be in Bakersfield on May 10th. That just so happens to be -- if it is -- I don't know if it is. I got a flyer there in front of you, because what we're doing -- that just happened to line up with our 9th Annual Public Contracting Expo.

So what we tried to do if you are going to be there what we're doing is we're working with the business community, our elected officials, and the community at level. And we want to put together after the Board Meeting and all that, before you all get out of town, we want to

have a reception meet-n-greet with the community. So we can set up and build good will.

And we formed a group called the San Joaquin Valley High-Speed Rail Association that is basically to give information, advocacy, and that type of things. So I just want to say that we welcome you. And help us support you and help us help you on the ground where's there a lot of misinformation and a lot of opposition.

So thank you for the extra moments.

CHAIRMAN RICHARD: Thank you, Mr. Dean.

Keith Harkey, good morning sir.

MR. HARKEY: Good morning. My name's Keith Harkey. I represent about 5,000 members of Ironworkers Local 433. Our training facility is right here in Orange County.

We're anxious to get this going, bottom line. Right now we have over a 1,000 people -- 1,000 young men and women, veterans that are changing their lives through our apprenticeship program -- with well paid jobs. So we're looking forward to getting this going.

I'd like to thank your foresight in bringing this all the way down to Orange County and looking forward to going into San Diego, hopefully. The United States is looking at the high-speed rail as an alternative. We know where that's moving forward. We like to be, like we said,

2016 Business Plan RECORD DETAIL

Submission Date :	4/15/2016
Submission Method :	Website
First Name :	Taylor
Last Name :	Safford
Stakeholder Comments/Issues :	The investment in high-speed rail uses innovative technology to facilitate travel across the entire state. This investment will improve the time and cost associated with travel between LA and San Francisco, allowing residents and visitors alike to spend more time actually enjoying the state's incredible destinations rather than just waiting in line at the airport. This investment is long overdue in the United States, and California should take the leadership position to seize this first-of-its-kind transportation opportunity. Our state needs this alternative mode of transportation now more than ever, as our population reaches 50 million by 2050. The valley to valley line is a game changer for the Bay Area: what was a three hour drive will become a 40 minute train ride - improving daily commuting and opening doors to new employment opportunities for many, and helping address the affordable housing crisis here in the Bay Area.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/12/2016
Submission Method :	Letter
First Name :	Brian
Last Name :	Dykes
Stakeholder Comments/Issues :	
Notes :	
Attachments :	TJPA_Biz_Plan_Comment_041216.pdf (1 mb)

TRANSBAY JOINT POWERS AUTHORITY
Maria Ayerdi-Kaplan • Executive Director

April 12, 2016

Ms. Annie Parker
California High Speed Rail Authority
Attn: Draft 2016 Business Plan
770 L Street, Suite 620 MS-1
Sacramento, California 95814

Dear Ms. Parker,

The Transbay Joint Powers Authority (TJPA) appreciates the opportunity to provide comments on the California High Speed Rail Authority's (CHSRA) Draft 2016 Business Plan dated February 18, 2016, and supporting documents. As the Business Plan states on page 27, the Transbay Transit Center in downtown San Francisco is the northern terminus of the High-Speed Rail "one-seat ride" between the Bay Area and Southern California. The TJPA has designed the Transit Center in cooperation with the CHSRA to accommodate HSR service, and we are excited to see this project coming to life. Construction is well under way, and the Transit Center, including two below-grade levels for rail operations, is scheduled to be completed by the end of 2017. Accordingly, we request the Business Plan to include a discussion of the Transit Center on page 24 where the progress on connectivity and bookend projects is listed.

The TJPA's next project is to begin construction of the Downtown Rail Extension (DTX) extending rail tracks from the current terminus at Caltrain's 4th and King station to the Transit Center. We appreciate that the CHSRA has budgeted a $550 million funding contribution for the DTX in its 2016 Business Plan. The DTX is also expected to enter the Federal New Starts funding pipeline later this year. By that time, the TJPA expects certification and a Record of Decision to be issued for the Transbay Transit Center Program Supplemental EIS/EIR, which analyzes certain design changes to accommodate HSR service to the Transit Center. The DTX is therefore on track to be completed by 2029—allowing HSR service to reach downtown San Francisco consistent with the Business Plan's schedule.

Accordingly, the TJPA requests that the Business Plan more clearly state that the CHSRA plans to have HSR service in San Francisco terminate downtown at the Transit Center. This would include (1) clarifying that the goal is to extend service to the Transbay Transit Center in downtown San Francisco by 2029 (where the extension to San Francisco is discussed on pages 11, 12, 22, 51, 61, 64, and 67); (2) referencing the CHSRA's contribution to complete the DTX (on page 12); (3) deleting references to a potential interim station at Caltrain's 4th and King station (on pages 15 and 64 where connections to transit hubs and increased ridership are discussed); (4) adding a reference to the Transit Center (on page 47 where the connectivity to other transit systems is mentioned); and (5) adding a reference to the Transit Center (on page 64 where the increase in ridership when CHSRA reaches San Francisco is noted).

The TJPA would also like the CHSRA to correct and clarify a few points in the Business Plan's supporting document Capital Cost Basis of Estimate Report. In Table 3 on page 15 of the Report, a reduction of $1.5 billion for the TTC is listed. The TJPA is not aware of any proposed

$1.5 billion contribution from the CHSRA and therefore is unclear on how a contribution that was not envisioned could be removed from the project budget. Please correct or clarify this reduction. In addition, please indicate a timeline for the two allocations listed on page 29 of the same document: the $100 million towards a potential interim station at Caltrain's 4th and King station, and the $550 million towards the TTC.

The TJPA also requests that the text in the Business Plan reflect the CHSRA's contribution of $550 million to the DTX and other investments in the extension of HSR to the Transit Center in downtown San Francisco. For example, Exhibit 5.3 on page 56 of the Business Plan notes an investment in the Los Angeles to Anaheim corridor, but does not reference the $2.9 billion investment in the Peninsula corridor or the $500 million investment in the DTX into the Transit Center. Page 67 of the Business Plan references investments in the Peninsula corridor, but does not reference investment in the DTX. Additionally, the lifecycle cost estimates included on pages 77-79, do not acknowledge the estimated lifecycle costs of the DTX or Transit Center, or indicate whether they are included in the values in the exhibits.

The TJPA also would like the CHSRA to consider additional inputs in its ridership forecasts. During meetings with CHSRA ridership estimating staff, the TJPA was told that the ridership modeling only assumed in-state travelers on the CHSRA system. If this is still true, it is a missed opportunity to account for the increase in ridership as a result of tourism, particularly for stations such as the Transit Center, Millbrae, and Union Station. Tourism in these regions is a significant multi-million dollar industry with many international travelers that are more accustomed to using high-speed trains for their travel needs than in-state travelers. This assumption should be clearly stated in both the ridership chapter of the Business Plan as well as in the Ridership and Revenue Forecasting supplemental document.

Finally, the TJPA requests that the CHSRA clarify or correct its ridership numbers. On page 70, Table 7.3, the Phase 1 ridership numbers do not match the numbers in Table 6.2 of the Ridership and Revenue Forecasting supplemental document. The values in Table 7.3 are for Bakersfield-SF and while it is assumed that the values in Table 6.2 are system-wide, which would explain the lower 2029 value in Table 7.3 than in Table 6.2; however, the value for 2040 in Table 7.3 is identical to that in Table 6.2.

We look forward to continuing to work closely with the CHSRA to produce the Final 2016 Business Plan, and to working closely and cooperatively in the future through final design and implementation of the project. If you have any questions regarding the TJPA's comments, please feel free to call me at (415) 597-4617 or email me at BDykes@transbaycenter.org.

Sincerely,

B. R. Dykes

Brian Dykes
TJPA Principal Engineer

cc: Maria Ayerdi-Kaplan, Scott Boule, Mark Zabaneh, Meghan Murphy (TJPA PMPC), Ben Triposis (CHSRA), William Gimpel (CHSRA PMT), Lillian Hames (CHSRA PMT)774162.1

2016 Business Plan RECORD DETAIL

Submission Date :	4/12/2016
Submission Method :	Letter
First Name :	William
Last Name :	Grindley
Stakeholder Comments/Issues :	
Notes :	Flash drive included with letter. Contents available upon request.
Attachments :	Grindley_041216.pdf (7 mb)

Another California High Speed Rail Authority Glossy Marketing Document Portrayed As The 2016 Business Plan

A Critique of the California High-Speed Rail Authority's 2016 Draft Business Plan,
With Reference to the 2008, 2009, 2010, 2012, and 2014 Business Plans

Prepared by: William Grindley
151 Laurel Street
Atherton, CA 94027

April 12, 2016

California High-Speed Rail Authority
Attn: Draft 2016 Business Plan
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

April 12, 2016

To Whom It May Concern:

This transmittal letter accompanies a document called: "Another California High Speed Rail Authority Glossy Marketing Document Portrayed As The 2016 Business Plan – A Critique of the California High-Speed Rail Authority's 2016 Draft Business Plan, With Reference to the 2008, 2009, 2010, 2012, and 2014 Business Plans"

It is submitted as commentary on the California High-Speed Rail Authority's Draft 2016 Business Plan.

Thank You

William Grindley
151 Laurel Street
Atherton, CA 94027

PREFACE

This critique came about because, like prior ones, the Authority's latest business plan continues to ignore empirically based facts about the ridership, fares and the costs of operating existing HSR systems. If it took empirical information about those variables of the financial viability equation into account, its per mile fares would double or triple, its ridership would shrink by at least half and its operating costs would far more than double; but the California high-speed rail (HSR) train would be profitable.

At least twice the Authority has been told there will be no private, at-risk investment without proven financial viability, and in 2015 that message was repeated. It continues asking future contractors' interest not only to design and build, but also to finance and maintain the rails, electrical power and signaling systems atop the Authority's substrate, with the *proviso* that State would owning that privately financed infrastructure!

The Authority also 'moves the goal posts' on legally binding issues in hope that the Legislature will 'run cover' for them, and lives in fantasyland about private investment. Its financial viability formula is based on a European Union railroad accounting system, prohibited in the United States.

The Authority presents glossy headlines. That's good marketing. But the project's reality is very different. If the present Authority strategy of "dig the hole deep enough that the public has no choice except to keep digging" prevails, California will woe the day it approved Proposition 1A. This paper highlights some of the Authority's reckless behavior that will lead to its financial collapse and abrogation of its foundation law – AB3034. It is a clear and present danger.

EXECUTIVE SUMMARY

The Authority headlines it has *"sufficient to deliver a high- speed rail line connecting the Silicon Valley to the Central Valley"* [1] i.e. VtoV Extension but only Federal funds are actually available. The claims and realities are:[2]

SUPPOSEDLY APPROPRIATED – $2.6Billion of Prop1A funds – all of which was blocked by court rulings from 2013. Until a second funding plan clears the state's courts, there is no access.

Federal ARRA/FY 10 Grants and Planning Funds – The Authority has access to these monies, with the proviso that the State match whatever the federal government provides.

SUPPOSEDLY COMMITTED – $4.2Billion of State Prop1A Bond funds – all of which was blocked by court rulings from 2013

Cap & Trade Funds (through 2024) – $5.3Billion – but SB826 only commits a percentage of Cap & Trade funds (25%) not a fixed amount and then only through 2020

Long Term Cap & Trade Funds (through 2025-2050) – $5.2Billion – but SB826 only commits only 25% of Cap & Trade funds, not a fixed amount and then only through 2020.

The Authority's assumes it has nearly $21billion. In reality it lacks about $17Billion to build VtoV Extension, and SB1029 constrains those available federal funds to the Madera-Bakersfield section. [3] In short, the Authority can only claim to have about 15% of the $21Billion needed to build VtoV Ext.

The high-speed rail (HSR) project is first and foremost a commercial enterprise required to operate without a subsidy. [4] The Authority needs private investment, but in 2008 and 2009 investors were in a 'wait and see'

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[1] Connecting and Transforming California, the California High-Speed Rail Authority's Draft 2016 Business Plan p. 9 [PDF 9]

[2] See Exhibit 6.2, p. 61 [PDF 61] of Draft 2016 Business Plan: Connecting and Transforming California, Section 6: Funding and Financing.

[3] Even the appropriated portion available is encumbered by SB1029 language restricting it to only the Initial Operating System as defined in the 2012 Business Plan, not the IOS of the 2016 Business Plan. SB1029 speaks specifically of the 2012 Business Plan as its reference document. SB1029, Appropriations for Initial Construction Segment (Items 2665-306-0890 and 2665-304-6043) says; *"This bill appropriates to the Authority $3.24 billion from the Federal Trust Fund and $2.61 billion from the High Speed Passenger Train Bond Fund for the construction and acquisition of a portion of the initial operating segment.* ***This initial construction segment constitutes the segment running for 130 miles between Madera and Bakersfield."*** [Emphasis added]

[4] AB3034 2704.08 (2) (J) says, *"The planned passenger service by the Authority in the corridor or usable segment thereof will not require a local, state, or federal operating subsidy."*

stance on whether an Initial Operating Segment (IOS) proved profitable.

The 2012 Plan said, *"On its own, the IOS is a viable, profitable high-speed rail system."* The 2014 Plan mentioned profitability only twice, and only as a key objective, not a legal requirement [5] and admitted it split its costs into several accounts as in the European Union,[6] illegal in the US. The 2016 Plan never mentions the 'profit' requirement, and 'commercially viable' only twice.

The ". . *IOS is a viable, profitable high-speed rail system."* mantra gets modified for two reasons in the 2016 Plan to *"Early involvement of the eventual operator is key to establishing a commercially viable system over the long-term."* [7] The first reason the mantra was modified is, unlike AB3034's demand that the IOS be profitable its first years, it isn't.

> *". . . opening year of the Silicon Valley to Central Valley line in 2025 (38% chance of breaking even), the ramp-up period between 2025 and 2029 (75% chance of breaking even)."* [8]

Being one-third or three-fourths profitable, particularly if how ridership, revenues are forecasted and Operating and Maintenance (O&M) expenses are hidden, is neither good a business proposition, nor conforms to AB3034. The second reason is that private investment is needed to install rails, electrification and signaling systems atop its substrate (aka dirt mound) before the IOS opens, not after IOS was proven profitable. The latter reason came with the *proviso* the government will own the privately financed investments. In 2015 the Authority again asked for private investors' interest, but again with the non-starter *proviso*.

> *The specific high-speed rail components that will be delivered under a potential* **[Design, Build, Finance and Maintain]** ***DBFM*** *or other*

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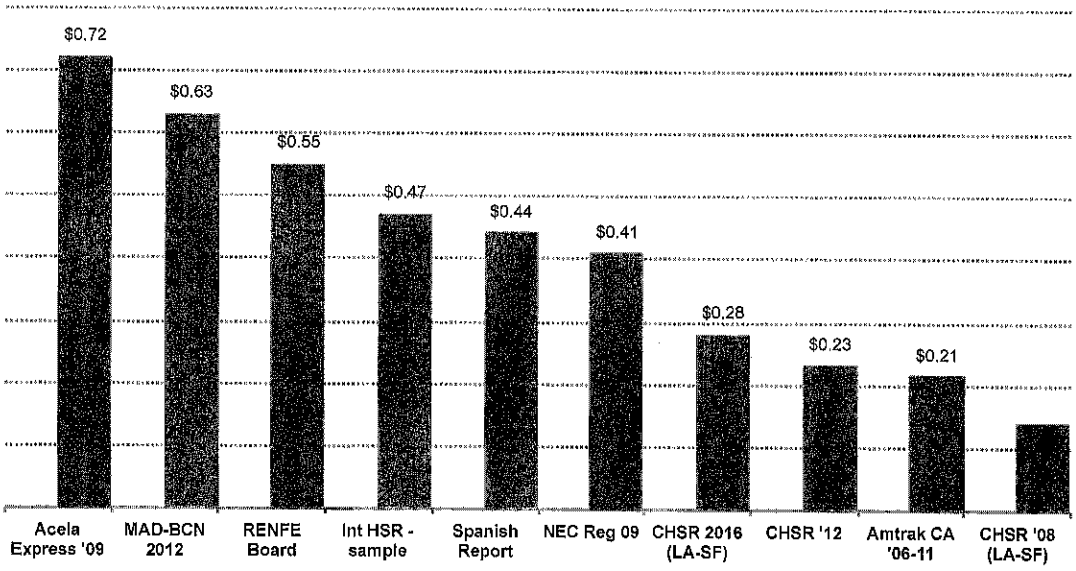
[5] See: Connecting California, 2014 Business Plan, April 30, 2014 page 53 [PDF 53].
[6] For a detailed discussion of the differences in European railways accounting under EU Directive 91/440 and the DOT requirements of GAAP, see To Repeat, The Authority's Train Will Need A Subsidy Forever, August 22, 2012, particularly pages 32-36. Found at: www.sites.google.com/site/hsrcaliffr
[7] See: pp. 36 and 38 [PDF 36 and 38] of Connecting and Transforming California, the California High-Speed Rail Authority's Draft 2016 Business Plan
[8] See p. 99 [PDF 99] of Connecting and Transforming California, the California High-Speed Rail Authority's Draft 2016 Business Plan

contract are described in detail below. [9] [Emphasis added]

Private investors will not put funds at risk when the Authority's 2016 Plan admitted that the project is only ". . *commercially viable . . over the long-term.*" [10] and they will have no control over their investments.

Fares are at the heart of why the IOS North (VtoV Ext.) and future phases will not profitable. The Authority's maximum fare, '83% of airfares' for SF-LA travel was set to be ". . *somewhat below current airfares . .*" [11] This makes the SF-LA fare, about 23¢-28¢/passenger mile shown in Figure 1, an 'outlier' to existing 45¢-72¢/mile HSR fares, including the USA's Acela Express.

Figure 1
Fares/mile Of Existing HSR Operations
And the Authority's Proposed Fares



But the Authority's formula has a dark side: about a third of today's average the Authority's fares are limited to $89.[12] No private HSR operator would

[9] See pp. 8-12 [PDFs 16-18] of the Request for Expressions of Interest for the Delivery of an Initial Operating Segment, RFEI HSR#15-02; Release date June 22, 2015. Found at: http://www.hsr.ca.gov/docs/about/doing_business/HSR15_02_RFEI.pdf
[10] See: pp. 36 and 38 [PDF 36 and 38] of Connecting and Transforming California, the California High-Speed Rail Authority's Draft 2016 Business Plan
[11] See: California High-Speed Rail Program Revised 2012 Business Plan, April 2012, page 5-11 [PDF 119]
[12] See Table 3.1, p. 3-3 [PDF 25] of Ridership and Revenue Forecasting; Draft 2016 Business Plan, Technical Supporting Document.

survive financially by charging travelers going the 407miles[13] between San Francisco and Anaheim[14] the same $89 fare as the 283mile fare from San Francisco to Bakersfield.[15]

While IOS North isn't dependent on capturing airline passengers, its own consultants report[16] showed the air passenger market between southern California and SF Bay Area airports stagnant at about 10Million passengers. The Authority admits its fares are ". . *well above the out-of- pocket cost of driving* . ." [17] i.e. driving is always cheaper, not to mention ride sharing. For example, the out-of-pocket cost of one person driving between LA and SF's downtowns is less than half ($42.25)[18] the HSR $89 fare.

Where do passengers come from if the Authority's has almost no access to the personal vehicle driving market (+95% of trips >50miles) and must wrest passengers from airlines' slow or non-growth LA-SF market? The Authority has never done a dedicated survey of potential IOS South or IOS North travelers. Their own consultants told them that HSR's potential market share dropped from 58% to 41%between the 2005 and 2013/2014 RP/SP surveys, [19] and the Authority cited the doyen of demand forecasting,[20] who said ". . *for two-thirds of the rail projects, forecasts are overestimated by two-thirds; . . on the average by 65 percent . . a massive and highly*

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[13] See: http://www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Anaheim,+CA Unless otherwise stated, miles are driving miles as are used by the Authority, see p. 65 [PDF 67] of California High-Speed Rail Authority, Report to the Legislature, December 2009.
[14] See: http://www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Anaheim,+CA
[15] See: http://www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Bakersfield,+CA
[16] See: Table 1, p. 10 [PDF 116] Appendix B, Potential Airline Response to High-Speed Rail Service in California, prepared by Aviation System Consulting LLC, for Cambridge Systematics, Inc. Found in California High-Speed 2012 Business Plan, Ridership and Revenue Forecasting, final technical memorandum, April 12, 2012.
[17] See: California High-Speed Rail Program Revised 2012 Business Plan, April 2012, page 5-11 [PDF 119]
[18] On April 11, 2016 the cost of driving between the two metropolitan centers was $42.25. Found at http://www.travelmath.com/cost-of-driving/from/San+Francisco,+CA/to/Los+Angeles,+CA
[19] See p.12 [PDF 10]; Cambridge Systematics, California High Speed Rail Ridership and Revenue Forecasting, Survey Data and Inputs to Version 2/Version 3 Preliminary Choice Patterns and Traders/Non-traders; Prepared for California High Speed Rail Authority and Ridership Technical Advisory Panel, March 20, 2014.
[20] See California High-Speed Rail Authority, Revised 2012 Business Plan, p. ES-15 [PDF 23]

significant problem." [21] But those devastating findings were ignored, and early years' ridership increased from 2014's 11.4Million to 12.8Million in the 2016 Plan, although the primary market (7Million in the SF Bay Area) is one-third that of 2014's Los Angeles metropolitan area. The above empirically based facts undercut the Authority's ridership, and therefore revenue [22] forecasts, even after the misuse of *avant-garde* mathematics modeling forecasting and risk analysis.

Operations and Maintenance (O&M) Cost is the final variable of the profitability equation. As in the case of ridership and revenues the public, including the LAO, the GAO and strangely DOT's Office of Inspector General, is prohibited from scrutinizing the data, assumptions and algorithms that support the O&M component of Authority's profitability equation.[23]

But we do know three facts that destroy any misplaced credibility in the Authority's O&M costs. First, the Union International des Chemins des Fer (UIC/IUR) study of the Authority's operating costs concluded the California train's increased average speed will increase costs exponentially (i.e. operating costs increase at a faster pace than the increases in speed) both for powering above the industry standard 186mph[24] and maintenance costs

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[21] See: Megaprojects and Risks: An Anatomy of Ambition, Bent Flyvbjerg, Cambridge University Press, 2003 page 26

[22] The Authority treats revenue as a fixed multiple of ridership for each phase: i.e. over or under estimated demand means revenue is over or under estimated .999%. See: page B-9 [PDF 80] of California High-Speed Rail Draft 2014 Business Plan: Ridership and Revenue Forecasting, draft technical memorandum: *"Revenue and ridership were closely correlated with a R^2 of more than 0.999 for each year."*

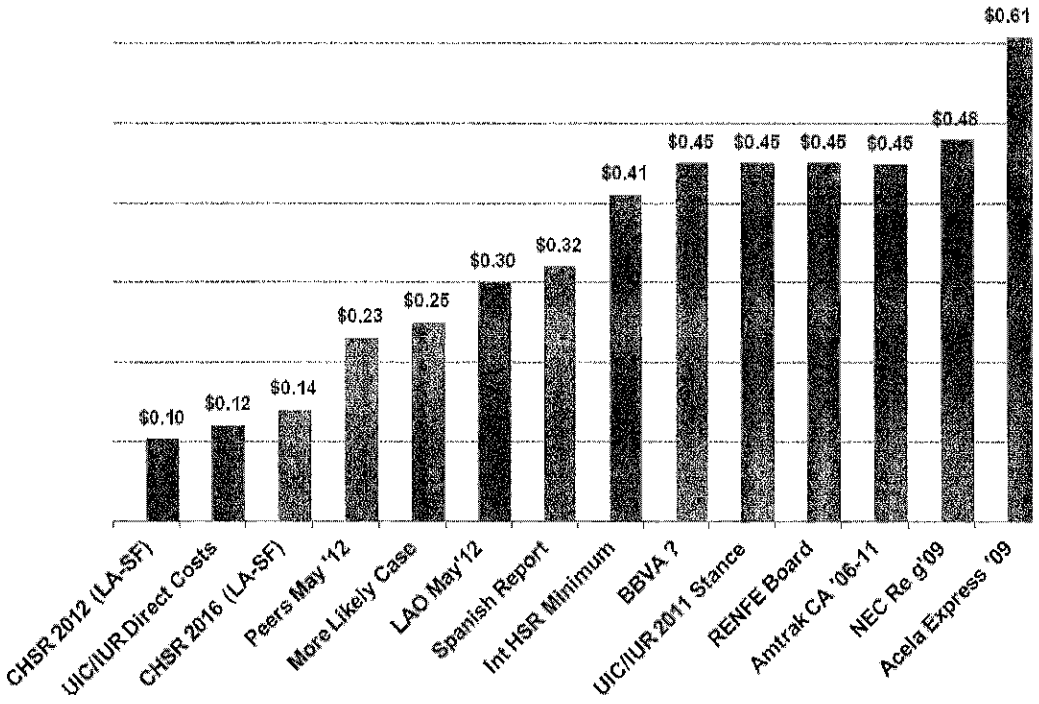
[23] Public Records requests concerning access to the actually used data and assumptions on ridership, revenues, O&M costs and profits, and the algorithms used for THE AUTHORITY's computations, have been met with responses that, for example, say: *"This is trade secret information pursuant to Evidence Code section 1060, incorporated into the California Public Records Act through Government Code section 6254(k) and, therefore, will not be provided."* See email to Mr. Robert Prantis from Ms. Anne Parker of the Public Records Act Staff of the CA High-Speed Rail Authority, December 27, 2013.

[24] See International Union of Railways; UIC PEER REVIEW OF OPERATING & MAINTENANCE COSTS OF THE CALIFORNIA HIGH-SPEED RAIL PROJECT, FINAL REPORT, JANUARY 2013. Page 7 [PDF 12] Finding #13 *"The electricity consumption for trains running at 220 mph (350 km/h) has to be increased by 10 to 30 percent (depending on the topography of the HSR line) in comparison with trains running at 186 mph (300 km/h)."* Operating & Maintenance Costs - UIC Peer Review, January 31, 2013, UIC (International Union of Railways) Found at: http://www.hsr.ca.gov/docs/about/ridership/ridership_PR_O_M_Costs_UIC_final.pdf

due to increased wear and tear on the fixed infrastructure and rolling stock.[25] UIC also told the Authority it should increase its maintenance estimate on the electricity-carrying overhead catenary system by 20%[26] and its track maintenance by at least 40%.[27]

Figure 2

Actual O&M Expenses PPM Vs. The Authority's O&M Forecasts



[25] See p.8 of International Union of Railways; UIC PEER REVIEW OF OPERATING & MAINTENANCE COSTS OF THE CALIFORNIA HIGH-SPEED RAIL PROJECT, FINAL REPORT, JANUARY 2013 Found at: http://www.hsr.ca.gov/docs/about/ridership/ridership_PR_O_M_Costs_UIC_final.pdf
"The experts also recommend making a significant cost provision for speeds up to 220 mph (350 km/h)) as preliminary findings show that the increase in equipment maintenance costs is above linearity when speed increases.

[26] International Union of Railways; UIC PEER REVIEW OF OPERATING & MAINTENANCE COSTS OF THE CALIFORNIA HIGH-SPEED RAIL PROJECT, FINAL REPORT, JANUARY 2013, Appendix 2-14 [PDF 30] *"The impact assessment of speed on catenary and overhead line is a simple forecast of friction consumption which is in direct proportion with speed level; the —theoricall [sic] increase of maintenance corrective actions should be at least 20% (based on extrapolation from available information)."* Found at: http://www.hsr.ca.gov/docs/about/ridership/ridership_PR_O_M_Costs_UIC_final.pdf

[27] International Union of Railways; UIC PEER REVIEW OF OPERATING & MAINTENANCE COSTS OF THE CALIFORNIA HIGH-SPEED RAIL PROJECT, FINAL REPORT, JANUARY 2013, Appendix 2-14 says *"theoricall [sic] increase of the maintenance activity on the geometry of the track should be at least 40% (based on extrapolation from available information)."* Found at: http://www.hsr.ca.gov/docs/about/ridership/ridership_PR_O_M_Costs_UIC_final.pdf

Second, like fares/mile, the Authority's O&M costs/mile is an 'outlier.' As Figure 2 shows, even European HSR systems with generally lower labor costs than the US,[28] operate at 45¢-48¢ per mile, while the profitable California HSR's surrogate, Acela Express, operates at over 60¢ per passenger mile.

Third, large swaths of O&M costs are omitted because the Authority split its accounting system into several parts, [29] like that required by European Union Directive 91/440.[30] UIC/IUR said in a 2011 policy statement that not all O&M costs in Europe arrive on the HSR train's operators' accounts.

> *"The **public authorities/society generally bear the costs** of investing in new infrastructure, constructing **and maintaining the infrastructure and related equipment such as safety, control-command and signalling**,* [sic] *etc."* [31] [Emphasis added]

Under Generally Agreed Accounting Practices (GAAP) rules, adopted by DOT for private rail operators in the United States, all revenues and O&M must be

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[28] See the 2009 Amtrak report, Amtrak, Office of Inspector General; EVALUATION REPORT E-09-01; Comparison of Amtrak Infrastructure Labor Costs to European Railroad Averages; March 24, 2009 pages 2-3 [PDF 5-6]. While the Authority's 2014 Plan shows numerous wage and benefit costs, in 2009 Amtrak Inspector General's report said, *"1) The average annual labor cost of an Amtrak infrastructure worker is more than twice (2.3) that of the average European railroad infrastructure worker. 2) Amtrak's Base Wages per Worker are 1.3 times that of the Average European Worker. 3) Amtrak's Extraordinary Wages per Worker are 3.5 times that of the Average European Worker. 4) Amtrak's Annual Benefit Costs per Worker are 4.25 times that of the Average European Worker."* Attached as Pet No 213, Amtrak Labor Cost and Efficiency Report E-09-01 March 2009.PDF. Also found at: https://www.amtrakoig.gov/report-records/audit-reports/comparison-amtrak-infrastructure-labor-costs-european-railroad-averages or http://www.amtrakoig.gov/sites/default/files/reports/LaborCostandEfficiencyReportE-09-01.pdf

[29] Page 37 [PDF 37] of the Authority's 2014 Plan says, *"The 2014 lifecycle cost model methodology is based on research and best practice established by a part of the European Union-funded research program called MAINLINE. The 2014 lifecycle model also draws from lifecycle guidance by the UIC and the European Investment Bank (EIB), based on their experience with developing and funding existing high-speed rail systems around the world."*

[30] For a detailed discussion of the differences in European railways accounting and the DOT requirements of GAAP, see To Repeat, The Authority's Train Will Need A Subsidy Forever, August 22, 2012, particularly pages 32-36. Found at: www.sites.google.com/site/hsrcaliffr

[31] See the official policy statement by the Union International des Chemins des Fer (UIC/IUR) on profitability included "social profitability" a concept unknown to US accounting practices: *". . , the profitability of high speed is not assessed by adding infrastructure costs to operational costs, line section by line section, but from the perspective of a high speed rail system serving both the passenger transportation market and society – the citizens – as a whole."* See pages 3-5 of UIC policy accompanying a letter to Mr. Roelof van Ark from Jean-Pierre Loubinoux, Director General of the UIC, Paris, dated 8 February 2011. Found at http://www.calhsr.com/wp- content/uploads/2010/02/IUR- Officials-Letter-to-THE AUTHORITY-CEO.pdf

in a single account.

As with Authority's uncompetitive fares to gain riders (and therefore revenue), its O&M costs should also be dismissed. No other conclusion is possible. The whole edifice of HSR in California depends on a document as reputable as the Donation of Constantine.

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SECTION 4 – THE AUTHORITY'S RIDERSHIP FORECASTS FLY IN THE FACE OF ITS FARES' LACK COMPETITIVENESS

ATTACHMENTS & FOOTNOTES

Attachments – There are 12 PDF files attached to this document. These files are included in a "Thumb Drive" that is appended to this Critique.

Footnotes – References to documents in the Administrative Record of Tos vs The Authority will show the Leading Bates Number of the document, or the specific Bates Number of the page being referenced. These appear as AG######.

SECTION 1

INTRODUCTION TO THIS CRITIQUE

The body of publically available information on the financial performance and competitive nature of the world's high-speed rail (HSR) systems has grown immensely since the California High-Speed Rail Authority's (Authority) predecessor's inception twenty years ago. But whether that comes from 'outsiders' or its own consultants, the Authority 'cherry picks' and promotes only that which supports its arguments to continue spending. It assumes that travelers will find reasons to take its HSR train when there are none, and uses modelers' outputs that depend on indefensible inputs.

1.1 The Authority Ignores Its 'External' Critics And 'Internal' Consultants' Findings – To its detriment in maintaining the public trust for the nation's largest public works program, the Authority has ignored years of 'outsiders' evidence-based critiques of its ridership, fares revenues and financial viability. The courts blocked use of Prop1A bond funds, yet the Authority ignores that fact.[32] California's Legislative Analyst's Office (LAO) questioned the capital shortcomings needed to build the project,[33] and questioned whether the project can meet the Legislature's demand to not require an operating subsidy.[34]

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[32] The 2016 Draft Business Plan still assumes the Authority has full access to $9.956Billion of Prop1A funds for construction. See p.59 [PDF 59] *"$9.95 billion in bond funds are available to pay for the planning and construction of the system, including regional services, which will connect to the system"*

[33] Review of High-Speed Rail Draft Business Plan, Legislative Analyst's Office, March 28, 2016, p. 7 [PDF 8] says, *"Current law does not appear to authorize the program's continuation beyond 2020. Thus, without legislative action, the cap-and-trade funds HSRA plans to use to build the IOS would likely not be available . . . Moreover, the plan estimates that the amount of funding that could be generated would fall significantly short of the level needed to complete Phase I and does not identify how this shortfall would be met."* Found at: http://www.lao.ca.gov/Publications/Detail/3394

[34] *". . it is unclear whether the system will actually generate an operating surplus."* See p. 7 [PDF 8] of Review of High-Speed Rail Draft Business Plan, Legislative Analyst's Office, March 28, 2016, found at http://www.lao.ca.gov/Publications/Detail/3394

Perhaps even more egregious, the Authority ignored and attempted to squelch its own consultants evidence-based findings on: A) the private sector's reluctance to put funds at risk for the project; B) that Operations and Maintenance costs were underestimated; C) construction costs in the Central Valley and the Tehachapi/San Gabriel mountains need to be seriously increased; and D) that the percent of Californians interested in being HSR riders' had declined. Chronologically, these are:

A) In a June 2008 presentation the Authority's consultants, the Infrastructure Management Group (IMG), reported that private firms were reluctant to take risks based on the Authority's then-ridership forecasts;

> ". . *respondents argued that interest in equity investment would increase if the risk to the concessionaire were decreased, perhaps through some form of revenue guarantee . .*" [35]

In September 2009 IMG and Goldman Sachs, a company that has raised over $100Billion[36] for an at-risk investment, told the Authority,

> "*Private appetite for ridership risk is limited without revenue guarantee or until ridership proven.*" [37]

The Authority has known for nearly eight years that its assumption of private, at-risk investment in its HSR project was a fantasy.

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[35] 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* "

[36] In 2000, Goldman Sachs – an advisor to the Authority in 2009 – led Vodafone's $183 billion purchase of Mannesmann. Vodafone AirTouch took control of Mannesman in February 2000. The £112bn ($183bn) all-share deal is still the largest corporate merger in history. See: http://news.bbc.co.uk/2/hi/business/630293.stm

[37] See p. 9 [PDF 9] of California High-Speed Rail Authority, Board Financing Workshop, September 2, 2009.

B) In May 2012, the Authority commissioned the Union International des Chemins des Fer (UIC/IUR) to comment on their O&M costs.[38] Among UIC's 19 findings:

> *"The electricity consumption for trains running at 220 mph (350 km/h) has to be increased by 10 to 30 percent (depending on the topography of the HSR line) in comparison with trains running at 186 mph (300 km/h)."* [39]
>
> *"The impact assessment of speed on catenary and overhead line is a simple forecast of friction . . . increase of maintenance corrective actions should be at least 20% . . ."* [40]
>
> *The "theorical"* [sic] *increase of the maintenance activity on the geometry of the track should be at least 40%"* [41]

The impact on either the 2014 or 2016 O&M costs forecasts is unknown, as the public is not allowed access to trade secret-protected information. The commissioned O&M cost review by UIC should have told the Authority their O&M estimates were far "off-base" and should be revised upwards. Instead O&M (Medium) for 2025 the Initial Operating Segment (IOS) decreased 40% from the 2014 Plan – $358 to $220Million.[42]

C) In October 2013, the Authority's lead consultants gave its Board a presentation updating the cost estimates for the then-forthcoming 2014

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[38] See p. 1, [PDF 4] of the UIC, International Union of Railways, UIC Peer Review of Operating & Maintenance Costs Of The California High-Speed Rail Project, Final Report, January 2013.
[39] Finding #14, p. 8 [PDF 14] See: UIC, International Union of Railways, UIC Peer Review of Operating & Maintenance Costs Of The California High-Speed Rail Project, Final Report, January 2013.
[40] See Appendix 2-14 [PDF 30] of UIC, International Union of Railways, UIC Peer Review of Operating & Maintenance Costs Of The California High-Speed Rail Project, Final Report, January 2013.
[41] See Appendix 2-14 [PDF 30] of UIC, International Union of Railways, UIC Peer Review of Operating & Maintenance Costs Of The California High-Speed Rail Project, Final Report, January 2013.
[42] The 2014 Plan said year 2040's O&M was $872Million, an increase of less than 1% in the 2016 Plan when comparing the 2014 Medium Forecast with the VtoV forecast, which is correct because in 2014 there was no stated intention to improve the SF Peninsula Corridor, a project now contemplated by Caltrain and the Authority. For the 2014 O&M costs, see: California High-Speed Rail Authority, Draft 2014 Business Plan, Exhibit 5.1, p. 49 [PDF 49] and Exhibit 7.1, p. 75 [PDF 75] of the California High-Speed Rail Authority, Draft 2016 Business Plan.

Business Plan.[43] Among other construction cost increases the consultants raised were:

> Cost escalation *"Accounts for $370-$410 million increase to Phase 1 costs in 2012 dollars."* [44]
>
> A *"$2,050 million increase"* between Fresno and Bakersfield, a *"$2,290 - $2,950 million increase"* between Bakersfield and Palmdale and between Palmdale and Los Angeles, a *"$90 - $845 million increase."* [45]

These quotations equate to at least $2.75Billion, and up to $9Billiondf of uncounted costs, a 4% to 13% increase in Phase 1 (SFTBT-LA Union/Anaheim) construction costs. Only by the efforts of a Los Angeles Times' reporter were the cost escalations brought to light in October 2015. Until then, the Authority's consultant's report had been hidden from public scrutiny for two years. Despite these professionals' calculations, the 2016 Plan claims the Year of Expenditure capital costs – including rolling stock, terminals, signaling and electrification – had decreased by $4Billion.[46] How can that be?

D) In 2014 the Authority's commissioned the 2013/2014 Revealed Preference/Stated Preference (RP/SP) surveys that brought them bad tidings about ridership, which *inter alia* were:

1. HSR's potential market share dropped from 58% to 41%between the 2005 and 2013/2014 RP/SP surveys.[47]

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[43] 2014 Business Plan Capital Cost Estimate Update, October 3rd 2013. Found by scrolling down the PDF file's letter from Chair Dan Richard on the URL http://www.hsr.ca.gov/docs/newsroom/Speaker_Atkins_Response_to_Request_for_Subpoena_110315.pdf This is also found in the Tos, Fukuda court record as AG031773

[44] See [PDF 18] of 2014 Business Plan Capital Cost Estimate Update, October 3rd 2013. Found by scrolling down the PDF file's letter from Chair Dan Richard on the URL http://www.hsr.ca.gov/docs/newsroom/Speaker_Atkins_Response_to_Request_for_Subpoena_110315.pdf. This is also found in the Tos, Fukuda court record as AG031773

[45] See [PDF 23-25] of See [PDF 18] of 2014 Business Plan Capital Cost Estimate Update, October 3rd 2013. Found by scrolling down the PDF file's letter from Chair Dan Richard on the URL http://www.hsr.ca.gov/docs/newsroom/Speaker_Atkins_Response_to_Request_for_Subpoena_110315.pdf This is also found in the Tos, Fukuda court record as AG031773

[46] See Draft 2016 Business Plan, Exhibit 5.3, p. 56 [PDF 56]

[47] Document# AG015260, see AG015269 – pg.12 [PDF 10]; Cambridge Systematics, California High Speed Rail Ridership and Revenue Forecasting, Survey Data and Inputs to Version 2/Version 3 Preliminary Choice Patterns and Traders/Non-traders; Prepared for California High Speed Rail Authority and Ridership Technical Advisory Panel, March 20, 2014.

2. The future use of autos was fourteen points (46%-60%) higher than 2005's equivalent survey.[48]

3. Drivers inclined to stay with their cars increased between the RP/SP surveys from 52% to 77%.[49]

4. Depending on the reasons for travel, 91%-99% of Californians[50] will continue to travel by auto.[51]

These client-friendly surveys were telling the HSR project's leadership that ridership should dwindle in their Draft 2016 Business Plan. Instead, ridership increased by 12-23% since the 2014 Plan.[52] IOS ridership estimates went from 11.4 to 12.8Million and Phase 1 (2040) ridership went from 34.7 to 42.8Million.[53]

Long ago, but certainly by 2013, the Authority should have listened to both 'outside' and 'inside' fact-based critiques and adjusted to the realities they presented. They have ignored criticism and that strategy has 'come home to roost' as reflected by public opinion polls. For example, the Public Policy Institute of California (PPIC) reflected in March 2016 that while its three prior annual surveys documenting public support for HSR found that 52% of California's voters favored building the project,

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[48] Document# AG015260, see AG015270 - Table 1.1 of Cambridge Systematics, California High Speed Rail Ridership and Revenue Forecasting, Survey Data and Inputs to Version 2/Version 3 Preliminary Choice Patterns and Traders/Non-traders; Prepared for California High Speed Rail Authority and Ridership Technical Advisory Panel, March 20, 2014. This document contrasts findings of the 2013/2014 RP/SP versus the 2005 survey.

[49] Document# AG015260, see 015272 - Table 1.3, Ridership and Revenue Forecasting - Survey Data and Inputs to Version 2 / Version 3, Preliminary Choice Patterns and Traders/Non-traders", Cambridge Systematics, March 20, 2014

[50] Document# AG015004, see AG015019, AG015020, AG015021 - See pages 16, 17 18 [PDF 16-18] of the California High Speed Rail Version 2 Ridership and Revenue Model; Calibration and Validation Briefing Book, Cambridge Systematics, January 1th, 2014.

[51] Document# AG015004, see AG015019, AG015020, AG015021 - See pages 16, 17 18 [PDF 16-18] of the California High Speed Rail Version 2 Ridership and Revenue Model; Calibration and Validation Briefing Book, Cambridge Systematics, January 1th, 2014.

[52] For the 2014 O&M costs, see: California High-Speed Rail Authority, Draft 2014 Business Plan, Exhibit 5.1, p. 49 [PDF 49] and Exhibit 7.1, p. 75 [PDF 75] of the California High-Speed Rail Authority, Draft 2016 Business Plan

[53] For the 2014 O&M costs, see: California High-Speed Rail Authority, Draft 2014 Business Plan, Exhibit 5.1, p. 49 [PDF 49] and Exhibit 7.1, p. 75 [PDF 75] of the California High-Speed Rail Authority, Draft 2016 Business Plan

"Today, 44 percent of likely voters favor the project." [54]

The Authority has no one to blame but itself for diminishing the public trust in the HSR project. If the general public knew more about the Authority's consistent efforts to mislead, support would further decline.

1.2 The Authority's Assertions Don't Reflect Either Real World Travelers' Thinking Or The Real World Costs Of Operating A High-Speed Rail System – While each of the last three Plans have increased the use of sophisticated ridership/revenue and O&M modeling and forecasting techniques, and calibrated the results to seem defendable, the Authority seems to not have asked itself two fundamental questions based on comparing the results of their assertions with empirical evidence.

1) Are travelers rational when they compare the costs and convenience of auto, HSR and air travel and choose a mode or modes?

> **Assumption Used In This Paper –** Travelers will trade-off the costs of travel in one mode versus the convenience of significantly faster door-to-door travel time and/or the convenience of not having to change to another travel mode as AB3034 demands.[55] Data on the stagnation of airline passenger growth is testimony to the high priority travelers give to costs versus the time saving convenience of air travel between the two major metropolitan centers.

2) Do the results of the California system's O&M costs reflect all the elements of operating and maintaining the entire system under the accounting system rules required of US private transportation operators?

> **Assumption Used In This Paper –** This has been the hidden element of the profitability equation. No "outsider" has access to the line items the Authority uses to assert profitability. But there is some publically

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[54] See Public Policy Institute of California (PPIC) March 2016, p. 20 [PDF 20] http://ppic.org/content/pubs/survey/S_316MBS.pdf

[55] 2704.09 (f) of AB3034 says, *"For each corridor described in subdivision (b), passengers shall have the capability of traveling from any station on that corridor to any other station on that corridor without being required to change trains."* For practical purposes this means an HSR traveler would not have to change to auto, bus, air or conventional rail (CVR) in a door-to-door trip within a given corridor.

available data that says not only are many Operations & Maintenance (O&M) items missing from the Authority's equations, but the formulae they use is not acceptable for commercial operations in the US.

The foundation of this document's analyses is that travelers are rational, particularly when using their pocketbooks in a society with multiple ways and costs of traveling between the state's two metropolitan centers, and that Acela Express is the California HSR system's most proximate surrogate. Because the Authority's ridership/revenue forecasts IOS have no grounding in rational 'travel consumer' behavior, the results are divorced from that thinking as the following analyses on fares, then ridership will show.

1.3 Getting To Profitable – Though there are many noble goals for the California high-speed rail (HSR) project, first and foremost AB3034 requires the HSR system to not require an operating subsidy. [56] In short, the project is first and foremost a commercial project and must adhere to the same US accounting rules as any commercial operation.

Revenues (= Fares x Ridership), when greater than (>) Total[57] Operations and Maintenance (O&M) Costs equates to Positive Operational Cash Flow (Profitability).[58] The result of the three variable equation governs whether the to-be privately operated[59] and maintained[60] California high-speed rail (HSR) system meets AB3034's demand that the Initial Operating Segment (IOS) and beyond be financially viable. The Authority's statement that each of the

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[56] See: AB3034, 2704.08 (J) *"The planned passenger service by the Authority in the corridor or usable segment thereof will not require a local, state, or federal operating subsidy."*
[57] The word 'Total' is used here because the US DOT, uses Generally Agreed Accounting Principles (GAAP) guidance, and requires all revenues and costs be in a single account.
[58] See: To Repeat - The Authority's Train Will Need A Subsidy Forever, August 22nd 2012. Found at: www.sites.google.com/site/hsrcaliffr Page. 35 [PDF 35] refers to France's and EU's rail accounting under Directive 91/440 that separates fixed infrastructure O&M accounts from rolling stock O&M accounts, as well as attributing at least part of health, pension and other benefits' costs to non-rail accounts. See: Réseau Ferré de France (RFF) History at http://www.fundinguniverse.com/company- histories/Reacute;seau-Ferreacute;-de-France-company-History.html
[59] Table ES-3 [PDF 21] in the 2012 Plan and see Exhibit 1.1 [PDF 16] in the 2014 Plan show that, starting with the IOS, the system is privately operated.
[60] The 2014 Plan, page 30, [PDF 30] says, *"The Authority will also rely on the private sector for the delivery and maintenance of the remaining elements of the infrastructure (i.e., track, systems, and power)."* See: UN Business Plan page 30 [PDF 30].

three IOS forecasts is profitable is supposed to be taken *prima facie*.[61]

"Outsiders" have been denied access to the data, assumptions and calculations[62] to verify or refute the Authority's claims on ridership/revenue claims. They've also cannot inspect the Authority's O&M costs to asses whether they are done on the basis of the US Department of Transport's (DOT) required per passenger mile metric[63] (PPM), and conform to US Generally Accepted Accounting Principals (GAAP) that would support or disprove financial viability during IOS.

Based on publically available documents, this paper shows the arbitrariness and/or lack of reasonableness of each of the profitability formula's variables, as well as other data and analyses that refute financial viability claims during IOS. It concludes that the Authority's IOS is not financially viable and will require government(s) to subsidize the IOS' operations.

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[61] *"On its own, the IOS is a viable, profitable high-speed rail system."* See: California High-Speed Rail Program, Revised 2012 Business Plan; April 2012; pg. 2-15 [PDF 59].

[62] Public Records requests concerning access to the actually used data and assumptions on ridership, revenues, O&M costs and profits, and the algorithms used for its computation, have been met with responses that say: *"This is trade secret information pursuant to Evidence Code section 1060, incorporated into the California Public Records Act through Government Code section 6254(k) and, therefore, will not be provided."* See: email to Mr. Robert Prantis from Ms. Anne Parker of the Public Records Act Staff of the CA High-Speed Rail Authority, December 27,2013

[63] Appendix 16 [PDF 145-146] of the To Repeat report presents two documents showing the requirement and utility of the PPM metric versus per seat mile [PSM] to calculate financial performance. See: http://www.bts.gov/publications/federal_subsidies_to_passenger_transportation/ and the Congressional Research Service's 2009 report that says, *"Comparing costs on a per-mile basis is not as useful as comparing costs on a per passenger- mile basis, which is the cost of moving one passenger one mile."* Found at: www.fas.org/sgp/crs/misc/R40973.pdf

SECTION 2

THE STATUS OF AVAILABLE CAPITAL FUNDS, THE LACK OF PROGRESS AND AUTHORITY'S VACILATING COMMITMENT TO AB3034

While the Authority claims it has all the funds needed to build the IOS North (VtoV Est.) it doesn't and its terms and conditions for desperately needed private investment guarantee there will be none.

2.1 Getting Past The Headlines Is The Key To Understanding What The Authority Can Actually Build – A viable project is first a constructed project. But its plans fall short of what the law[64] and private investors require. First, the Authority's assumptions on certified sources of funding are misleading, exhibited by headline on the shift northward.

> *"The funding authorized by the Governor and Legislature, by the federal government and the people of California is sufficient to deliver a high-speed rail line connecting the Silicon Valley to the Central Valley"* [65]

> *"First, initiate high-speed rail passenger service as soon as possible."* [66]

But the 2012 and 2014 Plans promised to initiate IOS South high-speed rail service starting in 2022; not 2025 as the Draft 2016 Plan now promises. The next cloak over the truth is the headline:

> *"In July 2014, the California 3rd District Court of Appeal ruled in the Authority's favor in two lawsuits relating to our ability to access*

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[64] For example, since 2008, the Authority hasn't addressed the legal requirement to report on the costs of building each corridor, as SEC. 2. Section 185035 was added to the Public Utilities Code, to read: *"(a) The Authority shall* ***establish an independent peer review group for the purpose of reviewing*** *the planning, engineering, financing, and other elements of the Authority's plans and issuing an analysis of appropriateness and accuracy of the authority's assumptions and an analysis* ***of the viability of the Authority's financing plan, including the funding plan for each corridor*** *required pursuant to subdivision (b) of Section 2704.08 of the Streets and Highways Code."* [Emphasis added]

[65] Connecting and Transforming California, the California High-Speed Rail Authority's Draft 2016 Business Plan p. 9 [PDF 9]

[66] Connecting and Transforming California, the California High-Speed Rail Authority's Draft 2016 Business Plan p. 9 [PDF 9]

Proposition 1A bond funds.[67]*"*

That statement should end in " . . *but ruled in favor of the Plaintiffs on both the Authority's lack of certified funds and incomplete certified environmental clearance to complete an initial operating segment and therefore the Authority has no access to Prop1A bond funds for construction."* The next headline hiding the truth is:

> *"As previously noted, with the passage of Senate Bill 862, the Legislature and Governor approved an annual appropriation of 25% of the annual Cap and Trade proceeds on a continuous basis to fund high-speed rail."*[68]

That should continue with, " *at best continuing until five years before IOS North is to be operational (2020)."* The Authority knows there is no certainty Cap & Trade funds will be available, rulings on two lawsuits are pending and there is no certainty the Legislature will extend SB862 past 2020.

Then to get from Bakersfield to San Francisco with HSR, but continuing slowly northward from San Jose to SFTBT – and somehow get a 50% jump in ridership and revenue – the Authority says,

> *"An additional $2.1 billion investment in that corridor will provide not just blended service, but allow for one additional track and, in some segments, two additional tracks in the existing corridor."* [69]

But that contradicts the prior page's general statement on sufficient funds.

2.1.1 Show Me Real Money, Not Phantom Funds – In its 2016 Draft Plan, the Authority says,

> *"Given the opportunity to leverage more ridership, revenue and private sector participation, we will seek federal funds to help complete the full San Francisco to Bakersfield line. If those additional funds are not forthcoming, we can and will still construct the Silicon Valley to Central*

[67] Connecting and Transforming California, the California High-Speed Rail Authority's Draft 2016 Business Plan p. 28 [PDF 28]
[68] Connecting and Transforming California, the California High-Speed Rail Authority's Draft 2016 Business Plan [PDF 10]
[69] Connecting and Transforming California, the California High-Speed Rail Authority's Draft 2016 Business Plan [PDF 11]

Valley line described above." [70]

That convoluted statement and the *"An additional $2.1 billion investment . ."* declaration mask that the Authority has no source of committed funds to build the VtoV Extension in 2016 or in 2025, but rather has lowered the future and yet invisible Phase 1 costs 8% to get a 'phantom' $2.1Billion. Later in the 2016 Plan, the Authority claims for itself the full complement of funds, but only one part of which is actually available. *Inter alia* these are:[71]

- **SUPPOSEDLY APPROPRIATED –** $2.6Billion of Prop1A funds – all of which was blocked by court rulings from 2013. Until a second funding plan clears the state's courts, there is no access.
    - **Federal ARRA/FY 10 Grants and Planning Funds –** The Authority has access to these monies, with the proviso that the State match whatever the federal government provides.
    -
- **SUPPOSEDLY COMMITTED** – $4.2Billion of State Prop1A Bond funds – all of which was blocked by court rulings from 2013
    - **Cap & Trade Funds (through 2024)** – $5.3Billion – but SB826 only commits a percentage of Cap & Trade funds (25%) not a fixed amount and then only through 2020
    - **Long Term Cap & Trade Funds (through 2025-2050)** – $5.2Billion – but SB826 only commits only 25% of Cap & Trade funds, not a fixed amount and then only through 2020

The Authority assumed it has nearly $21billion. In reality it lacks about $17Billion to build VtoV Extension, and SB1029 constrained those available federal funds to the Madera-Bakersfield section. [72] In short, the Authority can only claim to have about 15% of the $21Billion needed to build VtoV Ext.

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[70] Connecting and Transforming California, the California High-Speed Rail Authority's Draft 2016 Business Plan, p. 12 [PDF 12]

[71] See Exhibit 6.2, p. 61 [PDF 61] of Draft 2016 Business Plan: Connecting and Transforming California, Section 6: Funding and Financing.

[72] Even the appropriated portion available is encumbered by SB1029 language restricting it to only the Initial Operating System as defined in the 2012 Business Plan, not the IOS of the 2016 Business Plan. SB1029 speaks specifically of the 2012 Business Plan as its reference document. SB1029, Appropriations for Initial Construction Segment (Items 2665-306-0890 and 2665-304-6043) says; *"This bill appropriates to the Authority $3.24 billion from the Federal Trust Fund and $2.61 billion from the High Speed Passenger Train Bond Fund for the construction and acquisition of a portion of the initial operating segment.* ***This initial construction segment constitutes the segment running for 130 miles between Madera and Bakersfield."*** [Emphasis added]

2.2 The Authority's Funds Are NOT Able To Build An Operating Railroad For the Initial Operating Segment (IOS), Only A Dirt Mound – Since its inception, the high-speed rail project has badly needed and sought private capital investment. In June 2008 the Authority's search for private interest concluded with;

> *". . respondents argued that interest in equity investment would increase if the risk to the concessionaire were decreased, perhaps through some form of revenue guarantee* [prohibited under AB3034] . ." [73]

In September 2009 IMG and Goldman Sachs,[74] repeated the story,

> *"Private appetite for ridership risk is limited without revenue guarantee or until ridership proven."* [75]

Until 2014, the Authority's plan was to build IOS; test the project's financial viability by running the system, then sell a concession to a private operator or investor. Then, instead of The Authority alone financing the fixed infrastructure and rolling stock for IOS, the Authority admits it needs private at-risk capital **BEFORE** the IOS is competed. Specifically:

> *"The Authority will also rely on the private sector for the delivery and maintenance of the remaining elements of the infrastructure (i.e., track, systems, and power)."* [76]

The 2014 and 2016 plans contained another 'bombshell' for private investors.

> *"While the Authority will rely heavily* ***on the private sector to bring*** *innovation and* ***investment*** *into the project,* ***the state will*** *maintain its lead organizational role,* ***retaining ownership and governance functions."*** [77] [Emphasis added]

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[73] 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* "

[74] Raising $100Billion for a creditworthy project is no problem for Goldman Sachs. It led Vodafone's $183 billion purchase of Mannesmann. Vodafone AirTouch took control of Mannesman in February 2000. The £112bn ($183bn) all-share deal is still the largest corporate merger in history. See: http://news.bbc.co.uk/2/hi/business/630293.stm

[75] See p. 9 [PDF 9] of California High-Speed Rail Authority, Board Financing Workshop of September 2, 2009.

[76] See: Connecting California, 2014 Business Plan, April 30, 2014page 30 [PDF 30]

[77] See: Connecting California, 2014 Business Plan, April 30, 2014, pg. 31 [PDF 31]

The specific high-speed rail components that will be delivered under a potential **[Design, Build, Finance and Maintain]** ***DBFM*** *or other contract are described in detail below.* [78] [Emphasis added]

No wonder that not one of the 36 private companies' responses in 2015's request for expressions of interest brought any form of capital commitment. Does the Authority not understand that the *sine qua non* of private investment is clear ownership and control over assets? With such onerous terms and conditions for a contract with private companies, the Authority will not receive private finance.

Without private investment the Authority's budget is only for a dirt mound from somewhere north of Bakersfield towards San Jose. That's not what the voters or Legislators were led to believe in 2008.

2.3 Three Years After Awarding The First Construction Contract, The Truth Is Not Much Of Anything Has Been Built Or Will Be Built – The Authority's Draft 2016 Plan headlined its progress, saying

"Starting with our official groundbreaking in January 2015, there are now have more than 100 miles of construction-related activities underway with almost $3 billion in contracts that came in lower than our estimates." [79]

While ". . *100 miles of construction-related activities underway . .* " is technically correct, by saying, " . .*we have acquired about 650 land parcels, and a have a few, scattered construction projects underway."* would have been much closer to the truth.

Digging into the Draft 2016 Plan reveals the Authority has serious problems executing the first 29miles of construction, called Construction Package 1

[78] See pp. 8-12 [PDFs 16-18] of the Request for Expressions of Interest for the Delivery of an Initial Operating Segment, RFEI HSR#15-02, Release date June 22, 2015. Found at: http://www.hsr.ca.gov/docs/about/doing_business/HSR15_02_RFEI.pdf

[79] See Section 1, p. 19 [PDF 19] of Connecting and Transforming California, Draft 2016 Business Plan, February 18, 2016.

(CP1) that was awarded in the spring of 2013. Among these are:

> In the nearly three years the Authority has tried to acquire land for CP1, only 44% has been acquired (642/1458 parcels) [80]

> The Authority touted that "*On average, Construction Package 1 and Construction Package 2-3 bids came in approximately 30% below engineer's estimates.*" It's too soon to know the history of CP 2-3 or CP4, but the Board abrogated both PUC and its own rules[81] to award to Tutor Perini (TPC), [82] the least financially[83] and technically[84] qualified of the five bidders, the CP1 contract. The Board should have expected such problems as they now have.

In rare admissions of problems, the Authority first admits CP1 costs are over the "*30% below engineer's estimates.*" and behind schedule,

> *"Although the first construction packages came in under engineers' estimates, they also faced a number of problems in execution and delivery . . . . Execution delays associated with Construction Package 1 may impact the expected cost and schedule for completing the package."* [85]

Then the Authority admits that all is not settled with either the railroads or

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[80] See p. 20 [PDF 20] of Connecting and Transforming California, Draft 2016 Business Plan, February 18, 2016.

[81] See: Board Policies and Procedures, adopted, November 2011. As of June 2013, the most recent (February 2013) Policies and Procedures are found at <http://www.calhsr.com/wp-content/uploads/2009/05/Policies-and-Procedures-as-of-Feb-2012.pdf> and the now more-than-a-decade old Conflict of Interest Code is at: <http://www.calhsr.com/wp-content/uploads/2009/05/Conflict-of-Interest-Code.pdf

[82] On April 12th 2013, the Authority announced that Tutor Perini/Zachry/Parsons (TPC) was the wining consortium. The Authority's announcement at: http://www.cahighspeedrail.ca.gov/assets/0/134/7fd71c2f-cf92-45b8-aee6-7a4ce052f2c6.pdf also find, "Bullet Train Agency Gives $985-Million Contract to Tutor Perini" Los Angeles Times, Ralph Vartabedian, June 7, 2013 CA: as appeared in Mass Transit magazine, June 7th 2013. See: http://www.masstransitmag.com/news/10956798/tutor-perini-to-begin-construction-of-californias-bullet-train-system

[83] TPC's earnings report of August 6th 2012 said, " . . *the Company obtained a waiver of compliance with the covenants of the credit agreement for the period ended June 30, 2012 as the Company would otherwise have been out of compliance with certain ratios due to the impairment charge, current debt levels, and lower than expected income from operations."* This was done, " . . *to allow for more favorable ratios for the Company."* Changing the way accounting rules apply for credit analysis suggests TPC's prior set of accounting rules would not show the company in good standing

[84] The highest technical rating went to California Backbone Builders with a score of 27.6; the next highest to Dragados/Samsung/Pulice with 26.13; the third to California High-Speed Ventures with 21.41 and the fourth to California High-Speed Rail Partners with 20.70. The highest score was a third higher than TP's. The second highest was more than a quarter higher than TP's.

[85] See p. 21 [PDF 21] of Connecting and Transforming California, Draft 2016 Business Plan, February 18, 2016.

the government agencies contracted to move utilities.

> *"Negotiations for third party agreements (railroads, utilities and others) were more difficult than anticipated."* [86]

No timeframe is given for when these agreements will be reached, or when the agencies will complete the work that will allow the Construction Package contractors to complete their work.

But then comes another headline, which in view of the Authority's internal problems with CP1, it's glacial acquisition of properties, and its problems with utilities, freight railroads and government agencies, makes it almost risible.

> *"We are on schedule with respect to the Construction Package 2-3 and Construction Package 4 contracts."* [87]

This headline on CP2-3 and CP4 ignores that nothing has been built in these two Construction Packages therefore few if any problems have emerged.

2.4 Time Is Not On The Authority's Side – The DOT/FRA Agreement says the Authority will start ICS *". . construction by the end of 2012, with construction completed by the end of September 2017."* [88] That Agreement also says; *"The Phase1 of this work is estimated to take 6 years to complete."* [89] Construction did not start two and a half years ago and the time to complete what was Phase 1 in 2011 has slipped from 2033[90] to an undesignated date for its equal, the Full Phase 1 Build Out.

The total length of CP2-3 and CP4 is more than three times the maximum 29miles of CP1. Making the very generous assumption that the Authority can

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[86] See p. 21 [PDF 21] of Connecting and Transforming California, Draft 2016 Business Plan, February 18, 2016.
[87] See p. 21 [PDF 21] of Connecting and Transforming California, Draft 2016 Business Plan, February 18, 2016.
[88] See the Grant/Cooperative Agreement; FR-HSR-0009-10-01-05; Amendment No. 5, dated 12/05/2012. Found at: http://www.hsr.ca.gov/docs/about/funding_finance/funding_agreements/FR-HSR-0009-10-01-05.pdf, pages 56-57 [PDF 58-59] or the Project Schedule table on page 88 [PDF 90]
[89] See page 60 [PDF 62] of Exhibit 1 to the Cooperative Agreement FR-HSR-0009-10-01-00, dated December 5, 2012.
[90] Before admitting that the intent of the Legislature to have Phase 1 operational by 2020, *"extending the date for completion of Phase 1 from 2020 to 2033"* the Authority then admitted that *"Phase 1 operating sections: the system will be completed by 2033"* See p. ES-8, [PDF 14] of the Californian High-Speed Rail Program, Draft 2012 Business Plan, November 1, 2011

acquire the remaining 816 parcels needed to build CP1, and that all parcels for CP2-3 and CP4 (± 5,000 parcels) can be acquired in the same three years as the remaining 56% of CP1, it will take at least three more years before the Authority has enough right-of-way to build where the Authority is already under legal contract to build.

That would be spring of 2019 about two years after contractors' invoices must be submitted in order for the Authority to claim those costs from federal funds.[91] But the ARRA grants stipulate that unspent funds must be returned to Congress by the close of the federal fiscal year FY'17 - about eighteen months hence. While the Authority has an unspent FY10 grant it can spend after the close of FY'17, it's likely that will be required for land acquisition, infrastructure relocation and dirt mound construction cost overruns, perhaps before the beginning of federal FY18. Time constraints on federal monies should not have encouraged the Authority to either continue assuming it has more time to complete C1 through CP4.

2.5 Nor Are Whole And Realistic Costs On The Authority's Side – The Authority holds that the costs of building CP1, CP2-3 and CP4 is $2.56Billion before overruns or change orders.[92] In 2013, the costs of moving infrastructure for CP1 were estimated to be about 1.4 times the costs of building only the substrate.[93] If the costs for CP2-3 and CP4 are only half the sections' construction cost, then moving infrastructure on CP2-3 and CP4's

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[91] See: 31 U.S.C. § 1552 (Grant/Cooperative Agreement, Amendment No. 5, Section 8, page 18 [PDF 20] says, *"FRA shall process all such materials, and complete final closeout and reimbursement by September 30, 2017, provided that FRA receives such materials from the Authority and determines those materials are consistent with the requirements above by July 31, 2017."* Page 57 [PDF 59] says; *"As described in Section 8 of Attachment 1B, the Authority must submit for reimbursement all expenses within the time specified in that Section 8 for FRA to make appropriate payments no later than September 30, 2017."* For all practical purposes the FRA must have the Authority's submissions by the end of July 2017, and the Authority must have them from contractors earlier. This assumes that the state's auditors can certify all invoices within three months; then federal auditors can do the same before making a payment to the state that will pay those contractors.

[92] See Exhibit 1.3, p. 21 [PDF 21] of Connecting and Transforming California, Draft 2016 Business Plan, February 18, 2016

[93] Column B of Figure 1 of Diminishing Prospects For the Authority's Initial Construction Section shows Californians Advocating Responsible Rail Design's (CARRD) findings on CP1. These are based on data from Public Works Agreements the Authority has with governments and utilities, plus the TPC-led consortium's contract. See: Figure 1 of Diminishing Prospects For the Authority's Initial Construction Section. Found at www.sites.google.com/site/hsrcaliffr

lengths will cost at least as much as those bids, or $1.25Billion.

Assuming the CP 2-3 and CP4 contracts do not run into financial difficulties due to oil wells and soil subsidence north of Bakersfield, and there are no overruns for property acquisition, infrastructure relocation and/or rebuilding and construction, the dirt mound and moved infrastructure for CP1, CP2-3 and CP4 together will cost around $4Billion. That exceeds the total Federal ARRA and FY10 funds.

Since, according to the DOT/FRA contract,[94] only FY10 funds can be spent north of Fresno, and ARRA grants are solely for work south of central Fresno,[95] that leaves the Authority in a legally difficult position if CP1 continues to overrun its estimates, as it has. The California High-Speed Rail Authority's 'window' to build and use available federal funds legally closes before its 'pivot to the north' to San Jose even starts construction.

2.6 Consequently, The Authority's Commitment To AB3034 Has Become Tentative And Tied To The Availability of Private Financing – Five years ago, the Authority stipulated to each operating segment being profitable and able to attract private capital. Its Draft 2012 Plan said,

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[94] The Authority's only practical remedy is to use the ARRA obligated grants and matching Prop1A bonds for the Madera to Fresno section. The DOT/FRA has previously shown itself very pliable to amending its contractual and financial terms to help the Authority, particularly by abrogating its 2011 policy directive that altered the timing of spending Federal grant dollars from each dollar being a 1:1 match to being those 'first spent.' The May 25th 2011 ruling requiring a 1:1 match of Federal and State monies for the HSR project was made by then-Undersecretary Roy Kienitz in a letter to then-CEO Roelof van Ark. John D. Porcari, Deputy Secretary of the Department of Transportation, reinforced tis position in January 3rd 2012 a letter. The pliant behavior of the FRA is also exemplified by agreeing that the theretofore-assumed start date of September 2012 could slip to mid-2013, which was forced upon the FRA as the original date passed. For the section in the Amended Agreement where the FRA lets federal dollars be spent first: see: AGREEMENT NUMBER: FR-HSR-0037-11-01-00, Attachment 1, page 93, which says, *"The Parties acknowledge their mutual benefit in efficiently spending the Federal and state funds to complete the Project and that there is an opportunity for substantial cost saving in Task 8 if the Grantee is allowed to accelerate the expenditure of ARRA funds."* No attempt to document *"substantial cost saving"* was found in the Amended Agreement.

[95] These funds, terms and conditions are part of the Grant/Cooperative Agreement; FR-HSR-0009-10-01-05; Amendment No. 5, dated 12/05/2012. Found at: http://www.hsr.ca.gov/docs/about/funding_finance/funding_agreements/FR-HSR-0009-10-01-05.pdf

"Private-sector involvement is feasible because each of the operating sections generates a net operating profit." [96]

Five months later its April 2012 Plan agreed with that supposition,

" . . the IOS is able to support operations without a subsidy . . . On its own, the IOS is a viable, profitable high-speed rail system." [97]

Then strangely, the 2014 Plan mentions profitability only twice, and only as a key objective, not a legal requirement of the operator.[98]

The 2016 Plan never mentions the word 'profit' while it adopts 2014's illegal stance and zigzags away from the boldness of 2012 and only mentions 'commercially viable' twice:

"Early involvement of the eventual operator is key to establishing a commercially viable system over the long-term." [99]

This most recent statement not only reinforces the need for private capital earlier than Plans up to 2014, it also backs off the AB3034 requirement and every Authority promise since 2011 that the IOS would be profitable.

This is another of the Authority's gradual shifts of 'moving the goalposts' (like the timing for private at-risk capital, and the morphing of the Blended System into becoming Phase 1 that diminish the Authority's credibility and reinforce the perspective that the project is nothing more than, as former Assembly Speaker Willie Brown said in 2013[100] another example of government-sponsored bait and switch projects.

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[96] California High-Speed Rail Program, Draft 2012 Business Plan; November 1, 2012; p. ES-8 [PDF 14]
[97] California High-Speed Rail Program; Revised 2012 Business Plan, April, 2012, Page 2-15 [PDF 59]
[98] *"A key objective of the operator will be to manage operating performance, i.e., matching revenues against operating costs, in order to enhance profitability while building the service."* See: Connecting California, 2014 Business Plan, April 30, 2014 page 53 [PDF 53].
[99] See: pp. 36 and 38 [PDF 36 and 38] of Connecting and Transforming California, the California High-Speed Rail Authority's Draft 2016 Business Plan
[100] See Former Assembly Speaker Willie Brown's column of July 28th 2013 column in the SF Chronicle

SECTION 3

HOW UNREALISTIC ARE THE AUTHORITY's FARES?

This section analyzes the reasonableness of the Authority's fares, (or lack of) that are half of the revenue part of the financial viability formula; Revenues (= **Fares** x Ridership), when greater than (>) Total[101] Operations and Maintenance (O&M) Costs equates to Positive Operational Cash Flow (Profitability or Financial Viability).[102] The Authority says its Revenues and Ridership are 99% closely correlated; i.e. a percentage movement up or down of one brings almost exactly the same movement of the other. [103] Since fares underlie half of the revenue portion of the equation, it seems logical to start by comparing the Authority's fares with historical and empirical data.

3.1 The Chosen Maximum HSR Fare Formula Is Arbitrary And Creates Distortions That Prohibit Private Operator/Investor Participation – In 2008 the Authority built a fare formula calculation trap for itself it has been unable to escape. In its two-month late 2008 Business Plan[104], the Authority said,

> *"With train fares at 50% of airfares, high-speed trains will carry an estimated 55 million trips in 2030 and generate $2.4 billion in ticket revenue in 2008 dollars for the Los Angeles/Anaheim to*

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[101] The word 'Total' is used here because the US DOT, uses Generally Agreed Accounting Principles (GAAP) guidance, and requires all revenues and costs be in a single account.
[102] See: To Repeat – The Authority's Train Will Need A Subsidy Forever, August 22nd 2012. Found at: www.sites.google.com/site/hsrcaliffr Page. 35 [PDF 35] refers to France's and EU's rail accounting under Directive 91/440 that separates fixed infrastructure O&M accounts from rolling stock O&M accounts, as well as attributing at least part of health, pension and other benefits' costs to non-rail accounts. See: Réseau Ferré de France (RFF) History at http://www.fundinguniverse.com/company- histories/Reacute;seau-Ferreacute;-de-France-company-History.html
[103] The Authority treats revenue as a fixed multiple of ridership for each phase, including IOS: i.e. over or under estimated demand means revenue is over or under estimated .999%. See: page B-9 [PDF 80] of California High-Speed Rail Draft 2014 Business Plan: Ridership and Revenue Forecasting, draft technical memorandum: *"Revenue and ridership were closely correlated with a R^2 of more than 0.999 for each year."*
[104] AB3034, SECTION 1. 185033 reads *"The Authority shall prepare, publish, and submit to the Legislature, not later than September 1, 2008, a revised business plan . ."* an unfulfilled demand met with impunity.

San Francisco link." [105]

No reason was given as to why the 2008 Plan explored only the ridership impacts of LA-SF fares chosen by the Authority at 50% and 77% of airfares[106] and not the costs of operating the HSR system. In support of the 2008 Plan's claims, and probably the source of the "about $50" fare claim,[107] the Plan's technical document, said of fares:

> *Baseline high-speed train fares for trips between regions were set so that the Los Angeles to San Francisco fare would be half of the average air fare from the SCAG airports to Bay Area airports, or $55 in 2005$$. Fares for other trips between regions were then calculated using a formula derived from this fare . . ."* [108]

That fare structure strategy was arbitrary. To be financial viable, fares must exceed operations and maintenance (O&M) costs. But nowhere in the 2008 technical document, nor that year's Plan is there any indication of how *"Annual operation and maintenance costs by 2030 for the initial phase have been estimated at approximately $1.3 billion."* [109] was derived, and no publically available document from 2008 or later shows that conclusion.

In fact, the 2008 Plan admitted that there was no basis for establishing fares based on any ratio of airline fares, and postponed any fare decision:

> *"A comprehensive fare structure will be a policy determination in future years . . ."* [110]

2009's Business Plan estimated O&M costs in general, but neither that Plan,

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[105] See p.17 [PDF 21] of California High-Speed Train Business Plan, November 2008.
[106] A footnote to Figure 16, p.17 [PDF 21] of the California High-Speed Train Business Plan, November 2008 says, *"HST Fares at 50% and 77% of airfare as described in ridership and revenue document"*
[107] See: p. 2 of the Proposition 1A Arguments in the Voter Information Guide 2008.
[108] See: p. 4 [PDF 8] of California High-Speed Train Project, Ridership and Revenue Forecasts, prepared by Parsons Brinckerhoff, Cambridge Systematics and SYSTRA. No publication date is given, but tables on PDF 10, 11, 12, 13 and 15 say *"SOURCE: High-Speed Rail Authority Program Management Team, 2008."*
[109] See p.17 [PDF 21] of California High-Speed Train Business Plan, November 2008.
[110] The full text says, *"A comprehensive fare structure will be a policy determination in future years taking into account such factors as revenue needs, time and distance of travel, advanced purchase, type of service, weekend and holiday demand and other marketing considerations."* See p.17 [PDF 21] of California High-Speed Train Business Plan, November 2008.

nor any since has produced a publically available, line item O&M cost document.[111] In the 2009 Plan, the SF-LA HSR fare, set at *"83% of the airfare"* [112] effectively doubled to $105.[113]

The Authority's basis for determining fares became capricious. Within thirteen months, the SF-LA fare had gone from $55 to $105. 2009's Fare structure in 2009 was portrayed as only a scenario: again real fares to be determined later.

> *". . the average high-speed train fares are scenarios, and no policy decision has yet been made on how much a ticket will cost for the system. That decision will be made in the future . . ."*[114]

By 2012, the same *"83% of the airfare"* formula had shrunk the SF-LA high-speed fare over 20% to $81[115] – or $83[116] depending on what Authority document is referenced.

Earlier Plan's LA-SF fares[117] were sequentially $50, $105, $83, and $86, while 2016's fare is $89.[118] Within a space of eight years, HSR fares for SF-

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[111] See: Letter (by email only) to Mr. Robert Prantis, from Annie Parker, Public Records Request staff, dated December 27, 2013 denying Mr. Prantis such information saying, *"This is trade secret information pursuant to Evidence Code section 1060, incorporated into the California Public Records Act through Government Code section 6254(k) and, therefore, will not be provided."*

[112] See: Table C, p. 72 [PDF 74] of the California High-Speed Rail Authority, Report to the Legislature, December 2009.

[113] *"The fare is calculated in the same manner as the 50 percent, but is anchored by an LA-SF HST fare at 83 percent of the air fare, or in 2009 dollars a high-speed train fare of $105."* See: p. 65 [PDF 67] of the California High-Speed Rail Authority, Report to the Legislature, December 2009. This fare is the closest to date of a per mile fare for SF-LA based on the operations of European HSR or Acela Express' 44¢-62¢ per mile fares. For comparisons of European HSR and Acela per mile fares, see: Figure 5, Section 3 of: To Repeat – The THE AUTHORITY's Train Will Need A Subsidy Forever, August 22nd 2012. Found at: www.sites.google.com/site/hsrcaliffr

[114] See: ADDENDUM to the California High-Speed Rail Authority's "Report to the Legislature, December 2009" Approved by High-Speed Rail Authority Board: April 13, 2010 p. 15 [PDF 15].

[115] *"The average ticket fare between San Francisco and Los Angeles will be $81 (83 percent of anticipated airline ticket prices)"* See: p. ES-14 [PDF 22] Rail California High-Speed Rail Program Revised 2012 Business Plan, April 2012.

[116] See Table 5.2, p. 5-6 [PDF 42] of the California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting

[117] The $50 SF-LA fare comes from p. 2 of the Proposition 1A Arguments in the Voter Information Guide 2008; the $105 fare from p. 65 [PDF 67] of the Report to the Legislature, December 2009; the $83 fare from p. 5-6 [PDF 42] of the California High-Speed Rail 2012 Business Plan, Final Technical Memorandum – Ridership and Revenue Forecasting; and the

LA, had nearly doubled, then dropped by 20%, then risen by 4%, then risen again another 4%. In 2016 the present SF-LA fare is 60% higher than stated in 2008's Plan.

Whatever justification for the 83% of airfare strategy[119], the 'ratio of airfares' approach was an arbitrary decision. Under every scenario, whatever actual SF-LA airfares are or become, the HSR fare is irrevocably and ALWAYS 17% lower. That tautology set the concrete: from 2009 onwards, the Authority's fare strategy became claiming a 17% discount off LA-SF airfares, versus a real world approach that set fares to reflect the empirical evidence of operating costs plus profit, taxes, etc.

Consequently, HSR's fares also can never be higher than 83% of SF-LA airfares for shorter or longer routes, creating distortions. No explanation is given for why the '83% ceiling' somehow starts in Bakersfield for journey's southward from SFTBT or Merced for journeys northward from Anaheim.

Interestingly the two journeys are roughly 300miles in driving distance.[120] Even if the Authority's planners chose those cities to set the '83% ceiling' the Authority presents no evidence that at around 300 miles a private operator can recoup operating costs and pay taxes on profit when charging the $89 of the Draft 2016 Plan. To the contrary, while Acela Express' NYC-WDC trip

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$86 fare from p. 3-5 [PDF 28] of the California High-Speed Rail Draft 2014 Business Plan Ridership and Revenue Forecasting – Draft Technical Memorandum

[118] See Table 3.1, p. 3-3 [PDF 25] of the Authority's 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting

[119] *"Because of the importance of increasing the amount of private sector funding . . . the 83 percent fare scenario was adopted . . . The fare is . . . is anchored by an LA-SF HST fare at 83 percent of the air fare, or in 2009 dollars a high-speed train fare of $105 vs. a $125 air fare, and a $118 cost to drive."* [No evidence is given for how the cost to drive was calculated.] See p. 65 [PDF 67] of California High-Speed Rail Authority, Report to the Legislature, December 2009.

[120] Anaheim to Merced is 299miles; see: http://www.travelmath.com/drive-distance/from/Anaheim,+CA/to/Merced,+CA. SF to Bakersfield is 283miles, see: http://www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Bakersfield,+CA

(228miles) is only three-fourths the Anaheim-Merced distance, the East Coast journey's fare is nearly twice ($161) the present ceiling.[121]

The 83% ceiling results in the absurdity that about a third of all Authority fares[122] in the 2012, 2014 and the Draft 2016 Plans are constrained by the arbitrarily fixed formula. In all three Plans, riders starting in SFTBT going south of Bakersfield get up to 40% of their ride for no more than the passenger to Bakersfield. But no private HSR operator would survive financially by charging travelers going the 407 miles[123] between San Francisco and Anaheim[124] the same $89 fare as the 283mile fare from San Francisco to Bakersfield.

The Authority speaks of the need to attract private capital. Such an arbitrarily fare formula choice of "freezing" fares at a percent of changing airfare ignores the need to pay the extra operating costs for extra miles and still be profitable. That doesn't make commercial sense, and according to AB3034[125] the train must have unsubsidized operations. The Authority's choice to constrain fares to 50% or 77% or finally 83% of SF-LA airfares is arbitrary and a formula for an operator's bankruptcy.

3.2 The Authority Attempts To Defend Indefensible Revenue and Ridership Forecasts – The Authority denied public records requests to analyze the ridership/revenue variables (including the PPM fares it used) and

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[121] The Acela Express fare is based on four-day advance purchase, mid-morning Acela Express Value Fare. For Acela Express fares see: https://tickets.amtrak.com/itd/amtrak.
[122] In Table 5.2, p. 5-6 [PDF 42] 30 of the 91 (33%) fares are 83% constrained to $83. See: the California High-Speed Rail 2012 Business Plan, Final Technical Memorandum – Ridership and Revenue Forecasting. In p. 3-5 [PDF 28] of the California High-Speed Rail Draft 2014 Business Plan Ridership and Revenue Forecasting – Draft Technical Memorandum, 30 of the 90 fares (33%) are constrained. In Table 3.1, p. 3-3 [PDF 25] of THE AUTHORITY 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting 25 of the 77 fares (32%) are constrained by the 83% 'ceiling' on HSR fares.
[123] Unless otherwise stated, miles are driving miles. See p. 65 [PDF 67] of California High-Speed Rail Authority, Report to the Legislature, December 2009.
[124] See: http://www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Anaheim,+CA
[125] See: AB3034, 2704.08 (J) *"The planned passenger service by the Authority in the corridor or usable segment thereof will not require a local, state, or federal operating subsidy."*

the algorithms that its models used;[126] ignored the Legislative Analyst's Office (LAO) criticism on its lack of transparency,[127] and stalled CARRD's repeated requests for information.[128]

Five years ago, it hired a phalanx of paid-for ridership consultants, the Ridership Technical Advisory Panel (RTAP), while it kept the statutorily required PRG from accessing "internal" materials available to RTAP.[129] Its modelers have misused sophisticated analytics, such as sensitivity analyses and Monte Carlo technique to calibrate and adjust forecasts.[130] The Authority found its industry's association would not analyze its ridership forecasts;[131]

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[126] Public Records requests concerning access to the actually used data and assumptions on ridership, revenues, O&M costs and profits, and the algorithms used for its computation, have been met with responses that say: *"This is trade secret information pursuant to Evidence Code section 1060, incorporated into the California Public Records Act through Government Code section 6254(k) and, therefore, will not be provided."* See: email to Mr. Robert Prantis from Ms. Anne Parker of the Public Records Act Staff of the CA High-Speed Rail Authority, December 27, 2013.

[127] The LAO criticized the 2009 Plan's still unresolved lack of transparency and vagueness of ridership forecasts. See: PET#197 pg.8 of LAO 2009-10 Budget Analysis Series: Transportation: High-Speed Rail.

[128] See PET#029 and #030 Emails between CARRD and HSRA requesting Ridership Peer Review Group reports, April 8 2011 thru June 30 2011. Between April 8 and June 30, 2011 CARRD followed up on repeated public records requests on ridership; without legally required responses from the Authority.

[129] In January 2012, the PRG doubted the demand forecast of November 2011 Draft Plan; *"Unfortunately . . the demand forecasts remain an internal product of the Authority and its internal peer review panel* [Ridership Technical Advisory Panel (RTAP)]. Letter from the California High-Speed Rail Peer Review Group, Will Kempton, Chairman, January 3, 2012. See www.cahsrprg.com, pg. 5. The RTAP members include at least one person who worked on the Cambridge Systematics' model.

[130] Evan Porteus, Stanford University Business School (ret.) comments on intellectual dishonesty of the 2014 Business Plan's use of Monte Carlo analysis. *"In the Monte Carlo simulations that I looked at, the quantities simulated were assumed to be statistically independent. But in Section 6 of* [2014 Business Plan] *BP (pp. 51-52), the scenarios for revenue and O&M costs were assumed to be perfectly, positively correlated. That is, if the revenues were low, then so were the O&M costs. If one assumes statistical independence for this part of the analysis, too, one would need to recognize the possibility of low or medium revenue along with high O&M costs, as well as high revenue along with low or medium O&M costs. It is not intellectually honest to assume that (a) different O&M cost categories in the same year and O&M costs in the same category but in different years are statistically independent, (b) ridership in different routes within a year and revenues between years are statistically independent, and, in addition, (c) total O&M costs in a year are perfectly correlated with total revenues in that year."*

[131] See: UIC Peer Review of Operating & Maintenance Costs of the California High-Speed Rail Project; Final Report, January 2013. " . . *analyzing the project design and the ridership forecasts and evaluating their reasonableness were not in the scope of this review."* But UIC/IUR's Finding #6 points out that the Authority's ridership demand; ". . . *may lead to an understatement of the O&M costs or to an overstatement of the revenues."*

and frustrated the PRG's efforts to understand and verify[132] its ridership/revenue forecasts. But this bunker mentality cannot overcome facts inherent in the IOS.

3.3 Since The Authority Admits Its Fares Don't Compete With Per Mile Auto Travel Costs, How Can It Assume To Cannibalize The Auto Or Shared Ride Market For HSR Riders – In 2009 the Authority declared,

> *"Train fares were assumed to be somewhere between the cost of driving and of taking an airplane or train"* [133]

This is an admission that the Authority's fares can't compete with the costs per mile of auto travel. 2012 repeated the '83% of airfares' pricing principle:

> *"Fare levels are assumed to be comparable to those of other HSR services world-wide—somewhat below current airfares in the longer distance travel markets and well above the out-of-pocket cost of driving in the shorter distance travel markets."* [134]

Despite what was said, the Authority knows their fares can't compete against either short or long distance auto travel costs. Their only chance was and is to set HSR fares to compete for long-range airline travelers. That makes the forecasts shown in Figure 3, the Authority's only forecast of sources of auto drivers[135] defecting to HSR during IOS, nothing short of arbitrary.

After again admitting their fares don't compete with driving costs, how can the Authority have assume that its offerings will bring 6-9Million annual IOS riders or 19-29Million annual riders for Phase1 if it already ceded 91-99% of the potential HSR market to auto travel, as their consultants told them would be reality. It's not a reasonable conclusion.

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[132] *"These forecasts have not been subjected to external and public review, and many of the internal workings of the model, especially as applied to the IOS and Bay to Basin scenarios, remain unclear."* Letter from the California High-Speed Rail Peer Review Group, Will Kempton, Chairman, January 3, 2012. See www.cahsrprg.com, pg. 5

[133] See p. 64 [PDF 66] of the California High Speed Rail Authority: Report to the LEGISLATURE, DECEMBER 2009

[134] See: California High-Speed Rail Program Revised 2012 Business Plan, April 2012, page 5-11 [PDF 119]

[135] In no other business plan does the Authority list the shifts in transportation modes to HSR.

Figure 3

2012 Plan – Sources Of HSR Riders (#s and %)[136] By Transport Mode Source [137]

	Source is Auto	No. of 2012 HSR Pax From Auto	Source is CVR	No. of 2012 HSR Pax From CVR	Source is Airlines	No. of 2012 HSR Pax From Airlines	Source is Induced Ridership	No. of HSR Pax from Induced Ridership
2012 IOS Low Est. – 7.3M	81.2%	5.75M	3%	0.213M	14.2%	1.00M	1.6%	0.114M
[138] 2012 IOS High Est. – 12.8M	**70.3%**	**8.99M**	**11.7%**	**1.49M**	**16.1%**	**2.06M**	**1.9%**	**0.243M**
2012 Phase1 Low Est. – 25.8M	74.4%	19.2M	1.4%	0.36M	22.1%	5.7M	2.1%	0.542M
Phase 1 High Est. – 39.1M	67.5%	29.1M	4.7%	1.84M	25.4%	9.93M	2.4%	0.94M

The 2013/2014 Stated Preference/Revealed Preference (SP/RP) survey findings should have strengthened the fact-based conclusions about the importance of door-to-door costs reigning as first priority for travelers' decisions about the mode they will use. Prying travelers out of their (or others') autos, vans, etc. and convincing them to defect to high-speed rail is highly improbable.

But as much as the Authority would like not to have to, its train must compete with bus and auto travel costs[139] in a relatively cheap fuel

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[136] See p. 5-8 [PDF 52] of the California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting

[137] Nomenclature: Passengers (Pax), Conventional Rail (CVR), Induced Ridership is the Authority's estimate of additional travelers to "defect" to HSR solely because the HSR option is available 2025-2028.

[138] Since the 2012 High Estimate for IOS is equal to the 2016 Medium Estimate, these numbers are indicative of the origin of IOS riders.

[139] Comparing only an auto's operating cost per mile to a HSR rail fare per mile during the IOS is valid because like auto owners thinking only of costs, The Authority's calculations carry no capital cost amortization and defer maintenance and replacement costs until after IOS. Also according to the Authority's consultants, Cambridge Systematics: *"travelers will rarely consider the full range of auto operating costs in their trip decisions"* and that they tend to *"consider their cost of [automobile] travel to be only their out-of-pocket gas costs."* See Cambridge Systematics (2008), *Desert Xpress Ridership Forecast Review,* p. 17, Steer Davies Gleave, *Ridership and Revenue Audit,* page 5, Federal Railroad Administration, Final Environmental Impact Statement, Appendix B, http://www.fra.dot.gov/downloads/rrdev/Appendix_B_Ridership_Forecast_Review.pdf. Cited in the 2013 Reason Foundation Report, An Updated Due Diligence Report; Joseph Vranich,

market.[140] The Authority's fares must compete with driver-only or rideshare auto travel costs at 11¢/mile,[141] and a one person, intercity SF-LA bus fares as low as 12¢/mile.[142] the Authority claims its fares between the state's largest downtowns, are 23¢/mile,[143] but the Authority claims that autos' per mile total costs in 2025 and 2029 should be 26¢/mile.[144] These claims deserve inspection; both to the reality of the Authority's auto operating costs, and the reality of the Authority's SFTBT-LA Union one-way fare (23¢/mile).

3.3.1 Realistic per mile Auto Operating Costs Are Lower Than The Authority Would Wish – Based on 2016 gasoline prices and the Authority's own Version 2 model for non-fuel costs,[145] and the Authority's only Plan (2012) estimate for 2030 fuel efficiency,[146] (33.6mpg) the total 2030 auto operating costs would be 8¢ per mile[147] [($2.60+$0.075)/33.6)].

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[140] The main operating cost of an auto is gasoline, and California's gasoline is relatively very cheap. Gas in the UK is about 92% more expensive than the US, Japan's 74% higher, France's 62% higher, Germany's 49% and Spain's 20% higher. See: http://www.nationmaster.com/graph/ene_gas_pri-energy-gasoline-prices

[141] For the 381miles between the downtowns, see http://www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Los+Angeles,+CA. For the cost of driving that 381miles for $42.50, see: http://www.travelmath.com/cost-of-driving/from/San+Francisco,+CA/to/Los+Angeles,+CA

[142] The BoltBus fare, SF-LA Union Station is $44 (12¢/mile). See: https://www.boltbus.com/

[143] Page. 3-4 [PDF 27] of the California High-Speed Rail 2014 Business Plan, Final Technical Memorandum – Ridership and Revenue Forecasting says; *"HSR fares for all 2014 Business Plan scenarios were identical to those in the 2012 Business Plan . . with an $86 maximum in 2013 dollars (see Table 3.1)"*

[144] See Table 4.4, p. 4-4, [PDF 31] of the California High-Speed Rail 2016 Business Plan, Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Support Document

[145] *"The 2014 Business Plan used 7.5 cent per mile non-fuel cost."* See p. 4-6, [PDF 30] of the California High-Speed Rail 2016 Business Plan, Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Support Document

[146] See Table 2.6, p. 2-9 [PDF 29] of the California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting. Costs are in 2011s.

[147] According to the Authority, in 2012 an auto's operating costs were 20¢-28¢ a mile, with gasoline in 2030 was $2.60 (low) to $6.11 (high). [See Table 2.6, p. 2-9 [PDF 29] of the California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting. Costs are in 2011s.] In 2014, no gasoline price range was given. The Year 2029 auto operating cost range was 19¢-28¢/mile. See Table 4.4, p. 4-4, [PDF 42] of the California High-Speed Rail 2014 Business Plan, Final Technical Memorandum – Ridership and Revenue Forecasting.] In 2016, no gasoline price range was given and the auto operating costs for 2029 were $26¢ per mile. [See Table 4-4, p. 4-4 [PDF 30] of the California High-Speed Rail 2016 Business Plan, Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Support Document.] The maximum decline over the three years of these assumptions is 8% (28¢ to 26¢). California's average gas prices in 2011 were $3.81/gallon: in

Obviously the higher per gallon fuel prices the Authority is counting on to justify total auto operating costs of 26¢/mile aren't reflected in this fact-based equation derived from California government records.

The Authority's use of non-fuel auto costs to compare with HSR fares are not justified either, because no capital equipment replacement is accounted for during the 2025-2028 IOS (VtoV Ext.). Therefore auto-driving costs during the same period should not need to account for capital replacement costs. Another bias to strengthen HSR's fares against auto travel's cost is the Authority's comparing todays HSR fares with auto driving costs 13-14 years hence.[148] Ultimately, those biases don't count, either mathematically, or as will be shown, in pragmatic decisions on what transport mode best fits the travelers' needs.[149] Comparing today's auto travel costs with today (2015) HSR fares is accurate 'apples-to-apples' accounting.

2012 $4.03/gallon. [See California Energy Commission, Fuels and Transportation Division, Fossil Fuels Office, Historic Yearly Average California Gasoline Prices per Gallon. Found at: http://energyalmanac.ca.gov/gasoline/gasoline_cpi_adjusted.html] In mid-March 2015, the average retail price for regular gasoline was $3.35/gallon: in March 2016 that was $2.60. [Found at: http://energyalmanac.ca.gov/gasoline/retail_gasoline_prices.html] That 2012-2016 drop was 65%.

[148] In the 2012 Plan, HST fares are in 2011 dollars. [See Table 5.2, p. 5-6, [PDF 42] of the California High-Speed Rail 2012 Business Plan, Final Technical Memorandum – Ridership and Revenue Forecasting.] Yet auto-operating costs are assumed to be for 2030 and used for forecasts. [See Table 2.6, p. 2-9, [PDF 24] of the California High-Speed Rail 2012 Business Plan, Final Technical Memorandum – Ridership and Revenue Forecasting.] In the 2014 Plan, HST fares are in 2013 dollars. [See Table 3.1, p. 3-5 [PDF 28] of the California High-Speed Rail 2014 Business Plan, Final Technical Memorandum – Ridership and Revenue Forecasting] But the auto-operating costs for 2029 were used for ridership/revenue forecasts. ["*The approach for forecasting auto operating costs for the 2014 Business Plan is consistent with the methodology used for the 2012 Business Plan, with updates to the cost projections.*" See Table 4.4, p. 4-4, [PDF 42] of the California High-Speed Rail 2014 Business Plan, Final Technical Memorandum – Ridership and Revenue Forecasting.] The 2016 auto costs computation methods were the same as prior Plans' for 2029. [See Table 4-4, p. 4-4 [PDF 30] of the California High-Speed Rail 2016 Business Plan, Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Support Document.] Yet HSR fares are assumed in 2015 dollars. [See Table 3.1, p. 3-5 [PDF 28] of the California High-Speed Rail 2014 Business Plan, Final Technical Memorandum – Ridership and Revenue Forecasting.]

[149] Based on the 8¢/mile calculation, the one-way SFTBT-LA Union 381 mile driving costs ($30.50) is not only far less than a third the one-way $89 HSR fare, it makes the disinterested computer site's, travelmath.com, rate of 11¢-14¢/mile seem upwardly biased. According to travelmath.com in 2014 the SFTBT-LA Union auto driving cost was $56 or 14¢/mile. In 2016, that same 381mile auto driving cost is $42.50 or 11¢/mile. Even if a compound rate of growth of that 8¢, 11¢ or 14¢ is calculated at 3% annually, those per mile fares come out at 12¢, 17¢ and 23¢ per mile, still below the Authority's claims.

3.4 Gaining Growth From A Stagnant Air Passenger Market Is Unrealistic –

Unlike countries where gasoline prices are 60%-140% more than US prices[150] or France, Japan and the USA's Northeast Corridor (NEC), where HSR can 'piggyback' off of generations of conventional rail (CVR) riders, those contextual factors don't 'work' for California's high-speed rail project. Because annual conventional rail (CVR) ridership in California (<3Million) is so small[151] even radical growth before 2025, CVR is unlikely to fill many HSR seats. The Authority also 'shoots itself in the foot' because its fares are much, much higher than Caltrain or Metrolink's and The Authority will eliminate Amtrak subsidies along the San Joaquin Valley (SVJ) 'spine' of the system. These too give present CVR riders a serious disincentive to shift to HSR.

That leaves the potential 'pool' of HSR riders being airline travelers. But, if past airline travelers had put more weight on time convenience than travel costs, air traffic would have grown in the last decades, because airfares per mile are always higher than per mile auto operating costs. But as the Authority's consultants told them, air travel growth hasn't happened.[152] SF Bay Area-to-LA Basin annual air passenger traffic has stagnated at around 10Million.[153]

Even air travel between San Diego and the SF Bay Area, where airline trip's time convenience would most attract more flyers, a decade of evidence

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[150] In late March US gasoline prices were US59¢/litre, Japan US96¢/litre and France was 1.42¢/litre. See: http://www.globalpetrolprices.com/gasoline_prices/

[151] See p. 5-8 [PDF 52] of the California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting

[152] Bay Area to/from Southern California airline travelers (both ways) between 2000 and 2009 averaged about 10Million (10.28) from a 2006 low of 9.84Million to a high of 11.9Million. See: Table 1, p. 10 [PDF 116] Appendix B, Potential Airline Response to High-Speed Rail Service in California, prepared by Aviation System Consulting LLC, for Cambridge Systematics, Inc. Found in California High-Speed 2012 Business Plan, Ridership and Revenue Forecasting, final technical memorandum, April 12, 2012.

[153] *CS* [Cambridge Systematics] *and ASC* [Aviation System Consulting LLC] *discussed the analytical approach and assumptions developed for the 2012 Business Plan, and concluded that the analysis performed in 2011 is still largely relevant since no significant changes have occurred since then in the airline industry.* See p. 4-1 [PDF 27] of Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document.

shows that passengers on those air routes decreased.[154] The Authority's own fare guideline, a maximum 83% of a forecasted air fare, shows the average fare will increase only $7 between the SF Bay Area and the LA Basin,[155] so airfare prices haven't and won't hinder the growth of air traffic. This too is evidence that door-to-door auto travel costs far outweigh the convenience of less travel time (by air) for the vast majority of travelers.

3.5 If The HSR System Conforms With the Law, The Authority's per Mile Fares Between SFTBT and LA Union Station Will Not Even Be Competitive With Airline Fares – The Authority's present-day $89 (23¢/mile) one-way SFTBT-LA Union fare claim is based on a 2008 marketing strategy. But empirical evidence in Figure 2 shows that European HSR systems charge about twice that per mile, and Acela Express even more.

The Authority has known for years that its per passenger mile fares are a fraction of worldwide operating experiences. In June 2011, Spain's high-speed rail (AVE) operator, RENFE, presented the Authority's Board evidence that its HSR (AVE) fares were about 55¢ [156] per passenger mile (PPM).[157]. In August 2011, the Authority received a one-page analysis of six existing HSR routes' fares similar to Figure 1. These ranged between 40¢-45¢/mile PPM, compared with the Authority's 2009 Plan's fare of 24¢/mile PPM.[158] In November 2011, three Authority Board Members received a private

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[154] In 2000, there were 2.56Million air passengers between San Diego (SAN) and the three SF Bay airports: by 2009, that had dropped 7% to 2.37Million air passengers. See: Table 1, p. 10 [PDF 116] Appendix B, Potential Airline Response to High-Speed Rail Service in California, prepared by Aviation System Consulting LLC, for Cambridge Systematics, Inc. Found in California High-Speed 2012 Business Plan, Ridership and Revenue Forecasting, final technical memorandum, April 12, 2012.

[155] The 83% of average airfare marketing ploy to attract airline passengers to HSR was $83, $86 and $89, making the Authority's airfare calculations $100 in 2012, $104 in 2014 and $107 in 2016.

[156] See Figure A 6-1 To Repeat – The Authority's Train Will Need A Subsidy Forever, August 22nd 2012. Found at: www.sites.google.com/site/hsrcaliffr

[157] The Revenues Per Passenger Mile metric is the critical measurement of financial success or failure. It demonstrates the revenue (and therefore cash) generating ability of the HSR rail system, compared to other operators or routes; i.e. how many dollars or cents does the operator on each route get for carrying one passenger one mile. Without this basic metric, comparisons between different operators or routes are meaningless.

[158] On Evidence-Based High-Speed Rail Fares, July 5th 2011. Brief Note #14 Found at: www.sites.google.com/site/hsrcaliffr

presentation using then-available data on seven HSR fares PPM, ranging from 34¢ to 50¢ PPM, compared with the Authority's 2009 fare of 24¢ PPM. [159]

In early 2012 the Brookings Institute reported[160] Acela Express' revenue PPM was 49¢ PPM;[161] almost twice the revenue PPM (24¢) that the Authority planned to charge at the time.[162] In December 2012, this same type of existing HSR per passenger mile fare-to- the Authority's fare comparison was developed and is now updated as Figure 1. A 2012 study showed that the average HSR ticket price in the Madrid-Barcelona (MAD-BCN) corridor ranges from $186-$244 or 63¢ PPM (2012 prices). [163] Using fifteen route's PPM fares, the analysis showed the Authority's then-23¢ PPM, while existing HSR fare ranged 44¢-72¢ PPM, with the Acela's (72¢ PPM) being the highest.[164] The Authority's then-23¢ PPM fares were only a third to one half that shown by empirical evidence. Today's 28¢ PPM doesn't much change that conclusion.

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[159] See: Figure 5, Section 3 of 'To Repeat: The Authority's Train Will Need A Subsidy Forever' August 22 2012. Found at: www.sites.google.com/site/hsrcaliffr

[160] Acela operates on 308 miles of track and carried 3.395Million passengers. In 2012, the Brookings Institution reported that, Acela's (non-government) revenues were $510.3Million; and its operating costs were $331.6Million, leaving a $178.8Million profit. No other revenues or government subsidy came to Acela. See Robert Puentes, Adie Tomer, and Joseph Kane: A New Alignment: Strengthening America's Commitment to Passenger Railroad; Metropolitan Policy Program at Brookings, March 2013, Appendix B, Amtrak Route Performance, page 19, [PDF 25]. Found at: http://www.brookings.edu/research/reports/2013/03/01-passenger-rail-puentes-tomer

[161] O&M does not include capital charges (such as depreciation), interest, and other costs. See: See Robert Puentes, Adie Tomer, and Joseph Kane: A New Alignment: Strengthening America's Commitment to Passenger Railroad; Metropolitan Policy Program at Brookings, March 2013, Appendix B, Amtrak Route Performance, page 19, [PDF 25]. Found at: http://www.brookings.edu/research/reports/2013/03/01-passenger-rail-puentes-tomer

[162] The To Repeat report says Acela numbers fares 72¢ PPM and O&M 62¢. From See: p. 18 [PDF 18] of 'To Repeat: The Authority's Train Will Need A Subsidy Forever' August 22 2012. Found at: www.sites.google.com/site/hsrcaliffr

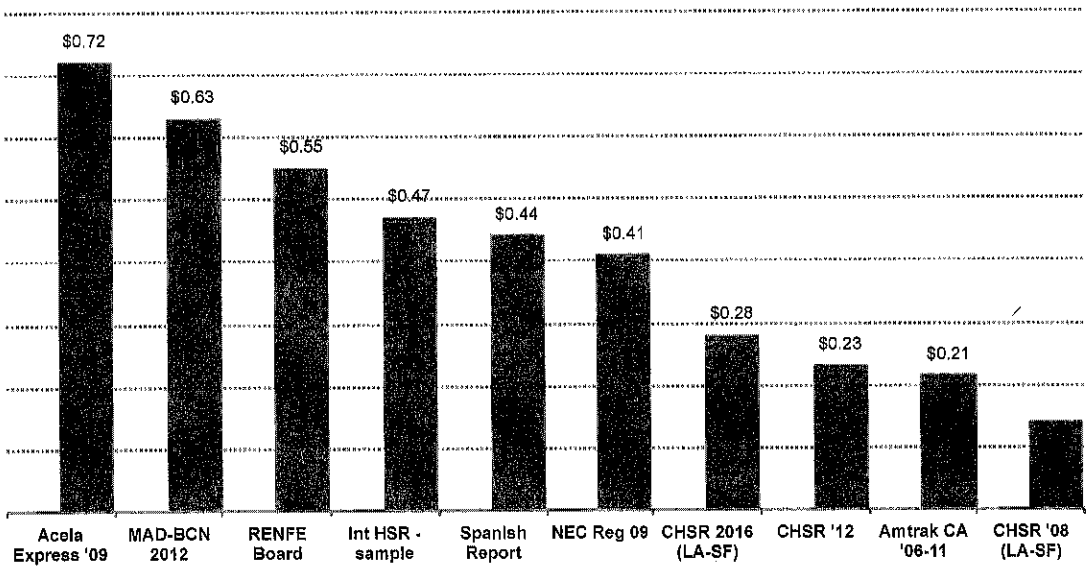
[163] See p. 471 [PDF 4] of Chuyuan (Viktor) Zhong, Suitability Analysis of Proposed High-Speed Rail Stations in Los Angeles Metropolitan Area. FN#1 of the article shows actual price and travel time for Madrid-Barcelona have been obtained from RENFE and Iberia –main airline in the corridor- web pages in June 2012. The website http://www.distance.to/Madrid/Barcelona shows the air and HSR distances. Dividing $186 fare by 385miles makes the PPM 48¢/mile. Dividing the $244 fare makes the PPM 63¢/mile (like Acela)

[164] See Figure 5, pg. 37 [PDF 37] of 'To Repeat: The Authority's Train Will Need A Subsidy Forever' August 22 2012. Found at: www.sites.google.com/site/hsrcaliffr

Figure 1

Fares/Mile Of Existing HSR Operations

And the Authority's Proposed Fares/Mile



While existing HSR operators' per mile fares, including Acela Express', vary between inspection dates largely because of yield management pricing, they are all multiples of the Authority's 2016 LA Union-SFTBT fare of 28¢ PPM.

Figure 1 shows the trap the Authority put itself into by not basing its fare estimates on existing HSR systems' or Acela Express' PPM fares. Once captured in that arbitrary, politically created trap, the Authority has been forced to defend an early-on bad decision against empirical evidence.

3.6 Getting To Profitability Kills HSR's Chances To Attract Airline Passengers – The '83% of airfare' formula doesn't work if the Authority's fares are raised to obey the law that underlies its existence[165] and be profitable. Here's why. In 2016, the $89 HSR fare between the metropolitan centers assumed the average airfare is $$107. Flight distance between SFO and LAX, the airports closest to the metropolitan centers, is 338miles.[166]

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[165] AB3034, 2704.08 (J) requires that *"The planned passenger service by the Authority in the corridor or usable segment thereof will not require a local, state, or federal operating subsidy."*

[166] See: http://www.travelmath.com/flying-distance/from/SFO/to/LAX

Between Burbank (BUR) and San Jose (SJC), the flight distance is 296miles.[167] Mathematically that makes those airfares 32¢ and 36¢ a flight mile respectively. This looks good to the Authority IF it were exempt from the stricture of having its revenues (HSR fares x Ridership) exceed its operating costs. But the Authority can't operate without a profit. That would violate the Authority's foundation law, AB3034.

Examples show why. First, assume a best fare scenario case for California's HSR project. This scenario allows a private, not-for-profit operator to adopt the EU's multiple accounts rail accounting standards, ignore GAAP rules, avoid taxes and not pay fees to terminal operators. This would bring the Authority's present metro center-to-metro center fare up to only about what government-owned and operated HSR systems in Europe charge, around 45¢/mile. Figure 1's empirical evidence shows that. Unfortunately that makes the Authority's fare 25-40% higher than intra-CA airfares' of 32¢ and 36¢ per flight mile.

A second scenario says the Authority first finds a private, not-for-profit operator who obeys GAAP rules, but pays no taxes, and little if any fees to a parent company (for IT, ticketing, etc.) and rail terminal operators, like Acela does. To be profitable in this case the Authority must charge per mile fares similar to Acela. A 2016 advance purchase Acela fare to go the 227miles between WDC and NYC was $189 or $84¢ PPM.[168] That fare is $11 (6%) less than the fares found in 2012.[169] Figure 1 says the WDC and NYC fare was 72¢ PPM. 2016's PPM Acela fare is three time the 2016 Plan's PPM fare (84¢ vs. 28¢).

If the Authority raised its SF-LA fares PPM to only 2012's 72¢ they would still be twice the more expensive per passenger flight mile (BUR-SJC): and

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[167] See: http://www.travelmath.com/flying-distance/from/SJC/to/BUR
[168] On March 26, 2016 the Acela Express Value Fare for April 6th, departing at 5am was $189. See: https://tickets.amtrak.com/itd/amtrak
[169] See: p. 18 [PDF 18] of 'To Repeat: The Authority's Train Will Need A Subsidy Forever' August 22 2012. Found at: www.sites.google.com/site/hsrcaliffr

today's 84¢ per passenger flight mile would be 2.3 times the BUR-SJC fare. The Authority expectation to be profitable and simultaneously attract airline passengers is a sterling example of cognitive dissonance.

3.7 Higher Per Mile Fares For Shorter HSR Rides Will Repulse Riders [170] – In 2009 AND 2014 the Authority said that shorter, intra-regional trips would have a lower fare per mile than interregional trips.

> *"Local trips within the LA Basin and within the Bay Area are much shorter than between-region trips, and have a lower per-mile fare, which accounts for the lower revenue from each local traveler."* [171]

> *"In developing these forecasts, the Authority's consultants have not assumed any revenue optimization that would result from adjusting fares to optimize yields on specific markets such as short distance and commuter trips either in the San Francisco Bay Area and/or in the Los Angeles Basin"* [172]

Those weren't misleading Authority statements: they're completely untrue. The Authority's fares comparatively worsen for shorter routes, and generally speaking, the shorter the ride, the higher the per mile fare. Instead of admitting, that San Joaquin Valley operations will need a subsidy [173] to keep passengers when IOS is introduced, per mile rail fares will increase dramatically after it eliminates Amtrak's subsidized San Joaquin[174] service[175]

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[170] This topic was analyzed in IF YOU BUILD IT THEY WILL NOT COME, March 11, 2014; found at www.sites.google.com/site/hsrcaliffr. It was also analyzed in the January 2014 report, 'FLEECING' LOCAL HIGH-SPEED TRAIN RIDERS WHILE BIG CITY EXECUTIVE RIDER CHEAPER. Found at: www.sites.google.com/site/hsrcaliffr and the April 2011 report, WILL THE HIGH-SPEED TRAIN BENEFIT CALIFORNIA'S MIDDLE CLASS; also found at www.sites.google.com/site/hsrcaliffr

[171] See: California High Speed Rail Authority: Report to the LEGISLATURE, DECEMBER 2009, PDF pg. 73

[172] See page 43 [PDF 43] of Connecting California, 2014 Business Plan, April 30, 2014

[173] 2008 Plan pg. 25 [PDF 29] *"Thereafter, segments linking the Central Valley with a major metropolitan area will provide an immediate benefit . . In many cases, such segments are projected to be "self supporting" over time and not require an ongoing operating subsidy."*

[174] The average operating costs of the CA Amtrak lines is $45¢ per passenger mile, while the average fare is 21¢ per passenger mile. See: To Repeat, The Authority's Train Will Need A Subsidy Forever, July 2012, page 20. Found at: www.sites.google.com/site/hsrcaliffr

[175] *"Note that the existing San Joaquin service south of Merced to Bakersfield is assumed to be discontinued upon the initiation of HST service."* See page 5-5 [PDF pg. 37] of Cambridge Systematics' (CS) final technical memorandum of Ridership and Revenue Forecasting of April 12, 2012, Section 5.2.

and offers HSR fares that don't with Caltrain's or Metrolink'sO in the two major metro areas.

For example, the Authority's Palmdale-LA Union $33 fare[176] of 2014 is 50¢/mile, while Metrolink's $14 fare[177] is less than half (22¢/mile). Eliminating Amtrak's San Joaquin service will bring higher per mile HSR fares for shorter trips to 27¢-76¢/mile [178] along the San Joaquin Valley (SJV) HSR corridor.[179] Doubling or tripling per mile fares on the HSR corridor's makes driving's 14¢-25¢/mile or a bus ride's 14¢/mile [180] or ridesharing on the same HSR corridor[181] a 'slam dunk' decision. Likewise a (SCAG-SCAG) Palmdale-LA Union Metrolink ticket is $14.25, the HSR and feeder bus ride is more than twice as much ($33).[182]

Continuous door-to-door auto travel also includes either not paying for local transport to or from a station, not paying parking fees at HSR stations, plus the nearly cost-free option of carrying 1-4 passengers. [183] Consequently

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[176] See Table 3.1 pg.3-3 [PDF 25] Ridership and Revenue Forecasting – Draft 2016 Business Plan, Technical Supporting Document

[177] See http://www.metrolinktrains.com/ticketspricing/pricefinderresults.html?from_station=114&to_station=131&fare_type=adult&viewticketoptions.x=128&viewticketoptions.y=15

[178] The HSR fare during IOS North to travel 300 miles between Merced and Burbank Airport is $86 (27¢/mile): for the 164 miles between Merced and Bakersfield the HSR ticket is $67 (39¢/mile): for the 95miles between Bakersfield and Palmdale $51 (53¢/mile) and for the 41miles between Palmdale and the Burbank Airport, the HSR ticket is $32, or 72¢ per mile. Per segment mileage is from travelmath.com. IOS fares are from Table 3.1, page 3-3 [PDF 25] of Ridership and Revenue Forecasting – Draft 2016 Business Plan, Technical Supporting Document

[179] This is discussed in depth particularly in Figures 4 and 5, in 'Fleecing' Local High-Speed Train Riders While Big City Executives Ride Cheaper: A Briefing Paper, January 29, 2014; found at www.sites.google.com/site/hsrcaliffr/home/briefing-papers/01- 2014-fleecing-local-high-speed-train-riders

[180] Fare calculated as 300miles divided by $43 fare. See: http://www.gotobus.com/

[181] To drive the 164 miles between Merced and Bakersfield costs $23 (14¢/mile): for the 95miles between Bakersfield and Palmdale $13 (25¢/mile) and for the 41miles between Palmdale and San Fernando, the HSR ticket is $6 (15¢ per mile). Per segment mileage and cost of driving is from travelmath.com.

[182] The Palmdale-LA Union station, one week advance purchase ticket can be found at http://metrolinktrains.com/tripplanner/ The Authority's fare is from Table 3.1, pg. 3-5 {PDF 28] of the Draft 2014 Business Plan Ridership and Revenue Forecasting-Draft Technical Memorandum

[183] Passengers could be a family or unrelated individuals or friends, carpools, or ride sharers using Uber, Wingz, Sidecar, etc. in a personal vehicle. Long distance for DOT is 100+ miles, for the Authority it's 50+ miles. The longer the distance, the lower auto travel per mile cost.

Authority-dependent trips during IOS will always be more expensive on a per mile basis than using autos or commercial buses.

Perhaps to compensate for the self-imposed "83% of average airline fare" ceiling, in 2012 the Authority moved to a fare structure that penalizes shorter rides in comparison to longer rides. Coupled with the elimination of subsidized Amtrak fares in California,[184] and the dramatic rises in per mile HSR fares versus Caltrain and Metrolink on the 'bookends' this strategic choice does not bode well for attracting riders.

The 2016 Plan's VtoV Ext., with its dependence on intra-SF Bay Area (MTC) and San Joaquin Valley (SJV) – SF Bay Area (MTC) ridership to provide nearly a quarter (23.4%) of the VtoV Ext. riders[185] makes lies out of 2009 and 2014's claims about not 'milking' shorter rides, and assures that:

> *"Moderate or high-speed rail would require everyone to subsidize trains that would serve only a small elite."* [186]

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[184] See: Attachment Pet No. 043.2 ACE Corridor Dan Leavitt, January 2014. *"Since 1990, the state has invested more than $1.3 billion in infrastructure and equipment for intercity passenger rail and about $1 billion in operating support."* [See: Amtrak California (http://amtrakcalifornia.com/index.cfm/news/press-releases/record-ridership-for-californias-san-joaquinc2ae-trains/ & http://amtrakcalifornia.com/index.cfm/news/press-releases/amtrak-californias-san- joaquin-corridor-reaches-more-than-a-million-riders/)] "The 2012/13 state costs for state-supported intercity rail services was just over $90 million ($29.4 million for Pacific Surfliner, $31.8 million for San Joaquin, and $29.1 million for Capitol Corridor)." [See: Caltrans, Oct 2013; Memo from William Bronte to CTC (Financial Allocation for FY 2013-14)] *"However, it should be noted that historically (until FY 2013/14) Amtrak paid 30% of the Pacific Surfliner total service cost as part of Amtrak's basic system."* [See: Under Section 209 of PRIIA, state is required to pay 100 percent by 2013/14. Based upon input from Caltrans and Amtrak, the LOSSAN Agency estimated that maintaining the Pacific Surfliner service would cost the state an additional $25 million annually for 2013/14 (for operations and maintenance and leasing Amtrak rolling stock)] *"By comparison, in 1997/98, the total state costs for the state supported intercity rail services was $48.4 million ($20.4 million for the Pacific Surfliner, $17.2 million for the San Joaquin, and $10.8 million for the Capitol Corridor)."* [See: Caltrans, California State Rail Plan 2007-08 to 2017-18] Found at: www.sjjpa.com and http://www.sjjpa.com/documents/SJJPA-Bus-Plan-2015-Final.pdf

[185] Ridership for VtoV Ext. is 12.8Million. See Table 6.3 [PDF 41] of the Authority's Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue

[186] "High-Speed Rail Is No Solution" Randal O'Toole, 2009. Found at http://www.cato.org/publications/commentary/highspeed-rail-is-no-solution A three page PDF on internet: In the last paragraph, after commenting: *"That's $82 million per mile for true high-speed rail (partly because the California project goes through some mountains) and only $2.4 million for moderate-speed rail."* The author also says: *"Moderate or high-speed rail would require everyone to subsidize trains that would serve only a small elite."* This supports

The Authority is fleecing local riders to cross subsidize long distance travelers. This strategic decision was never made in the public arena, is arbitrary and ultimately will help the project conform to the theory that the worst projects get built.[187]

3.7.1 Expensive Intra-MTC and Intra-SCAG HSR Fares (and per mile fares) Will Defeat The Authority's Need For Riders –

During 2025-2028, 1.8Million annual intra-MTC riders supposedly choose HSR over Caltrain. By 2040, annual intra-MTC ridership supposedly grows to 2.3Million. In Southern California, no traveler will use HSR between 2025 and 2028, a curious but prudent forecast, as further analysis will show. By 2040, the Southern California Area Government (SCAG) domain's ridership has grown from zero to 6.4Millon per year – somehow choosing HSR over Metrolink.

How either of those phenomenal growth rates happens is not revealed by the Authority, but it couldn't be based on HSR's price competitiveness over the regional rail carriers (Caltrain and Metrolink).

In 2009, the Authority said:

> *"Local trips within the LA Basin and within the Bay Area are much shorter than between-region trips, and have a lower per-mile fare"* [188]

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the thesis that HSR largely serves reimbursed business travelers. See Attachment Pet No. 087, Accessibility Analysis of Korea HSR.PDF. *"The price quotations for building the California High-Speed Rail Authority's first miles (Merced-towards-Bakersfield) of conventional, non-electrified rail without Positive Train Control or rolling stock – but including the costs of land and moving existing public infrastructure (roads, highways, irrigation channels, electrical and telephone transmission equipment) already exceed $90 million a mile.*

[187] See: Flyvbjerg, Bent, Oxford Review of Economic Policy, Volume 25, Number 3, 2009, pp.344–367. Survival of the unfittest: why the worst infrastructure gets built – and what we can do about it. Page 351 says, *"The existence of optimism bias in managers and promoters would result in actual costs being higher and actual benefits lower than those forecasted."* Found at: http://arxiv.org/ftp/arxiv/papers/1303/1303.6571.pdf or, http://oxrep.oxfordjournals.org/content/25/3/344.full.pdf+html

[188] See: California High Speed Rail Authority: Report to the LEGISLATURE, DECEMBER 2009, Figure 2, p. 71, [PDF 73].

Figure 4 HSR & Caltrain Intra-MTC Fares and Times Saved [189]						
	Elapsed Miles [190] From SFTBT	**HSR Fares [191]**	**HSR Fare per mile**	**Clipper Card Caltrain Fare [192]**	**Clipper Card Caltrain Fare/mile**	**Minutes Saved Using HSR [193] (Caltrain Baby Bullet – HSR)**
SFTBT-Millbrae	13	$18	$1.38	$5.20	40¢	(18min-16min)=2min
SFTBT-San Jose	46	$23	50¢	$9.20	20¢	(62min-48min)=14min
SFTBT -Gilroy	76	$25	33¢	$13.20	17¢	No Baby Bullet to Gilroy

Figure 4 HSR & Metrolink Intra-SCAG Fares and Times Saved						
	Elapsed Miles [194] From LA Union	**HSR Fares**	**HSR Fare per mile**	**Regular Metrolink Fares**	**Metrolink Fare/mile**	**Travel Time** (Sources)[195]
LA Union-BUR [196]	13	$27	$2.07	$6.75	52¢	(23min-9min)=14min
LA Union-Palmdale	49	$33	$1.48	$14.25	29¢	(93min-38min)=55min

As Figure 4 shows, this claim is as patently untrue in 2016 as in 2009; i.e. the shorter the HSR ride, the higher the fare, and the higher the per mile fare – refuting the Authority's claim for lower fares for shorter rides.

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[189] HSR fares expressed in 2015 $s, while Caltrain Clipper Card fares, in 2016 $s, are more current.

[190] The elapsed miles southwards from SFTBT are shown in California High Speed Rail Version 2 Ridership and Revenue Model, Calibration and Validation Briefing Book, p. 56 [PDF 56] (of AG015004) Cambridge Systematics, January 10th 2014.

[191] See Table 3.1 p. 3-3 [PDF 25] of the California High-Speed Rail Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue

[192] For Caltrain fares, see: http://www.caltrain.com/Fares/farechart.html

[193] Caltrain's Baby Bullet schedule is found at: http://www.caltrain.com/schedules/weekdaytimetable.html. HSR elapsed time found at Appendix A-3, p. A-3 The Authority's Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue

[194] The elapsed miles north of LA Union Station were computed from data found in the California High Speed Rail Version 2 Ridership and Revenue Model, Calibration and Validation Briefing Book, p. 59 [PDF 59] (of AG015004) Cambridge Systematics, January 10th 2014.

[195] Travel time sources are: HSR = HSR elapsed time found at Appendix A-3, p. A-3 of the Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue. Metrolink= http://www.metrolinktrains.com/pdfs/Timetables/Metrolink_OC_91_IEOC_timetable.pdf

[196] The Bob Hope, Burbank Airport Code is BUR. Metrolink fares between LA Union and Burbank Airport are found at: http://www.metrolinktrains.com/ticketspricing/pricefinderresults.html?from_station=131&to_station=85&fare_type=adult&viewticketoptions.x=84&viewticketoptions.y=18. Travel time between LA Union-Burbank Airport and LA Union-Palmdale is found at http://www.metrolinktrains.com/schedules/stationtostation/?from=85&weekday=1&to=131&submit.x=58&submit.y=13.

3.7.2 Forecasted Intra-MTC Riders Will Remain Caltrain Riders

Riders – The SFTBT to Millbrae (SFO) rider using HSR is assumed to be willing to pay 3.5times what a Caltrain Baby Bullet rider pays in order to gain two minutes. The difference in annual commuting cost between Millbrae and downtown SF would be $6,656.[197] For teachers or mid-level civil servants earning three-times the state's minimum wage ($10/hour)[198] of $64,200/year; making that commute by Caltrain and saving a non-tax deductible 10% of their gross salary is significant.

Then there's the SFTBT to San Jose, intra-MTC connection. The HSR rider saving 14minutes is assumed to be willing pay 2.5 times the Caltrain Clipper Card rider on the Baby Bullet. The annual commuter using HSR would pay nearly $10,000 more ($9,776) than the Caltrain Baby Bullet commuter.[199] A Psychiatric Nurse in San Jose, being paid $81,000/year[200] would have to think twice about giving up 12% of his/her pre-tax earnings, while a high school teacher in San Jose[201] would give up 15% of his/her pre-tax salary to get to work a bit quicker by HSR.

3.7.2.1 The Nonsensical HSR ride to SFO –

There's also a big problem with using assuming HSR travelers will use the SFTBT-SFO section: namely, there are no mentions in the 2009, 2012, 2014 or 2016 Business Plans for building a dedicated SFTBT to SFO rail line.

If travelers today could take HSR from downtown SF to the airport, they would find the fare to be more than three times the Caltrain fare. They would also find the BART fare half HSR SF-SFO fare.[202]

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[197] Over the course of a 260 day working year, the HSR rider's commute would cost $9,360; the Caltrain rider's $2,704. The difference is $6,656.

[198] Effective January 1, 2016, the minimum wage in California is $10.00 per hour. Found at http://www.dir.ca.gov/dlse/faq_minimumwage.htm

[199] During a 260 workday year, the SFTBT-San Jose Diridon commuter would pay $14,650 using HSR. See: Table 3.1 p. 3-3 [PDF 25] of the Authority's Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting. The Caltrain Clipper Card user on that same sector would pay $4,784. The difference is $9,776. See: Fares from Zone 1 to Zone 4 (or vice versa) found at http://www.caltrain.com/Fares/farechart.html

[200] See: http://www.indeed.com/salary/q-RN-l-San-Jose,-CA.html

[201] The median annual high school teacher salary in San Jose (February 2016) was $67,240. See: http://www1.salary.com/CA/San-Jose/high-school-teacher-salary.html

[202] The one-way 16th & Mission St to SFO fare is $8.90. Found at: https://www.bart.gov/tickets/calculator. The HSR fare is $18.

But the deeper problem would be inconvenience. Having stopped at HSR's first stop south of downtown San Francisco, Millbrae, the HSR traveler would wait, then board a BART train for northbound ride back to San Bruno, wait, then board a southbound BART train back to SFO. It seems probable that few if any travelers would choose HSR over BART that goes directly from downtown SF to SFO.

3.7.2.2 Building HSR North of San Jose Makes Little Commercial Sense –

Once the comparative costs and time advantages of commuting southward from San Francisco are analyzed, it's fair to ask why the Authority plans to offer services along the SF Peninsula. If any guide, Caltrain's daily ridership south of Redwood City plunges a quarter – from about 24,000/day to about 18,000/day from Palo Alto.[203] South of there it's even more miserable, Sunnyvale (38miles south of SF) at about 8,000/day, and San Jose Diridon around 1,000/day. From the commercial point of view a private concessionaire/operator must assume, there's no profit in running HSR trains north of San Jose Diridon: Caltrain offers a cheaper ticket and competitive travel times.

Finally, there's the question of why there's a planned HSR station in Gilroy. Both Caltrain's ridership records and the MTC model show that south of Palo Alto daily ridership plunges. Only three of Caltrain's weekday northbound service starts in Gilroy, and no southbound train ever reaches Gilroy.[204]

3.7.2.3 What value is San Francisco's Central Subway if the HSR train isn't planning to stop there? –

In Phase 1, when The Authority is legally required to go between SFTBT and Los Angeles Union Station[205] in 2hrs 40mins, its 2016 Plan makes no mention of stopping

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[203] See: the California High Speed Rail Version 2 Ridership and Revenue Model, Calibration and Validation Briefing Book, p. 56 [PDF 56] (of AG015004) Cambridge Systematics, January 10th 2014

[204] See: http://www.caltrain.com/schedules/weekdaytimetable.html

[205] AB3034 Section 2704 (b) 2) says "As adopted by the Authority in May2007, Phase1 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."

at the 4th & King station – the subway's terminus.[206] Are our state's transport planners going to allow nearly $2Billion to be wasted if Central Subway passengers can't board a HSRF train at 4th & King? This isn't an erroneous oversight. Construction began in 2010, and the connection from the 4th & King station is scheduled to open in 2019, long before VtoV Ext. or Phase 1 is scheduled to be operational.

3.7.3 Forecasted Intra-SCAG HSR Riders Will Remain Metrolink Riders

– As Figure 4 also shows that the shorter the HSR ride, the higher the fare and the higher the per mile fare. Boarding at Burbank Airport (BUR) the HSR rider will pay four times as much ($27) as the Metrolink passenger ($6.75) to arrive at LA Union 14minutes faster. IF the HSR can go the 62miles between Palmdale and LA Union in 38minutes,[207] an average of 100mph through tunnels and urban areas, the HSR rider paying $33, more than twice (2.3times) the $14.25 paid by the Metrolink rider to save slightly less than an hour[208] (55min).

For a non-reimbursed commuter to pay an extra $7,020-$9,750 per year for the shorter or longer commute respectively, to save an hour a day would to be a questionable decision. For a Los Angeles high-school teacher making $62,460[209] the savings would represent 11-16% of their pre-tax, non-deductible income. For a Grade II carpenter[210], those savings represent 13-18% of their pre-tax, non-deductible income, for an entry level (Grade I)

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[206] Although the Millbrae HSR stop is shown, the 4th & King Station is not shown as a HSR stop during Phase 1 in Figure 3.2, p. 3-2 [PDF 24] of Ridership and Revenue Forecasting, Draft 2016 Business Plan, Technical Supporting Document.

[207] The 62 miles is calculated from graphics on p. 59 [PDF 59] of Version 2 Ridership and Revenue Model, Calibration and Validation Briefing Book, p. 56 [PDF 56] (of AG015004) Cambridge Systematics, January 10th 2014. Consulting travelmath.com says the distance is 63miles, see: http://www.travelmath.com/drive-distance/from/Palmdale,+CA/to/Los+Angeles,+CA

[208] Metrolink train #285 leaves LA Union at 5:35, arrives at Palmdale at 7:08. See: http://www.metrolinktrains.com/pdfs/Timetables/Metrolink_OC_91_IEOC_timetable.pdf

[209] This is the median annual salary for a high-school teacher in Los Angeles. See: http://www1.salary.com/CA/Los-Angeles/high-school-teacher-Salary.html

[210] The median annual Grade I carpenter's salary in LA is $56,092. See: http://www1.salary.com/CA/Los-Angeles/Carpenter-II-salary.html

carpenter[211], the savings represent 16-22% of that income. Lower and middle income Angelinos, who benefit from the subsidized Metrolink fares are very unlikely to rank the convenience of time saved over savings on their commuting costs.

3.7.4 HSR Won't Become the San Joaquin Valley (SJV) – Silicon Valley (SV) Commuter Train – The 2016 Plan positions HSR as a 3Million rider/year [212] mode to connect Silicon Valley's (SV) thriving economy to the un-or-underemployed of the San Joaquin Valley (SJV). [213]

> *". . . a trip from Fresno to San Jose will take about an hour on high-speed rail which is a game changer . . . New job markets will be opened up for people living in the Central Valley . . ."* [214]

But the Authority's headline parses the truth: it doesn't compare HSR commuting's door-to-door times or costs with autos or ridesharing.[215] While the Authority's 'headlines' claim sounds beneficial to SJV and SV residents, the reality is the reverse.

The Authority's 2016 Plan's general access (25min) and egress times (25min)[216] must be added to HSR travel times between the Fresno and San Jose HSR stations to get to that new job. Adding those 50minutes to the

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[211] The median annual Grade I carpenter's salary in LA is $43,649. See: http://www1.salary.com/CA/Los-Angeles/Carpenter-I-salary.html

[212] See: Table 6.3, p. 6-5 [PDF 41] of the California High-Speed Rail 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting

[213] Again the reality does not match the headline. Page 12 [PDF 12] of the California High-Speed Rail Draft 2016 Business Plan says, *"With this new connection, a trip from Fresno to San Jose will take about an hour on high-speed rail which is a game changer both for the people and the economy of the Central Valley and for Silicon Valley as well. New job markets will be opened up for people living in the Central Valley and creating a high-speed connection to the Central Valley would help address the affordable housing crisis in the Bay Area." However,* AB3034, 2704.09 (i), says, *"The high-speed train system shall be planned and constructed in a manner that minimizes urban sprawl and impacts on the natural environment."* By supposedly creating a more affordable housing area for Silicon Valley employers, the Authority is violating AB3034.

[214] See: p. 12 [PDF 12] of the California High-Speed Rail 2016 Business Plan.

[215] This seems to have been a concern of RTAP, expressed on p. 4 [PDF 5] of their May 17, 2014 Findings and Recommendations from the October 2014-January 2015 Review Period

[216] Table 7.4 [PDF 64] of the California High-Speed Rail Draft 2014 Business Plan Ridership and Revenue Forecasting—Draft Technical Memorandum

72minute HSR journey between Fresno and San Jose,[217] the door-to-door travel time to the *"New job markets"* doubles to two hours (2.03hrs). Driving that particular route takes 2.5hours,[218] but CV towns with shorter driving times to SV, like Los Banos[219] (1hr 22min), Chowchilla, Madera and Merced (±2hrs)[220] are already rapidly growing SV bedroom communities.

Figure 5
VtoV and VtoV Ext. HSR Fares vs. Driving Costs-San Joaquin Valley to San Jose)

	One-way, one person HSR Fares [221]	Annual fare (one person-260 days)	One-way, One Person Driving Costs [222]	Annual driving $s (one person-260 days)	Annual one person, shared-ride[223] cost [224]
[225] **Merced**	$56	$29,120[226]	$13	$6,760	$2,704
Fresno	$63	$32,760	$17	$8,840	$3,536

The Authority's headline also fails to mention SJV-SV commuters' costs. The above table shows that a daily HSR commute cost about 4.5times the auto driver's commute between San Jose and one of the two SJV cities. Even using the Authority's auto operating expenses, roughly double those in the table, a HSR commute is still more than twice an auto driver's costs.

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[217] See: p. A-2 [PDF 60] of the California High-Speed Rail 2016 Business Plan.
[218] See: http://www.travelmath.com/driving-time/from/Fresno,+CA/to/San+Jose,+CA
[219] See: http://www.travelmath.com/driving-time/from/Los+Banos,+CA/to/San+Jose,+CA
[220] See: http://www.travelmath.com/driving-time/from/Merced,+CA/to/San+Jose,+CA
[221] See Table 3.1, p.3-3 California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting
[222] The costs of driving using http://www.travelmath.com are based on gasoline costs as of early 2016 as HSR fares are based on 2015 $s. Using the Authority's formula for driving costs approximately doubles those costs. But the 'fuel only' to HSR fare comparison is accurate for the VtoV Ext. period, because the Authority's plans also do not include rolling stock replacement costs. For the costs of driving Merced-San Jose see http://www.travelmath.com/cost-of-driving/from/Merced,+CA/to/San+Jose,+CA For the costs of driving Fresno-San Jose see: http://www.travelmath.com/cost-of-driving/from/Fresno,+CA/to/San+Jose,+CA
[223] The Authority found, and William Warren's comments on the 2016 Plan concur that the average load per shared ride vehicle is 2.5persons.
[224] The Authority's 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting. p. 2-1 [PDF 21] says, *"The model also includes an adjustment to divide auto costs by an assumed average auto occupancy of 2.5 for those who travel in groups."* Therefore dividing auto-driving costs by 2.5 is logical for this analysis.
[225] For illustrative purposes only: during IOS the HSR train does not operate to or from Merced.
[226] Does not include transport costs to and from the Merced or Fresno station.

By definition, most Silicon Valley (SV) jobs that pay enough to afford SV's expensive housing are highly skilled, managerial or executive jobs. If San Joaquin Valley (SJV) residents had those incomes, they would not commute to SV; therefore most SJV-SV commuters are middle class, lower-paid and budget-conscious.

The Authority wants nearly a quarter (23.4%) of its 12.8Million VtoV Ext. riders[227] to make that SJV-SV trip, but when fares and the costs of driving alone or ridesharing are compared, that argument becomes a chimera.

3.7.4.1 Empirical Examples Deflate the Authority's SJV-SV Headline Claim –

Not counting the costs of getting from the San Jose Station to the workplace, even a Merced resident whose gross income is $62,400 (more than three times California's minimum wage) would pay half (47%) of his/her pre-tax income for an HSR commute to and from San Jose: a Fresno colleague, over half (53%).

A lower income Merced commuter, earning $41,600 (twice California's minimum wage) would pay three-fifths (70%) of their annual income to commute to SV, while a Fresno colleague's annual HSR fare would take nearly four-fifths (79%) of his/her pre-tax income. This seems irrational behavior and consumers, particularly low and moderate-income consumers presented with other choices for the same or similar service, are not irrational for long.

Likewise, why would a Registered Nurse in Fresno, with gross annual earnings three times minimum wage ($62,000)[228] or an administrative support worker there, grossing twice California's minimum wage ($35,460)[229] choose to commute to SV? Commuting costs are not tax deductible, so why

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[227] See: Table 6.3, p. 6-5 [PDF 41] of the California High-Speed Rail 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting
[228] See: http://www.indeed.com/salary/q-RN-l-Fresno,-CA.html
[229] See: http://www.bls.gov/oes/current/oes_23420.htm#43-0000

not stay in Fresno and not face the door-to-door transit time or HSR's expensive commute?

3.7.4.2 Ridesharing, Not HSR, Is The Real Benefit For SJV's Middle and Lower Income Workers To Get To SV – While door-to-door commute times during IOS between Fresno and San Jose are about equal, by contrast, a Fresno-based driver alone would pay about one-fourth (27%) of the HSR commute to and from San Jose, and a Merced-based driver alone would pay about one-fifth (23%) of the HSR costs to drive door-to-door.

But the real auto or van commuting cost advantage comes today and tomorrow by auto-or-van-pooling. As Figure 5 shows, commuting together from Merced or Fresno would cost each occupant $10-12 per working day; less than a tenth (9-9.5%) of the HSR door-to-door commuting cost. A shared ride's cost makes it feasible for even construction helpers in Fresno, earning $14-16/hr.[230] to take advantage of another SV construction boom, as they did before 2008 and have in recent years. Workers earning $33,000/year are unlikely to travel by HSR from Fresno to and from San Jose if their only option costs nearly all of their annual salary.[231]

HSR is not the panacea for creating even a small number of SV jobs for SJV residents, mainly because the markets in the distinctly different economies have already sorted out how workers living in SJV can commute to SV. The claim that the presence of HSR starting in 2025 will create 3million MTC-SJV riders/year rings hollow and comes from calibrated computer models, not a comparison of empirical evidence.

3.7.5 The Authority's Fares Are A Disincentive To Present-day Amtrak (SJV) Riders To Use HSR – In 2008, the Authority admitted

[230] See: http://www.bls.gov/oes/current/oes473015.htm
[231] See Annual mean wage of $28,450 for building equipment contractors in http://www.bls.gov/oes/current/oes473015.htm

that its San Joaquin Valley operations will need a subsidy.[232] When IOS is introduced, per mile rail fares will increase dramatically after San Joaquin fares are discontinued and The Authority eliminates Amtrak's subsidized San Joaquin Valley (SJV) route. [233]

> *"Note that the existing San Joaquin service south of Merced to Bakersfield is assumed to be discontinued upon the initiation of HST service."*[234]

Fare costs per mile on anything less-than-SF-LA tickets drastically increase present day Amtrak-subsidized[235] per mile fares.[236] In 2012, HSR fares for Merced-Visalia ($48) and Merced-Bakersfield ($63) were 100-150% higher than Amtrak's Value Fares of $22.50 for the first[237] and $26 for the second trip. By 2014 HSR fares on Merced-Visalia ($50) and Merced-Bakersfield ($65) were 120-180% higher than today's Amtrak fares.

As Figure 6 shows, in 2016's Plan, the HSR fare from Merced to the stop nearest Visalia (Kings/Tulare) costs $52; and between Merced- Bakersfield costs $67, making the 2016 HSR fares 130-150% of Amtrak's present day fares. Figure 6's per mile comparison reinforces this conclusion: HSR fares/mile are 60-130% higher than present day Amtrak for both the longest route (SF-Anaheim) and intra-San Joaquin Valley routes.

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[232] California High-Speed Train Business Plan, November 2008.p. 25 [PDF 29] *"In many cases, such segments are projected to be "self supporting over time and not require an ongoing operating subsidy."*

[233] The average operating costs of the CA Amtrak lines is $45¢ per passenger mile, while the average fare is 21¢ per passenger mile. See: To Repeat, The Authority's' Train Will Need A Subsidy Forever, July 2012, page 20. Found at: www.sites.google.com/site/hsrcaliffr

[234] See: Cambridge Systematics' (CS) final technical memorandum of Ridership and Revenue Forecasting of April 12, 2012, Section 5.2, page 5-5 [PDF pg. 37]

[235] In 2009 the average fare for the three California Amtrak lines was 21¢ per passenger mile (PPM), while the average operating and maintenance cost for the three was about 45¢ PPM. The subsidy to each San Joaquin line ticket averaged 46% – nearly half what it cost to run that train along that route: See: 'FN 107, page 39 in To Repeat: The Authority's Train Will Need A Subsidy Forever. Found at: www.sites.google.com/site/hsrcaliffr

[236] As pointed out in a 2014 report, this creates a hidden subsidy for travelers between the metropolitan centers. The $50 promise of a one-way fare for the 381miles between the centers of SF and LA would have cost 13¢/mile; 2012's $83 would have cost 22¢/mile; 2014's $86 would have been 23¢/mile, while 2016's $89 fare would be 24¢/mile. See: William Grindley and William Warren; Fleecing Local Riders While Big City Executives Rider Cheaper; January 29, 2014; Figure 2 and Figure 3. Found at; www.sites.google.com/site/hsrcaliffr

[237] For Merced-Visalia, see: https://tickets.amtrak.com/itd/amtrak

Figure 6 **Comparisons Of HSR and Amtrak San Joaquin Valley Fares** (based on 2016 Plan, Table 3.1 and Amtrak's Fare Schedules)						
	Fare in $s SFTBT-Anaheim	**¢/mile of SFTBT-Anaheim fare[238]**	**Fare in $s Merced-Visalia [239]**	**¢/mile of Merced-Visalia fare [240]**	**Merced – Bakersfield fare**	**¢/mile of Merced - Bakersfield fare [241]**
HSR Fares [242]	$89	24¢/m	$52	56¢/m	$67	40¢/m
Amtrak Fares [243]	$59[244]	15¢/m	$22.50	24¢/m	$26	16¢/m

This drastic uplift in fares is a serious financial disincentive for San Joaquin Valley residents to ride the HSR during the IOS or afterwards.[245] Presently travelers take a subsidized train ride to Bakersfield, and change to a 2-hour 10minute Amtrak bus over the Tehachapi's to LA's Union Station, also part of their subsidized trip. When VtoV/VtoV Ext. opens, The Authority's fares and busses take over.

If the Authority's train ride is considerably more expensive in the San Joaquin Valley, and can't offer a time convenience incentive, how can the Authority assume HSR during the IOS offers San Joaquin Valley residents any incentive to abandon their auto, trucks or shared rides. Travellers will vote with the pocketbooks, and use modes such as ride sharing, buses or jitney services.

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[238] Based on 381 miles. Found at http://www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Los+Angeles,+CA

[239] In 2016, the kings/Tulare station was substituted for the Visalia station.

[240] The 98 miles between Merced and Visalia is found at http://www.travelmath.com/drive-distance/from/Merced,+CA/to/Visalia,+CA

[241] The 164 miles between Merced and Bakersfield is found at http://www.travelmath.com/drive-distance/from/Merced,+CA/to/Visalia,+CA

[242] From: Table 3.1 [PDF 25] of the Authority's Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting

[243] Amtrak's pull-down website for individual, point-to-point fares is at: https://tickets.amtrak.com/itd/amtrak

[244] Requiring two bus rides over 10hours of travel, the SFTBT-LA Union Amtrak fare is found at https://tickets.amtrak.com/itd/amtrak

[245] For a detailed discussion about the depth of subsidies on California's passenger rail lines, compared with what the Authority intends to charge, see 'To Repeat: The Authority's Train Will Need A Subsidy Forever' August 22 2012. For a discussion on revenues see pp. 20. For discussion on operating costs see pages 27/28. Found at: www.sites.google.com/site/hsrcaliffr. Appendix 10 (starts on page 186) deals specifically with the operating economics of Amtrak's San Joaquin route.

For the Authority to assume it will capture any visible percent of the present day Amtrak San Joaquin riders is unreasonable.

3.8 Shared Rides Always Defeat The Choice of HSR Fares – If travelers are rational in their transport mode choice, The Authority will not gain much any share of the families traveling by auto or commuters sharing rides (paid for or not) of the intra-California's travel market.

Auto distance between SF and LA's centers is 381miles.[246] An unbiased website says auto costs of that journey is slightly less than $43[247] or 11¢ per mile. If it is an average California household of 2.90persons[248] traveling, the cost per traveler is less than $15 ($14.82) or less than 4¢ a mile. The Authority claims that autos' per mile total costs in 2025 and 2029 should be 26¢/mile.[249] Doing the math of this claim shows a single driver between SF and LA's centers will pay about $100 ($99.06) to make the journey. That makes the per person costs of average California household $34 ($34.15) or 12¢ per mile.

By contrast, the one person, one-way ticket between SFTBT and LA Union is $89. Instead of a $43 or $100 cost the California household will pay $258 to use HSR between SF and LA's centers. That's a 'no-brainer' for rational traveling households.

What is shared ridership's impact on The Authority's forecasts for its two most important inter-regional travel routes in the 2016 plan, – MTC-SJV and

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[246] See http://www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Los+Angeles,+CA

[247] On March 26th 2016, that one-way cost is $42.18. The day before it was $42.50, so bias doesn't enter into portraying current auto driving costs. See: http://www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Los+Angeles,+CA

[248] See https://www.census.gov/newsroom/releases/archives/2010_census/cb11-cn137.html

[249] See Table 4.4, p. 4-4, [PDF 31] of the California High-Speed Rail 2016 Business Plan, Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Support Document

MTC-SCAG? The Authority notes there are 43Million MTC-SJV annual trips.[250]

> *"The MTC to San Joaquin Valley market is also dominated by autos, which are forecasted to carry about 93 percent of the overall demand . . . because high-speed rail is not as competitive in shorter-distance markets where autos are the dominant mode."*[251]

After this statement and the previous pages' review of the lack of comparative reasonableness of HSR fares in the SJV-SV market, it's proper to ask how the Authority can forecast 3Million MTC-SJV annual riders for the VtoV Ext. period.[252]

The math tells that about 40Million (39.9M) of those MTC-SJV trips are by auto. A recent analysis determined that about two-thirds (64%) of all auto trips are multiple passenger, ride sharing trips with an average of 2.5 persons/vehicle.[253] Using that ratio, shows that about 26Million annual trips (25.6M) are shared rides of one form or another. If each those shared rides reflect an average of 2.5passengers per, nearly 64Million (63.9M) passengers are transported annually from the Bay Area to the San Joaquin Valley (MTC-SVJ). Those ride-sharing travelers are lost to the Authority.

The remaining 36% of the 40Million annual MTC-SJV trips (14.4Million) might be considered a target market for the Authority if it were not for the stark comparison of the small, time inconvenience versus the large cost differences. For example, to gain a half-hour each way using HSR during IOS, the Fresno – HSR's first SJV stop outside MTC during VtoV Ext. – the single person traveler would have to pay HSR's one-way ticket of $63 versus

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[250] See p. 6-3 [PDF 39] of the California High-Speed Rail Authority, 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting
[251] See p. 6-3 [PDF 39] of the California High-Speed Rail Authority, 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting
[252] See Table 6.3. p. 6-5 [PDF 41] of the California High-Speed Rail Authority, 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting
[253] *"What is striking is that these conclusions show that the mix of people in the auto market place are: 1) 36% in a car with just a driver, at a cost of 28 cents per mile, and 2) 64% are in cars that have an average of 2.5 people per car, with an average cost of about 11 cents per mile."* See p. 2, William H. Warren, Comment Regarding Draft 2016 Business Plan, Topic – Ridership Model Auto Group Factor Maybe Overstating Auto Market March 28, 2016.

an out-of-pocket driving cost of $14.[254] Few, if any auto users are likely to choose this option.

The Authority also notes there are 21Million annual MTC-SCAG trips. The Authority's fares must compete with driver-only or rideshare auto travel costs about $43, or 11¢/mile.[255] Even using the 'ceiling fare' of $89 (2016), a one-way SCAG-MTC HSR rider will pay twice what the auto driver pays, and not experience the inconvenience or anxieties of changing between CVR, HSR and dedicated busses (or reverse) between 2025 and 2029. Very few single passenger auto drivers are likely to defect to HSR under that scenario.[256]

IF the Authority raises its '83% of airfare' fares to reflect real world conditions[257] why would any driver defect during the IOS North (aka. VtoV Ext.) the Authority's fares would be 45¢-72¢ PPM as shown in Figure 1,

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[254] Comparing only an auto's operating cost per mile to a HSR rail fare per mile during the IOS is valid because like auto owners thinking only of costs, The Authority's calculations carry no capital cost amortization and defer maintenance and replacement costs until after IOS. Also according to The Authority's consultants, Cambridge Systematics: *"travelers will rarely consider the full range of auto operating costs in their trip decisions"* and that they tend to *"consider their cost of [automobile] travel to be only their out-of-pocket gas costs."* See Cambridge Systematics (2008), *Desert Xpress Ridership Forecast Review,* p. 17, Steer Davies Gleave, *Ridership and Revenue Audit,* page 5, Federal Railroad Administration, Final Environmental Impact Statement, Appendix B, http://www.fra.dot.gov/downloads/rrdev/Appendix_B_Ridership_Forecast_Review.pdf. Cited in the 2013 Reason Foundation Report, An Updated Due Diligence Report; Joseph Vranich, Wendell Cox and Adrian Moore, Ph.D. Found at: http://reason.org/files/california_high_speed_rail_report.pdf

[255] For the 381miles between the downtowns, see http://www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Los+Angeles,+CA. For the cost of driving that 381miles for $42.50, see: http://www.travelmath.com/cost-of-driving/from/San+Francisco,+CA/to/Los+Angeles,+CA

[256] Using the Authority's 25minute access time to the first station, the following were computed as the door-to-LA Union travel times: 1) SJ-Oakland-LA Union via ACE and Amtrak –3 changes, 10 stops, 8hours 15minutes (495minutes), 2) Oakland (Amtrak to Stockton) - 3 changes, 13 stops, 8 hours (474minutes), 3) SFTBT to LA Union via San Jose – 3 connections and 6 hours (360minutes), 4) San Jose to LA Union – 2 connections, 5 hours (300minutes). Only the SJ-LA Union trip takes less time (8 minutes shorter) than driving. Not counting the BabyBullet, Amtrak or ACE train fares, the costs of using the VtoV Ext. services, including HSR is a minimum of 2.5 times the cost of driving.

[257] Although not officially adopted for the Draft 2016 Plan, an adjunct technical document explores raising San Jose to N. of Bakersfield fare from $83 to $106: the 2029 SFTBT-LA Union fare from $89 to $113, and the 2040 SFTBT-LA Union fare from $89 to $167. This change would likely bring about not only calls of 'bait and switch' but more importantly would doom the HSR train's ability to compete against airfares. See: Table 3.3, p. 3-9 [PDF 27] of the Draft 2016 California High-Speed Rail Business Plan Ridership and Revenue Risk Analysis

versus airfares of 32¢-36¢ PPM. Both airline and HSR public carrier transport require arriving at a terminal, purchasing a ticket, then to get from SCAG to MTC, riding a bus, then HSR, then conventional rail (CVR). Once a traveler weighs the real door-to-door times and includes the dedicated bus missing a HSR connection time and the possible hassle of non-courteous staff, the luster of the first high-speed rail ride disappears.

3.9 Conclusion: The Authority's Fares Guarantee Its Financial Failure – The Authority has set up it's own financial failure whether or not it follows AB3034's financial viability stricture and raises fares to commercially profitable levels. If it proceeds, the use of its present estimated fares will thwart any private sector investment or bankrupt the operator. If it raises fares to cover real, not imaginary Operations and Maintenance (O&M) costs, HSR fares will not be competitive with airfares. The Authority designed this fatal flaw in 2008, when the Legislature required the HSR system to not require an operating subsidy. Some details:

– The Authority's Procrustean Bed for SFTBT-LA Union/Anaheim fares – '83% of airfares' – is the maximum an HSR fare can be. In 2016, that's $89 or 28¢ per passenger mile (PPM). A third of all HSR fares are constrained by this formula. As Figure 1 makes clear, IF the Authority's fares reflected EU or Acela's PPM fares, 45¢-72¢ PPM, HSR can't compete with airfares.

– The Authority eliminates subsidized Amtrak fares in the San Joaquin Valley (SJV). The new 100%-150% higher than Amtrak point-to-point fares, and higher fares per passenger mile (PPM), are strong disincentives for SJV travelers to use HSR.

– As Figure 4 shows, the Authority's fares in the SF Bay Area (MTC) are more than double Caltrain's Baby Bullet. The HSR rider between Palmdale and LA Union will pay more than twice that paid by the Metrolink rider. HSR cannot compete with Caltrain's or Metrolink's. Period.

– Three million riders[258] nearly a third of all IOS (VtoV Ext.) riders are expected to commute between SJV and SV at one-way fares ($63) that are nearly five times the costs of driving ($14) between Fresno and San Jose. Given the evidence, that's unrealistic to the point of being absurd.

– By 2008, the Authority knew the competitive out-of-pocket costs of driving forbade their ability to get some if any drivers, and no rideshare passengers to defect to high-speed rail during any of its phases.

– By 2012, it knew its arbitrary[259] '83% of airfare' formula had to compete for airline passengers in a stagnant SF Bay Area-LA Metropolitan Area market.

These relative costs-of-travel-by-mode facts were ignored, in the blind hope that its modelers would produce convincing enough forecasts that would keep the project's construction alive until it became too late to halt.

[258] Total VtoV ridership is forecasted at 12.8Million; MTC-SJV ridership is 3Million of that. See Table 6.3. p. 6-5 [PDF 41] of the California High-Speed Rail Authority, 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting

[259] The 83% is arbitrary because, starting with the 2008 Plan, the potential of a 50% or 70% of airfares formula had been analyzed and discarded.

SECTION 4

THE AUTHORITY'S RIDERSHIP FORECASTS FLY IN THE FACE OF ITS FARES' LACK COMPETITIVENESS

This section focuses again on the formula, Revenues (= Fares x **Ridership**), when greater than (>) Total[260] Operations and Maintenance (O&M) Costs equates to Positive Operational Cash Flow (Profitability or Financial Viability). It analyzes evidence to find whether the Authority's ridership forecasts seem authentic when compared with historical and empirical data.

4.1 Where Exactly Does The Authority Think Riders Will Come From? –

How is the Authority to attract and grow ridership by over 16% per year (35Million) in the 11 years between 2028 (7.3Million) and 2040 (42.2Million)?[261] Its commissioned RP/SP surveys show 16% less interest to ride HSR than a decade ago;[262] while in those same surveys driving increases it share of trips at least 14%.[263] The premise of taking market share from auto travel seems futile. Nearly all of the 21Million metro center-to-metro center trips (MTC-SCAG)[264] are made by auto. But according to the 2016

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[260] The word 'Total' is used here because the US DOT, uses Generally Agreed Accounting Principles (GAAP) guidance, and requires all revenues and costs be in a single account.

[261] See Table 6.3, p. 6-6, [[PDF 42] of Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document. The year 2028 is the last year of IOS (VtoV Ext.) operations and therefore the "mature ridership

[262] Table 1.1 of Cambridge Systematics, California High Speed Rail Ridership and Revenue Forecasting, Survey Data and Inputs to Version 2/Version 3 Preliminary Choice Patterns and Traders/Non-traders; Prepared for California High Speed Rail Authority and Ridership Technical Advisory Panel, March 20, 2014. This document contrasts findings of the 2013/2014 RP/SP versus the 2005 survey.

[263] Table 1.1 of Cambridge Systematics, California High Speed Rail Ridership and Revenue Forecasting, Survey Data and Inputs to Version 2/Version 3 Preliminary Choice Patterns and Traders/Non-traders; Prepared for California High Speed Rail Authority and Ridership Technical Advisory Panel, March 20, 2014. This document contrasts findings of the 2013/2014 RP/SP versus the 2005 survey.

[264] *"The lower high-speed rail mode share in the MTC to San Joaquin Valley market is partially explained by the size of the market, which has about twice the number of total person trips as MTC to SCAG (43 vs 21 million). The MTC to San Joaquin Valley market is also dominated by autos, which are forecasted to carry about 93 percent of the overall demand."* See: p. 6-3 [PDF 39] California High-Speed Rail Authority, Draft 2016 Business Plan: Technical Supporting Document

ridership report, 42% or 9Million (8.99M) of those auto travelers are to defect to HSR in 9-to-12 years during IOS North.[265]

Simultaneously, a separate Authority consultant's report[266] showed an intra-California air passenger market stagnant at about 10Million passengers between southern California airports and the SF Bay Area airports.

Given the many disadvantages California HSR faces, both admitted to by the Authority and found in their consultants' surveys, meeting the Pollyannaish ridership and revenue forecasts will be tough enough. As a start-up company, competing with established providers whose market shares have been fixed for decades, the Authority's HSR offerings face the even more daunting task of convincing travelers to abandon their autos in the face of survey evidence to the contrary, while simultaneously *"squeezing blood from the turnip"* to capture a share of the stagnant airline ridership figures.

4.2 Historical Evidence Should Induce Extreme Caution In Agreeing With Ridership Forecasts – Several major studies have concurred that rail ridership demand is always inflated. First, World Bank financiers documented HSR promoters' propensity to overestimate demand.

> *"High-speed projects have rarely met the full ridership forecasts asserted by their promoters, and in some cases have fallen woefully short."*[267]

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[265] Both page 5-8 [PDF 52] of the California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting and Table 6.3 [PDF 41-42] of Ridership and Revenue Forecasting; Draft 2016 Business Plan: Technical Supporting Document show IOS ridership as 12.8Million, although the 2012 figure is a high estimate, while the 2016 estimate is supposedly a Medium Level Scenario. Page 5-8 of the 2012 report gave sources of IOS riders, auto, air and CVR. The 2016 Draft Plan gave no sources; i.e. no estimate of how many travelers were to defect from their present mode to HSR.

[266] See: Table 1, p. 10 [PDF 116] Appendix B, Potential Airline Response to High-Speed Rail Service in California, prepared by Aviation System Consulting LLC, for Cambridge Systematics, Inc. Found in California High-Speed 2012 Business Plan, Ridership and Revenue Forecasting, final technical memorandum, April 12, 2012.

[267] A World Bank study: Paul Amos, Dick Bullock and Jitendra Sondhi; World Bank Report No. 55856; July 2010; pg.14

Second, the Authority's 2012 Plan cited Bent Flyvbjerg,[268] the doyen of megaproject analyses, who in 2003 described overestimated demand for the privately operated Eurostar,[269] and also said,

> *". . for two-thirds of the rail projects, forecasts are overestimated by two-thirds; . . on the average by 65 percent . . a massive and highly significant problem."* [270]

A 2005 Flyvbjerg study of rail projects' inflated demand forecasts concluded:

> *"Rail passenger forecasts were overestimated by an average of 105.6% . . . resulting in actual traffic that was on average 51.4% . . lower than forecasted traffic . ."* [271] and *" Furthermore, for a quarter of the projects, ridership was at least 70 percent lower than estimated."* [272] and *"Rail passenger forecasts are as inaccurate—that is, inflated—today as they were 30 years ago. . ."* [273]

Third, twenty-six years ago a DOT transit forecasting study found that

> *Ridership forecasts always tended to be high, while capital and operating costs almost always tended to be low. The net effect is that actual costs per passenger tended to be much higher than forecast, sometime as much as an order of magnitude."* [274]

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[268] California High-Speed Rail Authority, Revised 2012 Business Plan, p. ES-15 [PDF 23]

[269] See p. 22, Flyvbjerg, Bent; Bruzelius, Nils and Rothengatter, Werner: Megaprojects And Risk, An Anatomy of Ambition; Cambridge University Press, 2003. In 1994 Eurostar HSR was projected to carry 15.9Million passengers its opening year: the reality was 2.9Million, 18% of the prediction. Six years after operations started in 2001 Eurostar carried 6.9Million, 43% of the prediction.

[270] See: Megaprojects and Risks: An Anatomy of Ambition, Bent Flyvbjerg, Cambridge University Press, 2003 page 26

[271] p. 133 [PDF 3], Bent Flyvbjerg, Mette K. Skamris Holm, and Soren L. Buhl; How (In)accurate Are Demand Forecasts in Public Works Projects? The Case of Transportation; Journal of the American Planning Association, Vol. 71, No. 2, Springe 2005. Found at: http://flyvbjerg.plan.aau.dk/Traffic91PRINTJAPA.pdf

[272] See: Bent Flyvbjerg, Massimo Garbuio, Dan Lovallo; California Management Review, Vol. 51, No. 2, Winter 2009. Delusion and Deception in Large Infrastructure Projects: Two Models for Explaining and Preventing Executive Disaster. Downloaded from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2229781

[273] p. 138 [PDF 8] Bent Flyvbjerg, Mette K. Skamris Holm, and Soren L. Buhl; How (In)accurate Are Demand Forecasts in Public Works Projects? The Case of Transportation; Journal of the American Planning Association, Vol. 71, No. 2, Springe 2005. Found at: http://flyvbjerg.plan.aau.dk/Traffic91PRINTJAPA.pdf

[274] Citing Donald H. Pickrell, *Urban Rail Transit Projects: Forecast vs. Actual Ridership and Costs*, U.S. Department of Transportation, Urban Mass Transportation Administration report (U.S. Government Printing Office, Washington, D.C.,1990). *"The US Department of Transportation issued a report (Pickrell, 1990) comparing the actual ridership and costs for when rail service starts to the forecast values used to justify these investments . . . Ridership forecasts always tended to be high, while capital and operating costs almost always tended to*

Fourth, academic authors studying worldwide HSR systems cited demand forecasts' inflation with specific examples.

> *". . ridership projections have been overly optimistic in most countries with operating HSR, particularly in China, Spain. . Italy . . Taiwan . . and Korea . ."* and *"The number of HSR passengers in the Madrid-Barcelona corridor in 2011 (the fourth year in which the service was operating), has still only reached 70 - 75% of demand forecasts."*[275]

Other authors have directly cited the Authority's overestimated demand forecasts.

> *". . . the 2035 interregional ridership would be 77% below the CHRSA forecast . . . Additional factors could lead to a larger gap between the forecasts and actual ridership . ."*[276]

In 2011 the Peer Review Group (PRG) recommended that the Authority ask its forecasting consultants, Cambridge Systematics (CS), to make

> *"Comparisons of forecasted ridership to actual ridership on HSR systems in other parts of the world . ."*[277]

Warning flags about the history of inflated rail ridership forecasts have been available to the Authority for at least thirteen years; yet they continue to claim their ridership forecasts solidly underpin their project's financial viability. The Authority chose to ignore this 'deep and wide' history of overestimated demand in rail projects.

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be low. The net effect is that actual costs per passenger tended to be much higher than forecast, sometime as much as an order of magnitude." Found at PDF 5, in Ten myths about US rail transit systems, Transport Policy 6 (1999), by Thomas Rubin, James Moore and Shin Lee. Found at: http://reason.org/files/8b6432296d935e9975583a74608c93bd.pdf

[275] Chuyuan Zhong, Germà Bel, and Mildred Warner: High-Speed Rail Accessibility: What Can California Learn From Spain? 2013, page 2 and p. 7 Found at: http://mildredwarner.org.s3.amazonaws.com/2012/09/20/Zhong_Bel_Warner_HighSpeedRail_2012-b19b0817.pdf

[276] *"Assuming realistic automobile costs and more plausible outside-the-corridor ridership, the 2035 interregional ridership would be 77% below the CHRSA forecast . . . Additional factors could lead to a larger gap between the forecasts and actual ridership such as slower population growth and excessive air travel delay bias in forecasts."* See: pg.4 [PDF 4] California High Speed Rail: An Updated Due Diligence Report; Reason Foundation, March 2013, Joseph Vranich and Wendell Cox Project Director: Adrian T. Moore, Ph.D.

[277] See: FINAL REPORT of the Independent Peer Review of the California High-Speed Rail Ridership and Revenue Forecasting Process: Findings and Recommendations from the January-March, 2011 Review Period; July 22, 2011.

In 2008 a non-profit organization concluded the Authority's demand forecasts to be three times reasonable calculations.[278] In 2010, a CA Senate-authorized review found the Authority's ridership and revenue forecasts unreliable:[279] that same year independent analysts concluded ridership forecasts were far too optimistic.[280] World Bank financiers also found 'optimism bias' in high-speed rail forecasts.

> *"A whole new area of behavioral research has been generated by the phenomenon of over-forecasting in transport, known as 'optimism bias'* [281]

In 2011 years ago the Legislature's watchdog, the Peer Review Group (PRG), noted that the Authority's IOS forecasts were not verifiable,[282]

> *". . many of the internal workings of the model, especially as applied to the IOS and Bay to Basin scenarios, remain unclear."*

Within months, the PRG again warned the Authority on the history of overestimated demand.[283]

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[278] Table 24 pg.140 [PDF 163] of the 2008 Reason Foundation Report, A Due Diligence Report; Joseph Vranich, Wendell Cox and Adrian Moore, Ph.D. shows that the Authority forecasted 96.5Million Phase 1 riders, whereas the authors estimated less than a third (31.0Million). Found at: http://reason.org/files/california_high_speed_rail_report.pdf: Seven years later, Table 7.2 [PDF 60] of the California High-Speed Rail Draft 2014 Business Plan Ridership and Revenue Forecasting—Draft Technical Memorandum has a Mid-Range ridership forecast of 33.1Million; only 6% more than the Reason Foundation authors.

[279] The Institute for Transportation Studies (ITS) Berkeley was skeptical about the Authority's ridership demand. ""*The forecast of ridership is unlikely to be very close to the ridership that would actually materialize . . .we have found some significant problems that render the key demand forecasting models unreliable for policy analysis."* See: Review of "Bay Area/California High-Speed Rail Ridership and Revenue Forecasting Study" David Brownstone, Mark Hansen and Samer Madanat; June 30, 2010 page 2 [PDF 3], found at: http://www.its.berkeley.edu/publications/UCB/2010/RR/UCB-ITS-RR-2010-1.pdf

[280] See page ES-15 [PDF 23] and [PDF 131] of the Revised 2012 Business Plan (April 2012) that cites Megaprojects and Risks and says, *"This report found that a common element in projects that failed to reach forecast results was an optimistic assumption of a particular event that would lead to higher ridership."*

[281] See Paul Amos, Dick Bullock and Jitendra Sondhi; World Bank Report No 55856; July 2010; pg.14. Found at: http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2012LibraryCh3Fast_Track_Dev.pdf

[282] Commenting on the Draft 2012 Plan's (November 2011) demand forecasts, PRG said, ". . *many of the internal workings of the model, especially as applied to the IOS and Bay to Basin scenarios, remain unclear."* See: Letter from the California High-Speed Rail Peer Review Group, Will Kempton, Chairman, January 3, 2012. Found at: www.cahsrprg.com. Page 5

[283] Then PRG said about the Revised 2012 Plan, *"Even so, virtually all initial rail passenger forecasts, including HSR, have turned out to be optimistic, with actual demand averaging about 60 percent of forecast and an unusually wide range of errors from projections."* See pg.7, Letter from the California High-Speed Rail Peer Review Group, Will Kempton, Chairman; May 18, 2012; found at: www.cahsrprg.com

> *"Even so, virtually all initial rail passenger forecasts, including HSR, have turned out to be optimistic, with actual demand averaging about 60 percent of forecast and an unusually wide range of errors from projections."*

As with authors citing empirical evidence[284] the Authority chose to ignore its own independent advisory group. One must question why the Peer Review Group exists, and warn this arbitrary demand forecasts can only end in tears.

4.3 Why Did The Authority Trade A Much Larger Potential IOS Ridership Market For A Market One-Third Its Size? – The Authority's November 2011 Draft Plan noted that it selected IOS-South because:

> *"The IOS-South has stronger projected ridership and net operating profits when compared to the IOS-North."* [285]

Five months later the rationale for an IOS South choice was repeated.

> *"The LA Basin-Bay Area is the most consistent market with the highest HST ridership across all scenarios (Tables 5.6 and 5.7) ranging from 1.2 million per year on the IOS scenario to 5.6 million per year* [Low Scenario] *in the full Phase 1 scenario for the low scenario. HST is forecast to capture nearly 7 percent of the LA Basin to Bay Area travel market with the IOS scenario."* [286]

To capture 7% of the annual LA Basin to SF Bay Area trips within five years meant growing HSR ridership of the IOS South by about 36% each year to get from 1.2Million in 2026 to 5.6Million in 2040. An audacious goal!

Then in 2016, instead of 'staying the course' and using the 21Million residents of the LA Basin[287] (SCAG) as its ridership 'pool,' the Authority

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[284] In 2013 the Authority's commissioned review of its O&M by the Union International des Chemins des Fer (UIC/IUR) declined to comment on the Authority's ridership forecasts. See: UIC Peer Review of Operating & Maintenance Costs of the California High-Speed Rail Project; Final Report, January 2013*"Ridership forecasts and project design have been considered as exogenous inputs."*

[285] See p. ES-9 [PDF 15] of the California High-Speed Rail, Draft 2012 Business Plan.

[286] See page 5-12 [PDF 48] of the California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting

[287] The six counties of the Southern California Area Government's (SCAG) jurisdiction were 20,826,000. See:

becomes even more unrealistic with its IOS building program northward to first attract riders from a Bay Area (MTC) population only a third (7.4Million) of the LA Basin's (MTC).[288]

If four years and two years earlier it took a 21Million population and compound growth rates of more than 30% per year to reach a critical mass of riders to support a profitable HSR system, how can the Authority think that potential riders from a pool only a third that size will make its operations profitable? The Authority has chosen an even harder case to prove than IOS South, a choice that is fundamentally capricious.

4.3.1 The Authority Acts More Like Tom Sawyer Than Transport Planners

Transport Planners – The Authority's decision to shift to an IOS North is like Mark Twain's story where Tom Sawyer searches for something he lost in a lighted place rather than where he thought he lost it. In the Authority's case, its plans to build northwards because it thinks it can find enough construction funds to complete an IOS North – and not towards where the population and potential ridership is (IOS South) – is just as half-baked. The motto 'if you build it they will come' is an illogical planning tool.

But the Authority's 2016 IOS decision is well explained by a former Speaker of the Assembly, who said,

> *"In the world of civic projects, the first budget is really just a down payment. If people knew the real costs from the start, nothing would ever get approved. The idea is to get going. Start digging a hole and make it so big, there is no alternative to coming up with the money to fill it in."* [289]

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http://www.sandag.org/resources/demographics_and_other_data/demographics/fastfacts/regi.htm

[288] MTC, which plans transportation for the nine-county SF Bay region says the MTC population is 7.44Million. See: http://inrix.com/metropolitan-transportation-commission-san-francisco-bay-area/

[289] In his July 28th 2013 column in the SF Chronicle former Assembly Speaker Willie Brown described how civic megaprojects that don't work get built. The full column says, *"News that the Transbay Terminal is something like $300 million over budget should not come as a shock to anyone. We always knew the initial construction estimate was way under the real cost. Just like we never had the real cost for the Central Subway or the Bay Bridge or any*

Disastrous financial results will ensue. And while embarrassing results such as the TransBay Terminal and the east span of the Bay Bridge may be measured in extra millions or billions of dollars, these are contained disasters. If built, the HSR project will require annual operating subsidies that will make those cost overruns insignificant.

4.4 The Train's Ridership Forecasts are Arbitrary If An Oakland HSR Station Is Missing In Action (MIA) – The City-County of San Francisco has some 865,000 residents[290]. Alameda County alone, of which Oakland/Berkeley is about a third (533,000)[291], has almost twice (1.68M)[292] the population of the City-County of San Francisco. Immediately northward, Contra Costa County, (1.13M) has nearly a third more residents than San Francisco County,

Alameda and Contra Costa counties' populations are counted as part of the SF Bay Area's (MTC) ridership. If HSR priorities were based on a commercially derived response to population characteristics, Alameda and Contra Costa counties should be high priority target markets. They aren't.

Legally AB3034, Section 2704.09 says about Oakland,

> *"The high-speed train system to be constructed pursuant to this chapter shall be designed to achieve the following characteristics: . . . (2) Oakland-Los Angeles Union Station: two hours, 40 minutes."* [293]

That statement, and other parts of the Authority's foundation document [294]

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other massive construction project. So get off it. In the world of civic projects, the first budget is really just a down payment. If people knew the real cost from the start, nothing would ever get approved. The idea is to get going. Start digging a hole and make it so big, there is no alternative to coming up with the money to fill it in."

[290] See http://www.census.gov/quickfacts/table/PST045215/06075,00

[291] For Oakland's 414,000 (2014), see http://www.census.gov/quickfacts/table/PST045215/00 For Berkeley's 119,000 (2014), see: http://www.census.gov/quickfacts/table/PST045215/0606000,0653000,06013,06075,00

[292] See https://www.census.gov/quickfacts/table/PST045214/06001

[293] See: Section 2704.09 (b) (2) of AB3034

[294] See AB3034 Section 2704.04 (b) (3) (C) and (G). 2704.04 (b) (3) says *". . the Legislature may appropriate funds . . . to be expended for any of the following high-speed train corridors:*

certainly require a high-speed rail station in Oakland.

Oakland is Missing In Action in the 2016 Plan. Oakland, or Oakland/Berkeley isn't found in the diagrams showing HSR termini[295] or in the text.[296] Nor is there any mention of an East Bay HSR terminal in any Phase 1 or prior phase diagram.

The East Bay is the orphan in the Authority's Plan to connect Northern and Southern California. Oakland/Berkeley and East Bay residents in general are expected to make their way to SFTBT or San Jose to begin their HSR experience.[297] But there is no mention of a BART to SFTBT connection (which it doesn't) during the VtoV or VtoV Ext. or Phase 1.

Perhaps the Authority is thinking that the SF Peninsula and Santa Clara County's population were large enough to create a higher priority for HSR service to downtown SFTBT. However, disregarding that fact that rapidly growing Santa Clara County straddles the Bay, adding up the populations of the three SF Peninsula counties (SF, San Mateo and Santa Clara) yields about a quarter (27%) more residents (3.53M vs, 2.77M)[298] than the East Bay's two counties. The choice to ignore the East Bay was arbitrary from both market and legal standpoints.

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*(C) Oakland to San Jose . .*and (G) says *. (G) Merced to Stockton to Oakland and San Francisco via the Altamont Corridor."*

[295] It isn't in diagrams on PDF 8, nor PDF 44, nor PDF 76 of Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document

[296] In the Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document, Oakland is mentioned four times: 1) as Cambridge Systematics offices [PDF 5], 2) in an air service table [PDF 27], 3) on PDF 28 as part of an enhanced ACE Train service (*"the enhanced San Joaquin trains were assumed to connect from Sacramento and Oakland to high-speed rail at Fresno.")* and it is 4) shown on Table 4.3 [PDF 29] as part of Conventional Rail (CVR) services in 2025/2029-2040. Those are the only instance mentioning the City.

[297] Oakland appears in Figure 3.1 and 3.2 [PDF 32-24] of the Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document

[298] 2014/2015 population statistics were found at http://www.census.gov/quickfacts/table/PST045215/00: San Francisco County at: http://www.census.gov/quickfacts/table/PST045215/06075,00, San Mateo County at: http://www.census.gov/quickfacts/table/PST045215/06081,06075,00, Santa Clara County at: http://www.census.gov/quickfacts/table/PST045215/06085,06081,06075,00 Alameda County at: http://www.census.gov/quickfacts/table/PST045215/06001,06085,06081,06075,00 Contra Costa County at: http://www.census.gov/quickfacts/table/PST045215/06013,06001,06085,06081,06075,00

4.5 The Authority's Modelers Aren't Above 'Inventing' Riders –

The Authority needs riders generating revenue during IOS and beyond. For example, when an Authority-commissioned 2011 Harris panel concluded that each Californian made 6 long distance (100 miles +) trips per year, the Authority's modelers "recalibrated" their model to use 7.36 long distance trips/year.[299] This increased the statewide "pool" of potential IOS travelers at least 20%.

Likewise, Cambridge Systematics' (CS) ridership model defines all trips within California, except those involving Lake Tahoe, as part of the potential ridership "pool" for the Authority's train, [300] whether or not the travelers might be anywhere near a HSR station. For example, trips like Eureka-to-Sacramento would be counted in the CS model. Almost 30% of Californians live in counties nowhere near where the IOS' HSR train service will be offered. However, the Authority's modelers know that a given percent of a bigger "pool" leads to higher ridership and chose to inflate ridership by the assumption that nearly all intra-state trips are part of HSR's market.

Then, after using a national norm on long distance travel, the Authority's modelers switched to counting travelers where high-speed rail's travel times (including access/egress time) make HSR non-competitive. In 2012, the Authority built its 'pool' of potential HSR riders using a DOT/ DOC survey's approach[301] of a minimum travel distance base where HSR would likely have a travel time advantage against auto or bus travel.

> *"One hundred miles was chosen as the breakpoint for segmenting short distance from long-distance trips. . . This value was also used in*

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[299] See pg.6-11 [PDF 54] of 2014 Ridership and Revenue Forecasting – Draft Technical Memorandum

[300] Pg. 1 CARRD Memo to Ridership Panel, September 2011 http://www.calhsr.com/wp-content/uploads/2010/02/Ridership-peer-review-letter-v1.1.pdf

[301] The California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting says; *The ATS represents the only large-scale travel survey conducted to date in the United States."* DOT is the US Department of Transportation, and DOC is the US Department of Commerce.

the past as the lower limit for long-distance trips in the 1995 American Traveler Survey (ATS) conducted by the U.S. Departments of Transportation and Commerce."[302]

In 2014, with no substantial evidence to support a change from a national norm adopted in 2012, the Authority abrogated that logical approach and included shorter trips (>50 but <100miles) in the 'pool' from which it draws HSR riders and revenue.

"We combined long-distance and short-distance interregional trips into one model of long distance trips (trips 50 miles or more from the trip-maker's home)."[303]

Without question, this 2014 choice increased the statewide travelers 'pool' for HSR since many of those traveling 50-100miles are commuters whose daily, round-trip journeys get counted twice. The 2016 Plan continues to use journeys greater than 50miles during each development phase in its ridership base.[304]

Trips of less than 50miles (<50miles) do not get counted during the VtoV and VtoV Ext. period[305] because the Authority recognizes:

". . the [VtoV Ext. period's HSR] *mode share is lower because high-speed rail is not as competitive in shorter-distance markets where autos are the dominant ."*[306]

But that first phase's ridership still includes trips over 50miles, as decided in

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[302] See p. 1-4 [PDF 14] of the California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting. The full quote is, *"One hundred miles was chosen as the breakpoint for segmenting short distance from long-distance trips. This breakpoint was selected based upon an evaluation of the trip length frequency distributions for interregional trips for each trip purpose from the surveys along with judgment about behavior for short versus long trips. This value was also used in the past as the lower limit for long-distance trips in the 1995 American Traveler Survey (ATS) conducted by the U.S. Departments of Transportation and Commerce."*

[303] See p. 2-1, [PDF 21] of California High-Speed Rail Draft 2014 Business Plan Ridership and Revenue Forecasting—Draft Technical Memorandum

[304] See Table 6.3, p. 6-5and 6-6 [PDFs 42-43] of Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting document, where only journeys of <50miles are excluded starting in 2029.

[305] See Table 6.3, p. 6-5 and 6-6 [PDFs 42-43] of Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting document, where only journeys of <50miles are excluded starting in 2029.

[306] See p. 6-4 [PDF 40] of Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting document

the 2014 Plan. Consequently, tens of thousands of weekday Caltrain commutes[307] between San Francisco and Gilroy (80miles)[308] and/or Gilroy-Millbrae (65miles)[309], and perhaps SF and San Jose (49miles)[310] get included in the VtoV Ext. ridership. Because these are rides (not riders) which largely counts round-trip commuters, the skew towards increasing the high-speed rail ridership 'pool' and therefore HSR ridership is even more pronounced.

The 2016 Plan claims it does not include less than 50mile trips (<50miles) in ridership forecasts starting in 2029, but it does.

> *Short-distance trips of less than 50 miles in length within SCAG and MTC contribute 0.6 million in ridership in years 2029 and 2040. This short-distance ridership was added to the year 2029 and year 2040 long-distance ridership for all probability levels to obtain total high-speed rail ridership.* [311]

> *"Short-distance trips of less than 50 miles in length within SCAG and MTC contribute approximately $12 million (2015 dollars) in revenue in year 2029 and 2040. This short-distance revenue was added to the year 2029 and year 2040 long-distance revenue for all probability levels to obtain total high- speed rail revenue."* [312]

The Authority arbitrarily violated not only the national norms about counting potential high-speed rail travelers; it violated its own rule based on that norm. And while one part of its ridership and revenue calculations denies using short, generally commuter trips, the Authority actually uses almost any length of trip to gain the ridership and revenues it needs to supposedly justify its financial viability. This decision alone should be substantial

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[307] Caltrain provides weekday service to over 47,000 riders. See: p. 2 [PDF 3] of Caltrain, February 2013 Caltrain Annual Passenger Counts, found at http://www.caltrain.com/Assets/Stats+and+Reports/Ridership/2013+Annual+Ridership+Counts.pdf

[308] Using Travelmath.com data on train and bus distances, the SF-Gilroy distance is 80miles. See: http://www.travelmath.com/transit/from/San+Francisco,+CA/to/Gilroy,+CA

[309] Using Travelmath.com data on train and bus distances, the Millbrae-Gilroy distance is 65miles. See: http://www.travelmath.com/transit/from/Millbrae,+CA/to/Gilroy,+CA

[310] Using Travelmath.com data on train and bus distances, the San Francisco-San Jose distance is 49miles. See: http://www.travelmath.com/transit/from/San+Francisco,+CA/to/San+Jose,+CA

[311] See p. 7-13 [PDF 55] of Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document.

[312] See p. 7-2, 7-3 [PDF 54-55] of Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document.

evidence to reject the credibility of any HSR forecast for any period.

4.5.1 Finding Riders From Where There Are None – The Authority cannot explain, except by admitting biased modeling, how its forecasts for differ so greatly from what survey-based, empirical findings conclude for time sensitive, largely business travel (airlines and HSR) and non-time sensitive travel, largely recreation/other (personal vehicle). On the one hand, the National Household Travel Survey (NHTS) put Business/Commute travel that is greater than 50miles at 13%-29%.[313] Conversely, the Authority's model predicted that Business/Commute travel would be 50%-55% – a 21-42 point difference. Likewise, the California Household Travel Survey (CHTS) that the Authority refers to in the 2016 planning exercise, found that 97% of Business travel was group travel by auto. But the Authority's model decreased that 19%.[314] No explanation is given for these significant differences.

The CHTS also found that 99%-100% of recreation/other travel, whether alone or in a group is by auto.[315] The NHTS work that the Authority cited in 2012 also shows that 71-87% of all trips were recreation/other trips, including visiting family and friends.[316] But the Authority's model predicted

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[313] See Table 19. Percentages of Trips by Trip Purpose [PDF 195] of the California High-Speed 2012 Business Plan, Ridership and Revenue Forecasting, April 12, 2012

[314] See p. 38 [PDF 38] of the California High-Speed Rail Version 2 Ridership and Revenue Model, Calibration and Validation Briefing Book. Cambridge Systematics, January 10th 2014.

[315] See p. 38 [PDF 38] of the California High-Speed Rail Version 2 Ridership and Revenue Model, Calibration and Validation Briefing Book. Cambridge Systematics, January 10th 2014.

[316] Table 19. Percentages of Trips by Trip Purpose [PDF 195] of the California High-Speed 2012 Business Plan, Ridership and Revenue Forecasting, April 12, 2012 shows that various editions of the National Household Travel Survey (NHTS) (sample size 100,000 *BTS National Household Travel Survey - Long Distance Travel Quick Facts*) show that between 71% (2001) and 87% (2009) of all travel is recreational/other. A 2010 long distance travel survey cited by Cambridge Systematics (*Surveying and Modeling Long Distance Trips)* showed recreational/other travel to range between 80% and 83% of long distance travel. This body in information was provided to the Authority in a separate Comment to the Draft 2016 Business Plan, by William Warren, dated March 30, 2016, "Ridership Model Auto Group Factor Could Be Overstating Auto Market." Mr. Warren's analysis of this data shows that in the US in 2009, for trips of 100 miles or more in autos, there are 1.9 passengers per auto. See Mr. Warren's analysis, Exhibit 1, cell H8. In addition, for trips of 50 miles and more, the number of passengers per auto only drops to 1.7; see Exhibit 1, cell H34. To achieve this average ratio of 1.7, only about 36% of the autos can have only one person in the auto (the driver), see Exhibit 2, cell H17. Therefore, about 64% of the auto market place is spreading the cost of the trip over multiple passengers, (see Exhibit 2, cell H24) making the Authority's pricing plan

recreation/other trips at only 45-50% of total trips.[317] The Authority has no substantial evidence to explain the 21-42 point difference its modelers chose to use in ridership/revenue forecasts, particularly given the likelihood that recreation/other travel is less time sensitive than airline or HSR travel during IOS and therefore should be assumed to be by personal vehicle. The Authority's modelers do not explain these 21-42 point differences, but rather try to use a HSR Constant to prove how desirable high-speed rail is.[318]

In the 2016 Business Plan Business/Commute riders are 27-28% of all reasons to travel.[319] While 28% is closer to upper end of the NHTS' findings for Business/Commute travel (29%), the public is unable to confirm or challenge that assertion.[320] The Authority also 'calibrates' its ridership model using a Trip Frequency Constant[321] that attempts to show the differences

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of about 23 cents per passenger mile extremely non-competitive. Tos – Authority lawsuit Administrative Record document AG 453 introduces the use of multiple outside sources of travel survey data, including the California Statewide Household Travel Survey (CSHTS), the Harris survey, and this DOT National Housing and Transportation Survey (NHTS). See Section 4.1.1 on pages 16 and 17 (PDF pages 22 and 23). Based on the Authority's use of the NHTS survey data, this additional reference to the NHTS survey data is being made. This NHTS survey data is also provided as part of Mr. Warren's Comment of March 30, 2016. This source of information may also be found at: http://nhts.ornl.gov/2009/pub/stt.pdf

[317] See Table 19. Percentages of Trips by Trip Purpose [PDF 195] of the California High-Speed 2012 Business Plan, Ridership and Revenue Forecasting, April 12, 2012

[318] For *"The unexplained variation component represents the desirability to choose HSR that is not captured directly by the system variables (e.g., travel time, cost, etc.) included in the model."* see: p. 3-2 [PDF 20] of the California High-Speed Rail Business Plan Ridership and Revenue Risk Analysis, draft technical report, Cambridge Systematics, Inc. February 17, 2016. Then, p. A-2 [PDF 50] of the same document says, *"The HSR constants are asserted based on results of stated- preference surveys and cannot be calibrated; as a result, there is uncertainty with the constant itself."* Although used throughout the Risk Analysis report, this appendix statement dismisses the HSR Constant as useless.

[319] See Table 3.1, p. 3-5 of the Draft 2016 California High-Speed Plan Ridership and Revenue Risk Analysis

[320] Public Records requests concerning access to the actually used data and assumptions on ridership, revenues, O&M costs and profits, and the algorithms used for the Authority's computations, have been met with responses that, for example, say: *"This is trade secret information pursuant to Evidence Code section 1060, incorporated into the California Public Records Act through Government Code section 6254(k) and, therefore, will not be provided."* See email to Mr. Robert Prantis from Ms. Anne Parker of the Public Records Act Staff of the CA High-Speed Rail Authority, December 27, 2013.

[321] See the California High-Speed Rail Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting, Table 7.2, p. 7-5 [PDF 47] For both Business/Commute and Recreation/ Other types of trips. *"The trip frequency constants capture the unexplained variation in the number of long-distance trips that travelers will take after accounting for household demographics and the accessibility of available destinations. Also, risks associated with the state of the economy are accounted for within the trip frequency constant risk variable*

between business/commuter and recreation/other types of trips. However the model's Trip Frequency Constant for both types of trips vary between 32% and 40% [322] making the outcomes inaccurate to useless. If the Authority's models' statistical variability swings between a third and two fifths, it would be logical to use empirical evidence and dismiss the model's predictions as unreliable.

4.6 From 2008 To 2014, Phase 1 Ridership Forecasts Decreased, Then Mysteriously Increased – In 2011, before becoming Chair of the California High-Speed Rail Authority's Independent Peer Review Group (PRG), Louis Thompson co-authored a paper on high-speed rail's (HSR) prospects in the US [323] saying,

> *"New HSR systems have an inherently high-demand risk because there is not past experience available."* [324]

No case could be truer than demand forecasts for the California unique HSR train. No other HSR system's trains operate at or above 200mph (320km/hr.), almost all are government owned-and-operated, and no system operates without some form government ownership and/or operating subsidy. Caution born of PRG guidance and history should be the watchword in forecasting the ridership variable, half the revenue portion of the equation. But the opposite seems true.

Before the 2008 Prop1A vote, demand for HSR between the downtowns of Los Angeles and San Francisco supposedly was nearly 100Million riders,[325]

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[322] See the California High-Speed Rail Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting Table 7.7, p. 7-15 [PDF 57]

[323] Section 2 *Section 185035 (a) of the Public Utilities Code reads: "The Authority shall establish an independent peer review group for the purpose of reviewing the planning, engineering, financing, and other elements of the Authority's plans and issuing an analysis of appropriateness and accuracy of the Authority's assumptions and an analysis of the viability of the Authority's financing plan, including the funding plan for each corridor required pursuant to subdivision (b) of Section 2704.08 of the Streets and Highways Code. "*

[324] Thompson, Louis and Tanaka, Yuki: High Speed Rail Passenger Services: World Experience and U.S. Applications; Prepared with the support of the Institution for Transport Policy Studies (a non-profit organization fully supported by the Nippon Foundation), September 20, 2011, p. 31 [PDF 35].

[325] The Authority's 2008 Business Plan, page 7 [PDF 11] says, *"A high-speed train system between Los Angeles/Anaheim and San Francisco with extensions to Sacramento and San*

while EIR/EIS estimates that year put 117Million riders on the HSR train.[326] After the 2008 successful passage of Prop1A, the demand forecast for the complete LA-SF high-speed rail ride, known as Phase 1, fell until 2014.[327] By 2009's Business Plan, LA Basin to San Francisco ridership was 41Million in 2035.[328] The 2008 and 2009 ridership forecasts must have been arbitrarily derived, as no explanation is given as to how nearly 60million riders disappeared within a year.

By the end of 2011, Cambridge Systematics lowered its Phase 1 ridership to 37.1Million,[329] four million short of the prior estimate and slightly over a third of 2008's estimate. Without explanation for the 63Million rider decline from 2008, this too was an arbitrarily selection of a computer model's output.

The Peer Review Group (PRG) was concerned about this. Its comments on the April 2012 Business Plan the PRG noted a dramatic drop in ridership from the November 2011 Plan's ridership forecasts, and said,

> *"As a result, the Authority notes that the forecasts used for the Revised Plan are only 63% of the August 2011 forecasts (72% for the medium case).* [330]

Two years later its 2014 Plan the Authority acknowledged,

Diego will carry more than 90 million passengers"

[326] See: Volume 1 Bay Area to Central Valley HST Final Program EIR/EIS of 2008. Table 2.3-3; "2030 Ridership Forecasts", on page 2-12 [PDF 121], says in the year 2030, 117 million trips, including 36 million commuter trips, will be made; and that is "*. . a representative worst-case scenario. . .*" Or from the same document, page S-5 [PDF 42] that says; *"A representative statewide system evaluated in this Program EIR/EIS was forecast to carry between 88 and 117 million passengers in 2030, with the potential to accommodate higher ridership by adding trains."* Again in that document, page 2-11 says *"Analyses were also performed as part of the independent ridership and revenue forecasts (Cambridge Systematics 2007), using different assumptions for a 50% real increase in the costs for air and automobile travel, which resulted in a high forecast of potential ridership for the HST system of 117 million annual passengers for 2030 (36 million riders would be commuters) (Table 2.3-3)."* This document is found at http://www.hsr.ca.gov/Programs/Environmental_Planning/bay_area_2008.html.

[327] The declines then rises in ridership are the product of Cambridge Systematics (CS). The firm has been the sole consultants for ridership and revenue forecasting since 2008.

[328] See: The Authority's 2009 Business Plan; Table C, page 72 [PDF 74]

[329] See Table 5.5, p. 5-11 [PDF 39] of California High-Speed Rail 2012 Business Plan Draft Technical Memorandum – Ridership and Revenue Forecasting

[330] See: Draft 2014 Business Plan, February 7, 2014, page 7 of the Peer Review Group Comment on the 2012 Plan [PDF 87 of the 2014 Plan].

"The updated forecasts show higher ridership than projected in the 2012 Business Plan, 25 percent higher in the Medium scenario." [331]

By 2012, the Phase 1 (Full Build) ridership ranged from 25.8 to 39.1Million – about a quarter to a third of what helped win the 2008 vote.[332] 2014's Plan reversed the downward trend and "found" 34.7Million Year 2040 riders. In 2016, the 2040 forecast clawed back another 8Million riders bringing the 42.8Million Phase 1 riders[333] to within earshot of the 2009 estimate.

The ridership model's inputs and assumptions, and therefore their outputs, change in each Plan. No "outsiders' including the LAO, GAO or non-government organizations have been allowed to inspect the underlying data, assumptions and algorithms that produce such varying forecasts.[334] The logical conclusion from this analysis is that 2008's ridership forecast was not arbitrary; it was politically driven. Subsequent, lower forecasts may have improved, but by 2014, enough was known about the inability to attract enough riders to meet operating costs, that ridership had to increase – and did by a third (32%) after 2012. Such decreases, then rises can only be labeled unconvincing and arbitrary.

4.7 The Authority Never Conducted A Survey That Gave An Empirical Base To Its IOS Ridership And Revenue Forecasts – The Authority's Phase 1 ridership and revenue figures are based on survey data either commissioned or publically available. But there no evidence in any Plan or its supporting documentation that the Authority conducted any form of survey that asked about travelers' reactions to using and making changes

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[331] See page 10 [PDF 11] of the 2014 Plan

[332] See: California High-Speed Rail Program; Revised 2012 Business Plan, April 2012, Figure 5.4, p. 5-10 12, p [PDF 46]

[333] See: Table 6.3 p. 6-3 [PDF 41] of the Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document.

[334] Public Records requests concerning access to the actually used data and assumptions on ridership, revenues, O&M costs and profits, and the algorithms used for their computation, have been met with responses that, for example, say: *"This is trade secret information pursuant to Evidence Code section 1060, incorporated into the California Public Records Act through Government Code section 6254(k) and, therefore, will not be provided."* See: email to Mr. Robert Prantis from Ms. Anne Parker of the Public Records Act Staff of the CA High-Speed Rail Authority, December 27,2013.

between two or three modes (conventional rail, bus and HSR) during the IOS periods – whether IOS South (2022-2026) or IOS North (aka. VtoV or VtoV Ext.) that supposedly opens in 2025.[335]

The seminal definition of an IOS trip will be the multiple changes in transport modes. Using public transit for starting involves a bus, trolley, conventional or light rail. Then comes the HSR ride; followed by using similar public transit or an auto from the HSR terminus to the destination. This is known as multi-modal travel. There is evidence that the Authority knew of French data on the negative impact on high-speed ridership of multi-modal travel, and tested its impact on ridership. The important test finding was:

> *"The French experience was tested by modifying the transit access/egress constants to reflect the 90-minute penalty for a trip between San Francisco and Los Angeles on a VtoV system.* ***The added penalty resulted in a 16-percent decrease in HSR ridership and revenue.***"[336] [Emphasis added]

Then the Authority's consultants dismissed the findings. That exhibits bias.

The Authority did ridership forecasts for the Phase 1 offerings, which offers HSR travel between downtown SF (SFTBT) to downtown LA (LA Union). But Phase 1 HSR offerings, with few modal changes, create a vastly different travel experience than changing to/from conventional rail or bus to HSR then back to one or both of those modes during IOS.

The Authority has no substantial evidence that it, or its consultants, conducted a consumer survey that would have recorded and used potential

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[335] *"Given that the revealed-preference data did not include transferring from CVR (or other transit modes) to HSR, we do not have observed data to directly estimate a coefficient for HSR. Thus, the magnitude of this coefficient is inherently uncertain for HSR."* See: p. A-4 [PDF 52] of the Draft 2016 California High-Speed Rail Business Plan Ridership and Revenue Risk Analysis, draft technical report, Cambridge Systematics, Inc. February 17, 2016.

[336] Page A-4 [PDF 52] of the California High-Speed Rail Business Plan Ridership and Revenue Risk Analysis, draft technical report, Cambridge Systematics, Inc. says *"Note, modifying the access/egress constant directly is not how we accounted for the "French Experience" risk; however, the results of the test indicate the risk should be analyzed.*

travelers' preferences as the basis for IOS ridership/revenue forecasts. Such an IOS survey would have been easy to do in 2012-2013 because the Authority knew the details of its IOS (South) offering,[337] and did a Revealed Preference/Stated Preference (RP/SP) survey in 2013[338] to update the 2005 RP/SP Survey.[339] Questions concerning the attractiveness of IOS travel could have been included. But the Authority chose to not know the empirical results of asking travelers about the relative attractiveness of those offerings.

There is still no substantial evidence from any survey that included descriptions of an HSR journey during IOS. [340] Such data would have indicated the number or percent of travelers who would "trade" from autos to HSR, if the HSR option during IOS were described as requiring access to bus-then HSR then-egress-to-bus-to-mode to final destination.[341] The Authority's ridership (and therefore revenue) modelers were missing author Bent

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[337] The 2012 Plan gave specific details on the prices and routes of HSR and the feeder busses. Those data are in Table 5.2 and Figure 5.2 of Final Technical Memorandum on the Ridership and Revenue Forecasting of April 2012. Comparisons could have been made by responders with auto travel times and costs though websites such www.travelmath.com

[338] California High-Speed Rail Authority, Connecting California, Draft 2014 Business Plan, pg.40 [PDF 40] In the 2014 Plan the Authority said; *"A new 2013 Revealed/Stated Travel Preference survey has been conducted in California."* An RP survey asks about a trip actually made by the respondent, while a SP survey pivots off of the actual trip, but asks the respondent to consider hypothetical trip attributes and make hypothetical mode choices from which high-speed rail is one option.

[339] Ridership Peer Review Panel, Independent Peer Review of the California High-Speed Rail Ridership and Revenue Forecasting Process, Findings and Recommendations from the January-March 2011 Review Period, July 22, 2011. Cited on page 1 [PDF 2] of the April-June 2013 'Final Report' of the Peer Review Group. In November 2013 the statutorily required Peer Review Group (PRG) concluded, *"Original model specified by the Panel for use in the 2014 Business Plan, based upon assumption that the 2013 RP-SP survey results would be available and used to re- estimate all long-distance model components. This concept has been abandoned."*

[340] After a request on whether an IOS survey was done, I was directed to by the Authority's Public Records staff on ridership and revenue; i.e. http://hsr.ca.gov/About/ridership_and_revenue.html. After searching twelve Authority documents, including those discussing recent and former RP/SP surveys, there was never a Revealed or Stated Preference survey, or any other survey type, conducted that asked travelers their interest in traveling by conventional rail (Caltrain/Metrolink), the Authorty's bus and high-speed rail during either the IOS South (2022-2025) or IOS North (2025-2028) versus other travel modes between San Francisco TransBay Terminal and LA Union Station.

[341] This could have been done because the comparative travel times and costs of HSR and autos were known as early as April 2012.

Flyvbjerg's "outside view" reality tests. [342] Without an underlying data set to understand travelers' reactions to a multi-modal IOS journey is that all IOS ridership forecasts are second order derivatives of some unknown formula and must be dismissed as arbitrary.

4.7.1 IOS Ridership Forecasts Ignored The Caution That Rail Demand Studies Should Have Induced – The Authority's consultants calibrated[343] their computer models more than 100 times to claim 'ramped up'[344] 2014 Plan's IOS forecasts of 11.4Million riders[345] as its 'mature' 2026 forecast. That was over 4Million more IOS riders than the 2012 Low Estimate.[346] By 2016, the mature medium level IOS forecast (VtoV Ext.) equaled the prior Plan's High Estimate.

The Authority gives no reason as to how that 12% ridership rise happened between the two Plans. Both drew from the same population and socio-economic base, traveling along the same routes with the same modal changes and uncompetitive HSR fares and travel times during IOS.

In 2012 and 2014 the Authority ignored independent researchers' findings that existing HSR systems' main clientele will be time-sensitive business travelers.[347] With HSR service during IOS only between the agricultural San Joaquin Valley (Merced-to-Bakersfield) with low population density, low

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[342] See Note 8, p. 35 of "Quality Control and Due Diligence in Project Management: Getting Decisions Right by taking the Outside View", Bent Flyvbjerg, November 2012. Found at: http://arxiv.org/ftp/arxiv/papers/1302/1302.2544.pdf

[343] AG013633, In the California High-Speed Rail Ridership and Revenue Model, *Version 2.0 Model Documentation,* Final report, April 11, 2014 the term "adjusted" is used over twenty times, and "calibrated" used over one hundred times.

[344] AG011047, see AG11088 Connecting California, 2014 Business Plan, April 30, 2014, p. 42 [PDF 42] *"A five-year ramp-up assumption was assumed when each segment opens to revenue service according to the following schedule: 40 percent of the long-term ridership potential is achieved in year 1; 55 percent in year 2; 70 percent in year 3; 85 percent in year 4; 100 percent in year 5"*

[345] Document# AG010724, see AG010787 p. 7-7 Table 7.4 The California High-Speed Rail Draft 2014 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting

[346] See Table 5.6 p.5-13 [PDF 49] of the California High-Speed 2012 Business Plan; Ridership and Revenue Forecasting

[347] Document# AG015418, see AG015435*"Business trips usually take up a significant proportion of HSR trips (Chang & Lee, 2008; Levinson, 2004)"* quoted in Chuyuan Zhong, Germà Bel, and Mildred Warner: High-Speed Rail Accessibility: What Can California Learn From Spain? 2013.

incomes and high unemployment; and lightly populated, northern LA County (Palmdale-to-San Fernando) there were few reasons that would attract time-sensitive business travelers to HSR. Yet 3.8Million SCAG-originated riders are destined only for the San Joaquin Valley (SJV) in the 2012 Plan[348] and 2.8Million in the 2014 Plan.[349] Those projections seem optimistic in the extreme.

In the 2016 Plan, the Authority's IOS strategy did and about-face and shifted northward[350] with HSR service terminating in San Jose. Whereas 2012 and 2014's Plans had intra-SJV ridership between 0.1Million and 1.2Million, the 2016 Plan's was 3.0Million. The public is supposed to believe that 2012's IOS ridership only within the San Joaquin Valley (intra-SJV) drops to about half of what it was[351] before subsidized Amtrak services are suspended,[352] then grows at over 30% per year, tripling ridership in the four IOS years, 2025-2028. No market survives a doubling of prices within one year; then surges in four years to three times the starting year's estimate. That's not credible.

4.7.2 Without A Survey For Empirical Evidence, IOS Ridership Somehow Falls, Then Rises And Again

– In the Draft 2012 Plan (November 2011) the 'Medium' scenario for the IOS (South) had 9.1Million riders: those riders helped produce a profit of $464Million. [353] But five months later (April 2012) ridership had dropped by a million to 8.1Million

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[348] See Table 5.6 p.5-13 [PDF 49] of the California High-Speed 2012 Business Plan; Ridership and Revenue Forecasting

[349] See: p. 7-7 Table 7.4 The California High-Speed Rail Draft 2014 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting

[350] Construction north and west of Madera towards San Jose will be started after completion of the sections southward presently under contract.

[351] See: Figure 1 pg.4 [PDF 4] of If You Build It They Will Not Come. Found at: www.sites.google.com/site/hsrcaliffr. A compound growth rate of 6.6% from 2013-2021 on Amtrak's San Joaquin service brings ridership to 2Million the year before IOS opens.

[352] Document# AG011047, see AG011090 Connecting California, 2014 Business Plan, April 30, 2014 Exhibit 4.4 PDF 43, of The Authority's, Draft 2014 Business Plan, February 7 2014. AG#002401, see 002436 Cambridge Systematics' (CS) final technical memorandum of Ridership and Revenue Forecasting of April 12, 2012, Section 5.2, p. 5-5 says *"Note that the existing San Joaquin service south of Merced to Bakersfield is assumed to be discontinued upon the initiation of HST service."*

[353] California High-Speed Rail Program, Draft 2012 Business Plan; November 1, 2011; Exhibit ES-3, pg. ES-9 [PDF 15]

riders (11% fewer) and the 'Medium' scenario only had $345Million of net cash flow from IOS operations[354] a fall of over a quarter five months earlier.

By the time of the 2014 Plan, without explanation, IOS ridership in the Medium scenario miraculously rose to 11.4Million about 3.3Million more than April 2012 Plan's (8.1Million) – a 36% increase. That means the HSR ridership's increased annual at a rate of 8.8%, commendable but questionable. It's miraculous because there were no changes in the travel time or cost advantages to using the Authority's offerings during the IOS South period during the 2012 or 2014 Plans.

Even more miraculous is the claim that while 2014's ridership increased about a third (8.1M vs. 11.4M), the 2014 the cash flow from the IOS South's Medium scenario (2022-2026) increased three fold ($345M vs $1,190B) over the 2012 cash flow! [355] How ridership can increase 36% and net cash flow from operations increase about 250% – more than doubling each of the four IOS years after 2022 – is never explained.

Then in 2016, the VtoV Ext. ridership increases 12% to 12.8Million.[356] How this can happen by drawing on an IOS North population one-third the size of that in IOS South's LA Basin population goes unexplained. Even less cogent is the conclusion the VtoV Ext. revenues drop over 40% ($1,190B in 2014 vs $698M in 2016[357]) and the IOS is still called profitable.

4.7.3 Forecasted IOS Ridership Between LA and SF Lack Credibility –

The Authority asked Californians to believe two separate

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[354] California High-Speed Rail Program, Revised 2012 Business Plan; April 2012; Exhibit ES-7, pg. ES-17 [PDF 25]

[355] This is the sum of the five years 2022-2026, starting with $24Million in 2022 and closing with $481M, a annual compound growth rate for net cash flow from operations of 150%. For 2014 cash flow see: Cambridge Systematics' (CS) final technical memorandum of Ridership and Revenue Forecasting of February 6, 2014, Exhibit 6.2, page 52 [PDF b52]

[356] See: Table 6.3 p. 6-5 [PDF 41] of the Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document.

[357] See: Table 6.3 p. 6-6 [PDF 42] of the Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document.

estimates of LA Basin-SF Bay Area travel. In 2012 Authority claimed the IOS would capture about 7%[358] of annual trips between the state's two metropolitan centers in its first few years of service. This claim assumes the travel market between the LA Basin and the SF Bay Area was either 91Million or 173Million.[359]

In 2016, the Authority's estimate of the annual SF-LA travel market dropped to 21Million, less than a quarter of the lower 2012 estimate.[360] Yet 2016's HSR ridership during IOS was either equal 2012's estimate or increased. Either the Authority's consultants aren't consulting their predecessors' assertions or the LA Basin-SF Bay Area travel market has shrunk drastically, or the Authority's IOS forecasts are invented and arbitrary.[361]

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[358] *"HST is forecast to capture nearly 7 percent of the LA Basin to Bay Area travel market with the IOS scenario."* See page 5-12 [PDF 48] of the California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting

[359] According to Table 5.6 and 5.7 of the California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting, the Low forecast for IOS South in 2012 was 6.4Million. If HSR is to capture 7% of the MTC-SCAG market, that makes total LA Basin to Bay Area travel market 91Million. The High forecast was 12.1Million for IOS South was 12.1Million, which makes the LA Basin to Bay Area travel market 173Million.

[360] See: p. 6-3 [PDF 39] California High-Speed Rail Authority, Draft 2016 Business Plan: Technical Supporting Document says *"The lower high-speed rail mode share in the MTC to San Joaquin Valley market is partially explained by the size of the market, which has about twice the number of total person trips as MTC to SCAG (43 vs 21 million).*

[361] As a demonstration of how arbitrary IOS North ridership can be, follow this logic trail. There are two primary sources as to where the 2.5 M passengers will come from for the first year of IOS North operations. Most may come from the current automobile traffic using Pacheco Pass, while some may be Amtrak San Joaquin's current customers. To better understand the traffic volumes on State Highway 152 between Gilroy and I-5, which includes Pacheco Pass, The California Department of Transportation's (CalTrans) reports include traffic volumes (counts) "2014 TRAFFIC VOLUMES ON THE CALIFORNIA STATE HIGHWAY SYSTEM." Attached as Traffic Counts 2014 aadt volumn.PDF. Also available and available at: http://traffic-counts.dot.ca.gov/docs/2014_aadt_volumes.pdf Page172 [PDF 181] of that report (bottom row) shows traffic volumes at the Casa de Fruta location on Highway 152. The annual average of the daily traffic (AADT) is about 34,000 (right most columns). Annual traffic is about 12.4Million vehicles are being counted each year. Assuming no trucks, 12.4M vehicles are autos, cars vans, each with one or more passengers. Based on the work contained in William Warren's Comment for the Draft 2016 Business Plan "Ridership Model Auto Group Factor Could Be Overstating Auto Market", dated March 30, 2016, it appears his best estimate of passenger volumes appear on Exhibit 2, [PDF 9]. His analysis shows that about 60% of all the vehicles pass by a location contain, on the average one person, the driver. The remaining 40% have at least one other person in the vehicle. Therefore, it would appear that about 60% of the 12.4 Million vehicles contain one person, or about 7.5 Million people who may be potential HSR riders. The analysis of William Warren in his Comment for the 2016 Business Plan "Amtrak Actual and Authority Projected Operating Results" dated April 7, 2016, showed in Exhibit 3, that the annual ridership for the San Joaquin route is about 1.2 Million per year. The key question becomes what penetration would the Authority need to achieve in these two market segments to achieve their ridership forecast, in 2025 and in 2028, i.e. the beginning

4.7.3.1 Nothing Justifies The Wide Fluctuations of Biannual IOS Ridership Forecasts And the 'Spread' Within Each Plan Between High And Low Forecasts

Within Each Plan Between High And Low Forecasts – The Initial Operating Segment (IOS) – first introduced in November 2011 – should be expected to have the most accurate ridership revenue forecasts because it is the nearest-term forecast. Another reasonable expectation of IOS forecast would be that subsequent business plans would lower the 'spread' between IOS ridership (and revenue) forecasts twice (in April 2012 and April 2014).

Yet, the Authority's computer modelers produce inconsistent IOS forecasts. Four plan's IOS ridership forecasts (2011, 2012, 2014, 2016) do not converge; nor do individual Plan's high and low estimates for IOS converge.

For example, the PRG noted of the 2014 Plan versus 2012 ridership forecasts:

> "*. . the low/high range increased from a 40 percent interval to a 60 percent interval . .*" [362]

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and the end of the IOS North period of operations? The CalTrans report shows on page ii, [PDF 4] that over the past 4 years vehicular traffic growth has been about 1% per year. Likewise, the Amtrak San Joaquin data on the same Exhibit 3 show that ridership is also slow to none. The Authority says they will get 2.5M passengers in the first IOS North year, 2022, and 6.2 M passengers in 2028, as displayed below. It is possible that to get 50% of the Amtrak market, growing to 60% in 2028, but only if they keep the subsidies illegal under Prop 1A/AB3034. That means the Authority would have to take 30% of the single occupancy autos off the Pacheco Pass Route in 2022, and penetration would have to grow to 73% of the single occupancy auto market by 2028; a seemingly impossible target to meet.

Figure 7
Ridership Market Penetration to Meet 2016 Business Plan Projections

IOS - North	2022		2028	
Ridership Projection		2.9M		6.2M
Amtrak Market	1.2 M		1.2M	
Penetration	50%	0.6M	60%	0.7M
Pacheco Pass	7.5 M		7.5M	
Penetration Needed	30%	2.2M	**73%**	5.5M
Possibility of Achieving	Maybe		Impossible	

The more likely result is achieving, or almost achieving, the 2022 objective, but failing to grow from 2.9M riders to 6.2 M riders in 2028. The impact on being able to secure the financing to build out Phase 1 is very uncertain, at best.

[362] See: Draft 2014 Business Plan, February 7, 2014, PDF 87.

Figure 8 shows what the PRG noted. The 'spreads' between highest and lowest ridership forecasts in subsequent Plans increased. April 2014's 'High' IOS forecast is 84% than in April 2012's 'High' yet April 2012 and April 2016's 'High' estimates are equal. 2014's Low is and a 30% lower than April 2012's Low estimate. While 2016's Low Estimate rises to exceed that of April 2012[363] it's still more than 30% lower than November 2011's Low Estimate. We are told to believe these 20-30% biannual swings without explanation, but they must be assumed to be arbitrary.

Figure 8
Analysis of Variations in IOS Ridership of the 2011, 2012,2014 and 2016 Business Plans of the High-Speed Rail Authority

Month and Year of Business Plan	Low Forecasts (MMs)	High Forecasts (MMs)	Low to High% 'Spread' within Each Plan	% Plan to Plan Change	
				Low to Low Forecasts	High to High Forecasts
Nov. 2011	10.7	13.1	+22%	Na.	Na.
April 2012	7.1	12.8	+80%	-33%	-2%
April 2014	5.1	23.8	+360%	-28%	+120%
April 2016	7.3	12.8	+75%	+43%	-45%

Simultaneously, the 'internal spreads' of high and low IOS ridership forecasts inside the Authority's 2014 Business Plan varied more greatly than inside either the 2011 or the 2012 Plans' spreads.[364] While the earlier two IOS spreads were 47% and 80% respectively, the 2014 IOS forecast 'spread' –

[363] See: California High-Speed Rail 2012 Business Plan Draft Technical Memorandum – Ridership and Revenue Forecasting, October 19, 2011 Table 5.2, page 5-6 [PDF 34]. The 'spread' is calculated by using the note in Table 5.2 that shows the 13.1Million ridership number has increased by 18% (from 10.7Million). For 2012 see: Cambridge Systematics' (CS) final technical memorandum of Ridership and Revenue Forecasting of April 12, 2012, Figure 5.3 [PDF 46]. For 2014 see: Cambridge Systematics' (CS) final technical memorandum of Ridership and Revenue Forecasting of February 6, 2014, page 7-3 [PDF 60]. For example, the highest IOS ridership forecast in the 2014 Plan is almost double the 2012 IOS high forecast.[363] In November 2011, the highest IOS (South) estimate was 13.1Million. Five months later (April 2012) it had decreased to 12.8Million; but by 2014 the IOS high estimate was 23.8Million. Low ridership forecasts were consistently lower. In November 2011 the lowest ridership was 10.7Million. Five months later (April 2012) the low was 7.1Million IOS riders. Two years later (April 2014) the IOS low forecast, 5.1Million, was less than half that of November 2011. In November 2011, the Authority had not chosen whether to build northward of southward of Merced-Bakersfield. Table 5.2, page 5-6 [PDF 34] shows both, but for purposes herein IOS South is chosen. See: California High-Speed Rail 2012 Business Plan Draft Technical Memorandum – Ridership and Revenue Forecasting, October 19, 2011.

[364] The November 2011 the 'spread' during the IOS was 9.5Milllion to 14Million – the higher being 47% more than the lower. See Draft 2012 Business Plan, Exhibit 6-8, pg. 6-13 [PDF 111]. As Figure 1 shows, in the April 2012 Plan the IOS ridership forecasts higher estimate was 80% more than the lower.

from a 5.1Million low to a 23.8Million high – is nearly five-fold.[365] Since the 2014 Plan's low-to-high varied even more than in 2011 or 2012, even less confidence should be put in 2014 Plan's IOS forecasts than in the 2012 Plan's forecasts. [366]

Without evidence to show why there would be an increase of SF-LA riders when travelers are offered similar HSR transport costs and modes, Figure 9 shows the 2016 Mid-level IOS forecast is somehow 2012's High IOS ridership estimate; while 2016's was 80% higher than 2012's Low forecast.

Figure 9
SFTBT-LA Union IOS Ridership In The 2012, 2014 and 2016 Business Plans

	IOS Riders (Ms.)	Increase Over Prior Plan	Increase Over Prior Plan	Compound Annual Growth Rates Over 2012 Forecasts
2012 Low [367]	7.1	–	–	–
2012 High	12.8	–	–	–
2014 Mid-Level [368]	11.4	1.45Million	15%	Over 2012 Avg.-20% p.a.
2016 Mid-Level [369]	12.8	1.4Million	12%	Over 2012 Avg.-30% p.a.

To gain such ridership increases means that in the two years between 2012 and 2014, the annual compound growth rate was over 20% per year over a 9.5Million ridership average. Between 2012's Low forecast and 2016's Mid-Leven, the annual compound growth rate needs to be over 50% per year: another audacious statement, entirely lacking evidentiary support.

Although considerable resources have been spent on Cambridge Systematics and RTAP over the last five years, during the intervals between the four

[365] See Cambridge Systematics' (CS) final technical memorandum of Ridership and Revenue Forecasting of April 12, 2012, Figure 5.3 [PDF 46]
[366] The statutorily required Peers, in their comments on the 2012 Business Plan said *"As a result, the Authority notes that the forecasts used for the Revised Plan are only 63% of the August 2011 forecasts (72% for the medium case). In addition, the low/high range increased from a 40 percent interval to a 60 percent interval, which may give a better measure of the potential variability in the results."* See: Draft 2014 Business Plan, February 7, 2014, PDF 87.
[367] For 2012 IOS ridership forecasts, see: Figure 5.5, and 5.7 [PDF 49-50] of the California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting.
[368] See: Table 7.4, p. 7.7, of the Authority's 2014 Business Plan, Final Technical Memorandum – Ridership and Revenue Forecasting.
[369] See: VtoV Ext. Table 6.3, p. 6-5, California High-Speed Rail Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting.

Plans, the Authority's consultants seem unable to convince themselves that their prior IOS ridership forecasts are credible. Flyvbjerg and colleagues are right: forecasts are made to meet clients' needs at the time.

> *". . the patronage estimates used by planners of rail infrastructure development are highly, systematically, and significantly misleading (inflated)."* [370]

Why should anyone believe the Authority's 2016 or subsequent IOS forecasts would be credible?

4.7.3.2 Distinctions Without Differences – The Authority says each of its two Initial Operating Segment (IOS) proposals is profitable.[371]

> *"On its own, the IOS is a viable, profitable high-speed rail system."*

It's worth exploring that claim in the 2016 Plan. That Plan's ridership forecasting document[372] says that ridership for VtoV is 1.4Million, while

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[370] p. 144 [PDF 14] Bent Flyvbjerg, Mette K. Skamris Holm, and Soren L. Buhl; How (In)accurate Are Demand Forecasts in Public Works Projects? The Case of Transportation; Journal of the American Planning Association, Vol. 71, No. 2, Springe 2005. Found at: http://flyvbjerg.plan.aau.dk/Traffic91PRINTJAPA.pdf

[371] *"On its own, the IOS is a viable, profitable high-speed rail system."* See: California High-Speed Rail Program, Revised 2012 Business Plan; April 2012; pg. 2-15 [PDF 59].

[372] The comparisons in this figure compare "apples to apples" because both the Plan and the R&R technical document speak of VtoV being from San Jose to north of Bakersfield and VtoV Ext. being from San Francisco to Bakersfield. In the 2016 Draft Plan document, the VtoV Medium Ridership in 2025 is 2.9Million: in 2028, it's 6.2Million. See: Exhibit 7.1 p.69 [PDF 69] in Connecting and Transforming California, Draft 2016 Business Plan, February 18, 2016. In the ridership forecasting technical document, VtoV Medium ridership is 7.3Million; VtoV Ext. Medium ridership is 12.8Million. See: Table 6.3 p. 6-3 [PDF 41] of the Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document.

Figure 10
Comparing Two Sources of VtoV and VtoV Ext. Ridership In the 2016 Plan

2016 Draft Plan Data Sources	2005 VtoV Medium Ridership Estimate (Ms.)	2008 VtoV Medium Ridership Estimate (Ms.)	2025 VtoV Ext. Medium Ridership Estimate (Ms.)	2028 VtoV Ext. Medium Ridership Estimate (Ms.)	2029 Phase 1 Medium Ridership Estimate (Ms.) – based on VtoV Ext.
Business Plan	2.9M	6.2M	5.1M	11.0M	22.6M
R&R Forecasting	Na.	7.1M	Na.	12.8M	37.1M

These forecasts are considered the "ramped up" ridership estimates. See: Table 6.3 p. 6-3 [PDF 41] of the Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document.

ridership for VtoV Ext. is 2.1Million.[373] The two labels are distinctions without differences. They start and finish in the same years (2025-2028). The Authority's 2016 Plan says an HSR journey to Los Angeles via San Jose will start from an unspecified point in San Francisco.[374] While the elapsed time of the SF-SJ ride on HSR is one minute faster[375] the HSR fare between those ($23)[376] points is more than twice the Caltrain Clipper Card fare ($9.20).[377]

South of San Jose, VtoV and VtoV Ext. have the same services except the later goes into Bakersfield while the former stops at a temporary terminal near Shafter. [378] Then both Authority services offer busses to Los Angeles. The difference in elapsed times SF-LA during VtoV (using Caltrain) and VtoV Ext. is 28minutes, or 8% of the on-board times.[379]

Given the 16% SF-SJ cost difference ($13.80) to start the southward journey during VtoV, these hardly seem reasons for the Authority to have increased ridership by 50% for the VtoV Ext. over the VtoV estimate.

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[373] See Table 6.3, p. 6-5 [PDF 41] of the Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue

[374] See Appendix A, tables A.1 and A.2 (and for Phase 1) A.3 of the Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue

[375] The Authority plans its VtoV Ext. service to leave an undisclosed place in San Francisco and only stop in Millbrae en route to San Jose. Since there is no mention of the SFTBT in the technical document's Appendix A analyses of elapsed times during the three phases, the proper assumption is that the starting point is 4th & King. Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Appendix A.2 says than in 2025 the elapsed time from SFTBT to San Jose (only stopping at Millbrae) during VtoV Ext. will be 52minutes. Today, Caltrain's weekday Baby Bullet makes six stops between SF (4ht & King) to San Jose Diridon and takes 63minutes. See: http://www.caltrain.com/schedules/weekdaytimetable.html. If each of the Baby Bullet stops were on two minutes, and five of those were eliminated to equal only one (the number of stops south that Authority says will happen) then the HSR train gains only 1 minute of elapsed time over Caltrain's Baby Bullet's elapsed time from SF to San Jose.

[376] See Table 3.1, p. 3-3 [PDF 25] of the Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue

[377] For Caltrain fares, see: http://www.caltrain.com/Fares/farechart.html

[378] See: Table 3.2, p.3-4 [PDF 26] of Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document.

[379] The VtoV time, using Caltrain's Baby Bullet schedule and Appendix A of the Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document is 28 minutes,

4.7.3.3 Looking For Consistency In IOS Ridership Forecasts' Is Hopeless –

As Figure 11 shows, the Authority's forecasters were not concerned that one year's forecasts bore no resemblance to the next year's (or vice versa).

Figure 11
2012, 2014 and 2016 Intra-Regional Ridership From the Two Largest Regions During IOS Period [380]
No. in Millions (M) & %

	2012 Plan	% *of total 2012 Plan*	2014 Plan	*% of total 2014 Plan*	2016 Plan (VtoV Ext.)	*% of total 2016 Plan*
MTC-MTC+MTC-SJV	0.2-0.9M	*3%-7%*	0.6M	*5%*	4.8M	*38%*
SCAG-SCAG+SCAG-SJV	0.7-4.5M	*11%-37%*	5.5M	*48%*	0.8M	*6%*

The combination of intra-MTC and MTC-SJV ridership goes from 2014's low of 5% to 2016's 38% of all IOS riders. That swing from a low of 200,000 riders (2012) or 2014's 600,000 riders to 2016's 4.8Million riders lacks a logical or empirical base.

Similarly, there's a leap then crash of intra-SCAG and SCAG-SJV riders. Going from a 2012 average ridership of 5.2Million, nearly equaling 2014's 5.5Million, is indefensible: even less so when that combination drops almost to 2012's Low forecast. How can ridership in 2014 be nearly half of all IOS ridership, then drop to 6% of the IOS total two years later?

How can these major swings in IOS ridership happen in the short space of four or two years? The travelers are still going to or from the same end points (MTC or SCAG), have equally lengthy HSR rides and the equal inconvenience of changing to busses going southwards to LA Union, and changing from busses, to HSR going northwards.

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[380] 2012 ridership comes from Table 5.6, p. 5-13 [PDF 49] of the Californian High-Speed Rail 2012 Business Plan, Final Technical Memorandum – Ridership and Revenue Forecasting. 2014 ridership comes from Table 7.4, p. 7-7 [PDF 64] of the Californian High-Speed Rail 2014 Business Plan, Final Technical Memorandum – Ridership and Revenue Forecasting. For 2016 ridership see Table 6.3 [PDF 41] of the Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue

4.7.3.4 From Zero To Two Million Intra-MTC Riders In Two Years Shows How Arbitrary IOS Ridership Forecasts Are –

As Figure 12 shows, 2012 and 2014 there were no intra-MTC riders during the IOS South (2022-2026).[381] That abruptly changed in the 2016 Plan: 1.8Million MTC riders (San Francisco to Gilroy) appeared.[382]

Figure 12
2012, 2014 and 2016 Intra-Regional Riders During IOS Period [383]
No. in Millions (M) & %

	2012 Plan	*% of total 2012 Plan*	2014 Plan	*% of total 2014 Plan*	2016 Plan	*% of total 2016 Plan*
MTC-MTC	None	*0%*	none	*0%*	1.8M	*20%*
SCAG-SCAG	0.7M	*11%*	2.7M	*44%*	none	*0%*

All three Plans (2012, 2014, 2016) for the IOS blend HSR rides with dedicated busses and/or local commuter rail rides (Caltrain and Metrolink). None provide a +200mph link to either SFTBT or LA Union station. All three require travelers to change for rail and/or busses to HSR and back to busses and/or commuter rail. In the 2012 and 2014 Plans, travelers during the IOS South period took busses from SFTBT to Merced, then HSR to San Fernando, then busses to any southward destination.[384] For the potential[385] VtoV Ext., shown in the 2016 Plan, travelers from SFTBT use commuter rail (or high-speed rolling stock traveling at commuter rail speeds), then HSR to

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[381] For 2012, see Table 5.5, p. 5-13 [PDF 49] of the California High-Speed Rail 2012 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting. For 2014, see: Table 7.4, p. 7-7 [PDF 64] of the California High-Speed Rail Draft 2014 Business Plan Ridership and Revenue Forecasting—Draft Technical Memorandum

[382] See Table 6.3 [PDF 41] of the Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue

[383] 2012 ridership comes from Table 5.6, p. 5-13 [PDF 49] of the Californian High-Speed Rail 2012 Business Plan, Final Technical Memorandum – Ridership and Revenue Forecasting. 2014 ridership comes from Table 7.4, p. 7-7 [PDF 64] of the Californian High-Speed Rail 2014 Business Plan, Final Technical Memorandum – Ridership and Revenue Forecasting. For 2016 ridership see Table 6.3 [PDF 41] of the Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue

[384] For 2012, see Figure 5.2, p. 5-3 [PDF 39] of the California High-Speed Rail 2012 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting. For 2014, see Figure 3.1, p. 3-2 [PDF 25] of the California High-Speed Rail Draft 2014 Business Plan Ridership and Revenue Forecasting—Draft Technical Memorandum

[385] Potential extensions to the Silicon Valley to Central Valley phase would extend high-speed rail service from San Jose to San Francisco in the north and from the assumed southern terminus to Bakersfield. See p. 3-1 of [PDF 23] the California High-Speed Rail 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue.

Bakersfield then a 2hr.40minute bus ride to LA Union.[386] Assuming that the Authority isn't fantasying about building dedicated tracks between San Jose and San Francisco for the VtoV Ext. phase, neither travel times nor the cost of HSR travel change substantially during the Initial Operating Segments (IOS), whether from the San Joaquin Valley southwards or northwards.

The decision to insert nearly two million (1.8M) intra-MTC riders into the 2016 revenue producing equation (or not have had a similar number in 2012 and 2014) exemplifies how arbitrary the Authority's forecasting system is.

4.7.3.5 Seismic Shifts in Origin-Destination Data Within Two Years Show How Arbitrary IOS Ridership Forecasts Are –

In 2014, about half of all IOS South riders (6.2Million) either originated or were destined to the Los Angeles Basin (SCAG). Two years later, when the IOS (VtoV Ext.) ridership has grown by 12% to 12.8Million, only 1.2Million travelers originate or are destined for SCAG. The Authority does not explain how that number dropped by 5Million riders to only 9% of all origins and destinations during the IOS North.

Conversely, in 2014 the SF Bay Area only counted for 2.2Million riders, a fifth of the 11.4Million total originating and arriving during IOS South. By making the assumption that 3Million riders – nearly a quarter (23%) of all IOS North period riders – would travel between MTC and the San Joaquin Valley (SJV) and pay an average of $63 for a one-way ride between San Jose and Fresno, MTC's O-D share jumps nearly 50 points.

That four-fold increase in MTC-SJV riders and the decline of 5Million riders starting or finishing their journeys in the SCAG region are not backed by specific survey data using the characteristics of IOS South or IOS North. Nor

[386] See p. 3-1 [PDF 23] and A.2 p. A-2 [PDF 60] of the California High-Speed Rail Authority Draft 2016 Business Plan; Ridership and Revenue Forecasting, Technical Supporting Document

can the Authority provide empirical logic that riders will pay 2-4times the cost of driving the MTC-SJV route to take the HSR train.[387] ????????

Figure 13

IOS North and IOS South - Main Categories of Origin-Destination

MAIN O-D CATEGORIES	2014 riders million	% of 2014 riders	2016 riders million	% of 2016 riders
SACOG	0.7	6%	0.9	7%
SANDAG	0.7	6%	0.3	2%
MTC	2.2	19%	8.8	68%
SCAG	6.2	54%	1.2	9%
SJV	1.6	14%	1.6	12%
Other Regions	0	0%	0.1	1%
TOTALS	11.4	100%	12.9	100%

The fact that the Authority's Ridership Technical Advisory Panel (RTAP) concurred with 2013/2014 RP/SP survey findings that interest in riding a high-speed train had decreased 17% in five years,[388] that personal vehicle users are less likely to change to HSR; [389] and that travelers cared less in 2013/2014 about travel times than they did five years earlier,[390] didn't seem to bother the Authority's forecasters. Figure 13 is testimony to the reckless and arbitrary assumptions underpinning the Authority's revenue and financial viability statements.

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[387] For the $63 one-way fare between San Jose and Fresno see [387] See: Table 6.3, p. 6-5 [PDF 41] of the California High-Speed Rail Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting. For the costs of driving Fresno-San Jose see: http://www.travelmath.com/cost-of-driving/from/Fresno,+CA/to/San+Jose,+CA

[388] See p.12 [PDF 10]; Cambridge Systematics, California High Speed Rail Ridership and Revenue Forecasting, Survey Data and Inputs to Version 2/Version 3 Preliminary Choice Patterns and Traders/Non-traders; Prepared for California High Speed Rail Authority and Ridership Technical Advisory Panel, March 20, 2014.

[389] See p. 2 [PDF 3] of the Ridership Technical Advisory Panel Review of the California High-Speed Rail Ridership and Revenue Forecasting Process, Findings and Recommendations from the May-June 2014 Review Period, September 17, 2014. *"Travelers appeared to be slightly less sensitive to differences in travel time and cost in 2013-14 than in 2005. Thus, mode changes are less likely to occur based only on those considerations."*

[390] See p. 3 [PDF 4] of the Ridership Technical Advisory Panel Review of the California High-Speed Rail Ridership and Revenue Forecasting Process, Findings and Recommendations from the May-June 2014 Review Period, September 17, 2014 *"Two issues of concern existed with respect to the results presented at the meeting: (1) lower than expected values of time, and (2) unexpected, significant increases in predicted recreational/other HSR ridership and revenue compared to previous V2 forecasts."*

4.8 Conclusions on Unconvincing HSR Ridership Forecasts – Somehow, with little or no credible competitive position against auto travel, and no substantial evidence that realistic HSR fares will draw 12.8Million IOS North riders, 37.1Million riders in Phase 1's first year and 42.8Million annual riders in 2040, the public is to risk at least $20-$64Billion building what may become not the USA's largest infrastructure project, but rather its largest White Elephant.

SECTION 5

ON THE LACK OF REASONABLENESS OF THE AUTHORITY'S OPERATIONS & MAINTENANCE (O&M) FORECASTS

This section focuses again on the formula, Revenues (= Fares x Ridership), when greater than (>) **Total** [391] **Operations and Maintenance (O&M) Costs** equates to Positive Operational Cash Flow (Profitability or Financial Viability).[392] It analyzes evidence to find whether the Authority's O&M forecasts seem authentic and able to withstand comparison with historical and empirical data and findings. It finds that the Authority's O&M forecasts are hidden from the daylight of public scrutiny and lack credibility when compared with publically available empirical evidence.

Public scrutiny of the Authority's O&M costs is not allowed.[393] But what can be gleamed from public documents shows that the Authority's O&M costs are 'outliers' to the worldwide HSR operating experience. The Authority knows this, again tried to defend the indefensible, and even its commissioned study of O&M pointed out substantial gaps. The Authority 'shaves' its costs by leaving out significant cost items, increasing its Load Factor and adopting European accounting rules that leave out large portions of fixed infrastructure maintenance costs.

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[391] The word 'Total' is used here because the US DOT, uses Generally Agreed Accounting Principles (GAAP) guidance, and requires all revenues and costs be in a single account.

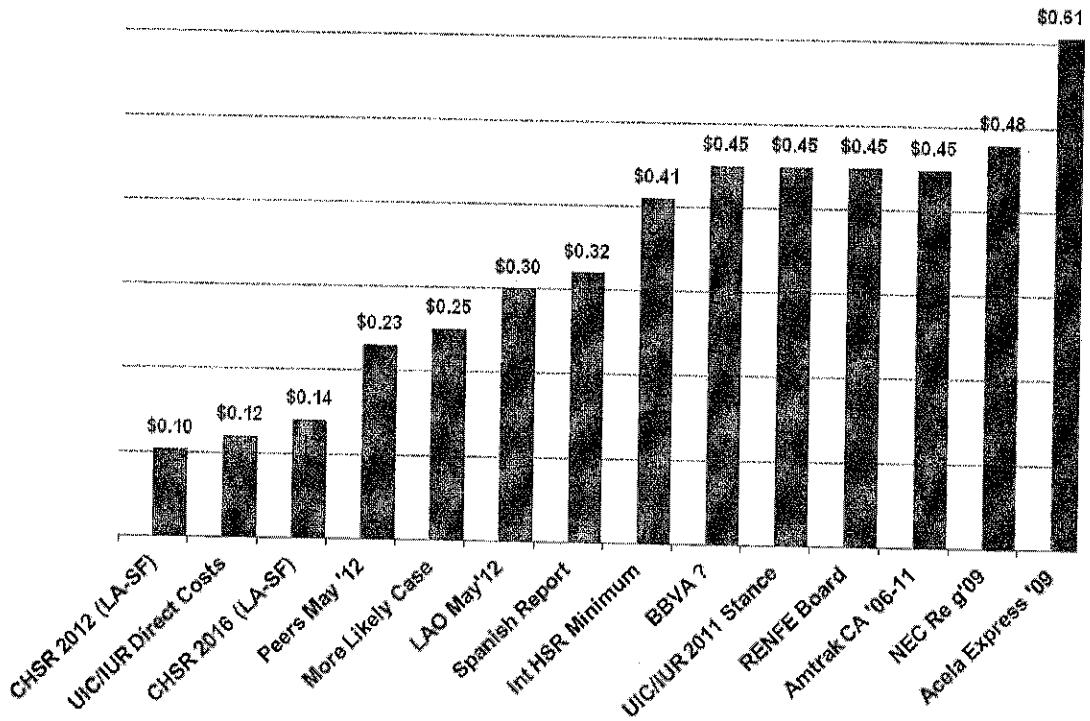
[392] See: To Repeat – The Authority's Train Will Need A Subsidy Forever, August 22nd 2012. Found at: www.sites.google.com/site/hsrcaliffr Page. 35 [PDF 35] refers to France's and EU's rail accounting under Directive 91/440 that separates fixed infrastructure O&M accounts from rolling stock O&M accounts, as well as attributing at least part of health, pension and other benefits' costs to non-rail accounts. See: Réseau Ferré de France (RFF) History at http://www.fundinguniverse.com/company- histories/Reacute;seau-Ferreacute;-de-France-company-History.html

[393] Public Records requests concerning access to the actually used data and assumptions on ridership, revenues, O&M costs and profits, and the algorithms used for the Authority's computations, have been met with responses that, for example, say: *"This is trade secret information pursuant to Evidence Code section 1060, incorporated into the California Public Records Act through Government Code section 6254(k) and, therefore, will not be provided."* See email to Mr. Robert Prantis from Ms. Anne Parker of the Public Records Act Staff of the CA High-Speed Rail Authority, December 27, 2013.

5.1 The Authority Cannot Claim Being Unaware That Its O&M Costs Are Unreasonably Low – Transport planners, even Californian transport planners underestimating O&M costs is nothing new. Twenty years ago, a study of actual versus real O&M showed that for Los Angeles' metro (Red Line) the actual O&M costs were more than five times the planners' estimates, and the commuter rail's (Metrolink) as 60% higher than estimated.[394]

Figure 2

Actual O&M Expenses PPM Vs. The Authority's O&M PPM Forecasts



[394] See Figure 2a, p. 4, [PDF 8], in Ten myths about US rail transit systems, Transport Policy 6 (1999), by Thomas Rubin, James Moore and Shin Lee. The quote is, *". . .forecasts always tended to be relentlessly optimistic. Ridership forecasts always tended to be high, while capital and operating costs almost always tended to be low. The net effect is that actual costs per passenger tended to be much higher than forecast, sometime as much as an order of magnitude." Nearly 25 years later this warning is still not heeded by Authority officials.* Attached as Pet No, 082, Ten Myths About US Rail, Transport Policy 6, 1999.PDF. Also found at: http://reason.org/files/8b6432296d935e9975583a74608c93bd.pdf or at .http://ise.usc.edu/assets/007/64769.pdf

Figure 2's empirical evidence from four-five years ago evidence shows worldwide HSR operators' O&M costs being a far greater percent of revenues, and more than twice and up to six times the Authority's O&M costs on a per passenger mile (PPM) basis.

Depending on which Authority ridership scenario is chosen, the Authority's O&M costs were roughly 51%-54% of IOS revenues per passenger mile.[395]. Since downtown SF-to-downtown LA fare per passenger mile (PPM) in 2012 were $24¢ PPM, by inference O&M costs were around 12¢ PPM:[396] by 2016, O&M costs were 14¢ PPM.

How can the Authority not see its O&M costs are a quarter to a third of real world experience? No amount of claiming that their faster train will be used more frequently can make those huge differences go away. The worldwide standard for operating speeds, 185-186mph, is a balance between capability and higher power costs, rolling stock and fixed infrastructure costs. The Authority's train operates about 20% faster (220mph). The lesson of Formula 1 racing, where operating speeds reach the Authority's, should be a 'speed costs' lesson as higher speeds cause power costs to rise exponentially and wears out rolling stock much quicker. The Authority's O&M calculations are not real world based and cannot explain how its trains' per passenger mile (PPM) costs can be a quarter or a third of that known to worldwide operators.

In June 2011 Spain's high-speed rail (AVE) operator, RENFE, presented the Authority evidence that AVE's O&M costs were about 45¢ PPM.[397] That same year, an independent review of the Draft 2012 Plan pointed out that the Authority's 12¢ PPM *"will be less than 25% of existing worldwide HSR*

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[395] See Exhibit ES-7, pg. ES-17 [PDF 25] Revised 2012 Business Plan, April 2012
[396] California High-Speed Rail, Draft 2012 Business Plan (November 2011) Exhibit ES-3, page ES-9 [PDF 15]. The Net Operating Profits for the IOS' High, Medium and Low ridership cases scenarios are 49%, 46% and 43% respectively; making the three scenarios' O&M costs 11.8¢, 12¢ and 13¢ PPM respectively.
[397] See: Figure A 6-1 To Repeat, December 2012 at: www.sites.google.com/site/hsrcaliffr

estimated costs"[398] and while the Plan said *"Composite unit prices for more than 300 separate cost items have been developed for the cost estimates."* none were issued, with comparisons to existing HSR systems O&M cost items with the 2012 Plan,[399] nor since.

In early 2012 the Authority recognized Acela as a profitable high-speed rail service.

> *"High-speed train services, on the other hand, generate positive cash flows around the world, including the Northeast Corridor;"*[400]

But the Authority has refused to recognize Acela's very much higher – ±60¢/PPM – O&M costs.

Also in 2012, the Authority received four reports comparing its O&M costs to empirical data. A March 2012 report analyzed eleven of Europe's HSR routes and found the O&M to be 48¢ PPP with one of France's TGV routes being lowest at 31¢ PPM and one of Italy's highest at 52¢ PPM.[401] An Authority document [402] cited a report on HSR by Spanish and UIC authors[403] incorporating data that showed 2002 per seat mile (PSM) costs. When analyzed, the data suggest an O&M cost of about 31¢ per seat mile,[404] or about 48¢/PPM,[405] four times that of the Authority's.

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[398] See: p. 25 [PDF 25] of California High Speed Rail Authority's Draft 2012 Business Plan Still Not Investment Grade. Source is California High-Speed Rail Program Draft 2012 Business Plan, November 1, 2011; pg. 7-1 at: www.sites.google.com/site/hsrcaliffr

[399] See: California High Speed Rail Authority's Draft 2012 Business Plan Still Not Investment Grade at: www.sites.google.com/site/hsrcaliffr, pg. 3-4. Source is California High-Speed Rail Program Draft 2012 Business Plan, November 1, 2011; pg. 7-1

[400] See p. 2-15 [PDF 59] of California High-Speed Rail Program; Revised 2012 Business Plan, April, 2012.

[401] See p. 5 [PDF 5] The Authority Knows Their Proposed High-Speed Train Will Forever Need An Operating Subsidy, March 17, 2012 at: www.sites.google.com/site/hsrcaliffr

[402] See Footnote 3, pg. 6 [PDF 7] of the Authority's 2012 Business Plan Estimating HST Operating and Maintenance Costs

[403] See [PDF 18- 19] Tables 1.2 and 1.3 in Albalte, Daniel and Bel, Germa: The Economics and Politics of High-Speed Rail, A Review of HSR Experiences Around The World

[404] See [PDF 5] in The Authority Knows Their Proposed High-Speed Train Will Forever Need An Operating Subsidy, March 17, 2012. Found at: www.sites.google.com/site/hsrcaliffr

[405] See Section 2, [PDF 4-6] of The Authority Knows Their Proposed High-Speed Train Will Forever Need An Operating Subsidy, March 17, 2012, at: www.sites.google.com/site/hsrcaliffr Using a very generous Load Factor of 75% (i.e. three-quarters of all seats aboard the HSR

A May 2012 Legislative Analyst's Office (LAO) letter to an Assembly Member said,

> *"Based on our analysis, we estimate that O&M costs for existing systems were in the range of 30 cents per passenger-mile."*[406]

A July 2012 report pointed out the Authority's low-ball O&M estimate[407] and that an earlier report showed the Federal Railroad Administration (FRA) said

> *"The operating cost per seat mile from the FRA study for the California corridor (2006$) is approximately 40 % higher than the Authority's projections."*[408]

A December 2012 report that expanded on the March 2012 report cited fourteen O&M costs, averaging 33¢ PPM in which the Authority's 10¢ PPM was the lowest and Acela's 61¢ PPM was the highest.[409] In 2013 the Brookings Institution said Acela's O&M was about 32¢ PPM;[410] three times the Authority's forecasted O&M (10-11¢).[411]

While these analyses have shown existing HSR systems operate at a cost of 32¢ - 61¢[412] PPM.[413] As Figure 2 shows, the Authority still proposes to

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systems studied were assumed to be always full) and uplifting for inflation, the PPM costs compute to 48¢ PPM.

[406] See "To Repeat – The Authority's Train Will Need A Subsidy Forever", August, 2012, Second Edition, December, 2012 at: www.sites.google.com/site/hsrcaliffr. Attachment 9, [PDF 180] is a LAO letter to Assembly Member Diane Harkey, dated May 4, 2012.

[407] Brief Note #15 "On Operating Costs Out of Sync with the FRA and Reality." Found at: at: www.sites.google.com/site/hsrcaliffr

[408] See p. 49 [PDF 62] California High Speed Rail: A Due Diligence Report; Cato Institute, Policy Analysis No. 625; Joseph Vranich, Wendell Cox, Adrian T. Moore, October 31, 2008. Source is Transportation Research Board, National Research Council, *In Pursuit of Speed: New Options for Intercity Passenger Transport,* Special Report 233, 1991, Table A-14 (operating cost items only). Found at http://www.trb.org/main/blurbs/153319.aspx Purchased from https://www.mytrb.org/Store/Product.aspx?ID=5283

[409] See Figure 5, [PDF 7] in "To Repeat – The Authority's Train Will Need A Subsidy Forever", August, 2012, Second Edition, December, 2012 at: www.sites.google.com/site/hsrcaliffr

[410] See Robert Puentes, Adie Tomer, and Joseph Kane: A New Alignment: Strengthening America's Commitment to Passenger Railroad; Metropolitan Policy Program at Brookings, March 2013, Appendix B, Amtrak Route Performance, page 19, [PDF 25]. O&M does not include capital charges (such as depreciation), interest, and other costs.

[411] Figure 5, pg. 7 says Acela were 72¢ PPM for fares and 62¢ for O&M. in To Repeat – The Authority's Train Will Need A Subsidy Forever, August, 2012, Second Edition, December, 2012 at: www.sites.google.com/site/hsrcaliffr

[412] See Figure 5, [PDF 7] of "To Repeat – The Authority's Train Will Need A Subsidy Forever", August, 2012, Second Edition, December, 2012 at: www.sites.google.com/site/hsrcaliffr

operate at a cost of about 13¢-14¢ per passenger mile PPM, about a third that in Europe, and a fifth that of Acela Express.

5.2 The Authority 'Hunkered Down' To Defend Its 'Low Ball' O&M Costs – In 2011 the Authority "baked in" profits when O&M costs were assumed to

> *" . . grow at 60 percent of the growth of ridership, so if ridership grew one percent, operating expense costs grew six-tenth of one percent . . "* [414]

This assertion always makes O&M about 40% less than revenues, since the Authority's declared revenues always correlate .999% with a multiple of ridership.[415] While this assumption sounds good, it is far from real world experience.

The Authority abhors Talthybius-like findings that differ from its public stance. The Authority publically disowned the Spanish and UIC authors' material used in its own report,[416] claiming the correct O&M data would be forthcoming. Four years on, this claim remains "under review."[417] Without substantial evidence to support his statement, in 2012 the Authority's then-CEO testified before the US Congress that all 2012 Draft Business Plan's price

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[413] See: U.S. Department of Transportation (the US DOT) document, 'Federal Subsidies to Passenger Transportation' of December 2004, prepared by the Transportation Bureau of Transportation Statistics. Examples on pages 1, 5, 8, and 10, and Tables 3 and 4 show per passenger mile (PPM) as the financial performance metric across a wide range of rail and air passenger modes. Available at http://www.bts.gov/publications/federal_subsidies_to_passenger_transportation/

[414] See California High-Speed Rail Program Draft 2012 Business Plan, November 2011; p. 7-3

[415] See: page B-9 [PDF 80] of California High-Speed Rail Draft 2014 Business Plan: Ridership and Revenue Forecasting, draft technical memorandum: *"Revenue and ridership were closely with a R^2 of more than 0.999 for each year."*

[416] See Footnote 3, pg. 6 [PDF 7] of the Authority's 2012 Business Plan Estimating HST Operating and Maintenance Costs

[417] The Authority's sentence, which footnoted the BBVA report, said: *"For the 2012 business plan, these items were compared to results reported for other high speed rail systems in Europe and Japan. European information drawn from the International Union of Railways (UIC), a worldwide railroad association headquartered in Western Europe, published work by Spanish researchers . . "* In an April 2012 Assembly hearing Vice Chair Mike Rossi stated that UIC would make the correct available. Shortly afterwards, accompanying an Authority press conference, he issued a letter saying the data used in the Tables 1.2 and 1.3 of the original BBVA-sponsored research document was "flawed" and *"under review."*

and cost projections had been checked and cross-checked against all HSR systems, and all of HSR systems were profitable.[418]

The Authority has denied public records requests to review its detailed O&M assumptions, data and calculations;[419] and stonewalled the Legislative Analyst's Office's (LAO) attempt to verify its O&M numbers.[420] Even the DOT's Office of Inspector General found (OIG) complained in 2011 that the level of detail for O&M costs were too general to be useful.[421] In 2012 and 2013 the US Government Accountability Office noted its lack of access to details on how the Authority computed O&M costs,[422] and noted in 2012 that,

" . . *over half of the operating costs are captured in a single category*

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[418] PET#201 AG 131, Testimony CEO Roelof before the US House Subcommittee on Railroads, Pipelines and Hazardous Materials, December 15, 2011.

[419] Public Records requests concerning access to the actually used data and assumptions on ridership, revenues, O&M costs and profits, and the algorithms used for the Authority's computations, have been met with responses that, for example, say: *"This is trade secret information pursuant to Evidence Code section 1060, incorporated into the California Public Records Act through Government Code section 6254(k) and, therefore, will not be provided."* See email to Mr. Robert Prantis from Ms. Anne Parker of the Public Records Act Staff of the CA High-Speed Rail Authority, December 27, 2013.

[420] The Legislative Analyst's Office (LAO) letter of May 4, 2012 said. *"However, we were provided with no further information to independently verify this* [the 2012 Plan's O&M costs] *although we understand that a report on those findings by this group is forthcoming."* See Attachment Nine, [PDF 185] of To Repeat, The Authority's Train Will Need A Subsidy Forever. Found at: www.sites.google.com/site/hsrcaliffr

[421] *"Neither the costs for the maintenance of rolling stock nor any detail on examination frequency or staff and equipment required to undertaken them are presented."* See: See: p. 32, [PDF 43] of HSIPR Best Practices: Operating Costs Estimation, prepared for: Office of Inspector General US Department of Transportation, prepared by: Steer Davies Gleave, June 2011. Attached as Pet No. 421, OIG-HSR-Best-Practice-Operating-Cost-Report June 2011.PDF or see https://www.oig.dot.gov/sites/default/files/files/OIG-HSR-Best-Practice-Operating-Cost-Report.pdf

[422] In 2012 Congressional testimony, the GAO Infrastructure Director chided the Authority for failing to provide more than *"half of the operating costs are captured in a single category called Train Operations and Maintenance. In addition, the Authority did not clearly describe certain assumptions underlying both cost estimates."* See: Susan A. Fleming, Director of Physical Infrastructure Issues, Testimony Before the Committee on Transportation and Infrastructure, House of Representatives on High-Speed Passenger Rail, December 6th 2012 Found at: http://gao.gov/assets/660/650608.pdf . GAO's March 2013 report on the project, said, *"The O&M model includes relevant data, but sources and variables can only be described as somewhat documented . ."* *"No comprehensive document exists that explains the O&M model element by element."* and *"In addition, the O&M cost estimate is not based on an approved technical baseline document."* and ". . *O&M models. . .do not appear to be based on historical data or analogous sources."* See: GAO-13-304, Report to Congressional Requesters, California High-Speed Passenger Rail, Project Estimates Could Be Improved to Better Inform Future Decisions, March 2013, pg.74 [PDF 79] and pg.76 [PDF 81]. Found at: http://www.gao.gov/products/GAO-13-304

called Train Operations and Maintenance. In addition, the Authority did not clearly describe certain assumptions underlying both cost estimates." [423]

Subsequently, the GAO's March 2013 report says;

> *". . .operating costs were not sufficiently detailed (comprehensive), the development of some cost elements were not sufficiently explained (well documented). ."* [424] *"For example, we were unable to identify the basis for how the operating costs from analogous foreign high-speed rail projects were adjusted for use in California.*[425]

GAO extended it incredulity about the Authority's O&M costs, saying,

> *". . no comprehensive document exists that explains the O&M model element by element."* and *". . the O&M cost estimate is not based on an approved technical baseline document . . ."*[426]

Although the PRG stressed that O&M is an equally important variable in calculating financial viability, [427] it too has been denied access[428] to the Authority's O&M data, assumptions and algorithms. PRG said the Authority exercised an optimism bias,[429]

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[423] Statement of Susan A. Fleming, Director Physical Infrastructure Issues; Testimony Before the Committee on Transportation and Infrastructure, House of Representatives; HIGH-SPEED PASSENGER RAIL; Preliminary Assessment of California's Cost Estimates and Other Challenges; GAO-13-163T; Thursday, December 6, 2012, page 8 [PDF 10]. Found at: http://www.gao.gov/products/GAO-13-304

[424] United States Government Accountability Office; Report to Congressional Requesters; CALIFORNIA HIGH- SPEED PASSENGER RAIL; Project Estimates Could Be Improved to Better Inform Future Decisions; GAO-13-304; March 2013, [PDF 2] Found at: http://www.gao.gov/products/GAO-13-304

[425] See United States Government Accountability Office; Report to Congressional Requesters; CALIFORNIA HIGH- SPEED PASSENGER RAIL; Project Estimates Could Be Improved to Better Inform Future Decisions; GAO-13-304; March 2013, , page 18 [PDF 23] Found at: http://www.gao.gov/products/GAO-13-304

[426] See: GAO-13-304, Report to Congressional Requesters, California High-Speed Passenger Rail, Project Estimates Could Be Improved to Better Inform Future Decisions, March 2013, pg.76 [PDF 81]. Found at: http://www.gao.gov/products/GAO-13-304

[426] See GAO-13-304, Report to Congressional Requesters, California High-Speed Passenger Rail, Project Estimates Could Be Improved to Better Inform Future Decisions, March 2013, page 18 [PDF 23] Found at: http://www.gao.gov/products/GAO-13-304

[427] On page b98 [PDF b98] of the 2014 Business Plan the PRG recognizes that O&M costs are as important as ridership/revenue in determining financial viability. *"Since the O&M costs are as important as the demand and revenue forecasts in determining the financial and economic justification of the project . . ."*

[428] Letter from the California High-Speed Rail Peer Review Group, Will Kempton, Chairman, January 3, 2012. See www.cahsrprg.com, pg. 5

[429] See Appendix 2, or see pgs 7-8 of the May 18, 2012 Peer Group Report found at http://www.cahsrprg.com/files/bus_plan.pdf that says,". . *the overall results of the* [THE AUTHORITY's O&M] *model appear optimistic by comparison with readily available data on the*

> *"These* [O&M] *forecasts have not been subjected to external and public review, and many of the internal workings of the model,* ***especially as applied to the IOS*** *and Bay to Basin scenarios, remain unclear."* [Emphasis added]

In a separate report, GAO questioned the accuracy of Amtrak's accounting, noting the railroad operator may have omitted O&M items[430], implying the Authority's O&M accounts are missing seriously large expense items.

The Authority also ignored transportation academics' conclusions[431] and GAO's recommendation for independent analyses.[432] It commissioned the hardly-independent[433] International Union of Railways (UIC) to analyze O&M costs.[434] But UIC said the Authority's explanation

> *". . may lead to an understatement of the O&M costs or to an overstatement of the revenues"* since it could only review *"aggregated costs categories"*[435] not detailed O&M costs.

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closest comparable U.S. HSR operations (Amtrak's operations in the Northeast Corridor)"

[430] GAO-06-145; Report to the Chairman, Committee on Transportation and Infrastructure, House of Representatives; AMTRAK MANAGEMENT Systemic Problems Require Actions to Improve Efficiency, Effectiveness, and Accountability; October 2005. Attached as Pet No. 008, GAO-06-145 Amtrak Mgmt Systemic Problems 10-2005.PDF. Also found at: http://www.gao.gov/products/GAO-06-145. Although Amtrak's revenues and expenses must be in a single account (unlike European rail systems) GAO found that *". . Amtrak had omitted or misallocated key expenses in several areas, substantially understating operating expenses in reports."* and seriously underestimated depreciation costs. See pages 2 (second and third point), 66 (first paragraph), and 81 (first paragraph), (PDF pages 8, 72, and 87).

[431] Commenting on the history of O&M costs being greater than forecasted, Professor Ibbs says *". . .if we have that type of experience on this project, it's going to eat future generations alive; its going to eat our grandchildren's wallets alive . ."* See: Video of testimony of Professor William Ibbs, UC Berkeley at CA Senate Hearing on High-Speed Rail, March 27 2014; found between minutes 9:33 and 10:01.

[432] The March 2013 GAO report said; *"The Authority also did not compare its operating cost estimate to an independent cost estimate or conduct a risk and uncertainty analysis."* Found at: United States Government Accountability Office; Report to Congressional Requesters; CALIFORNIA HIGH- SPEED PASSENGER RAIL; Project Estimates Could Be Improved to Better Inform Future Decisions; GAO-13-304; March 2013, page 20 [PDF 25]

[433] The UIC mission is *"to promote rail transport at world level and meet the challenges of mobility and sustainable development."* See http://www.uic.org/spip.php?article528&lang=en

[434] In 2013, the GAO said, *"For example, we were unable to identify the basis for how the operating costs from analogous foreign high-speed rail projects were adjusted for use in California. Authority officials said that the operating cost estimate was used at a high level to determine whether or not the California system will operate with an operating surplus."* See GAO-13-304, Report to Congressional Requesters, California High-Speed Passenger Rail, 'Project Estimates Could Be Improved to Better Inform Future Decisions', March 2013, page 18 [PDF 23]

[435] The UIC comment on the Authority's explanation of ridership demand said it *". . . may lead to an understatement of the O&M costs or to an overstatement of the revenues."* it reviewed

5.3 The Authority Minimizes O&M Costs Through Biased Modeling – The Authority's memory is selective about what constitutes O&M costs. Despite needing private capital to operate and maintain the IOS, its 2014 Plan does not include a private operator's or investor's profit;[436] nor are taxes the private operator must pay on the profit part of the Authority's accounting formula.[437] It contradicts itself on the number of daily operating hours per year, (5,840 vs. 6,570) which could increase O&M costs 13%. [438]

The Authority also forgot landing and parking fees – for its trains. SF TransBay Terminal (SFTBT) or LA Union Station are city-owned and operated terminals. They are unlikely to waive their equivalent of landing or parking fees for HSR trains using their terminals, particularly since those trains will be operated by private, for profit companies. However, the Authority chose to exclude these operating costs from its five business plans.

An HSR example: In the SFO case, the operators' cost $6.40 per passenger; at LAX that's $6.55 per passenger. HSR train sets carry 450 passengers. [439] That's 2.78 times the 162-passenger 737-800. Train's "land" and park. If the SFO SF TransBay Terminal (SFTBT) charged fees similar to SFO ($6.40 per passenger) the fees could be $2,880 to land plus $325 to park and turnaround: a total of $3,200 per HSR arrival. With nearly 800 trains/day

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only *"aggregated costs categories."* See: UIC Peer Review of Operating & Maintenance Costs of the California High-Speed Rail Project; Final Report, January 2013.

[436] See: William Warren's comments on 2014 Plan pg.7 of 11

[437] See Warren comments on 2014 Plan, pp.7-8 of 1. The tax liability of the operator starting with the Bay to Basin Phase is part of the operator's profit equation. Either a gross profit (including the operator's tax liability) needs to be included in 10.4, or a net profit can be computed in 10.4 and the tax liability shown in 10.5.

[438] See William Warren comments on 2014 Plan paragraph 3.0, Figure shows 16 hours per day of operations, but Paragraph 4.3 states the Revenue Service Hours are 0600 to 2400, which is 18 hours.

[439] *"Trainsets were assumed to be approximately 660 feet in length with 450 passenger seats."* See: p. 10, [PDF 14] of 2014 Service Planning Methodology, Draft 2014 Business Plan, February 2014, prepared by Parsons Brinckerhoff.

(788) the fees could be over $5,000 per train or over $800Million/year. The terminal operators' income potential is too large for them to ignore.[440]

The Authority also defers maintenance, and the operation of maintenance facilities, in its O&M estimates until after the IOS. Consistent with US and state tax codes, the GAAP accounting practices used by DOT calculate a depreciation charge towards what an eventual asset replacement would cost and include a *pro rata* portion of such calculation in each annual O&M expense.[441]

But the Authority does not treat capital asset renewal as a component of O&M costs. It says,

> *"Finally, the system will require capital asset renewal expenditures over its life reflecting the need to renew or replace assets over time."*[442]

The Authority has no such calculation for IOS, and perhaps for any phase. This means the inclusion of such replacement costs are not in IOS's annual

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[440] At the City-owned and operated SFO airport, the landing fee varies $4.01 - $5.01/1,000 pounds of aircraft weight, and parking fees above or below 250,000lbs. See: p. 3 [PDF 6] of SFO, Summary of Airport Charges, Fiscal Year 2012/13. Found at: https://sfoconnect.com/sites/default/files/legacy/summarychargesfy1213_0.pdf For example, a 162 passenger See: https://en.wikipedia.org/wiki/Boeing_737_Next_Generation Boeing 737-800 at 174,000lbs See: Axlegeeks at: http://planes.axlegeeks.com/l/269/Boeing-737-800 would pay $713 to land, and $325 to park at a gate for an hour. Since that 737 is a fairly common intra-California carrier, it's safe to say that SFO charges the intra-CA airlines landing at SFO nearly $100,000 a day, or $25Million/year to land, park and leave. Each 737-800 would incur SFO's $1,038 landing and parking fees. There are 183 daily take offs and landings to/from seven Southern California airports, or 91 landings. Excluding weekends, the 261 operating days yields $24.65Million for SFO operations. For air traffic see: See: Table 1, p. 10 [PDF 116] Appendix B, Potential Airline Response to High-Speed Rail Service in California, prepared by Aviation System Consulting LLC, for Cambridge Systematics, Inc. Found in California High-Speed 2012 Business Plan, Ridership and Revenue Forecasting, final technical memorandum, April 12, 2012. LAX, another City-owned and operated airport, the 162 passenger B737-800 would pay $762/landing, and assuming a five minute wait for ramp access ($100) and 30minutes unloading and loading at the ramp ($200), the airplane's cost for that turn-around would be $1,062. [See letter from LAX's CFO Yabubik to airlines of June 22, 2015. Found at: http://www.lawa.org/uploadedFiles/AirOps/pdf/FY%202015-16%20Landing%20Fees%20at%20LAX.pdf] LAX send and receives 123 aircraft a day from (61 landings/day) and to the three SF Bay Area airports. That's $17Million a year ($16.9M) of revenue for LAX, solely derived from airplanes coming in from the Bay Area.

[441] See p. 29 [PDF 29] of California High Speed Rail Authority's Draft 2012 Business Plan Still Not Investment Grade. Source is California High-Speed Rail Program Draft 2012 Business Plan, November 1, 2011

[442] See p. 7-1 [PDF 121] of the California High Speed Rail Authority's Draft 2012 Business Plan

profit equation over all the years of the equipment's' use, rather are totally dependent on positive cash flows only in the years the assets are to be replaced.

The Authority-authorized UIC report on O&M pointed out several biases that keep O&M costs low. It said the Authority forgot to include marketing and advertisement budgets as well as the costs of distribution channels.[443] Among the missing variable costs that UIC could not find in the Authority's O&M costs were sales, marketing and station costs.[444] According to Amtrak's Vision to expand its very similar high-speed rail service, sales and marketing represents 15% and station services another 13% of forecasted O&M costs of its NEC Next-Gen project.[445] UIC also said that the Authority's cost escalation factors needed to be linked to income growth during the service ramp-up period, not the full service, mature income;[446] that O&M prices should reflect the "full" costs of O&M activities; suggesting UIC did not consider the Authority's O&M estimates complete.[447] UIC closed its analysis of the Authority's O&M costs disappointed at the inconsistencies, *"Finally, consistency between ridership forecasts, the operating plan, and the O&M cost evaluation should be more deeply analyzed."* [448]

Ultimately UIC fails. Although UIC has access to worldwide and the Authority's O&M data, it's report contained no side-by-side comparisons of those O&M cost data sets from different HSR operators, as several

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[443] See pg. ii of International Union of Railways; UIC PEER REVIEW OF OPERATING ?? & MAINTENANCE COSTS OF THE CALIFORNIA HIGH-SPEED RAIL PROJECT, FINAL REPORT, JANUARY 2013
[444] p. 5.5 Finding #2 in UIC PEER REVIEW OF OPERATING & MAINTENANCE COSTS OF THE CALIFORNIA HIGH-SPEED RAIL PROJECT, FINAL REPORT, JANUARY 2013
[445] See pg.21 [PDF 23] A Vision for High-Speed Rail in the Northeast Corridor, September 2010. Found at: https://www.amtrak.com/ccurl/214/393/A-Vision-for-High-Speed-Rail-in-the-Northeast-Corridor.pdf
[446] See p.6 [PDF 11] of UIC PEER REVIEW OF OPERATING & MAINTENANCE COSTS OF THE CALIFORNIA HIGH-SPEED RAIL PROJECT, FINAL REPORT, JANUARY 2013
[447] See p.6 [PDF 11] of UIC PEER REVIEW OF OPERATING & MAINTENANCE COSTS OF THE CALIFORNIA HIGH-SPEED RAIL PROJECT, FINAL REPORT, JANUARY 2013
[448] See: pp.9 [PDF 14] of UIC PEER REVIEW OF OPERATING & MAINTENANCE COSTS OF THE CALIFORNIA HIGH-SPEED RAIL PROJECT, FINAL REPORT, JANUARY 2013

independent reports, including that by Spanish authors and a UIC staff member displayed earlier.[449]

Another way to make O&M costs seem reasonable is to increase the Load Factor used in the per passenger mile (PPM) equation. With more passengers the PPM operations and maintenance charges get spread over a larger number of riders in the denominator of the O&M cost equation. The Authority's modelers of IOS 'ratcheted up' successive Business Plans' passenger Load Factors, ignoring empirical evidence on existing passenger rail's Load Factors.

Initially the Authority tried to use Per Seat Miles (PSM) to measure financial performance;[450] but this is only correct when all train seats are 100% revenue producing.[451] Load Factors (the ratio of paid-for seats to total seats) affect financial performance per passenger mile (PPM): i.e. higher Load Factors produce more revenue therefore better financial performance. Amtrak's Average Load Factor for its routes in California was 32% in 2009;[452]

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[449] See: Economic Analysis of High Speed Rail in Europe; Ginés de Rus (Ed), Iñaki Barrón de Angoiti, Javier Campos, Philippe Gagnepain, Chris Nash, Andreu Ulied and Roger Vickerman; Fundacion BBVA, 2009. Found at: http://www.fbbva.es/TLFU/dat/inf_web_economic_analysis.pdf

[450] PET#166 The Authority's criticism of the 'Forever' report for using PPM versus PSM is both in an Assembly Transportation Committee statement given by Board Member Mike Rossi on April 30 2012 found at http://youtu.be/yWU9uKUuHII and in a May 4, 2012 letter and the Authority's Press Release. PET#100 The letter and Press Release can be found at http://www.cahighspeedrail.ca.gov/ under the PDF file called: "Authority Responds to Flawed Report: Corresponds with Authors."

[451] DOT requires measuring the financial performance of a railroad (or airline) by dividing Seat Miles by a Load Factor. *"Load factor measures usage by capacity. It is calculated by dividing passenger miles (the aggregation of trip lengths for individual passengers) by seat miles (the sum of the products of total seats available and total miles traveled for individual trains)."* The seat miles measure assume a 100% Load Factor. See: http://www.rita.dot.gov and http://www.dot.gov/

[452] PET#061 Source is: The Authority's Train Will Need A Subsidy Forever, August, 2012, Second Edition, December, 2012 at: www.sites.google.com/site/hsrcaliffrFigure A3-1, PDF page 53.

while its conventional rail in the heavily trafficked NEC was 44% in 2009.[453] Even Acela's Load Factor was 56% in 2009.[454]

By comparison the Authority's April 2012 Plan's Load Factor could be calculated to be 78%-73%:[455] two years later its Load Factor had increased to an unreasonable 85%,[456] and since no mention of Load Factors can be found in the 2016 Plan, the 2014 assumption is assumed to stand. The Authority's modelers have repeatedly chosen Load Factors unforeseen in modern rail travel capriciously chosen and without substantial evidence to support the choice.

5.4 The Authority Has Long Had Evidence That Acela Express Was Its HSR System's Surrogate For Fares And O&M Costs – Since 2009, the Authority has measured its fares against Acela's.[457] That Plan also quoted a Pew Charitable Trust study about Acela Express's profitability. The Trust's calculations, based on GAO studies, had a calculated $40.50 "profit" (i.e. positive cash flow) per passenger on Acela, after depreciation and other unallocated costs.[458]

Prior to joining the statutorily required Peer Review Group, now PRG Chairman Lou Thompson found, that using Generally Accepted Accounting

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[453] PET#061 Source is: The Authority's Train Will Need A Subsidy Forever, August, 2012, Second Edition, December, 2012 at: www.sites.google.com/site/hsrcaliffrFigure A3-1, PDF page 53.
[454] PET#061 Source is: The Authority's Train Will Need A Subsidy Forever, August, 2012, Second Edition, December, 2012 at: www.sites.google.com/site/hsrcaliffrFigure A3-1, PDF page 53.
[455] Source is: To Repeat Report, Figure A4-1, PDF page 56. High case is 78%, Medium case is 75%, and Low case is 72%
[456] Source is: See the Authority's 2014 Business Plan, "Service Planning", PDF page 15. Note statement of *"Nominally 85% of the all passenger seats are occupied. This is a target seat occupancy typically assumed in the heavy passenger rail service planning in the United States"* This claim is not substantiated by any known Amtrak data.
[457] *"At the top end, weekend Acela fares in the New York to Washington market were higher than air fares . . "* p. 70 [PDF 72] of the California High-Speed Rail Authority, Report To The Legislature, December 2009.
[458] See: Studyscope, An Initiative of the Pew Charitable Trust, October 27 2009 [PDF 27, FN 28]. Found at http://subsidyscope.com/transportation/amtrak/] Found at: http://www.pewtrusts.org/en/research-and-analysis/reports/0001/01/01/subsidyscope-transportation-sector

Principles' (GAAP) 'single account' method required of U.S public transport systems,

> *". . . the NEC trains are the only ones in the Amtrak system that cover all their operating costs and cover their allocated capital. Acela Express service is significantly more "profitable" than NEC Regional."* [459]

The May 18, 2012 Peer Group Report said,

> *". . the overall results of the* [the Authority's O&M] *model appear optimistic by comparison with readily available data on the closest comparable U.S. HSR operations (Amtrak's operations in the Northeast Corridor)"* [460]

In 2011 an independent report showed that, using the same per mile charge as Acela's NYC-WDC fares, the fare connecting SF-LA ($184) should be about double any of the four 'ceilings' in four different Authority business plans.[461]

For the 2012 Plan, the Authority did a comparison of what its fares would be based on studying "NEC (Northeastern Corridor) Like" fares.[462] The outcome was predictable, because the 2012 fares, which included some subsidized conventional rail fares, were close to those in both Figure 1 and Figure 14. For example, in Figure 14, the 2012 analysis said a 200mile fare would be $118, while the 228mile NYC-WDC Acela Express fare is $161, and the 100mile fare would be $94, while the WDC-Wilmington Acela Express fare was $111. To travel the 481 miles on France's TGV between Paris and Marseille would cost $151[463], on the hypothetical 2012 HSR trip, a 400mile trip's fare would be $163. The important point isn't whether these are exact matches between the 2012 analysis and outsiders' findings, it's that the

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[459] Thompson, Louis and Tanaka, Yuki: High Speed Rail Passenger Services: World Experience and U.S. Applications; Prepared with the support of the Institution for Transport Policy Studies (a non-profit organization fully supported by the Nippon Foundation), September 20, 2011, page 18 [PDF 21].

[460] Found at http://www.cahsrprg.com/files/bus_plan.pdf

[461] See: Figure D, p. 30 [PDF 30-] of Revisiting Issues in the October 2010 Report, The Financial Risks of California's Proposed High-Speed Rail Project, September 14th 2011. Found at: www.sites.google.com/site/hsrcaliffr

[462] See Table 6, p. 10 [PDF 92] of the California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting document

[463] See Figure 1, p. 18 [PDF 18] of To Repeat, The Authority's Train Will Need A Subsidy Forever. Found at www.sites.google.com/site/hsrcaliffr

Authority's $89 one-way SFTBT-LA Union average fare is completely out of line for a profit-making organization.

Instead of heeding its own consultants' or outsiders' advice, the Authority reacted:

> *"The Acela fare structure is substantially higher than the planned CHSR fare structure, because the CHSR fares were designed to be 83 percent of airfares from the San Francisco Bay Area to the Los Angeles Basin, with lower fares for shorter trips."* [464]

Of course the Acela fare structure is higher: Acela's fares reflect its now fifteen-years of operating experience [465] and real world conditions that make Acela profitable[466], as the Authority's system must be. The Authority's fare structure doesn't reflect empirical data on existing HSR operating costs.

The Authority's fares are arbitrary and capricious because they have a politically chosen 'ceiling' to convince supporters that its fares would always be lower than airfare fares. The '83% of airfares' formula may have been a politically wise choice, but it holds disastrous consequences for making the HSR train financially viable.

The Authority "hoisted itself on its own petard" by its 2008 marketing message designed to capture travelers' votes. Admittedly uncompetitive with driving costs but designed to attract air travelers,[467] the 2008 ballot's SF-LA fare of "about $50"[468] was a political choice, but justified by the

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[464] See: 1.0 Summary [PDF 84] of the California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting document

[465] Acela began commercial operations in December 2000. See: https://en.wikipedia.org/wiki/Acela_Express#Background

[466] On April 6th 2015, during a Assembly Budget Hearing, Authority Chair Dan Richard confirmed that Acela was profitable. However, he failed to mention that Acela's per mile fares are 2.5-3 times higher than the Authority plans to charge. See the discussion between the Chair and Member Patterson, starting at 12min. 30seconds in the following link: https://youtu.be/iBziL_H0xOc

[467] *"Train fares were assumed to be somewhere between the cost of driving and of taking an airplane or train."* p. 64 [PDF 66], California High-Speed Rail Authority, Report to the Legislature, December 2009.

[468] Prop1A proponents touted that HSR would allow *"Travel from Los Angeles to San Francisco in about 2 hours for about $50 a person."* See: p.2, Proposition 1A Arguments – Voter Information Guide 2008,

Authority as competitive with airfares after the election in the later-than-AB3034-demanded[469] Business Plan.[470] It wasn't. It wasn't and it isn't.

The Authority's 2009 Report to the Legislature, more than doubled[471] ($105) the 2008 pre- election assertion. The 2012 Business Plan 'lowered' a one-way SF-LA fare, but was still half again as much ($83)[472] as in 2008; then 2014's SF-LA fare was $86. The 2016 Plan's one-way fare is still 60% higher ($89)[473] than before Prop1A.

Ipso facto the fare 'ceiling' is sufficient cause for private investors to balk. In the three most recent business plans, about one-third of all HSR fares are constrained by the 2009 *"83 percent of airfares"* formula;[474] 32% in 2012[475], and 31% in 2014. Of the twelve Authority fares for 2016 from San Francisco's TransBay Terminal (SFTBT) southward, a third (25 of 77) (Bakersfield, Palmdale, Burbank, LA Union, Orange County and Anaheim) are constrained by the 83% formula to $89.[476] That arbitrarily derived formula makes no commercial sense.

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[469] SECTION 1. 185033 reads *"The Authority shall prepare, publish, and submit to the Legislature, not later than September 1, 2008, a revised business plan . ."* a demand not met with impunity.

[470] *"With train fares at 50% of airfares, high-speed trains . ."* See: p.17 [PDF 21] of the California High-Speed Train Business Plan, November 2008.

[471] *"Because of the importance of increasing the amount of private sector funding . . . the 83 percent fare scenario was adopted . . . The fare is . . . is anchored by an LA-SF HST fare at 83 percent of the air fare, or in 2009 dollars a high-speed train fare of $105 vs. a $125 air fare, and a $118 cost to drive."* [No evidence is given for how the cost to drive was calculated.] See p. 65 [PDF 67] of California High-Speed Rail Authority, Report to the Legislature, December 2009.

[472] See: Table 5.2 [PDF 42] of the California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting document

[473] See Table 3.1, p. 3-3 [PDF 25] of the Authority's 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting

[474] *"The fare is . . . is anchored by an LA-SF HST fare at 83 percent of the air fare . . ."* See p. 65 [PDF 67] of California High-Speed Rail Authority, Report to the Legislature, December 2009.

[475] For the 2012 of constrained to total fares ratio, see: 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting document. For the 2014 ratio, see: Table 3.1, p. 3-5 [PDF 28] California High-Speed Rail Draft 2014 Business Plan Ridership and Revenue Forecasting – Draft Final Technical Memorandum. For the 2016 ratio, see: Table 3.1, p. 3-3 [PDF 25] of the Authority's Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting

[476] See Table 3.1, p. 3-3 [PDF 25] of California High-Speed Rail Authority Draft 2016 Business Plan; Ridership and Revenue Forecasting, Technical Supporting Document

An inspection of Acela Express' fares in Figure 14 from WDC to BAL, WIL, PHL and NYC shows how preposterous the 83% ceiling will seems to investors and operators. First, Acela's per mile fares are multiples of the Authority's proposed fares. No Acela per mile fare is less than about twice the fares for shorter distance Authority sections – and the average per mile fare is 86¢.[477]

Figure 14 [478]
Analysis of Acela Express And The Authority's Fares & Fares/Mile

	Acela Express Fare	Driving Miles Distance [479]	Acela Express Fare/mile
WDC-BAL	$44	39[480]	$1.28/mile
WDC-WIL	$104	111[481]	94¢/mile
WDC-PHL	$109	142[482]	77¢/mile
WDC-NYC	$161	228[483]	70¢/mile
WDC-BOS	$271	441[484]	61¢/mile
	2016 Authority Fares [485]	**Driving Miles Distance**	**Acela Express Fare/mile**
SFTBT - Bakersfield	$89	283[486]	31¢/mile
Bakersfield - LA Union	$56	112[487]	50¢/mile
SFTBT- Palmdale	$89	370[488]	24¢/mile
SFTBT - BUR	$89	370[489]	24¢/mile
SFTBT - LA Union	$89	381[490]	23¢/mile
SFTBT - Anaheim	$89	407[491]	22¢/mile

[477] Per mile fares analyzed for Acela's five stops between WDC and Boston averaged 86¢.
[478] All fares are based on four-day advance purchase, mid-morning Acela Express Value Fare. For Acela Express fares see: https://tickets.amtrak.com/itd/amtrak.
[479] All distances are measured in driving miles. There will be aberrations, the most pronounced being that Palmdale and Burbank Airport (BUR) are the same driving distance from SFTBT, while the HSR 'detour' of 70-75 miles from Bakersfield up to Palmdale and back down to Burbank is not counted. However, for consistency, and because the Authority has not set its alignment on that sector, driving miles are used.
[480] The 39miles between WDC and Baltimore is found at http://www.travelmath.com/drive-distance/from/Washington,+DC/to/Baltimore,+MD
[481] The 111 mile distance between WDC and Wilmington, DE is found at: http://www.travelmath.com/drive-distance/from/Washington,+DC/to/Wilmington,+DE
[482] The 142 mile distance between WDC and Philadelphia, DE is found at: http://www.travelmath.com/drive-distance/from/Washington,+DC/to/Philadelphia,+PA
[483] The 228 mile distance between WDC and NYC is found at: http://www.travelmath.com/drive-distance/from/Washington,+DC/to/New+York,+NY
[484] The 441miles between WDC and Boston is found at http://www.travelmath.com/drive-distance/from/Washington,+DC/to/Boston,+MA
[485] See Table 3.1, p. 3-3 [PDF 25] of the California High-Speed Rail Authority Draft 2016 Business Plan; Ridership and Revenue Forecasting, Technical Supporting Document
[486] The 283 miles between SFTBT and Bakersfield are from: http://www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Bakersfield,+CA
[487] The 112 miles between Bakersfield and LA Union are from: http://www.travelmath.com/drive-distance/from/Bakersfield,+CA/to/Los+Angeles,+CA
[488] The 370 miles between SFTBT and Palmdale are from: http://www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Palmdale,+CA
[489] The 370 miles between SFTBT and Burbank Airport (BUR) are from: http://www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/BUR
[490] The 381 miles between SFTBT and LA Union are from: http://www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Los+Angeles,+CA

Although the WDC-Wilmington and Bakersfield-LA Union routes are equal distances, Acela's fares and per mile fares are almost double the Authority's. This, despite the Authority's Bakersfield-LA Union 50¢ per mile fare being 125% more than a fare for the entire Phase 1 (SFTBT-Anaheim) route.

The Authority's November 2011 Draft Plan admitted;

> *"US labor and construction costs are 30 – 75% higher than in other developed countries with existing HSR systems such as France, Germany, Italy, the Netherlands, the UK and Japan."* [492]

This puts paid to any notion that comparisons to Europe or of operating cheaper than Europe. It is also affirmation of why, to remain profitable and have its revenues exceed its O&M, Acela must charge much more per passenger mile (PPM) than what the Authority plans to charge.

Second, as would be expected, Acela's per mile fares decrease as a journey's distance increases. That's rational, profit-producing pricing, since the fixed costs of serving each passenger becomes a smaller portion of longer distance passengers'. But the Bakersfield to LA Union per mile fare is more than twice that of SFTBT-Anaheim, which is a 70% longer trip. That Authority approach is both irrational and contrary to rail, bus and airline fare pricing strategies.

The '83% of airfares' rule shows the Authority has not consulted with private operators. Unless there were exogenous reasons for investing, none would be willing to charge the same $89 fare for a 407mile SFTBT-Anaheim ride, as

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[491] The 407 miles between SFTBT and Anaheim are from: http://travelmath.com/drive-distance/from/San+Francisco,+CA/to/Anaheim+CA

[492] See PET 213 and the California High-Speed Rail Authority Draft 2012 Business Plan, November 1, 2011. p. 3-13, [PDF 76]. This recognized the findings of the 2009 Amtrak report, Amtrak, Office of Inspector General; EVALUATION REPORT E-09-01; Comparison of Amtrak Infrastructure Labor Costs to European Railroad Averages; March 24, 2009 pages 2-3 [PDF 5-6]. That report said, *"1) The average annual labor cost of an Amtrak infrastructure worker is more than twice (2.3) that of the average European railroad infrastructure worker. 2) Amtrak's Base Wages per Worker are 1.3 times that of the Average European Worker. 3) Amtrak's Extraordinary Wages per Worker are 3.5 times that of the Average European Worker. 4) Amtrak's Annual Benefit Costs per Worker are 4.25 times that of the Average European Worker."* Found at: https://www.amtrakoig.gov/report-records/audit-reports/comparison-amtrak-infrastructure-labor-costs-european-railroad-averages

a 283mile SFTBT-Bakersfield ride. That 'ceiling' contradicts commercial economics as well as Acela profitability and the Authority's need to be profitable.

Acela's longer trips fares increase six fold over length of the HSR train's route. They don't 'hit a ceiling' because of a politically chosen fare formula. Their per mile fares also decrease up to half for the longest Acela trip, in keeping with fixed costs being a smaller portion of the total costs of serving passengers traveling that far. Under the Authority's fare structure, for the Kings/Tulare-Bakersfield section and the five south of Bakersfield, the 83% formula 'kicks in' without consideration of the actual costs of serving passengers traveling the remaining miles.

Inspect Figure 15 and consider the unreasonableness of the Authority's earlier fares[493] ($50, $105, $83, $86) or today's $89 fare[494] for over 400miles of HSR travel, nearly twice the 230miles between New York City (NYC) and Washington DC (WDC) where Acela's fare is almost twice ($161).

Then consider the risibility of such a claim in face of the need to pay the additional operating costs for an extra 138 miles of an HSR ride between Bakersfield and Anaheim,[495] and still be profitable. That doesn't make commercial sense, and first and foremost the train must be profitable. The Authority's politically driven fare structure is a formula for bankruptcy.

Figure 15 also shows the Authority failed to heed crucial 'top down' guidelines from Acela's now fifteen-year operating experience.[496] If the

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[493] The $50 SF-LA fare comes from p. 2 of the Proposition 1A Arguments in the Voter Information Guide 2008; the $105 fare from p. 65 [PDF 67] of the Report to the Legislature, December 2009; the $83 fare from p. 5-6 [PDF 42] of the California High-Speed Rail 2012 Business Plan, Final Technical Memorandum – Ridership and Revenue Forecasting; and the $86 fare from p. 3-5 [PDF 28] of the California High-Speed Rail Draft 2014 Business Plan Ridership and Revenue Forecasting – Draft Technical Memorandum

[494] See Table 3.1, p. 3-3 [PDF 25] of the California High-Speed Rail Authority Draft 2016 Business Plan; Ridership and Revenue Forecasting, Technical Supporting Document

[495] See: http://www.travelmath.com/drive-distance/from/Bakersfield,+CA/to/Anaheim,+CA

[496] Acela began commercial operations in December 2000. See: https://en.wikipedia.org/wiki/Acela_Express#Background

Authority's fares reflected the statutory requirement to not need an operating subsidy, its per mile fares would resemble Acela Express'.

Figure 15
Actual Acela Fares And Hypothetical Authority Fares [497]

Table 6 Data-Distance-in miles *(O-D and actual distance in driving miles)*	Authority fare based on Table 6 of 2012 Ridership and Revenue Forecasts	Proposed Authority Fare Structure or (2016 Fare proportioned to mileage [498])	Authority Fare based on "NEC-Like" Fares [499] and *(NEC-Like fares proportioned to actual miles)*
(SFTBT-Gilroy-79 miles) [500]		$25	
100miles – from Table 6	$29.95	$29.95	$94.40
(SJ-Fresno-153 miles) [501]	153mles = $46	$63	*($106)*
200miles– from Table 6	$41.18	$41.18	$117.54
(NYC-WDC-Acela Express-230miles) [502]	230miles = $54	*($189)*	*($146)*
NYC-WDC-Acela Express-To Repeat Report[503]	230miles = $54	*($200)*	*($154)*
(SFTBT-Bakersfield-283 miles)[504]	283miles = $59	$89[505]	*($122)*
300miles – from Table 6	$52.42	$52.42	$140.70
(SFTBT-Palmdale-370miles)[506]	$66	$89 [507]	*($142)*
400 – from Table 6	$63.65	$63.65	$163.84
(SFTBT-LA Union-381miles) [508]	381miles = $61	*$89*	*($149)*
SFTBT-LA Union – 2011[509] *and 2012 reports* [510]	–	*$89*	*($184-$178)*

[497] Based on Table 6, [PDF 92] "Hypothetical Fares by Distance" (in 2011 dollars) in California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting

[498] *Italicized fares* are from Table 3.1 [PDF 25] of the Draft 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting

[499] What the Authority's 2012 PDF 92 comparison does is mathematically lump together both a great number of short Northeast Corridor (NEC) trips by conventional rail (CVR) fares and Acela Express fares in the NEC to make their 83%-of-airline fare formula seem more reasonable.

[500] See: http://www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Gilroy,+CA

[501] See: http://www.travelmath.com/drive-distance/from/San+Jose,+CA/to/Fresno,+CA

[502] The 230mile NYC-WDC train distance is from http://www.travelmath.com/transit/from/New+York,+NY/to/Washington,+DC. The $ Acela Express fare is a two advance purchase for April 19, 2016, based on mid-week morning fare found on March 12 2016, from: https://tickets.amtrak.com/itd/amtrak#

[503] See Figure 1, p. 18 [PDF 18] of -To Repeat-The Authority's Train Will Need A Subsidy Forever, August 2012. Found at: www.sites.google.com/site/hsrcaliffr

[504] See: http://www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Bakersfield,+CA

[505] Bakersfield is the first destination south of SF in the Draft 2016 Business Plan where fares are limited to $89.

[506] See: http://www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Palmdale,+CA

[507] Like Bakersfield, Palmdale, Burbank, LA Union, Orange County and Anaheim are constrained by the 2008 promise that HSR fares would be no more than 83% of airline fares.

[508] The 381 miles is driving distance and does not account for the 'detour' to Palmdale to cross the Tehachapi Range. From: http://www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Los+Angeles,+CA

The Authority's self-inflicted wounds from its 'maximum 83% fare trap' are again evident in Figure 15 when 2016's fares are compared with either 1) their own fare tables, or 2) the Northeast Corridor (NEC) fares, or the high-speed rail project's surrogate, Acela Express.

For example, based on hypothetical fares in 2012's Plan,[511] to go 153miles between San Jose and Fresno would cost only $46: adjusting for the extra 53miles would be $46. In 2012's fare table that ride (using HSR) would cost 44% more ($66).[512] In 2014 that ride using HSR would cost 48% more[513] ($68) and in 2016 40% more ($63).[514] An upward adjusted fare from the Authority's table to go the 300miles from SFTBT to Palmdale would be $66; but the Authority's own 2016 Plan says that fare is $89. Even more preposterous is the claim that a 400mile trip should cost $61, when the Authority's 2016 table shows $89.

Those differences in Authority-to-Authority comparisons are significant, but they're based on abstract computations and forecasts, influenced by human choice. Those divergences pale when comparisons are made between the Authority's hypothetical approximations and real world Acela fares proportionately adjusted for distances. For example, the 2012 Plan[515] says

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[509] See: Figure D, p. 30 [PDF 30-] of Revisiting Issues in the October 2010 Report, The Financial Risks of California's Proposed High-Speed Rail Project, September 14th 2011. Found at: www.sites.google.com/site/hsrcaliffr

[510] See Figure 1, p. 18 [PDF 18] of -To Repeat-The Authority's Train Will Need A Subsidy Forever, August 2012. Found at: www.sites.google.com/site/hsrcaliffr

[511] Table 6, [PDF 92] "Hypothetical Fares by Distance" (in 2011 dollars) in California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting

[512] See Table 5.2 p. 5-6 [PDF 42] of the California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting document

[513] See Table 3.1, p. 3-5 [PDF 28] of the California High-Speed Rail Draft 2014 Business Plan Ridership and Revenue Forecasting – Draft Final Technical Memorandum. Six of the thirteen fares are limited to $86.

[514] See Table 3.1, p. 3-3 [PDF 25] of the Authority's 2016 Business Plan; Final Technical Memorandum – Ridership and Revenue Forecasting

[515] Table 6, [PDF 92] "Hypothetical Fares by Distance" (in 2011 dollars) in California High-Speed Rail 2012 Business Plan Final Technical Memorandum – Ridership and Revenue Forecasting

(with spurious precision) that a 200mile fare should be $41.18. Increasing that for the 230miles between NYC and WDC, would suggest a $54 fare, while in 2011 and 2012, the fare would have been nearly double ($178-$184) the Authority's self-defeating ceiling. In April 2016 NYC-WDC Acela Express fare for those 230 miles ($146) is two thirds higher than the "83% of airline" fares. The Authority's private operator can't give away money.

Although the Authority will argue that their private sector operator will be able to offer more seats in any given time interval, thus lowering labor costs in that interval, given that the Authority's fares are a third of Acela's it will be hard for the Authority to demonstrate that its supposedly lower PPM revenues (fares x ridership) will overcome the deficit.

The Authority has no substantial evidence to deny that Acela; whose same accounting system and likely lower labor, electricity, maintenance of rolling stock and fixed infrastructure costs, is the most suitable existing example of how its own fares should be much higher to cover the extra costs resulting from longer distances and higher O&M due to its higher operating speeds (220mph vs 185mph).

5.5 Most Egregious Of All, The Authority Thought It Could Adopt An Accounting System That Is Illegal In The USA – As the Authority said, all segments of the HSR system are to be operated by a private firm;

> *"It is also the case that the California High-Speed Rail Authority will be "selling" a concession to a private operator, giving them the right to operate and maintain the system."* [516]

Consequently, whatever benefits the Authority may claim, the system's operating performance must meet the standards of financial viability according to Generally Accepted Accounting Principals (GAAP) as required of

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[516] Letter from then-Authority Chairman Tom Umberg to Legislators, dated January 3, 2012, Page 6 [PDF 6]

private companies and the US Department of Transportation (DOT).[517]

The Authority's accounting system cannot be for a government-owned-and-operated HSR system like the vast majority, nor claim "social profitability' as the UIC/IUR statement on European policy, nor receive hidden revenue guarantees like Eurostar.[518] Nor can the Authority split its accounting system into several parts as required by European Union Directive 91/440.[519] But the Authority uses the European Union's multi-account approach to O&M costs.[520]

The Authority's trade organization, UIC, admitted in a 2011 policy statement that not all O&M costs in Europe arrive on the HSR train's operators' accounts, which they must in the United States.

> *"The public authorities/society generally bear the costs of investing in new infrastructure, constructing and maintaining the infrastructure and*

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[517] See: Amtrak's 2013 Operating, Capital Programs and Debt Service Expense Budget. Attached as "Pet No. 219, Amtrak 2013 Operating Budget.PDF". Also found in 2013 at About Amtrak, Reports and Documents via: https://www.amtrak.com/servlet/ContentServer?c=Page&pagename=am%2FLayout&cid=1241245669222 Unlike European rail systems' accounting that separate costs for operating and maintaining fixed and moving infrastructure as well as health and pension benefits into separate accounts, Table 4, p.13, [PDF 13] of the Amtrak Operating report shows Amtrak's revenues and expenses are accounted for in a single, unified account and conform to STB regulations. Note that Employee Benefits and Depreciation account for over a third of total Amtrak expenses. This is a crucial Amtrak report since it shows that, unlike European HSR accounting, Amtrak's accounting conforms to GAAP. Additionally under Section 209(a) of the Passenger Rail Investment and Improvement Act of 2008(PRIIA), the National Railroad Passenger Corporation (Amtrak) must implement a single, nationwide standardized method for allocating operating and capital costs among the States and Amtrak. The routes include high-speed rail corridors designated by the Secretary of Transportation (other than the Northeast Corridor). See: 49U.S.C. § 24102(5)(B).

[518] For the Official stance of UIC, the worldwide railway association on the profitability of the high-speed rail system, see pages 3-5 of UIC policy accompanying a letter to Mr. Roelof van Ark from Jean-Pierre Loubinoux, Director General of the UIC, Paris, dated 8 February 2011. For a discussion of Eurostar's hidden subsidies, see page 34 [PDF 34] of the report, To Repeat, The Authority's Train Will Need A Subsidy Forever, August 22, 2012. Found at: www.sites.google.com/site/hsrcaliffr

[519] For a detailed discussion of the differences in European railways accounting and the DOT requirements of GAAP, see To Repeat, The Authority's Train Will Need A Subsidy Forever, August 22, 2012, particularly pages 32-36. Found at: www.sites.google.com/site/hsrcaliffr

[520] Page 37 [PDF 37] of the Authority's 2014 Plan says, *"The 2014 lifecycle cost model methodology is based on research and best practice established by a part of the European Union-funded research program called MAINLINE. The 2014 lifecycle model also draws from lifecycle guidance by the UIC and the European Investment Bank (EIB), based on their experience with developing and funding existing high-speed rail systems around the world."*

related equipment such as safety, control-command and signalling, [sic] *etc."* [521]

The Lincoln Institute, for example reinforced this point.

> *"High-speed rail in Europe has been funded and financed by a variety of sources, including national governments and EU structural funds. The European Investment Bank (EIB) provides subsidized loans with favorable interest rates and long repayment periods, as well as loan guarantees and direct recruitment of private lenders."* [522]

As discussed extensively in a December 2012 report, other authors have shown that HSR systems operate with subsidies and, at least in the EU, some O&M costs are 'off the balance' sheet' such a track maintenance and personnel benefits; reducing their reported O&M costs.[523]

Based on a review of four European HSR systems, in 2011, consultants to the DOT's Office of Inspector General found (OIG) that; as a proportion of overall maintenance costs ($90,000-$120,000 per single track mile) for High Speed Intercity Passenger Railroads (HISPR): the individual items of the fixed infrastructure costs should 'brake out' at 1) permanent way (rail beds) and supporting structures (bridges, viaducts, etc.) account for 40-67%; 2) signaling and telecommunications systems account for 10-35%; and 3) electrification equipment accounts for 8-19%%.[524] The OIG also reported that, for the San Francisco-Los Angeles corridor, the O&M costs would be $280Million per train mile[525] and that," *The average operating and*

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[521] See: Policy statement attached to a letter from Director General of UIC to the Authority's CEO Roelof van Ark of 8 February 2011, found in Attachment 11 of this report or at http://www.calhsr.com/wp-content/uploads/2010/02/IUR-Officials-Letter- to-the Authority-CEO.pdf

[522] See p. 48 [PDF 50] of Petra Todorovich, Daniel Schned and Robert Lane; Policy Focus Report, Lincoln Institute of Land Policy: High-Speed Rail, International Lessons for U.S. Policy Makers, 2011. Found at: https://www.lincolninst.edu/pubs/dl/1948_1268_High-Speed%20Rail%20PFR_Webster.pdf

[523] See [PDF 34-36] of To Repeat – The Authority's Train Will Need A Subsidy Forever, August, 2012, Second Edition, December, 2012 at: www.sites.google.com/site/hsrcaliffr

[524] *"Infrastructure maintenance costs are presented for four European HSR networks."* See: p. A-1, [PDF 161] of HSIPR Best Practices: Operating Costs Estimation, prepared for: Office of Inspector General US Department of Transportation, prepared by: Steer Davies Gleave, June 2011. Attached as Pet No. 421, OIG-HSR-Best-Practice-Operating-Cost-Report June 2011.PDF or found at https://www.oig.dot.gov/sites/default/files/files/OIG-HSR-Best-Practice-Operating-Cost-Report.pdf

[525] See: p. A-3, [PDF 161] of HSIPR Best Practices: Operating Costs Estimation, prepared for:

maintenance cost per seat is $75,000 . ." [526]

Under Europe's rail accounting system (Directive 91/440), 58%-121% of the overall maintenance costs for fixed infrastructure go into a different account than the costs of operating and maintaining the rolling stock. Since the Authority has adopted a EU-based accounting system, it's fair to assume that at least 58% of its O&M costs do not appear on the Authority's operating accounts.

The 2013 UIC review of the Authority's O&M cost model was "*preliminary*" [527] and only used aggregated, not detailed, cost level data,[528] only compared the Authority's O&M model with worldwide best practices because it found no US comparisons,[529] and admitted its report did not estimate all O&M costs, specifically excluding any US costs including personnel benefits. In mid-2013

Office of Inspector General US Department of Transportation, prepared by: Steer Davies Gleave, June 2011. Also, for the San Francisco-Los Angeles corridor, the OIG said, "*Infrastructure maintenance – this is proportional to the number of trains running and is labor intensive, with 45% of track maintenance, 55% of electric traction installations and 50% of equipment comprising of staff costs*" Attached as Pet No. 421, OIG-HSR-Best-Practice-Operating-Cost-Report June 2011.PDF or see https://www.oig.dot.gov/sites/default/files/files/OIG-HSR-Best-Practice-Operating-Cost-Report.pdf

[526] The full quote is, "*Rolling stock operating and maintenance costs are presented for four European countries in terms of per train, per seat and per seat-km for the life of the train . . . The average operating and maintenance cost per seat is $75,000 . .*" See: p. A-1, [PDF 161] of HSIPR Best Practices: Operating Costs Estimation, prepared for: Office of Inspector General US Department of Transportation, prepared by: Steer Davies Gleave, June 2011. Attached as Pet No. 421, OIG-HSR-Best-Practice-Operating-Cost-Report June 2011.PDF or see https://www.oig.dot.gov/sites/default/files/files/OIG-HSR-Best-Practice-Operating-Cost-Report.pdf

[527] See UIC PEER REVIEW OF OPERATING & MAINTENANCE COSTS OF THE CALIFORNIA HIGH-SPEED RAIL PROJECT, FINAL REPORT, JANUARY 2013, P.4 [PDF 9] says "*The ridership forecasts and project cost estimates were studied for years and the O&M cost analysis is preliminary.*" Found at: http://www.hsr.ca.gov/docs/about/ridership/ridership_PR_O_M_Costs_UIC_final.pdf

" See International Union of Railways; UIC PEER REVIEW OF OPERATING & MAINTENANCE COSTS OF THE CALIFORNIA HIGH-SPEED RAIL PROJECT, FINAL REPORT, JANUARY 2013. Found at: http://www.hsr.ca.gov/docs/about/ridership/ridership_PR_O_M_Costs_UIC_final.pdf

[528] See Pg.4 [PDF 9] in UIC PEER REVIEW OF OPERATING & MAINTENANCE COSTS OF THE CALIFORNIA HIGH-SPEED RAIL PROJECT, FINAL REPORT, JANUARY 2013. Found at: http://www.hsr.ca.gov/docs/about/ridership/ridership_PR_O_M_Costs_UIC_final.pdf

[529] Page 3 [PDF 8] of UIC PEER REVIEW OF OPERATING & MAINTENANCE COSTS OF THE CALIFORNIA HIGH-SPEED RAIL PROJECT, FINAL REPORT, JANUARY 2013 says "*Other costs regarding the maintenance activities of the HSR system were compared to the worldwide best current practices because there was no close analogy with the U.S HSR project.*" Found at: http://www.hsr.ca.gov/docs/about/ridership/ridership_PR_O_M_Costs_UIC_final.pdf

the Authority presented the PRG with O&M costs from the UIC.[530] This prompted the PRG to discount UIC's accounting methods, findings[531] and the relevance of UIC's work to GAAP-based accounting used in the U.S. [532] The UIC policy statement also says,

> " . .*the profitability of high speed is not assessed by adding infrastructure costs to operational costs . . but from the perspective of a high speed rail system serving both the passenger transportation market and society – the citizens – as a whole."*[533]

This admits that governments pay at least part of the O&M costs, clearly different from GAAP rules accounting.[534] Agreeing with the PRG's criticism, UIC admitted its 2012/13 O&M study was not an apples-to-apples comparison because:

> *"Other costs regarding the maintenance activities of the HSR system were compared to the worldwide best current practices because there was no close analogy with the U.S HSR project."*[535]

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[530] See Authority, Update to PRG of Work in Progress on O&M Modeling and Projections (July 2013). This shows 2014 projection of O & M costs were in the range of 8 cents PSM (Per Seat Mile), as compared to the 2012 projection of 7 cents PSM.

[531] Contrary to Generally Accepted Accounting Principles (GAAP) used in the United States, the Authority's costs of replacing train sets is deferred far into the future, and supposedly paid for by the cash flow in future years. Second, EU Directive 91/440 separates rail's operating costs into two accounts; that related to the rolling stock and that related to the fixed infrastructure. This method is not available to the Authority because DOT requires private operators to use GAAP. The GAAP-based accounting system does not account for "social profitability" which makes it different from accounting for profitability in European HSR and passenger rail systems. Third, the official policy statement by the Union International des Chemins des Fer (UIC/IUR) on profitability included "social profitability" a concept unknown to US accounting practices: ". . , *the profitability of high speed is not assessed by adding infrastructure costs to operational costs, line section by line section, but from the perspective of a high speed rail system serving both the passenger transportation market and society – the citizens – as a whole."* See pages 3-5 of UIC policy accompanying a letter to Mr. Roelof van Ark from Jean-Pierre Loubinoux, Director General of the UIC, Paris, dated 8 February 2011. Found at http://www.calhsr.com/wp- content/uploads/2010/02/IUR- Officials-Letter-to-The Authority-CEO.pdf

[532] In 2013 the Peer Review Group (PRG) noted that, ". . *while the UIC analysis is quite useful, it is not fully based on methods, practices and cost levels typical of railways in the U.S."* From: PRG comments of August 14, 2013 on the forthcoming 2014 Business Plan. This appears on PDF 93-99 of the California High-Speed Rail Authority, Final 2014 Business Plan

[533] See pages 3-5 of UIC policy accompanying a letter to Mr. Roelof van Ark from Jean-Pierre Loubinoux, Director General of the UIC, Paris, dated 8 February 2011

[534] See pages 3-5 of UIC policy accompanying a letter to Mr. Roelof van Ark from Jean-Pierre Loubinoux, Director General of the UIC, Paris, dated 8 February 2011.p. ii

[535] See International Union of Railways; UIC PEER REVIEW OF OPERATING & MAINTENANCE COSTS OF THE CALIFORNIA HIGH-SPEED RAIL PROJECT, FINAL REPORT, JANUARY 2013 Pg.3 [PDF 8]. Found at: http://www.hsr.ca.gov/docs/about/ridership/ridership_PR_O_M_Costs_UIC_final.pdf

UIC told the Authority to increase its O&M estimates. UIC argued that the Authority train's increased average speed will cost exponentially more (i.e. operating costs increase at a faster pace than the increases in speed) both for powering above 186 mile per hour (mph)[536] and maintenance costs for increased wear and tear on the fixed infrastructure and the rolling stock's equipment maintenance.[537] UIC also told the Authority it should increase its maintenance estimate on the electricity-carrying overhead catenary system by 20%[538] and its track maintenance by at least 40%.[539] With continued denial of access to the Authority's detailed O&M data,[540] there is no way to verify the Authority's claim that any or all of UIC or others' observations were used in the 2014 Plan.[541]

5.6 Conclusions On The Authority's O&M Forecasts – No "outsiders" are allowed full access to the Authority's detailed information on

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[536] See International Union of Railways; UIC PEER REVIEW OF OPERATING & MAINTENANCE COSTS OF THE CALIFORNIA HIGH-SPEED RAIL PROJECT, FINAL REPORT, JANUARY 2013. Page 7 [PDF 12] Finding #13 *"The electricity consumption for trains running at 220 mph (350 km/h) has to be increased by 10 to 30 percent (depending on the topography of the HSR line) in comparison with trains running at 186 mph (300 km/h)."* Operating & Maintenance Costs - UIC Peer Review, January 31, 2013, UIC (International Union of Railways) Found at: http://www.hsr.ca.gov/docs/about/ridership/ridership_PR_O_M_Costs_UIC_final.pdf

[537] See p.8 of International Union of Railways; UIC PEER REVIEW OF OPERATING & MAINTENANCE COSTS OF THE CALIFORNIA HIGH-SPEED RAIL PROJECT, FINAL REPORT, JANUARY 2013 Found at: http://www.hsr.ca.gov/docs/about/ridership/ridership_PR_O_M_Costs_UIC_final.pdf *"The experts also recommend making a significant cost provision for speeds up to 220 mph (350 km/h)) as preliminary findings show that the increase in equipment maintenance costs is above linearity when speed increases.*

[538] International Union of Railways; UIC PEER REVIEW OF OPERATING & MAINTENANCE COSTS OF THE CALIFORNIA HIGH-SPEED RAIL PROJECT, FINAL REPORT, JANUARY 2013, Appendix 2-14 [PDF 30] *"The impact assessment of speed on catenary and overhead line is a simple forecast of friction consumption which is in direct proportion with speed level; the —theoricall [sic] increase of maintenance corrective actions should be at least 20% (based on extrapolation from available information)."* Found at: http://www.hsr.ca.gov/docs/about/ridership/ridership_PR_O_M_Costs_UIC_final.pdf

[539] International Union of Railways; UIC PEER REVIEW OF OPERATING & MAINTENANCE COSTS OF THE CALIFORNIA HIGH-SPEED RAIL PROJECT, FINAL REPORT, JANUARY 2013, Appendix 2-14 says *"theoricall [sic] increase of the maintenance activity on the geometry of the track should be at least 40% (based on extrapolation from available information)."* Found at: http://www.hsr.ca.gov/docs/about/ridership/ridership_PR_O_M_Costs_UIC_final.pdf

[540] The last response to a PRA request for O&M information records was an email to Mr. Robert Prantis from Ms. Anne Parker of the Public Records Act Staff of the CA High-Speed Rail Authority, December 27, 2013.

[541] California High-Speed Rail 2014 Business Plan pg. 11 [PDF 11] *"The updated* [O&M] *estimates for the 2022 through 2060 analysis period show an approximately 14 percent increase from the cost estimates shown in the 2012 Business Plan"*

the data, assumptions and calculations of its Operations & Maintenance (O&M) costs, but have shown that the Authority's O&M forecasts are a fraction of worldwide experience,[542] and that its accounting for O&M is selective, biased and ultimately far below empirical evidence.

Even if outside access to inputs were available, by adopting EU rules instead of GAAP rules, the Authority's costs accounting is much like Volkswagen's accounting for carbon emissions versus US Government standards – what counts is what goes into the formula, not what comes out. That won't work beyond the first operating year; but by then it will be too late,

[542] See Figure 5, page 7 of To Repeat, The Authority's Train Will Need A Subsidy Forever, July 2012

SECTION 6

THIRTEEN MORE HURDLES

TO THE AUTHORITY'S HSR SYSTEM'S FINANCIAL VIABILITY

The following observations note challenges to the notion that the Authority's HSR project will be completed as the Authority says, and that it is competitive in terms of cost or passengers' door-to-door convenience.

6.1 Surveyed Travelers Are Less Interested In A High-Speed Rail Ride Even If Auto Travel Takes Longer – The Authority's paid Ridership Technical Advisory Panel (RTAP) thought the 2013/2014 RP/SP survey's findings powerfully demonstrated the decreased interest in changing from autos and airplanes to high-speed rail.

> *"Travelers appeared to be slightly less sensitive to differences in travel time and cost in 2013-14 than in 2005. Thus, mode changes are less likely to occur based only on those considerations."* [543]

The RTAP agreed that both time was less important and there was more than expected recreation travel the earlier RP/SP survey.

> *"Two issues of concern existed with respect to the results presented at the meeting: (1) lower than expected values of time, and (2) unexpected, significant increases in predicted recreational/other HSR ridership and revenue compared to previous V2 forecasts."* [544]

These empirical findings, reinforced by the Authority's commissioned RP/SP surveys, should be a 'red flag' against optimistic changes out of personal vehicles to high-speed rail travel.

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[543] See p. 2 [PDF 3] of the Ridership Technical Advisory Panel Review of the California High-Speed Rail Ridership and Revenue Forecasting Process, Findings and Recommendations from the May-June 2014 Review Period, September 17, 2014

[544] See p. 3 [PDF 4] of the Ridership Technical Advisory Panel Review of the California High-Speed Rail Ridership and Revenue Forecasting Process, Findings and Recommendations from the May-June 2014 Review Period, September 17, 2014

6.2 HSR Is Not A 'Disruptive' Technology: It's Just A Faster Rail Ride – High-speed rail may be new to California, but it is not a 'disruptive' transport alternative that changes users' experiences like Surf Air[545], Uber and Lyft are, or self-drive vehicles and Hyperloop be. There is no personalized service for HSR users; passengers would be using a mass transport mode, like rail for 150 years and airlines more than 70 years.

When HSR was introduced more than 50 years ago, it was 'disruptive' because it offered travelers[546] between densely crowded cities a faster rail ride. Today and in 2025 when IOS North supposedly opens, there is and will be nothing new about a faster rail ride that *ipso facto* will enthuse potential riders to switch from their present long distance (>100miles) travel modes.

6.3 CA High-Speed Rail Faces The Rigors of All Start Ups: It Must Differentiate Itself From Other Travel Modes While Making A Profit – HSR in California is a start-up corporation. That's because of the requirement to not require and operating subsidy from 2025 onwards. Start-ups are risky: consider Coca-Cola's New Coke, Ford's Edsel and Apple's Newton, all from well-established and leading companies in their markets. But all failed. The Authority has leaped into a highly competitive market without experience in managing either the construction or operation of a high-speed rail system.

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[545] Membership-based Surf Air (http://www.surfair.com/) provides 90 daily intra-California flights, serving Burbank and Hawthorne in the LA Basin, San Carlos and Oakland in the SF Bay, as well as Sacramento. The company was founded to provide members with rapid, no-wait time transport to close-to-CBD airports with frequent flights.(http://www.surfair.com/how-it-works.html). The monthly cost looks attractive when compared to the costs of twelve or more LA-SF round-trips on HSR. Twelve RTs on HSR would cost $$2,136. As of March 2016, Surf Air membership starts at $1,950/month, and Surf Air's offerings allow members flights that also quickly reach vacation spots such as Monterey, Napa, Palm Springs Santa Barbara and Lake Tahoe at any point in a business day or week. (http://www.surfair.com/destinations.html)

[546] The Tōkaidō Shinkansen began service on 1 October 1964. See: https://en.wikipedia.org/wiki/Shinkansen#Initial_success

The Peer Review Group drew the right conclusion for this start-up two years ago: *"HSR in California will be a "greenfield" system: that is, neither HSR nor adequate intercity rail service on any significant scale exists in California today.*[547] But unlike Global Star, Webvan or other unknown-then, unknown-now brands offering "greenfield" services, the Authority has a surrogate. The Authority recognizes Acela as a profitable high-speed rail service.[548] But although the statutorily required Peer Review Group (PRG) said Acela was the HSR system most like the Authority's,[549] Acela's per mile fares and operating costs being multiples of the Authority's [550] that analogy was spurned by the Authority.

The operator, whether private or the Authority, must make a profit and differentiate itself to consumers in California's auto-dominated market. Put another way, the Authority's train service must show it is the ". . . *safe, convenient, affordable, and reliable alternative . .* " [551] it was billed to be in 2008. As an unknown start-up, HSR services must be considerably more convenient and affordable in order to take market share from present day air or auto travel as its plans claim it will. At present it's neither.

6.4 California HSR Has An Inherent Cost Disadvantage For Pragmatic Travelers – The Authority can't charge the 40¢-50¢ per passenger mile (PPM) fares as European HSR operators do[552] largely to

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[547] Connecting California, 2014 Business Plan, April 30, 2014, p.7 [PDF 87] letter from the California High-Speed Rail Peer Review Group, Will Kempton, Chairman; May 18, 2012 Found at: www.cahsrprg.com.

[548] HSRA Report to the Legislature, December 2009 p. 2-15 [PDF 59] *"High-speed train services, on the other hand, generate positive cash flows around the world, including the Northeast Corridor"*

[549] Connecting California, 2014 Business Plan, April 30, 2014 says, ". . *overall results of the model appear optimistic by comparison with readily available data on the closest comparable U.S. HSR operations (Amtrak's operations in the Northeast Corridor)."*

[550] See Figure 5, p. 7 [PDF 7] of To Repeat – The Authority's Train Will Need A Subsidy Forever, August 22nd 2012. Found at: www.sites.google.com/site/hsrcaliffr

[551] See: Section 1.6 p.6 [PDF 1] of Prop1A arguments – Voter Information Guide. Found at http://vigarchive.sos.ca.gov/2008/general/argu-rebut/argu-rebutt1a.htm

[552] Figure 5 pg.7 [PDF 7] of To Repeat – The Authority's Train Will Need A Subsidy Forever, August 22nd 2012. Found at: www.sites.google.com/site/hsrcaliffr

business passengers[553] in California's relatively cheap fuel market.[554] The Authority recognized that seven years ago when it said,

> *"Train fares were assumed to be somewhere between the cost of driving and of taking an airplane or train"*[555]

The Authority set its fare to compete for airline travelers, not to compete against auto travel costs. It has also never proven, as required by AB3034, that HSR's capital cost is one-third or less than the cost of expanding the highway and air travel system to carry equal numbers of passengers.[556] That requirement was ignored in the 2014 and 2016 Business Plans.

Having it maximum fare metro-center-to-metro-center fare at $83 or $89 (20¢-24¢ PPM) perpetuated auto travel's advantage because a single person's driving costs between LA and SF's downtowns is less than $50,[557] while the Authority's 2016 fare ($89) is 70% more. Door-to-door driving time is 5hrs. 33min,[558] while an HSR-using traveler during the VtoV Ext. period – making all connections on time, and no delays in the bus service – arrives at LA Union about six and a half hours after leaving his/her home or business in SF.[559] Advantage driving!

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[553] *"Business trips usually take up a significant proportion of HSR trips (Chang & Lee, 2008; Levinson, 2004)"* quoted in Chuyuan Zhong, Germà Bel, and Mildred Warner: High-Speed Rail Accessibility: What Can California Learn From Spain? 2013. Found at: http://mildredwarner.org.s3.amazonaws.com/2012/09/20/Zhong_Bel_Warner_HighSpeedRail_201 2-b19b0817.pdf

[554] See: http://www.nationmaster.com/graph/ene_gas_pri-energy-gasoline-prices The main operating cost of an auto is gasoline, and California's gasoline is relatively very cheap. Gas in the UK is about 92% more expensive than the US, Japan's 74% higher, France's 62% higher, Germany's 49% and Spain's 20% higher.

[555] HSRA Report to the Legislature, December 2009 p. 64 [PDF 66] *"Train fares were assumed to be somewhere between the cost of driving and of taking an airplane or train"*

[556] AB3034, Section 8 *(c) says, "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"* A feeble attempt was done in 2012 to prove this demand, but used ridership figures about four times as high as Phase 1 ridership, and even then did not meet the one-third cost requirement. See: pp.60-61, [PDF 60-61] of California High-Speed Rail Authority's 2012 Draft Business Plan, Assessment: Still Not Investment Grade, January 27, 2012. Found at www.sites.google.com/site/hsrcaliffr

[557] The cost of driving between LA and SF on April 1st 2016 was $42.58. Found at: http://www.travelmath.com/cost-of-driving/from/San+Francisco,+CA/to/Los+Angeles,+CA

[558] The driving time on April 1st 2016 between SF and LA was found at http://www.travelmath.com/driving-time/from/San+Francisco,+CA/to/Los+Angeles,+CA

[559] Using the elapsed times in Appendix A.2 of the Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document, the travel time using the Authority's

The Authority recognizes that capturing any of that metro center-to-metro center market depends on getting a larger and larger share of the almost stagnant air travel market:

"In longer-distance markets, high-speed rail diverts a smaller share from autos and a greater share from air travel." [560]

While the Authority's current fare tables are calculated to **ALWAYS** give the HSR train a cost advantage, if the Authority is to be profitable it will loose that advantage at the same time intra-CA air passenger ridership has stagnated. This is a dead end for gaining customers.

To pry any Californians from their autos, the Authority must offer a clear convenience differential, because the HSR train cannot compete with the costs of auto travel, particularly for recreation/other travel where the likelihood of multiple travelers per auto is high. the Authority's research into the impact of the introduction of HSR on auto travel should have been instructive; showing only a 6%-8% decrease of auto travelers occurred since the introduction France's Paris-Lyon TGV route (1981) and only an 8% decrease since Spain's Madrid-Seville AVE route was introduced in 1992.[561] In addition to its consultant's findings on the increased preference for driving, the Authority should be under no illusion that the introduction of HSR in California will get travelers out of their cars.

6.5 Traveling Via HSR During IOS North Is Long, Complex, Riddled With Potentially Missed Connections – Trips to LA Union, starting in SF or Oakland and choosing a HSR-included trips' during VtoV Ext. include:

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offerings is 5hrs. 42mins. However another 25 minutes for both access and wait time in SFTBT and an equal amount to egress from LA Union to the destination must be added; bringing the door-to-door travel time during IOS to 393minutes or 6hours 33minutes.

[560] See: Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document, p. 6-4 [PDF 40]

[561] See: p. ES-12 [PDF 20] of the California High-Speed Rail Program, Revised 2012 Business Plan, April 2012, Building California's Future

1) access via public or private transport ride to a regional rail (more frequent and HSR will only stop at Millbrae in VtoV Ext.) or Authority train station, and wait to connect, a total of at least 25minutes[562]

2) then a regional rail or Authority train (that does not travel at 200mph), of 52-63 minutes[563] then a wait

3) then a 2hour 11minute HSR ride,[564] plus at least five more minutes for three intermediate followed by another wait

4) then an Authority bus ride, of 2hours 40minutes hours[565], and

5) finally station egress, then public or private transport to the traveler's destination (another 25 minutes).

That's three-four connections. Assuming inter-modal connections of no more than 5minutes, at best one hour is added to a 'perfect' IOS journey. Given that there are only two HSR trains or busses/hour and one HSR train or bus/hour during peak and non-peak travel times, waits are likely to be longer. Also, any evening time interruption of HSR service could leave LA-SF travelers stranded in the San Joaquin Valley.

Even in the best of conditions, each of those SF -LA Union journeys will be at least 5-8hours. To enjoy HSR's benefits during IOS, every SF/Oakland-LA Union traveler must spend 40% of that travel time (2-5hrs) on regional rail or busses.

Then there is the Travel-in-the-Southland-Penalty. To go onward from LA Union to Anaheim via Metrolink,[566] the extra 45minutes makes a SF/Oakland to Anaheim trip total about 6-9hours; to Riverside 6.5-9.5 hours, and to San

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[562] See: 'Most Likely Case' at Table 7.2 Year 2025 Silicon Valley to Central Valley Risk Variable Ranges and Distributions, p. 7-8 in the California High-Speed Rail Authority Draft 2016 Business Plan

[563] See: p. A-2 [PDF 60] of the California High-Speed Rail Draft 2016 Business Plan. Time between SF TransBay Terminal and San Jose connection to HSR is 52minutes.

[564] See: p. A-2 [PDF 60] of the California High-Speed Rail Draft 2016 Business Plan. San Jose to Bakersfield is scheduled at 131 minutes (2hrs 31min)

[565] See: p. A-2 [PDF 60] of the California High-Speed Rail Draft 2016 Business Plan. Time between SF TransBay Terminal and San Jose connection to HSR is 52minutes. The Dedicated Bus Connection between Bakersfield and LA Union is 160minutes

[566] Metrolink schedules at http://www.metrolinktrains.com/schedules/

Bernardino, total trip time is 7-10hours. Travelers can drive from SF/Oakland to Anaheim in 6hours 17minutes, and to Riverside or San Bernardino in 6hrs. 45min.[567]

Worse, to get to SANDAG, a HSR journey originating in SF/Oakland will be another 2hrs. 45min.[568] – making the total SF/Oakland to San Diego journey 7hrs. 45min-10hrs. 45minutes. Driving time is nearly three hours faster.[569]

6.6 The Inconvenience of Longer HSR Travel Times During IOS Succumbs To The Convenience of Auto or Flight Times – In 2007, the Director of High-Speed for the Paris-based Union International des Chemins Des Fer (UIC/IUR) presented the US House of Representatives evidence that around two and a half hours of HSR travel, high-speed rail begins to lose long haul market share to air travel.[570] In 2008 the Authority recognized that door-to-door travel times[571] are highly influential when travelers choose their mode of intercity travel.[572] But during IOS, high-speed rail (HSR) service does not reach the centers of SF and LA's metropolises. The Authority also recognized that half or more of the reasons to travel are business

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[567] Driving times are from http://www.travelmath.com/driving-time/from/Oakland,+CA/to/Anaheim,+CA and http://www.travelmath.com/driving-time/from/Oakland,+CA/to/Riverside,+CA and http://www.travelmath.com/driving-time/from/Oakland,+CA/to/San+Bernardino,+CA

[568] Amtrak schedule at https://tickets.amtrak.com/itd/amtrak

[569] Driving times are from http://www.travelmath.com/driving-time

[570] On PDF 64, Iñaki Barron de Angoiti, Director Of High-Speed Rail for the UIC/IUR, presents a table that shows that after 2.5 hours of transport time - or about 300 miles – HSR's share of riders versus airlines' drops off precipitously. See: Pet No. 198, or 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 19, 2007. Attached as Pet No. 198, House RR Sub hearing CHRG-110hhrg34799 Apr 18 2007.PDF, also see: http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_house_hearings&docid=f:34799.pdf

[571] See Kings County Board of Supervisors Coordination with High-Speed Rail Authority - transcript, June 4, 2013. Authority Chairman Dan Richard states, *"Frankly, if we get longer than the three hours we start to lose some of the advantages we have in terms of competition with airlines in that corridor. So we have reasons to want to keep the times down."* Attached as Pet No 038, Kings County-HSR coordination transcript 06-04-2013.PDF, Also see p. 31, line 12 to 17, [PDF 31] of the transcript

[572] Page. 25 [PDF 29] Californian High-Speed Train Business Plan, November 2008, says *"Locating well-placed stations in large urban centers, with adequate connections to the existing and planned transit, air, and road networks."*

related.[573] Europe's existing HSR systems' serve mostly (70%) [574] reimbursed [575] business passengers traveling to and from employment-concentrated urban cores.[576] Air travel is the quickest way for the business traveler to

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[573] The 2012 Plan's technical memorandum says, *"Based on the 2,820 interregional trips captured in the* [2001 California statewide household activity/travel survey] *survey, business travelers and commuters comprised more than 50 percent of the interregional travel market."* See: California High-Speed Rail 2012 Business Plan Draft Technical Memorandum – Ridership and Revenue Forecasting, October 19, 2011, page 1-4 [PDF 14]

[574] See: Accessibility Analysis of Korean High-speed Rail: A Case Study of the Seoul Metropolitan Area; Transport Reviews, Vol. 28, No.1, 87-103; Chang, J., & Lee, J.-H; January 2008, Page 9 [PDF 10 *". . 70.8% of all HSR passengers travel for business reasons during a weekday."*]. Attached as "Pet No. 087, Accessibility, Analysis of Korean HSR.PDF", also found at http://www.tandfonline.com/doi/pdf/10.1080/01441640701421495#.VGfmF_mjOm4. Also see: *"Business trips usually take up a significant proportion of HSR trips (Chang & Lee, 2008; Levinson, 2004)"* quoted in Chuyuan Zhong, Germà Bel, and Mildred Warner: High-Speed Rail Accessibility: What Can California Learn From Spain? 2013, found at: http://mildredwarner.org.s3.amazonaws.com/2012/09/20/Zhong_Bel_Warner_HighSpeedRail_201 2-b19b0817.pdf or Zhong, Chuyuan; Bel, Germà; Warner, Mildred: High-speed rail accessibility: a comparative analysis of urban access in Los Angeles, San Francisco, Madrid, and Barcelona. Attached as "EJTIR Urban Access in CA and Soain, Zhong and Bel 2014, replaces Pet 102 –AR394.PDF", also see EJTIR, Issue 14(4), 2014 pp. 468-488 ISSN: 1567-7141. Found at tlo.tbm.tudelft.nl/ejtir. Or http://www.tandfonline.com/doi/pdf/10.1080/01441640701421495#.VGfmF_mjOm4

[575] See The Economics and Politics of High-Speed Rail; Lessons From Experiences Abroad; Daniel Albalate and Germa Bel; Lexington Books, copyright 2014 (paperback); Hand delivered to California High-Speed Rail Headquarters, 770 L Street, Sacramento, CA on 29 March 2016 and time stamped at 9:07am. Page xiii says: *". . taxpayers are subsidizing journeys realized above all by users belonging to the upper-middle and upper income brackets, who usually travel for business reasons and whose ticket (the amount of which is far from covering the total cost of the service) is paid for by their employers."* Page xii shows that despite enthusiastic promotions of HSR: *". . . the widely recognized fact that only two lines in the world, the Tokyo-Osaka and the Paris-Lyon, have been able to fully recover the costs of both their construction and operation, as even the president of the International Union of Railways has pointed out."* Page xiii says not only are HSR riders in Spain mainly reimbursed through their businesses, but also that high-speed rail's operations' costs exceed the revenue from tickets: *". . if we keep in mind that the public resources used in high-speed rail imply a regressive transfer of income, in that taxpayers are subsidizing journeys realized above all by users belonging to the upper-middle and upper income brackets, who usually travel for business reasons and whose ticket (the amount of which is far from covering the total cost of the service) is paid for by their employers."* On page 17, *"In conclusion the projected costs of the California HSR have risen continuously, and ridership forecasts have decreased. Given these figures, it is doubtful that a high-speed rail link could be constructed in California without considerable subsidy and that profitability is out of the question."* Page 104: *"The fact that it is difficult for fees to recover even the variable costs of Spanish high-speed rail sheds light on the importance of the public subsidies granted to the high-speed train in Spain . . . has sparked significant criticism, as well as an important sanction for Spain from the European Union for illegal competition."*

[576] Chuyuan Zhong, Germà Bel, and Mildred Warner, High-Speed Rail Accessibility; PDF 18 says, *"Many business trips originate or terminate at office district destinations where employment concentrates. Hence a major employment center is also a major area of potential HSR riders."* and PDF 20 says, *"In Barcelona and Madrid, the employment centers coincide with the population centers in the downtown areas. . . However, in Los Angeles and the Bay Area, employment centers do not coincide with population centers."* Found at: http://mildredwarner.org.s3.amazonaws.com/2012/09/20/Zhong_Bel_Warner_HighSpeedRail_2012-b19b0817.pdf or Zhong, Chuyuan; Bel, Germà; Warner, Mildred: High-speed rail

productively get between the state's largest cities. Even counting a half hour transit time to a LA Metro Area or SF Bay Area regional airport, plus a 45 minute check in and security wait, plus another three-quarters of an hour via public transit to a Bay or Basin destination, the business traveler can make that one-way trip in just under or over 3 hours, or the round trip between California's mega-cities (about 6 hours) allows the business traveler to be home or back to the office or factory by the evening.[577]

Capturing business riders is one of the Authority's Achilles Heels, as business travelers' basic motive is to get to and from their appointments or jobs as quickly as possible, creating productivity – less time doing the same work – and therefore maintaining jobs and profits. Using the Authority's offerings is not only an inconvenient and inefficient use of the business travelers' time; it's also a waste of human resources.

The 2012 and 2014 IOS only had HSR service between the agricultural San Joaquin Valley (Merced-to-Bakersfield) with low population density, low incomes and high unemployment; and lightly populated northern Los Angeles County (Palmdale-to-San Fernando).[578] Unlike Europe, [579] after a HSR ride, passengers would have travel one-to-three more hours by the Authority's

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accessibility: a comparative analysis of urban access in Los Angeles, San Francisco, Madrid, and Barcelona. Attached as EJTIR Urban Access in CA and Spain, Zhong and Bel 2014, replaces Pet 102 –AR394.PDF: see also EJTIR, Issue 14(4), 2014 pp. 468-488 ISSN: 1567-7141 tlo.tbm.tudelft.nl/ejtir.

[577] See: Figure 4, pg. 7 [PDF 7] of 'If You Build It They Will Not Come' prepared by William Grindley and William Warren, found at https://www.sites.google.com/site/hsrcaliffr/home

[578] Merced to San Fernando is about three-fifths the 500-mile distance between California's two major cities' downtowns.

[579] Chuyuan Zhong, Germà Bel, and Mildred Warner: High-Speed Rail Accessibility: What Can California Learn From Spain? 2013, Found at: http://mildredwarner.org.s3.amazonaws.com/2012/09/20/Zhong_Bel_Warner_HighSpeedRail_2012-b19b0817.pdf. PDF 18 says, *"Many business trips originate or terminate at office district destinations where employment concentrates. Hence a major employment center is also a major area of potential HSR riders."* and PDF 20 says, "In Barcelona and Madrid, the employment centers coincide with the population centers in the downtown areas. . . *However, in Los Angeles and the Bay Area, employment centers do not coincide with population centers."* Also see the attached as EJTIR Urban Access in CA and Spain, Zhong and Bel 2014, replaces Pet 102 –AR394.PDF

feeder bus, rail and/or auto; to reach either Los Angeles'[580] or San Francisco's centers; and more to reach each of the respective regions' forty to twenty employment centers.[581]

The Authority's 2012 and 2014 IOS South offering was for a journey between SF and LA Union station of 6hrs 3min.[582] In 2016, the VtoV HSR train starts near one of the polycentric SF Bay Area's business centers and zooms over to near Bakersfield with three intermediate stops[583] where passengers then take a three-hour bus ride to LA Union. Without substantial evidence to support the assertion, that route's VtoV Ext. journey supposedly takes 5hrs 43minutes. [584]

The 2016 VtoV journey takes eight minutes more (371min vs 363min) than that route's 2012/2014 journey – not counting access/egress or wait times at stations, for busses or any 'pad' for traffic congestion on three hour bus rides. VtoV Ext.'s elapsed time is 20minutes (343-363minutes) faster than the 2012/2014 IOS journey. Driving time (333minutes)[585] is quicker than either the 2012/2014 Plan's 363minutes or VtoV (371minutes) or VtoV Ext. (343minutes).

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[580] Including connections, the bus trip, San Fernando-LA Union will require an hour – to go onward to San Diego, another three hours via Amtrak. Arriving at Merced, the HSR passenger will take 2 hour 15 minute trip to San Jose or a 2hour 45minute trip to San Francisco. See: www.travelmath.com/

[581] Chuyuan Zhong, Germà Bel, and Mildred Warner: High-Speed Rail Accessibility: What Can California Learn From Spain? 2013, found at: http://mildredwarner.org.s3.amazonaws.com/2012/09/20/Zhong_Bel_Warner_HighSpeedRail_201 2-b19b0817.pdf. On PDF 8, the authors say, *"Los Angeles is the prime example of a polycentric city . . 7 employment centers in Los Angeles Metro area in 1970 . . 36 employment centers in 1990 and 48 in 2000. The SF Bay Area is only slightly less polycentric; 22 employment centers in the San Francisco Bay Area in 1990."*

[582] See Appendix A. p. A-1, [PDF 68] of California High-Speed Rail Draft 2014 Business Plan Appendix A. The total elapsed time between SF and LA Union was 363minutes.

[583] See Appendix A, A-1, p. A-1 [PDF 59] of Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document.

[584] See Appendix A, A-2, p. A-2 [PDF 60] of the Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document.

[585] For driving time between LA and SF, see http://www.travelmath.com/driving-time/from/San+Francisco,+CA/to/Los+Angeles,+CA

If a traveler wants to experience HSR and is genuinely concerned about a 5% difference on a partial HSR journey during IOS of nearly six hours, he/she is most probably a business traveler (likely reimbursed for costs) and will most probably choose to fly and be in LAX or SFO in less than an hour (57min).[586] During either rendition of IOS North, driving is both cheaper and faster than the Authority's partial-HSR ride, and flying takes about one-sixth time.

6.7 Door-to-Door Times Are What Counts – But HSR travel or flying times don't show the real picture. Door-to-door travel requires access/egress times and wait times. These 'frictions' add time to air and Authority travel.

Uncounted in the Authority's claim of a 2hour 40minute trip between LA and SF during Phase 1 are the 'last mile' details of door-to-door travel.[587] During IOS, access and egress times count disproportionately compared with the Authority's later phases. Going northward, a partial-HSR passenger must first use private or public transit to connect with the Authority's feeder buses to next go to an HSR station, then take a HSR ride, and egress by connecting to at least one other private or public transport mode to arrive at their destination. That's a minimum of three connections. For example, after getting to LA's Union Station, northbound Authority travelers arrive at the Bakersfield HSR station in three and a half hours:[588] they could drive that route in less than two hours.[589]

The Authority's feeder bus connections must synchronize with four HSR trains/hour during peak times but only two/hour during off-peak hours.[590] In

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[586] http://www.travelmath.com/flying-time/from/San+Francisco,+CA/to/Los+Angeles,+CA
[587] 2012 and 2014's door-to-door travel times were also analyzed in If You Build It, They Will Not Come, March 11, 2014, found at www.sites.google.com/site/hsrcaliffr
[588] Assume 10 minutes from the front door-to-LA Union, a five minute wait; the LA Union-Bakersfield, the Authority's bus requires at least10 minutes more than driving 28 minutes to exit I5, stop and load in Burbank, then re-enter I5: with a 5 minute connection the door-to-Bakersfield HSR station is at least 205minutes,
[589] See: http://www.travelmath.com/driving-time/from/Bakersfield,+CA/to/Los+Angeles,+CA
[590] See Table 3.2, pg. 3-6 [PDF 29] of Draft 2014 Business Plan: Ridership and Revenue Forecasting, draft technical memorandum

real life, connections get missed. Seamless auto travel also eliminates the time to rent and return a rental car at an HSR-friendly station to complete the door-to-door trip in relatively low population density California. Analysis shows that with some exceptions, the travel time on an IOS high-speed train is less time[591] than getting to the HSR station and from it to a final destination. The consequences of these inherent 'frictions of time' on the Authority during IOS travel undermine HSR's rationale, and make auto travel almost always quicker and although more expensive flight times are always quicker.

6.7.1 But The Authority Makes The Importance Of Its Model's Access and Egress Times' Perform A Disappearing Act –

The Authority's Draft 2016 Plan says it will make passengers' journey's safe.[592] In theory, it complies with AB3034's demands for passenger security.[593]

But its model doesn't seem to count times for passenger security checks like at airports, and the Authority received criticism that its ridership model did not adequately account for access times from a journey's starting point to a high-speed rail ride or egress times from the HSR station to a selected destination. The Authority's third version of the Business Plan Model's ridership model (BPM-V3) supposedly recognized this problem.[594]

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[591] "*. . . the HSR Phase 1 system average speed between San Francisco and Los Angeles is planned to be approximately 140 miles per hour.*" See: [PDF 84] of Analysis of an "Equivalent" Northeast Corridor (NEC) of the California High-Speed Rail Draft 2014 Business Plan: Ridership and Revenue Forecasting, draft technical memorandum

[592] The California High-Speed Rail Draft 2016 Business Plan P. 30 [PDF 30] says, "*We will implement the highest levels of safety and security measures to ensure the protection of passengers, employees, emergency responders and the public including: A comprehensive safety and security program.*" and p.76 [PDF 76] says, "*Stations – station managers, ticket agents, passenger assistance representatives, facility maintenance managers, station cleaners, train cleaning staff, police and security.*"

[593] AB3034, Section 2704.08 (C) says, *All known or foreseeable risks associated with the construction and operation of high-speed passenger train service along the corridor or usable segment thereof and the process and actions the Authority will undertake to manage those risks.*"

[594] "*Additionally, the BPM-V3 addresses a tendency of the Version 2 Model to forecast some trips with long access and/or egress times, coupled with relatively short trips on the main mode.*" See p. 2-1 [PDF 21] of Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting document

Then the Authority's consultants 'calibrated' the model to discount much if not all the trips where access/egress times as a percent of travel times were significant.[595]

> *"Although these trips did not constitute a substantial share of either ridership or revenue, CS* [Cambridge Systematics] *added specific variables to the model to discourage these types of trips."*

The net effect of this calibrating – a word used over 100 times in the Authority's risk analysis report[596] – is that access/egress times which impinged on ridership, particularly for shorter HSR trips, get discounted heavily or completely. This makes HSR travel times for both long and short haul trips appear to be more competitive against auto and air travel since the shorter trips become a smaller percent of the total.

This is just one method of changing a model's variables to fit the Authority's needed outcome. By 2009, the compiled data from several studies allowed Flyvbjerg and his colleagues to conclude:

> *" . . . perverse incentives that encourage promoters to underestimate costs and overestimate benefits . . . the projects that are made to look best on paper are the projects that amass the highest cost overruns and benefit shortfalls in reality."* [597]

The Authority's consultants consistently produced outcomes that are not supported by empirical evidence, rather appear to make the train financially viable.

6.8 HSR Travelers Can't 'By Pass' Other Travel Inconveniences –

Even in the Age of Mobile Communications, HSR and air passengers' experiences of getting from an origin to a destination (O-D) are similar. First, they must take the time to buy tickets. Then both must somehow

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[595] See p. 2-1 [PDF 21] of Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting document

[596] See: California High-Speed Rail Draft 2016 Business Plan Ridership and Revenue Risk Analysis, draft technical report, Cambridge Systematics, Inc. February 17, 2016.

[597] Bent Flyvbjerg, Survival of the unfittest: why the worst infrastructure gets built—and what we can do about it; Oxford Review of Economic Policy, Volume 25, Number 3, 2009, pp.344–367. Found at: http://oxrep.oxfordjournals.org/content/25/3/344

arrive at a city center station (be it Fresno or LA or SF) or air terminal and wait: then ride or fly, only to arrive at another city center station and find transport to their desired destinations. 'Getting there' requires 2-3 different types of transport: an access mode, HSR/air and finally an egress mode. But unlike metro-to-metro California air travel, HSR travel can require eight stops en route for other passengers even in Phase1 between San Francisco's TransBay Terminal (SFTBT) and LA Union Station (LA Union).[598]

If not before, certainly by 2025, high-speed rail operators are likely to require airline-similar security screening to thwart domestic terrorist attacks; they already do in Madrid, on the Eurostar system, and likely to do after the March 2016 Brussels' attacks. So, the access times to and through HSR rail terminals and airports will be similar. Egress time – the time from the station or terminal to the final destination – is calculated as equal by the Authority, no matter the travelers' final destination. But that's unrealistic, and another Achilles' Heel of the high-speed rail scheme.

6.9 Regional Airports Are Today and Tomorrow's Gateways To The SF Bay Area and LA Metropolitan Area – A goal of Phase1 is to connect the downtowns of San Francisco and Los Angeles with high-speed rail in 2hours, 40minutes. But today, flights between LAX and SFO take about a third (35%) of the time of the estimated LA Union-SFTBT ride on HSR,[599] with seven, price competitive airlines serving those two airports.[600] That gives air passengers lots of fare options, and leaves them at least an hour and a half to compensate for delays in scheduled arrival times, which planners being realistic must assume will also happen to HSR travel.

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[598] See Figure 3.2, p. 3-2 [PDF 24] of the Ridership and Revenue Forecasting; Draft 2016 Business Plan: Technical Supporting Document.
[599] Flight time SFO-LAX is 56minutes. See: http://www.travelmath.com/flying-time/from/LAX/to/SFO The legal maximum HSR travel time between SF's TransBay Terminal and LA Union Station is 160minutes (2hrs. 40min.)
[600] Seven airlines serve the LAX-SFO route: Spirit, JetBlue, Virgin America, United, Southwest, American and Delta For daily one-way service from SFO or LAX to the other, see https://www.orbitz.com/lp/flights/178305/178280/san-francisco-to-los-angeles

But airlines' unassailable time-as-convenience advantage for metro area-to-metro area travel is the dispersed regional airports serving different clusters of metro populations: versus a fixed rail system operating on one route. There are three major regional airports in three Bay Area (MTC) counties (SJC, OAK, and SFO).[601] Together, the three have more than 400 departures and arrivals (408) from the seven LA metro area airports (including Palm Springs and San Diego[602]). SFO alone has nearly as many (183) daily connections[603] to/from Southern California as the 199 in the HSR train's forecasts; and this doesn't count either the 121 connections from Oakland, or the 100 daily connections between San Jose (SJC) and the Southland. During the same 16hour day, HSR is forecasted to connect SFTBT with LA Union with only half the number (199) of trains as the three Bay Area airports.[604]

If you wish to go between the state's metropolitan centers, and value the convenience of more options to decrease door-to-door times, the solution exists: seven dispersed airports in the Los Angeles metropolitan area (SCAG), and three in the San Francisco Bay Area (MTC). San Diegans (SAN) can find four airlines[605] that will fly them to/from Oakland (OAK) in half the time they to get the LA Union;[606] likewise to/from San Francisco (SFO) or San Jose (SJC). Orange County residents can avoid more than an hour traveling to LA Union by choosing one of five airlines serving the SNA-SJC

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[601] The fourth, STS in Sonoma Count has infrequent flights to/from LAX.
[602] Both PSP and SAN are included in this paper because Palm Springs is in Riverside County, which is part of the SCAG area, and the Authority includes San Diego travelers in its 'pool' of potential HSR riders.
[603] See: Table 1, p. 10 [PDF 116] Appendix B, Potential Airline Response to High-Speed Rail Service in California, prepared by Aviation System Consulting LLC, for Cambridge Systematics, Inc. Found in California High-Speed 2012 Business Plan, Ridership and Revenue Forecasting, final technical memorandum, April 12, 2012.
[604] See Appendix A.2 of the Ridership and Revenue Forecasting, Draft 2016 Business Plan: Technical Supporting Document.
[605] The airlines are Delta, Alaska, American and Spirit. Found at: https://www.orbitz.com/lp/flights/601762/178304/oakland-to-san-diego
[606] Flight time SAN-OAK is 70minutes. Found at: http://www.travelmath.com/flying-time/from/San+Francisco,+CA/to/San+Diego,+CA. The Amtrak ride from San Diego to LA Union takes at least 166minutes (longer than the forecasted LA Union-SFTBT travel time). Found at: https://tickets.amtrak.com/itd/amtrak

route[607] or five airlines serving SNA-SFO,[608] or SNA-OAK with three competing airlines.[609]

6.10 Urban Geography Defeats The Rationale For HSR Journeys Between SFTBT and LA Union Station – Business travel usually makes up a significant proportion of the total number of passengers traveling on HSR.

> *In South Korea . . 70.8% of all HSR passengers travel for business reasons during a weekday.*[610]

The Authority's assumption of capturing airline passengers is affirmation of that finding since many, if not most business travelers are reimbursed.

In a 'benchmark' study comparing Spain's AVE Barcelona-Madrid route with SFTBT-LA Union, the authors stressed the similarities of the two HSR routes.[611] But they also pointed out:

> *"Among the aspects not adequately assessed in demand forecasts is the role of urban structure, especially as regards accessibility of HSR."* [612]
>
> *"HSR has proved to work best in corridors with populous and dense urban centres, such as Paris and Tokyo . . Polycentric cities with low population density will not reap the benefits of city centre connection that HSR offers. For polycentric cities, HSR presents a difficult trade-off: build several stations to attract suburban riders or limit stations to*

[607] The airlines are Alaska, American, Delta, Southwest and United. Found at: https://www.orbitz.com/lp/flights/603224/6023769/orange-county-to-san-jose-silicon-valley
[608] The airlines are Alaska, American, Delta, Southwest and United. Found at: https://www.orbitz.com/lp/flights/603224/178305/orange-county-to-san-francisco
[609] The airlines are Alaska, American, and Southwest. Found at: https://www.orbitz.com/lp/flights/601762/603224/oakland-to-orange-county
[610] See Chuyuan (Viktor) Zhong, Suitability Analysis of Proposed High-Speed Rail Stations in Los Angeles Metropolitan Area, PET #087. Or see: Lee and Chang, 2008, found at: http://www.tandfonline.com/doi/abs/10.1080/01441640701421495
[611] See p. 470, of Zhong, Chuyuan; Bel, Germà; Warner, Mildred: High-speed rail accessibility: a comparative analysis of urban access in Los Angeles, San Francisco, Madrid, and Barcelona. EJTIR, Issue 14(4), 2014 pp. 468-488 ISSN: 1567-7141 tlo.tbm.tudelft.nl/ejtir. *"California and Spain have similar surface areas (423,970 and 505,645 Square Km), relatively similar population (38 and 47 million), and population densities (92 and 93 inhabitants per Square km), and the same distance (430 miles) between their main metropolitan areas: Los Angeles and San Francisco in California, and Barcelona and Madrid in Spain. Projected travel times in the two HSR corridors are also similar: 150 minutes for Barcelona-Madrid and 166 minutes for LA-San Francisco."*
[612] See p. 469 of Zhong, Chuyuan; Bel, Germà; Warner, Mildred: High-speed rail accessibility: a comparative analysis of urban access in Los Angeles, San Francisco, Madrid, and Barcelona. EJTIR, Issue 14(4), 2014 pp. 468-488 ISSN: 1567-7141 tlo.tbm.tudelft.nl/ejtir.

maintain the high speed advantage." [613]

Then the authors 'drill down' to the differences between Spain and California cities' urban geographies. Two quotes suffice:[614]

> *"Los Angeles is the prime example of a polycentric city . . . identified seven employment centres in the Los Angeles Metro area in 1970 and later . . . identified 36 employment centres in 1990 and 48 in 2000. The San Francisco Bay Area is only slightly less polycentric . . . 22 employment centres in the Bay Area in 1990."*
>
> *"However, employment concentration in the two Spanish cities is much higher. Data for 2009 in the metropolitan area of Barcelona show that the three districts in the central city surrounding the HSR station . . . concentrate more than 17% of total employment . . . In 2009, concentration of employment in the metro area of Madrid is still higher: the four districts in the central city surrounding the HSR station . . . concentrate more than 20% of total employment in the metro area . . ."*

This tale of two city pairs is crucial. In simple terms a HSR passenger going to Barcelona from Madrid (or vice versa) is likely to only be destined to one of three or four employment centers. By stark contrast, a HSR passenger going to Los Angeles Union Station from SFTBT (or vice versa) faces the question of how to get to between twenty and forty employment centers.

Complementing the inconvenience of finding their way to and from the HSR station, the traveler finds California's employment centers scattered far beyond the two HSR stations, particularly for Los Angeles. The travelers' solution all to often involves renting an auto, which not only adds time to a business trip, but defeats the Authority's goal of decreasing greenhouse gases. It's a lose-lose proposition that few, if any business travelers will find more convenient than the regional airport solutions.

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[613] See p. 471 of Zhong, Chuyuan; Bel, Germà; Warner, Mildred: High-speed rail accessibility: a comparative analysis of urban access in Los Angeles, San Francisco, Madrid, and Barcelona. EJTIR, Issue 14(4), 2014 pp. 468-488 ISSN: 1567-7141 tlo.tbm.tudelft.nl/ejtir.

[614] See p. 472 of Zhong, Chuyuan; Bel, Germà; Warner, Mildred: High-speed rail accessibility: a comparative analysis of urban access in Los Angeles, San Francisco, Madrid, and Barcelona. EJTIR, Issue 14(4), 2014 pp. 468-488 ISSN: 1567-7141 tlo.tbm.tudelft.nl/ejtir

6.11 The HSR Train Will Never Succeed Financially If It Only Relies On Central City Residents – LA and SF residents who don't reside in the city center are assumed to use the high-speed train services. The Authority recognized this in detailed assumptions of riders' origins in 2014.[615] But travel times and the door-to-door costs of HSR trip still assume travelers live on top of the HSR stations.

The City-County of San Francisco and the City of San Jose together represent only a quarter of the 7.15Million residents of the SF Bay Area.[616] The 3.86Million residents of the City of Los Angeles represent only a third of the 12.8Million population of Los Angeles' metropolitan area.[617] An effective transport system must serve the other 67%-75% of an area's population. HSR in a dispersed, polycentric urban geography is not a solution.

The non-central city dwellers will need substantial cost, time-savings or other advantages to select the Authority's HSR offerings over auto or air transport. Assuming an Anaheim station ever gets built and a passenger wishes to go to Berkeley, north of downtown San Francisco, during the IOS period, the best the Authority can offer is a 7hour journey, versus 6hours driving and under two hours by flying.[618]

Even for the longer trips, access to a HSR station is a large portion of the travel equation. In 2001 the now-Chair of the Peer Review Group said:

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[615] For examples of the markets for all phases, including IOS, see Table 7.4 Page 7-7 [PDF 64] of the California High-Speed Rail Draft 2014 Business Plan: Ridership and Revenue Forecasting, draft technical memorandum; prepared for Parsons Brinckerhoff for the California High-Speed Rail Authority; prepared by Cambridge Systematics, February 6, 2014.
[616] The SF Bay Area population comes from Bay Area Census, found at http://www.bayareacensus.ca.gov/bayarea.htm The population of San Francisco, 805,235 and the San Jose population of 1,000,000 come from http://worldpopulationreview.com/us-cities/san-francisco-population/ and http://worldpopulationreview.com/us-cities/san-jose-population/
[617] Found at http://worldpopulationreview.com/us-cities/los-angeles-population/
[618] See Figure 4, page 7 [PDF 7] and Figure 5 [PDF 9] of If You Build It, They Will Not Come. Found at www.sites.google.com/site/hsrcaliffr

". . .the eventual success of HSR in the U.S. will have to be based . . . on much better systems of urban access to HSR stations. While these do exist in some cities in the Northeast U.S., they are very sparse elsewhere." [619]

The HSR system is being built to serve those beyond the central cities. While it's arguable whether San Francisco may have a decent 'feeder' bus and light rail system to/from SFTBT, all other HSR stops are either in polycentric urban areas or 'cities' with low or very low population densities.

Neither central city nor suburban dwellers gain a time advantage during the IOS, and the only cost advantage of HSR is versus air travel, which is only true for all phases if the Authority's fares don't rise to exceed the train's operating costs. At least two-thirds of the potential market, suburban dwellers, have autos and the underlying reasons they will choose to drive during the IOS and afterwards should be fairly clear.

6.12 Induced By Construction, Valley Fever Will Hinder Construction Progress – The Act's (AB3034) title, the *"Safe, Reliable High-Speed Train Bond Act"* says the high-speed rail project "Reduces air pollution and global warming greenhouse gases" [620] Section 14 of the Act, says *"This act is an urgency statute necessary for the immediate preservation of the public peace, **health**, or safety within the meaning of Article IV of the Constitution and shall go into immediate effect."* [Emphasis added]

Perhaps no one at the Authority thought of Valley Fever as a impediment to building the HSR system, but the disease is omnipresent throughout the Central Valley and triggered by construction activities that disturb the soils. Igniting the fungal infection[621] called Valley Fever will not only affect

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[619] Thompson, Louis and Tanaka, Yuki: High Speed Rail Passenger Services: World Experience and U.S. Applications; Prepared with the support of the Institution for Transport Policy Studies (a non-profit organization fully supported by the Nippon Foundation), September 20, 2011, page 18 [PDF 21].
[620] See AB3034, p. 92 [PDF 16]
[621] *"Valley fever is a fungal infection caused by coccidioides . . .organisms. . ."* See: http://www.mayoclinic.org/diseases-conditions/valley-fever/basics/definition/con-20027390

construction workers, it will infect anyone within proximity of the high-speed rail project, including school children.[622]

The Corps of Engineers' mitigation measures include washing hands, respiratory protection and providing information to local health officials.[623] This may be well meaning, but having wide spread tests for Valley Fever prior to the start of construction,[624] while time consuming and expensive, may be the only way to identify existing Valley Fever cases and narrow the probable litigation expenses, since those who already have the disease are likely immune.

If a recent Central Valley correction facility test is indicative,[625] 8% of those tested had been exposed to Valley Fever and are likely immune the Authority still has a big problem. During the construction of IOS, the Authority claims it will create over half a million (510,000) construction and construction related jobs.[626] If only half are construction site jobs, that means 92% of that work force, or 230,000 IOS workers should be inoculated. Even assuming all those inoculated construction workers stay on-the-job when Phase 1 direct and indirect employment is to rise to over a million (1,010,000)[627] – not counting nearby residents, school children and business employees – at least 500,000 workers will need inoculations. That is not a risk: it's a reality. But it isn't accounted for in the 2016 Business Plan or its predecessors.

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[622] See Table 2 Fresno to Bakersfield Avoidance and Minimization Measures, p. 344 [PDF 344] of the HSR FEIR ROD Appendices & errata AIR.pdf

[623] See Table 2 Fresno to Bakersfield Avoidance and Minimization Measures, p. 344 [PDF 344] of the HSR FEIR ROD Appendices & errata AIR.pdf

[624] Such tests already exists, as reported in http://www.news-medical.net/news/20150409/Nielsen-BioSciences-launches-skin-test-that-helps-physicians-manage-Valley-Fever-infections.aspx

[625] Joyce Hayhoe, a spokeswoman for the medical receiver's office, said skin tests were offered to more than 94,500 inmates at the Pleasant Valley and Avenal correctional facilities in mid-January: 36,600 agreed to be tested and more than 3,000 (8%) tested positive, suggesting they had previously been exposed and unlikely to become ill from the fungus. See: http://www.latimes.com/local/political/la-me-ff-skin-tests-identify-inmates-for-valley-fever-stricken-prisons-20150129-story.html

[626] See Exhibit 7.3, p. 59 [PDF 59] of the California High-Speed Rail Program; Revised 2012 Business Plan, April, 2012,

[627] See Exhibit 7.3, p. 59 [PDF 59] of the California High-Speed Rail Program; Revised 2012 Business Plan, April, 2012,

6.13 The Authority Does Not Control Its IOS Timetable, Highway Traffic Flows Do – In 2012, 2014 and 2016 the Authority expanded its IOS mission to be a multi-modal transport corporation using feeder busses to complement HSR service with all the attendant problems of management as well as the logistics and operations of each mode. It not only must have enough spare capacity in its bus fleet to compensate for delays; but also between modes such as coordinating its own HSR fleet with not only its feeder bus schedules, which it doesn't seem to have,[628] but also coordinate with Metrolink, Amtrak and Caltrain's schedules.

The Authority biases travel times by assuming its feeder bus fleets' point-to-point times equal to auto travel times[629] discounting the time its busses require to detour, stop to pick up passengers then return to a main highway. Each dedicated bus journey is also at the mercy of highway traffic. While auto travelers are also captive to that, they don't have to meet a high-speed train's schedule. The southern HSR terminus, Bakersfield in VtoV Ext., requires only one stop (BUR in 2014 and Burbank in 2016) after leaving LA Union: the northern terminus required five stops to/from Sacramento in 2014 [630] and eight stops in 2016.[631]

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[628] Analysis of the number of arrivals in feeder buses during peak HSR operating hours shows too few HSR riders to sustain the claimed 85% Load Factor. See California High-Speed Rail Draft 2014 Business Plan, Appendix A, page A-1 [PDF 68]
[629] See Section 5.2.3, page 14 [PDF 18] of the Draft 2014 Business Plan, Technical Supporting Document 2014 Service Planning Methodology of February 2012. *"Run times for each feeder bus connection were based on auto travel times between each consecutive bus stop."*
[630] AG000336 See Figure 3.1, page 3-2 [PDF 25] of the California High-Speed Rail Draft 2014 Business Plan Ridership and Revenue Forecasting—Draft Technical Memorandum and
[631] See Figure 3.1, p. 3-1 [PDF 23] of Ridership and Revenue Forecasting; Draft 2016 Business Plan: Technical Supporting Document

SECTION 7

THE AUTHORITY'S HIGH-SPEED RAIL SYSTEM LACKS FINANCIAL VIABILITY DURING IOS AND BEYOND

For the Authority, *"Revenue and ridership were closely correlated with a R^2 of more than 0.999 for each year."* [632] meaning that a rise of fall in ridership was reflected nearly exactly in revenues. Prior sections showed how the Authority's fares were 'outliers'; another addressed inflated ridership – and therefore revenue – was when compared with empirical evidence about the lack of the HSR train's competitiveness with auto travel, and airfares if the Authority's fares are raised to reflect real world conditions. Another section The preceding section showed some problems a real world HSR system in California has to face. This section brings together all the variables of the formula, Revenues (= Fares x Ridership), when greater than (>) Total[633] Operations and Maintenance (O&M) Costs equates to Positive Operational Cash Flow (Profitability or Financial Viability) [634] and shows that through its dismissal of critics' fact-based analyses, its self-inflicted, mortal wound from its '83% fare ceiling' and its attempt to use a non-compliant accounting system, public support for the HSR system has dwindled. Today, the Authority faces an existential crisis.

7.1 Whatever Stance The Authority Takes About Financial Viability, IOS North Isn't Profitable – And The Authority Admits It –

[632] See: page B-9 [PDF 80] of California High-Speed Rail Draft 2014 Business Plan: Ridership and Revenue Forecasting, draft technical memorandum

[633] The word 'Total' is used here because the US DOT, uses Generally Agreed Accounting Principles (GAAP) guidance, and requires all revenues and costs be in a single account.

[634] See: To Repeat – The Authority's Train Will Need A Subsidy Forever, August 22nd 2012. Found at: www.sites.google.com/site/hsrcaliffr Page. 35 [PDF 35] refers to France's and EU's rail accounting under Directive 91/440 that separates fixed infrastructure O&M accounts from rolling stock O&M accounts, as well as attributing at least part of health, pension and other benefits' costs to non-rail accounts. See: Réseau Ferré de France (RFF) History at http://www.fundinguniverse.com/company- histories/Reacute;seau-Ferreacute;-de-France-company-History.html

In 2008's hubris, apparently no legislator sought the give the Authority the right to 'ramp up' its ridership and revenue to be profitable after its first initial operating years. Nowhere is AB3034 is there provision for operating with a financial loss for several years, as new companies often do. But the Authority assumes it can ignore AB3034, and operate at a loss through IOS North and into Phase 1.

> *"Analysis shows that five years after opening (after ramp-up) there is a 97% chance of breaking even and the cumulative chance of breaking even over the first five years is 89%. . . Analysis focuses on opening year of the Silicon Valley to Central Valley line in 2025 (38% chance of breaking even), the ramp-up period between 2025 and 2029 (75% chance of breaking even)."* [635]

The first IOS year's 38% chance of breaking even – while excluding *inter alia*, operator's profit, state and federal taxes, fees to terminal operators and while using an European Union (EU) accounting system prohibited in the US – is not breaking even. The first Phase 1 operating year's chance of breaking even (87%) is also not what is required by AB3034. To allow the Authority to ignore AB3034 is to succumb to arbitrary and unlawful decisions taken without Legislative or Ballot approval.

7.2 The Authority Ignored "Outsiders" Analyses And Suggestions –

Like its behavior towards HSR's history and "outsiders" expertise on other portions of the financial viability equation, the Authority ignored its statutorily required Peer Review Group's (PRG) suggestions for early-on private operators and investors' planning input, [636] and early warnings from PRG's now-chairman that private investors do not see that the

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[635] See p. 99 [PDF 99] of Connecting and Transforming California, the California High-Speed Rail Authority's Draft 2016 Business Plan

[636] *"Without input from the final private sector participant regarding route alignment and station location, the future value of the HSR concession/franchise may be greatly diminished and less attractive to potential private sector participants."* See: Letter, dated January 3, 2012 to Legislators from The Authority Chairman Tom Umberg, critiquing the letter from the California High-Speed Rail Peer Review Group, Will Kempton, Chairman, January 3, 2012. Found at: www.cahsrprg.com. See Page 5 [PDF 5]

benefits of an HSR investment outweigh the risks of financing such projects without a subsidy.[637]

This was not the first or only bad news. In US Congressional testimony, the High-Speed Rail Director at the Union International des Chemins des Fer (UIC), presented a graphic showing that after about 250 miles of travel, HSR's share of riders versus airlines' drops off precipitously.[638] In that same hearing, RENFE, Spain's HSR (AVE) operator, showed that government O&M subsidies amounted to $1.8Billion.

A 2013 Congressional Research Service (CRS) report on HSR in the US said,

> *"The organizational structure of passenger rail is not conducive to a market environment in which competition among carriers exerts downward pressure on operating costs."* [639]

The Authority is 'swimming against the tide' or more accurately, against a riptide. In 2011, the Lincoln Institute, a professional group focused on land use, concluded:

> *"Like other modes of transportation and public goods, high-speed rail generally does not pay for itself through ticket fares and other operating revenues."* [640]

Because every phase of the project must produce a profit, listening to what outsiders say and do about the "opportunity" was crucial. Didn't happen.

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[637] "*There is little question that, for most potential U.S. HSR systems, private financial net benefits alone will not support the system.* Thompson, Louis and Tanaka, Yuki: High Speed Rail Passenger Services: World Experience and U.S. Applications; Prepared with the support of the Institution for Transport Policy Studies (a non-profit organization fully supported by the Nippon Foundation), September 20, 2011, page 27 [PDF 31].

[638] AG131 PET #198 [PDF 64] http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_house_hearings&docid=f:34799.pdf

[639] See p. 18 [PDF 22] of the Congressional Research Service (CRS) Report R42584 - The Development of High Speed Rail in the United States: Issues and Recent Events; Peterman, Frittelli, and Mallett; December 20, 2013

[640] See p. 46 [PDF 48] of Petra Todorovich, Daniel Schned and Robert Lane; Policy Focus Report, Lincoln Institute of Land Policy: High-Speed Rail, International Lessons for U.S. Policy Makers, 2011. Found at: https://www.lincolninst.edu/pubs/dl/1948_1268_High-Speed%20Rail%20PFR_Webster.pdf

The 2009 Business Plan stated, "*The private sector will expect to be compensated for any risks that it assumes.*"[641] clarifying that the project's basic purpose is commercial. Again in 2012 the Authority seemed implacable on the point of IOS' financial viability,

> "*Under all forecasted scenarios, each operating section of the California high-speed rail system is projected to operate without a subsidy. This is not only important in terms of achieving the Proposition 1A criteria, but it supports investment of private capital for construction.*" [642]

But empirical evidence shows that headline to be a *chimera*. The ability to make IOS operational is even harder. The Authority has no substantial evidence of a commitment from state[643] or federal sources[644] to complete constructing and equipping IOS to make it operational, and supposedly profitable. In 2011[645] and 2012, [646] The Authority said that over $10Billion of private sector investment would emerge, the latter claim because IOS operations produce a positive cash flow. [647] In 2012 the Authority offered more detail, saying that ". . *initial operating contracts will be structured to support the Authority's plan for granting a long-term operating concession*

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[641] See p. 102, California High-Speed Rail Authority: Report to the Legislature; December 2009.
[642] Pg. ES-17 of the California High-Speed Rail Authority, Revised 2012 Business Plan,
[643] Although the 2012 Business Plan, pg. 8-21 [PDF 189] claimed a state commitment, before April 10, 2014, there was no commitment to use 25% of Cap & Trade funds for the HSR project. The quote is, "*Notably, the Authority has secured a backup funding commitment from the state for funding the full IOS should the estimated amount of federal funding not materialize.*"
[644] 2012 DRAFT Plan Figure 5-2 pg. 5-5 [PDF 85] shows that private sector operations, maintenance and investment come after IOS is operational; the last role only when B2B is under construction
[645] 2012 DRAFT Plan (November 2011) ES-6 [PDF 12] "*Importantly, the state has authorized $9 billion in Proposition 1A bonds, and projections illustrate that an additional $11 billion should be available in private capital when the IOS is completed.*"
[646] 2012 DRAFT Plan (November 2011) pg. 2-7 [PDF 39] *Introduce the state's (and nation's) first fully operational high-speed service with the Initial Operating Section. This service can be operated by a private entity without subsidy, will have the potential to attract private investment in expansion to Bay to* Basin . ."
[647] 2012 Plan, pg. ES-12 [PDF 20] says, "*Based on projected cash flows from operations, over $10 billion in potential private-sector capital is anticipated once the IOS is in operation. These funds can provide a significant contribution toward completion of the Bay-to-Basin system.*"

after the IOS is in operation and early ridership is proven."[648] This is a clear statement that the project's future depends on private capital input.

But the Authority seems to have missed private investors' paramount message of 2008 and 2009, as shown in the Introduction to this paper. Given what the Authority has known since then about the unwillingness of private parties to invest in its project, the Authority's claim of private capital's interest to invest without any form of operating subsidy at best seems highly speculative.

7.3 The Authority's Policy Towards Private Operators and Investors Is Now Both Irrational And Unreasonable – The lifeline to continuing to build the IOS is solely private investment. Prior to 2014, asset investment was dependent on private capital input after IOS was proven profitable.[649]

> *"These initial operating contracts will be structured to support the Authority's plan for granting a long-term operating concession* ***after the IOS is in operation and early ridership is proven.*** *"* [650]
> [Emphasis Added]

At first, the 2014 Plan seemed to maintain the 2012 and earlier policy[651] to sell a long-term operating concession to finance building the Bay-to-Basin

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[648] In the 2012 Plan the private sector enters the picture after the IOS ridership has been proven: *"These initial operating contracts will be structured to support the Authority's plan for granting a long-term operating concession after the IOS is in operation and early ridership is proven."* See: Final 2012 Business Plan, Page 4-6 [PDF 102]." No mention is made of the need for private sector investment prior-to-IOS operations until the 2014 Plan, which requires at least several $Billion of private investments in IOS infrastructure to overlay the basic rail bed the Authority plans; *"The Authority will also rely on the private sector for the delivery and maintenance of the remaining elements of the infrastructure (i.e., track, systems, and power)."* See: Connecting California, 2014 Business Plan, April 30, 2014 p. 30 [PDF 30].
[649] *"These initial operating contracts will be structured to support the Authority's plan for granting a long-term operating concession after the IOS is in operation and early ridership is proven."* See: 2012 Business Plan, Page 4-6 [PDF 102].
[650] See: California High-Speed Rail Authority, Revised 2012 Business Plan, Page 4-6 [PDF 102]
[651] The Connecting California, 2014 Business Plan, April 30, 2014, pg. 55 [PDF 55] says *"Once the IOS is in operation, cash flows will be available from the project that can be used to support capital from government, private-sector debt programs and private-sector equity investments."*

after the Authority has proven the IOS is profitable.[652] Then the Authority's policy towards private investment did an about face, became unreasonable and even less likely to be taken up. Instead of the Authority alone financing the fixed infrastructure and rolling stock, the Authority's IOS formula became:

> *"The Authority will also rely on the private sector for the delivery and maintenance of the remaining elements of the infrastructure (i.e., track, systems, and power)."* [653]

The 2014 Plan admits that $8.5 Billion of private capital is now needed to supplement the Authority's rail bed with investment in tracks, control systems and electrification[654] before IOS is operational, much less proven able to produce a positive operating cash flow (profit). [655] Since private investors have shown no commitment or interest in the nearly seven years after AB3034, the Authority admits that sum

> " . . *is very large in current private-sector investment terms . .*" [656]

The Authority then falls back on its old canard,

> " . . *the transaction would likely need to encompass low-cost federal debt programs . . .*"[657]

This ignores that there is no ARRA federal commitment past September 30, 2017 although about $1Billion of FY10 FRA funds can be spent after that

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[652] The California High-Speed Rail Authority, Revised 2012 Business Plan, pp. 7-18 [PDF 160] explains the $10.1Billion concession will be negotiated in 2023 the second year of IOS operations – but in 2011 terms is $7.3Billion.

[653] See: Connecting California, 2014 Business Plan, April 30, 2014page 30 [PDF 30]

[654] By inference, since IOS must show a profit, it will also need rolling stock, a maintenance facility, ticketing and IT centers, etc. suggesting $8.5Billion is likely a low estimate.

[655] "*The Authority is exploring procuring a high-speed rail operator, even before the construction of the IOS is complete . . The Authority will also rely on the private sector for the delivery and maintenance of the remaining elements of the infrastructure (i.e., track, systems, and power).*" See: Connecting California, 2014 Business Plan, April 30, 2014, p. 30

[656] See: Connecting California, 2014 Business Plan, April 30, 2014 Plan p.56 [PDF 56] The full text is "*For the purpose of planning the sources of funds for the Bay to Basin phase . . . resulted in an estimated $8.5 billion of private sector capital that could be used to augment government funding contributions . .This plan recognizes that the amount to be financed is very large in current private-sector investment terms and the transaction would likely need to encompass low-cost federal debt programs and be staged to allow for market capacity and competition.*"

[657] See: Connecting California, 2014 Business Plan, April 30, 2014, pg.56 [PDF 56] The full text is " . . *the transaction would likely need to encompass low-cost federal debt programs and be staged to allow for market capacity and competition.*"

date; and that legally AB3034 requires all needed capital needed to make IOS operational be committed **before** using Pro1A funds for IOS construction[658] a part of AB3034 upheld by the Appellate Court.

Simultaneous with stating the need for a-pre-financially-proven-IOS investment, the 2014 Plan went on to say the Authority will own those privately financed infrastructure investments and exercise governance over them.[659] The *sine qua non* of private investment is clear ownership, control over assets and high quality due diligence proof of financial viability prior to investing; therefore a private, at-risk asset investment, owned and governed by the Authority is an oxymoron. The extraordinary the Authority statement both admits that while it has insufficient federal and state funds to make the IOS operational, it will attempt to attract private investment under onerous rules after learning in 2008 and 2009 the highly qualified interest private sector investors might have in the project. It is unreasonable to assume private investors IOS will appear under the proposed terms and conditions.

Yet the Authority continues to claim, ". . *that the private sector will regard this as an attractive investment opportunity."*[660] The Authority cannot see that its only way to complete IOS is to find private capital, but that its new terms and conditions are anathema to private investors. With no private investment commitment seven years after Prop1A, it is unreasonable to assume operators/investors will change their 2008/2009 or 2015 stance and raise private funds to complete IOS's infrastructure based the risks inherent in the Authority's ridership, revenue and O&M forecasts and on it 2014 Plan's contradictory statements.

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[658] The Appellate Court upheld that part of the Superior Court's ruling,

[659] See: See: Connecting California, 2014 Business Plan, April 30, 2014, pg. 31 [PDF 31] that says *"While the Authority will rely heavily on the private sector to bring innovation and investment into the project, the state will maintain its lead organizational role, retaining ownership and governance functions."*

[660] See: Connecting California, 2014 Business Plan, April 30, 2014 pg. 9 [PDF 9] "*These new forecasts serve as the basis for the updated financial analysis—which continues to show that the program is financially viable and which, in turn, confirms that the private sector will regard this as an attractive investment opportunity."*

The plan to have private investment prior to the opening of at-the-time IOS South is also described in its 2015 requests for expressions of private sector interest.

> *"Between Madera and the southern terminus of CP4, the Developer would not be required to provide civil infrastructure* ***but the other components would be required to be delivered sooner so that this section can serve as a test track*** *to commission trains before being put into revenue service."* [661] [Emphasis added]

Despite what they were told in 2008 by IMG, and in 2009 by IMG and Goldman Sachs and in 2015,[662] the Authority still thought it would have private, at-risk capital to complete IOS before operations began.[663] It's unclear whether the thirty-six companies that responded to the 2015 request understood they were being asked to risk many billions of dollars on a poorly conceived, planned and managed project. But none responded that they were interested in committing capital to the project.

7.3.1 More Private Sector Financing Fantasies In The 2016 Draft Plan –

The Authority continued its fantasy that private capital will finance and build much of the IOS infrastructure prior to its being ready for operations: this time for the IOS North.

> *"The business model will transition over time from government funding and government decisions to a commercially run enterprise managed by* ***a private sector operator and infrastructure provider*** *responsible for service, safety and commercial risks and success."* [664] [Emphasis added]
>
> *The specific high-speed rail components that will be delivered under a*

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[661] See p. 5 [PDF 12] of Request for Expressions of Interest for the Delivery of an Initial Operating Segment, RFEI HSR#15-02, Release date, June 22, 2015. Found at: http://www.hsr.ca.gov/docs/about/doing_business/HSR15_02_RFEI.pdf

[662] Thirty-six firms responded to the 2015 request for expressions of interest from the Authority.

[663] More details on the Authority's assumptions about having private investment prior to IOS being completed by public funds are described in Section 7.2 of the Request for Expressions of Interest for the Delivery of an Initial Operating Segment, pp. 5-7 [PDFs 12-14]. These include the need for private capital to build civil works, tunneling, track, traction power, communications, signaling and an Operations Control Center OCC)

[664] See p. 35 [PDF 35] of Connecting and Transforming California, the California High-Speed Rail Authority's Draft 2016 Business Plan

potential **[Design, Build, Finance and Maintain] *DBFM*** [665] *or other contract are described in detail below.* [666] [Emphasis added]

and later in the 2015 RFEI document:

"The Authority is contemplating a single DBFM or similar contract with a Developer to deliver the IOS-South project scope and a single DBFM or similar contract with a Developer (could be the same or different Developer) to deliver the IOS-North project scope." [667]

It's hard to know whether any the Authority staff or board member understands that private capital is NOT going to come to a project where the Authority's ridership, revenue and O&M cost claims are so arbitrarily derived; and that once the investment is made, the state of California owns those assets. But it's not reflected in the 2014 or 2016 plans.

The 2016 Plan (again) parses the truth, suggesting Cap & Trade funds are a certified, permanent funding source.

". . . with the passage of Senate Bill 862, the Legislature and Governor approved an annual appropriation of 25% of the annual Cap and Trade proceeds on a continuous basis to fund high-speed rail. " [668]

No mention is made of two lawsuits outstanding against Cap & Trade funds, nor is there mention that that appropriation is only through 2020, five years before IOS North (VtoV Ext.) is supposedly operational. The choice to not face facts is the hallmark of the Authority's work.

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[665] "For example, with a Design-Build-Finance-Operate-Maintain (DBFOM) contract, the private sector entity is responsible for the design, building, financing, operation, and maintenance of an infrastructure under a very long period of time, usually 20-30 years, after which the facility is transferred to the public entity." See p. 24 [PDF 24] of Flyvbjerg, Bent; Garbuio, Massimo and Lavallo, Dan: Delusion and Deception in Large Infrastructure Projects Two Models for Explaining and Preventing Executive Disaster. Found at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2229781 or at https://arxiv.org/ftp/arxiv/papers/1303/1303.7403.pdf

[666] See pp. 8-12 [PDFs 16-18] of the Request for Expressions of Interest for the Delivery of an Initial Operating Segment, RFEI HSR#15-02, Release date June 22, 2015. Found at: http://www.hsr.ca.gov/docs/about/doing_business/HSR15_02_RFEI.pdf

[667] See p. 11 [PDF 18] of Request for Expressions of Interest for the Delivery of an Initial Operating Segment, RFEI HSR#15-02, Release date, June 22, 2015. Found at: http://www.hsr.ca.gov/docs/about/doing_business/HSR15_02_RFEI.pdf

[668] See p. 10 [PDF 10] of Connecting and Transforming California, the California High-Speed Rail Authority's Draft 2016 Business Plan

After the analyses of the lack of competitiveness of HSR fares against auto transport, the lack of competitiveness against regional airports in the vast tracks of Los Angeles, and the lack of interest from private funding sources, the following 2016 Plan statement rings hollow.

> *Given the opportunity to leverage more ridership, revenue and private sector participation, we will seek federal funds to help complete the full San Francisco to Bakersfield line. If those additional funds are not forthcoming, we can and will still construct the Silicon Valley to Central Valley line described above.* [669]

The decision to switch the timing of the entry of private at-risk capital is not insignificant. First, it recognizes that the funds available to the Authority can only pay for the IOS' substrate, not its rails, electrification, and signaling systems. These items – and perhaps the rolling stock, IT systems, stations, etc. – are perhaps as expensive as building the dirt mound that will become a 'stranded asset' in the San Joaquin Valley.

Second, to ask a private company or companies to put such serious funds at risk without having had input a decade (or more) of prior, key decisions such as planning, design, engineering, or routing – or having very early-on validated the Authority's detailed financial data, algorithms and assumptions on demand (ridership) revenues and O&M – is unrealistic and likely to fail. But the Authority continues to spend public funds with impunity.

For seven years the Authority has claimed, but not produced, evidence of private sector interest to invest in the project. Of the more than twenty HSR operators worldwide, not one has offered as much as a letter of commitment to the Authority's plans. And while private funds such as Goldman Sachs[670] have assembled investment packages of far more than $68Billion, not one

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[669] See p. 12 [PDF 12] of Connecting and Transforming California, the California High-Speed Rail Authority's Draft 2016 Business Plan

[670] Sixteen years ago, in 2000, Goldman Sachs – an advisor to the Authority in 2009 – led Vodafone's $183 billion purchase of Mannesmann. Vodafone AirTouch took control of Mannesman in February 2000. The £112bn ($183bn) all-share deal is still the largest corporate merger in history. See: http://news.bbc.co.uk/2/hi/business/630293.stm

has expressed the willingness to invest, to lead an investment group for the project, or to co-invest as an operator.

To date 'outsiders' are bereft of evidence that the Authority's claims about profitability are supported by independently verified data, assumptions and calculations.[671] The Authority's claim of private capital's interest seems a mirage. That evidence would be the *sine qua non* of financial viability.

7.4 Tracing The Zigzags Of The Project's Profit Equation Shows Its Lack Of Financial Viability – The 2008 Authority Business Plan's profits were clearly a sign of self-confidence, *". . . an annual operating surplus of more than $1.1 billion".*[672] The 2009 Business Plan downgraded that assertion but promised an operating surplus of $370 million in 2020, the first operating year of the voter-approved Phase 1.[673] Then the Blended system was introduced in the Draft 2012 Plan (November 2011) and the Authority claimed

> *"Private-sector involvement is feasible because each of the operating sections generates a net operating profit."*[674]

That Draft Plan claimed the IOS (South) produced an annual profit of $464Million, and would attract private capital to purchase a concession to run the system.[675] After the first year, profits were projected to explode.

According to the 2012 Draft Plan, by 2030, a year after the Blended system started operations, the Medium case in the Draft Plan showed $1,246Million in net operating profits – 3.4 times the profits from the fully mature, voter-

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[671] Public Records requests concerning access to the actually used data and assumptions on ridership, revenues, O&M costs and profits, and the algorithms used for their computation, have been met with responses that, for example, say: *"This is trade secret information pursuant to Evidence Code section 1060, incorporated into the California Public Records Act through Government Code section 6254(k) and, therefore, will not be provided."* See: email to Mr. Robert Prantis from Ms. Anne Parker of the Public Records Act Staff of the CA High-Speed Rail Authority, December 27,2013.
[672] 2008 California High-Speed Train BUSINESS PLAN November; pg. 12
[673] California High-Speed Rail Authority, Report to the Legislature; December 2009; pg. 81
[674] California High-Speed Rail Program, Draft 2012 Business Plan; November 1, 2012; pg. ES-8 [PDF 14]
[675] California High-Speed Rail Program, Draft 2012 Business Plan; November 1, 2011; Exhibit ES-3, pg. ES-9 [PDF 15]

approved Phase 1 offered in 2009.[676] Five months later (April 2012) the Authority's supposed Phase 1 Blended system produces three times the net cash flow from operations in its first operating year (2029) – $1,144Million vs $370Million – that the voter-approved Phase 1 purported to promise in 2009.[677] Both these plans achieved of soaring profits despite not supplying the voter-approved, full HSR passage between SF's Transbay terminal and LA Union Station.

Then the *deus ex machina's* miraculous intervention reversed outcomes. In 2014's technical supporting document, the net cash flow from operations shrinks 55% below the 2012 claim. Instead of the $1.14Billion in the 2012 Plan, by 2029 the Blended System, now called Phase 1, only produced $519Million of net cash flow from operations – aka profits.[678] When the Authority (finally) admits there are capital replacement costs, the cumulative net project cash flow is negative – $65Million negative in 2029.

From *"an annual operating surplus of more than $1.1 billion"* to half that ($519Million); to a $65Million deficit in cash flow in six years is a rollercoaster ride of claims. That inconsistency is likely born of continual struggles to get the ridership, revenue and operating cost data and computer models to produce profits. Instead of a continued refinement around a norm of the same time period's forecasts, the opposite of expected refinement happens, making all the Authority's financial forecasts appear unreasonable.

7.5 The Authority Set Sail Into The Shoals Of Bankruptcy With Impunity – The Authority's 2014 Ridership and Revenue memo opened by saying that its forecasts were; *". . predicated on the following concepts"* –

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[676] California High-Speed Rail Program, Draft 2012 Business Plan; November 1, 2011; Exhibit 8-12, pg. 8-20 [PDF 148]

[677] California High-Speed Rail Program, Revised 2012 Business Plan; April 2012. The first operating year of the Phase 1 Blended system is 2029, as stated in Exhibit ES-3, pg/ ES-13 [PDF 21]. According to the Medium Scenario in Exhibit 7-2, pg. 7-3 [PDF 145], in 2029 the net cash flow from operations in 2029 is $1.144Billion.

[678] California High-Speed Rail Authority, 2014 Business Plan, Section 6, Financial Analysis and Funding, High, Medium, Low Cash Flows; February 2014; Medium Case pg. 8, Exhibit 2, [PDF 10].

the first of which was that the ". . *model produces reasonable forecasts . . .*"[679]

The main body of the 2014 Plan warned that its ridership and revenue forecasts for a 'Greenfield' HSR project could be far from accurate,

> *"Given that the program is entirely new, and no high-speed rail currently operates in the U.S., a risk exists that the actual ridership demand and revenue will differ from the projections currently being used. The impact to the program could be wide ranging and include the following: Decreased commercial and financial viability: Lower-than-expected project revenue: Increase in the public funding required: Loss of stakeholder support."*[680]

But instead of being cautious, as its Plan's remarks warned, the Authority chose to use ridership forecasts that 'push the envelope' far past credibility. This may have been the result of their self-laid fare trap that disallows fares greater than '83% of airfares' or unknown reasons, but the net results are risible revenue forecasts without substantial supporting evidence.

According to both the 2014 and 2016 plan's technical memos on ridership and revenue, the Authority selected ridership and revenue forecasts even they recognize could be as much as 50% less than forecasted to compute financial viability.[681] While the Authority had full (100%) confidence in 2014 that annual riders during IOS will not be less than 2.27Million, it 'cherry-picked' and 11.3Million riders instead.[682] The choice of ridership five times more than its, model that "*produces reasonable forecasts . . .*" assured manipulated result existing only on paper.

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[679] See Cambridge Systematics (CS) final technical memorandum on Ridership and Revenue Forecasting of February 6, 2014; page ES-1 [PDF 12]

[680] See: California High-Speed Rail Draft 2014 Business Plan, page 71 [PDF 71].

[681] For examples of how the Authority used ridership and revenue forecasts with a possible 50% failure rate, first see Table 7.2 and 7.3 on page 7-3 [PDF 60] of Cambridge Systematics (CS) final technical memorandum on Ridership and Revenue Forecasting of February 6, 2014. Those forecasts are then used in Table 7.4 [PDF 64] to compute Total ridership and revenues at the 'mature' case – when ridership has grown to its maximum such as 11.3 (or 11.4) million during the IOS period.

[682] The 100% confidence level would be 45% of CS' 95% confidence level – stated inversely in the CS report. If the average ticket during IOS is $55.57 for the 95% confidence interval, dividing the Figure 7.1 revenues ($126.61Million/yr.) by $55.57 yields 2.28Million annual riders during IOS.

Likewise, in 2016 the Authority chose to risk public funds by selecting the 'Median' (50%) ridership forecast of either 7.6Million or 7.3Million VtoV riders [683] when there was 100% confidence that 1.7Million riders would take the VtoV train annually.[684] The 7.6Million IOS forecast is 4.5 times the assured 1.7Million riders, but increases the risk that nearly 6Million (5.9M) of those riders will not show up.

The 2016 Plan gives no range of confidence in the chosen VtoV Ext. ridership forecast, but the 12.8Million riders for the VtoV Ext.[685] is labeled the Year 2025 Medium Level forecast.

Since Flyvbjerg's 2003 study's database included both conventional and Greenfield rail technologies, it would have been reasonable for the Authority to understand that, when choosing ridership and revenue forecasts for a first-of-its-kind project, requiring solid proof of profitability to potential private operators, its planners should err or the side of financial caution – choosing forecasts with a higher probability of becoming reality. Otherwise, the eventual operating income portion of the profitability equation is compromised, the HSR train has little or no chance to meet the strictures of AB3034 and no private operator will step forward.

The PRG took notice of this late-in-the game risky choice. In their April 2014 comments on the Draft 2014 Plan, the PRG noted the risk inherent in using the chosen mid-range of ridership and revenue figures in forecasting and said,

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[683] Table ES.1, p. ES-2 [PDF 14] of Ridership and Revenue Forecasting; Draft 2016 Business Plan, Technical Supporting Document says the Median for VtoV is 7.6Million riders, while Table 6.2, p. 6-3 [PDF 39] says 7.3Million riders. While the difference is 4%, the expectation after at least five years of forecasting is that ridership forecasts in the same document should be the same.

[684] See Table ES.1, p. ES-2 [PDF 14] of Ridership and Revenue Forecasting; Draft 2016 Business Plan, Technical Supporting Document

[685] See Table 6.2, p. 6-3 [PDF 39] of Ridership and Revenue Forecasting; Draft 2016 Business Plan, Technical Supporting Document

> "*We have added the 15%* [i.e. PRG lowered the risk of having fewer riders than the medium forecast] . . *to give an indication of greater caution on the low side. The* ***critical point is that the program must be assessed not just on the medium forecast*** [50% confidence that ridership not be what the Authority's forecast] . . ." [686] (Emphasis added)

The PRG made no comment on the riskiness of choosing the medium forecast in its letter on the 2016 Plan .[687]

The choice to use more risky figures stands in contrast to the Plan's statement about their ridership and revenue model's reasonableness. These risky ridership choices exhibit politically useful behavior, with paper consequences today, but disastrous, future financial consequences.

Nowhere is there a description of why the Authority chose to use a risky ridership and revenue forecast in this first-of-a-kind project. Private investor/operators performing independent due diligence have not and will not be tantalized by theoretical numbers based on a 50:50 chance of failure in a Greenfields project.

7.6 Conclusions On The Chances To Complete IOS North (VtoV Ext.) Or Any Other Phase And Prove Financial Viability – One of the existential problems that the Authority's IOS faces is that in late 2015 and early 2016, the Authority had no recourse to private, state or federal monies other than what it has had for nearly three years, federal grants equaling about 10% ($3Billion) of the then-estimated $30.5Billion to build IOS South – or 15% of its unsubstantiated capital investment claim to build IOS North for $20Billion.

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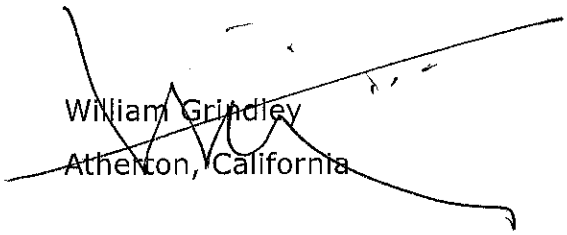
[686] See: PDF 9 of California High-Speed Rail Group, Letter to Legislative Leadership, April 6, 2014.
[687] Louis S. Thompson, Chairman, California High-Speed Rail Peer Review Group, to Legislative Leadership, dated March 25, 2016.

The Authority "burned its bridges" to private sector capital by requiring Billions of dollars be invested under unacceptable terms and conditions before IOS is completed and proven profitable. In 2016 it's assertions of available capital, be it private, at risk or non-existing federal funds, are premised on either very shaky of false assumptions.

There is no public access nor ever has been to the underlying data, assumptions and calculations, nor an independently verifiable analysis on whether the IOS can be an operationally profitable business, which AB3034 requires California's *sui generis* HSR project to be. But there is a great deal of evidence in the public domain to conclude that its ridership, revenue and O&M forecasts are indemonstrable or false. The Authority's IOS is not financially viable and will require a government's operating subsidy; so will succeeding phases.

In seventeen months, the Authority will have only FY'10 funds and at best a relatively small amount of Cap & Trade funds to continue property acquisitions, infrastructure relocation and rail bed earthworks. The project's status is rapidly approaching that of a 'stranded' asset. To continue to allow state and federal funds to be spent without assurance of enough funds to complete this 'greenfield' concept is reckless.



William Grindley
Atherton, California

April 12, 2016

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2016 Business Plan RECORD DETAIL

Submission Date :	4/15/2016
Submission Method :	Letter
First Name :	Andrea
Last Name :	Mackenzie
Stakeholder Comments/Issues :	Hello, Please find our comment letter attached. Best, Joelle Joelle Garretson Executive Assistant <tel:408.224.7476> 408.224.7476 Openspaceauthority.org ... _____ Please print only if necessary. Confidentiality Notice: The information contained in this e-mail message is privileged, confidential, and protected from disclosure. If you are not the intended recipient, any dissemination, distribution, or copying is strictly prohibited. If you have received this e-mail message in error, please e-mail the sender or telephone <tel:408.224.7476> 408.224.7476.
Notes :	Report was submitted entitled, "Santa Clara Valley Greenprint." A copy of the report is available upon request
Attachments :	OSA_CommentLetter_HSRBusinessPlan_160415.pdf (1 mb) Santa Clara Valley Greenprint.pdf (762 kb) Greenprint enevelope.pdf (397 kb)

April 15, 2016

OPEN SPACE AUTHORITY
SANTA CLARA VALLEY

Attn: Draft 2016 Business Plan
California High Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

Via Email Only: 2016businessplancomments@hsr.ca.gov
RE: California High-Speed Rail Draft 2016 Business Plan

Dear California High Speed Rail Authority,

The Santa Clara Valley Open Space Authority ("OSA") thanks you for the opportunity to comment on the California High Speed Rail Draft 2016 Business Plan. This preliminary letter primarily provides information about the recent and emerging work to map and evaluate the natural and working lands resources values in the Southern Santa Clara County region. We have scheduled a meeting with High Speed Rail Authority Staff and Consultants on May 4th to learn more about the proposed project as well as to share additional information about the recent and emerging work described below.

This exchange of information on May 4th is intended to help inform:

- The proposed alignment and features of the proposed HSR project so that the project results in the least conflicts possible to high value resource lands in the region;
- Potential early landscape scale programmatic environmental mitigation opportunities that align with our planning and conservation goals and advance those goals.
- Opportunities to partner to support conservation outcomes shared by both of our organizations.

Attached is a copy of our recently published Santa Clara Valley Greenprint ("Greenprint"), a 30-year conservation plan and vision which identifies goals, priorities, and strategies for land conservation and highlights opportunities for partnership and funding to support these efforts.

The Greenprint sets forth the following conservation priorities for the OSA :

1. Protect and manage an interconnected system of wildlands and natural areas to support native habitats and species and to ensure resilience to a changing environment.
2. Protect and restore water resources to benefit local communities and the environment.

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3. Conserve farms, ranches, and working landscapes to sustain the economic and environmental viability of agriculture in the County.
4. Protect and manage an interconnected network of open space lands that provide opportunities for nature-based recreation and education for all residents.

We are happy to share any of the information and data in the report you would find helpful.

As we understand it, the Business Plan will be followed by the development of project definition including alternatives for alignment and rail facilities later this spring-summer and the identification of an initial preferred alternative in November 2016. Our comments on the Business Plan are therefore primarily intended to introduce the HSR Authority to the OSA so that in the critical planning phases now getting underway we can work together to reduce the impacts of the project on this important landscape by seeking the most environmentally sensitive alignment and facilities locations, work to reduce potential project impacts through design options (e.g., alignments, degrees of grade separation, wildlife crossing features) and identify priority conservation projects for early mitigation funding.

Summary of Efforts Underway

There are a number of planning and scientific efforts underway that the OSA is leading or partnering on to map, evaluate and characterize the multiple natural resources in the region more specifically. A quick summary of those efforts is as follows:

One Water Plan: The Santa Clara Valley Water District (SCVWD) is now preparing its One Water Plan and has prioritized the Coyote Creek Watershed for its first watershed management plan. Completion of the Coyote Watershed Management Plan is expected by December 2016.

Sustainable Agricultural Policy Framework for Southern Santa Clara County: On June 30, 2015, the County of Santa Clara and the OSA were awarded a competitive grant from the Sustainable Agricultural Lands Conservation Program, a program of the California Strategic Growth Council. The $100,000 grant award will support development of a *Sustainable Agricultural Policy Framework for Southern Santa Clara County* (Framework). The *Framework* will strengthen the connection between farmland preservation in Southern Santa Clara County and reducing Greenhouse Gas Emissions from growth induced Vehicle Miles Traveled. The grant is funded with Climate Auction Revenues generated through the implementation of AB 32, the Global Warming Solutions Act. Results of this effort will help the County, OSA, and partners, which include the cities of San Jose, Gilroy and Morgan Hill to conserve the most critical agricultural lands in the County and secure funding for farmland protection. Preparation of this Framework is already underway and is expected to be completed in September 2017.

Regional Conservation Framework for Santa Clara County: Development of a Regional Conservation Framework (RCF) for Santa Clara County has just been initiated and will demonstrate how integrating landscape-scale conservation and streamlined permitting can facilitate transportation project delivery while also enhancing protection and enhancement of ecologically and agriculturally significant areas. Partners include the OSA, Valley Transportation Authority (VTA) and The Nature Conservancy. This work will create a comprehensive strategy for landscape scale conservation and facilitate efficient delivery of future transportation projects through advanced mitigation in areas identified by the RCF. This work is expected to quickly produce a suite of focused mitigation areas by integrating scientific information, strategies, and conservation priorities from existing state and regional conservation plans. Preparation of the Santa Clara County RCF is expected to be completed by December 2016.

2016 California Department of Fish and Wildlife Coyote Valley Connectivity Study: This new study provides, for the first time, empirical evidence which demonstrates that Coyote Valley is a critically important wildlife corridor. There is now ample scientific data showing that the Mid and North Coyote Valley—and Fisher Creek in particular—serve as a critical area for wildlife movement between the Santa Cruz Mountains and the Diablo Range. Genetic testing within the Valley corridor is also underway.

Newly-available scientific studies have substantiated the functionality of the wildlife corridor within the Valley and point to its fragility. Poor decision making about the Valley's future would be detrimental to wildlife populations surrounding the Valley. If HSR severs this vital corridor, these wildlife populations would be isolated to either the Santa Cruz Mountains or Diablo Range, preventing genetic mixing between populations, and endangering their long term viability.

Focused Conservation Strategy for Coyote Valley: The OSA is now undertaking a focused conservation mapping and evaluation study of the Coyote Valley, as called for in its Valley Greenprint, that will analyze the Valley's specific natural resource and economic values. Given that HSR alignments and facilities are planned to be near and within this Valley, information from this study is likely to provide timely and important environmental information to inform alternative alignments and location of improvements. The study includes the following focus areas and partners:

- Climate Resiliency and Agricultural Viability – Partners include the CA Strategic Growth Council, Santa Clara County
- Water Resource Reliability and Watershed Restoration – Partners include the Santa Clara Valley Water District and San Francisco Estuary Institute
- Wildlife Connectivity – Partners include CA Department of Fish and Wildlife and Bay

Area Colleges and Universities

This research will be made publicly available as they are completed and should inform future land use planning decisions in the region, including HSR.

Alignment of Goals and Next Steps

Our review of the Draft Business Plan suggests there are a number of areas our goals align. The Business Plan notes the establishment of a statewide conservation program in partnership with the Strategic Growth Council that will identify priority natural resources throughout the state that are important to protect and retain in order to promote sustainable habitats for the health of humans and native species (see Business Plan Page 28). In addition, the Business Plan describes the HSR Authority's agreement with the Department of Conservation for implementing agricultural preservation and funding of agricultural conservation easements (See Page 28). Finally, the Business Plan emphasizes the goal of minimizing impacts to the natural and built environments and doing so by engaging with local government and stakeholders as choices are made about the preferred project design and alignment as well as mitigation opportunities.

Our preliminary review of the early proposed alignments and facilities suggest that impacts could vary greatly between the alignments and even more so depending upon whether the tracks are at grade or elevated. It seems clear as well that impacts to resource values could vary depending on the location of maintenance yards and depots and other facilities. The emerging and forthcoming studies mentioned above provide timely and important information for consideration as the project is more fully defined.

We look forward to working closely with HSR to advise and inform final design of a preferred alternative and mitigation opportunities.

Very Truly Yours,

Andrea Mackenzie

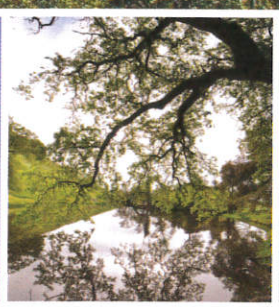
Andrea Mackenzie
General Manager

Cc: OSA Board of Directors

A guide for protecting open space and livable communities

SANTA CLARA VALLEY GREENPRINT

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2016 Business Plan RECORD DETAIL

Submission Date :	4/13/2016
Submission Method :	Letter
First Name :	Katrina
Last Name :	Hoyer
Stakeholder Comments/Issues :	Hello, Please see the attached comments on the Authority's Draft 2016 Business Plan, which I submit on behalf of myself and my wife Katrina Hoyer. I can be reached via return email or at (209) 580-4240. Best wishes, -Shane Smith
Notes :	
Attachments :	Smith_Hoyer Ltr CHSRA re 2016 Business Plan [2016-04-13].pdf (108 kb)

Katrina Hoyer & Shane Smith

1319 Luke Dr., Merced, CA 95340-8395 | (209) 580-4240 | shanegsmith@yahoo.com

April 13, 2016

Mr. Dan Richard
Chairperson, California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

Subject: The CHRSA Draft 2016 Business Plan Does Nothing to Grow a Knowledge-Based Economy Around UC Merced and in the North San Joaquin Valley

Dear Mr. Richard:

The Authority's recent decision to disconnect Merced County from High Speed Rail was a mistake. Any business plan that omits the University of California-adjacent communities in Merced misses a once-in-a-generation opportunity to link our state's greatest hub for innovation in Silicon Valley with the best hope for igniting a modern knowledge-based economy in the Central Valley. We ask you to reconsider.

We make this request from the perspective of a young family who took a chance on California's experiment with elite higher education in the Valley, a place too often recognized more for unemployment and crime than for intellectual achievement. Katrina is an immunologist and Assistant Professor at UC Merced studying both valley fever and autoimmune disease. Shane is an intellectual property attorney who continued his litigation practice in the Silicon Valley even as we moved our home to Merced in 2012. We both remember the uncertainty mixed with joy during that moment at the top of the stairs in our San Francisco row house when Katrina explained that she got the UC Merced job: "Merced is just so far away; what do we do now?"

We still struggle with the answer to that question. Virtually every week for the past four years, Shane has made at least one trip — by car — to Silicon Valley for work. We estimate that he has missed 100 full days out of every year of our daughter's life during that period just to spend time at the office. As a consequence, Katrina has grown her research laboratory, taught undergraduates, and competed in the difficult world of academic science while nearly always acting as the primary parent. The strains on our family have at times been enormous. And we are not alone: Other UC Merced families experience similar hardships when, like Shane, the spouse unaffiliated with the University must travel long distances for his or her knowledge sector job.

This reality also harms the University's ability to attract and retain new talent in the Valley. As a member of faculty recruitment committees at UC Merced, Katrina has observed that most applicants have a stay-at-home spouse, a spouse suited to a University position, or are single. The inference is that faculty candidates paired with a non-academic worker in a knowledge-based job frequently choose to avoid UC Merced. And we have both seen faculty and administrators take positions at UC Merced, commute in from homes in other areas of the state, and then leave UC Merced at the first available opportunity. None of this benefits our campus or furthers California's

strategic investment in UC Merced as a path to a stronger economy in the Northern San Joaquin Valley.

By returning to an HSR system that reaches north from the Highway-152/Road 13 interchange into Downtown Merced, the Authority will at once connect knowledge economy workers in Merced and the North Valley to relevant jobs in the Bay Area. You will also give a powerful incentive to those thinking about bringing their advanced skill sets to the Valley, namely, the ability to continue their careers while owning a home, raising their children away from urban congestion, and helping shape a vibrant community where their abilities will be much appreciated. The planned HSR extension into agricultural land around Shafter cannot so further the Authority's vision of improving the quality of life for Californians. Please bring the train to Merced.

Sincerely,

Katrina Hoyer

Katrina Hoyer, Ph.D.
(University affiliation discussed for identification purposes only)

Shane G. Smith

Shane G. Smith, Ph.D., J.D.

2016 Business Plan RECORD DETAIL

Submission Date :	4/14/2016
Submission Method :	Letter
First Name :	Aaron
Last Name :	Fukuda
Stakeholder Comments/Issues :	Please accept the attached letter from the Citizens for California High Speed Rail Accountability regarding comments on the Draft 2016 Business Plan. Aaron Fukuda
Notes :	
Attachments :	CCHSRA_041416.pdf (3 mb)

CCHSRA

CITIZENS FOR CALIFORNIA HIGH SPEED RAIL ACCOUNTABILITY

April 14, 2016

Attn: Draft 2016 Business Plan
California High Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, California 95814

Subject: Comments on the Draft 2016 Business Plan

Dear Chairman Richard and Rail Authority Board,

After nearly six years of engaging in the quasi-public process carried out by the California High Speed Rail Authority (Authority) in pursuit of building the California High Speed Rail Project (HSR Project), and providing comments and concerns in two previous business plans, the Citizens for California High Speed Rail Accountability (CCHSRA) applauds the Authority for once again moving the marker in a completely random and unsupported direction to confuse the public and gain political blessings from favorite politicians of the hour. The proposal being put forth continues to selectively limit the construction to a shrinking scope which looks fundable, yet upon further reading of the Draft 2016 Business Plan it is clear that the IOS North is does NOT HAVE A COMPLETE funding plan nor is there a semblance of a funding plan for Phase 1 or Phase 2 of the complete high speed rail system. It comes as no surprise to CCHSRA that most, if not all, of the 2016 Business Plan was imagined, fabricated and codified behind closed doors without the participation of the public or legislature.

As with past comment letters we require the Authority to review the comments provided in this letter and make the appropriate additions, deletions or changes required to provide the legislature and voters with a viable business plan. Once these adjustments have been made, CCHSRA requests that the Authority provide an appropriate public review and comment period prior to certifying the Draft 2016 Business Plan.

DISCUSSION OF MAJOR FLAWS

Selection of the IOS North Option

In order to fully grasp the hail marry pass attempt being made, we would like to recap the wandering progression of critical construction decisions made to get to this point:

- 2008 Proposition 1A - Voters are told that the Authority is going to build a high-speed rail system consisting of 880 miles of dedicated high speed rail service connecting San Francisco, Los Angeles, Sacramento and San Diego all for approximately $38 Billion.

The system would not be subsidized and that passengers could travel from SF to LA in 2 hours and 40 minutes.

- Next voters were told that they are going to build a Phase 1 project from San Francisco to Los Angeles on dedicated tracks for $120 billion and Sacramento and San Diego are now relegated to a Phase 2 project without any cost estimates. The Phase 2 destinations receive very little discussion or detail, almost getting lost in the shuffle.
- Voters are then told that they are now going to build what is called the Initial Operating Section South, connecting Merced to San Fernando for the cost of approximately $28 billion with a completion date of 2022. Voters were also told that the plan was to "blend" high speed rail service with conventional rail service in the Bay Area and in Los Angeles to garner political support and save money. Phase 1 was now to cost approximately $68 billion and Phase 2 details were still missing.
- 2016 Business Plan - Voters are now told that the plan is to build the IOS North for a price of approximately $20 billion and be completed by 2025. The Phase 1 system is now $64 billion and again no details for Phase 2.

The lack of consistency in approach and the continual change in direction are all signals that the overall approach and agency carrying out the approach do not have the ability to establish a clear set of goals, objectives and outcomes. Because the plans keep changing, Legislature and the voters should not accept this as a viable business plan nor should the Authority pursue this approach. Accepting the Draft 2016 Business Plan in its current form, without major modification is simply allowing a critical funds follow an unrealistic plan. This practice has been pursued since 2008 hence the failure of 2010, 2012 and 2014 Business Plans to have any resemblance to each other or to the 2016 Business Plan.

Use of Silicon Valley Versus Santa Clara Valley

In an attempt to link the high-tech industries of the Silicon Valley with the concept of high speed rail and conjure visions of connecting the wealthy technology employees with high speed rail, the Authority misleads the reader. The actual location of the northern terminus is Diridon Station, which is in the heart of Downtown San Jose. This is on average 15-20 miles south of the main technology center punctuated by names such as Apple, Google, SAP and Intel. Furthermore a quick review of the geography, road networks and other public transportation services, one quickly comes to the realization that the technology community in the Silicon Valley is not connected to Diridon Station.

Again, the Authority is stretching too far to paint a favorable picture and elicit benefits to the HSR Project. CCHSRA requests that the Authority remove any mention of the Silicon Valley and refer to the northern terminus as San Jose, Downtown San Jose or Diridon Station.

Financial Feasibility of IOS North

The Authority makes the case that the IOS North is financially feasible with the funds currently in hand. Unfortunately the following identified sources of funding are not available as stated or inferred in the 2016 Business Plan:

- Proposition 1A Bond Funds - These funds although being cleared of legal challenges for the time being are currently not available for release to the bond market or available for use. The Authority must still comply with Proposition 1A and secure a valid funding plan that is submitted to the California Director of Finance and approved to be achievable. Although there is construction money, approximately $2.7 billion appropriated by Legislature, those funds are not currently available to be issued on the bond market. CCHSRA believes that in its current form the Authority cannot comply with Proposition 1A due to several inadequacies including the inclusion of the Blended Approach, failure to comply with headway times (trains per hour), trip time guarantees, lack of financial data to ensure that subsidies will not be needed, and the lack of identified funding sources.
- Cap-and-Trade Funds - The Authority assumes the infusion of Cap-and-Trade (C&T) funds to supplement funding gaps not met by State Proposition 1A funds and Federal Funds. The C&T funds are relied upon to achieve the IOS North which is expected to be completed in 2025. C&T funds are expected to disappear in 2020, however the Authority makes no mention of this in the Draft 2016 Business Plan. Furthermore, because the allocations from C&T are made to the Authority based upon a percentage of the funds, and the funds are designed to decrease over time as air quality projects are implemented, the Authority cannot assume that the level of funds will remain the same. The Authority should assume C&T funds decrease over time from now until 2020. Lastly, the Authority does not discuss or include a risk analysis of the legal challenges that the C&T program are under both from a taxation practice and the allocations to HSR. Part of the legitimacy of a business plan is full disclosure of the risk associated with potential funding sources. Failure to disclose legal exposure to funding sources, for purposes of misleading Legislature and the voters would be viewed as professional negligence on behalf of the Authority Board Members.
- Federal Funds - The Federal funds allocated to the project are only available until September 2017 when the Federal Authority for the spending will sunset. At the current rate of construction and expenditures the ability to use all of the Federal funds seems unlikely. Therefore the Authority fails to identify and address risks associated with not being able to utilize all of the Federal funds as a part of the IOS North.

CCHSRA cautions the Authority that what the 2016 Business Plan presents is a misleading representation of the realistic funding available for the construction the IOS North, which is only a small portion of the overall system the Authority must construct. It is most troubling that the Authority seemingly fails to include key details in an attempt to lure the reader into the belief that all of the funds needed are in the ready for construction. CCHSRA requests that the Authority address the specific funding issues raised in the Draft 2016 Business Plan.

IOS North Compliance With Proposition 1A

The IOS North is ***NOT*** compliant with Proposition 1A as alluded by the Authority in the 2016 Business Plan. The obvious and most blatant violations are:

1. Nowhere within Proposition 1A is the word "bus" written, referenced or noted. The IOS North being proposed has a northern terminus in San Jose and a southern terminus north of Shafter at a yet to be determined "temporary" HSR station, which will require riders to

disembark and utilize a bus system to connect to Bakersfield and on to Los Angeles or other destinations. Proposition 1A envisioned high speed rail service, not a bus system. The Authority is also only granted specific authority over the construction and execution of a high speed rail system. Therefore, any inclusion, use or design of a system involving busses is not statutorily allowed under Proposition 1A.

2. Proposition 1A did not contemplate the use of "temporary" high speed rail stations. There are specifically 27 stations that are mandated under the proposition, and none of them are contemplated to be a temporary usage. Nor is a station contemplated in the rural area north of Shafter. This temporary station was also not included in any environmental review documentation under the California Environmental Quality Act (CEQA) or the National Environmental Protection Act (NEPA).
3. Funding sources as discussed above are not sufficient to complete the IOS North. C&T funds are not currently slated to continue beyond 2020 and at the current Federal fund utilization rate to complete funding will not be expended by the deadline set on the funds. Proposition 1A specifically mandated that the Authority identify accessible funding, not theoretical funding in establishing a funding plan to comply with Proposition 1A.

For the specific reasons above, the Authority MUST strike any notation regarding the IOS North being compliant with Proposition 1A form the Draft 2016 Business Plan. CCHSRA also recommends the Authority specifically address each of these concerns in the Draft 2016 Business Plan and include them in the risk analysis for the HSR Project.

Avoiding IOS South is Problematic

The IOS South was viewed for 4 years by the Authority as carrying the highest benefit and most realistic approach for execution of the HSR Project. This included the initial attempt at crossing the San Gabriel mountains and achieving passenger rail service from the Central Valley into Los Angles for the first time in California's history. The construction of the IOS South included very complicated tunneling stretches that were noted by the Authority and recent news articles as being very costly. Under the 2014 Business Plan, these tunnels were to be constructed between now and the year 2022. This puts the most expensive and technically complicated section towards the early construction window and at the lowest construction costs. As the Authority now pushes this section of the tract to some undetermined date after 2025, the Authority should analyze and present the cost risk associated with carrying out the most costly and technically difficult sections later in the project schedule. These cost increases come from inflation in construction costs and other time related cost increases. Once this cost exposure is identified it should be compared to the IOS North costs and balanced, as it has a potential to increase the costs of the project significantly. Just the inflationary cost increases on the most expensive stretches of the entire project could add billions of dollars to the project.

We also note that the decision to change to the IOS North from the IOS South was not publically known until the Draft 2016 Business Plan was released. A decision of this significance should have been publically vetted and at a minimum deserved mention at an Authority Board meeting prior to its revealing in the Draft 2016 Business Plan. If the Authority continues to represent that the IOS North is the future construction path, CCHSRA strongly encourages the Authority to

include an entire chapter of the plan to discussing the process that utilized to conclude that a change was warranted and the facts to support the decision.

This analysis should include:

- When the Authority began investigating the IOS North alternative as a change to the Draft 2016 Business Plan
- Who including Authority Board Members, Executive Staff and consultants were involved in the decision, information and selection process
- Who in the public was invited to participate in the discussion surrounding the IOS North
- What formal process took place to conclude with the inclusion of the IOS North in the Draft 2016 Business Plan

Although the Authority Board and specifically the Chairman continue to promote the Authority as a transparent agency, the recent activities surrounding the IOS North inclusion in the Draft 2016 Business Plan continue to raise major suspicions on behalf of CCHSRA that nothing is publically known until final decisions and political favor have been granted.

Cost Reductions Are Falsified

The Authority has made claims that initial bids for the project from Construction Package 1 were well below engineering estimates and therefore the project will see overall cost savings. This statement does not reflect the manipulation of the bidding process that led to the lowest cost bidder. The process that was adopted by the Authority to initially retain construction/design services for CP-1 included receiving proposals and scoring those proposals both on technical capability and cost, with lower cost being the preferred proposal. When the proposals were received they were scored for their technical capabilities, with the lowest scoring proposal to be removed from the process. After the scoring of the proposals the Authority Chairman and the CEO of the Authority modified the scoring criteria to allow the lowest scoring proposal to remain in the process. ***This action was taken unilaterally without Authority Board discussion or any public process.***

After the proposals were scored for technical capabilities and the lowest scoring technical proposal continued through to the cost proposals, the Authority announced that Tutor Perini was the selected firm for the CP-1 contract. Only upon public records requests did the public discover that Tutor-Perini was also the lowest technically scoring team, the team specifically allowed to continue beyond the technical scoring phase. **Therefore, the outcome was the lowest cost and lowest qualified team constructing the first segment of the project.**

The Legislature and voters cannot rely upon the initial bid prices presented to the Authority to determine the overall cost of the project. Any cost saving presented in the Draft 2016 Business Plan must be viewed in the context of a manipulated bid process. CCHSRA encourages the Authority to provide a discussion of the bidding process used to secure initial bids and the justification for any changes to the initial bidding requirements. A full discussion should also be included as to the recent potential change orders that exist that could increase the cost of the CP-1, which is anticipated now to be above the original budget.

CCHSRA also notes that in the Basis of Estimate costs, the actual cost of Central Valley Sections either has minor cost saving or increased. The overall cost savings being seen in the Draft 2016 Business Plan are really due to the removal of items from the scope of the project. This includes removal of $1.5 billion in funding to the Transbay Terminal in San Francisco. The other cost savings come from other areas such as placing the alignment at-grade coming into the Diridon station rather than on an aerial viaduct. However, recent news articles by the Silicon Valley Business Journal highlight that recent planning efforts have set the stage to determine if the approach should be at-grade, tunnels or aerial viaducts[1]. It is completely inappropriate to conclude that the system will use at-grade designs, when the Authority is also promoting planning operations with the community which would decide these options. This is simply a misleading financial maneuver to manipulate the overall project cost to show a lower construction cost.

Major Technical Issues Not Addressed Giving Rise of SIGNIFCANT Safety Concerns

The Authority has knowledge of existing technical issues that have been identified, yet never discussed or addressed in any analysis or report for the public or Legislature to vet. One major issue is the ability of a high-speed tainsets to travel at speeds in excess of 200 mph. Across the world the upper speed limit for steel-on-steel high speed rail service is approximately 200 mph for sustained service. Most high-speed rail service operates at speeds around 185 mph. When the Authority sought feedback from private investors and high speed rail operators, it was clearly brought to their attention in the reports that a system with the ability to achieve speeds greater than 200 mph currently proved to be unsustainable and presented a significant safety risk.

CCHSRA requests that the Authority present in the 2016 Business plan examples of world-wide high speed rail systems that achieve sustained speeds in excess of 220 mph for extended travel. This should also represent the steel-on-steel systems as proposed here in California. If no world-wide system exists, CCHSRA requests that the Authority provide a specific Monte-Carlo risk analysis of the inability to achieve sustainable speeds in excess of 200 mph.

Significant Environmental Concerns Plaguing Current Design

The Authority in its rush to promote the high speed rail system in the Central Valley has overlooked significant environmental concerns that will cause either impacts, delays or even potential for loss of life. The issues facing the Authority include:

1. Subsidence has been identified through several key legs of the high speed rail alignment through the Central Valley. A key subsidence issue is located in the area around Corcoran, California. This subsidence area has sunk in double digits over the last 5-10 years, in a very non-linear fashion. This subsidence is driven by the extraction of groundwater that causes the inelastic compression of impermeable soils. As these areas subside, the alignment being proposed would also reflect this depression which presents a linear displacement of tracks, which could present safety issues as a train speeds at 220+ mph down the track.
2. The significant volumes of dirt and earthmoving required introduces significant amounts of dust and particulates into the air. A recent increase in the cases of Valley Fever have been experienced in the Southern San Joaquin Valley, which poses a threat to residents

[1] http://www.bizjournals.com/sanjose/news/2016/04/13/rail-planning-shifts-into-high-gear-group-to.html

located near areas where heavy earthmoving will take place. The Authority has done little to no identification or mitigation of this significant health risk.

3. As the Authority is finding, the existing alignment choices were based on little to no interaction with the locals, which has left the designs being continually altered and alignments being changed to either address impacts or to save costs. With these changes, the Authority must include an environmental analysis to ensure no further environmental action is needed. It is also troubling that these changes are being made behind closed doors with the contractors and the Authority, and the public is only notified with a landowner discovers a change and notifies local jurisdictions or CCHSRA discovers the changes.

Although environmental impacts may not be required or typical of a business plan, for the Authority, these issues are significant hurdles that can impact the outcome of the Draft 2016 Business Plan. CCHSRA requests that these issues be address as risks, which includes identifying the risk, outlining the risk and determining the impact on the project through analysis and the Monte-Carlo risk assessment.

If these issues are not addressed the outcomes could include: 1) new identified impacts that require mitigation measures that will cost the Authority time and money, 2) potential safety risks to the public around or on the high speed rail system, and 3) significant delays in the project that will have its own impacts including significant cost ramifications.

New Alignment Selections Necessitate New Cost Estimates

The LA Times recently reported that the Authority has released new alternatives for routes from Bakersfield to Anaheim[2]. In this report it is highlighted that new alternatives solve some problems by increasing the amount of tunneling through this challenging section of the project. With the new information the Authority should utilize the most conservative route to estimate costs and ensure that these costs are included in the 2016 Business Plan.

Questions Not Answered in the Draft 2016 Business Plan but Integral In Determining Financial Feasibility:

1. The Authority has broken the project into two phases. Phase 1 goes from San Francisco to Lost Angeles. Phase 2 connects Sacramento and San Diego. What is the cost to complete Phase 2 and what is the schedule?
2. If all funds are spent for construction, what are the costs associated with the administration and operation that are needed for the Authority? Where are these funds to come from?
3. Where are the finance charges being paid from? Are the loan repayment funds being paid out of the revenue generated from ridership?
4. Can Cap-and-Trade funds be used as finance charges for loans as proposed by the Authority? Does the legislation authorizing the use of C&T allow for this use of the funds?

[2] http://www.latimes.com/local/california/la-me-bullet-train-reports-20160409-story.html

Provided for evidence and support of our claims that the Draft 2016 Business Plan is unacceptable are the following comments and concerns with specific page locations:

1. References to the Authority start on Page 10 of the Executive Summary indicating the achievement of a Record of Decision on the Fresno to Bakersfield section.
    a. This statement should be qualified and/or footnoted with the statement that there are currently several pending CEQA cases against the Record of Decision and the outcome of its validity has yet to be determined by the judicial system.
2. On Page 11 of the Executive Summary the Authority claims to have incorporated lessons learned from the first design-build proposals and contracts.
    a. This claim is disingenuous because it fails to report to legislature and the voters that the process by which the first design-build contract was awarded averted the internal requirements set forth by the Authority itself to ensure the most technically competent and lowest cost bidder. During the bidding process the Chairman of the Authority and the CEO, Jeff Morales unilaterally and without Authority Board consent changed the bidding rules to allow Tutor Perini to continue to remain in the bidding after the first elimination was made[3]. It was internal bidding requirements that mandated that the Authority eliminate the lower technically competent teams, which Tutor Perini had the lowest score. On the second round, which included the cost to construct, Tutor Perini was the lowest and therefore awarded the bid. What we can conclude from the first design-build contract is that the least technically competent team with the lowest bid price is building the first section of the high speed rail project.
3. On Page 12 of the Executive Summary the Authority states *"creating high-speed connection to the Central Valley would help address the affordable housing crisis in the Bay Area."*
    a. This statement is an astonishing admission of the increase sprawl that will be the driving force to this new approach to shuttle people from San Jose to the Central Valley. Currently the Central Valley is a rural setting with agricultural and governmental/institutional economies. Housing is affordable when compared to urban pricing in the Bay Area and Southern California, however salaries and economies also reflect the affordable housing. When the Authority begins to shuttle people to the Central Valley and host of economic, resources and quality of life impacts will be experienced by the Central Valley. Lower income urbanites will begin to bring their families to the Central Valley elevating the cost of land and homes, increasing pressure on scarce resources such as water and generally creating overcrowding and loss of agricultural land to meet the housing needs. This statement within the Draft 2016 Business Plan requires that the Authority augment their CEQA/NEPA process to provide supplemental analysis on the impacts of sprawl on the Central Valley. Impacts such as water resources impacts, traffic impacts, air quality impacts and housing impacts will all be required to be addressed given this project and specifically the IOS North will increase the migration of urban home seekers to the Central Valley.
4. On page 16 the Authority states that high speed rail is "helping to reduce urban sprawl and slowing conversion of farm land to development."

[3] http://www.fresnobee.com/news/local/high-speed-rail/article19516161.html

a. Previous statement in the Draft 2016 Business Plan and public statements by San Jose elected officials conflict with this statement. As stated on Page 12, the Authority in tends to utilize the construction of the first section provide affordable housing options for the urban dwellers in the San Jose area. They will be able to commute to housing in the Central Valley which is cheaper than the urban prices in the San Jose area.

5. Page 17 the Draft 2016 Business Plan asserts that the new San Jose to Shafter plan "Allows operations to start as quickly as possible."
    a. CCHSRA believes that this statement is misleading and should be removed from the document. Assuming that the Authority provided a thorough and detailed 2014 Business Plan, the IOS that was planned from Merced to San Fernando would have been operational by 2022, which is three years before the current plan contemplated under the Draft 2016 Business Plan. This simply is not operations "as quickly as possible" as the IOS South would have been faster. This is yet another example of misleading statements to cast a favorable light on an otherwise tarnished project.
6. Page 17 indicates that the Authority plans to comply with Proposition 1A. CCHSRA again believes this is not a legitimate statement and it should be removed for the following reason:
    a. Nowhere in Proposition 1A is there a "temporary" station contemplated for high-speed rail service. A quick search of the Proposition 1A language found no results for the work "temporary" within the document.
    b. The voters where lead to believe that investments were to made between very discrete corridors, not between one urban station and a "temporary" station in between two rural communities.
    c. Proposition 1A did not contemplate an interim and/or long-term bus system to connect passengers between high-speed rail service and any nearby transportation hub. It is also not clear in the Draft 2016 Business Plan who will operate and maintain the bus system as proposed. It is also not evident in the Draft 2016 Business Plan or supporting documents that the cost of providing interim service is included in the construction costs, operating costs or anywhere within the cost estimate. Unless the Authority provides specific evidence that the there is financial support to connect the interim station in Shafter to some other location, the voters and Legislature must assume that the system terminates with no logical connection.
    d. The Authority DOES NOT have the available funding to complete the construction section from San Jose to Shafter. Proposition 1A funds must be matched with other funding, which will not yield enough to finish the project. This is because the Authority incorrectly assumes funding from Cap & Trade to be consistent and extend well past 2020. The impetus for Cap & Trade mandates its eventual reductions and potential for non-existence if the air quality objectives are met.
7. Page 20 - It is stated that seven small businesses and more than 100 workers have been involved in the construction of the viaduct over the Fresno River.
    a. CCHSRA requests that the Authority provide within the Draft 2016 Business Plan the total costs for planning, design and construction for the work being completed

by the seven firms and 100 workers, such that on a business planning level the Legislature and the public can see the investments being made for such results. Without this analysis, the Authority assumes that this is a benefit to the economy, but fails to provide enough of a balanced discussion.

8. Page 20 - It is stated that as of January 29, 2016 the Authority has 642 parcels of the 1,458 needed for the initial construction phases.
    a. With the original notice to proceed taking place in 2014 it took approximately 2 years to obtain 44% of the parcels that were the ones that the Authority claims chose "to use the relocation as an opportunity to expand and grow their businesses or move to better locations." Therefore the remaining parcels are going to be the difficult parcels and the realistic ability to obtain the next 44% of parcels may well be beyond the 2 year mark, making that 2018 or later.
    b. In the funding analysis it not evident what date is assumed for 100% of parcels to be obtained. The Authority is encouraged to divulge this information to the reader and Legislature.
    c. The Draft 2016 Business Plan should provide the reader with an anticipated date along with the potential risks associated with not achieving the targeted amount of land by the required date. The analysis could also break the acquisition down in the phases if necessary.
9. Page 28 - The Authority claims that in 2014 the Legislature established a continuous funding source from C&T funding.
    a. This statement should be qualified that the continuous funding stream is only legislatively authority until the year 2020. This is not intended to be a continuous funding stream that will last forever. Inferences have been made that this funding MAY continue in the future, however there is no evidence currently that it will continue.
10. Page 30 - Safety and Security
    a. It is with great sadness that events that recently took place in Europe highlight the weaknesses that trains and train stations present with facing global terrorism. It is critical that the Authority ensure that the Draft 2016 Business Plan list terrorist threats specifically in this section and give a brief understanding to the Legislature and voters on how this is being addressed.
    b. Another safety concern is the presence of land subsidence and the current alignment traveling through two of the largest subsidence areas in the state of California. This element alone presents a potentially greater safety risk to passengers than any other safety concern related to terrorism.
    c. Trainset speed around the world generally remain at speeds from 185 mph to 200 mph. This seems to be a "sweet spot" for which trains can perform and not achieve track resonance. This has been cataloged by the Swedish Deep Stabilization Research Center in 2002[4]. As the Authority plans and must operate at speeds greater than 220 mph, the HSR Project presents a significant safety risk to passengers as it has not provide an analysis or mitigation for ground stability that effects train derailments.
11. Page 32 - The system will create 3,500 full time jobs according to the Authority

[4] http://www.swedgeo.se/globalassets/publikationer/svensk-djupstabilisering/sd-r10.pdf

a. It should be noted that this equates to approximately $19,428,571 of expenditures by taxpayers to create 1 job. This also does not include the financing charges required for the initial construction and repayment of loans and bonds.
b. The current statistics from the American Recovery and Reinvestment Act (Stimulus Bill) indicate that the Federal Government spent approximately $230,000 to create a single job. The Authority should provide a value to the Legislature and the voter as to the cost/benefit value of each permanent job created.

12. Page 36 - The Authority claims that the project must be broken in contracts for $3-5 Billion in order for there to be competition.
    a. This means that the Authority will have to manage a minimum of 14 to a maximum of 23 contracts which are all multi-billion dollar contracts. Given the current staffing and expertise of the Authority we believe that there should be a discussion on the how the Authority plans to handle these contracts and what risk it presents as it pertains to contract management and ensuring that the project comes in on budget and on time. For example the Authority has already begun to cause its own internal delays in the project by awarding contracts without the ability to turn over parcels for construction. The property acquisition component of the project has been poorly managed where there are instances of appraisals taking place with improper staking, appraisals delivered to wrong property owners, appraisers who have lost documentation, numerous appraisals that have had to be redone, and most egregious is simply the lack of experience shown by the land acquisition team. As these delays begin to multiply and overlap, the exposure to cost increases exponentially increases. How will the Authority address these and other project management issues as they are not improving and only devolving.

13. Page 37 - The Authority indicates it will retain two key private sector partners, a train operator and an infrastructure provided to help manage the technical and operational aspects of the project.

a. CCHSRA recommends that the Authority suspend the development of the Draft 2016 Business Plan until these two critical partners are brought into the team. This would allow the technical and operational aspects of the project to be integrated into the financial and business aspects of the high speed rail project.

b. CCHSRA also notes for the public and legislatures benefit that the Authority was advised that this approach was very important back in 2011 as the initial 2012 Business Plan was being developed. An internationally recognized high speed rail developer from France, SNCF approached the Authority to assist in developing key aspects of the high speed rail system. The idea was for the SNCF team to use their experience to help begin the process such that it could have the best initial foundation. A presentation was made to the Authority on an approach where SNCF would assist, but not retain any monopoly on the system, however the Authority and its contractor Parsons Brinckeroff internally decided to ignore the assistance, leaving SNCF no choice but to send their staff and expertise home to France. The presentation can be found at: http://transdef.org/Blog/Whats_hot_assets/SNCF%20Presentation.pdf

14. The Authority outlines the Pre-Operations Phase of the project, but adds very little discussion.
    a. CCHSRA recommends the Authority include a robust discussion of how the pre-operations phase would be conducted. How would the private operators be solicited. Have private entities shown interest? How will they participate in the system when the existing design engineers work for other firms that will be carrying out the construction aspects of the project? How will the Authority manage the decision making process between the private operators and the current design administrators Parson Brinckeroff?
15. Page 41 - The Authority discusses the use of one singular procurement for rail infrastructure across the entire high speed rail network, however several bullet items later state that the rail infrastructure provider will be selected for the first operating segment (assuming IOS North however Authority must clarify) with an option to extend for Phase 1. These two bullet point are contradictory, is the Authority issuing one rail infrastructure contract or several?
16. Page 46 - Silicon Valley to Central Valley Line - What It Means
    a. The Authority states that the Silicon Valley is the indisputable engine of economic growth in California, however this misleading statement fails to also clarify that the economic factors have created the gentrification of the Silicon Valley, income inequality and also some the largest housing problems facing the state. CCHSRA requests that this statement be struck from the Draft 2016 Business Plan or qualified with the significant social and economic problems also being faced in the Silicon Valley and the neighboring urban areas.
17. Page 64 - The Authority highlights the Silicon Valley to Central Valley line extending to reach San Francisco (4th and King Street) and Bakersfield will increase ridership.
    a. The mention of San Francisco as 4th and King Street is only mentioned 60 pages into the document. CCHSRA recommends that when referencing San Francisco as the extension north of San Jose that each reference include the 4th and King Street notation. This is not the same location as what was contemplated in Prop 1A, which San Francisco meant the Transbay Terminal.
18. Page 65 - The 2016 Business Plan states that completing the Phase 1 system will include extending the San Francisco to Bakersfield service to the Los Angeles and Anaheim markets.
    a. CCHSRA notes that Phase 1 is intended to reach a northern terminus of the Transbay Terminal. The 2016 Business Plan should be corrected to include the need to extend the system from 4th and King street to the Transbay Terminal and also include extension to Anaheim for the completion of Phase 1.

Ridership Revenue Forecast Comments

1. Page 3-1 - The Authority lays out the Silicon Valley to Central Valley Line - Open in 2025
    a. It is not clear how "coach" service will be handled. Who will run this system? It is not addressed in the Draft 2016 Business Plan or any other document. CCHSRA recommends modification to the model to have a temporary station north of Bakersfield with no service connections to Bakersfield other than

vehicular transportation. The Authority has no viable "coach" service and has no authority or ability to design, manage or coordinate a "coach" service.

b. The model also includes mention of San Francisco, however it is not clear if this is 4th and King Street or the Transbay Terminal. This distinction is critical to the ridership model and should be noted.

2. Page 3-2 - The Authority explains that Phase 1 service will start in 2029 with a northern terminal at San Francisco and a southern terminal at Anaheim.
    a. The Authority again should clarify if San Francisco means Transbay Terminal or 4th and King. Depending on how the model was built, this should also be consistent with the 2016 Business Plan.
3. Page 3-3 The Authority provides Table 3.1 Assumed High-Speed Rail Fares which includes a fare of $83 from San Jose to Bakersfield, with a notation that fares from the North of Bakersfield station evaluated in the Silicon to Central Valley lines are the same.
    a. This assumption by the model cannot be included as it is not realistic to assume that the inclusion of some other form of transportation from the North of Bakersfield station to Bakersfield station will not add any additional cost. This improperly indicates lower fares and will have a significant impact on the ridership and revenue forecasts.
4. Page 7-1 Indicates that there was a panel of experts that were convened to develop a set of potential risks factors that could impact the ridership and revenue.
    a. It seems obvious that the results from such a panel is public information and should either be provided or at a minimum cites such that the reader and the public can understand the variables being discussed. CCHSRA requests that this information be provided for public review immediately and that the 2016 Business Plan not be adopted until such time that the public and Legislature have the time to review the information.
    b. For example, one risk we believe is not being addressed is the implementation of the Sustainable Groundwater Management Act. The 2016 Business plan promotes the importance of solving the difficult housing problems in San Jose by provide affordable housing in the Central Valley. Along with this movement of the urban areas to the rural areas comes the need for resources, including water. Most of the Central Valley communities, including those cited as possible commuter communities such as Fresno rely heavily on groundwater. Under SGMA, the ability to accept new housing and resource demands may not be realistic or allowed under local or state regulations. This risk must be included in the risk analysis for ridership and revenue.

BASIS OF ESTIMATE COMMENTS

1. Page 7 - The document indicates that Phase 1 will be 520 miles, operate over 200 mph and be under three hours.
    a. Proposition 1A and voters believe that the system will connect San Francisco to Los Angeles in 2 hours and 40 minutes. The statement should be "in under 2 hours and 40 minutes" to comply with the legislation establishing the project.
2. Page 12 - Table 2. Phase 1 Capital Cost Estimate by SCC reports that the sub-total is for the system from "San Francisco - Los Angeles Union Station".

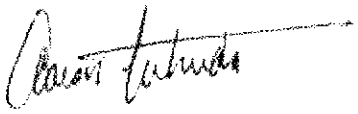
a. It is not clear if San Francisco is meant to be the Transbay Terminal or the station on 4th and King Street. The Authority should clarify what is the ultimate destination in San Francisco and the appropriate costs.

3. Page 14 - Figure 3 indicates that for the Fresno to Bakersfield section there was a increase of $1.047 billion and in the Merced to Fresno there was a decrease of approximately $342 million, therefore for much of the Central Valley section there was an overall increase of $705 million.
    a. In several sections throughout various documents associated with the 2016 Business plan the Authority touts that initial contracts where below budget therefore saving costs to the project. However, this table would suggest that a majority of the CP1 and CP2-3 contract sections have seen an overall increase in costs. The Authority is requested to clarify the discrepancy between Figure 3 and the other sections of the 2016 Business Plan.
4. Page 15 - Table 3. 2014 to 2016 Business Plan Capital Cost Comparison - Reduction in Transbay Transit Center contribution (-$1.5B).
    a. The 2016 Business Plan does not discuss the reduction in contribution to the Transbay Terminal. CCHSRA also would like to offer that this decision was not made at the Authority Board level as we do not recollect this conversation taking place at any public meeting. CCHSRA requests that the Authority provide a discussion of when this decision was made, who made the decision and who approved the decision.
5. Page 15 - Table 3. 2014 to 2016 Business Plan Capital Cost Comparison
    a. Many reductions in cost are associated with eliminating or changing the scope of the project, and nothing related to the cost of material and/or labor. In the event that these are scope changes, the Authority has an obligation under CEQA and NEPA along with the public policies that require that these decision be made publically and that each go through a rigorous environmental vetting process to ensure that is it is least environmentally impactful option. From the justifications provided in Table 3, most of the changes were made in a vacuum and for the sake of saving costs.
6. Page 29 - The report indicates a $100M cost for an interim terminal station at 4th and King Street.
    a. Proposition 1A does not authorize nor contemplate the utilization of a "temporary" station. CCHSRA requests that the Authority provide evidence that a "temporary" station can be built per the requirements of Proposition 1A.
7. Page 30 - The report indicates that a five mile track from Santa Clara to San Jose for Union Pacific Railroad freight use is no included in the estimate.
    a. If the Authority is planning on reviewing this item and there is a potential for inclusion, the cost should be appropriately included in the 2016 Business Plan.
8. Page 37 - The report indicates that for the Madera Acres to Poplar Avenue section there is $174 million included for a Fresno Station and an interim terminal station at Polar Avenue.
    a. Where is the cost for the Kings/Tulare station?
    b. The Authority has touted that there will be station in Hanford and has said that funding will be provided. Where is the funding for the Kings/Tulare station?

CONCLUSION

The Authority continues mismanage the California High Speed Rail Project, therefore misleading the public ability to finance, design and construct a high speed rail project for California. As it stands, the Authority does not have the cash in hand, or financing capacity to design and construct the newly touted IOS North between San Jose and a temporary station north of Shafter. The ridership numbers used to promote the IOS North seem so unrealistic leaving one to wonder just how realistic the system-wide model can simulate future ridership. The Authority also has gaps in their plan to execute the IOS North such as being capable of installing temporary stations or operating bus systems on behalf of the State. **We submit that the Authority must address the faulty nature of the Draft 2016 Business Plan and resubmit the plan for public review before it can be adopted by the Authority.**

Sincerely,



Aaron Fukuda
Co-Chairman CCHSRA

Citizens for California High Speed Rail Accountability
P.O. Box 881
Hanford, CA 93232

ATTN DRAFT 2016 BUSINESS PLAN
CA HIGH SPEED RAIL AUTH
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2016 Business Plan RECORD DETAIL

Submission Date :	4/14/2016
Submission Method :	Letter
First Name :	Stuart
Last Name :	Flashman
Stakeholder Comments/Issues :	Please find attached a comment letter on the 2016 Draft Business Plan. Environmental, Land Use, and Elections Law Serving public interest and private clients since 1990 Stuart Flashman Attorney Law Offices of Stuart Flashman 5626 Ocean View Drive Oakland, CA 94618-1533 stu@stuflash.com <mailto:stu@stuflash.com> tel: fax: (510) 652-5373 (510) 652-5373
Notes :	
Attachments :	2016 BP comment letter.pdf (147 kb)

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April 14, 2016

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

Re: CHSRA Draft 2016 Business Plan

Dear California High Speed Rail Authority Board Members:

This letter contains comments on the above-referenced document. The document purports to satisfy the requirements of Public Utilities Code §185033 that, every two years, the Authority prepare a draft business plan, provide a public comment period, and then, taking into account the comments received, prepare, approve, and submit to the Legislature a final business plan. That statutory section also lists a number of topics that each business plan is required to address, including the estimated cost for each segment of the entire system, including both the initial Phase 1 service between San Francisco, Los Angeles, and Anaheim and later extensions to at least San Diego and Sacramento.[1] The Plan is also expected to draw upon materials the Authority develops for its pre-appropriation and pre-expenditure analyses under Street & Highways Code §2704.08 subd. (c) and (d).

This business plan, while it claims to follow upon and continue the analyses contained in the prior 2012 and 2014 business plans, clearly strikes out in a different direction. While the 2012 and 2014 business plans proposed that the initial operating segment (IOS) would be what was referred to as "IOS-South," extending from Merced to Burbank through the Tehachapi and San Gabriel Mountains and Palmdale, the new IOS is now IOS-North, extending from Bakersfield to San Jose through Fresno and across the Pacheco Pass.

The obvious reason for this is that, at $31+ billion, the IOS-South was far too expensive, The Authority simply could not make a credible claim that it would find the full funding needed under Streets & Highways Code §2704.08 to allow use of high-speed rail bond funds for the segment's construction. The new IOS-North configuration is proposed to be considerably cheaper, $20.68 billion in year of expenditure dollars.[2] Supposedly, the reduction in cost from what was proposed for IOS-North in the 2012 business plan reflects improved knowledge and greater efficiencies.[3] However, it does not reflect the fact that the contracts for the central valley segments bid thus far are for extremely simple and straightforward segments and were bid at a time when California's

[1] Other potential extensions, for example to Oakland, would also arguably be included.

[2] The 2012 Business Plan, at p. 3-9, estimated the IOS North costs at $24.4-31.4 billion.

[3] In reality, much of the decrease is from dropping service to Merced and Bakersfield.

economy was recovering from a severe financial slump and contractors were eager to obtain contracts. Nor does it reflect the fact that those same contractors are now signaling that they will require significant increases beyond the bid contract amounts. In a word, the current estimate for IOS-North is, in all likelihood, unrealistically low. Further, this estimate is only for a segment extending to the northern "suburbs" of Shafter, not to Bakersfield as originally proposed in 2012 and as approved in the legislative appropriation.

It is understandable that the Authority has reduced the scope of IOS-North. Not only was it more expensive, but the path into downtown Bakersfield raised significant environmental and environmental justice issues that have yet to be resolved. Nevertheless, the functionality of a San Jose to north-of-Shafter IOS-North is questionable, particularly from the standpoint of satisfying the requirement under Streets & Highways Code §2704.08 that the segment, when operational, would not require a public operating subsidy.

Like its predecessor IOS-South, the Authority has provided estimates of ridership and revenue as well as operations & maintenance costs for the segment. However, also like the IOS-South, these estimates are not credible. Thus, for example, they include a significant amount of ridership/revenue for travel between Los Angeles and San Francisco, with a fare that is the same as for the 2014 business plan. Yet this proposed IOS would require passengers to take a bus between Los Angeles and Shafter before being able to board the HSR train. It is frankly incredible that any significant number of passengers would be willing to do so. Indeed, the Authority can provide no direct data, even that from stated preference surveys, showing the public's willingness to undertake that trek for that cost, when they could, instead, put five or six people into an automobile, share gas costs and driving duties, and travel between Los Angeles and San Francisco in less time at a far lower cost, and with tremendously greater flexibility as to timing.

The revised business plan must address this credibility gap and provide substantial evidence to support its claimed ridership/revenue figures.

Beyond that, the IOS-North shares another similarity to IOS-South – there is simply not the funding available to complete its construction. The business plan shows, on Page 61, that the Authority supposedly has sufficient funds to complete the IOS-North. However, this assumes that the Legislature will not only be willing to extend the Cap & Trade Auction program beyond its current 2020 termination date for an additional thirty years, but that it will also be willing to dedicate the current 25% of those funds to the HSR project for that entire time period so that they can be securitized to finance bonds for roughly half of the total cost of the segment. There is no basis for the Authority to make these assumptions.

Further, unless these assumptions can be validated, the Authority may not, under Streets & Highways Code §2704.08, access HSR bond funds towards construction of this segment. In essence, the funding for the project is not very different from what it was in 2013 when the Sacramento County Superior Court found, and the Court of Appeal did not disagree, that there was insufficient funding available to credibly claim

that the construction of the IOS could be completed as proposed. With neither cap & trade funds nor bond funds available as secure funding sources, the business plan's discussion of capital funding is little more than a pipe dream, and certainly not a plan for a serious business enterprise.

These are far from the only challenges the proposed IOS-North faces. As noted, the business plan proposes to use over $4 billion of bond funds for the IOS-North. In addition it proposes to use more than $700 million towards electrification of Caltrain between San Francisco and San Jose. Yet there are additional requirements under Streets & Highways §2704.09 that do not appear to be met by the proposed IOS-North or the full Phase 1 blended system. These include being able to achieve the required nonstop service travel times of 30 minutes between San Francisco (Transbay Transit Center) and San Jose (Diridon Station) and 2 hours 40 minutes between San Francisco (Transbay Transit Center) and Los Angeles (Union Station).

The Authority's own documentation, as presented during the recent challenge to the Authority in *Tos et al v. California High-Speed Rail Authority et al.* (copies of which documentation have been submitted to the Authority with other comments on this business plan) shows that, taking into account: 1) the physical limitations on travel speeds through mountainous areas, 2) the legal limitations on travel speeds in areas where there are grade crossings, and 3) the voluntary limitations on speed in urban areas that the Authority has placed on its operations to avoid a variety of environmental and social impacts, the Authority cannot meet these requirements.

Likewise, given the limitations on running HSR trains over the same tracks as Caltrain through the San Francisco Peninsula, as well as the potential joint use of tracks between HSR and Metrolink trains in the Los Angeles basin, the Authority cannot meet Proposition 1A's minimum headway requirement of five minutes. Because of these failures, the proposed system, as currently designed, cannot use Proposition 1A bond funds for its construction, even if there were sufficient funds to build it.

That is not to say that bond funds could never be used. As has been pointed out numerous times, there are other system designs, for example, using a nonstop Los Angeles – San Francisco travel route along the I-5 corridor and through the Grapevine Pass, that could meet Proposition 1A's travel time requirement.

Further, a route through Altamont Pass to San Francisco could reduce the amount of shared track between Caltrain and HSR and thereby reduce the travel time and headway problems that joint use creates. In addition, nothing in the Public Utilities Code or Proposition 1A limits the Authority to running only a single line between Los Angeles and San Francisco. The Legislature, and the voters, authorized construction of a HSR *system*; not just a single route. Service to the Central Valley, and even Palmdale, would still be possible with a true HSR system.

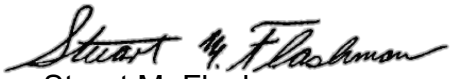
Finally, the Authority touts its "early investment" strategy for pouring Proposition 1A bond money into the two "bookend" segments of its proposed system. The Legislature has already appropriated this money. However, as the Court of Appeal ruled, that money may not be spent on construction unless and until the Authority has completed and received approval for a pre-expenditure funding plan for each "bookend"

segment for which bond funds use is planned. That will mean meeting the requirements of both §2704.08 and §2704.09 for those segments. At the moment, it does not appear those requirements can be met, especially for the "blended system" segment between San Francisco and San Jose.

One would have expected the business plan to address all of these issues in the portion of the business plan devoted to Risk Management. One would be disappointed. As with much of the business plan, the risk analysis is little more than whitewash that does not provide the thoughtful analysis that could allow the Legislature to exercise thoughtful management of this multi-billion dollar "megaproject." Of course, the Legislature, as a whole, has repeatedly failed to provide that oversight and management. It would probably be wishful thinking to expect it to begin taking its responsibilities seriously, at least until there is a change in the Governor and the legislative leadership.

It would be nice if the Authority took these comments seriously and provided a serious reevaluation of its plans in the final 2016 business plan. Given the Authority's track record, that seems little more than wishful thinking. Sadly, it appears that the Authority remains intent on spending down all its available funding on a project doomed to failure, at least until a legal challenge or bankruptcy forces it to stop.

Most sincerely



Stuart M. Flashman

2016 Business Plan RECORD DETAIL

Submission Date :	4/15/2016
Submission Method :	Letter
First Name :	Michael
Last Name :	Cunningham
Stakeholder Comments/Issues :	
Notes :	
Attachments :	HSR 2016 draft business plan BAC letter.pdf (136 kb)

BAYAREA COUNCIL

April 15, 2016

Mr. Dan Richard, Chairman
California High-Speed Rail Authority
770 L St., Suite 1160
Sacramento, CA 95814

Dear Chairman Richard:

I am writing on behalf of the Bay Area Council to express our support for the Draft 2016 High Speed Rail Business Plan. High speed rail is an appropriate and necessary strategic investment that will allow Californians—including the tens of millions of new Californians that will join our state's population in coming decades—to enjoy convenient, affordable, and environmentally sustainable transportation through our most heavily populated regions. Though undeniably an expensive undertaking, the alternatives—expanding highways and airports—are no less expensive and would have unwelcome environmental consequences.

The Draft 2016 Business Plan builds upon and improves previous business plans in several ways that have earned the support of the Bay Area Council:

- Close scrutiny of investment plans has enabled the Authority to identify ways to reduce the estimated project cost.
- The Draft Plan recognizes the importance of using available and committed funds to complete an operating segment, for the dual purposes of delivering transportation benefits to Californians as soon as possible and also demonstrating ridership demand to private investors that will finance subsequent segments.
- The Draft Plan builds upon the Caltrain electrification project that is currently underway. By constructing high speed rail tracks from Merced to San Jose, the Authority will be able to leverage the electrified Caltrain system in order to run trains all the way to San Francisco, which is forecast to be the highest ridership station in the entire system.
- Even while planning to build the first operating segment on the northern half of the system, the Draft Plan remains committed to sequenced construction that will make the essential connection to the Los Angeles region.

The Authority has laid out a sensible, realistic and achievable plan for implementing this system with its Draft 2016 Business Plan. Simply put, our economy and our environment need high-speed rail, and future generations with thank us for it. The Bay Area Council looks forward to continued progress, stands ready to assist, and eagerly awaits the initiation of California's first-in-the-nation high speed rail service.

Sincerely,

Michael Cunningham
Senior Vice President, Public Policy

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353 Sacramento Street, 10th Floor
San Francisco, California 94111

1215 K Street, Suite 2220
Sacramento, California 95814

2016 Business Plan RECORD DETAIL

Submission Date :	4/15/2016
Submission Method :	Letter
First Name :	Ratna Amin, Laura Tolkoff, Egon Terplan
Last Name :	Ratna Amin, Laura Tolkoff, Egon Terplan
Stakeholder Comments/Issues :	Dear California High Speed Rail Authority, Thank you for the opportunity to provide comments on the 2016 Draft Business Plan. Attached, please find SPUR's comment letter. SPUR supports the 2016 CAHSRA Draft Business Plan. In particular, we support plans to make the initial operating segment between Bakersfield and San Jose, and we support the Authority's commitment to work with its partners to make the most out of this incredible investment in the Bay Area's future. We look forward to working with the Authority to ensure that high-speed rail supports great urbanism and strong connections between California's cities. Sincerely, Laura Tolkoff San Jose Policy Director SPUR • Ideas + Action for a Better City 408.638.0167 ltolkoff@spur.org SPUR Join our movement for a better city. Become a member of SPUR
Notes :	
Attachments :	SPUR Comments-CAHSRA 2016 Draft Business Plan.pdf (323 kb)

SPUR
San Francisco | San Jose | Oakland

April 15, 2016

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

RE: California High-Speed Rail Draft 2016 Business Plan

Dear California High-Speed Rail Authority,

This letter is intended to express SPUR's strong support for the 2016 CAHSRA Draft Business Plan. In particular, we support plans to make the initial operating segment between Bakersfield and San Jose, and we support the California High-Speed Rail Authority's commitment to work with its partners to make the most out of this incredible investment in the Bay Area's future.

SPUR is a non-profit urban policy think tank with offices in San Francisco, San Jose and Oakland. SPUR is an early supporter of High-Speed Rail and the emphasis to put stations in city centers. We have authored numerous policy reports and articles about how the Bay Area can make the most of this critical investment in California's future, including Beyond the Tracks, which focused on land use planning and Getting High Speed Rail on Track, which argued that California can and should fund high speed rail even without significant additional federal investment.

SPUR strongly supports bringing an initial operating segment to San Jose, with service continuing on to San Francisco. Developing service to San Francisco should also happen as soon as possible, due to the importance of this market and this link to the entire statewide high-speed rail system. SPUR believes that high-speed rail is not just a worthwhile investment but a necessary one. Successfully building and initiating service on the first segment to San Jose will be the best option to grow public confidence in High-Speed Rail. Additionally, having one operating segment provides much needed learning opportunities for every aspect of high-speed rail operations.

High-speed rail will have a profound and transformational impact on the Bay Area. Some of the many benefits include:

- Strengthening regional intercity rail, such as Caltrain and BART.

- Saving travel time and reducing congestion as travelers shift from auto and air to rail.
- Making the Bay Area, the Central Valley and Southern California seem closer together by making travel between the regions faster and easier, which shifts the competitive structure within which people and firms make decisions.
- Providing economic opportunity to cities in the Central Valley by enabling their cities and economies to be better linked with each other and with metropolitan economies on the coast.
- Relieving airports of some of the expected growth in their local services, enabling the use of limited slots by longer-distance services.
- Providing an armature for the state's population and job growth.
- Reducing pollution and helping to meet statewide climate change goals.

But to realize the full benefits of high-speed rail in the Bay Area requires a real commitment to intermodality and an appropriate land use response around each station. The Bay Area transit experience is that too many comprises were made with station design, station access and integration with surrounding neighborhoods. High-speed rail is an opportunity to do better. To be successful will require new and better partnerships between cities, transit operators, high speed rail and local businesses, civic groups and other actors.

Below, we articulate some of the key opportunities and challenges SPUR suggests focusing on as you implement this business plan in the Bay Area. We have are emphasizing the Diridon Station and Station area, given that it high-speed rail's gateway to the Bay Area and it is a city major decisions lie ahead in the next 18 months.

<u>Diridon Station</u>

Today, Diridon station is a regional rail hub. But in 2025, Diridon Station will have the largest concentration of public transit west of the Mississippi, bringing together the first operating segment of high-speed rail, BART, Caltrain, Santa Clara County Valley Transportation Authority (VTA) light rail and buses, the Altamont Commuter Express and Amtrak Capitol Corridor. Altogether, there will be at least 1,500 trains and buses running through Diridon station on an average weekday.

To develop the station and station area successfully, we encourage High Speed Rail to continue to work with its partners to achieve the following:

- *A clearer source of funding for long-range planning.* The city's long-term fiscal strain has shrunk its capacity do the sustained and intensive planning and

implementation work that are required for an opportunity of this magnitude. New resources to continue this work are necessary.

- *An effective governance structure to complete the station and oversee high-quality land use development.* There are multiple transit operators at Diridon station, each with different real property and service interests. There are also many property owners and a large amount of parcelization within the Diridon station area. Special attention to governance will be needed in order to deliver a world-class intermodal station at Diridon and a transit-oriented station area.

- *Careful management of new development to ensure the limited development capacity is not underutilized.* A high water table and the proximity to the Mineta International Airport and related aviation policies constrain building heights to 130-feet. It will be critical to make the most of every site. Too much parking could harm the walkability of the area and limit ability to achieve an appropriate land use response.

- *Creation of a multimodal station access plan that supports connections to downtown San Jose and nearby neighborhoods.* Diridon station is a 15-minute walk to downtown and ringed with the most historic and walkable neighborhoods in the city, but there are poor connections between these places. Public transit at Diridon station is more likely to be successful if there are multimodal connections to downtown and nearby neighborhoods.

- *A high quality of urban design commensurate with ambitions of the transit program. The* Diridon Station Area Plan (completed in 2014) includes design guidelines. However, these are largely aspirational and do not have the same standing as code. A walkable urban place will not emerge without significant attention to urban design.

Millbrae Station

While not in the core of a major downtown, the Millbrae high-speed rail station is of major importance to the entire network and an opportunity for a significant land use response. But this will only happen with forward-looking policies around land use, station design and station access. Millbrae will be the only station in the entire network with the ability to connect between High Speed Rail, Caltrain, BART and the San Francisco International Airport, the second busiest airport in California and the seventh busiest in the United States. The station area could accommodate office, hotel, convention, retail, and other airport-oriented uses as well as residential.

SPUR recommends that CAHSR work with the City of Millbrae, BART, SFO and Caltrain to establish the policies and station design guidelines that will appropriately shape the development and planning around Millbrae station. Given that high-speed rail is not yet in Millbrae, it will be important to plan for the area's long-term growth opportunity and not to consider today's market conditions a key indicator of what is possible. In some cases, it might be necessary to say no today to land uses or development that undervalue the opportunity (such as lower-density residential). As we look at the future of transportation, particularly on-demand services, using valuable sites for structured parking should be discouraged.

Transbay Transit Center and Extension of Caltrain to Downtown San Francisco

The completion of the Downtown Extension of rail to the Transbay Transit Center (TTC) will be a critical step in the success of CAHSR. SPUR supports CAHSR's investment in this project and recommends continued cooperation with all partners to ensure that this project is funded and completed as soon as possible. We support continued discussions on how to achieve level boarding heights throughout the corridor and maximizing the interoperability and throughput at the TTC.

In addition, we recommend that the Authority continue to support a more integrated and seamless transportation network in the Bay Area by working closely with partners on the following:

Caltrain Electrification and the Blended System

In the blended system between San Jose and San Francisco, Caltrain and high- speed rail share tracks and stations. This an opportunity to provide convenient rail services to riders while also reducing costs and community impacts. SPUR supports continued planning and funding cooperation needed to make the blended system a reality.

SPUR recommends that the blended system consider a schedule and service quality for Caltrain that attracts new transit riders in the corridor and also provides good connections with high-speed rail trains. We support investment in incremental infrastructure such as passing tracks and station improvements (beyond what is contemplated in the Blended System Operations analysis). These may be necessary to achieve a high level of service to Peninsula rail customers. A fully blended system will also need a thoughtful multi-agency strategy to prioritize grade separations in this corridor.

Network Integration

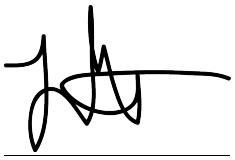
In order for High-Speed Rail to be connected to other transit and sustainable modes, integration across modes is essential. Implementation of the business plan should include:

- The implementation of shared ticketing/payment systems between high speed rail and local transit, bikeshare, etc;
- The integration of non-auto access such as easy bike access and bike storage;
- The integration of transit service planning between high-speed rail and local transit. A pulse system should be designed for reliable connections between the statewide rail network and local transit.

In conclusion, SPUR supports the 2016 Draft High-Speed Rail Business Plan and looks forward to working with the Authority to ensure that high-speed rail supports great urbanism and strong connections between California's cities.

Sincerely,

Ratna Amin
Transportation Policy Director



Laura Tolkoff
San Jose Policy Director

Egon Terplan
Regional Planning Policy Director

cc:

Gillian Gillett, City and County of San Francisco
Alix Bockelman, MTC
Tilly Chang, SFCTA
Nuria Fernandez, VTA
Jill Gibson, SamTrans
Jim Harnett, Caltrain

Leyla Hedayat, VTA
Jim Ortbal, San Jose Department of Transportation
Ed Reiskin, SFMTA
Randy Rentschler, MTC
Ben Tripousis, California High Speed Rail Authority
Kim Walesh, City of San Jose
Ru Weerakoon, City of San Jose

2016 Business Plan RECORD DETAIL

Submission Date :	4/17/2016
Submission Method :	Website
First Name :	Pamela
Last Name :	Malouf
Stakeholder Comments/Issues :	We voters approved bonds to help fund the California high speed rail 8 years ago at a much lower cost than what is now realistically projected. The majority of Californians no longer want the high speed rail - the problems, the current budget and the environmental impact was not clear or accurate when we approved bond funding. It should be scrapped. Or, if necessary, then put a bill in front of us again so that we may accurately make a decision.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/16/2016
Submission Method :	Letter
First Name :	Karo
Last Name :	Torossian
Stakeholder Comments/Issues :	please see attached letter.
Notes :	
Attachments :	CHSRA2016BuisnessPlan-KaroTorossianComments.pdf (127 kb)

Karo Torossian, Environmental Urban Planner
10019 Cabanas Ave
Tujunga CA 91042
818-395-8575

Sent Via Email: 2016businessplancomments@hsr.ca.gov
April 16, 2016

California High Speed Rail Authority
Chairman Dan Richard and Honorable Board Members
California High-Speed Rail Authority
Attn: Draft 2016 Business Plan
770 L Street, Suite 620 MS-1,
Sacramento, CA 95814

Re: California High Speed Rail, 2016 Draft Business Plan

Dear California High Speed Rail Authority Board:

I join with many community groups and thousands of concerned residents of the Northeast San Fernando Valley, objecting to the prolonged uncertainty that the new 2016 Draft Business Plan creates due to the shift of construction phasing to the north from the south. We understand and appreciate the additional time that this allows for the routes in the south to truly analyze the best alternatives and do thorough environmental studies. This also provides an opportunity to redo or to conduct third party independent peer reviews of some of the recently published studies, that fair arguments have been raised by experts in the appropriate fields of studies, especially but not limited to the Equine study that compared grazing cows to horses being ridden. The recent refinements to the Palmdale to Burbank routes including tunneling for Refined SR14 and Refined E1 are substantial improvement and mitigate for much of the concerns in Environmental Justice Neighborhoods of Sylmar, San Fernando and Pacoima. As I testified at the Assembly High Speed Rail Authority Oversight Committee, the Palmdale to Burbank route keeps several alternatives in the April 2016 Supplemental Alternatives Analysis without identifying a preferred alternative. This leaves many communities under the threat of condemnation and uncertainty for years to come. Alternative Refined R2 causes tremendous impacts not only to one of the few remaining equestrian communities in the City of Los Angeles that must be preserved and protected, it also causes a tremendous impact to one of the San Fernando Valley's largest African American neighborhoods, and will cause unmitigatable environmental impacts to endangered species habitat and will potentially lead to the extinction of the Santa Anna Sucker Fish.

Not having selected a preferred alternative for the past several years and leaving the threat of condemnation for several years to come, for the communities is truly an unreasonable delay. This continues to leave hundreds of people's homes and lifestyles in jeopardy for several years, and causes a tremendous loss in property values and expenses due to this unreasonable delay, that this business plan may exacerbates. Without the identification of a preferred route and

the removal of E2 as an alternative leaves the agency and the California taxpayers potentially liable for tens or hundreds of millions of dollars due to Klopping Damages. In the Supreme Court case Klopping v. City of Whittier (1972) 8 Cal.3d 39, 52 [104 Cal.Rptr. 1, 500 P.2d 1345], the courts held that "the public authority acted improperly by unreasonably delaying eminent domain action following an announcement of intent to condemn or by other unreasonable conduct prior to condemnation; and as a result of such action the property in question suffered a diminution in market value." The threat of condemnations alone, as is the case currently for communities in the Northeast Valley, without the agency not having created a formal resolution for condemnations may still leave the agency liable. As was ruled in the case Barthelemy v. Orange County Flood Control Dist. (1998) 65 Cal.App.4th 558, 570 [76 Cal.Rptr.2d 575], the courts found that a formal resolution of condemnation is unnecessary under Klopping if the property owner can demonstrate conduct on the part of the public entity 'which significantly invaded or appropriated the use or enjoyment' of the property. Since Klopping damages compensate a landowner for a public entity's unreasonable precondemnation conduct, the agency and California Taxpayers may be liable irrespective of whether condemnation proceedings are abandoned or whether they are instituted at all. In discussions with Realtors in the area, it is clear that the threat of High Speed Rail and the potential condemnation has slowed down home sales and limited property values in the communities around the Big Tujunga Wash. Therefor I ask, that the California High Speed Rail Authority Board to limit the States future liability of Klopping damages and not exacerbate the unreasonable delay in condemnation to communities; by prior to the adoption of the new 2016 Business Plan the Board require the agency to select a preferred alternative and remove alternative E2.

Refined E-2 route being carried forward for detailed study in the project-level environmental document not only opens the State up for Klopping damages but is clearly one that is environmentally unfeasible and should be identified as so by the agency immediately. The refined E2 causes the most displacement and condemnation of residential properties from all of the alternatives being reviewed. This route also crossed the most amount of earthquake faults, yet is the one tunneling in proximity to more oil and gas wells. As with the other alternatives it is inconsistent with existing land uses in unincorporated Los Angeles County, Los Angeles, and Burbank, but E2 is the only alternative that would have additional inconsistent land uses impacts in and near the Tujunga Wash. The most troubling part of E2 alternative is the unmitigatable impacts to the wetland habitat and this alternative causes the most potential impacts to critical habitat. The Santa Ana Sucker, the Southern Willow Flycatcher and the Spine Flower are all threatened and endangered species that are found in the 84 acers of critical habitat that will be disturbed and destroyed with the construction of the E2 alternative.

I raised the concerns of the unmitigatable impacts to the critical habitat to Chairman Dan Richard, during his presentation to the San Fernando Valley Congress of Governments, he stated that this land was already disturbed since the E2 alternative was looking at location between two major high voltage transmission lines. The Chairman was correct that the high voltage transmission lines do traverse this area but the powerlines have only one tower each in the wash and span between the closest towers are almost 1,900 feet apart and are not located on wetland therefor do not disturb the critical habitat. For the CHSRA to be able to compare its self to these powerlines it would need to build a bridge in this area that will span almost 1,900 feet, which would make this the third largest span of all bridges in California after the Golden Gate and

Oakland Bay bridges. Comparing a High Speed Train Bridge to powerlines is truly insulting, even if the CHSR was able to accomplish this span without disturbing the habitat below, it would still be a massive structure compared to powerlines. That span would not be a feasible option and the existence of high voltage transmission lines in the area should not be a justification to cause irreparable damage to one of the last habitats remaining of the identified endangered species.

As the refinements to the Palmdale to Burbank routes were an improvement to previous versions, the rail authority should listen to the communities of the Northeast San Fernando Valley. Now is the ideal time for California High Speed Rail Authority Board, to immediately remove all above ground high speed trains; near residential areas, that divide communities, or threaten sensitive environmental areas during both construction and operations located within the San Fernando Valley. The immediate removal of damaging above ground elements such as E-2 from further consideration, will avoid potential additional liability and remove the unmitigatable environmental impacts that it causes.

Very Truly Yours,

Karo Torossian
Environmental Urban Planner and Northeast Valley Resident

2016 Business Plan RECORD DETAIL

Submission Date : 4/17/2016

Submission Method : Project Email

First Name : Mary

Last Name : Pizzo

Stakeholder Comments/Issues :

April 17, 2016
Mary Pizzo
President of Gregory Plaza Neighborhood Association
725 Harrison Street San Jose, Ca 95125

California High-Speed Rail Authority
Attn: Draft 2016 Business Plan
770 L Street, Suite 620 MS-1 Sacramento, CA 95814

Dear Dan Richard and team,

The Gregory Plaza Neighborhood is part of the Greater Gardner Coalition. It is just 6 short streets of single family and duplex homes – made short by past rail and highway transportation projects. It's western border is Los Gatos Creek; it's eastern border is Bird Avenue; and it's northern border are both Interstate 280 and the Joint Powers Board (JPB) property.

The JPB property which USPP and CalTrain run along, is a unkempt and continuously blighted piece of land. JPB is the equivalent of an absentee landlord, who does little to groom or even patrol their property. Homeless encampments spring up like the weeds, and are dismantled only when USPP and CalTrain railroad work commences.

This is not how you want HSR passengers to be greeted to San Jose, Silicon Valley and the Diridon Transit center.

Back in April 2009, our community provided comments in the HSR Scoping process. We were thrilled when the CHSRA Board and staff agreed with our recommendation, as written in the Preliminary Alternatives Analysis Report, June 2010, Executive Summary page ES-1:

"The AA Report also recommends eliminating from further consideration the program alignment through the Greater Gardner community because of potential impacts to the neighborhoods including community cohesion, noise/vibration, visual, impacts on Fuller Park and displacement of a nonprofit (house of worship). The recommended alternative (SR 87/I-280) would minimize impacts by utilizing the existing freeway corridors for much of the approach to the station and would move the alignment away from the Greater Gardner neighborhood."

Which is why we are troubled to see in the Draft 2016 Business Plan Capital Cost Basis of Estimate Report the San Jose to Gilroy Assumptions (Section 4.2 Estimate General Assumptions and Exclusions page 31):

"Assumes electrification of two high-speed rail /Caltrain tracks and maintaining one non- electrified track for UPRR from Diridon to south of Caltrain's Tamien station"

"Between Diridon to south of Tamien in this section, assumes construction of a third at- grade track, 4.6 miles long"

These two assumptions are the opposite of the Alternative Analysis report of 2010.

Running a high speed rail trail through this neighborhood along the same track as Caltrain, will cause negative impacts to the144 properties and residents in these ways:

Dramatically increasing noise/vibration daily,

Installation of fencing to protect HSR from trespassers creates a visual barrier usually reserved for minimum security prisons,

Elimination of 3-5 residential homes to allow for closing the ‘at grade’ rail crossing on West Virginia and Drake Avenue - displaces 6-10, low income families, and

Closing 1 of the 2 streets into the neighborhood is a safety issue. In the event of an emergency, residents of 144 properties would have on 1 road to leave the area. This constitutes a serious Environmental Justice issue.

I am asking you on behalf of the residents of Gregory Plaza and the anticipated users of HSR, to revert to the June 2010 Alternatives Analysis conclusion and remove the three track option. Routing the HSR by bridge or tunneling into Diridon Station is a better engineering solution than the slow movement through the ’S’ curve in Greater Gardener and miles of chainlink fencing to protect the HRS traveling along the joint powers board blighted property.

You will only have 1 chance to get this right. Please take the time to plan for and build a futuristic design for High Speed Rail.

Sincerely,

Mary Pizzo,
President Gregory Plaza Neighborhood Association

Notes :

Attachments : Gregory Plan NA response to HSR Draft 2016 plans.pdf (55 kb)

April 17, 2016

Mary Pizzo
President of Gregory Plaza
Neighborhood Association
725 Harrison Street
San Jose, Ca 95125

California High-Speed Rail Authority
Attn: Draft 2016 Business Plan
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

Dear Dan Richard and team,

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The Joint Powers Board (JPB) property which USPP and CalTrain run along, is a unkempt and blighted piece of land. JPB is the equivalent of an absentee landlord who does little to groom or even patrol their property. Homeless encampments spring up like the weeds, and are dismantled only when USPP and CalTrain railroad work commences.

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> "The AA Report also recommends eliminating from further consideration the program alignment through the Greater Gardner community because of potential impacts to the neighborhoods including community cohesion, noise/vibration, visual, impacts on Fuller Park and displacement of a nonprofit (house of worship). The recommended alternative (SR 87/I-280) would minimize impacts by utilizing the existing freeway corridors for much of the approach to the station and would move the alignment away from the Greater Gardner neighborhood."

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- Installation of fencing to protect HSR from trespassers creates a visual barrier usually reserved for minimum security prisons,
- Elimination of 3-5 residential homes to allow for closing the 'at grade' rail crossing on West Virginia and Drake Avenue - displaces 6-10, low income families, and
- Closure of 1 of only 2 streets into the neighborhood. In the event of an emergency, residents of 144 properties would have on 1 road to leave the area. This constitutes a serious Environmental Justice issue.

I am asking you on behalf of the residents of Gregory Plaza and the anticipated users of HSR, to revert to the June 2010 Alternatives Analysis conclusion and remove the three track option. Routing the HSR by bridge or tunneling into Diridon Station is a better engineering solution than the slow movement through the 'S' curve in Greater Gardener and miles of chainlink fencing to protect the HRS traveling along the joint powers board blighted property.

You will only have 1 chance to get this right. Please take the time to plan for and build a futuristic design for High Speed Rail.

Sincerely,

Mary Pizzo

Mary Pizzo,
President Gregory Plaza Neighborhood Association

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Bill
Last Name :	Rankin
Stakeholder Comments/Issues :	The correct letter is attached. Thank you,Bill RankinPresident, North Willow Glen Neighborhood Association From: "bill@networds.com" <bill@networds.com> To: "2016businessplancomments@hsr.ca.gov" <2016businessplancomments@hsr.ca.gov> Cc: "jeanann2@aol.com" <jeanann2@aol.com>; "harveydarnell@yahoo.com" <harveydarnell@yahoo.com>; "VonErceg@sbcglobal.net" <VonErceg@sbcglobal.net>; "bill@networds.com" <bill@networds.com>; "alikat.2@juno.com" <alikat.2@juno.com>; "chrisdavis@cdavisdesigns.com" <chrisdavis@cdavisdesigns.com>; "KCygnusRaZ@aol.com" <KCygnusRaZ@aol.com>; "annette@networds.com" <annette@networds.com>; "waltervierra@aol.com" <waltervierra@aol.com>; "pgormlet@yahoo.com" <pgormlet@yahoo.com>; "barbkeeg@gmail.com" <barbkeeg@gmail.com>; "mpizzo@apple.com" <mpizzo@apple.com>; "rjwillowglen@gmail.com" <rjwillowglen@gmail.com> Sent: Sunday, April 17, 2016 9:07 PM Subject: HSR 2016 Draft Business Plan Comments - North Willow Glen Neighborhood Association Hello Chair Richard, North Willow Glen Neighborhood Association has compiled responses to the 2016 Draft Business Plan for High-Speed Rail, which is attached. A draft was released earlier and we are submitting this complete version now. Please let us know if you have any questions. Thank you, Bill Rankin President North Willow Glen Neighborhood Association
Notes :	
Attachments :	NWGNA Response to HSR Draft 2016 Business Plan.pdf (111 kb)

North Willow Glen Neighborhood Association
1012 Spencer Avenue
San Jose, CA 95125

April 17, 2016

California High-Speed Rail Authority
Attn: Draft 2016 Business Plan
Dan Richard, Chair
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

Dear Chair Richard,

We as a member of the **Greater Gardner Neighborhood Coalition** (Gardner Action Committee, Gregory Plaza Neighborhood Association and the North Willow Glen Neighborhood Association) would like to register our concerns and comments about the portion of proposed High Speed Rail traveling between Tamien Station and Diridon Station in San Jose (a portion of **the San Jose to Merced** plan) as pertains to the **Capital Cost Basis of Estimate Report**.

Who are we?

The Greater Gardner Coalition was formed over 15 years ago to take full advantage of the Redevelopment Agency-sponsored neighborhood rehabilitation program. We were the first neighborhood to prepare a plan and we were the most successful project area. While that program known as the **Strong Neighborhood Initiative** (SNI) has been discontinued, the original and continued impact on the neighborhood has been enormous. In a statement from then Councilmember now **Mayor Sam Liccardo**, he said, “This is a community that has come together and exuded leadership in a transformative way, and the results can be seen clearly**." (http://www.mercurynews.com/ci_7483237)** We continue as a community to work very hard and put in many volunteer hours each month to keep forces from negatively impacting what we have created.

Involved with HSR from the beginning

This community has done extensive work on creating visual guidelines in the **San Jose to Merced** HSR programs presented here in San Jose. Virtually all of the ideas accepted during the **original scoping process** involved grade separations as necessity, and given the issues discussed here, options point to **adopting the elevated track system along the Hwy 280 corridor**.

Environmental Justice Issue

The rail lines run directly through our neighborhoods. Diridon Station currently does not have adequate passing tracks, so not only do we experience trains passing through our neighborhood, trains also **idle on the tracks** directly behind homes. We are surrounded by Highway 87 to the east and Highway 280 to the north with extensive noise. Traffic noise from cars and trains results in **airborne debris** that settles on homes like soot. We’re impacted by the Airport **flight path of San Jose Mineta**. On foggy days in San Francisco, flights from San Jose must take off over our heads. Add in that **Bird Avenue** has become a

major thoroughfare for commuters as they move into and out of downtown San Jose and this neighborhood is very much suffering from **Inequitable Transportation Impacts**.

A complicated pathway

The route between Tamien Station and Diridon station is a severe S curve. It includes four 1930's era concrete railroad bridges over existing roadways and one lengthy overpass across Highway 280 just South of Bird Avenue. Exiting out of the Tamien Station, tracks also cross over the Guadalupe River and pass through a hundred-year-flood zone.

Attempting to create a **parallel at-grade (the three track system)** set of tracks along existing tracks would be **extremely difficult and costly** for the following reasons: The intersection of the existing tracks and Bird Ave involves the road bed dipping 15 feet below grade to allow clearance between traffic and the underside of the track bed. This also happens just south of Tamien Station where Alma dips below the track overpass. These are both four-lane-plus, main traffic thoroughfares that **have no alternate routes**. The river must be crossed and so must Highway 280.

Currently the **vicinity of the tracks to homes limits speed to no more than 35 MPH**. The perception that trains will be able to move along this section at 60 MPH is not a likelihood given the two tight curves through the area. Banked tracks would simplify that problem but potentially make it all but impossible for car traffic to pass over at-grade intersections.

Train of the Future or Train of Yesterday?

An **elevated track** sweeping quickly over car commuters does a better job of showing off the HSR system. It also can be visually enhanced to wrap the downtown core of San Jose high rises with a Bay-Bridge-like LED art installment that could very well help San Jose promote its identity. Options abound with a highly visible approach into San Jose.

Additional costs to HSR and the neighborhoods

Bringing HSR to the existing pathway between the Tamien and Diridon Stations will very likely require **many property acquisitions via purchases or eminent domain.** Properties include but are not limited to:

Word of Faith Church. In addition to their regular services and duties the church graciously hosts regular neighborhood association meetings.

Fuller Avenue Park. Formerly neglected and exploited space paralleling the existing rail tracks was officially converted to a much-loved area park featuring a bocce court, horseshoe pit, lawns, trees and flowers enjoyed by picnickers, dog walkers, kids and parents, and folks doing yoga and Tai Chi.

A Habitat for Humanity home. The house, immediately adjacent to the tracks at Delmas and the railroad bridge, is currently under construction. This house would be removed based on the proposed 2016 draft plan.

Multiple single family homes. The loss of several single-family homes in an area that struggles to provide entry-level housing for new families should be addressed in the cost associated with this alignment.

Potential for Inverse Condemnation suits. While not all homes in the immediate area would be destroyed, adjacent property values would be negatively affected and these lawsuits could be not only costly, but long-lived.

In Conclusion

We are **heartily in favor of a successful project**; however, it seems that the HSR Authority is unfamiliar with the obstacles and costs of following the current rail path. The continued inequity of creating more transportation impacts on North Willow Glen continues a negative pattern that is detrimental to the community.

We urge you to carefully consider the actual obstacles and costs of navigating through our neighborhoods as compared to what seems like a win-win-win design of a more **community-friendly design through the Highway 280/87 corridor**, creating a more enticing view and experience for the ridership of HSR.

Sincerely,

Bill Rankin
President, North Willow Glen Neighborhood Association

Alison England
Founding President, North Willow Glen Neighborhood Association

2016 Business Plan RECORD DETAIL

Submission Date : 4/18/2016

Submission Method : Project Email

First Name : Benjamin

Last Name : Turon

Stakeholder Comments/Issues : Dear Sir,

I will reserve my comments to one subject, with the exception of first stating that the “Blended Plan” of the CHSRA represents a major improvement
over the original plan presented to the public in 2008 which I saw as being unrealistic. I was not surprised when its costs later ballooned, but unfortunately the CHSRA still seems straight-jacketed by the original require for a 2 hrs 40 mins travel time LA-SF, a ridiculous requirement when a travel time in the 3-hour range would be more then suitable enough for attracting high ridership based on some 60 years of international intercity passenger rail experience. Cutting below 3 hours only adds considerably to the project’s cost without generating that much more benefit.

One way I think the current plans for the high speed rail system could be improved is for high speed rail service to be extended beyond the initial operating segment by utilizing a dedicated fleet of diesel locomotives to haul electric high speed trainsets beyond electrified tracks. For example, diesels could haul trains on the current Amtrak routes from San Jose to Oakland and from Merced to Stockton and Sacramento.

This idea might sound impractical or a bit crazy but in the UK Virgin Trains actually did this for several years between Crewe in England on the electrified West Coast Mainline and Holyhead in Wales were intercity train service from London connects with a ferry to Ireland. Virgin Trains utilized a small dedicated fleet of diesel locomotives nicknamed the “Thunderbirds” to haul its high speed Pendolino emu trainsets thru the non-electrified territory between Crewe and Holyhead. Not only did the diesel locomotives haul the trains, but they also provided the onboard power for the electric trainsets. The Thunderbirds were also used to haul Pendolinos during diversions from the WCML over non-electrified track during maintenance blockades on the WCML between London and Scotland. Today
however Holyhead services are handled by 125-mph DMU “Voyagers” and the
Thunderbirds have moved on to other duties.

Thunderbird Pendolino “Drag” to Holyhead

https://www.youtube.com/watch?v=UqXHsAkl4M0

Thunderbird Coupling to a Virgin Pendolino at Crewe

https://www.youtube.com/watch?v=X5yinGfKMF8

Once the full LA-SF link is up trains could also be hauled to San Diego by diesel locomotives. Another more long-term option here however could be the electrification of the Surf Line, LA-SD. Current Amtrak Surfliner trains could be hauled by dual-mode locomotives while high speed trains from Northern California could just run south under the wires south of Anaheim under their own power. This option should include projects, some planed or underway now to increase capacity and reduce the existing travel time, boosting average speed from today’s mid-40s to the 60s or 70s. Upgrading the existing line will much cheaper, by tens of billions than building an entirely new high speed link to San Diego.

Bringing high speed service to the rest of California sooner and cheaper should be a big goal of the CHSRA, and thinking a bit out-of-the-box by

adopting ideas used overseas, including hauling high-speed emu trainsets thru non-electrified territory by utilizing diesel locomotives should be seriously considered. Overall California's HSR project is very inspiring for a passenger rail advocate like me and I hope it succeeds.

Benjamin Turon
41 Lewis Street
Ballston Spa, NY, 12020

Notes :

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Raul
Last Name :	Bocanegra
Stakeholder Comments/Issues :	
Notes :	
Attachments :	HSR Letter 4.15.16.pdf (111 kb)

From the desk of **Raul Bocanegra**
PO Box 330424*Pacoima CA 91333

April 15, 2016

Mark A. McLoughlin, Director of Environmental Services
Attn: Palmdale to Burbank Project Section
California High Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

Dear Mr. McLoughlin:

This letter is to inform you I am deeply alarmed by the recent release of the California High Speed Rail, April 2016 Supplemental Alternative Analysis for the Palmdale to Burbank section. First, I urge the authority to remove the Redefined E-2 option and consider other alternatives for routes. Secondly, the authority should remove all above grade routes near residential areas.

I commend the California High Speed Rail Authority's (CHSRA) decision to remove E-3 as an option as well as the authority's decision to remove the routes through the City of San Fernando, portions of Sylmar and Pacoima, particularly due to the long history of environmental justice issues in the North East San Fernando Valley.

However, as the CHSRA moves forward with the community input and environmental review process, I urge you to also remove the Redefined E-2 option and consider other alternatives. Redefined E-2 incorporates an above grade section in the communities of Lake View Terrace and Shadow Hills. The proposed above grade section would devastate residential homes and severely damage areas of scarce open space such as Hansen Dam and Big Tujunga Wash.

Third, the authority needs to commence an independent third-party independent study of the seismic risk in all proposed routes. This study will provide essential data and should also include an analysis of this project on the equestrian community.

Finally, transparency and openness are paramount to the success of this project. A complete removal of the Mineta Study is needed due to issues of conflict of interest.

I cannot stress the importance of ensuring community members have their voices heard during this process. As a former planning assistant for the City of Los Angeles, I stand ready to be of assistance in this process and look forward to having a thoughtful dialogue with you and the community.

Sincerely,

Raul Bocanegra

RAUL BOCANEGRA

CC: Shadow Hills Property Owners Association
Foothill Trails District Neighborhood Council
Kagel Canyon Civic Association
S.A.F.E. Coalition.

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Project Email
First Name :	Frances
Last Name :	Bojorquez
Stakeholder Comments/Issues :	HSR is simply “another” alternative to travel from LA to Sacramento, with a few stops in between, at an exorbitant cost to taxpayers. And worse, so few taxpayers are in favor of this rail system. I live in Sylmar and I am extremely upset at the thought of having this system possibly 1 mile from my home. So much for property values for any homeowner living within 3 miles from the rails. Plus this is earthquake country and someone has come up with the bright idea of tunneling through the San Gabriel mountains. Has anyone considered the possibility of this tunneling causing a major earthquake? Please stop this nonsense immediately and come up with better alternatives. Or better yet, please just kill this idea altogether. Consider commuter planes out of Action or Palmdale where there is plenty of land for “free parking” and a small airport for those few people that have to get to Sacramento in under 2 hours. For those legislatures that are excited about using this system (they can afford the high fare for this train with their per diem), why not set up offices in their respective cities to video/teleconference with Sacramento. In this digital age, working people can easily work with digital options. Sincerely, Frances Bojorquez Voter and Sylmar Resident
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Judy
Last Name :	Botsford Warren
Stakeholder Comments/Issues :	See attached
Notes :	
Attachments :	HSR Comment April 17.pdf (607 kb)

April 17. 2016

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

Subject: My Comment About the 2016 Business Plan

Dear Sir,

I see by a review of the Draft 2016 Business Plan that you quote Cintra on page 36. It is my understanding that Cintra was one of your EOI responders. You stated in your Draft Plan that Cintra believed that savings in excess of 20% could be achieved if the construction process of the rest of Phase 1 was correctly managed. This quote was on page 6 of their response to your request for an expression of interest in the later part of 2015. Their response is included as part of this Comment

However I would like to point out that they also said on page 9 of their document that the then current vision, as described in you request of expression of interest was not going to work. Quoting from their page 9:

"The delivery strategy as proposed in this Expression of Interest we believe is not executable in the private market, and would transfer excessive integration/interface risk to the private sector."

The way the Draft 2016 Business Plan is structure, with an IOS phase followed by the Phase 1 is what Cintra is warning against. Your Phase 1 needs to be broken up into manageable pieces that private enterprises will be able to digest. For example, I would recommend the old Bay to Basin phase be put back into the plan, then the extension of true HSR in the LA Basin (to Anaheim) and finally into the San Francisco Bay Area (all the way to the Trans Bay Terminal). All of these should be broken out as part of the Final Version of the 2016 Business Plan.

J. L. Botsford

Attachment of Cintra Ferrovial "CALIFORNIA HIGH-SPEED RAIL AUTHORITY DELIVERY OF AN INITIAL OPERATING SEGMENT"

RESPONSE TO EXPRESSION OF INTEREST – RFEI HSR#15-02
SEPTEMBER 14, 2015

CALIFORNIA HIGH-SPEED RAIL AUTHORITY
DELIVERY OF AN INITIAL OPERATING SEGMENT

RESPONSE TO EXPRESSION OF INTEREST – RFEI HSR#15-02

SEPTEMBER 14, 2015

RESPONDENT

CINTRA INFRAESTRUCTURAS, S.A.
FERROVIAL AGROMAN, US CORP.

Point of Contact

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Cintra and Ferrovial Agroman bring together a multi-disciplinary team and provide full end-to-end integration of all project stages.

Cintra – Transportation Infrastructure Developer

Cintra is a wholly-owned subsidiary of Ferrovial S.A. Ferrovial S.A. is one of the few companies with more than 40 years of experience developing, managing, operating and maintaining infrastructure projects. Cintra specializes in the development of complex PPP transportation projects. The group's first Design, Build, Finance, Operate, and Maintain ("DBFOM") project was awarded in 1968, and was recently handed-back to the grantor after successfully completing the 35-year concession term. Cintra-Ferrovial is recognized by Public Works Financing Bulletin/Magazine in 2012 and 2013 as the top transportation developer by invested capital internationally, with over $72 B in PPP contracts.

In the last 4.5 years Cintra has raised over $3.3 billion of committed financing for US roadway concession projects in addition to investing $798 million of its own equity. The LBJ and NTE projects (Texas) are two of the largest P3 projects in United States history and combined represent a total investment of nearly $5 billion. These financings included $1.5 billion in TIFIA funds, $1 billion in tax exempt private activity bonds ("PABs"), and over $1 billion in equity from private partners, all arranged under a financing plan managed by Cintra's financial team.

Cintra currently manages 20 projects in six countries comprising 1,280 miles of roadways and a cumulative investment of over $28 B. Cintra has invested more than $1.5 B of equity and manages $5.8 B of direct private investment in the United States, represented primarily by investments in the Indiana Toll Road, the Chicago Skyway, SH 130, Segments 5 & 6, the North Tarrant Express and the LBJ Express. Information on the SH 130, Segments 5 & 6, North Tarrant Express and LBJ Express is provided under relevant experience. In recognition of these successes, Infrastructure Investor named Cintra "2009 Global Infrastructure Developer of the Year," and "North American Infrastructure Developer of the Year" in 2009, 2010 and 2013, further establishing Cintra as a leading P3 infrastructure developer even during challenging financial times.

Ferrovial Agroman - Design-Build Contractor

Ferrovial Agroman will join Cintra on the Project as the Design-Build Contractor ("DB Contractor") within the Design-Build Team, managing the design and construction of the Project. The DB Contractor will not invest equity into this Project, but will be expected to have an at-risk security package to support the risks which will be transferred to them during the course of the Project. Ferrovial Agroman is one of the world's preeminent construction firms with more than 80 years of construction experience in design-bid-build, design-build, and public-private partnership projects in all types of infrastructure assets, specializing in large and complex transportation projects. Ferrovial Agroman has designed and constructed 2,700 miles of railways including 440 miles of high speed rail; 2,300 miles of highway concessions; 9,400 miles of new roads; 16,700 miles of rehab of roads; and 270 miles of tunnels. Ferrovial Agroman has been active in the North American transportation industry since 1999, and currently has five major design-build contracts in the U.S. totaling more than $6 B. Ferrovial Agroman was one of the first construction companies to achieve ISO 9001 certification. Ferrovial Agroman is OHSAS 18001:2007 Certified firm, ISO 14001 compliant and has a certified Health & Safety Risk Management Plan.

Cintra and Ferrovial Agroman have extensive experience in developing complex infrastructure projects in North America similar in complexity and magnitude as the California High Speed Rail ("the Project").

Assuming that the California High Speed Rail Authority ("CHSR") elects to proceed under a Public-Private Partnership model for the Project, Cintra would perform the role of lead developer/equity member retaining an interest in the project operations and maintenance.

We anticipate that, Cintra would form a Special Purpose Vehicle (Concession Company) that would enter into the Comprehensive Agreement with CHSR to design-build-finance-operate-maintain the Project. The equity members will provide the equity and the resources to this Concession Company. The Concession Company will enter into a lump-sum fixed price and fixed schedule contract with the Design-Build Contractor, a joint venture led by Ferrovial Agroman, for the design and construction of the Project. The Concession Company would also manage operations and maintenance as assigned in the Comprehensive Agreement for the term of the agreement.

Cintra is interested in participating in the Project if it comprises a concession regime that entails private financing (equity+debt) coupled with O&M performed by the private partner, and a construction element that requires advanced design and construction expertise, for a fixed price and schedule. Specifically, we are interested in the Project

being procured as, an availability payment concession or a minimum revenue guaranty, or a combination of both.

We are confident we can provide a very competitive proposal assuming that the delivery method ultimately chosen by the Authority is consistent with the feedback in our EOI response. The Cintra/Ferrovial Aroman team brings a unique combination of world-class Financial, Technical and Operational expertise and prior experience with financing.

Proof of this is the recent proposals won by our Group in North America involving different delivery methods:

- **NTE** and **LBJ** (Texas), demand risk concessions – TxDOT saved 20% ($237 million) of the public equity committed to fund both projects. A bundle of value engineering (i.e. innovative design concept) and financial innovation (first time unwrapped PABs for a managed lanes/toll road concession placed in the market) made this achievement possible;
- **407 East Extension** (Canada), availability payment concession – The design concept developed jointly by Ferrovial Agroman´s DBJV and Cintra´s OM&R teams which integrated O&M and life cycle considerations lead us to submit the most efficient long term OM&R strategy. This paved the way for the optimal project capital structure crafted by our project finance team which afforded Infrastructure Ontario estimated savings of $40 million; and

  We have a strong commitment to our clients and project stakeholders. We are long distance runners and we will work with CHSR to make the California High Speed Rail System a viable project and reality for the citizens of California.

Commercial Questions

1. Is the delivery strategy likely to yield innovation that will minimize whole-life costs and accelerate schedule? If so, please describe how. If not, please recommend changes to the delivery strategy and describe how those changes will better maximize innovation and minimize whole-life costs and schedule.

For a large complex infrastructure project, generally a public private partnership under a design-build-finance-operate-maintain (DBFOM or DBFM) delivery mechanism will result in the lowest whole-life cost, greatest project acceleration and schedule certainty.

Whole-Life Costs

Transferring the responsibility for maintenance and lifecycle costs to the private sector will incentivize bidders to design with future Operations, Maintenance and Rehabilitation (OM&R) work, (and costs) in mind. A concessionaire with responsibility for future OM&R work will focus during construction, to deliver an asset which requires a minimum level of future maintenance work. For example, it can be more cost-effective to build an asset with features that are more expensive at the outset, but will result in reduced maintenance costs over the whole life-cycle of the asset. A private firm that is responsible for only one phase of the project does not have an incentive to incur these additional costs, even if those costs would be more than offset on a present-value basis by the savings achieved in a subsequent phase.

Overall, integration of design and construction with operations and maintenance can achieve lifecycle cost savings in excess of 20%.

Integrating OM&R into a P3 provides enhanced innovation in the form of Advanced Technical Concepts (ATC's). While ATCs are common in DB procurements, in a P3 whole of life considerations are taken into account, resulting in better ATC's that generate savings during operations as well as in construction.

Project Acceleration

A P3 with private financing can accelerate some projects years ahead of when they might be delivered versus publically financed projects. A DBFOM delivery can also allow for schedule certainty which is driven by the fixed-price date-certain construction contract and the oversight role of the private sector financing with strong and liquid security to project against contractor default.

California High-Speed Rail (CHSR) Delivery Model

After a thorough and complete review of the CHSR Business Plan and other supporting documentation, in our view, the following delivery models should be considered for delivery of the Project:

- **DB**
  Using a design-build delivery model, a majority of the CHSR could be financed by the public sector and delivered under numerous design-build packages. This model transfers a majority of the design and construction risk to the private sector by selecting one private construction joint venture to perform both functions. Instead of relying exclusively on the lowest bid, design-build selections are usually based on the "best value" bid using preliminary design documents (around 30%). The public agency retains the obligation to fund the project, along with O&M. This model will provide significant benefits over traditional procurement with respect to certainty of price and schedule and provide some modest level of technical innovation. However there is no consideration of life-cycle costs with this model and savings and efficiencies will be significantly less than under a P3 model.

- **DBOM or DBM**
  This model is similar to the design-build approach (with multiple DB packages) but also includes a short to medium term operational and maintenance responsibility for the private partner. This structure promotes additional innovations during the construction and design process, as the private partner is motivated to produce a high quality asset that performs well the initial life of the contract and has manageable maintenance costs. The public agency retains the obligation to fund the project and any demand risk.

- **DBFOM or DBFM (Availability Payment)**
  This model is similar to the DBOM/DBM approach (with multiple DB packages) but, with the private partner also responsible for financing. The use of private financing can allow the project to be built faster. Under this model, the public sector is still responsible for the revenue stream to support the private financing, (collected first by the public agency) or public sources (such as annual appropriations or dedicated tax revenues). These revenues are then paid in annual installments (known as "availability payments") to the private partner, on the condition that the transportation facility is "available" and meets agreed-upon performance specification. The private partner then uses these payments to pay operating and maintenance costs, cover debt service, and

provide returns to equity investors. All demand risk is borne by the public sector.

Given the inherent risks in this project, an availability payment obligation from the CHSR, backed by its limited resources would likely be inadequate to finance the Project. It is our belief that an availability payment backed by the State of California would be required to fund this project. Also we do not believe that the private sector would find a DBFOM or DBFM delivery model with full revenue risk transfer attractive.

- **DBFOM or DBFM (Minimum Revenue Guaranty)**
  A Minimum Revenue Guaranty (MRG) which is a combination of a revenue risk and availability payment project. Under this scenario, the State of California would guarantee a minimum amount of revenue per period (e.g., 70%), regardless of the project's performance. If toll revenue is below the lower bound (say 70%), the State provides a subsidy to make up some of or the entire shortfall. Revenues in excess of the upper bound are shared with or turned over entirely to the State/Authority.

  The MRG provides a great deal of security to debt holders, and leaves the majority of the remaining risk to the equity, so the project could be leveraged further than before and additionally, the cost of the private debt would also be less expensive. The combination of more leverage and less costly debt will fund more project scope and/or lower the required subsidy from the Owner.

- **Multi Delivery Models**
  A hybrid approach could be undertaken, whereby some components of the Project could be financed by the Authority while others are financed through a DBFOM (Availability) or DBFOM (Minimum Revenue Guaranty).

We would recommend the delivery of the required civil works through a series of design-build sub-packages as more fully described in question 5. Many of these design-build sub-packages could be delivered through a P3 model, subject to capacity constraints within the P3 equity sector. Some of the packages and civil sub-packages may have to be delivered by a DB model.

With DBFOM, MRG or Multi Delivery models there would be significant residual integration risk that the private sector would not be in a position to retain. An analysis would need to be undertaken to determine how much of this integration risk should remain with the public sector.

2. Does the delivery strategy adequately transfer the integration and interface risks associated with delivering and operating a high-speed rail system?

The delivery strategy as proposed in this Expression of Interest we believe is not executable in the private market, and would transfer excessive integration/interface risk to the private sector.

We have examined IOS North & South as one project, and separate projects for the purposes of this EOI response. As reflected in Exhibit A, the estimated combined hard and soft costs[1] associated with the IOS using end-of-year dollars is $58.6 billion. We have looked at delivering the IOS using a P3 delivery model as shown in Exhibit B. The size and scale of the IOS is outside the delivery capacity of major industry participants, both locally and globally. These reasons include balance sheet capacity, bonding limitations, single risk limitations, human capital and other resource limitations. Contractors in the U.S. market have demonstrated abilities to delivery projects up to $4 billion. Using this $4 billion limitation we have broken the $58.6 billion IOS capital needs into 6 delivery packages as follows:

- Stations, terminals, intermodal & Support Facilities $2.4bn
- Signaling Systems + Rolling Stock $3.9bn
- Electric traction $3.4bn
- Track $2.6bn
- Train & Infrastructure Operations tbd
- Civil $38.7bn

We have broken the civil works in 10 sub-packages of $3.8bn each.

While breaking down the IOS needs into 15 packages/sub packages may work from a capacity perspective, it divides the project into too many pieces, which increases the number of interfaces among different sections of the rail line, leading to potential problems with coordination. Multiple packages may drive the best value solution, but this solution creates an increased interface risk. We do not believe the private sector will be willing to accept this much interface/integration risk. We believe that these major interface risks should be retained by the public sector irrespective of the chosen delivery model.

Interface Risk Defined: With multiple packages if a defect occurs for a particular section/package this could lead to complex claims against or between multiple contractors due to the difficulty in determining which party is at fault. This may result in claims between government, contractors, operator and maintainer in relation to the impact of these defects.

[1] Soft costs include interest during construction, development costs, lender required reserves, debt fees, taxes and SPV costs.

What are the key risks that will be borne by the State if such risk transfer is not affected?

As shown in the chart on the following page, assuming the State delivers CHSR under a design-build delivery model the key risks retained versus a P3 delivery would be: integration/interface, right of way, environmental for known conditions, O&M, financing and ridership/revenue

What are the key risks that are most appropriate to transfer to the private sector?

The following chart illustrates how major risks are generally allocated using various infrastructure delivery models.

INFRASTRUCTURE PROJECT DELIVERY
SUMMARY RISK ALLOCATION/TRANSFER

Risk	Design-Bid-Build	Design-Build	DBFOM - P3 (Availability)	DBFOM - P3 (Revenue)
Scope Changes (owner requested)	Public	Public	Public	Public
NEPA/CEQA Approvals	Public	Public	Public	Public
Permits & Approvals	Public	Shared	Shared	Shared
Right of Way	Public	Public	Shared	Shared
Utility Relocation	Public	Shared	Shared	Shared
Rail Relocation	Public	Public	Public	Public
Design (errors & omissions)	Public	Private (80%/20%)	Private	Private
Ground Conditions	Public	Shared	Shared	Shared
Environmental Contamination (pre-existing & unknown)	Public	Public	Public	Public
Environmental Contamination (other or known)	Public	Public	Private	Private
Construction Delays	Shared	Private (80%/20%)	Private	Private
Construction Cost Overruns	Shared	Private (80%/20%)	Private	Private
Rail Integration/Interface	Public	Public	Shared	Shared
Labor Disputes	Public	Private	Private	Private
Quality Assurance/Control	Public	Shared	Private	Private
Final Acceptance	Public	Private	Private	Private
O&M + CapEx/Lifecycle	Public	Public	Private	Private
Financing	Public	Public	Private	Private
Interest Rate/Credit Spread	Public	Public	Public	Public
Changes in Law	Public	Public	Shared	Shared
Force Majeure	Public	Shared	Shared	Shared
Ridership	Public	Public	Public	Private
Revenue	Public	Public	Public	Private
Fare Collection	Public	Public	Public	Private

3. Are there any other components of a high-speed rail system that should be included in the scope of work for each project?

Some of the components of the high-speed rail system could be bundled together to facilitate optimal packaging and procurement outcomes. As noted in our response to question #1, it could be possible to procure some, of all of CHSR as a DBFOM or a DBOM, thereby combining the design and construction with the maintenance and the operations. One of the key benefits of integrating components of the high speed rail system at key interfaces is the minimization of transaction costs and interface risks.

4. What is the appropriate contract term for the potential DBFM contract?

The proper duration for the concession will depend on the delivery method chosen by the Authority. Historically, projects procured under an availability payment model transfer less risk to the private sector, and, therefore, have a shorter payback period and require a shorter concession term. Availability payment projects can carry concession terms that commonly range from 30 to 40 years. Projects structured as revenue risk carry more uncertainty, thus require a longer concession term to compensate for this elevated level of risk assumed by the private sector. Due to the heightened risk profile of revenue risk projects, concession terms typically range from 50 to 99 years.

Will extending or reducing the contract term allow for more appropriate sharing of risk with the private sector?

Reducing the concession term from the above suggested ranges will impose additional risks on the private sector which will require some form of a higher equity required return and/or higher public subsidy. In an extreme case some private sector participants may not wish to bid a contract with a concession term that is too low. Extending the concession term may provide some marginal benefits to the public sector.

If the Respondent recommends a different delivery model, what would be the appropriate term for that/those contract(s)?

We are recommending a P3 availability model with a 30 to 40 year concession term or a MRG with a 50+ year concession.

5. What is the appropriate contact size for this type of contract?

As noted in our response to Question #2. We believe the maximum civil contract should be in the $3.8 billion range. The other contracts (stations, signaling/rolling stock, electric and track) could be in the $2.4 to $3.9 billion range.

What are the advantages and disadvantages of procuring a contract of this size and magnitude?

Using the above contract sizes as guidelines will provide the Authority with an appropriate amount of competition in procuring the Project, while also reducing interface risk and project construction duration.

Do you think that both project scopes should be combined into a single DBFM contact?

As stated earlier, we do not recommend combining all of the IOS project scope into one big $59 billion P3. The market will be unable to accommodate anything close to this size irrespective of whether CHSR elects a P3 or DB procurement. The project must be broken into manageable packages and sub-packages to achieve success for the Authority. In addition State Law would need to be modified to allow a lower level of bonding, since performance and payment bonds in this amount are likely beyond current and expected industry bonding capacities for a single contract.

6. Does the scope of work for each project expand or limit the teaming capabilities?

Generally for a DB or P3 project over $300 million, private companies team in the form of consortiums to diversify risk and allocate risk to the party best able to manage that risk. For a P3 project in the $3 billion range, a typical consortium will consist of 2 to 3 equity investors/concessionaires, 2 to 3 construction joint venture contractors, several local nominated construction sub-contractors, 2 to 3 designers and 2 to 3 O&M providers.

A mentioned earlier, each project (IOS-North and South) is too large to be considered as separate DB or P3 contracts. Attempting to procure either project above the recommended $3 to $4 billion contract size will limit teaming capabilities.

Again we recommend that the Authority pursue a project specific law that allows bonding at a lower level than required by current California law. We would suggest at a maximum the performance and payment bonds be 50% of the project value. Other

states have capped the performance and payment bonds lower percentages or at fixed dollar amounts for projects over a certain dollar amount.

Does it increase or reduce competition?

If each project is procured as stated in this EOI, competition will be seriously reduced.

Funding and Financing Questions

7. Given the delivery approach and available funding sources, do you foresee any issues with raising the necessary financing to fund the IOS-South project scope? IOS-North project scope? Both?

We do believe that the IOS (both North and South) as presented in this EOI is not achievable in the private market today for the reasons listed earlier.

We have reviewed the sources of funding for the California High Speed Rail project as listed below with our comments:

- **Federal Grants**
  - Comment: As indicated in the EOI, these funds are already fully committed for CP1-4.

- **Proposition 1A**
  - Comment: $4 billion is available for the System

- **Cap-and-Trade Proceeds**
  - Comment: The value of future Cap-and-Trade revenue for CHSR funding is uncertain for the following reasons:
    - Cap-and-Trade is valued on the free market in an auction process, thus it is impossible to know with any certainty the demand and value for this financing tool.
    - Cap-and-Trade is subject to political pressure. The Public Policy Institute of California conducted a poll in 2014 and found that a majority of California voters would not support Cap-and-Trade if it meant paying more for electricity or gas. There is no guaranty that this funding source will be available for 30 to 50 years in order to repay debt and equity holders their required return.
    - Based on publically available studies we have read, its appears as if the most optimistic projections for cap-and-trade proceeds available to fund construction would be in the $20 to $25 billion range.

- **Farebox/Operating Revenue**
  - Comment: We have reviewed data from the International Union of Railways (Sept. 2014) which analyzed all 111 high speed rail lines in the world. Of the 111 train lines, only 3 make an operating profit and one

breaks-even. [2] The remaining 107 high-speed rail lines require large government subsidies from both general taxpayers and drivers. The HSR lines that break-even or turn an operating profit have a different dynamic than CHSR, in that these lines are 30-50 years old and have much higher density of population in the areas that the train would serve. We believe it is highly unlikely that the CHSR will turn on operating profit within the first 10 years of operation. More likely, CHSR will require large government subsidies for years to come.

What are the limiting factors to the amount of financing that could be raised?

The first limiting factor is the amount of direct support/guarantees from the State of California for a P3 with private finance component. Without support from the State of California private financing is extremely unlikely.

The second factor is the amount of equity available in the market for greenfield P3's. There is a limited number of financial and industrial firms that have an appetite for investment in greenfield pre-operational infrastructure projects. We believe that the entire IOS will require in the neighborhood of $5.5 billion of equity capital, assuming that the entire project were able to be procured by a P3 concession and with a $18 billion assumed public/Authority subsidy. $5.5 billion of equity capital is well beyond the capacity of the infrastructure equity market today and in the near-term.

Lastly, funding the entire Project as a P3 may require up to $35.5 billion of private debt. It is doubtful that there is enough capacity in the debt markets for this type of project.

8. What changes, if any, would you recommend be made to the existing funding sources?

As stated earlier, we believe that private financing of some portion of the CHSR is only achievable subject to direct support from the State of California, through either an availability payment or minimum revenue guaranty.

It may be possible to privately finance some portion of the IOS over the next 10 years. The remainder of the scope could be publically financed, with a private finance take-out after construction completion and achieving certain operational income milestones.

What impact would these changes have on raising financing?

[2] Make an Operating Profit: France/TGV (Paris Sud), Japan (Shin Osaka), US (Acela Northeast Corridor). Break-even: Japan (Hakata)

If the State of California was able to provide availability payment or minimum revenue guaranty support for the Project, this would significantly increase the likelihood that some of the IOS's $58.6 billion of required financing could be raised. As indicated earlier, even with the full support of the State of California, the sheer size of the Project, and the estimated $5.5 billion of required equity make privately funding the entire project unlikely.

9. Given the delivery approach and available funding sources, is an availability payment mechanism appropriate?

As indicated in our response to Question #1, we believe an availability payment mechanism could be an appropriate financing tool; however the counterparty behind the payment guaranty should be the State of California, and not the Authority. The Authority's payment guarantee is only backed by its limited, and to a degree uncertain financing sources which include cap-and-trade proceeds.

Also as noted earlier in our response, even if the availability payment is backed by the State of California, it is uncertain that there is enough equity appetite in the P3 market today to fund the entire estimated $5.5 billion of required equity. In this case, some portion of the project may have to be financed by the public sector with the remainder being procured by an availability or MRG payment mechanism.

Could financing be raised based on future revenue and ridership (i.e., a revenue concession)?

We do not believe that the project could be financed as a pure revenue risk deal without some form of support, such as a minimum revenue guaranty. This MRG would have to be fully backed by the State of California and not the Authority.

Would a revenue concession delivery strategy better achieve the Authority's objectives?

Either availability or revenue based concessions can achieve much of the Authority's key project objectives. However, we believe that revenue risk concessions have some real strategic advantages over availability payment mechanisms. Such as:

- **Integration Efficiency**: Passing through to the developer revenue responsibility allows the developer to integrate design, construction, finance, operation and revenue management, finding synergies that the public sector will be unable to find.

- **Alignment of Interests**: Interests are better aligned under a revenue risk than AP project. Under demand risk, the developer's success only takes place when the road usage is maximized or when congestion is truly relieved, which is the main public sector objective for developing the project. An AP developer does not care if the project is used or not (in fact it can be argued he benefits from low usage because this drives costs down). Interests are misaligned.

- **Private Incentive**: Transferring revenue risk encourages an enterprising approach, taps private sector insights into customer preferences and priorities, and spurs radical new ideas for scope, design and financing of the most attractive projects

As stated in our response, a pure revenue concession for this project is not advisable. However, many of the benefits of the revenue concession can be achieved by using a minimum revenue guaranty (MRG). The key MRG benefit in addition to the ones listed above is:

Better Debt Financing/Lower Subsidy – With a MRG much of the extreme downside risk to the private sector would be limited, or hedged, by the State. Financing terms (interest rates, leverage) which would be closer to an availability payment project, and would result in a lower public subsidy.

10. **Based on the Authority's capital, operating, and lifecycle costs from its 2014 Business Plan, describe how the preferred delivery model could reduce costs, schedule or both. Please provide examples, where possible, of analogous projects and their cost and/or schedule savings from such delivery models.**

Larger projects will generally have lower total overhead costs; greater buying power; greater efficiencies in equipment and manpower use. The use of ATC's can also have greater impacts on larger projects. An example of this would be the elimination of the tunnel section on our LBJ project that saved one billion dollars.

The use of Design Build, a key component of the preferred and other recommended potential procurement methods has also proven to reduce total project timelines for design and construction. The majority of projects completed by our companies using P3 in the US are delivered significantly ahead of schedule. We have recently completed mega projects such as the LBJ project several months early and completed the North Tarrant Express project nine months early. These are from 10%-20% shorter than the contract time allowed

Examples of Cintra P3 Efficiencies

Cintra believes that the P3 model provides more savings and efficiencies than a DB or DBB procurement. P3's provide greater efficiencies (see examples below), which derives from developing projects with a lifespan perspective; from the transfer of public risks that can be better handled by the private sector; with incentivizes to innovate.

Cintra/Ferrovial Agroman Added Cost Efficiencies
3 managed lanes projects in the Dallas-Fort Worth area

Project	Estimated Cost Before Efficiencies	Implemented Efficiencies	Actual Investment
NTE 1&2W	$2.29 B	$480 M	$1.81 B
NTE 35W PDA	$1.49 B	$150 M	$1.34 B
IH 635ML (LBJ)	$3.52 B	$1.32 B	$2.20 B
Totals	**$7.30 B**	**$1.95 B**	**$5.34 B**

11. **How does this compare to separately procuring each high-speed rail component (i.e., separate contracts for civil works, rail systems, power separately)?**

The greatest savings in large complex infrastructure procurement generally happen with an integrated DBFOM. This model takes full advantages of the integration of design and construction with lifecycle and promotes the greatest quality and quantity of cost and schedule saving advanced technical concepts.

Procuring separately the civil, rail and power components can yield efficiencies provided this is coupled with some form of maintenance or maintenance and operations. Further savings can be achieved by the addition of private financing and the role of equity.

Please discuss design/construction costs, operating/maintenance/lifecycle costs, and schedule implications.

Separately procuring the different components during design and construction has both advantages and disadvantages. The advantages lie in larger more specific contracts with contractors who specialize in that particular type of work such as civil, rail, systems integration, or vehicles. These larger contracts will have greater buying power and cost efficiencies. The disadvantages lie in risk that the authority takes where these different scopes interface (civil works with tracks, tracks with systems and vehicles; systems with vehicles).

Separately procuring the components allows the specific experts to maximize total life cycle costs for their particular portion of the infrastructure – again the key difficulty will be managing the interface risk between the separate components. This risk would be certainly be a significant component in a Design-Bid-Build strategy where the Authority will absorb significantly all of this risk. In a P3 some of this risk could likely be transferred and the respective suppliers could be held responsible for their life cycle costs.

The schedule implications of separate procurements will be greatly affected by the dependent component construction. For example: Adjacent Civil packages could be constructed independently and achieve significant cost and schedule efficiencies. The rail and systems components will likely require that all of the civil be substantially complete prior to commencing construction in order to create the desired cost and schedule efficiencies. Thus one civil package that encounters difficulties or an extended schedule for unknown reasons could significantly delay follow on contracts and affect their costs and schedule..

12. **For each project, are there any technical changes to the respective scope of work that would yield cost savings and/or schedule acceleration while still achieving the Authority's objectives? Is so, please describe.**

An early review of the proposed alignment indicates that there will likely be design modifications that will optimize the tunnel, viaduct, lowered and embankment sections many general changes are being identified and modified during the current procurements. We do believe that early identification of hazardous materials, environmental constraints, and identification and acquisition of known ROW would yield significant cost and schedule acceleration. Additional Geotechnical technical investigations in tunnel and large viaduct sections and specifically near fault lines would also eliminate risk and the associated costs.

A. IOS Allocation of Costs by Segment

End of Year ($ millions)		Phase 1S IOS South Ctrl Valley to SFV	Phase 1S IOS South CP1-4 DB Contracts	Phase 1S Revised IOS South Merced to Burbank	Phase 1N IOS North San Jose to Bakersfield	Phase 1S & N San Jose/Merced to Burbank IOS
Track Structures & Track						
Civil	(civil)	$ 1,726	$ 1,727	$ (1)	$ 1,150	$ 1,149
Structures	(civil)	13,652	-	13,652	7,613	21,265
Track		1,418	-	1,418	657	2,075
Stations, terminals, intermodal		707	-	707	700	1,407
Support faciliites: yards, shops, admin bldgs		496	-	496	52	548
Sitework, row, land, existing improvements	(civil)	5,478	1,303	4,175	4,403	8,578
Communications and signaling		594	-	594	235	828
Electric traction		1,945	-	1,945	746	2,691
Vehicles		998	-	998	1,304	2,302
Professional services		3,087	-	3,087	2,015	5,102
Unallocated contingency		1,072	-	1,072	664	1,736
TOTAL HARD COSTS		31,172	3,030	28,142	19,537	47,679
TOTAL SOFT COSTS (@ 23%)		7,170	697	6,473	4,494	10,966
TOTAL COSTS TO FINANCE		$ 38,342	$ 3,727	$ 34,615	$ 24,030	$ 58,645
Multiplier to End of Year		1.122			1.325	1.363
Miles				300	110	410

B. IOS Packages Assuming a DBFM Delivery

IOS (North & South) PPP - Package Description ($ millions)	Add	Package	Sub-Package	Timing of Award	Phase 1S & N Package Value	(incl Soft Costs) Phase 1S & N Package Value
Stations, terminals, intermodal + Support Fac.	Main. + Lifecycle	1	n/a	?	$ 1,954	$ 2,404
Signaling Systems + Rolling Stock	Main. + Lifecycle	2	n/a	?	3,130	3,850
Electric traction	Main. + Lifecycle	3	n/a	?	2,691	3,310
Track	Main. + Lifecycle	4	n/a	?	2,075	2,552
Train and Infrastructure Operations	n/a	5	n/a	?	tbd	tbd
Civil - Package #1	n/a	6	1	?	3,099	3,812
Civil - Package #2	n/a	6	2	?	3,099	3,812
Civil - Package #3	n/a	6	3	?	3,099	3,812
Civil - Package #4	n/a	6	4	?	3,099	3,812
Civil - Package #5	n/a	6	5	?	3,099	3,812
Civil - Package #6	n/a	6	6	?	3,099	3,812
Civil - Package #7	n/a	6	7	?	3,099	3,812
Civil - Package #8	n/a	6	8	?	3,099	3,812
Civil - Package #9	n/a	6	9	?	3,099	3,812
Civil - Package #10	n/a	6	10	?	3,099	3,812
Other (prof. services + contingency)	n/a	1-6	n/a		6,837	8,410
Total Costs to Finance					$ 47,679	$ 58,645
Less: Assumed Public Subsidy (30%)						(17,594)
Total Private Capital (AP based P3)						41,052
Equity (13.4%)						5,501
Debt (86.6%)						35,551
Total Public Subsidy						17,594
Total Hard & Soft Costs						58,645

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Project Email
First Name :	Bonnie
Last Name :	Bernard
Stakeholder Comments/Issues :	De-fund this ever increasing HSR Plan whichis out of control spending / costing and is being made up as they go. Now they want to plan a track/tunnel through Sylmar where the worse earthquake disaster occurred in 1971. The route goes through Newhall which has active earthquakes occurring right next to the Sylmar earthquake faults. What are they thinking?
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Project Email
First Name :	Jean
Last Name :	Rains
Stakeholder Comments/Issues :	I am very concerned about the planned bullet train. Since we live within four blocks of one of the proposed routes and perhaps half a mile from another route, we expect that our quiet neighborhood of thousands of houses will experience devastating loss of quality of life if the bullet train is put through nearby. This will be true of any neighborhood in Southern California. What amount of budget money has been set aside for compensation when entire neighborhoods are ruined? Our area was touted as new housing for professionals in the Los Angeles Times about 16 years ago. Now those who moved here are facing possible loss of real estate value, not to mention the loss of peace and quiet. Additionally, the San Gabriel Mountains are quite fractured. Will bullet train drilling and vibration start small earthquakes similar to fracking? Altogether, the expense and damage from this project is too large for the public to support. Jean Rains Sylmar resident
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date : 4/15/2016

Submission Method : Letter

First Name : Adam

Last Name : Cohen

Stakeholder Comments/Issues : From: Adam Cohen <adam.p.cohen83@gmail.com>
Date: Fri, Apr 15, 2016 at 5:53 PM
Subject: Response to California High-Speed Rail Authority's Draft Business Plan - Additional Oversight Needed
To: drichard@hsr.ca.gov, boardmembers@hsr.ca.gov
Cc: senator.anderson@sen.ca.gov, senator.beall@senator.ca.gov, senator.berryhill@senate.ca.gov, senator.block@sen.ca.gov, Senator.hall@sen.ca.gov, senator.cannella@sen.ca.gov, Senator.hertzberg@sen.ca.gov, Senator.hueso@sen.ca.gov, senator.deleon@sen.ca.gov, Senator.leyva@sen.ca.gov, Senator.mcguire@sen.ca.gov, Senator.mendoza@sen.ca.gov, senator.fuller@sen.ca.gov, senator.gaines@sen.ca.gov, senator.galgiani@senate.ca.gov, senator.hancock@sen.ca.gov, senator.hernandez@sen.ca.gov, senator.hill@sen.ca.gov, senator.huff@sen.ca.gov, senator.jackson@sen.ca.gov, Senator.morrell@sen.ca.gov, senator.lara@sen.ca.gov, senator.leno@sen.ca.gov, Senator.nguyen@sen.ca.gov, senator.liu@sen.ca.gov, senator.monning@sen.ca.gov, senator.nielsen@senate.ca.gov, Senator.pan@senate.ca.gov, senator.pavley@sen.ca.gov, Senator.runner@sen.ca.gov, senator.roth@senator.ca.gov, Senator.stone@sen.ca.gov, Senator.vidak@sen.ca.gov, Senator.Wieckowski@sen.ca.gov, senator.wolk@senate.ca.gov, Senator.moorlach@sen.ca.gov, Senator.mitchell@sen.ca.gov, senator.glazer@sen.ca.gov, senator.bates@sen.ca.gov, senator.allen@sen.ca.gov, assemblymember.achadjian@assembly.ca.gov, assemblymember.alejo@assembly.ca.gov, assemblymember.allen@assembly.ca.gov, Assemblymember.arambula@assembly.ca.gov, assemblymember.atkins@assembly.ca.gov, assemblymember.bigelow@assembly.ca.gov, assemblymember.bloom@assembly.ca.gov, Assemblymember.baker@assembly.ca.gov, Assemblymember.brough@assembly.ca.gov, assemblymember.bonilla@assembly.ca.gov, assemblymember.bonta@assembly.ca.gov, Assemblymember.burke@assembly.ca.gov, assemblymember.brown@assembly.ca.gov, Assemblymember.chang@assembly.ca.gov, assemblymember.calderon@assembly.ca.gov, assemblymember.campos@assembly.ca.gov, assemblymember.chau@assembly.ca.gov, assemblymember.chavez@assembly.ca.gov, Assemblymember.chiu@assembly.ca.gov, Assemblymember.chu@assembly.ca.gov, assemblymember.cooley@assembly.ca.gov, assemblymember.dahle@assembly.ca.gov, assemblymember.daly@assembly.ca.gov, Assemblymember.cooper@assembly.ca.gov, Assemblymember.dababneh@assembly.ca.gov, assemblymember.eggman@assembly.ca.gov, Assemblymember.dodd@assembly.ca.gov, assemblymember.frazier@assembly.ca.gov, assemblymember.gaines@assembly.ca.gov, assemblymember.garcia@assembly.ca.gov, assemblymember.gatto@assembly.ca.gov, assemblymember.gomez@assembly.ca.gov, assemblymember.gordon@assembly.ca.gov, Assemblymember.gallagher@assembly.ca.gov,

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Adam Cohen

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April 15th, 2016

Chairman Dan Richard
California High-Speed Rail Authority
770 L Street, Suite 1160
Sacramento, CA 95814

Dear Chairman Richard and Members of the Board:

I want to thank you for the opportunity to provide comments regarding the California High-Speed Rail Authority's (CHSRA) 2016 Draft Business Plan.[1] I have read through the authority's Draft Business Plan and the material provided by your staff. The draft plan raises considerable concerns of state and national importance on a project that will receive $9.95 billion in Proposition 1A bonds, approximately $1.75 billion in cap-and-trade auction revenue, $3.5 billion in federal appropriations. Given the significant cost of the planned high-speed rail project and the level of investment that the state and federal government has made thus far, it is critical that our elected officials ensure that the authority's business plan is aligned with our state and federal priorities. I provide you, the board, and members of the Californian Legislature and Congressional delegation the following facts, circumstances, and observations for your consideration.

Today, 34 percent of California's population lives in the Los Angeles - Orange County basin and produces 36 percent of California's economic output. Seventeen percent of California's population lives in the San Francisco Bay Area producing 25 percent of the state's output. Together, these two regions account for $1.5 trillion of our nation's Gross Domestic Product. With a $2.4 trillion-dollar state economy, larger than some Group of Eight (G8) nations, a strong California economy equals a strong national economy. Everyday California competes with economies around the Pacific Rim. The exceptional growth, rapid industrialization, and development our Pacific Rim competitors such as Hong Kong, Singapore, South Korea, and Taiwan for more than three decades is not an Asian miracle. These economies
exemplify the trifecta of growth policy: low taxes, a favorable regulatory environment, and first-rate infrastructure.

For years, our nation has underinvested in our transportation infrastructure. Today, several key trends and infrastructure gaps limit both California's and America's economic competitiveness and growth potential. California has $183 billion in unmet capital expansion needs.[2] Some of these include:

· Severe gate, runway, and airspace congestion at key Californian hubs, quickly becoming a major obstacle to expand intercontinental service to Pacific Rim destinations;

· Critical rail gaps between the San Francisco Bay Area and the Los Angeles/Orange County region; and

· Critical highway gaps along the CA-58 corridor between Interstate 40 (I-40) and Interstate 5 (I-5) prohibiting grade-separated I-40 connectivity to the Port of Oakland.

These transportation gaps prevent our nation from achieving full productivity by increasing the travel times and cost of doing business, and making our businesses and workforces less competitive. Investing in our transportation future increases productivity and creates economic dividends that will be paid for generations. High-speed rail is one of numerous transportation infrastructure investments needed to stay economically

competitive with our growing Pacific Rim counterparts.

As a supporter of the California's High-Speed Rail program, I must say that I am disheartened by the 2016 Draft Business Plan. The California High-Speed Rail Authority's management of the Fresno-to-Bakersfield project segment raises considerable concerns about the financial viability, ridership, conformity with California's Sustainable Communities and Climate Protection Act, and compliance with environmental justice mandates (including Title VI of the Civil Rights Act, Executive Order 12898, and the Federal Department of Transportation Environmental Justice Order).

The 2016 Draft Business Plan contains numerous critical unaddressed issues that threaten the success and viability of California's High-Speed Rail. Under the draft plan, the initial operating segment (IOS) would extend 239 miles from the Silicon Valley to the Central Valley. The southern terminus would be approximately 50 miles south of the last station, where the California High-Speed Rail Authority has indicated their intent to construct an interim station on prime agriculture land approximately 23 miles northwest of Bakersfield, California. According to an April 8, 2015, statement made by Diana Gomez, the Central Valley Regional Director, no ridership models or environmental impact statements (EIS) were completed for this interim station, just a terse statement that the California High-Speed Rail Authority was ending the IOS in an unpopulated agriculture area. According to California's Legislative Analyst's Office (LAO):

*"…to make the southernmost portion of the IOS usable, HSRA plans to build a temporary station or platform at this location. However, doing so would require additional environmental clearance as a station at this location was not previously evaluated by [the High-Speed Rail Authority]. Even with a temporary station or platform, ending the IOS in an unpopulated agricultural area does not appear to be an effective approach. This is because this location would not have the types of facilities and nearby businesses, such as transit connections, rental car facilities, and shops necessary to meet the needs of train passengers..." *[3]

An alternative station site north of Bakersfield at the Wasco Amtrak station would be equally ineffective. Wasco is even farther from Bakersfield metro and like Poplar Avenue, Wasco's open-air Amtrak station lacks the facilities, nearby businesses, and transit connections to meet the needs of high-speed rail passengers.

Evidence of this wholly ineffective approach can be seen by viewing the Bakersfield Californian's video of the proposed interim station site at Poplar Avenue north of Bakersfield. This video can be viewed at: https://www.youtube.com/watch?v=1nefaM37QWw Indeed, by any objective standard, expecting Californians to drive to either of these remote locations to catch a train, damage the integrity of the California High-Speed Rail Authority's draft business plan and shake the very core of the system: *ridership*.

Bakersfield is California's ninth largest city and Amtrak's 22nd busiest station with more than a half million riders annually.[4] Despite having an approved station co-located alongside Bakersfield's Amtrak (Attachment A), the California High-Speed Rail Authority began consideration of an alternative alignment (dubbed BFSSA) to decouple multi-modal connectivity. Multi-modal transportation is an industry best practice recognized by multiple public agencies and industry associations, including the U.S. Department of Transportation (US DOT); Federal Transit Administration (FTA); Federal Railroad Administration (FRA); American Public Transportation Association (APTA); American Planning Association (APA); and
Transportation Research Board of the National Academies of Sciences, Engineering, and Medicine. These well-respected public agencies and associations recognize that there is a synergistic multiplier effect that happens when you pair transportation modes together. This is such a superior best practice, that California is spending billions of dollars to

construct the San Francisco Transbay Terminal, a modern transportation complex analogous to Central Station, that even high-speed rail will connect.

Decoupling these rail links only increases vehicle miles traveled and vehicular emissions as high-speed rail passengers will be forced into shuttles, taxis, and Ubers to transfer to an Amtrak train (or vice versa). All one has to do is to look at the connecting ridership between Stockton's two train stations, the Altamont Corridor Express and the San Joaquin Corridor to know that this is too, an ineffective approach. Why then would the nation's first high-speed rail system, even consider rejecting a universally accepted best practice? This is a question that should be answered by the California Legislature and Congress.

It should be noted that California law requires that the state's Metropolitan Planning Organizations (MPOs) prepare a sustainable communities strategy (SCS) as part of its transportation plans to achieve climate action goals and reduce greenhouse gas (GHG) emissions.[5] Under California law, the California Air Resources Board sets regional targets for GHG emission reductions from passenger vehicle use and manages the state's Cap-and-Trade program.[6] In 2014, California began providing cap-and-trade auction proceeds to the High-Speed Rail Authority for the completion of the project. Cap-and-trade auction proceeds are revenues generated by the state from the sale of emission allowances. In 2014-15, the California High-Speed Rail Authority received $250 million in cap-and-trade auction revenues. What message does it send to Californians and the California Air Resources Board when the High-Speed Rail Authority is willing to promote this project as environmentally conscious, accept cap-and-trade funds, and then entertain a station option that would force riders into private vehicles and shuttles to connect to feeder rail service? The hypocrisy shocks the conscience. This is a question that the California Legislature should answer.

Of equal concern is the ineffective use if not misappropriation of public funds with the Bakersfield Station Area Plan. After the Federal Railroad Administration and the Surface Transportation Board approved the Fresno to Bakersfield alignment, the California High-Speed Rail Authority agreed to consider a new alternative route through the south San Joaquin Valley. Despite having a federally approved station elsewhere, the California High-Speed Rail Authority appropriated funds for a local Station Area Plan for a station where an environmental impact statement had not been completed, let alone certified, and neither the Federal Railroad Administration nor the Surface Transportation Board had approved the alternate station. Why is money being spent to study an alternative station site that has not cleared the environmental process?

In addition to raising concerns regarding the draft 2016 business plan, I would like to provide additional public comments to the California High-Speed Rail Authority board about the ongoing environmental processes surrounding BFSSA. The community has serious concerns about CHSRA's compliance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) regarding BFSSA. NEPA and CEQA
are procedural laws that identify potential environmental harm and inform decision-makers and the public of these consequences. These statutory provisions require that that the California High-Speed Rail Agency solicit public comments. However, a close examination of the California High-Speed Rail Authority's environmental practices raises significant compliance questions. Multiple members of the community who previously submitted comments critical of BFSSA at Community Open Houses in Summer and Fall 2015 received email replies stating: *"Thank you for your interest in the California High-Speed Rail Program and your attendance at the November 5, 2015 Community Open House in Bakersfield. We appreciate your words of support. We have received your comments regarding your support of the Bakersfield F Street Station Alignment (BFSSA)." *This raises concerns about whether all of the public comments from these public meetings were

read and taken into consideration during the community meetings.

In addition to NEPA and CEQA, Title VI of the Civil Rights Act of 1964 establishes the need for public agencies to disclose to the public the benefits and burdens of transportation programs on minority populations. Presidential Executive Order 12898 directs federal agencies to make Environmental Justice part of its mission by identifying and addressing the effects of all programs, policies, and activities on underrepresented groups and low-income populations. A memorandum accompanying this Executive Order identifies Title VI as one of several federal laws that should be
applied “to prevent minority communities and low-income communities from being subject to disproportionately high and adverse environmental effects.”

Today, the Federal Department of Transportation (DOT) has implemented an order applying to all policies, programs, and other activities that are undertaken, funded, or approved by all US DOT components. As a recipient of
federal transportation funding, the California High-Speed Rail Authority must comply with the rules and policies set forth by the U.S. Department of Transportation, including but not limited to, ensuring full and fair participation by all potentially affected communities in the transportation decision-making process.

As a recipient of federal funding, the California High-Speed Rail Authority must avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects on minority and low-income populations. A close examination of BFSSA using the
Environmental Protection Agency’s EJSCREEN[7] mapping tool reveals that this proposed alignment imposes disparate adverse impacts on low-income and
minority communities (Attachment B).

*I believe that it is imperative that the California High-Speed Rail Authority redo the entire BFSSA environmental process, including Community Open Houses to ensure that no public comments at the open houses were not
mistakenly omitted. This is necessary to ensure transparency, public participation, and NEPA/CEQA, Title VI, and Executive Order 12898 compliance. Additionally, s**hould the BFSSA alignment be selected, Congress should review the appropriateness of continued federal funding to the California High-Speed Rail Authority given the provisions of Title VI of the Civil Rights Act and Executive Order 12898. *

Finally, it should be noted that the medical needs of our nation’s veterans have become the latest casualty of the high-speed rail alignments. For years, the Department of Veterans affairs has been in the procurement process to design and construct a 30,000 square foot outpatient clinic at the alternative BFSSA station site currently under review. This is another issue that should be reviewed by Congress.

Success of California’s High-Speed Rail system is critical. Success on the first day of operation will determine its ability to attract private investment not only for California high-speed rail but for many other large-scale public infrastructure projects across the nation. Two key performance indicators commonly used by the private sector to measure this success is ridership and costs-per-mile (capital and operational). The 2016 Draft Business Plan fails to address these key performance indicators with an interim southern terminus located north of Bakersfield. This interim station site is a high-risk venture with a low probability of success.

*With that being said, if funding is unavailable to construct the 23-mile segment of high-speed rail from construction package 4 (CP4) to Bakersfield as part of the initial operating segment, the California High-Speed Rail

Authority should consider electrifying the adjacent BNSF/Amtrak rail line to allow high-speed trains to continue to the existing Bakersfield Amtrak station.* Electrifying the adjacent BNSF tracks would serve independent utility for an existing planned commuter rail line should future funding become available for the completion of high-speed tracks from CP4 to Los Angeles. Connecting to the existing Amtrak station would ensure a seamless multi-modal connection with one of Amtrak's busiest stations, connect California's 9th largest city to the initial operating segment, and ensure the highest ridership at system inauguration. This will inspire renewed public and private sector confidence and encourage private investment in California's High-Speed Rail system.

I do apologize for the length of this letter. It is, however, very necessary to more fully explain the problems with the California High-Speed Rail Authority's 2016 Draft Business Plan and how additional legislative oversight is necessary. In conclusion, I want to express gratitude that the CHSRA will be meeting in Kern County next month. With that being said, I would like to strongly encourage that your board select an alternative venue for that meeting. The City of Bakersfield does not represent the nearly one million Kern County residents and the numerous municipalities also impacted by high-speed rail. This sends a confusing message to the community as Kern County represents local interests. Should you require additional information, or need me to clarify any statements made in this letter, please do not hesitate to contact me at your earliest convenience. You have my gratitude for your time and consideration on this matter.

Very sincerely,

//SIGNED//

Adam Cohen
661-912-2986

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[1] http://hsr.ca.gov/docs/about/business_plans/DRAFT_2016_Business_Plan_0201816.pdf

[2] *http://www.catc.ca.gov/**reports/2012%20Reports/Trans_* *Needs_Assessment_corrected_**01172012.pdf*

[3] http://lao.ca.gov/reports/2016/3394/HSR-Draft-Business-Plan-Review-031716.pdf

[4] https://www.amtrak.com/ccurl/998/601/Amtrak-National-Fact-Sheet-FY2015.pdf

[5] http://www.arb.ca.gov/cc/sb375/sb375.htm

[6] http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm

[7] https://www.epa.gov/ejscreen

?

Notes :

Attachments :

Attachment A.jpg (4 mb)
Response to CHSRA Draft Business Plan.pdf (520 kb)
Attachment B.pdf (1 mb)

Adam Cohen
3566 PO Box 1679
Sacramento, CA 95812

April 15th, 2016

Chairman Dan Richard
California High-Speed Rail Authority
770 L Street, Suite 1160
Sacramento, CA 95814

Dear Chairman Richard and Members of the Board:

I want to thank you for the opportunity to provide comments regarding the California High-Speed Rail Authority's (CHSRA) 2016 Draft Business Plan.[1] I have read through the authority's Draft Business Plan and the material provided by your staff. The draft plan raises considerable concerns of state and national importance on a project that will receive $9.95 billion in Proposition 1A bonds, approximately $1.75 billion in cap-and-trade auction revenue, $3.5 billion in federal appropriations. Given the significant cost of the planned high-speed rail project and the level of investment that the state and federal government has made thus far, it is critical that our elected officials ensure that the authority's business plan is aligned with our state and federal priorities. I provide you, the board, and members of the Californian Legislature and Congressional delegation the following facts, circumstances, and observations for your consideration.

Today, 34 percent of California's population lives in the Los Angeles - Orange County basin and produces 36 percent of California's economic output. Seventeen percent of California's population lives in the San Francisco Bay Area producing 25 percent of the state's output. Together, these two regions account for $1.5 trillion of our nation's Gross Domestic Product. With a $2.4 trillion-dollar state economy, larger than some Group of Eight (G8) nations, a strong California economy equals a strong national economy. Everyday California competes with economies around the Pacific Rim. The exceptional growth, rapid industrialization, and development our Pacific Rim competitors such as Hong Kong, Singapore, South Korea, and Taiwan for more than three decades is not an Asian miracle. These economies exemplify the trifecta of growth policy: low taxes, a favorable regulatory environment, and first-rate infrastructure.

For years, our nation has underinvested in our transportation infrastructure. Today, several key trends and infrastructure gaps limit both California's and America's economic competitiveness and growth potential. California has $183 billion in unmet capital expansion needs.[2] Some of these include:

- Severe gate, runway, and airspace congestion at key Californian hubs, quickly becoming a major obstacle to expand intercontinental service to Pacific Rim destinations;
- Critical rail gaps between the San Francisco Bay Area and the Los Angeles/Orange County region; and
- Critical highway gaps along the CA-58 corridor between Interstate 40 (I-40) and Interstate 5 (I-5) prohibiting grade-separated I-40 connectivity to the Port of Oakland.

1 http://hsr.ca.gov/docs/about/business_plans/DRAFT_2016_Business_Plan_0201816.pdf

2 http://www.catc.ca.gov/reports/2012%20Reports/Trans_Needs_Assessment_corrected_01172012.pdf

These transportation gaps prevent our nation from achieving full productivity by increasing the travel times and cost of doing business, and making our businesses and workforces less competitive. Investing in our transportation future increases productivity and creates economic dividends that will be paid for generations. High-speed rail is one of numerous transportation infrastructure investments needed to stay economically competitive with our growing Pacific Rim counterparts.

As a supporter of the California's High-Speed Rail program, I must say that I am disheartened by the 2016 Draft Business Plan. The California High-Speed Rail Authority's management of the Fresno-to-Bakersfield project segment raises considerable concerns about the financial viability, ridership, conformity with California's Sustainable Communities and Climate Protection Act, and compliance with environmental justice mandates (including Title VI of the Civil Rights Act, Executive Order 12898, and the Federal Department of Transportation Environmental Justice Order).

The 2016 Draft Business Plan contains numerous critical unaddressed issues that threaten the success and viability of California's High-Speed Rail. Under the draft plan, the initial operating segment (IOS) would extend 239 miles from the Silicon Valley to the Central Valley. The southern terminus would be approximately 50 miles south of the last station, where the California High-Speed Rail Authority has indicated their intent to construct an interim station on prime agriculture land approximately 23 miles northwest of Bakersfield, California. According to an April 8, 2015, statement made by Diana Gomez, the Central Valley Regional Director, no ridership models or environmental impact statements (EIS) were completed for this interim station, just a terse statement that the California High-Speed Rail Authority was ending the IOS in an unpopulated agriculture area. According to California's Legislative Analyst's Office (LAO):

"…to make the southernmost portion of the IOS usable, HSRA plans to build a temporary station or platform at this location. However, doing so would require additional environmental clearance as a station at this location was not previously evaluated by [the High-Speed Rail Authority]. Even with a temporary station or platform, ending the IOS in an unpopulated agricultural area does not appear to be an effective approach. This is because this location would not have the types of facilities and nearby businesses, such as transit connections, rental car facilities, and shops necessary to meet the needs of train passengers..." [3]

An alternative station site north of Bakersfield at the Wasco Amtrak station would be equally ineffective. Wasco is even farther from Bakersfield metro and like Poplar Avenue, Wasco's open-air Amtrak station lacks the facilities, nearby businesses, and transit connections to meet the needs of high-speed rail passengers.

Evidence of this wholly ineffective approach can be seen by viewing the Bakersfield Californian's video of the proposed interim station site at Poplar Avenue north of Bakersfield. This video can be viewed at: https://www.youtube.com/watch?v=1nefaM37QWw Indeed, by any objective standard, expecting Californians to drive to either of these remote locations to catch a train, damage the integrity of the California High-Speed Rail Authority's draft business plan and shake the very core of the system: *ridership*.

Bakersfield is California's ninth largest city and Amtrak's 22nd busiest station with more than a half million riders annually.[4] Despite having an approved station co-located alongside Bakersfield's Amtrak

3 http://lao.ca.gov/reports/2016/3394/HSR-Draft-Business-Plan-Review-031716.pdf

4 https://www.amtrak.com/ccurl/998/601/Amtrak-National-Fact-Sheet-FY2015.pdf

(attachment A), the California High-Speed Rail Authority began consideration of an alternative alignment (dubbed BFSSA) to decouple multi-modal connectivity. Multi-modal transportation is an industry best practice recognized by multiple public agencies and industry associations, including the U.S. Department of Transportation (US DOT); Federal Transit Administration (FTA); Federal Railroad Administration (FRA); American Public Transportation Association (APTA); American Planning Association (APA); and Transportation Research Board of the National Academies of Sciences, Engineering, and Medicine. These well-respected public agencies and associations recognize that there is a synergistic multiplier effect that happens when you pair transportation modes together. This is such a superior best practice, that California is spending billions of dollars to construct the San Francisco Transbay Terminal, a modern transportation complex analogous to Central Station, that even high-speed rail will connect.

Decoupling these rail links only increases vehicle miles traveled and vehicular emissions as high-speed rail passengers will be forced into shuttles, taxis, and Ubers to transfer to an Amtrak train (or vice versa). All one has to do is to look at the connecting ridership between Stockton's two train stations, the Altamont Corridor Express and the San Joaquin Corridor to know that this is too, an ineffective approach. Why then would the nation's first high-speed rail system, even consider rejecting a universally accepted best practice? This is a question that should be answered by the California Legislature and Congress.

It should be noted that California law requires that the state's Metropolitan Planning Organizations (MPOs) prepare a sustainable communities strategy (SCS) as part of its transportation plans to achieve climate action goals and reduce greenhouse gas (GHG) emissions.[5] Under California law, the California Air Resources Board sets regional targets for GHG emission reductions from passenger vehicle use and manages the state's Cap-and-Trade program.[6] In 2014, California began providing cap-and-trade auction proceeds to the High-Speed Rail Authority for the completion of the project. Cap-and-trade auction proceeds are revenues generated by the state from the sale of emission allowances. In 2014-15, the California High-Speed Rail Authority received $250 million in cap-and-trade auction revenues. What message does it send to Californians and the California Air Resources Board when the High-Speed Rail Authority is willing to promote this project as environmentally conscious, accept cap-and-trade funds, and then entertain a station option that would force riders into private vehicles and shuttles to connect to feeder rail service? The hypocrisy shocks the conscience. This is a question that the California Legislature should answer.

Of equal concern is the ineffective use if not misappropriation of public funds with the Bakersfield Station Area Plan. After the Federal Railroad Administration and the Surface Transportation Board approved the Fresno to Bakersfield alignment, the California High-Speed Rail Authority agreed to consider a new alternative route through the south San Joaquin Valley. Despite having a federally approved station elsewhere, the California High-Speed Rail Authority appropriated funds for a local Station Area Plan for a station where an environmental impact statement had not been completed, let alone certified, and neither the Federal Railroad Administration nor the Surface Transportation Board had approved the alternate station. Why is money being spent to study an alternative station site that has not cleared the environmental process?

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5 http://www.arb.ca.gov/cc/sb375/sb375.htm

6 http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm

In addition to raising concerns regarding the draft 2016 business plan, I would like to provide additional public comments to the California High-Speed Rail Authority board about the ongoing environmental processes surrounding BFSSA. The community has serious concerns about CHSRA's compliance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) regarding BFSSA. NEPA and CEQA are procedural laws that identify potential environmental harm and inform decision-makers and the public of these consequences. These statutory provisions require that that the California High-Speed Rail Agency solicit public comments. However, a close examination of the California High-Speed Rail Authority's environmental practices raises significant compliance questions. Multiple members of the community who previously submitted comments critical of BFSSA at Community Open Houses in Summer and Fall 2015 received email replies stating: *"Thank you for your interest in the California High-Speed Rail Program and your attendance at the November 5, 2015 Community Open House in Bakersfield. We appreciate your words of support. We have received your comments regarding your support of the Bakersfield F Street Station Alignment (BFSSA)."* This raises concerns about whether all of the public comments from these public meetings were read and taken into consideration during the community meetings.

In addition to NEPA and CEQA, Title VI of the Civil Rights Act of 1964 establishes the need for public agencies to disclose to the public the benefits and burdens of transportation programs on minority populations. Presidential Executive Order 12898 directs federal agencies to make Environmental Justice part of its mission by identifying and addressing the effects of all programs, policies, and activities on underrepresented groups and low-income populations. A memorandum accompanying this Executive Order identifies Title VI as one of several federal laws that should be applied "to prevent minority communities and low-income communities from being subject to disproportionately high and adverse environmental effects."

Today, the Federal Department of Transportation (DOT) has implemented an order applying to all policies, programs, and other activities that are undertaken, funded, or approved by all US DOT components. As a recipient of federal transportation funding, the California High-Speed Rail Authority must comply with the rules and policies set forth by the U.S. Department of Transportation, including but not limited to, ensuring full and fair participation by all potentially affected communities in the transportation decision-making process.

As a recipient of federal funding, the California High-Speed Rail Authority must avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects on minority and low-income populations. A close examination of BFSSA using the Environmental Protection Agency's EJSCREEN[7] mapping tool reveals that this proposed alignment imposes disparate adverse impacts on low-income and minority communities (Attachment B).

I believe that it is imperative that the California High-Speed Rail Authority redo the entire BFSSA environmental process, including Community Open Houses to ensure that no public comments at the open houses were not mistakenly omitted. This is necessary to ensure transparency, public participation, and NEPA/CEQA, Title VI, and Executive Order 12898 compliance. Additionally, should the BFSSA alignment be selected, Congress should review the appropriateness of continued federal funding to the California High-Speed Rail Authority given the provisions of Title VI of the Civil Rights Act and Executive Order 12898.

7 https://www.epa.gov/ejscreen

Finally, it should be noted that the medical needs of our nation's veterans have become the latest casualty of the high-speed rail alignments. For years, the Department of Veterans affairs has been in the procurement process to design and construct a 30,000 square foot outpatient clinic at the alternative BFSSA station site currently under review. This is another issue that should be reviewed by Congress.

Success of California's High-Speed Rail system is critical. Success on the first day of operation will determine its ability to attract private investment not only for California high-speed rail but for many other large-scale public infrastructure projects across the nation. Two key performance indicators commonly used by the private sector to measure this success is ridership and costs-per-mile (capital and operational). The 2016 Draft Business Plan fails to address these key performance indicators with an interim southern terminus located north of Bakersfield. This interim station site is a high-risk venture with a low probability of success.

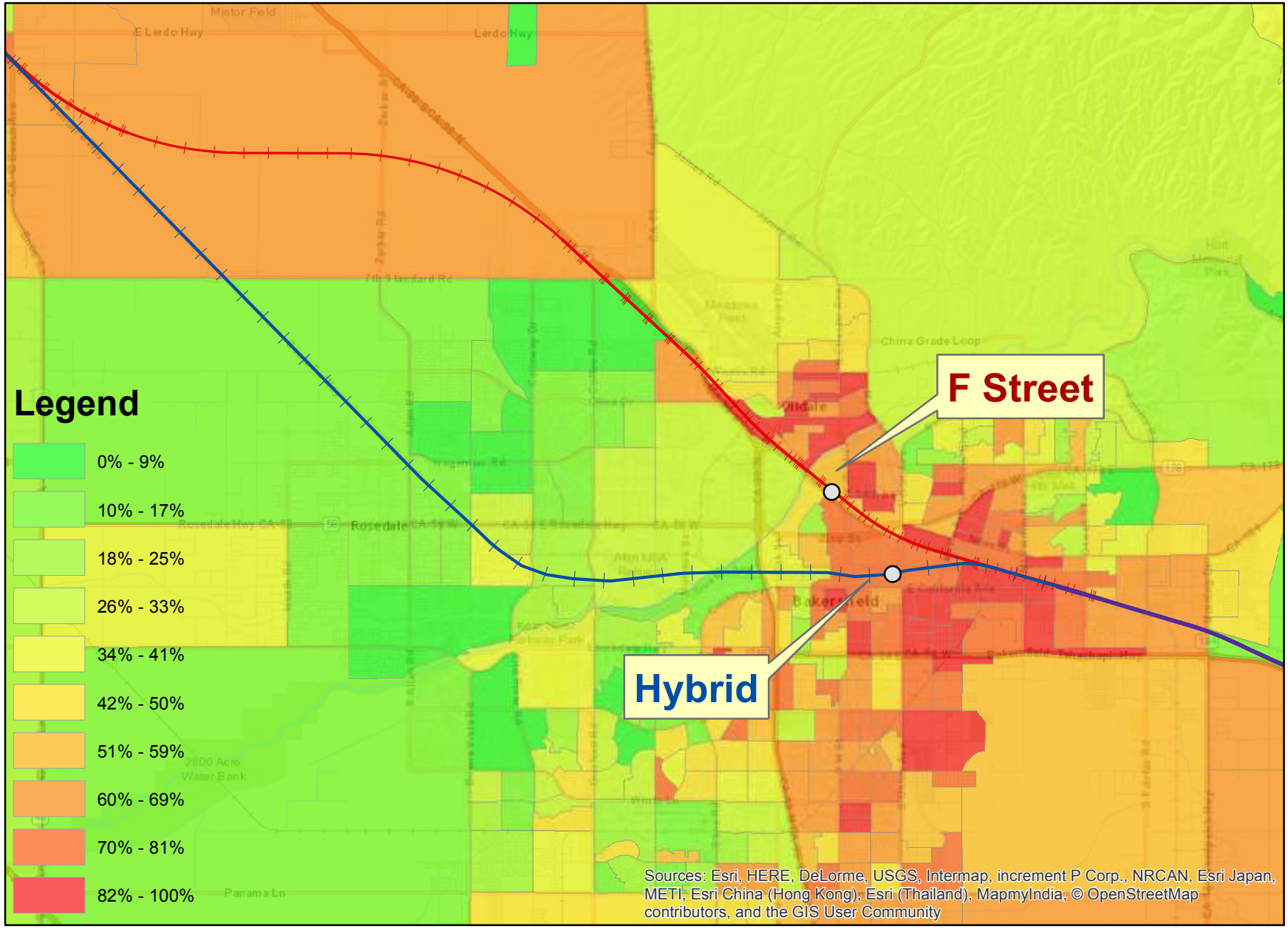
With that being said, if funding is unavailable to construct the 23-mile segment of high-speed rail from construction package 4 (CP4) to Bakersfield as part of the initial operating segment, the California High-Speed Rail Authority should consider electrifying the adjacent BNSF/Amtrak rail line to allow high-speed trains to continue to the existing Bakersfield Amtrak station. Electrifying the adjacent BNSF tracks would serve independent utility for an existing planned commuter rail line should future funding become available for the completion of high-speed tracks from CP4 to Los Angeles. Connecting to the existing Amtrak station would ensure a seamless multi-modal connection with one of Amtrak's busiest stations, connect California's 9th largest city to the initial operating segment, and ensure the highest ridership at system inauguration. This will inspire renewed public and private sector confidence and encourage private investment in California's High-Speed Rail system.

I do apologize for the length of this letter. It is, however, very necessary to more fully explain the problems with the California High-Speed Rail Authority's 2016 Draft Business Plan and how additional legislative oversight is necessary. In conclusion, I want to express gratitude that the CHSRA will be meeting in Kern County next month. With that being said, I would like to strongly encourage that your board select an alternative venue for that meeting. The City of Bakersfield does not represent the nearly one million Kern County residents and the numerous municipalities also impacted by high-speed rail. This sends a confusing message to the community as Kern County represents local interests. Should you require additional information, or need me to clarify any statements made in this letter, please do not hesitate to contact me at your earliest convenience. You have my gratitude for your time and consideration on this matter.

Very sincerely,

Adam Cohen
661-912-2986

Golden State & F Street vs Truxtun Ave Hybrid Alignments
Low Income Communities by Percentage



Source: EPA EJScreen v23, Census Data

0 1 2 4 6 8 Miles

04/04/16

2016 Business Plan RECORD DETAIL

Submission Date :	4/15/2016
Submission Method :	Letter
First Name :	Lauren
Last Name :	Skidmore
Stakeholder Comments/Issues :	Please see attached letter on behalf of the Kern4HMF coalition out of Kern County, CA. Have a great day, Lauren Skidmore Kern Citizens for Sustainable Government
Notes :	
Attachments :	Kern4HMF Poplar opposition letter 2016 business plan.pdf (1 mb)

Kern4HMF

April 15, 2016

Chairman Dan Richard and Members of the Board of Directors
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

RE: Draft 2016 Business Plan

Dear Mr. Richard and Members of the Board of Directors:

The members of Kern4HMF, a coalition of individuals, businesses, schools, and governments who strongly support the location of the high-speed train system's Heavy Maintenance Facility in Kern County, are writing to express our unanimous opposition to the Authority's proposed establishment of an "interim" station north of Bakersfield and establishing Poplar Avenue as the southern terminus of the Initial Operating System (IOS).

The Draft Business Plan presents little to no justification for stopping the IOS not only short of Bakersfield, the system's gateway to the southern California passenger market, but short of the most advantageous HMF site. The plan also fails to address the challenges of creating a station in a rural area that is not included in the approved Fresno to Bakersfield environmental impact report and whose development will present added infrastructure and environmental review costs.

Truncating high-speed rail service in an undeveloped area between the communities of Wasco and Shafter presents large infrastructure and transportation connectivity challenges and severely handicaps the system's ability to attract initial ridership. These and other outcomes violate Proposition 1A provisions, which would open the project to further legal challenges.

Terminating the IOS at Poplar Avenue would also reduce initial track distance below the minimum needed to test trains at the statutorily required speed of at least 220 mph. It would also preclude locating the Heavy Maintenance Facility (HMF) at a proposed site near Shafter that offers no cost for the land and logistical and environmental advantages unmatched by any other potential site.

We respectfully urge the Authority to explore alternatives to the Poplar Avenue terminus and station that will satisfy statutory requirements while fostering the immediate success of the system. High-speed rail needs Los Angeles basin ridership to promote the entire HSR system that was approved by voters. Its southernmost station must therefore be in Bakersfield, where existing surface transportation connections provide easy access for Los Angeles-area passengers. High-speed rail also needs a viable test track as well as the swift and cost-effective construction of a heavy maintenance facility that will remain logistically sound from the initial phase through full build-out of the system.

Kern4HMF is seeking answers to:

- How does the 2016 Draft Business Plan aligns with and addresses the original Fresno to Bakersfield environmental impact report?

- What is the justification for stopping north of Bakersfield?
- What is the justification for removing the Shafter HMF site from the IOS?
- Without federal funding, can you be certain you will extend into Bakersfield or San Francisco?
- What is the criteria for selection of the Heavy Maintenance Facility and other supporting facilities?

Instead of ending the IOS at Poplar Avenue, other options will better promote the initial success of high-speed rail and will enable its steady expansion. Kern4HMF desires to explore these alternatives with Authority Board members and staff, and we urge the Authority not to approve its business plan until all options have been thoroughly investigated.

Sincerely,

Kern4HMF Coalition

CSU Bakersfield

BAKERSFIELD
COLLEGE

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Project Email
First Name :	Wynona
Last Name :	Mayo
Stakeholder Comments/Issues :	Only makes since if it comes to Bakersfield. This is where the riders are. Why would I want to drive all the way into Shaffer to catch the train! Electrify the Amtrak and utilize the existing station!
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Telephone
First Name :	Maria
Last Name :	Castro
Stakeholder Comments/Issues :	
Notes :	
Attachments :	voice_msg_457832637_1460768788.wav (34 kb) Castro_041816_Voicemail.pdf (38 kb)

Hi yes my name is Maria Castro and I am a taxpayer and I do not agree with the high-speed rail. I would like for you to put it to where make sure people are paying more taxes. Thank you, bye.

2016 Business Plan RECORD DETAIL

Submission Date : 4/18/2016

Submission Method : Project Email

First Name : Skip

Last Name : Burrows

Stakeholder Comments/Issues : We live in San Jose, close to Diridon Station---Actually we live very close. From our front door it takes about 215 steps to board a Caltrain. Light rail is much closer---From our front door to a VTA train takes about 40 steps. Our next door neighbor is a few steps closer. If I understand correctly the planning for the Initial Operating Segment, when service to Diridon begins in 2025, our neighbors house will take the prize for having the shortest travel distance to the Northern terminus of the first high speed rail station in the USA. Admittedly not something everyone would want to brag about.

From our front window I can look beyond the train station and see the three buildings that make up the headquarters of Adobe Systems, a high tech company which has over 2000 employees at its San Jose headquarters. If I worked at Adobe I could be at work in 15 minutes by walking through the train station. If their headquarters were instead in Fresno a similar distance from the Fresno high speed rail station---Or if we lived next to the Fresno station and Adobe headquarters remained in San Jose, I could still be at work within an hour and a half if I could take a high speed train.

Nobody except our neighbor would be able to commute from San Jose to Fresno
faster than I would be able to, but by 2025 thousands more will be able to make the trip almost as quickly. A brief look at what is being planned or under construction within a 1 mile radius of where I live shows at least 7000 residential units plus over 1 million sq. ft. of office space.
Fresno, I understand, also has major development plans in mind for the area around its train station. As construction gets under way between San Jose and Fresno, I would guess that station area redevelopment would rapidly increase in both cities, and that as HSR becomes operational a strong link will be established between the two cities--A link that is currently not possible with present travel times in the 3 hour range.

I have not been to Fresno in years. With no business dealings or personal reasons to go there, travel to Fresno has just not been worth the 6 hour round trip. But the idea of catching a 200 mph train at my doorstep some time in the morning, spending a little time in Fresno, and returning in the afternoon sounds like a good one---In fact we are likely to make that trip to Fresno shortly after high speed rail service begins.

Sincerely
John Burrows
109 Laurel Grove Ln
San Jose

Notes :

2016 Business Plan RECORD DETAIL

Submission Date :	4/14/2016
Submission Method :	Letter
First Name :	Norberto
Last Name :	Duenas
Stakeholder Comments/Issues :	
Notes :	
Attachments :	CA High-Speed Rail Authority Draft 2016 Business Plan.pdf (2 mb)

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Office of the City Manager

April 14, 2016

Dan Richard, Chair
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

RE: California High-Speed Rail Authority Draft 2016 Business Plan

Dear Chair Richard:

The City of San José supports the California High-Speed Rail Authority's (Authority) effort to plan and build a high speed rail system that connects the State's major population and economic centers and helps meet long term transportation needs in a more environmentally sustainable way. Furthermore, the City of San José supports the Authority's phased implementation strategy in its Draft 2016 Business Plan to connect San José and Silicon Valley to the Central Valley ("Valley to Valley") by 2025 and looks forward to working with the Authority, other transportation partners, and our local communities to advance this project in mutually beneficial ways.

The letter focuses on three key areas:

1. San José's support for the "Valley to Valley" phase with full completion of Phase I by 2029
2. Priorities for project investment, including the significance of the Diridon Transportation Center to the City, Region, and State, and statewide mobility
3. Importance of transparency and collaboration in working with the San José community; and the need to define current project assumptions and elements such that both technical and community reviewers garner a full understanding of the project alternatives and details, such that the City, the Authority, and the community arrive at beneficial project approaches throughout San José.

1) San José Supports the "Valley to Valley" Phase and Full Completion of Phase I by 2029

The Authority's new focus on the "Valley to Valley" segment of the project will accelerate the connection of California's major economic and population centers by demonstrating functional high speed rail service that generates operating revenue. The City supports completing the "Valley to Valley" segment as a first operational phase with completion of the full Phase 1 system by 2029 (San Francisco to Anaheim). The relatively lower construction cost of this segment compared to others in the State makes it clear that building the first segment to San José is the best option to achieve successful service as soon as possible for California.

200 East Santa Clara Street San José, CA 95113 *tel* (408) 535-8100 *fax* (408) 920-7007 www.sanjoseca.gov

We recognize that much work remains to determine how this first operational segment will function seamlessly with other rail services in the corridor and through the Diridon Transportation Center, particularly a modernized Caltrain system, expanded ACE service, and Capitol Corridor/Amtrak lines. For example, the draft Business Plan represents a significant departure from the service model studied to date by Caltrain and the Authority. Investments in passing tracks, grade separations, at-grade crossing enhancements, level boarding, extended platforms, and other improvements will be important to make for reliable, frequent and clear, easy intermodal connections. We appreciate the work ahead to advance plans for greater levels and increased quality of service by the many operators that run to and through San José. We thank the Authority in advance for working closely and collaboratively with other rail providers and stakeholders.

2) Priorities for Project Investment, including the Diridon Transportation Center

Among future California High-Speed Rail Stations, San José's Diridon Transportation Center will offer unrivaled rail and transit services, enabling efficient connections to the region, state and nation. Diridon Station is a historic structure and already a major transit hub with Amtrak, Altamont Commuter Express (ACE), Caltrain, and Valley Transportation Authority (VTA) light rail and bus services. With the addition of Bay Area Rapid Transit (BART) and High Speed Rail service – both anticipated in 2025 – and an expanded Caltrain, ACE and Capitol Corridor service, the Diridon Transportation Center will become one of the busiest intermodal stations in North America. In addition, we have worked with our regional partners to explore an automated transit connection from Diridon to Mineta San José International Airport; the City, the High-Speed Rail Authority and VTA should collaboratively assess the feasibility of this connection further with an eye towards a connection in 2025.

The Diridon Transportation Center is about more than just great connections – it is in an already thriving community and is beginning to catalyze significant new development. With support in the form of a planning grant from the Metropolitan Transportation Commission (MTC), the City of San José recently developed and adopted the Diridon Station Area Plan. The plan and associated environmental clearance paves the way for a broad mix of transit-supportive, high intensity land uses in and around the Station Area. The City of San José, VTA, Caltrain, and the Authority are currently working together under the guidance of the Diridon Joint Policy Advisory Board to advance the implementation of the expanded Station, as well as facilitating private development in the area.

The Diridon Transportation Center is at a strategic location in the statewide transportation system and economy – it must evolve into a world-class intermodal hub reflecting that fact. The Center must function superbly for the people who use it, whether they are traveling through San José and connecting to other transportation services, live in the San José/Silicon Valley region and use Diridon to access Bay Area transit, or live/work in Downtown San José and walk to and through the station area. We have greatly valued the interest and investment that the Authority has demonstrated to date in Diridon, particularly through recent partnerships and agreements. We request the new Business Plan be revised from the $50 million represented in the Capital Cost Basis of Estimate Report to reflect the Authority's commitment to invest and pursue adequate resources for the Diridon Transportation Center, which we expect to be comparable to the funding and investment needs of the other major stations on the high speed rail system – namely the new Transbay Terminal in San Francisco and Union Station in Los Angeles. Our collective investment in the Diridon Transportation Center – from High-Speed Rail, BART, Caltrain, private development, public funding, and more – will likely range between $1 billion and $2 billion. Given the importance of Diridon to the future of statewide travel, we must continue to jointly pursue an excellent customer

and transit experience in and around this facility and an amazing place for community members and travelers alike. An initial step that must be confronted is thoughtfully accommodating parking needs for transit riders and impacts during Station construction; we look to the Authority to collaborate with the City and Diridon-area partners to cooperatively address those needs in the near term.

Equally as important is the fact that the High-Speed Rail project will cross the full length of the City of San José, more than 20 miles, representing the largest length of track in any City on the "Valley to Valley" segment. The previous planning and environmental work, and the new Business Plan and associated costing assumptions, identify a mix of alignments and elements along the corridor. It is essential that the design and construction of this project are compatible and acceptable to the City of San José and the community. During the last phase of planning and environmental work, the City, the Authority and the community worked collaboratively to develop Visual Design Guidelines for the project that would set the context for development of the project, and how it would integrate and fit within the neighborhoods along the corridor. The City of San José expects the Authority to adhere to and build off that work to ensure that the project design is of high quality, minimizes impacts (visual, noise, and others), and integrates with neighborhoods in a way that the project is viewed as an asset to the maximum extent possible, as further discussed below. The project must enhance – rather than detract from – safety and community connectivity, with particular attention to the ability to comfortably walk and bicycle across the corridor and to Diridon Transportation Center.

3) Importance of Transparency and Collaboration in Working with the Community to Define Project Assumptions and Elements and to Arrive at Beneficial Alternatives

While the City welcomes the move to bring high-speed rail service to San José by 2025, the project development process must be sensitive to the City's neighborhoods, residents and businesses and reflect the unique character of the City. According to Authority staff and consultant statements at the initial Technical Working Group meeting, a number of alignments and alternatives will continue through the planning and environmental process, but no decisions have been made to date.

With that understanding, we note that the draft Business Plan and particularly the Capital Cost Basis of Estimate Report include several departures from previous plans discussed with City staff and the community. The City's support for the general direction of the draft 2016 Business Plan should not be interpreted as support for specific changes. Major changes include assumptions of an aerial (rather than at-grade) alignment along most of Monterey Road and at-grade (rather than aerial or underground) alignments through Downtown, at Diridon Transportation Center, and through neighborhoods like College Park, Greater Gardner and North Willow Glen. In an effort to advance the vetting process and to create clarity and understanding of the project and Draft Business Plan assumptions, more specific questions and comments about the Estimate Report are attached.

We understand that the Authority has great interest in advancing an at-grade alternative through Downtown and North Willow Glen in the planning and environmental process in an effort to minimize the potential impact of an aerial alignment. The City is comfortable exploring that alternative with the express understanding that the project be planned and constructed in such a way as to ensure safety and compatibility with neighborhoods and community facilities (for example, Fuller Park). However, the City has serious concerns about a potential aerial alignment in the Monterey Corridor. The Authority must find a way to come to agreement with the Union Pacific Railroad to utilize the rail corridor more effectively and avoid an aerial alignment. Questions remain regarding other grade separations, crossings, and alignment choices, as well as whether existing rail bridges can be reused and shared with high-speed trains.

Alignment and infrastructure decisions must be made by way of an open and transparent process addressing the project's impacts on the community, with particular sensitivity to impacts on communities of concern – areas with high concentrations of low-income, minority, elderly, or otherwise disadvantaged people. The City requests that any property acquisition or easement needs will be surfaced early and transparently in the planning process, so that community members, elected officials, staff and – most importantly – affected property owners and/or tenants have a clear understanding of the project, its potential impacts, and proposals to mitigate or compensate them for that impact. We also encourage the Authority to find effective alternative ways to communicate with property owners and/or tenants who might be affected by the project. These communication efforts should include language capacity that meets the need of each of these communities. We request that – as was done with the Visual Design Guidelines – visualization simulations continue to be used through during the planning as an effective tool for engagement and project understanding.

The City is aware that the Authority is convening technical and community working groups; it supports that decision and encourages the Authority to make the community working groups publicly accessible with robust information available online in various languages about the project, comments received, and cataloguing decisions previously made and/or upcoming. Initially as the working groups convene, it will be critical that the Authority transparently surface all the assumptions and alternatives, and specifically describe and explain the conceptual design assumptions of the San José alignment in the Capital Cost Basis of Estimate Report. In the future, the City anticipates that the Authority will proactively plan with City staff and community members, rather than surface previously unstudied assumptions in official documents. The Authority needs to work with us to establish appropriate processes for City review of project details and decision-making before key decisions are finalized. The opportunity to work closely with the Authority throughout the process is essential to the City, the community, and the effective delivery of the project.

The City of San José looks forward to working cooperatively with the Authority as it implements the Silicon Valley to Central Valley segment of the Project and the ultimate completion of the Phase 1 Project between San Francisco and Los Angeles. Please provide a response to this letter and direct questions to Jim Ortbal, City of San Jose Director of Transportation. Thank you for your work, partnership and consideration of these comments.

Sincerely,

Norberto Dueñas
City Manager, City of San José

cc: Mayor Sam Liccardo and the San José City Council
Jeff Morales, CEO, California High Speed Rail Authority
Ben Tripousis, Northern California Regional Director, CHSRA
Jim Ortbal, City of San José, Director of Transportation
San Jose Area Community Working Group Members

Supplemental Questions and Comments: California High-Speed Rail Authority Draft 2016 Business Plan

The City of San José appreciates the time taken by California High-Speed Rail Authority staff to describe the highlights of the Draft 2016 Business Plan and its implications for San José. We welcome further engagement with Authority staff and consultants to ensure greater understanding of the project and its alternatives to help maximize the opportunity presented by high-speed rail and to minimize impacts on the City of San José, its neighborhoods, residents and businesses. The Supplemental Questions and Comments follow:

- City staff understands and welcomes that Community Working Groups (CWGs) will be established to help the City and its residents work with the Authority. Staff appreciates that the Authority has initiated these before the comment deadline for the Draft Business Plan (4/18) and that the meetings will be open to the public. We will also look for more advance notice for CWG meetings in the future and continue to seek robust participation by residents representing impacted parts of the City.

- The way that the Capital Cost Basis for Estimate Report (technical appendix to the Draft Business Plan) presents assumptions regarding the alignment and type of structure (aerial, at-grade, or below ground) makes those assumptions appear to have already been decided. City staff understands from Authority staff that this is not the case; rather, the cost estimates are a starting point for the Draft 2016 Business Plan, that comments are welcome on the draft, and that any decisions regarding the project alignment will be made through other, transparent public processes over the coming years.

  In the spirit of transparency, City staff documents its initial concerns with assumptions detailed in the Capital Cost Basis for Estimate Report. These include the following:

  - That the "aerial approach to Diridon station [has] been now removed" (p. 29); staff understands that aerial, at-grade and tunnel approaches at and near Diridon Station will all continue to be evaluated through public planning and environmental processes. It is not that the City is opposed to removing the "aerial approach", we think it needs to be done in context and with clear understanding of the alternative and how it will be acceptable to the San José community.

  - "At-grade use of Caltrain corridor to just past the San José station with alignment adjustments including curve straightening to achieve operating speed up to 110 mph" and "Between Diridon to south of Tamien in this section, assumes construction of a third at-grade track"; we have two comments:

    1. The alternatives presented in the draft Business Plan represent a significant departure from the blended service model studied to date by Caltrain and the Authority. At this point, we do not collectively understand how HSR, Caltrain and other rail providers (including freight, Amtrak/Capitol Corridor, and Altamont Commuter Express (ACE)) will operate under the proposed plan. Investments in passing tracks, grade separations, level boarding, extended platforms, and other improvements will be needed to make for reliable, frequent and therefore useful service, and it is unclear whether the funding allocated for those purposes will be sufficient.

2. City staff does not yet understand the potential implications on San José of the "curve straightening" referenced or how a three-track at-grade alignment would impact neighborhoods along the corridor.

- "A $50M allowance … for high platform upgrades to Diridon"; The City of San José has greatly valued the interest and investment that High-Speed Rail Authority has demonstrated to date in Diridon, particularly through recent partnerships and agreements. However, given the importance of Diridon Transportation Center to the future of statewide travel, we must continue to jointly pursue an excellent customer and transit experience in and around this facility and an amazing place for community members and travelers alike. We therefore request the revised Business Plan reflect the Authority's commitment to pursue adequate resources for Diridon Transportation Center, which we expect to be comparable to the funding needs and investments of the other major stations in the high speed rail system – namely the new Transbay Terminal in San Francisco and Union Station in Los Angeles. The $50M allowance cited will not suffice.

- That the cost estimate "Includes dedicated high-speed rail viaduct along Monterey Road from south of Tamien to Gilroy, … a 60-foot elevated viaduct to cross major roadways including: Capital Expressway, Blossom Hill Road, St. Rte. 85, Bernal Hwy. and Bailey Ave," and "UPRR realignment at Communication Hill". These alternatives have yet to be studied and understood by the City and impacted neighborhoods; the initial reaction is the potential for an elevated viaduct along Monterey Road is highly concerning, both because of impacts to adjacent neighborhoods and the safety and connectivity implications of building an aerial structure and leaving existing Caltrain tracks at-grade without separations previously planned at Skyway, Branham, and Chynoweth.

- Please clarify where the HSR project is in the environmental process and particularly whether the scoping phase of that process will be revisited given additional alternatives introduced.

- The City is cataloguing existing places where people and/or roads cross the potential alignments and possible changes to those crossings. We look forward to reviewing these and discussing specific challenges and opportunities to provide safety, community connectivity, greater development potential, and high quality rail service at and through these locations. The City is particularly interested in identifying places where HSR and City objectives align to improve existing facilities – for example, the San Carlos Street Bridge over the rail tracks, which will likely need to be rebuilt to allow the HSR project to proceed and will improve the safety and utility of that structure for the surrounding neighborhoods. The City also prioritizes safe and ample connections for people on foot and bicycle across the corridor.

- Access planning to and from Diridon Transportation Center will be a collaborative effort among the City, VTA, Caltrain, the Authority, and other transit providers and stakeholders. We look forward to this undertaking to maximize access to Diridon Transportation Center for people walking, bicycling, taking transit or shuttles, being dropped off, or parking.

- Construction impacts have not yet been discussed, but will need to be robustly addressed during the initial planning, environmental and design processes to ensure community safety and quality of life as the project is built.

2016 Business Plan RECORD DETAIL

Submission Date :	4/14/2016
Submission Method :	Letter
First Name :	Joel
Last Name :	Logan
Stakeholder Comments/Issues :	Please see the attached cover letter and public comments.
Notes :	
Attachments :	PublicCommentsCoverLetter003-Final.pdf (38 kb) PublicCommentsonCHSRAs2016DraftBusinessPlan002V3GPTAI-Final.pdf (643 kb)

April 14, 2016

Chairman Dan Richard

California High Speed Rail Authority

770 L Street, Sacramento, CA 95814

Dear Chairman Richard,

Toyota Tsusho America, Inc. has followed the development of the high-speed project with great interest since 2010, and we fully support the construction of a world class train system which will sustain California's economy well into the future.

As California Proposition 1A, High-Speed Rail Act (2008) stipulates, the CHSR passenger service will not require a local, state, or federal operating subsidy, it is essential to the success of the CHSR revenue operation to reduce lifecycle cost of the project. We also understand that it's the Authority's desire to build a world class HSR train system in terms of seismic safety since California experiences frequent seismic activity, which is often damaging to the rail infrastructure. In the attached document, we call for your attention to lifecycle costs, especially projected maintenance costs, as well as seismic safety feature of track to be built for the CHSR project.

We hope these comments help the Authority see what are available for the CHSR project to achieve its goals.

Sincerely,

Joel Logan

Vice President

Toyota Tsusho America, Inc.

Attachment: Public Comments on CHSRA's 2016 Draft Business Plan - Toyota Tsusho America, Inc.

Public Comments on CHSRA's 2016 Draft Business Plan

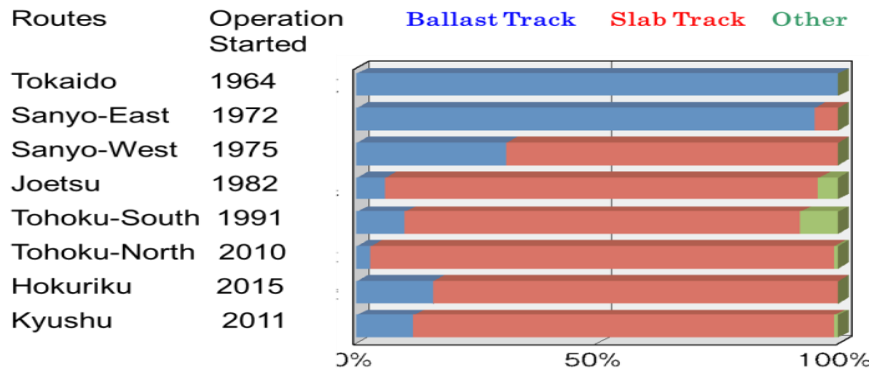
Toyota Tsusho America, Inc.

1. Lifecycle cost of ballast track and slab track

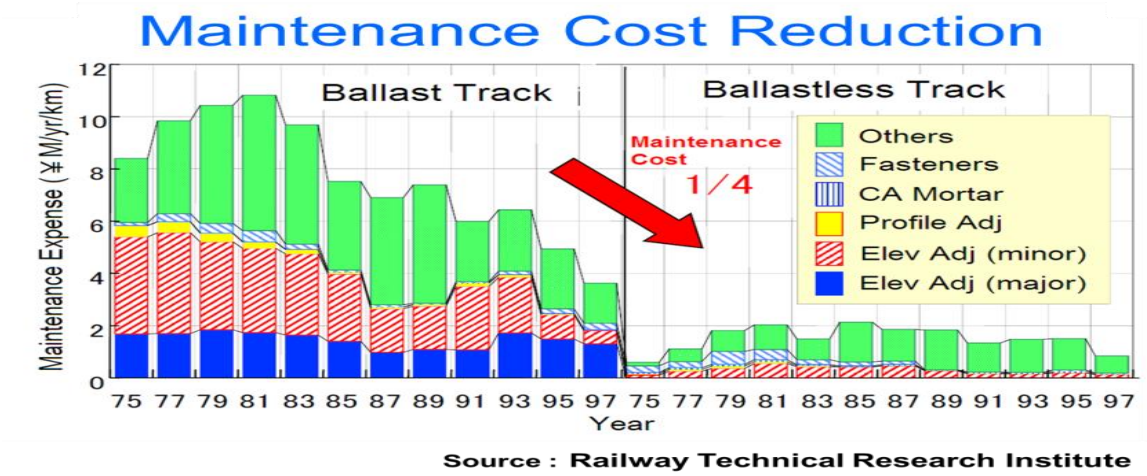
We respectfully submit that it is extremely important for the CHSRA to consider lifecycle costs, especially projected maintenance costs, and not just the initial construction cost when choosing the type of track to be built for the CHSR project. In that regard, we also submit that important lessons can be gleaned from the actual operational experience of Japan National Railway ("JR"), which as you know built the Tokaido Shinkansen, the very first HSR in the world, and has continued over the years build more, and greatly improved HSR lines in Japan.

The Tokaido Shinkansen opened in 1964. Its track structure was conventional, ballast track. As the number of passengers increased rapidly, the frequency of maintenance required also increased tremendously. In 1965, one year after the Tokaido Shinkansen began commercial operations, conceptual development of the original slab track design for HSR was undertaken in Japan as a countermeasure for the unexpectedly high maintenance costs of the Tokaido Shinkansen track.

Slab track has been a huge success and, as shown in the graph below, has been the standard HSR track structure in Japan, beginning with the Sanyo-West Shinkansen. Because of its superior performance compared to ballast track, slab track for HSR has now been in use in Japan for 45 years and since the 1980's, 90% of all Shinkansen track in Japan is slab track.



The predominant reason for choosing slab track in Japan is to achieve significantly lower maintenance costs in comparison to conventional ballast track.



As shown in the above graph, during the period between 1975 and 1997, the maintenance cost of 1 kilometer of ballastless track per year (slab track) in Japan was one quarter to one fifth of that for conventional ballast track. This is an important part of the reason why slab track has prevailed as the dominant HSR track technology in Japan.

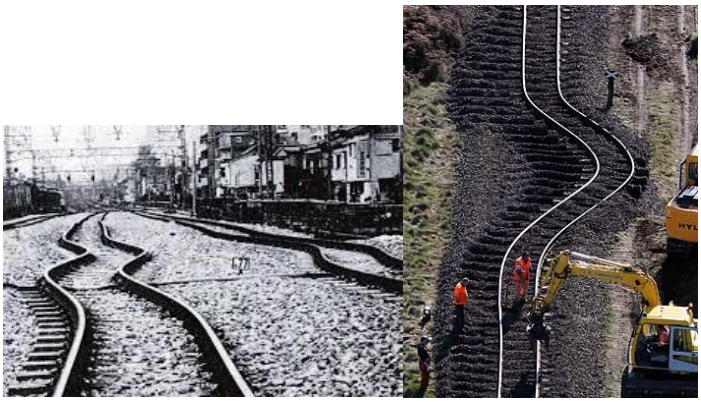
Although the initial construction cost for one mile of slab track is approximately $640,000 more than for ballast track, the annual maintenance cost per mile of slab track is $112,000 less than for ballast track. When viewed from this perspective, the breakeven point for slab track versus ballast track is 6 years; And after nine years of operation, the additional annual maintenance cost of $112,000 for every one mile of ballast track will result in additional annual maintenance costs of $89,600,000 for the entire 800 mile project.

2. Seismic safety of ballast track and slab track

The draft Business Plan calls for “an early earthquake warning system to detect earthquakes before they happen and to stop the trains and enable safety measures to be taken,” and also states that the authority will “continue to explore provisions to cross active faults on at-grade alignments where practical or crossing faults in underground structures with seismic fault chambers that accommodate shifts in track alignment.” Because of these very necessary considerations, we believe it is also important for the authority to look into the quake resistance characteristics of slab track -- which is far superior to that of conventional ballast track.

It is common knowledge that Japan is one of the most earthquake-prone countries in the world, and for this reason it is common sense that enhancing the earthquake resistance of railway structures is essential for safe HSR operations in Japan.

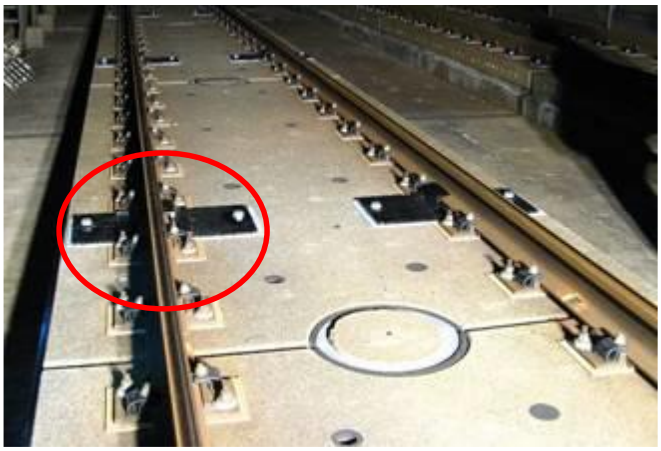
Actual experience in Japan has shown that ballasted tracks are subject to being deformation in certain earthquake scenarios, as depicted in the photos below which show large horizontal displacements even though there is no significant or harmful deformation to the underlying roadbed structure. (1)



Replacing ballast track with slab track, which has a much higher lateral resistence to seismic ground motions than ballast track, together with Japanese improvements in seismic engineering, has greatly reduced the occurrence of large track deformations from seismic ground motion in recent years.

For example, the extreemly powerful magnitude 9.0 earthquake and tsunami that struck on Mach 11, 2011 caused huge damage to much of northeastern part of Japan. However, there were no railway related casualties caused by this quake, and damege to HSR railway structures was relatively minimal. As shown in the photos below, despite the massive destruction caused by this quake, there was no significant damage to the Tohoku Shinkansen slab track.

This impressive lack of structural damage was due to improvements and safety enhancements made following other large earthquakes in Japan that occurred in 1995 and 2004. Because of lessons learned from these earlier large quakes, JR East installed Rail Over-turn Prevention Devises, shown in the photo below. These devices, which were installed on the line's slab tracks, helped to prevent Shinkansen traincars from derailing during the quake (2). We respectfully submit that the use of such devices in conjunction with slab track will provide increased earthquake resistance and enhanced safety for the CHSR line.



References:

(1) See, Takahisa Nakamura (2014), Estimation of Lateral Resistance of Ballasted Track during Seismicity, Railway Technology Newsletter, No. 48

(2) See, Norimichi Kumagai (2011), The Great East Japan Earthquake and JR Group Response: Preparing for Major Earthquakes, Japan Railway & Transportation Review, No. 60

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Tomohiro
Last Name :	Kobayshi
Stakeholder Comments/Issues :	Dear Sir / Madam: By way of my introduction, I am Masao Kanno from Japanese Consulate in San Francisco. The attached file is comments on your draft 2016 Business Plan by the Railway Bureau of Japanese Government. I hope that comments will be helpful in implementing your project. Sincerely, Masao Kanno ========== Masao Kanno (Mr.) Consul Consulate General of Japan in San Francisco 275 Battery Street, Suite 2100, San Francisco, CA 94111 Tel: 415-780-6064 Fax: 415-767-4200 Email: masao.kanno@mofa.go.jp ==========
Notes :	
Attachments :	?Japan?Comments on CHSRA's Draft 2016 Business Plan.pdf (104 kb)

April 18, 2016

California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA95814

To Whom It May Concern:

Please accept the attached comments from my bureau regarding your draft 2016 business plan.
I hope you will find it useful in implementing your project.

Sincerely,

Tomohiro KOBAYSHI
Director
Office of Project Coordination, International Policy and Project Division, Railway Bureau
Ministry of Land, Infrastructure, Transport and Tourism
2-1-3, Kasumigaseki, Chiyoda-ku, Tokyo, Japan
Phone: +81-3-5253-8551
Fax: +81-3-5253-1635

Japan's Comments on the California High-Speed Rail Authority's Draft 2016 Business Plan

《General Remarks》

- We believe that the plan to link Silicon Valley and the Central Valley by 2025 is more realistic than the previous plan for the following reasons:
  - By linking the system to a densely populated area during the early stages of the project, this plan works to build ridership demand sooner.
  - It will be possible to construct this segment with committed funds.

- The San Francisco Bay Area has seen a significant rise in population and now has chronic traffic congestion. We feel that it is essential to have alternative transportation options aside from cars and airplanes. The Bay Area has also seen a sharp increase in home and rental prices. The opening of a high-speed rail line would create a larger commutable area with promising potential to alleviate the situation.

- On the other hand, in order to extend the system to Los Angeles it will be necessary to secure additional funding and complete difficult construction projects that include building tunnels near fault lines. As such, seismic countermeasures are one crucial area that California should pay special attention to, as in the case of Japan. We would like to closely follow future developments in the discussion of how this segment will be completed.

- A high-speed rail system facilitates the establishment of 'positive connectivity' for revitalizing communities and developing stations in cities along the route. We feel that the business plan would be more practical if it included details about how the high-speed rail project will coordinate with the cities along the route.

《Detailed Remarks》

Funding Sources

- The proposed plan will make it possible to secure all funds for the construction costs of the Silicon Valley - Central Valley segment using federal grants, state bonds and Cap-and-Trade revenue. We would like to express our strong support of this plan. However, in order to ensure sufficient demand, it is essential to fully connect San Francisco and Los Angeles. Funding is still insufficient to complete all of Phase 1, and it is necessary to consider options for funding plans soon.
- Also, developing commercial facilities such as a shopping centers and hotels would be helpful for an operator trying to increase their revenue. We will be able to provide our expertise and knowledge.

Early Selection of an Operator

- We would like to express our strong support of conducting bidding to secure an operator within the next year. In Japan, an operator is selected during the early stages of the planning process. The operator also plays a major role in developing the maintenance plan for the Shinkansen. By incorporating the operator's opinions into the plan, it becomes possible to check whether the system will be logical from an operations and maintenance perspective. Selecting an operator during the early stages is also essential for finding ways to maximize operational efficiency and reduce lifecycle costs.

Procurement Packages

- We note that the draft business plan lists rail infrastructure and rolling stock as separate procurements. We support having the rail infrastructure bundled into one procurement package. Integration between rail infrastructure and rolling stock is very important for ensuring operational safety and efficiency. We are open to discussion on this point and would like more information on why the Authority seems to want to move in a different direction.

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Gary
Last Name :	Patton
Stakeholder Comments/Issues :	I serve as the Executive Director of the Community Coalition on High-Speed Rail, and am submitting the attached comments on their behalf. The CC-HSR is also jointly submitting other comments, in cooperation with Citizens For California High-Speel Rail Accountability, by way of a letter from attorney Jason Holder. Gary A. Patton, Attorney at Law P.O. Box 1038 Santa Cruz, CA 95061 Telephone: 831-332-8546 Email: gapatton@gapattonlaw.com Website: www.gapatton.net <http://www.gapatton.net/>
Notes :	
Attachments :	CC-HSR Letter Commenting on 2016 Business Plan.pdf (233 kb)

Gary A. Patton, Attorney At Law
Post Office Box 1038, Santa Cruz, California 95061
Telephone: 831-332-8546 / Email: gapatton@gapattonlaw.com

April 18, 2016

Dan Richard, Chairperson, Board of Directors
California High-Speed Rail Authority (CHSRA)
770 L Street, Suite 1160
Sacramento, CA 95814

RE: Comments On Draft 2016 Business Plan
[Sent By Email: 2016businessplancomments@hsr.ca.gov]

Dear Chairperson Richard and Board Members:

These comments on the Draft 2016 Business Plan are being submitted on behalf of the Community Coalition on High-Speed Rail (CC-HSR). CC-HSR has been working on high-speed rail issues since 2008.

The comments in this letter are in addition to other comments jointly submitted on behalf of CC-HSR and Citizens for California High-Speed Rail Accountability by attorney Jason Holder. This letter will make a set of specific comments on the 2016 Draft Business Plan, providing those comments on a page by page basis. The letter will begin, however, with an overall analysis of how well the Authority's Draft 2016 Business Plan complies with the requirements of Section 185033 of the California Public Utilities Code.

Code Requirements – Purpose Of The Business Plan
By way of requirements imposed on the Authority by Public Utilities Code, the Authority has been directed *by the Legislature* to submit a biennial "business plan" *to the Legislature*, with the current version of Public Utilities Code §185033 specifying that the first such business plan was due by May 1, 2014, and with the second installment due to the Legislature this year, on or before May 1, 2016. §185033 specifies both the content and the timing of the required business plan submission, as well as the procedures by which public comments are to be taken on the proposed plan.

The *purpose* of the business plan is clearly to provide the Legislature (and the public, too, of course) with specific facts that will allow the Legislature to ensure that the proposed high-speed rail project is being well managed, and that the objectives of the project, as spelled out in state law, will actually be achieved, and that the public monies allocated for the project will be properly and effectively spent.

Since CC-HSR is very critical of the business plan draft made available for public comment on February 18, 2016, we are copying our comments to the Governor, and to the Assembly Committee on Transportation, the Senate Committee on Transportation and Housing, the Assembly Committee on Budget, and to the Senate Committee on Budget and Fiscal Review.

Naturally, we hope that the Authority will take heed of the comments we make, but since the *purpose* of the business plan is really to provide the *Legislature* with the ability to make good budget and other decisions with respect to the Authority's implementation of the state's high-speed train project, CC-HSR thinks that the Legislature needs to know at the earliest possible time that the Authority's business plan, as currently proposed in the February 18, 2016 draft, is woefully inadequate, and that unless the final business plan submitted by the Authority is fundamentally changed, and is, in fact, completely rewritten, the Legislature should take action to suspend funding to the Authority until the Authority demonstrates, if it can, that the Authority actually has a viable plan to construct and operate a high-speed train system that will meet the objectives outlined in state law.

CC-HSR notes that Public Utilities Code §185033 was amended, effective January 1, 2014, to restate and reduce the Authority's reporting requirements. Previously, Public Utilities Code §185033 required the Authority to report on all of the following issues, in the biennial business plan:

1. The type of service the authority anticipates it will develop, such as local, express, commuter, regional, or interregional;

2. A description of the primary benefits the system will provide;

3. A forecast of the anticipated patronage, operating and maintenance costs, and capital costs for the system;

4. An estimate and description of the total anticipated federal, state, local, and other funds the authority intends to access to fund the construction and operation of the system; and

5. The proposed chronology for the construction of the eligible corridors of the statewide high-speed train system.

6. A discussion of all reasonably foreseeable risks the project may encounter, including, but not limited to, risks associated with the project's finances, patronage, right-of-way acquisition, environmental clearances, construction, equipment, and technology, and other risks associated with the project's development, and the authority's strategies, processes, or other actions it intends to utilize to manage those risks.

Some of the same issues must be addressed by the authority under the current requirements of Public Utilities Code §185033, but the current statute is more general in stating what the Authority must provide as part of the required business plan. As this letter observes, despite these reduced demands, the Authority has signally failed to provide a genuine "business plan," and the factual materials required by the statute have either not been provided at all, or have been provided in a form that makes it almost impossible for the Legislature (or for members of the public) actually to know what the authority's plans are.

Unless the final business plan is fundamentally revised before being submitted to the Legislature (which seems highly unlikely, since the Authority has said that it intends to submit the business plan to the Legislature by May 1st, and the changes that need to be made are extensive), the Legislature should reject this 2016 business plan as clearly non-responsive to the requirements of Public Utilities Code §185033, and demand that the Authority provide the Legislature and the public with a business plan that will allow the public, and its elected representatives, to exercise the kind of supervision over the project that is the obvious purpose of §185033.

The Required Business Plan Elements Established in §185033

1. §185033 (b)(1)(A) requires a "description of the type of service the authority is developing and the proposed chronology for the construction of the statewide high-speed rail system, and the estimated capital costs for each segment or combination of segments.

   The 2016 Business Plan Draft does NOT provide the required information for "the statewide high-speed rail system, and the estimated capital costs for each segment or combination of segments." At least, it does not do so in any way that would allow either the Legislature or members of the public to evaluate the projected cost of "the statewide high-speed rail system." Members of the public, and members of the Legislature, need to know what it will cost to build the *entire system*, including the connections with Sacramento and San Diego. There is no clear presentation of this cost. It appears likely that the capital cost of the entire system is so far beyond what anyone could reasonably expect might ever be available that it would probably make good sense to abandon the project at this stage, so as to avoid spending something like ten billion dollars for a "train to nowhere," that carries hardly anyone. The Legislature can't evaluate what policies to pursue if the business plan doesn't provide the required estimated costs for the *entire system*.

2. §185033 (b)(1)(B) requires "a forecast of the expected patronage, service levels and operating and maintenance costs for the Phase 1 corridor… [which corridor is established between Los Angeles Union Station and Anaheim and the Transbay Terminal in San Francisco] and by each segment or combination of segments for which a project level environmental analysis is being prepared for Phase 1. The forecast shall assume a high, medium, and low level of patronage and a realistic operating planning scenario for each level of service.

   This section of the law calls for the business plan to present an easily understandable report, on a segment by segment basis, of the expected patronage, service levels, and operating and maintenance costs currently expected. Again, the purpose of the requirement is to allow the Legislature, and members of the public, to evaluate the key factors that will either indicate the likely success or failure of Phase 1 of the overall project. The draft business plan utterly fails to comply. Some of the information may be gleaned, perhaps, from the appendices, but the Legislature specified a "business plan," not a set of self-satisfied promotional statements, attached to difficult to read reports that may or may not have the information the Legislature wanted to know about. It is also important to state that the current draft of the business plan most emphatically does not provide the required information for a system that connects to the Transbay Terminal, an independent reason to find that the draft business plan is noncompliant with the requirements of §185033.

3. §185033 (b)(1)(C) requires "alternative financial scenarios for different levels of service, based on the patronage forecast in subparagraph (B), and the operating break-even points for each alternative, assuming, as specified in subparagraph (J) of paragraph (2) of Streets and Highways Code §2704.08, that the passenger service will "not require a local, state, or federal operating subsidy."

   Again, it is clear what the Legislature has demanded. This kind of succinct, clear statement about alternative financial scenarios has simply not been presented by the Authority in the current draft of the business plan.

4. §185033 (b)(1)(D) requires "the expected schedule for completing environmental review and initiating and completing construction for each segment or combination of segments of Phase 1."

   A listing of a schedule for environmental review is found on Page 26. The schedule is not well anchored to the facts, however, and is extremely optimistic about how quickly environmental review can be completed, particularly insofar as the Draft 2016 Business Plan proposes new approaches to the project implementation and purpose that will likely mean that the 2005 Program Level EIR for the entire system must be redone. Furthermore, the listing provided seems to assume that the Authority is not going to have to comply with the California Environmental Quality Act (CEQA). Even if the estimates in the listing were correct, there is no clear, segment by segment analysis, as is called for in the statute.

5. §185033 (b)(1)(E) requires the business plan to provide "an estimate and description or the total anticipated federal, state, local, and other funds the authority intends to access to fund the construction and operation of the system, and the level of confidence for obtaining each type of funding.

   While information is, admittedly, provided about the funding sources that the Authority anticipates accessing, the information produced by the Authority is not contained in an easily understood format, to allow the Legislature and the public really to understand the financial situation. As comments submitted by others properly note, there is no demonstration, whatsoever, that the Authority actually has access to the funding necessary to build even the Phase 1 project, much less the "entire system," and unless the facts are made clear in the business plan, as the Legislature obviously intended by enacting §185033, then it becomes impossible for the Legislature (and for the public) to evaluate whether or not the state should continue to pursue a project with very little, if any, chance of financial success.

6. §185033 (b)(1)(F) requires the Authority to provide information on "any written agreements with public or private entities to fund components of the high-speed rail system, including stations and terminal, and any impediments to the completion of the system."

   The Authority has not provided the information required; nor has it said that there are no such written agreements (other than with the federal government, the exact provisions of which are not clear in the business plan). Presumably, the Authority does not want to

deliver any bad news, but what the Legislature has demanded is that the Authority be forthright about the funding for the necessary components of the high-speed rail system. The Authority has failed to comply.

7. §185033 (b)(1)(G) requires the Authority to report on "alternative public-private development strategies for the implementation of Phase 1."

   While the draft business plan does mention, in various places, possible public-private development strategies, the Authority clearly has no such strategies in place, and rather than admit this, as the statute requires, the Authority speculates that future partnerships with the private sector are possible. If the Authority were forthright, it would admit that it has solicited such private participation, and that no private entity contacted by the Authority has provided any indication that it is interested in providing a private contribution to develop the state's project.

8. §185033 (b)(1)(H) requires the Authority to provide a "discussion of all reasonably foreseeable risks…"

   A *listing* of various risks is included in Section 9 of the draft business plan, but what is provided is not, in fact, a "discussion." A fair presentation and compliance with the requirements of §185033 would reveal not only that there are MANY risks involved with the project (more than the Authority lists), but that many of these "risks" are almost certainties, undermining confidence that the project could ever be constructed and operated as state law contemplates. Just to list a couple of "risks" that the Authority has not noted, the impact of self-driving cars, and the possible feasibility of a "hyperloop" system, could have a real impact on the proposed project; but these are not either "listed" or "discussed."

This Is No "Business Plan"

If the Authority were a business organization that had obtained initial funding for its proposed high-speed train project, and if the Authority were then coming to the original investors to seek additional funding (a very common business situation) it is almost certain that the Authority would never receive even a dime of additional funding if this February 2016 draft were the Authority's proposed "business plan."

The Legislature has demanded a *real* "business plan," and has further required that *that plan* be updated every two years. The Legislature has not asked for a *new plan* every two years. The purpose of the business plan requirement is to keep the Authority "on track," working to implement the largest public works project in the history of the United States.

The Legislature has specified in detail exactly what information it wants, and how that information should be presented. Instead of providing what the funder (in this case the Legislature) told the Authority that it wants, as the Legislature has spelled out its requirements in Public Utilities Code §185033, the Authority has provided a rah-rah promotional document, that ends up with a rosy statement about what the Authority "envisions" (see Page 86).

The Legislature hasn't asked for "visions." It has asked for a real "plan," based on facts, and based on hard information, not speculation, and organized in a way that will allow members of the Legislature, and members of the public, to evaluate the likely success (or not) of the proposed project. That has not been forthcoming. What is really worse, from the point of view of the credibility of the Authority, is the big "switcheroo" that the Authority is now presenting as its way of moving ahead.

For the last four years, the Authority has told everyone that its "plan" was to construct the first, initial operating segment of its total project from the Central Valley to the Los Angeles Basin. Now? Wow! We have decided to switch around and go in exactly the opposite direction! If this were a startup business, no credible investor would provide the Authority with any additional funding whatsoever, because the Authority clearly does not have an actual "business *plan*," which they are seeking to implement and execute. The Authority is simply an amateur hour operation with no actual "plan" in place at all. The Authority is purely reactive, and is manifestly unprepared for the inevitable difficulties that implementing an actual "plan" will almost always entail.

<u>The Legislature should demand that the Authority provide a real plan, for evaluation by the Legislature and the public, or the Legislature should pull the plug on the Authority's "project without a plan</u>."

Specific Comments On The Draft 2016 Business Plan
Here are specific, page by page, comments on the document that the Authority has called its 2016 "business plan."

1. This comment letter has pointed out that the Authority has not provided the report called for by Public Utilities Code §185033. That the Authority essentially admits this can be found in the section titled, "Statutory Requirements for a Business Plan," found at pages 6-7 in the Authority's document. While the Authority lists the requirements of the statute, the Authority does not systematically respond, but summarizes its "plan" in the first paragraph found on page 6, stating that the document "summarizes the progress we have made, …updates information and forecasts, … and identifies key milestones and decisions we anticipate making over the next few years." In short,

the draft document is not the "business plan" that the Authority is statutorily required to produce. Instead, it represents a kind of "status report."

2. The "Executive Summary" on page 9 claims that "there are now more than 100 miles of construction underway in the Central Valley." This is simply untrue. Constructions activities, such as they are, are occurring only in or adjacent to the City of Fresno, and the work being undertaken is not related to the construction of a rail line, which might be measured in "miles." The statement is intentionally deceptive, intended to keep members of the Legislature, and others, in the dark about the Authority's notable lack of progress.

3. Also on page 9, the Authority describes the Phase 1 system as connecting "the San Francisco Bay Area to the Los Angeles Basin." In fact, the statutory requirement is for the project to extend from the San Francisco Transbay Terminal to the Los Angeles Union Station and Anaheim. As in the example just mentioned, the Authority is obviously trying to disguise the fact that it has no "plan" that can actually complete the project as specified by the Legislature.

4. On page 10, the Authority says that it is now "our plan" to "connect the Silicon Valley to the Central Valley," saying that the Authority is now aiming to "offer rail passenger service between these two important economic regions." As noted earlier, this "plan" is a completely new "plan," never disclosed or discussed before in any significant way. Most notably, the objective of this newly-stated "plan" seems to be to offer commuter rail to serve Silicon Valley industry, but the "purpose" of the state's high-speed rail project is not to provide new commuter train services. It is to provide a high-speed rail connection between San Francisco and Los Angeles, in Phase 1, with ultimate high-speed train service to be extended to both San Diego and Sacramento. In short, this edition of the Authority's "business plan" shows that the Authority is not keeping its eye on the ball, describing a "plan" and then carrying it through, with biennial reports to the Legislature as the Legislature has required. Instead, the Authority has converted its mission to devising its "own plan," the "our plan" of this section of the document, and is simply trying to find some way to keep justifying its expenditure of funds, even though the end result of the expenditures it is making will be some new thing, never determined to be a state priority.

5. The statement made by the Authority on page 10, relating to the Authority's claim that construction bids have come in under estimate, does not disclose that there are very significant cost overruns that the Authority has not chosen to reveal, as it reviews the overall financial demands that the Authority will have to meet to construct the project.

6. The Authority claims on page 10 that "significant progress has been made in advancing environmental clearance of the Phase 1 system. The only "clearances" obtained have been those obtained under the National Environmental Policy Act (NEPA). Compliance with the requirements of the California Environmental Quality Act (CEQA) have most emphatically not "advanced." The adequacy of the Fresno to Bakersfield Environmental Impact Report (EIR) is being challenged in a CEQA lawsuit which has not proceeded because both state and federal courts (including the California Supreme Court) are now addressing claims by the Authority that the Authority does not have to comply with California's premier environmental law. Were the Authority forthright, it would reveal to the Legislature that environmental clearance activities are now suspended because of the Authority's outrageous claim that the Authority doesn't have to comply with CEQA. So far, an appellate court has rejected this claim; if the California Supreme Court agrees, then the Authority is very far, indeed, from having made the "progress" it states it has made in this section of the document.

7. On page 11, the Authority provides its justification for having "switched" its previous "plan," coming up with a completely new "plan" to connect the Silicon Valley to a temporary station located outside of Bakersfield, California. Since there is no current demand for transportation services between San Jose and the outskirts of Bakersfield, it is obvious that the reason that the Authority has now determined that this Bakersfield San Jose connection is its new "plan" is only because the Authority has totally failed to be able to carry out the plan that was supposed to have been guiding the Authority's efforts since 2012.

8. On page 12, the Authority further discusses its self-derived new "plan." The concept is that once an actual rail line is in place, private investors will see that there is revenue potential, and then provide the funding that is so clearly lacking at the current time. This is wishful thinking. Before any investor will invest, the investor will conduct an investment grade ridership report, independently to verify the numbers. Therefore, the Authority will not be successful in stretching the truth with their vision of ridership that will turn a profit.

9. Since the only actual demand from San Jose to the Central Valley would be to Fresno, and any further construction to the south of Fresno would almost certainly produce very little if any ridership and revenue, any legitimate consideration of a new "plan," to be based on the reasoning just outlined, should actually have the Authority considering reorienting its project to extend from Fresno to the San Francisco Transbay Terminal. It is just possible that such a project would, in fact, produce ridership and revenue capable of demonstrating to an outside investor

the benefits of investing in the overall state project. The fact that the Authority did not analyze this option indicates that the Authority is not actually "planning" anything, but is simply spending money, and that its "plans" are intended only to permit the Authority to keep doing that, until the money is ultimately gone.

10. The new "plan" has another problem, not mentioned on page 12, and not disclosed elsewhere in the Authority's draft "business plan." Changing the project to provide commuter service between San Jose and the Central Valley repudiates a fundamental premise of the earlier plan, namely that this project was not going to have growth-inducing impacts in the Central Valley. Now, the Authority is saying that it will be an actual purpose of the project to stimulate and then serve such new residential growth. Because this is a completely new "plan," the Authority must undertake a complete revision and recirculation of the program level 2005 EIR for the entire statewide project. That earlier EIR denied that the project would have any growth-inducing impacts. As described in the Authority's latest document, however, the Authority is now seeking to use the project to build ridership by inducing residential growth in the Central Valley, as a way to provide a housing supply for Silicon Valley industry, and ridership for its commuter trains. Not only is that a horrible idea, substantively, it will require a long round of new procedural reviews that will be costly, and the outcome of which is uncertain.

11. As a last comment on page 12, the Authority claims that "changing circumstances" have led the Authority completely to replace its former "plan" with the current "plan." In fact, no "circumstances" changed at all. Purely and simply, the Authority never figured out correctly how to get a train from the Central Valley into the Los Angeles Basin, because the Authority simply didn't pay sufficient attention to the difficulty of crossing the Tehachapis. The Tehachapis have not moved or changed their character or in any way. The Authority wants to characterize its planning failure as "changed circumstances" so as not to reveal the Authority's utter failure to be able to execute the "plan" they have had in place since 2012.

12. On page 15, the Authority claims that their project will be "powered by 100% renewable energy." There is absolutely no foundation for this claim. If the Authority wants to say this, it needs to document the actual energy-producing projects that it will either construct itself, or contract for. Unless there are real projects identified, there is nothing to justify the Authority's "feel good" assertion. Statements like these, and the Authority's lack of forthrightness about the difficulties it has encountered in trying to carry out the former "plan," substantially detract from the Authority's credibility on any question.

13. On page 16, the Authority claims that the current document "builds on the 2012 and 2014 Business Plans." In fact, as already indicated, the latest "plan" is a massive "switcheroo," and repudiates the 2012 and 2014 business plans. Saying that the new document "builds on" the earlier plans is a way to avoid disclosing that the Authority has not, in fact, been able to advance those earlier plans. Hence, the Authority is now proposing a completely new "plan," and neither the Legislature nor the public should have any illusion that the Authority will be any better in executing on this "plan" than it was on executing the 2012 and 2014 "plans." To raise a question that is not totally rhetorical, "what happens if getting over Pacheco Pass, or tunneling under it, turns out to be as costly and as geographically challenging as the Authority has found it to be getting over the Tehachapis?" I guess we will have to wait to see the 2016 plan, unless the Legislature in fact exercises its responsibility for oversight of this runaway "project without a plan."

14. On page 17, the Authority says that it now has an "ongoing funding stream through the state's Cap and Trade program." Anyone reading these words should be advised that there is no long term, nor even any short term stability to this so-called "funding stream." Significant legal challenges are pending in court, and any student of AB 32 and the state's "Cap and Trade" program is well aware that the justification for using Cap and Trade funding for the high-speed rail project is on very shaky legal ground. Even if the allocation of Cap and Trade funding to the Authority survives these significant and pending legal challenges, the long term political support for this "funding stream" is anything but secure.

15. On page 19, the Authority's document again alludes to the construction contracts that came in "under bid." No conclusion can be drawn from this, despite the Authority's invitation to construe this as "happy news," since the design build contracts being let by the Authority generally produce cost overruns which eliminate any initial savings. This is, in fact, clearly already the case with respect to the Authority's existing contracts.

16. On page 20, the Authority provides the actual description of the construction now underway, the construction that the Authority earlier claimed in the Executive Summary was "more than 100 miles" in extent. The construction, in Fresno, is 1.5 miles long, and relates to highway and grade separations, not the construction of an actual rail line.

17. On page 22, the Authority again fails to disclose the actual situation it faces with respect to environmental review. Nowhere does the Authority indicate that it has launched an unprecedented attack on the California

Environmental Quality Act, claiming that the Authority is exempt from compliance. So far, the courts have not upheld that extraordinary claim, and because the Authority is trying to avoid CEQA altogether, the Authority never addresses CEQA compliance in this business plan. This is a fundamental disservice to the Legislature, and to anyone who would like to know what is really going on with the project. On this page, the Authority also misstates the environmental review situation on the Peninsula. The Caltrain electrification project is part and parcel of the Authority's plan for a "blended system" on the Peninsula, and the failure of Caltrain and the Authority to address environmental impacts jointly, and to analyze the project from this perspective, has resulted in litigation that challenges the assertions made by the Authority in this document.

18. On pages 22 and 23, the Authority lists the various aspects of the project that require environmental review, but the document does not disclose the difficulties in providing an adequate environmental review of the project.

19. On page 26, in listing the "projected environmental schedule," the Authority has provided a chart with the dates of "anticipated record of decision." This language relates to environmental review carried out under NEPA. Again, the Authority is seeking to "hide the ball," and has not disclosed that it has decided to pick a fight with the California Environmental Quality Act, and to claim that CEQA does not apply to the high-speed train project. The "schedule," provided on this page is, thus, totally bogus, with virtually no relationship to the reality that the Authority is actually facing, with respect to required environmental review procedures.

20. Page 27 discloses that the Authority is planning to build a station in Gilroy. What aspect of the "plan" does this station advance? In fact, there seems no reason for any such station, except the fact that the Authority is apparently attempting to design a project that will have the greatest possible growth-inducing impact, putting the greatest possible amount of prime farmland at risk.

21. On pages 29 and following, the Authority proclaims its "Guiding Principles and Core Values." Why are these topics that appear in a "business plan?" The fact is, whatever the Authority's "core values" might be, the charge to the Authority is not to pursue "values" or "visions;" it is to manage and implement a project that has been authorized by the Legislature. This "business plan" document is supposed to report on the Authority's progress (or not) on the project that the Legislature has established. Instead, the Authority seems to think that the "statewide program" for high-speed rail is meant to be

pursued under a "flexible framework." This is a basic misconception by the Authority of its actual duty and obligation, and should give the Legislature pause.

22. One item in particular should be highlighted with respect to the materials in Section 2, found on pages 29 and following. The Authority says that it has a guiding principle of considering "appropriate business models." If it were sincere, the Authority would see if it were possible to attract an organization that actually operates high-speed trains, to take over and implement the project. The "core value" of the Authority seems to be to do whatever is necessary to perpetuate its own existence, instead of finding the best way to serve the people of California.

23. On page 30, the Authority says that providing for the safety and security of the system is a "core value." However, there is absolutely no evidence that the Authority has any kind of a "plan" to provide for such safety and security, at a time when terrorist incidents involving trains are common. If this "core value" is more than rhetorical, but is actually to be part of a "plan" for the system, then the Authority should surely cost it out, and show how it will be achieved, in a document that it calls itself a "business plan."

24. Another "core value" listed by the Authority on page 30 is providing for "positive train control" for the high-speed train system. In fact, the Caltrain electrification project is moving ahead with a positive train system completely inconsistent with the system that has been proposed for the rest of the state's high-speed train system. There ought to be a "plan" for dealing with that, and it ought to be revealed in any document that wants to be given the status of a "business plan."

25. On page 31, the Authority acknowledges the need to protect both trains and automobile and pedestrian traffic where roads cross the tracks in the "blended system." What the Authority has not disclosed, and acts like it doesn't know, is that "quad gates" are not a sufficient answer for the forty-plus grade crossings up and down the San Francisco Peninsula. Separated grade crossings are absolutely required on that route, and how to finance and construct those necessary facilities needs to be part of any document that calls itself a "plan."

26. Also on page 31, the Authority makes the statement that the Authority will not "construct or operate the system ourselves." This statement well illustrates what is apparently the Authority's most important "core value;" namely, that the Authority is going to be "in charge" of spending all the available money (until it's all gone, of course). Any "plan" worth its name would recognize that getting the system operator deeply embedded in the design decisions would be absolutely vital, if there

is really a desire to have a workable project. As noted in our general comments, made earlier, this document isn't really a "business plan." Hopefully, the Legislature will take notice of this, and demand that a real plan be developed, and then implemented. Unless the Legislature does require that, the Authority will continue to expend public funds without producing anything positive for the public.

27. The "Business Model" section of the document, beginning on page 35, makes clear that the Authority thinks that it is a good "plan" to have the government own and construct the capital facilities, with some private sector operator then maintaining and operating them. In fact, as the history of the Authority's "planning" to date makes clear, this is a recipe for fiscal and operational disaster. The Legislature should demand that the operator of the system have a major role in deciding how the system will be designed and built. Although this section of the Authority's document claims that the Authority will "engage an operator early," if there is a real "plan" to do that, this should be disclosed. So far, no private sector organization has indicated any willingness, whatsoever, to commit its own resources to the project, and the bad business model being pursued by the Authority is undoubtedly one of the major reasons why.

28. The Authority says it will "strive to enhance ridership and revenue during the initial ramp-up period." This comment is found on page 39. An adequate "business plan" doesn't pledge to "strive." It outlines a real program, with specifics, and numbers, that demonstrates exactly what steps the "plan" proposes as a way to achieve that objective. It is unfortunate, but true, that virtually every page of the Authority's document demands the same response: "This is not a business plan!"

29. On page 41, the Authority says, with reference to positive train control, that "there should be one signaling and communications system across the entire high-speed rail network to ensure performance and reduce interface risk across the geographical segments." In fact, as already noted, the Authority has done nothing to ensure that this is in fact the case, and Caltrain is proposing to build an electrification project, to be used by the Authority, that relies on the CBOSS system, a system completely different from the system that the Authority is planning to utilize elsewhere on the high-speed train system that it will build.

30. The statement made on page 45, that private sector interest is "very high," is simply not true. To date, no private sector operator has been willing to commit its own resources, and the strategy to attract such a commitment in the future is totally dependent on revenue projections that are completely unproven, and that seem, on their fact, to be

ridiculous. Please see the comments of William Grindley, separately submitted.

31. On pages 46 and 47, the Authority touts the high-speed train project as a commuter train to serve the Silicon Valley. The original purpose of the project was to provide high-speed service between Los Angeles-Anaheim and the Transbay Terminal in San Francisco. Talk about "mission drift!" There are many substantive reasons to reject the idea of inducing urban sprawl into the agricultural areas of the Central Valley through the high-speed train project, but as noted before, even if this were a "good idea," the fact that it is a completely different idea, a brand new "plan," means that the Authority must go back to stage one in terms of the environmental review previously conducted in 2005. This will take several years, and significantly delay the project. One has to assume that the Authority must realize this, and if so, the only conclusion possible is that the Authority is not really serious about this new "plan," but is simply trying to find some way to stay "in business" when it is obvious that it has failed in its basic mission.

32. On page 47, the Authority reports on its Memorandum of Understanding with the Peninsula Corridor Joint Powers Board, to operate a "blended" project on that corridor. The Authority has not participated in the environmental review of the electrification project that is absolutely required if that blended project is to advance, and has not advanced any way that such blended project could go forward in a manner that would not massively disrupt street and traffic connections in the local communities along the right of way.

33. On page 67, the Authority's document outlines "Forecasts and Estimates," but the suggestion that the Authority will only take five years (from 2024 to 2029) to connect from Bakersfield to Los Angeles-Anaheim, taking account of the massive geological problem of crossing the Tehachapis, is obviously a fiction. Again, what the Authority should be producing is a "plan." What the Authority has produced is a "vision."

Conclusion

As indicated in the very first sentence in this set of comments, CC-HSR has been working on high-speed rail issues since 2008. Early on, concerned about various impacts of the plan on the San Francisco Peninsula, CC-HSR operated with its goal being to help the Authority "do it right." As time has passed, it has become quite apparent to CC-HSR that the Authority, in fact, has no interest in "doing it right." This so-called "business plan" provides clear evidence of that. The Authority's so-called "plan" does not comply with the statutory requirements that have mandated it, and the current "plan" is completely different from the "plan" that the Authority has supposedly been following since 2012.

It would be nice to think that the Authority might read our comments, and then decide to reformulate its submission, to make this document into a real "business plan." Hope springs eternal, and thus we do hope that the Authority will do that. But just in case the Authority doesn't, we truly address these comments to the Legislature and to the Governor, who have been charged by the voters who elected them to take care of us! The current "plan" is not really a "plan" at all, and unless the Legislature demands a real plan, and cuts off funding until there is one, the net result of these years of work, and of more than a billion dollars of public expenditures so far, will add up to nothing.

Thank you for taking our comments into account.

Very truly yours,

Gary A. Patton

cc: Governor Jerry Brown
Assembly Committee on Budget
Assembly Committee on Transportation
Senate Committee on Transportation and Housing
Senate Committee on Budget and Fiscal Review
CC-HSR Board of Directors
Local Elected Officials
Other Interested Persons

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Project Email
First Name :	Lawrence
Last Name :	McQuillan
Stakeholder Comments/Issues :	Dear Madam or Sir, I would like to submit to the CHSRA as a comment to the 2016 Draft Business Plan the attached PDF. Thank you. Sincerely Lawrence J. McQuillan --- Lawrence J. McQuillan, PhD Senior Fellow and Director, Center on Entrepreneurial Innovation Independent Institute 100 Swan Way Oakland, CA 94621-1428 (510) 632-1366, ext. 125 (510) 568-6040 Fax lmcquillan@independent.org Twitter: @Econ_Doc LinkedIn www.independent.org The Power of Independent Thinking
Notes :	
Attachments :	2016-04-13_cagf_spring_2016.pdf (384 kb)

INDEPENDENT INSTITUTE

California's High-Speed Rail Authority Wins Dishonor of the California Golden Fleece Award

The California High-Speed Rail Authority (CHSRA) has won the Independent Institute's first California Golden Fleece Award for its lack of transparency and history of misleading the public about key details of the state's "bullet-train" project, which no longer reflect what voters approved in 2008.

The agency's "bait-and-switch" strategy justifies a statewide vote on whether or not to proceed with the train system. Californians should reject this unnecessary and expensive boondoggle.

Background

In November 2008, California voters approved Proposition 1A, a $9.95 billion bond measure authorizing construction of a high-speed "bullet train" between downtown San Francisco and the greater Los Angeles area. The vote was 53 percent in favor and 47 percent opposed. The ballot measure contained key details regarding the project's cost, dedicated tracks, trip time, and financing plan. Many of these details have been changed repeatedly since 2008.

The Cost: A Moving Target

Before the 2008 vote on the bond measure, the California High-Speed Rail Authority said: "The total cost to develop and construct the entire high-speed train system would be about $45 billion." Proposition 1A also promised voters that the train system would operate without taxpayer subsidies: "The planned passenger service by the authority in the corridor or usable segment thereof will not require a local, state, or federal operating subsidy." Soon after voters approved the project, however, cost projections escalated.

In its original 2012 Business Plan, the CHSRA set the price tag at a staggering $98 billion. Public and political outcry caused rail officials to quickly backtrack. Just five months later, the revised 2012 Business Plan lowered the cost by $30 billion by moving to a "blended" route: one that would share existing rail tracks in urban areas with other train systems, rather than building new dedicated tracks.

Based on this radical redesign, CHSRA said the entire 520-mile system would be completed in 2029 at a cost of $68 billion, but only by eliminating high-speed service between Los Angeles and Anaheim and between San Jose and San Francisco.

Then in 2016, the CHSRA Business Plan lowered the cost by roughly $4 billion net, to $64 billion, through a combination of vaguely specified "design refinements," "system optimization," "value engineering," and "lessons learned from bids."

At this point, the ever-changing cost estimates defy belief. As noted by Dan Walters, *Sacramento Bee* columnist and longtime observer of state government: "Those charged with building California's north-south bullet train system have been more or less making it up as they go along." But regardless of whether the final cost is $64 billion, $68 billion, $98 billion, or even higher, the reality should be clear: The cost far exceeds the $45 billion approved by voters in 2008, and now with substantial track redesigns.

Tracks and Trip Time: From Bullet Train to Choo Choo Train

Public outrage over the $98 billion price tag prompted train officials to abandon the original plan of building dedicated tracks in urban areas. Instead, officials shifted to blended tracks in urban areas: the bullet train would share tracks with the existing Metrolink commuter network in Southern California and the Caltrain system in Northern California. But the blended approach increases trip time considerably from what was promised to voters.

Voters in 2008 were told the high-speed train would whisk travelers from San Francisco to Los Angeles in a "maximum nonstop service travel time" that "shall not exceed" 2 hours and 40 minutes. This specific trip time was often mentioned by supporters to sell the bond measure to voters. (See for example, here and here.) But with the blended approach, the fastest time between these cities is now estimated by the CHSRA to be 3 hours and 8 minutes, with zero nonstop trips planned — another violation of Proposition 1A. But more realistic trip times are expected to be 3 hours and 50 minutes, or more, under real-world travel conditions.

The original 2:40 trip time assumed that trains would operate at peak speeds of 220 mph, and "sustained revenue operating speeds of at least 200 miles per hour." But under the blended approach, high-speed trains must share tracks with commuter trains and freight trains, forcing them to slow down at the urban "bookends." And today's older urban tracks can typically handle maximum speeds of only 125 mph.

In February 2016, officials announced that the first operating leg of the high-speed train system would be built for $21 billion from downtown San Jose to an agricultural field in Shafter, north of Bakersfield, which would begin operating by 2025. The previous plan called for trains to operate first from Merced to Burbank by 2022, three years earlier. This change in the initial route might appear innocent, but by moving the first leg of construction further north, officials can delay construction on a tunnel through the Tehachapi and San Gabriel Mountains, which is likely to bust the current $64 billion budget.

According to a *Los Angeles Times* special report:

> The monumental task of building California's bullet train will require punching 36 miles of tunnels through the geologically complex mountains north of Los Angeles.

> Crews will have to cross the tectonic boundary that separates the North American and Pacific plates, boring through a jumble of fractured rock formations and a maze of earthquake faults, some of which are not mapped.
>
> It will be the most ambitious tunneling project in the nation's history. . . .
>
> However, a *Times* analysis of project documents, as well as interviews with scientists, engineers, and construction experts, indicates that the deadline and budget targets will almost certainly be missed — and that the state has underestimated the challenges ahead, particularly completing the tunneling on time.
>
> "It doesn't strike me as realistic," said James Monsees, one of the world's top tunneling experts and an author of the federal manual on highway tunneling. "Faults are notorious for causing trouble."

Serious questions remain about whether sufficient funding will ever materialize to complete the newly proposed first leg from San Jose to Shafter, and then to eventually extend the line north to San Francisco and south through the mountains to Los Angeles as originally promised.

The Financing Plan: Smoke and Mirrors

Supporters of the high-speed rail project envisioned financing coming from multiple partners. Under Proposition 1A, California voters approved a $9.95 billion bond in 2008 to help finance construction of the rail network (interest costs will be an additional $9.5 billion). Voters were told that if they approved the bond, the federal government and the private sector would pay for the rest.

Supporters were counting on private investors kicking in as much as $36 billion. The federal government was also expected to contribute up to $18 billion. Another source of funding that arose in 2014 consisted of earmarking 25 percent of the proceeds from auctioning credits to emit greenhouse gases under California's "cap-and-trade" program, which is estimated to yield the rail project about $500 million a year. (Under the plan, the rail authority would use the annual "cap-and-trade" revenues through 2024, and then seek to borrow $5.2 billion against future carbon fees from 2025 to 2050.) To date, much of the promised financing has never materialized and largely amounts to wishful thinking.

Congress has pledged an initial grant of $3.3 billion, mostly through President Obama's economic stimulus package. But the state has received only $503 million of that money as of 2015. And Congress has balked at additional funding. "Congress is never going to allocate more money to a project that lacks the ridership numbers, speeds, private funding, and voter support once promised," said Rep. Jeff Denham (R-Turlock), chairman of the House rail subcommittee.

The legal authorization to impose the state "cap-and-trade" fees expires in 2020, making the future availability of this money questionable. And a lawsuit seeks to block use of the cap-and-trade fees for the high-speed rail project. According to Jessica Peters, principal fiscal and policy analyst with California's nonpartisan Legislative Analyst's Office (LAO): "About half of the [San Jose to Shafter] funds would come from cap-and-trade beyond 2020," when the fees are set to expire. A LAO review of the CHSRA's 2016 Business Plan also questioned the logic of choosing a field in Shafter as the initial southern terminus:

> Even with a temporary station or platform, ending the IOS [initial operating segment] in an unpopulated agricultural area does not appear to be an effective approach. This is because this location would not have the types of facilities and nearby businesses, such as transit connections, rental car facilities, and shops necessary to meet the needs of train passengers.

Finally, the private sector has not invested in the project, which is unlikely to ever be profitable. Summarizing, the LAO said that the CHSRA's current funding plan is "significantly short of the level needed to complete [the entire San Francisco to Los Angeles system] and does not identify how this shortfall [of $43 billion] would be met."

Moreover, the pledge to voters in 2008 that the high-speed train would operate without taxpayer subsidies was based on ridership estimates that are quickly evaporating. In 2008, the CHSRA forecasted a base annual ridership of 65.5 million intercity riders and a high projection of 96.5 million intercity riders by 2030.

But independent analysis concluded:

> The CHSRA ridership projections are considerably higher than independent figures developed for comparable California systems in Federal Railroad Administration and University of California Transportation Center at Berkeley studies. Using generous assumptions, this *Due Diligence Report* projects a 2030 base of 23.4 million intercity riders, 64 percent below the CHSRA's base of 65.5 million intercity riders, and a 2030 high of 31.1 million intercity riders, nearly 60 percent below the CHSRA's high of 96.5 million. It is likely that the HSR will fall far short of its revenue projections, leading to a need for substantial additional infusions of taxpayer subsidies.

The blended 2012 redesign will increase trip times substantially, making air travel, driving, Skype, or phone calls more attractive relative to a slower train ride:

> [A]ssuming the optimistic travel time projection of 3:50, the 2035 interregional ridership would be approximately two-thirds (67 percent) below CHSRA projected levels [of 21 million] at 6.9 million annually. Assuming realistic automobile costs and more-plausible outside-the-corridor ridership, the 2035 interregional ridership would be 77 percent below the CHRSA forecast, at 4.8 million annually. Even if the number of automobile drivers switching to rail equals the European experience, ridership would still fall nearly 65 percent short of the CHSRA projection.

Thus, the CHSRA's downgraded ridership estimate of 21 million people is still likely to be wildly exaggerated. The promise to operate the high-speed trains without subsidies, therefore, is fantasy using realistic ridership numbers: calculations by Joseph Vranich and Wendell Cox concluded that day-to-day operating losses will generate annual deficits totaling between $124 million and $373 million at the operating-cost midpoint projected by CHSRA for 2035. Subsidies would be needed to backfill these deep deficits.

The money secured to date is far less than needed to complete the project. With no clear path to obtaining the funds needed for completion, many Californians now decry "the train to nowhere."

And realistic ridership projections show that annual subsidies will likely be needed to keep the trains rolling, if the project is built at all.

The Pathologies of Government: A Lesson in Perverse Political Incentives

California's high-speed rail project highlights that governments do a poor job of assessing the costs and benefits of capital-investment projects since politicians do not personally bear the costs and benefits of the projects or of their calculation errors. In fact, politicians have an incentive to exaggerate the benefits and hide true costs, as was done with the bullet train, to build support for these projects. In contrast, private investors and private operators generally have an incentive to develop accurate projections of capital projects because, if they are wrong, they will typically bear the costs, and, if they are right, they can reap any profits from the wise stewardship of resources.

Train officials and supporters have repeatedly told the public that the train will cover operating costs, will not require any operating subsidies, and "generate sufficient cash flow to attract private capital" for future construction — even the first leg from San Jose to Shafter will feature "non-subsidized operations," according to CHSRA officials. If the project is as good of an investment as supporters claim, then taxpayer/government involvement to bankroll the construction and operation is unnecessary. Private investors and private operators can, and should, provide this transportation service.

But the evidence indicates that the high-speed rail project will not be self-sustaining. As it will waste scare resources, the bullet train qualifies as a boondoggle and should not be undertaken.

The Recommendation

The serious discrepancies between the original plan for the high-speed rail project and current promises warrant a statewide ballot referendum on whether to proceed with the project and, if so, how. There is growing opposition to the project now that more information is known about the true cost, slower routes, and financing uncertainties.

In February 2015, Gavin Newsom (D), California Lieutenant Governor and former mayor of San Francisco, said:

> We're not even close to the timeline (for the project), we're not close to the total cost estimates, and the private-sector money and the federal dollars are questionable. . . . I am not the only Democrat that feels this way. I am one of the few that just said it publicly. Most are now saying it privately.

Following Newsom's candid remarks, Assemblywoman Patty Lopez (D-San Fernando) said that she now opposes the project, and that five other legislative Democrats are also considering a switch to opposing it. Lopez supports a re-vote on the issue.

A January 2016 poll found that 53 percent of Californians support killing the high-speed rail project and using the unspent money on water projects; only 31 percent do not. Dan Walters of the *Sacramento Bee* echoes this sentiment: "We should put at least as much effort into protecting our vital water supply as we are wasting on a bullet train that we neither want nor need."

A March 2016 survey found that only 26 percent of likely voters in California consider the high-speed train as "very important" for the future of California. More Californians, 27 percent, view it as "not at all important." A majority of likely voters, 54 percent, now oppose building the high-speed rail system.

Californians deserve a re-vote on the high-speed rail project. Voters should use the opportunity to kill this unnecessary and expensive boondoggle sold to the public using tricks and deceit.

Written by Lawrence J. McQuillan, PhD, and Hayeon Carol Park, MA.

Each quarter, Independent Institute highlights a California state or local spending program, tax, or regulation that fleeces taxpayers, consumers, or businesses. The California Golden Fleece Awards shine a spotlight on waste, fraud, and abuse in California government to provide valuable information to the public, enabling them to provide needed oversight and demand meaningful change.

Fleece award winners are announced quarterly on Independent.org and posted on Independent's Twitter, Facebook, LinkedIn, and Instagram. We encourage people — both inside and outside of government — to send us Fleece candidates. To learn more and to submit your candidates, go to independent.org/cagoldenfleece.

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Scott B.
Last Name :	Birkey
Stakeholder Comments/Issues :	Attached please find Mr. Kole Upton's comments on High-Speed Rail Authority's Draft 2016 Business Plan. Best regards, Scott Scott B. Birkey Cox, Castle & Nicholson LLP 50 California Street | Suite 3200 | San Francisco, CA 94111 direct: 415.262.5162 main: 415.262.5100 | fax: 415.262.5199
Notes :	
Attachments :	Upton Comments on Draft 2016 Business Plan.pdf (75 kb)

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Scott B. Birkey
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File No. 74286

April 18, 2016

VIA E-MAIL (2016businessplancomments@hsr.ca.gov)

Dan Richard, Chair, California High-Speed Rail Authority
Jeff Morales, Chief Executive Office, California High-Speed Rail Authority
Diana Gomez, Central Valley Regional Director, California High-Speed Rail Authority
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

Re: Comments on Draft 2016 Business Plan

Dear Mr. Richard, Mr. Morales, and Ms. Gomez:

On behalf of F.M. Upton & Sons and Mr. Kole Upton, we appreciate the opportunity to provide comments on the California High-Speed Rail Authority's (HSRA) Draft 2016 Business Plan ("Business Plan" or "Plan").

Background

F.M Upton & Sons owns approximately 1,148 acres northwest of Chowchilla in Merced County (the "Upton Property"). The Upton family has maintained ownership of portions of the Upton Property since 1947. They are committed to principles of sound agricultural and natural resource stewardship, and to management practices designed to sustain the production of agricultural crops for future generations while maintaining important habitat for wildlife. Mr. Upton and his family have worked towards achieving these conservation goals through decades of sound management and the pursuit of partnerships with federal, state, and local agencies to preserve and maintain the biological and agricultural values of the property.

Because of their commitment to these values, the Upton family is concerned about any high-speed rail alignment within the Central Valley Wye area that would impact the biological and agricultural integrity of the Upton Property. An alignment along Road 13 from either State Route 152 or Avenue 21 would effectively destroy this integrity. In particular, a Road 13 alignment would cut through areas on the Upton Property specifically designed to enhance the environment. Notably, the U.S. Department of Agriculture's Natural Resources

Conservation Service is collaborating with Mr. Upton to provide funding and technical expertise for that environmental enhancement effort. Other areas located on the property are subject to a recorded agricultural conservation easement for the purposes of forever conserving the agricultural productive capacity of the area.

From a broader perspective, and as compared to an alignment along Road 19, a Road 13 alignment would result in fewer impacts to agricultural resources and potentially fewer impacts to biological resources. It would also result in fewer disruptive impacts to irrigation and drainage systems that serve the agricultural industry in this region. Significantly, a Road 19 alignment is supported by the vast majority of elected officials who represent constituents in the wye area, such as Congressman Jim Costa, State Senator Anthony Cannella, State Assemblyman Adam Gray, Merced County Supervisor John Pedrozo, and Madera County Supervisor David Rogers.

Comments on the Business Plan

Our comments on the Business Plan are organized around certain policy themes identified in the Plan that pertain to HSRA's goals and objectives for implementing high-speed rail in California. HSRA must adhere to and follow through on the promises that emerge from these themes in order to develop a high-speed rail system that truly will provide transportation benefits while at the same time supporting business (including the state's agricultural business), protecting the environment, and ensuring land use sustainability.

- ***HSRA Must Not Sacrifice Individual Protections in the Name of "Transformative and Dramatic" Change in California.***

The Business Plan states that high-speed rail will be a "transformative investment in California's future" and a "dramatic[] chang[e in] how people travel throughout the state." (Plan at p.15.) To enable these sweeping "transformative and dramatic" changes, the Plan indicates that one of its "fundamental objectives" is to "initiate high-speed rail passenger service as soon as possible." (Plan at p.9.) However, the Plan pays little attention to the fact that property owners and other individual interests are at risk of being severely impacted by high-speed rail in the face of HSRA's headlong rush to start a high-speed rail system in California. Real people with longstanding roots in their communities own property or businesses along proposed rail alignments. Their rights and protections should not be swept away by the momentum HSRA hopes to create in order to initiate high-speed rail service "as soon as possible." (Plan at p.9.)

- ***HSRA Must Not Make Any Alignment Decisions Before Those Decisions Are Subject to Environmental Clearances and Approvals.***

The Business Plan describes certain "next steps for delivering high-speed rail service to California," one of which is to complete the environmental clearance for the entire Phase 1 system. (Plan at p.51.) The stated intent is to ensure HSRA can "becom[e] shovel

ready" for construction. (Plan at p.22.) Environmental clearances and approvals, such as those related to the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) processes, are critically important. They require HSRA to evaluate and mitigate for the impacts of high-speed rail on agricultural lands, biological resources, and other environmental issues.

HSRA must not make any decisions regarding the location of high-speed rail alignments until those clearances and approvals have occurred. Otherwise, those decisions are merely post hoc rationalizations. To take one element of the high-speed rail system as an example, HSRA depicts a number of Central Valley Wye Alternatives in a figure available on-line and dated November 2014. HSRA should not make a decision as to any of those alternative alignments before completing the necessary environmental clearances and approvals for those alignments – not even for the sake of ensuring shovel-ready construction. To be meaningful, environmental clearances and approvals require a significant amount of processing time, particularly for a project of this magnitude. As such, we find it troubling that HSRA believes it will be completing environmental approvals and establishing the final alignment and station locations for the entire Phase 1 system by 2020, which is only three and a half years from the date the 2016 Business Plan will become final. (Plan at p.85.)

We also find it troubling that the Business Plan depicts in Exhibit 4.1 the Silicon Valley to Central Valley Line as excluding that portion of Phase 1 that leads to Merced. Spending time and money on evaluating elements of Phase 1 that appear to be logical extensions and connections to the Silicon Valley to Central Valley Line, but are left only as rail "stubs" that will not be serviced, is inefficient and wasteful, and frankly makes little sense. For that portion of the Phase 1 system, HSRA is effectively creating tracks to nowhere.

- ***HSRA Must Scrupulously Adhere to Its Stated Principles of Land Use Sustainability, and HSRA Must Minimize Farm Land Conversion in Implementing Its Promise of Sustainability.***

The Business Plan indicates that one of HSRA's "core values" is sustainable land use, and that one of the ways HSRA will support sustainable land use is by minimizing impacts to the natural environment. (Plan at p.33.) Of particular relevance to Mr. Upton is the Business Plan's promises to "preserve agricultural . . . lands" (Plan at pp.3 & 33), "slow[] conversion of farm land to development" (Plan at p.16), and "implement[] agricultural preservation" pursuant to an agreement with the Department of Conservation (Plan at p.28). These statements are the only acknowledgment of farm land conversion in the entire Business Plan, which is unsettling given the amount of farm land at risk of conversion from high-speed rail in the Central Valley. Because of the significant potential loss of agricultural resources and other critically important land use values associated with high-speed rail, HSRA should diligently adhere to its "core value" of sustainable land use, and not lose sight of the fact that the preservation of agricultural resources is a critical aspect of sustainable land use practices.

- ***HSRA Must Coordinate and Cooperate With Property Owners and Other Key Stakeholders in Identifying Alignments.***

The Business Plan commits HSRA to "to work with . . . local communities" (Plan at p.18) and mentions HSRA's efforts to work with stakeholders to "integrate the high-speed rail system into local communities." (Plan at p.47.) The Plan also commits HSRA to work closely with affected stakeholders "to address issues before they become formal lawsuits" or to resolve "legal issues raised through lawsuits." (Plan at p.89.) These commitments reflect the reality that HSRA may not simply ignore property owners with interests that could be adversely impacted by high-speed rail. HSRA must continue to coordinate and cooperate with property owners and other key stakeholders to identify high-speed rail alignments.

Notably, as a member of Preserve Our Heritage, Mr. Upton and other parties worked closely with representatives of HSRA in April 2013 to reach a settlement of claims against HSRA related to development of the Merced to Fresno Section of the high-speed rail project. That settlement agreement requires HSRA to consult with the other parties to the agreement regarding HSRA's identification of a preferred alignment for the Central Valley Wye. Mr. Upton has been fully engaged in that consultation process and intends to remain engage in the on-going dialogue with HSRA regarding the wye alignment. Of course, HSRA has a legal obligation under the April 2013 settlement agreement to continue those consultations, but in all other respects as well, HSRA must follow-through on its stated commitments in the Business Plan to work with stakeholders such as Mr. Upton and other property owners who risk losing significant agricultural and habitat lands as a result of the high-speed rail project.

To that end, we note that Mr. Upton has participated for seven years in HSRA's outreach efforts. In 2010, HSRA's consultants first identified and recommended Road 13 as a preferred route for the Wye configuration. However, after intense opposition the HSRA Board, under Chairman Pringle's leadership, rejected the recommendation. Commenting on the HSRA Board's action, Chairman Pringle admonished HSRA staff and consultants by essentially asking, "Haven't we learned anything? We aren't supposed to go through agricultural land." After a number of changes in the HSRA Board and staff, HSRA's consultants nevertheless again recommended Road 13 as a preferred route. Again, after intense opposition, the HSRA Board, under Chairman Richard's leadership, rejected that recommendation and deferred the wye portion of the Merced to Fresno section for further future study. Astonishingly, two of the three remaining alternative routes for the wye still involve a Road 13 alternative.

We note that the other alternative – Road 19 – represents the consensus selection reached after several years of negotiations between HSRA and local interests in the wye area. In fact, a recent petition drive indicates overwhelming local support for the Road 19 route.

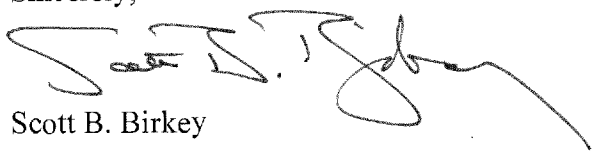
In light of this history, the inescapable conclusion is that some of HSRA's consultants predetermined the viability of a Road 13 route before the completion of any engineering study or environmental analysis pursuant to CEQA or NEPA and, moreover, in the

face of strong opposition to a Road 13 route. This kind of pre-analysis decision making is prohibited under both CEQA and NEPA.

* * *

Thank you again for the opportunity to provide comments on the Business Plan. We look forward to our continued working relationship with HSRA, its staff, and its consultants. Feel free to contact me should you have questions regarding any of the issues raised above.

Sincerely,



Scott B. Birkey

074286\7580641v4

cc: (all by regular U.S. Mail)
Congressman Jim Costa
Congressman Jeff Denham
Congressman Devin Nunes
Congressman David Valadao
State Senator Anthony Cannella
Assemblyman Adam Gray, and his chief of staff Mike Lynch
State Senator Cathleen Galgiani and Staff member Robin Adam
State Assemblyman Jim Patterson
State Senator Andy Vidak
Valley CHSRA Board Member Tom Richards
Merced County Supervisors John Pedrozo, Chairman Hub Walsh, & Jerry O'Banion
Madera County Supervisors Chairman Rick Farenelli & David Rogers
Clayton Haynes, Chairman, Dairyland School District
Ron Seals, Superintendent, Chowchilla High School
Steve Massaro, President, Preserve Our Heritage
Daniel M. Dooley, Esq.
Brian Boroski, Ph.D., H.T. Harvey & Associates
Brad Samuelson, Provost & Pritchard Consulting Group
Gary Sawyers, Esq., Bolen Fransen Sawyers LLP

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Bob
Last Name :	Johnson
Stakeholder Comments/Issues :	Letter is attached
Notes :	
Attachments :	SJRRCCommentLetteronCHSRADraft2016BusinessPlan.pdf (2 mb)

SAN JOAQUIN
REGIONAL
RAIL COMMISSION

April 18, 2016

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Mr. Dan Richard
Chairperson, California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

RE: Comments on California High-Speed Rail Authority (CHSRA) Draft 2016 Business Plan

Dear Chairperson Richard,

San Joaquin Regional Rail Commission (SJRRC) appreciates the opportunity to comment on the CHSRA Draft 2016 Business Plan. The SJRRC is the owner/operator of the Altamont Corridor Express (ACE) Rail Service.

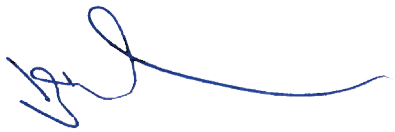
The CHSRA Draft 2016 Business Plan presents a significant change for where high-speed rail (HSR) service will be initiated. This new plan focuses on delivering a HSR line connecting the Silicon Valley to the Central Valley (north of Bakersfield) in 2025 instead of between Merced and the San Fernando Valley in 2022. While this is a major change for the phasing of HSR, it does not change the need for coordination and integration between ACE and the HSR system.

With the exception of the Burbank to Anaheim improvements, the CHSRA Draft 2016 Business Plan places much less emphasis on "blended" service improvements than CHSRA's 2014 and 2012 Business Plans. Throughout the CHSRA's 2012 Revised Business Plan the importance of early investments to conventional services (including ACE) which would connect to the HSR system was strongly emphasized. Having near-term improvement of the ACE Rail Service between Merced and San Jose should continue to be identified as an important for increased regional connectivity and as a "feeder" service to HSR in the CHSRA Final 2016 Business Plan.

CHSRA has made significant Prop 1A resources available to SJRRC to enable the planning, environmental, and engineering work needed to provide improved passenger rail service between the future Phase 1 HSR service at Merced and San Jose. SJRRC expects to release a Draft EIR in 2016 for improving and expanding ACE service. In the CHSRA 2016 Business Plan, CHSRA should take appropriate credit for providing the funding needed to progress the planning work to provide a superior connection between an improved and expanded ACE and the proposed HSR service.

SJRRC is committed to working with CHSRA, CalSTA, and Caltrans to improve and expand ACE service in a manner which helps support the phased implementation of HSR. The SJRRC looks forward to working with CHSRA to implement a coordinated, complementary, and integrated intercity rail network which will help California's economy and will enable our State to grow in a more sustainable manner which protects the environment.

Sincerely,



Bob Johnson, Chair
San Joaquin Regional Rail Commission

cc Chad Edison, CalSTA, Jeff Morales, CHSRA, Ben Tripousis, CHSRA

2016 Business Plan RECORD DETAIL

Submission Date : 4/18/2016

Submission Method : Project Email

First Name : Roland

Last Name : Lebrun

Stakeholder Comments/Issues : Dear Chair Richard and members of the CHSRA Board of Directors,

The intent of this email is to elaborate on the comments I made during the 3/8/2016 Board meeting and to highlight information from the recently released Mineta Transportation Institute (MTI) research paper entitled TREND ANALYSIS OF LONG TUNNELS WORLDWIDE (http://transweb.sjsu.edu/PDFs/research/1429-long-tunnels-trend-analysis.pdf)
which reads as follows on page 3:

“Ventilation to control smoke dispersion is one of the most important systems in a long tunnel."This is followed by a section on tunnel ventilation systems (page 17) and multiple examples of tunnel ventilation strategies in European tunnels (page 18).

The “value engineering” strategies outlined in the 2016 Draft business plan are in direct conflict with the MTI research paper, specifically the section between Gilroy and Carlucci Road (AKA “Pacheco Pass”)

http://www.hsr.ca.gov/docs/about/business_plans/DRAFT_2016_Business_Plan_Basis_of_Estimate.pdf
(page 33) which states:

“The tunneling costs were reduced based on the value engineering resulting in reduction of tunnel diameter and revisions to the mechanical ventilation requirements relative to the assumptions included in the 2014 Business Plan estimate.” “Ventilation in tunnels is based on a trainset compartmentation strategy for smoke control in tunnels which would eliminate requirements for mechanical ventilation.”

This conflict between best tunnel design practices and the Authority’s consultants approach to safety is likely to result in the inability to share tunnels with freight trains or other passenger trains which, if resolved, would result in a $2B shortfall in the funding plan for the Central Valley to Silicon Valley connection making it impossible to connect either Merced or Bakersfield to Silicon Valley.

Sincerely,
Roland Lebrun

Notes :

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Jeff
Last Name :	Boynton
Stakeholder Comments/Issues :	Susana Hill Executive Secretary City of La Mirada (562) 943-0131, ext. 2307 Fax (562) 943-1464
Notes :	
Attachments :	Comments CHSRA Draft 2016 Business Plan.pdf (102 kb)

CITY OF LA MIRADA
DEDICATED TO SERVICE

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April 18, 2016

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

SUBJECT: COMMENTS ON CHSRA DRAFT 2016 BUSINESS PLAN

On behalf of the City of La Mirada, I appreciate the opportunity to provide comments on the California High-Speed Rail Authority's Draft 2016 Business Plan (Plan).

As you are aware, the Los Angeles to Anaheim Project Section will connect Los Angeles and Orange Counties by traveling from Los Angeles Union Station to the Anaheim Regional Transportation Intermodal Center (ARTIC) in a shared corridor with dedicated track using the existing Los Angeles-San Diego-San Luis Obispo (LOSSAN) rail corridor. The LOSSAN rail corridor includes an approximate 1.8-mile section of La Mirada. With the environmental review underway locally, I want to take this opportunity to make you aware of several concerns in our community with the proposed project.

The LOSSAN rail corridor is located very close to the homes of thousands of La Mirada residents who live in the neighborhoods just north of the railroad tracks. Residents have routinely expressed concerns with existing railroad operations and the potential increase in noise and vibration resulting from the High Speed Rail Project. As stated in the document regarding the Los Angeles to Anaheim section, "This Draft 2016 Business Plan proposes a higher level of investment to deliver more service, faster speeds, and enhanced reliability in this already heavily-traveled corridor." The increase in rail activity resulting from the Project, and the anticipated noise and vibration impacts on neighboring residents and businesses, are of paramount concern to our community. The Authority has promised to work with local communities, and we are hopeful that proven sound and vibration mitigating measures including, but not limited to, sound buffer walls, rail infrastructure with sound/vibration-attenuating features, and noise reduction home improvements are given real consideration.

The Valley View Grade Separation project, which was completed in October 2014, has been a major community enhancement by improving pedestrian and motorist safety, limiting traffic delays, and reducing train horns. Another grade separation at Alondra Boulevard/Stage Road was previously completed and resulted in similar benefits. It is requested that modifications or additions to these grade-separations from the Project, and the high-speed rail infrastructure generally, be completed with consideration of the

existing environment with the least negative impact on the community as possible. The proposed agreement between the City of La Mirada and the State of California for the reimbursement of expenses incurred for reviewing technical/engineering documents associated with the Project will assist in identifying potential issues/conflicts in the community.

Once again, thank you for the opportunity to comment on the Draft 2016 Business Plan.

Sincerely,

CITY OF LA MIRADA

Jeff Boynton
City Manager

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Jim
Last Name :	Hartnett
Stakeholder Comments/Issues :	
Notes :	
Attachments :	PCJPB comments_2016 CHSRA BusinessPlan final.pdf (174 kb)

April 18, 2016

Mr. Jeff Morales
Chief Executive Officer
California High- Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

SUBJECT: Peninsula Corridor Joint Powers Board comments on the DRAFT 2016 Business Plan

Dear Mr. Morales,

Thank you for the opportunity to comment on the California High Speed Rail Authority's (CHSRA) DRAFT 2016 Business Plan. The DRAFT 2016 Business Plan includes many significant new elements most notably the intent of CHSRA to implement high speed rail service by 2025 from San Francisco to Bakersfield. The Peninsula Corridor Joint Powers Board (JPB) and the Northern California region are encouraged by this decision in the DRAFT 2016 Business Plan to prioritize the Northern Segment to San Francisco as the first operating segment for high-speed rail service. CHSRA has been a strong supporter the Peninsula Corridor Electrification Project (PCEP), and since the update of the last CHSRA Business Plan many key milestones have been achieved toward implementation of the PCEP. This progress provides the foundation for the future Blended System for the Peninsula Corridor.

The DRAFT 2016 Business Plan includes more information about important project elements and assumptions. For the Peninsula Corridor, some assumptions are different than what was previously used by the JPB to assess the operational feasibility of the Blended System. As you are aware, JPB worked side by side with CHSRA to develop the *March 2012 Caltrain/HSR Blended Operations Analysis* and *June 2013 Caltrain/HSR Service Plan/ Operations Considerations Analysis.* Since the release of the DRAFT 2016 Business Plan, JPB and CHSRA staffs have had many conversations and meetings about the project features, but more work is needed. JPB stands ready to provide input, analysis, and time to CHSRA to support completion of the necessary studies and environmental review. We look forward to working with CHSRA to help plan improvements to the Peninsula Corridor that will deliver high-speed rail service in a way that supports existing service needs and benefits surrounding communities.

1250 San Carlos Ave. – P.O. Box 3006
San Carlos, CA 94070-1306 650.508.6269

The following articulates the JPB comments, observations and questions on the DRAFT 2016 Business Plan:

I. Operational Feasibility of the Blended System: The DRAFT 2016 Business Plan outlines blended system infrastructure needs that are significantly different than those assumed in the *March 2012 Caltrain/HSR Blended Operations Analysis* and *June 2013 Caltrain/HSR Service Plan/ Operations Considerations Analysis,* and expressly or impliedly referenced in the 2014 HSR Business Plan. While JPB recognizes that it is the intent of the CHSRA to study these issues as part of the current environmental review, JPB urges CHSRA to provide technical plans, specifications and modeling as soon as possible for JPB review and analysis. It is critical for JPB to evaluate the operational feasibility of these proposals to identify impacts to JPB operations. If these evaluations are completed early in the process, there will be adequate time to identify issues and to find solutions.

   a. San Jose Diridon Station At-grade Alignment (Capital Cost Basis of Estimate Report p.29): Previous plans and iterations of high speed rail in the Peninsula Corridor contemplated interfacing at the San Jose Diridon Station on an aerial structure merging at-grade north of control point Coast on the Caltrain corridor. The DRAFT 2016 Business Plan now assumes that the HSR alignment will interface at-grade at the San Jose Diridon Station. This represents a fundamental change to HSR proposed operation in the Caltrain Corridor and presents issues of potentially serious concerns to the JPB. The potential impact to Caltrain operations, capacity and facilities need to be analyzed in detail prior to any final decision on configuration at San Jose Diridon Station. The revised configuration has not been modeled to evaluate the operational feasibility. The South Terminal Area is capacity constrained with Caltrain, and its tenants, Amtrak, Altamont Corridor Express (ACE), Capitol Corridor and Union Pacific freight services. It is currently unclear to JPB the magnitude of potential impact resulting from high speed rail trains being added to the existing terminal facility. This applies both to the 2025 timeframe in the DRAFT 2016 Business Plan (assumes 10 – 11 train sets to terminate at San Jose Diridon) as well as in the 2029 timeframe (assumes 4 trains per peak hour per direction utilizing the San Jose Diridon Station as an in-line station to San Francisco).

   b. Passing Track Location (Capital Cost Basis of Estimate Report p.29): Previous Caltrain / HSR Blended System operational feasibility studies completed for the Peninsula Corridor contemplated five passing track options. The passing track options ranged from approximately 6 to 16 miles in length. The DRAFT 2016 Business Plan indicates a single two-mile passing track located in San Mateo between Hayward Park and Hillsdale Stations. Is this the only location for passing tracks? This location and length has not been studied. It is prudent to complete the appropriate operational due diligence to ensure robust operations for the blended system.

   c. Shared Platforms and Common-Height (50”) Level Boarding: Previous Caltrain / HSR Blended System studies have evaluated dedicated platforms each for Caltrain and HSR. The DRAFT 2016 Business Plan indicates that HSR will share the Caltrain platforms at San Jose Diridon, Millbrae and San Francisco stations. Further, in 2015, there was extensive discussion regarding the issue of not precluding shared common-height platforms. After several months of public

discussion, the JPB made a decision that additional technical information is needed before support can be given to shared platforms. In order to not preclude common-height platforms at the shared stations, the Caltrain Electric Multiple Unit (electric vehicles) Request for Proposals was modified to include an option for two sets of doors. One set of doors would utilize Caltrain's existing platforms (as well as future level boarding at 25") and the second set of doors could utilize the HSR's boarding height of 50". During these discussions, CHSRA staff indicated that the high speed rail project may consider paying for increased costs to JPB to accommodate common-height (50") level board at shared station platforms. While it appears that the DRAFT 2016 Business Plan includes the cost of constructing new platforms, the additional costs for JPB to use vehicles that would be served at HSR boarding heights are not. This issue requires further extensive technical analysis and joint policy decisions.

The DRAFT 2016 Business Plan also does not appear to include capital costs to access the facilities at shared stations. JPB would like to understand what CHSRA is contemplating regarding station access planning and facilities.

II. Blended Service Plan: The DRAFT 2016 Business Plan includes a Service Planning Methodology component. JPB looks forward to working closely with CHRSA to understand the service plan assumptions in detail. Crafting the Blended Service Plan together is critical to refining assumptions regarding infrastructure needs.

a. Stations: JPB would like to understand the needs for high speed rail for the joint station locations. What kinds of operations/maintenance (if any) amenities are contemplated? Also, recently in public forums, the CHSRA has discussed the option for a Mid-Peninsula Station. But the DRAFT 2016 Business Plan does not appear to reference it. Is a Mid-Peninsula Station still being evaluated?

b. Stations: JPB would like to understand the planned operational business model for the high speed service relative to the types of security measures, passenger amenities, baggage handling/processing, catering, etc. In particular, understanding the facilities needed to support passenger security screening is important in developing the necessary infrastructure at stations. Caltrain currently runs an "open" system in that our passengers do not have to pass through fare collection facilities (similar to BART) to board the trains. JPB would like to understand the needed facilities related to fare collection for the high speed service. These elements directly relate to the ability to share platforms with the Caltrain service.

c. High Speed Rail Maintenance Facility: Where is the location of the "Maintenance of Infrastructure Facility & Maintenance of Equipment Facility for Northern California Section"? The DRAFT 2016 Business Plan seems to indicate a facility in both Gilroy and Brisbane.

Previous plans for high speed rail service have not contemplated any elements affecting the Caltrain Centralized Equipment Maintenance and Operations Facility (CEMOF). JPB would like to confirm that no impacts will occur to CEMOF.

d. Dispatching: The DRAFT 2016 Business Plan seems to imply that CHSRA will assume control of dispatching in the Peninsula Corridor. JPB has not agreed to this. The JPB and CHSRA need to have further discussions about this and other Blended Service operational elements. JPB requests that the 2016 Business Plan remove this as an operational assumption for Blended Service.

We look forward to a productive partnership in working with you to deliver Blended Service on the Peninsula by 2025.

Sincerely,

Jim Hartnett
Executive Director

Cc: Seamus Murphy, Chief Communication Officer
Michael Burns, Chief Planning/CalMod Officer
Elizabeth Scanlon, Manager Caltrain Planning
Michelle Bouchard, Chief Operating Officer, Rail
Ben Tripousis, Northern California Regional Director

2016 Business Plan RECORD DETAIL

Submission Date :	4/17/2016
Submission Method :	Letter
First Name :	Darryl
Last Name :	Davis
Stakeholder Comments/Issues :	
Notes :	
Attachments :	NAACP_Merced_County_Branch_1047_Letter_to_CHSRA.pdf (525 kb)

Merced County NAACP
Branch 1047

P. O. Box 1310
Atwater, CA 95301
(209) 726-3236

To: High Speed Rail Authority (HSRA) 4/17/16
From: NAACP Merced County Branch #1047

To the (HSRA) Committee,

My name is Darryl G. Davis and I have resided in Merced County for nearly 30 years. As a USAF veteran serving at Castle Air Force Base and serving the local community of Merced, CA in law enforcement in nearly half those years, I love Merced County with the good and bad times.

In the late 80 Merced had some good years with minimal crime, gangs, and very few homeless citizens, Merced was my "city of dreams". In the mid 90, Castle AFB left and a shift in the economy took place. With hope for future jobs coming to the county of Merced because of the University of California, Merced, the housing market took off. The housing market shortly thereafter collapsed in the area and sent Merced County and so many others in the Central Valley into a tailspin.

With a glimmer of light, here comes the High Speed Rail being introduced in to our communities with a hope of some type of recovery to our community. From the inception of the idea sometime in 2010, the NAACP Merced County Branch #1047 supported the proposal of the (HSRA) Committee with a high speed train being used in the Central Valley, especially stopping in Merced or even being a potential maintenance facility.

I attended my second, Merced County Passenger Rail Committee meeting and hear this new proposal. It is very disheartening to hear of this "all of a sudden" change of plans to strip away plans of economic relief to the Central Valley. Our local branch supported the HSRA Committee's proposal for two reasons. First, the highway transportation system (Highway 99 from Sacramento to Bakersfield) is old, out of date, and infrastructure does not meet the need of the people commuting though the Central Valley for employment or travel. Secondly, our citizens hoped the High Speed Rail would create employment for thousands of citizens throughout the Central Valley especially Merced. Citizens hoped for a way to recover, maintain, and possibly overcome their own any economic setbacks.

To the HSRA Committee, we know you have a difficult decision but we want you to make the right decision. The right decision would be to stay on track with the proposal first presented to the citizens of the Central Valley.

Respectfully Submitted,

Darryl G. Davis

Darryl G. Davis
NAACP President Merced Branch # 1047

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	John Pedrozo, Ben Duran, Mary-Michal Rawlings, Darryl Davis, Bill Spriggs, Ryan Heller
Last Name :	John Pedrozo, Ben Duran, Mary-Michal Rawlings, Darryl Davis, Bill Spriggs, Ryan Heller
Stakeholder Comments/Issues :	
Notes :	
Attachments :	County_of_Merced_and_City_of_Merced_Comments_on_California_High_Speed_Rail_Authority_Draft_2016_Business_Plan.pdf (3 mb)

John Pedrozo
Merced County Board of Supervisors
District 1 Supervisor

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April 18, 2016

Mr. Dan Richard
Chairperson, California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

Subject: County of Merced and City of Merced Comments on California High -Speed Rail Authority (CHSRA) Draft 2016 Business Plan

The California High-Speed Rail Authority Draft 2016 Business Plan came as a complete shock and disappointment to the County of Merced and City of Merced. This new business plan focuses on delivering a high speed rail line connecting the Silicon Valley to the Central Valley in 2025 instead of between Merced and the San Fernando Valley in 2022. While the Silicon Valley to Central Valley segment may be cheaper to construct, it is not what the legislature voted for in 2012 to enable high-speed rail construction to begin. Nor is it consistent with Senate Bill 862 (2014), which provided the substantial ongoing Cap-and-Trade funding required by the high-speed rail project to be viable. This newly proposed route between San Jose and north of Bakersfield does not benefit the Merced region, the Northern San Joaquin Valley or Sacramento. So to have represented for the last 10 years that Merced would be part of the initial operating segment (IOS), and then drastically change such a plan is extremely disappointing, especially since including Merced in the initial operation segment was critical for generating the support for passing Proposition 1A in 2008. Without significant changes to the CHSRA Draft 2016 Business Plan, the County of Merced will be forced to take a position of opposition towards the Business Plan, and by extension the HSR project.

History

Since 2004, Merced County along with numerous other regional organizations and community groups have worked with the CHSRA in multiple capacities to support a state of the art transportation system that would transform the Central Valley. We as a region were supportive of such a catalyst project because we saw first-hand what an investment into a region can do directly and indirectly with development and construction of the University of California Merced. But that being said, there was great skepticism about the implementation of such an expensive infrastructure project and the unknowns given no such system existed within the United States. Despite this, the Merced community continued to be at the forefront of advocating for the system development and literally fought many of CHSRA's political battles within the Central Valley.

Over the last twelve years of continuous support, we worked with our then Assemblywoman Cathleen Galgiani in her efforts to draft and garner support for Proposition 1A, which are the bond funds that gave California High-Speed Rail the initial momentum to transition from a concept to a tangible infrastructure project. CHSRA's commitment to include Merced in the IOS was critical for passing Proposition 1A in 2008. We worked with multiple officials from the CHSRA as the leadership continued to change as the project evolved. We worked with the leadership of CHSRA and staff to support an alignment through Merced County and the WYE despite great opposition from the agricultural community. Our community underwent frustration, anger and disagreements, but we

committed to help move forward a system that we thought would transform the region. So, in summary we are thoroughly disappointed with the CHSRA leadership in making such a drastic change in 2016 Business Plan and never contacted the communities that have been eliminated from the first leg a heads up of any sort. It really makes us question, how such an oversight could have occurred by leadership that claims they have our region's best interest in mind.

The community of Merced was promised by CHSRA leadership to be part of an initial test-track between Merced and Bakersfield. The promise of early implementation to Merced and conventional improvements in the Altamont Pass were essential for getting the Northern San Joaquin Valley and Sacramento to accept CHSRA's selection of the Pacheco Pass. The CHSRA Draft 2016 Business Plan almost completely ignores the connections to Sacramento and San Diego which were part of the "entire system" which was sold to the voters to be implemented by 2020.

The new plan greatly delays closing the gap between Northern and Southern California which the CHSRA 2012 Revised Business Plan stated was "the state's highest priority for intercity rail." It also delays providing benefit to the Northern San Joaquin Valley, Sacramento, and the rest of Northern California by eliminating the initial connection to Merced. The promise of the early connection to Merced has been essential for support from the County of Merced and City of Merced for the statewide HSR project for many years. CHSRA's commitment to Merced's inclusion as part of the initial HSR implementation goes back to before Proposition 1A was passed by the voters in 2008.

Funding Components and Requirements

ARRA Funds - Merced County and City of Merced understood that the federal ARRA funds came with very specific criteria, specifically:

- That of the $3.2 billion in federal grants, $2.6 billion to build the Central Valley section of the IOS had to be committed by September 30, 2017. This requirement promoted shovel ready components of the operating system, which made the Central Valley the logical starting point given the minimum environmental challenges. According to the recent California Legislative Analyst report, less than $700 million of these funds have been spent to date and Merced County wants to understand why those funds cannot be used to connect to Merced in the IOS.
- Must preserve and create jobs, promote economic recovery, and invest in transportation and other infrastructure to provide long-term economic benefits to high unemployment areas that were hit the hardest by the recession and the Central Valley of California, including Merced was an identified target of the funds given chronic double digit unemployment.
- Must have "operational independence" and independent utility. The omission of Merced would mean that a major part of the independent utility would be not be realized. This should be maximizing the connectivity of HSR with the other services. The three key stations for this are San Francisco, San Jose and Merced. The CHSRA would be linking up the whole San Joaquin Valley and existing services up to Sacramento with Merced in the initial IOS. This is shown by the fact that Merced has a twice as high percentage of passengers joining by rail than Gilroy. Shafter on the other hand, is likely to be 100% auto connection. This is not our understanding of what the US Department of Transportation and the Federal Railroad Administration is seeking to achieve from their initial investments. Our understanding is that they want maximum connection by rail and transit. **Amtrak's San Joaquin services, allowing operations from Merced to Fresno train stations meets FRA's funding criteria and "independent utility."**

Initial Operating Segment – The California Legislative Analyst's Office expressed concerns that the CHSRA change in scope for the IOS may not meet the priorities of legislature and whether the IOS has alone value. The State of California Legislature will want to ensure that

the change in the scope of the IOS meets its priorities. To the extent that the Legislature concurs with the proposed IOS North, it will want to consider whether the IOS has stand–alone value, meaning that the entire IOS is usable and that it connects major metropolitan regions of the state. If the remaining parts of Phase I were not built due to a lack of available funds, the state would still have a usable asset.

In evaluating the stand–alone value of the IOS North, the Legislature will want to consider whether the southern terminus of the proposed IOS makes sense. As mentioned above, under the plan, the IOS North would have its southern terminus at an agricultural area north of the small city of Shafter "it was referred to as an almond orchard by CHSRA at the Assembly Transportation Committee", which is about 50 miles south of the last planned station on the IOS. In order to make the southernmost portion of the IOS usable, HSRA plans to build a temporary station or platform at this location. However, doing so would require additional environmental clearance as a station at this location was not previously evaluated by HSRA. Even with a temporary station or platform, ending the IOS in an unpopulated agricultural area does not appear to be an effective approach and further frustrates Northern Central Valley regions.

Connectivity - There is also almost no discussion of the connectivity improvements ("blended" service, Northern California Unified Service) which dominated the 2012 Business Plan. Should this plan be approved CHSRA should include fulfilling the commitments made in the 2012 Revised Business Plan for Blended service. Key elements of "blended" service improvements included conventional rail improvements to the San Joaquin service to Sacramento and the ACE service to increase connectivity of these systems to the future HSR service.

The Merced to Bakersfield portion of the route is cleared environmentally and construction is under way, electrification of the shared CalTrain tracks from San Jose to San Francisco is soon to break ground and the TransBay Transit Center, with its rail platforms in place is set to open in less than two years. The route from San Francisco to San Jose to the Central Valley can be in revenue service with a private sector operating partner by 2025.

There are about 50,000 daily commuters going over the Altamont Pass to the Bay Area mostly from San Joaquin and Stanislaus counties. The three Central Valley counties that would be most likely to have commuters to the Silicon Valley interested in taking a high-speed passenger rail service would be from San Joaquin, Stanislaus and Merced counties – none of which are served by the current HSR route using the Pacheco Pass.

Investment Commitments

The CHSRA's 2012 Revised Business Plan not only promised the initial HSR service to be between Merced and Southern California, but it also committed to providing funding support for investments in conventional services which would connect to the HSR Initial Operating Segment. The Budget Act of 2012, as amended by SB 1029, included the appropriation of $53.9 million of Proposition 1A funding for planning work in the Merced to Sacramento Corridor.

These funds are needed to enable the planning, environmental, and engineering work needed to provide improved passenger rail service between the future Phase 1 high-speed rail service and Sacramento, and to provide the foundation for full Phase 2 high-speed rail implementation. The legislative intent behind the inclusion of the Merced to Sacramento planning funding in SB 1029 was to do the planning needed to support near-term passenger rail improvements that will benefit both the Amtrak San Joaquin service and the Altamont Corridor Express service. While Page 23 of the CHSRA Draft 2016 Business Plan asserts that "Phase 2 corridor studies and planning are ongoing including the connections and opportunities for early investments between Merced and Sacramento and between Los Angeles, the Inland Empire, and San Diego," this is not accurate. Despite the unwavering support and high level of interest from the region, there has been no progress over the

last several years made in the planning for improved early investment for connecting rail service between Merced and Sacramento.

The CHSRA 2016 Business Plan should be revised to specify that the majority of the planning funds (allocated in SB 1029) will be used to planning near-term conventional improvements and to highlight that this work will be done in partnership with the San Joaquin Joint Powers Authority, coordinated with the Central Valley Rail Working Group, and will be completed as quickly as possible.

The CHSRA Draft 2016 Business Plan includes a commitment to invest $2.1 billion between Burbank and Anaheim. The Executive Summary states that CHSRA will reinvest savings from its cost estimates for the Phase 1 HSR project to pay for this service enhancement in Southern California. However, Section 6 ("Funding and Financing") only specifies the $500 million commitment CHSRA already made in 2012 and lists a number of potential sources (most of which are not HSR funds). Rather than providing new funds through Phase 1 HSR savings to the Burbank to Anaheim Segment, CHSRA appears to be mostly promising their support for future Transit and Intercity Rail Capital Program (TIRCP) Cap-and-Trade and federal grant applications for this segment.

Recommendations and Requests

Merced County and the City of Merced recommend that CHSRA reinstate Merced back into the initial IOS. By doing this, CHSRA will then be in compliance with Prop 2008 which requires all routes to have independent utility and promote economic development in areas with high unemployment, which was the spirit of the ARRA investments.

Maintaining Merced in the initial segment allows the entire north valley to become a catchment area with riders coming from Merced County and Stanislaus County this 22-mile addition allows the North Valley to increase ridership and we believe the Merced to Fresno leg will serve more riders than the Fresno leg by itself. The Merced station to the North will allow for ACE and Amtrak San Joaquins services from various locations to now connect with the Merced station. By adding only 22 extra miles of track the authority is gaining concessionaries to operate the services of this IOS once this leg is connected.

Merced County and the City of Merced believe that the CHSRA is better off shortening the route from Fresno to Shafter and taking 22 miles off this segment and redirect these funds to continue on to the north valley off the WYE interchange.

While Merced County and the City of Merced is not opposed to near term improvements in the Burbank to Anaheim corridor, Merced County must stress that the system as proposed in the Draft 2016 Business Plan will not provide any meaningful benefit to the Northern San Joaquin Valley and Sacramento for years if not decades.

As part of the "cost savings" for the Phase 1 high speed rail project, CHSRA must revised the Draft 2016 Business Plan to include an enforceable commitment for investing in near-term conventional rail connectively improvements between the Northern San Joaquin Valley, Sacramento, and the San Francisco Bay Area. CHSRA will need to specify where this funding will come from and that it will be a priority of the CHSRA to have improved conventional rail service between Fresno and Sacramento as an important "feeder" service to the Phase 1 high speed rail system. It is imperative for the state to fulfill the promise of the CHSRA's 2012 and Revised 2012 Business Plans by supporting this improved conventional rail connectivity to the Phase 1 HSR service through the following:

- CHSRA must include the Central Valley WYE connection to the Merced Station as part of the Phase 1 HSR in the CHSRA 2016 Business Plan.
- CHSRA must immediately release the $53.9 million of Proposition 1A funding authorized by the Budget Act of 2012, as amended by SB 1029 to the San Joaquin Joint Powers Authority (SJJPA) for planning work in the Merced to Sacramento Corridor.
- CHSRA must include a commitment for a $1.0 billion investment in near-term conventional rail connectivity improvements between Fresno and Sacramento in the CHSRA 2016 Business Plan.

- CHSRA must include a commitment for a $1.0 billion investment in near-term conventional rail connectivity improvements between Merced and San Jose through the Altamont Pass in the CHSRA 2016 Business Plan.

Merced County and the City of Merced are formally requesting a meeting to discuss the options presented in this letter with CHSRA Executive Director Jeff Morales and Dan Richard, Chair of the CHSRA in Merced no later than June 30th 2016. Our region would also like our State Assemblymember and Senator to attend.

The California Assemblymembers in the North Central Valley our aware that $2 billion dollars of this bond money is being given to MTA in southern California to sign off on this new draft. The North Central Valley now believes that the CHSRA has no intention of spending any remaining dollars for a planned stop in Merced and in fact we believe that CHSRA wants to continue to lay as much track as feasible south of Fresno until the funding is depleted. We need assurances that this is not the case and an explanation if it is.

CHSRA has received significant support from Merced County, the City of Merced, the Northern San Joaquin Valley, and Sacramento for many years even though the Pacheco Pass route selected by CHSRA between the Bay Area and San Joaquin Valley does not effectively serve the Northern San Joaquin Valley or Sacramento. Support from these regions helped pass Proposition 1A and members of the legislature from these regions provided key votes for CHSRA in 2012 and 2014 (in addition to authoring Proposition 1A). We hope that the final version of your 2016 Business Plan will be a plan which can be supported by Merced County and the City of Merced. However, if these requested changes to the 2016 Business Plan are not made, Merced County will be forced to adopt a position of opposition towards the Business Plan, and by extension the HSR project.

Sincerely,

John Pedrozo
Supervisor, District 1
Merced County

Darryl Davis
Committee Member

Ben Duran
Committee Member

Bill Spriggs
Merced Boosters Club

Mary-Michal Rawlings
Committee Member

Ryan Heller
Committee Member

Cc
Assemblymember Adam Gray
Assembly Member Jim Frazier
Senator Anthony Cannella
Senator Cathleen Galgiani
Senator Jim Beall
Congressman Jim Costa, 16th Congressional District
US Senator Dianne Feinstein
US Senator Barbara Boxer
Mr. Jeff Morales, Chief Executive Officer, CHSRA
Mr. Mike McKeever, Executive Director, SACOG

Ms. Rosa Park, Executive Director, StanCOG
Ms. Marjie Kirn, Executive Director, MCAG
Ms. Stacey Mortenson, Executive Director, SJRRC
Mr. Josh Pedrozo, Mayor Pro Temp, City of Merced
Mr. Tony Dossetti, Councilmember, City of Merced
Mr. Steve Carrigan, City Manager, City of Merced

2016 Business Plan RECORD DETAIL

Submission Date :	4/13/2016
Submission Method :	Letter
First Name :	Marjie
Last Name :	Kirn
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Biz_Plan_MCAG.pdf (938 kb)

MERCED COUNTY ASSOCIATION OF GOVERNMENTS

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April 13, 2016

Mr. Dan Richard
Chairperson, California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

Subject: Comments on California High-Speed Rail (CHSRA) Draft 2016 Business Plan

Dear Chairperson Richard,

Merced County Association of Governments (MCAG) is submitting this letter detailing our concerns with the proposed new routes in the CHRSA Draft 2016 Business Plan, the lack of support for the blended service concept, and our continued dismay with the outreach and coordination efforts between the CHRSA and its public sector partners. We stand in support of the concerns outlined by the Central Valley Rail Working Group, who has been involved in the coordinated planning for passenger rail service between Sacramento and Merced since 2006.

The new plan greatly delays closing the gap between Northern and Southern California which the 2012 Revised Business Plan stated was "the state's highest priority for intercity rail". For many years the promise of the early HSR connection at Merced and improvements to conventional intercity rail, commonly called the "blended service concept" have been essential for support from the Northern San Joaquin Valley and Sacramento region. Not only does the draft plan leave in doubt any real funding for connections between Merced and Sacramento, the draft plan also does not provide funding support for improved connections between Sacramento and San Jose or between Merced and San Jose.

The draft business plan includes a commitment to invest $2.1 billion between Burbank and Anaheim. But previously, the CHSRA was also committed to providing funding support for investments in "conventional" services which would connect to the Initial Operating Segment (IOS) of high speed rail. While we recognize there are investment needs in the Burbank to Anaheim corridor, the draft plan does not propose "blended service" investment priorities for Northern California that will benefit Sacramento or the Northern San Joaquin region for decades. In order to fulfill the commitment for "blended service" there is a strong case for significant intercity rail funding to connect Sacramento and the Northern San Joaquin Valley to both Fresno and San Jose.

MCAG requests that CHSRA fulfill the promise in the prior business plan to fund the blended service needs in Northern California and to extend HSR to Merced. Three intercity rail corridors in Northern California offer significant promise to increase ridership for the IOS of HSR. Investing in these corridors also offer significant promise for better connections for the Northern California Megaregion.

Specific investments along these three corridors that would be developed through active rail corridor planning efforts:

- $1.0 billion in connectively improvements for San Joaquin Rail Service between Fresno and Sacramento
- $1.0 billion in connectively improvements, for the Altamont Corridor Express (ACE) Service between Merced and San Jose through the Altamont Pass
- $1.0 billion in connectively improvements along the Capital Corridor between San Jose and Sacramento
- Include an amount to be determined for the Central Valley Wye connection to the Merced Station that will improve Northern California high speed rail ridership prospects.

The CHSRA 2016 Business Plan should include an enforceable commitment for investing in near-term conventional rail connectively improvements between Sacramento, the Bay Area and Northern San Joaquin Valley. It is important for the CHSRA to specify where this funding will come from and that it will be a priority to have improved "conventional" intercity rail service. Intercity rail investments along the San Jose to Sacramento and Fresno to Sacramento corridors can become an important "feeder" services to the Phase 1 HSR system.

A final recommendation is that the CHSRA fulfill the earlier commitment for funds to support rail planning coordination in Northern California. As such, the Authority should release the $53.9 million of Proposition 1A Funding authorized by the Budget Act of 2012 for planning work along the Merced to Sacramento Corridor. These funds are needed to enable the planning/environmental/engineering work needed to provide improved passenger rail service between the future Phase 1 HSR service and Sacramento and to provide the foundation for full Phase 2 HSR implementation. We believe the legislative intent behind the inclusion of the Merced to Sacramento planning funding in SB 1029 was to do the planning needed to support near-term passenger rail improvements. Despite the support and high level of interest from the region, there has been no progress in the planning for improved early investment for connecting rail service between Merced and Sacramento.

In closing, we request that CHSRA fulfil the promise in the prior business plan to fund the blended service needs in Northern California and to extend HSR to Merced. Thank you for your consideration in addressing our concerns.

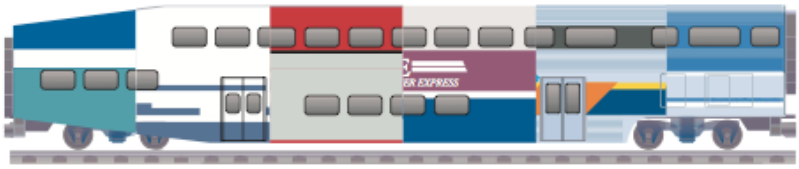
Sincerely,

Marjie Kirn
Executive Director

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Ronald
Last Name :	Jones
Stakeholder Comments/Issues :	Please accept the attached comments and attachments from TRAC. Thank you, --David David Schonbrunn, Vice-President for Policy Train Riders Association of California (TRAC) P.O. Box 151439 San Rafael, CA 94915-1439 415-370-7250 cell & office David@Schonbrunn.org www.calrailnews.net
Notes :	
Attachments :	Comments on 2016 Draft HSR Business Plan.pdf (419 kb) TRAC_Business_Plan_Attachments.pdf (13 mb) Hollywood_has_no_monopoly.pdf (92 kb)

TRAC
Train Riders Association of California



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April 18, 2016
By E-Mail to:
2016businessplan
comments
@hsr.ca.gov

Dan Richard, Chair
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

Re: Draft 2016 Business Plan

Dear Mr. Richard:

Please find attached a collection of articles published in the *California Rail News* by the Train Riders Association of California. These articles reflect TRAC's long-standing concerns about the CHSRA's project, and our ideas on how to make HSR work. We know that HSR will be a profitable enterprise in California, if the private sector is allowed to make key decisions, including selecting the route.

We favor a commonsense approach, first building out the existing intercity Amtrak lines with passenger-only 110 mph tracks, and developing connecting transit services. Cap and trade is the perfect funding source for this work. Then call on the private sector to build on that base with an at-risk investment.

TRAC believes, along with the Peer Review Group (see attached article) that the rush to grab the free money from ARRA thoroughly disrupted what should have been the orderly planning of an HSR system. The project has not had a credible business plan since then.

The next issue of the *California Rail News* will carry an article by board member Susan MacAdams about HSR funding being wasted on incompatible structures now being built in Southern California. Ms. MacAdams has national experience in passenger rail, and formerly served as HSR Planning Manager for LA Metro.

TRAC urges the CHSRA Board to recognize the consequences of its failure to develop a fundable statewide HSR project, and acknowledge that a change in direction is needed. Please call on us to help guide that change.

Regards,

ronaldjones

Ronald Jones,
President

Articles from *California Rail News* (TRAC's Newspaper)

Viaducts Blow HSRA Budget. May-Aug. 2011

10 Ways to Straighten Out the Crooked HSR Proposal. May-Aug. 2011

Let HSR Operator Do Design. May-Aug. 2011

California High-Speed Rail Authority "Flatly Ridiculous." November 2011 (Published in Sacramento Bee)

HSR Route is a Jerrymander. Sept.-Dec. 2011

Truth, Tejon and Tehachapi. May-June 2013

High Speed Rail Authority Admits I-5 Was Fundable. July-Oct. 2014

Amtrak & Michigan to Extend 110 MPH Service. July-Oct. 2014

Why HSR Should Start in Los Angeles. July-Oct. 2014

I-5 Tejon Pass May Be The Only Politically Feasible HSR Alignment Into Los Angeles. April-July 2015

Keys to HSR Success: Market-Based Route & Private Funds. Oct.-Dec. 2015

HSR: A Walk Under and Through the Angeles National Forest? Oct.-Dec. 2015
Fatal Flaws of Tunnels Under the National Forest. (Also on same page.)

HSR in the Southland--Hollywood Has No Monopoly on Fantasy. In press.

California Rail News

Volume 23 Number 3 | Sacramento, CA | August 2011

Viaducts Blow HSRA Budget

Proposed 220 mph train through Bakersfield on 60-foot viaduct.

VAN ARK ADMITS MULTI-BILLION COST OVERRUN

Opinion by Richard F. Tolmach

Latest plans published by the California High Speed Rail Authority show nearly 150 miles of its proposed San Francisco - Anaheim line using aerial structures, many as high as 60 feet in the air. Given the many drawbacks of viaducts, HSRA's plan to put 30% of the high-speed route on them appears entirely unrealistic.

Viaducts were HSRA's preferred answer to almost any alignment problem, despite known seismic and safety vulnerabilities, and their propensity to broadcast train noise. In pushing aerial lines, HSRA was ignoring modern European practice, which severely limits the extent of high-speed structures on safety grounds. For example, France's TGV has less than 2% of track on viaduct, including all river crossings.

Rail engineers cite unacceptable risks as a reason to avoid extended 220 mph operations on viaducts. Each mile of speed increase diminishes the ability to keep trains from launching off the viaduct in an accident. Perching crash walls atop a 60 foot structure would add so much mass as to require more frequent piers and greatly increase the construction cost.

Construction of rail lines on viaducts is something that European cities rarely allow anymore. Berlin's last major elevated railways were built by the 1920's. Decades of scholarship, much of it done in the U.S., has proven that elevated railways produce urban blight. The spectacle of a railway management ignoring public input and trying to blast its way through residential neighborhoods with an elevated rail line is unthinkable today in Europe.

HSRA actively fanned public outrage in a dozen neighborhoods on the Peninsula by proposing elevated trains most of the way from San Francisco to Gilroy. HSRA's intransigence motivated dozens of local professionals to oppose the rail project and elicited three major lawsuits.

Once Bay Area plans were blocked, the Authority did not change its approach and proposed even bigger elevated structures through five Central Valley cities, as well as poorly thought-out elevated lines through rural areas, spurring citizen activism against the project in a region that was previously solidly pro high-speed.

In addition to 60 miles of viaducts in the Bay Area, the Authority proposed another 15 miles on Gilroy-Chowchilla, over 42 miles on its two Central Valley starter segments, and at least 30 miles

(continued on Page 2)

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VIADUCTS: DESIGN FOR FAILURE

(continued from Page 1)

between Bakersfield and Los Angeles.

Viaducts were not originally planned for these segments, but were ladled onto the project scope, driving up capital costs by up to $3.8 billion just in the Central Valley. More viaducts also inflated other segment costs, clearly busting the $45 billion first stage network budget. From 2009 onward, HSRA wasted thousands of engineering hours and many millions of dollars on viaduct designs which were never affordable, and now are likely to be discarded.

Reliance on viaducts to allow 220 mph speeds has put costs and even route feasibility into doubt. With even the Central Valley segment $3 billion to $6 billion over budget, all HSRA CEO Roelof van Ark has to show for hundreds of millions of dollars spent is a financially unrealistic plan.

Either **A)** HSRA staff sincerely didn't realize its viaducts and other lavish uses of capital were a waste or **B)** its agenda always was to abort the project once $1.5 billion of design and engineering funds are sucked dry. Hypothesis **B** is beginning to look like the only reasonable explanation.

On the Bakersfield-Los Angeles segment, HSRA has made a belated effort to address cost and safety issues produced by overdesign, but it has been ineffective in controlling engineering costs or keeping politics out of its route selection.

Four months ago, a HSRA review of the Tehachapi route already had concluded that the required lengths of viaducts and tunnels on its winding 140 mile preferred line between Bakersfield, Palmdale and the L.A. Basin were unaffordable and that the only way to obtain savings was a shorter route with more track at grade. Authority engineers also found "unexpected and significant construction challenges" between Palmdale and Sylmar, involving tunnels and the California Aqueduct.

Instead of handling these issues earlier with a realistic program EIR, HSRA has launched yet another round of alternative analyses and more litigation, as the City of Palmdale filed suit to stop the Authority from reconsidering the Grapevine route as part of its final environmental documents.

In far too many cases HSRA selected routings and structures no competent operator of high-speed rail would ever consider. How much of this work was productive and how much of it was simply an abuse of the public trust? California has the experience of prior fraudulent transportation projects which selected unbuildable bridge types, aimed tunnel boring machines at the La Brea tar pits, and routed light rail through known serpentine deposits.

California's last chance to avoid a scam project may be to eject the charlatans and assign design to competent international high-speed rail operators whose interests are in attracting private capital and making money from operating trains, not from charging taxpayers for unbuildable plans.

BIKES ON METROLINK

As part of a pilot program, Metrolink introduced its first two "bicycle cars," passenger railcars outfitted with space for at least 18 bicycles, instead of two slots like Metrolink's other railcars. The agency hopes this will encourage more bicyclists to take the train to their destination.

To accommodate the additional bicycles, Metrolink crews removed 29 passenger seats on the bottom level of one of its railcars that traditionally seats up to 149 people.

"We hope to attract bicyclists whose public transportation options may be limited by available storage space," said Metrolink CEO John Fenton. "We are committed to growing our ridership; to do that, we have to modify the type of services we offer."

Metrolink used in-house resources to design and retrofit existing cars with additional storage for bicycles. The agency coordinated with bicycle advocates on the design, which was ultimately approved by the Federal Railroad Administration.

Initially, Metrolink's "bicycle cars" are used on the Inland-Empire line weekend beach trains, where demand is highest for additional bicycle storage space. Bicycle cars can be identified by yellow decals located on the outside of the rail car.

Metrolink is prepared to add up to 10 additional bicycle cars to its fleet, depending on the success of the pilot program.

Integration of LOSSAN: Great Goal, Hard to Achieve

Service integration on the LOSSAN corridor, long a goal of TRAC, looks every bit as problematical as it did ten years ago, prior to several major efforts by Southern California counties to meld service by multiple carriers, the latest of which is in progress under the advice of Gene Skoropowski, former Capitol Corridor manager, now working for HNTB, a consulting firm.

The blockage seems to be largely financial and institutional.

Caltrans and the CA Dept. of Finance are worried about the skyrocketing subsidy of their *Pacific Surfliner* service, which has been financially harmed by Metrolink competition, lax management, and a fare scheme that the state Department of Finance characterizes as a gift of state funds. Farebox ratio of the *Pacific Surfliner* service declined from 103% to 44% over the past 18 years, while annual public subsidy grew from zero to $50 million.

Caltrans has been working with Amtrak to try to recoup lost connections and lost traffic, particularly with San Joaquin trains. Revival of reliable daily train connections across California would apparently improve revenue by over $1 million annually, even with a slightly lower frequency of service.

Fiscal conservatives wonder why state taxpayers should continue to underwrite local Amtrak California service between Los Angeles and San Diego when local agencies seem ready to provide competing services without subsidy. One reason the state subsidy should continue is that counties seem not to understand the needs of intercity travelers, and may impair long-distance connections, further restraining mobility.

Local agencies are now actively encroaching on Amtrak markets, which has reduced State and Amtrak willingness to cooperate. Metrolink and Coaster have begun new through service authorized under Section 209 of the PRIIA bill that undercuts Amtrak both on price and convenience. They plan to interline more of their trains. That is great for passengers who will save up to 50%, but bad for taxpayers who are expected to fund a fares war and increased subsidies.

One solution would be for California to negotiate with locals to take over state service at a lower monthly rate than Amtrak's current billings. Unfortunately, Caltrans never before had the political moxie to carry out a reform, but a proactive stance now would avert a fiscal collapse on the *Surfliners* later.

Section 209 gives states rights to obtain Amtrak equipment for such service and has the Surface Transportation Board referee any disputes. However, taking advantage of such benefits would require open and friendly communications between state and local agencies, a stance that is now more difficult.

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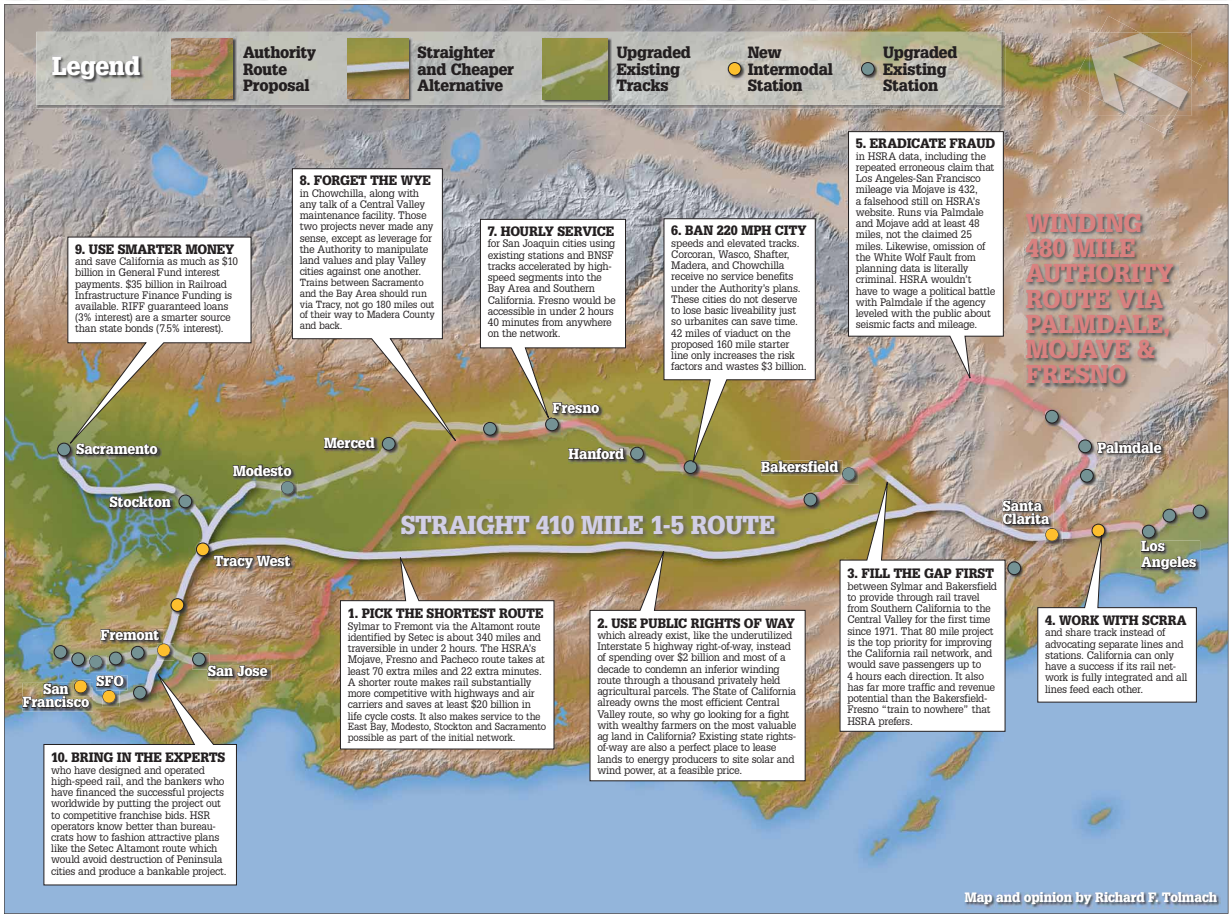
10 WAYS TO STRAIGHTEN OUT THE CROOKED HSR PROPOSAL



LET HSR OPERATOR DO DESIGN

PEER REVIEW PANEL SAYS HSRA IS UNQUALIFIED

The following comments regarding competence of the High Speed Rail Authority are from the July 2011 Peer Review Group review of the LAO's May 10 report to legislators.

The [Peer Review] Group has consistently taken the position that the current organization of the HSRA does not lend itself to meeting the challenge posed by the HSR project. We agree with the LAO Report that a change is critical. Our conclusion has been based on the clear disjunction between the needs of the project for a very large increase in the range and level of managerial skills in the near term, on the one hand, and the often significant limitations posed by the State bureaucratic requirements, on the other. Transferring the project to Caltrans would do little to remove these crippling restrictions.

Unfortunately, without an agreed upon business model to work with, it is not possible to develop a better organization with any confidence. The HSR project is not a simple (albeit very large) highway construction project. If it were, it might be appropriate to shift responsibility for planning and implementation to Caltrans as suggested by the LAO Report. Indeed, certain aspects of the LAO's proposal clearly do deserve consideration. Caltrans may well be the best State agency to complete the environmental studies and requirements along with basic ROW alignment and acquisition. It has long been suggested that this responsibility be subcontracted from HSRA to Caltrans.

The problem is that Caltrans has rightly not been able to accept the task without the kind of staff augmentation (positions, as well as money) that has proven difficult for HSRA to achieve. Another practical difficulty is that some aspects of HSR design, especially track, signaling, electrification and rolling stock, require skills that no existing California State agency possesses. To put this into perspective, during each of the peak four construction years of the project, the annual outlays for the HSR project would be about 20% greater than the entire Caltrans capital outlay program, and would involve a skills mix much more diverse than Caltrans has on board. Transfer of the Authority to Caltrans would not be a simple task.

A related problem is the fact that high-speed railways are **systems**, not easily separable parts. Gradients, curvature, track components, signaling, electrification and rolling stock must work together. Ideally the critical elements of all of these would be specified by the future operator of the system in order to ensure compatibility and safety of the system. Neither Caltrans nor the HSRA has the required operating expertise. HSRA's consultants may have some of the required expertise, but cannot speak for the viewpoint of the future operator.

The importance of the operator's input into the details of the systems design cannot be overstated. The operator should have major input into the design and siting of the maintenance facility, siting of high-speed crossovers, line side signaling and the layout of stations, among other features. Consequently it is the norm to let a concession contract for the operator several years prior to the start of commercial operations and before many critical engineering decisions are made. This is particularly important if the operator will also acquire the rolling stock for the project. Moving rapidly to construction now may well be important to spending Federal money before the 2017 deadline, but it might do so at the cost of disrupting the link between designer/constructor and operator. Among other things, this means that any design decisions that cause (or can be argued to cause) safety or efficiency problems will be the responsibility of Caltrans, or HSRA, or the designer/builder, but not the future operator.

More broadly, the LAO Report identifies a concern with Caltrans' "lack of expertise in working with private partners on PPPs" which is exactly the problem that the project faces even now in the issue of the lack of operator/designer/builder feedback, and which will become much more serious when the time comes to develop, award and oversee (or regulate) the operating arrangement. The Authority does not have this expertise either, and the Group is deeply concerned that neither the Authority nor Caltrans will be able to acquire it in a timely way if the Department must stay within existing State agency limitations on positions, salaries and skills. The California Transportation Commission (CTC) is the only state agency that has developed criteria for the review and implementation of PPP [public private partnership] projects; to date, the CTC has reviewed and approved only a handful of much smaller projects which are in the early stages of development.

This is a critical issue. At a minimum, California faces a $43 billion investment project involving passenger revenues of over $70 billion in the first 30 years of operation. This would create a rail passenger operator with revenues about eight times the size of BART and Caltrain combined and about one-third larger than the entire Amtrak system. It would have revenues nearly three times as large as the largest U.K. rail franchise - and the experience of the U.K. Government in designing, awarding and overseeing their franchises has been anything but trouble free.

It does not encourage unbounded confidence in an agency (Caltrans or HSRA or the CTC) with limited experience in the rail PPP field and without the skills, resources and authority to do the job.

In fact, the U.K. experience with franchising has highlighted a number of issues that will need to be considered in the HSRA's 2011 Business Plan. First, how will the HSR infrastructure be owned, managed, maintained and operated? Second, if the private sector is to operate the trains on the system, what form will the relationship take? These are not abstract problems for which the answers can be delayed for the present and then allowed to emerge over the years. At least some consistent version of the entire picture is needed before the Group and the Legislature can assess whether the organizational structure, along with the related resources and skills, are appropriate.

The Group continues to believe that the HSR project management will need full flexibility to hire and pay the staff needed for the project over all its phases and will need to handle procurement rapidly and efficiently in a way that the standard public procurement rules do not facilitate. Real trouble lies immediately ahead if the current organization proceeds to awarding construction contracts without being restructured to ensure adequate accountability for taxpayer funds. The project is larger than the entire Caltrans construction program, and will need maximum flexibility in management to ensure quick decision making capability and a minimum of organizational interfaces.

As we have argued in our earlier letters, the organization needed would be more consistent with some form of State-owned corporation in which public oversight would be exercised by public appointment and confirmation of the Board of Directors but with management free to act with the flexibility of a corporation. However, we recognize that the Legislature's desire for direct public control could lead in the direction of continuing the Authority as a public agency. In this case, consideration should be given to the establishment of an organizational structure similar to Caltrans within the overall control of the Business Transportation and Housing agency. The Board of this organization could assume functions similar to the California Transportation Commission, responsible for programming and allocating funds to various segments as proposed by the HSRA staff. The new agency should retain the freedom to contract with both private and public sector entities for various services, and perhaps utilize the creation of public benefit corporations where appropriate.

VAN ARK PRESSES HIS LUCK WITH PROFIT CLAIM

MR. VAN ARK OF HSRA, MEET MR. BARRÓN OF THE UIC

"EVERY SINGLE HIGH-SPEED RAIL SYSTEM IN THE WORLD OPERATES IN BLACK, THAT MEANS IT GENERATES CASH, WHEN IT COMES TO FARE-BOX INCOME COVERING THE COST OF OPERATIONS. EVERY SINGLE ONE, AND THAT'S NOT ACCORDING TO MYSELF OR THE AUTHORITY. IT IS ACCORDING TO THE INTERNATIONAL UNION OF RAILWAYS, THE UIC..."

ROELOF VAN ARK AT HSRA BOARD MEETING 6/2/2011

"HIGH-SPEED RAIL IS GOOD FOR SOCIETY AND IT'S GOOD FOR THE ENVIRONMENT, BUT IT'S NOT A PROFITABLE BUSINESS," SAID MR. BARRÓN OF THE INTERNATIONAL UNION OF RAILWAYS. HE RECKONS THAT ONLY TWO ROUTES IN THE WORLD — BETWEEN TOKYO AND OSAKA, AND BETWEEN PARIS AND LYON, FRANCE — HAVE BROKEN EVEN.

IÑAKI BARRÓN DE ANGIOTI IN NEW YORK TIMES 5/29/2009

RIPTIDE
Covers the Coastside

November 09, 2011

Opinion: California High-Speed Rail Authority "Flatly Ridiculous"

Viewpoints: Dismantle High-Speed Rail Authority and start over

By Richard Tolmach
Special to The Bee
Published: Saturday, Nov. 5, 2011 - 10:00 pm | Page 5E
Last Modified: Sunday, Nov. 6, 2011 - 11:37 am

For my organization and others who hoped to see a California high-speed rail line built in the next decade, the High-Speed Rail Authority has been a great disappointment. Instead of delivering a fundable plan with private industry support, clear benefits and low risk, the agency intends to break its promises to taxpayers and gamble $98 billion on a political pork barrel no private investors will touch.

Why not acknowledge California's fiscal constraints and propose something realistic? For example, it should cost only $7 billion to fill the Bakersfield-to-San Fernando gap in California's rail network, but the agency doesn't want to do anything that simple. Despite $12 billion in resources, the High-Speed Rail Authority proposes to begin only a Bakersfield-to-Chowchilla line, which it admits cannot generate any revenue.

The "new and improved" business plan still fails to answer legislative critics who have been asking the authority for three years how it would find private funds for an operable segment. Even more seriously, there is a threat that the authority will try to press ahead with construction of a vastly overpriced line with the public bearing all the risk.

A successful California plan would efficiently connect areas of high population while avoiding high-speed running through populated areas. The agency has

failed to achieve either of these goals and stirs up trouble wherever it goes. The agency's obtuse idea to invade cities with 125-mph to 220-mph elevated trains lowered property values and made powerful enemies statewide. Its insensitivity to locals managed to unite venture capitalists on the San Francisco Peninsula, Latinos in Los Angeles and Kern counties, farmers in the Central Valley and anti-tax activists in opposition.

The High-Speed Rail Authority has spent more than $800 million of public funding over the past 14 years and hasn't produced a single mile of service or lined up a single private investor. The agency has set back the cause of high-speed rail nationally, and made itself a poster child for government incompetence.

Gov. Jerry Brown's unquestioning support of the destructive agency, upon release of its new plan, may be the final fatal blow to the controversial project. The $98 billion price tag for the project ballooned 300 percent from the $32 billion promised voters in 2008, and reveals that the governor's new team never reined in the engineers. Most of the price escalation was not increased unit costs, but new capital added in the past two years, including $14 billion in new elevated structures and $10 billion in tunnels since the 2009 business plan.

Costs per mile for the basic Bay Area to Los Angeles line are now $125 million to $145 million, triple typical European costs. Why is Europe so much cheaper? Tracks there are built on solid ground for safety reasons, with less than 2 percent of track mileage elevated. Another difference is that European operators and financial backers demand cost-effective projects. Here, magical thinking seems to have trumped sharp-eyed financial analysis.

Brown has promised a reform, and his team claims that the new plan is based on a new model and more conservative ridership assumptions. Sadly, this is not the case. For example, the starter line between Merced and San

Fernando cited by the business plan as the most feasible option depends upon attracting more daily boardings in Merced (14,400) than Amtrak has in New York City. That doesn't seem possible or conservative. Merced traffic also constitutes three-quarters of all Central Valley ridership on that alternative, a clear signal that the ridership model is still broken.

The agency itself admits that neither Eurostar, nor the Paris-Belgium Thalys, nor Spain's Madrid-Seville AVE produced more than 7 million annual trips within a decade despite serving European capitals. Actual 10th-year increases in French traffic produced by high-speed rail were 5.3 million annual rides on TGV-Southeast and 6.7 million on TGV-Atlantique, due to pre-existing traffic. Compared with five European startups ranging from 5.3 million to 7 million new rides after a decade, the High-Speed Rail Authority's 10th-year projection of 100 million new rides is flatly ridiculous.

The California Rail Foundation fervently believes high-speed rail must be part of California's future. We are equally convinced that the High-Speed Rail Authority is incapable of delivering a viable project. The time has come to shut down this agency and seek competitive proposals from private industry.

Instead of letting bureaucrats design a fantasy project based on a wish for $98 billion, a better formula, one followed by Texas and Florida, is to ask successful high-speed rail operating companies to demonstrate what could be built, matching the existing $12 billion of public funding with private capital.

Railroad operating companies are much more capable than public agencies of convincing banks and investors that their projects are financially sound. The project might not be so vast as what is currently proposed, but it is far likelier to actually provide service within our lifetimes.

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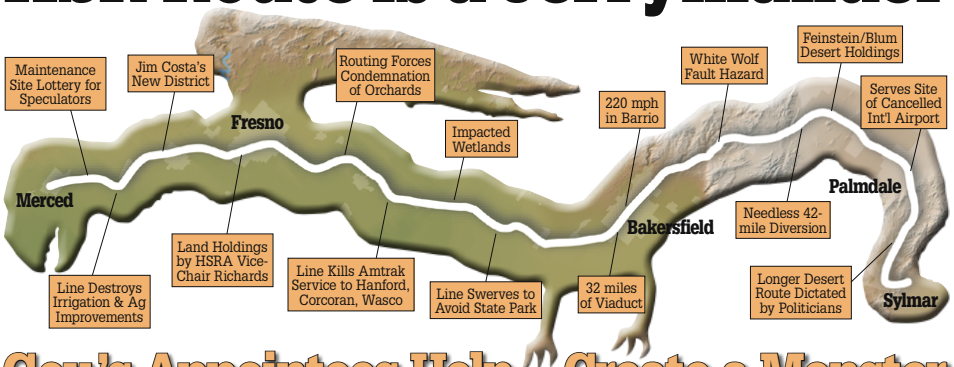
Posted on November 09, 2011 at 11:53 AM in Transportation | Permalink

California Rail News

Volume 23 Number 4 | Sacramento, CA | December 2011

HSR Route is a Jerrymander



Gov.'s Appointees Help Create a Monster

by Richard F. Tolmach

A joint meeting of two Senate oversight committees on December 5 grilled newly appointed board members of the High Speed Rail Authority (HSRA) about its draft business plan issued November 1. Senators had sharp questions about where the capital will come from, the likelihood of subsidy and the overall value of spending $6 billion dollars for an inoperable Central Valley starter line.

Sen. Joe Simitian (D-Palo Alto), told HSRA officials there would be a serious discussion on whether the project goes back on the ballot or "we just say give it up because the dollars aren't going to be there in the long-haul." Simitian urged caution. "In all due respect, accessing 3 billion dollars unwisely if it's going to cost us $100 billion isn't anything I want to rush forward with."

The Legislative Analyst's Office openly challenged HSRA claims about the need to start construction by September 2012 to save $2.3 billion in federal stimulus funds. Farra Bracht, LAO Managing Principal Analyst, said her office reviewed grant agreements and did not find any construction start deadline. She said she had not been given the location of the start-of-construction language by either HSRA or the Dept. of Finance, although it was requested months ago.

Sen. Simitian asked HSRA to provide the language by noon, December 16. Senator Mark DeSaulnier added, "…unless your administrative officer has gone to another planet, this is a pretty direct question that we need to have answered. Senator Simitian has been more than kind to give you two weeks to provide the information."

Legislators seem to have reached the end of their patience. Instead of delivering a fundable plan with private industry support, clear benefits and low risk, the Authority proposes to break its promises to taxpayers and gamble $98.5 billion on a political pork-barrel no private investors will touch.

It would seem far more practical to acknowledge California's fiscal limitations and propose a project the state can actually afford to complete this decade.

For example, it should cost only $7 billion to fill the Bakersfield to San Fernando gap in California's rail network, but the agency doesn't want to do anything that simple. Despite $12 billion in funds, the Authority would build only an inoperable segment in the Central Valley and not deliver through San Francisco-Anaheim service until 2033.

The "new and improved" business plan still fails to answer the basic questions from legislators who have been asking the Authority for three years how it would find private funds for an operable segment. Even more seriously, there is a threat the Authority will try to press ahead with a vastly overpriced 300 mile Merced-Sylmar line with California taxpayers bearing 100 percent of the risk, since the Business Plan identifies no means of involving private capital in the project design phase.

Gov. Jerry Brown's uncritical support of the agency may have unwittingly doomed the controversial project. The project badly needed a haircut, but instead its price tag ballooned 300 percent from the $32 billion

(continued on Page 2)

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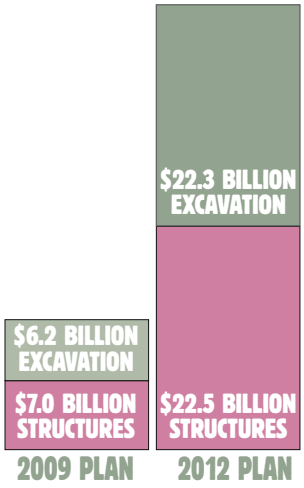
BUSINESS PLAN ASSUMES N.Y. TRAFFIC IN MERCED

WHAT BROKE BUDGET:
NEW VIADUCTS AND TUNNELS



(continued from Page 1)

promised voters in 2008 for a system with the same mileage. The inflated price reveals that the governor's team never pushed project managers to slash the obvious pork.

Most of the price escalation was not from inflation, but new capital added in the past two years. The Phase I network has 138 to 168 miles of elevated structures compared to 77 miles in the 2009 plan and has added 20 extra miles of tunnels. Since 2009, the cost of structures and subterranean work rose from $13 billion to nearly $45 billion.

A successful California plan would have efficiently connected areas of high population while avoiding high-speed running through populated areas. The Authority has failed to achieve either of these goals. The new business plan is characteristically misleading about reasons for the addition of viaducts:

Page 3-5 of the plan states, "California added nearly 5 million people between 2000 and 2010, with much of this growth along the project route. In many areas, the alignment has had to be relocated, elevated on bridges, or placed in tunnels to avoid severe community impacts and to navigate through densely populated urban areas." On the contrary, the elevated railroad plans were found environmentally unacceptable by every community faced with them, and the Authority's stubborn insistence on them turned 35 cities into project opponents. Its proposal to invade cities with 220 mph elevated trains has made powerful enemies statewide.

The High Speed Rail Authority has spent more than $800 million of public funding over the past 14 years and hasn't produced a single mile of operable track or lined up a single private investor. It is rapidly burning its little remaining credibility by putting forth overpriced unworkable plans.

At $98.5 billion, the 520 mile Phase I line is $190 million per mile, while Rhin-Rhone, latest French line to open, cost only $25 million per mile. Why is Europe so much cheaper?

European tracks are built on the ground for safety reasons, with less than 2 percent of tracks in tunnel or on structure, compared to about 40 percent in HSRA's latest plan.

HSRA cites Taiwan's elevated line, but it is a world-class error, not something to copy. Taiwan authorities fear tracks have only a 10-year lifespan because the structures are sinking in alluvial soil. What's more, the Taiwan High Speed Rail Corporation nearly went bankrupt because it was faced by the crushing costs of elevated track, the highest HSR per mile cost worldwide to date.

Brown promised a reform at HSRA, and his team claimed that the new plan was based on a new ridership model and more conservative assumptions. Sadly, this is not the case. For example, the Initial Operating Segment-South between Merced and San Fernando cited by the business plan as the most feasible option, depends upon attracting more daily boardings in Merced (14,400) than Amtrak has in New York City.

HSRA's ridership projections don't seem possible, let alone conservative. Merced traffic also constitutes three-quarters of all Central Valley ridership on the Initial Operating Segment-South, a clear signal that the controversial ridership model is still broken. That is a major concern, because California taxpayers could be on the hook for billions of dollars of subsidy on top of the construction cost if politicians are stampeded into proceeding without private capital backing the project or proof that the line will be profitable.

No leap of faith was needed by the French government on feasibility of fast trains, since 12.2 million riders already used conventional trains in the Southeast and 17 million on the Atlantique. Increases produced by high-speed rail in the first decade of fast service were only 5.3 million annual rides on TGV-Southeast and 6.7 million on TGV-Atlantique.

Compared with five European startups ranging from 5.3 million to 6.7 million new rides after a decade, HSRA's "medium" projection of 36.8 million new riders on a Phase I system by its 10th year (Page 6-13 of the Business Plan) is dislocated from reality.

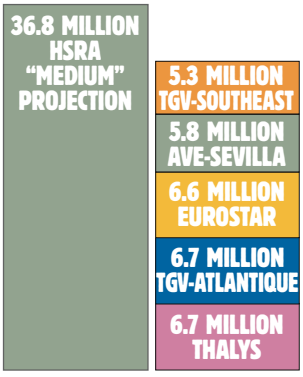
The Authority's "medium" traffic claim is more new ridership than happened on five European systems together (see below). Those networks together serve a population of about 90 million, have a track extent of 1000 miles and service extending over 2000 route miles. The claim that California's rail traffic will grow to nearly 40 million annually on a single winding 520 mile line that fails to serve regional Southern California markets or the Capitol Corridor is just not credible.

Despite repeated assurances from Gov. Brown's new appointees, the High Speed Rail Authority is clearly incapable of delivering a viable project. The time has come to shut down this wasteful agency and seek competitive proposals from private industry.

Instead of letting bureaucrats design a fantasy project based on a wish for $98.5 billion, a better formula, one followed by Texas and Florida, is to ask successful high-speed rail operating companies to demonstrate what could be built matching the existing $12 billion of public funding with private capital.

Railroad operating companies are much more capable and experienced than public agencies at the tasks of drawing up reasonable plans and of convincing banks and investors that their projects are financially sound. The project California is eventually presented with might not be so vast as what is currently proposed, but it is far likelier to actually provide service within our lifetimes.

CALIFORNIA DREAM VS. EUROPEAN REALITY:
NEW TRAFFIC BY 10TH YEAR



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TRUTH, TEJON AND TEHACHAPI:

by Richard F. Tolmach

A Bay Area high-speed rail expert and aerospace engineer has released a slashing critique of the California High Speed Rail Authority's routing decisions between Bakersfield and Sylmar involving the Southern Mountain Crossing, arguably the most technically challenging mileage of the California project.

The web-published piece and its supporting documents appear to represent hundreds of hours of research and analysis, but are highly readable and accessible, with all calculations out in the open, contrary to the style of the Authority's work. Clem Tillier's documentation absolutely demolishes the case for the Antelope Valley high-speed rail (HSR) route, along with the Authority's claims regarding cost, distance, speed and elapsed travel time.

With two lawsuits focusing squarely on false claims by the Authority pending in California courts, the independent analysis poses both legal and technical problems for the project, especially because its findings are very strong, worded in common English, and meticulously supported.

Tillier takes aim at 12 myths about the southern mountain crossing which have been used to support the Tehachapi alignment via the Antelope Valley and Palmdale:

1. **Tejon Pass HSR alignments can't cross into Tejon Mountain Village property**
2. **Tejon Pass HSR requires more tunneling than the Antelope Valley**
3. **Tehachapi Pass is the easier mountain crossing, as the Southern Pacific Railroad figured out in the 1870s**
4. **Tejon Pass HSR suffers from greater seismic risk than Antelope Valley HSR**
5. **Tejon Pass HSR via Santa Clarita would significantly impact Newhall Ranch**
6. **Antelope Valley HSR via Tehachapi Pass alignment can just plug into the electric grid**
7. **Bakersfield can be crossed at 220 mph**
8. **Bakersfield must be served with a downtown station**
9. **Tejon Pass HSR is only 3-5 minutes faster than Antelope Valley HSR**
10. **HSR can operate at 220 mph on long and steep down grades**
11. **Tejon Pass HSR costs about the same as Antelope Valley HSR**
12. **Tejon Pass HSR screws Palmdale. Palmdale will never get fast rail service to LA unless it is on the HSR main line**

Each of the above myths constitutes a distortion of reality. Tillier article systematically demolishes them in turn, and in doing so revives the prospects of Tejon Pass, also known as the "Grapevine" or I-5 alignment.

Tillier's comparison of two high speed rail routes pits the Authority's current likely Tehachapi route (in red) via the Shafter Bypass, Bakersfield Hybrid, Edison New E2, Tehachapi New T3, New AV4, SR 14 E/ Hybrid, and Santa Clarita South against a direct Tejon Pass route (light blue). Tillier says a proper Tejon alternative can be 34 miles shorter than Tehachapi, provide a 431 foot lower pass, and save at least 12 to 18 minutes of travel time, making rail more competitive with air.

Tillier provides a map (right) comparing two possible HSR alignments through these passes. The map, oriented so that the SF-LA axis is vertical, highlights one of the major trade-offs decisions in California high-speed rail: detour through the fast-growing but isolated Antelope Valley, or take the direct shortcut to Los Angeles.

POLITICS SENT HSR THE LONG WAY

Tillier largely avoids political discussions in his paper, but asserts in his paper that the above trade-off was never technical. "For political reasons that will not be discussed here, Tejon Pass was never seriously considered for high-speed rail," says Tillier.

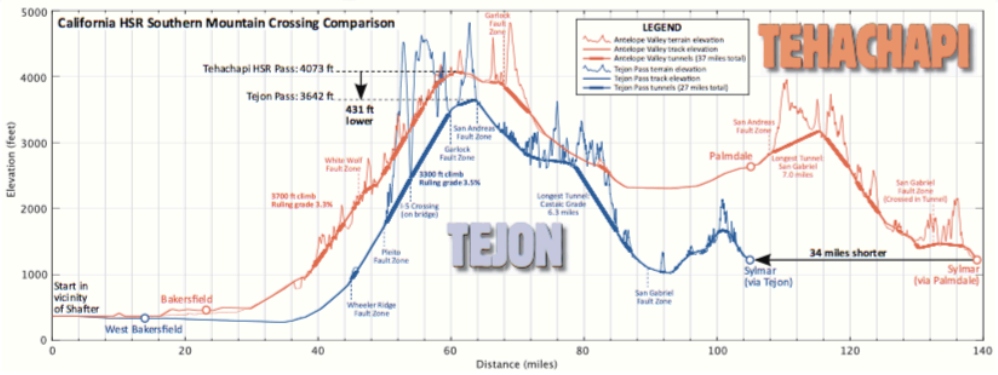
The Authority views its route choice of Antelope Valley as being irrevocable, but investors who have examined the project see Antelope as fatally flawed.

The fault-laden Tehachapi Mountain range is a barrier and requires one of the highest-elevation high-speed rail segments worldwide. Even the lowest passes require a roughly 1000 m (3300 ft) vertical climb from the floor of the Central Valley, with sustained steep grades and tunnels and bridges of considerable length. The segment incorporates the most complex and expensive mileage of the entire proposed HSR network.

Tillier's web article at **http://www.cahsrblog.com/2013/06/the-truth-about-tejon/** provides details of how the Authority and

3 Illustrations: Clem Tillier

TEJON IS $5 BILLION CHEAPER



its consultants cooked the books to justify a political decision. The Conceptual I-5 Corridor Study, published at the same January 2012 board meeting Roelof van Ark resigned his CEO post, said HSR should go the long way, 34 miles longer than needed.

"This study was tailored, rather blatantly as we will see, to reconfirm the route via Palmdale. The technical rationale for dismissing Tejon Pass alignments was built on numerous contrived assumptions and constraints that warrant close examination," said Tillier.

HSRA MINIMIZED TEHACHAPI COSTS

Among the more extreme assumptions were HSRA's claim of 29 miles of Antelope Valley route tunnel. Tillier says the study "grossly distorts the truth about tunnels" and "underestimates by about 8 miles the length of tunneling required for the Tehachapi / Palmdale alignment by use of obsolete engineering data that has since been refined in DEIR/SAA documents."

HSRA assumed the Tehachapi grades and the viaducts through Bakersfield could be traversed at 220 mph, neither of which is a reasonable possibility given current engineering and equipment plans.

Finally, Tillier points out HSRA also neglected to gauge the financial impact of having to build and supply power to a high-voltage line for the Bakersfield-Mojave corridor, currently lacking megawatts for over 30 miles. Electrical power costs could add a billion to the $5 billion Tillier cited for Tehachapi's incremental construction costs.

HSRA EXAGGERATED TEJON COSTS

On the other side, Tillier says HSRA exaggerated by 4 to 6 miles the tunneling for Tejon Pass alignment by selecting an exceptionally poor alignment that avoids Tejon Mountain Village. HSRA said in its January 2012 staff report that "Tejon Ranch Company would prefer that the alignments not cross its property."

"CHSRA / PB took the avoidance of Tejon Mountain Village property as a strict non-negotiable constraint, as in 'no trespassing.' Dozens of promising HSR alignments were eliminated as a result of this constraint," said Tillier. Tillier points out it would be cheaper to condemn the small slice of land involved, or buy out Tejon whose entire market capitalization is about $620 million, less than the cost of extra tunneling.

Apparently to further increase costs of the Tejon Pass route, HSRA assumed a jug-handled detour leaving Bakersfield that adds about 10 miles to its length, as well as proposing 7.5 miles of viaduct through open farm land, and 12 miles of downtown viaduct, instead of just skirting Bakersfield on open ground to the west. Tillier points out a Tejon line to the west of Bakersfield could also save these 20 miles of viaduct.

Given Bakersfield's current opposition to the project, a western perimeter line may be more feasible, in addition to saving billions. Tillier illustrates the technique with an aerial view of Reims, which has a TGV-Est Européen station on its southern fringe, linked with town by a new light rail line.

Tillier suggests Bakersfield not be sliced apart through the middle by a 220 mph HSR line, but instead have a high-speed rail station on its fringe like Reims.

Tillier proposes a more reasonable Tejon Pass HSR alignment without a host of contrived problems to compare with the likely Antelope Valley alignment. To see his idea in better detail and in 3D, download Tillier's KML file http://www.tillier.net/stuff/hsr/tejon.kml and open it in Google Earth.

Tillier provides details to dismantle each of the myths using numerous figures and diagrams to illustrate each point in a 75 slide PDF also linked to the web article noted above.

His conclusions are very compelling. Compared to the Antelope Valley alignment currently being planned with a stop in Palmdale, Tillier asserts that the more direct Tejon Pass HSR alignment would have the following advantages:

- **12 minutes faster (7% of SF–LA trip time)**
- **34 miles shorter**
- **10+ fewer miles of tunnel**
- **20 fewer miles of bridges**
- **$5 billion cheaper to build**
- **$175 million/year annual benefit from lower operating cost and higher revenue**

As part of his presentation, Tillier even takes on the notion that HSR would be beneficial to Palmdale, by pointing out a profit-driven HSR operator would limit Palmdale frequencies during commute hours and increase prices to discourage low-yielding Palmdale passengers. He suggests that HSR service will fall short of Palmdale's hopes, and fail to produce as much travel as Metrolink enhancements.

In a self-effacing way, Tillier asks "how some guy on the internet can come up with this stuff and claim that it undercuts years of studies by professional consultant teams paid hundreds of millions of dollars? The point is that when it comes to math and physics, the numbers don't lie," says Tillier, who holds physics and engineering degrees from Princeton and Stanford.

Tillier, who also hosts the Caltrain HSR Compatibility Blog, is a strong supporter of high-speed rail, and appears sincere in his desire to help make California HSR a bankable, successful project.

INVESTORS MAY DEMAND TEJON

"The numerous advantages of a Tejon Pass alignment will not be lost on potential private investors, who will spare no effort to produce their own untainted investment-grade analysis of the mountain crossing," said Tillier. He noted that the 2012 business plan requires $13 billion of private capital (20% of $68 billion budgeted overall), and that choosing the wrong mountain crossing "could make or break HSR in California."

HSRA train simulation runs belatedly released this spring threw into doubt the feasibility of a 2 hour 40 minute timetable between San Francisco and Los Angeles via Tehachapi. That travel time is viewed as necessary to successfully move air traffic onto trains, a prerequisite to attract private investment.

Tejon's travel time savings of 12 to 18 minutes in combination with lower capital costs and a better operating margin could finally make the project viable in capital markets.

"If the numbers presented here are to be believed, the smart money will demand a Tejon Pass alignment. Failing this, private capital will stay away, and California's high-speed rail system is unlikely to be completed as planned. That's why informed HSR supporters, those who are analytically-minded and open to new information, should place their full support behind the re-alignment of California's high-speed rail backbone via Tejon Pass," said Tillier.

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California Rail News

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High Speed Rail Authority Admits I-5 Was Fundable

By Michael D. Setty

In a remarkably candid interview in the Sept. 8 Sacramento Business Journal, California High-Speed Rail Authority CEO Jeff Morales admits that a straight-shot line from San Francisco to Los Angeles could conceivably have been built privately.

He notes dismissively that such a line "would have bypassed all those population centers" in the Central Valley and Antelope Valley. All those population centers (Modesto, Merced, Fresno, Bakersfield, and Palmdale) constitute about 7.5 percent of California's population. So why would the authority plan to build a route through these cities at enormous cost, if they don't have that many potential passengers?

The answer is simple: These cities contain huge swaths of vacant land perfect for land value manipulation and sprawl development. Morales unwittingly disclosed how the authority has changed the fundamental nature of the project: What had been sold as a self-sustaining profitable business has morphed into crony capitalism with generous government support.

Adding 100 miles of detours to serve favored land parcels will waste tens of billions of dollars. It will harm high-speed rail's competitiveness with air travel, and require faster speeds, which use much more energy.

Besides the massive undisclosed subsidy to developers, the current plan cannot possibly work financially. There's no conceivable source for the $26 billion shortfall for a line just to get from Merced to the San Fernando Valley. Neither federal nor private investment is forthcoming. Cap-and-trade revenues cannot fill the gap, either, even if that proposal survives a legal challenge.

Michael D. Setty is the administrative director of the Train Riders Association of California. A version of the above article appeared as an opinion piece September 28 in the Sacramento Bee.

The burning desire to spend its $6 billion in and near Fresno led the authority to play fast and loose with the requirements of Proposition 1A, the 2008 high-speed rail bond. Two courts have ruled that the authority failed to meet bond measure requirements.

The Train Riders Association of California believes that the authority has no prospects for building a larger system. That's why achieving a working high-speed rail line in California will require discarding the current wasteful plan.

The state needs a much less costly plan, built around private investment, which benefits passengers now — not 20 years in the future. Here's what our association proposes:

- Spend federal stimulus money to upgrade the existing Amtrak corridor between Sacramento and Bakersfield to 110 mph. That would provide fast service up and down the San Joaquin Valley, without noise to cities and disruption to agriculture that the current project would bring. The mission to connect these population centers to the rest of the state could be accomplished by spending a tiny fraction of the planned $6 billion.
- Use cap-and-trade funds to upgrade the San Diego-Los Angeles Amtrak corridor to 110 mph. These investments in the state-subsidized Amtrak system will provide significant improvements in mobility at an affordable cost. San Joaquin Valley residents would be able to board in Fresno, for example, and disembark in Los Angeles or San Francisco less than three hours later, without changing trains. Existing stations would continue to be served by Amtrak, with tickets that cost much less than high-speed rail.
- Create an open bidding process for private investment in high-speed rail. We believe that experienced operators should direct the development of new routes. Past interest by operators suggests that access from Bakersfield to Los Angeles via the Grapevine is far superior to the authority-proposed detour through the Mojave Desert via Palmdale. Similarly, operators are likely to prefer access to the Bay Area via the Altamont Pass, rather than the Pacheco, as that route would add significant revenue from Sacramento.

We are concerned that the current approach by the Authority will fail miserably, making it politically impossible to ever improve rail service in California. We want rail to succeed and become an essential part of the state's transportation system.

THE AUTHORITY'S RESPONSE TO TRAC

HSRA CEO Jeff Morales felt compelled to respond to the TRAC opinion piece:

"We agree, and under the leadership of Gov. Jerry Brown, we have worked with the Legislature over the last five years to advance a statewide rail network with high-speed rail as the backbone. Unfortunately, the rest of the commentary consists of a litany of erroneous and misleading statements, and fundamentally misrepresents the development of high-speed rail in California.

(Continued on Page Two)

INSIDE

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HSRA Response

(Continued from Page One)

It was the Legislature and voters who decided the route of the high-speed rail system; it's not some nefarious strategy hatched by the California High-Speed Rail Authority. Contained within the voter-approved language in Proposition 1A is a specific stipulation that high-speed rail serve all the state's major population areas, including Sacramento, Modesto, Fresno and Bakersfield – Central Valley cities that will play a vital role in California's future.

And high-speed rail actually will help to reduce sprawl by inducing infill growth around stations and providing new transit-oriented growth to revitalize crumbling downtown areas.

Setty recommends using federal stimulus funds and cap-and-trade revenue to upgrade existing Amtrak corridors, but omits the fact that Amtrak operates over privately owned freight lines and that federal stimulus funds cannot be transferred from high-speed rail. He also disregards that voters specified service of up to 220 miles per hour, not the 110 mph that he advocates.

The purpose of the state's cap-and-trade expenditure plan is to tackle broader issues of reducing greenhouse gas and achieving sustainable growth; high-speed rail is a key element in this strategy.

Setty claims there is no private sector interest in the program. The fact is that we continue to receive serious interest from infrastructure and investment firms both domestic and abroad, who agree with our ridership, revenue and cost projections that show there will be enough demand to generate net operating cash flow.

High-speed rail is a transformative investment that will connect economies, advance sustainable growth, and create jobs and opportunity. This is the vision for high-speed rail. Our job is to implement this vision by building a comprehensive rail system that will be fast, efficient, clean and reliable, and will benefit Californians throughout the state, not one group or special interests.

EDITOR'S NOTE:

Mr. Morales' denials crystalize the issue. The project is indeed all about special interests with land holdings. Voters never picked a Fresno start. Michigan and Illinois used federal stimulus funds for 125 mph lines.

HSRA projects do nothing to improve service in Sacramento, let alone the Bay Area or Los Angeles. HSRA cannot give Californians claimed benefits because it runs out of funding long before it builds a mile of track south of Bakersfield or north of Merced County, two zones where HSRA design malpractice is most flagrant.

BOARD RESOLUTION ON PALMDALE

TRAC Favors Cap and Trade Projects with Near-Term Benefits

The Train Riders Association of California opposes the California High-Speed Rail Authority's proposal to add the Palmdale to Burbank segment to its work plan. We believe this proposal unnecessarily delays benefits to residents of the state, and cannot be built with available funding. (The Central Valley segment of the project does not have full funding, even with its share of cap and trade dollars.)

We strongly urge that the cap and trade funds dedicated to HSR be directed to achieving meaningful greenhouse gas emission reductions, air pollution reduction, and on-the-ground transportation improvements in the near-term.

The list below comes from An Alternative Strategy for Developing High-Speed Rail Service in California,* written by the staff of the Senate Transportation and Housing Committee in July 2012. "The[se] projects offer near-term benefits to today's commuter rail and Amtrak riders and will be fully compatible with future high-speed train service."

- **Caltrain Downtown Extension to the Transbay Transit Center**
- **Los Angeles Union Station Run-through Tracks (SCRIP)**
- **Grade Separations between Los Angeles and Anaheim: Rosecrans/ Marquardt Avenue, Los Nietos Road, and State College and planned road closures**
- **Caltrain electrification**

The cost of these projects makes them feasible with existing funding. While the upgrade of the Palmdale Metrolink service to Los Angeles was included in the Senate paper, the exceptional cost and technical difficulty of the project places it in the Infeasible category until additional funding is secured.

When further funding is found, we believe the state's first priority should be a passenger rail connection between Bakersfield and Southern California. We published an analysis of the route**, which indicated that the Tejon Pass route is cheaper to build, faster and more profitable than the Authority's route via Palmdale.

Using the HSR cap and trade in this strategic manner will mean that the Transit and Intercity Rail portion of the cap and trade program will be able to deliver far more benefits to rail passengers.

* **http://transdef.org/HSR/Solutions_assets/HSR Plan B Background Paper.pdf**

** **http://www.calrailnews.net/wp-content/uploads/2014/05/crn0813.pdf**

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AMTRAK & MICHIGAN TO EXTEND 110 MPH SERVICE

Building upon agreements concluded in 2012, Chicago-Detroit Amtrak trains will obtain 110 mph service on 90 percent of the corridor by next year. For about two years, a section of 110 mph track has been successfully operated in Western Michigan, the only such service west of the Potomac.

The new segment will extend to 232 miles, bringing the corridor up to international standards of speed. The service was made possible by negotiations and agreements between Amtrak, the Michigan Department of Transportation (MDOT) , and the Norfolk Southern Railway (NS).

As announced in December 2012, MDOT used a grant from the Federal Railroad Administration (FRA) to purchase of 135 miles of NS railroad for $140 million, a highly attractive price of about $1 million per mile. The line is directly connected to the Amtrak-owned Michigan District, which runs 97 miles from Kalamazoo to Porter, Ind. The result is nearly 80 percent of the route between Detroit and Chicago is publically owned and will soon be maintained for passenger trains at higher speeds.

Extension of the 110 mph top speed district for Amtrak trains from the prior 80 miles started eastward with the 22-mile segment between Kalamazoo and Battle Creek. Travel times are being reduced sequentially as more improvements are made. In 2012, Amtrak shaved about 20 minutes from the 2001 schedules on the Amtrak-owned segment of the corridor. The current plan is to further reduce the travel time between Detroit and Chicago to about five hours.

The $140 million used to purchase the line included FRA High-speed Intercity Passenger Rail Program grant funds, plus a state match of $37.5 million. The FRA also awarded $196.5 million to MDOT for major track and signal improvements on this corridor, to be performed by Amtrak. NS will also transfer the duty of train dispatching to Amtrak in phases between now and 2016.

"Amtrak looks forward to working with the FRA, Michigan, Illinois and Indiana to improve this corridor and better connect these vital cities in the Midwest with travel times far better than driving, more comfortable and productive than flying and with a smaller carbon footprint than either of those modes," said Amtrak CEO Joe Boardman.

While California HSR officials claim that this kind of improvement is impossible using FRA high speed funds, work is underway today in Michigan, Indiana, and Illinois, all states with far more limited staff and financial resources. One key to the progress made in Michigan may be its use of small, rail-focused consulting firms like R.L. Banks instead of huge international engineering firms.

Another is obviously Michigan's close work with railroads, and the practical nature of the agreements they have concluded with them. Midwestern states found common ground and quietly purchased the lines with public funds, improving the tax and cost situation for freight carriers, doing so with federal grants. The net result is that Michigan has 110 mph trains now, rather sometime a decade or two in the future.

Spanish HSR Station & Tunnel Flood in Girona

Where's a vaporetto when you need one? Flood turned high speed rail into a spooky canal. ADIF says it saved Girona from worse flooding.

By Richard F. Tolmach

Barcelona-Figueres AVE high-speed trains as well as all Spanish international TGV service was stopped for over a week, following heavy rain September 29 that flooded the Girona AVE station and blocked the six kilometer tunnel north of the station. About 15,000 riders were negatively affected, and several hundred trains cancelled.

Renfe was initially forced to cancel all AVE (high speed) and AVANT (regional expresses) north of Barcelona, partly because the line was cut, partly because the entire local fleet was stranded in Figueres. By three days after the incident, water was drained from Girona AVE station and service was re-established to that point, using sets borrowed from Madrid. The fleet shortage and delays turning trains also somewhat disrupted and delayed Barcelona-Madrid AVE service.

The line north of Girona was more challenging, because infrastructure operator ADIF had to clear 15 million gallons of water from the last mile of the tunnel, a process that lasted several more days. ADIF requested help from the army's Emergency Military Unit (UME) which brought 84 soldiers, 30 vehicles, a boat and an aircraft to Girona. Its pumps were theoretically capable of moving 300,000 gallons an hour, but the distance between the closest access point and the water meant slower progress.

Conditions for travelers to Figueres and France were chaotic. Passengers were generally redirected to conventional regional trains or bus shuttles, but without much warning. International passengers clogged both Girona and Perpignan stations, waiting for delayed buses to show up.

Between 2 and 4 inches of rain fell in the 24 hours preceding the tunnel problem. This certainly was not a 100-year storm, but set a record for more than decade, because the region has had low rainfall for years. Various streets and highways around Girona also flooded at the same time.

The Girona AVE station was particularly vulnerable to flooding because it was placed underground next to a watercourse. The conventional Renfe station above it, perched 20 feet above water level and with a modern viaduct connecting northward, was relatively unaffected.

The AVE station filled to platform level, approximating the appearance of a Venetian canal. The tunnel filled to 7 meters height, enough to submerge the catenary. Luckily, no trains were on the line at the time.

For three days, ADIF was silent on the cause of the flood, but then blamed the problem on city infrastructure. ADIF went so far as to claim that flooding of AVE through Girona acted to divert water from flooding city streets, which prevented "greater harm" to the city itself.

Girona Mayor Carles Puigdemont retorted, calling the ADIF statement "a shameful text that is an insult to public intelligence."

Opening the line required overcoming many problems. The tunnels were filled with mud, which had to be cleaned with more water. Until the tunnels were dry, ADIF technicians couldn't check damage caused to catenary or AVE's electrical and signalling equipment.

Ironically, less than a week after the disaster, Girona hosted a summit of cities on high speed for which French participants had to arrive by bus. Girona Parliamentary representative Santi Vila believes that the AVE flood made the Rajoy administration "ridiculous in the eyes of the world." In a speech before Parliament, he noted that Rajoy has made high speed rail its flagship project, and characterized the tunnel flood as a "collapse of a project of which [Rajoy] boasted until recently."

Mayor Puigdemont not only criticized the AVE project for negligence, but for intrinsic safety flaws in its design. He made the point that many lives would had been in danger if the tunnel had flooded when trains were operating instead of overnight. The tunnel section below the river was one of the most expensive features of the line through Girona, but now seems to have become the Achilles heel of the project.

On October 10, the Girona City Council overwhelmingly passed a resolution stating that the event showed that the AVE line, although operating for 21 months through Girona, is clearly not completed and lacks essential safety provisions.

Officials characterized ADIF as having produced "totally unnecessary and unacceptable risk." The text concludes by asking ADIF to complete "immediately and urgently without further delay" remaining work especially in Central Park and in the neighborhood of Sant Narcís. It has been forwarded to the Minister for Public Works, Ana Pastor, the Ministry of Development and President of ADIF.

The resolution criticizes ADIF for resuming service without adequate security. Mayor Puigdemont was sent to Madrid to put ADIF on notice of the City's concerns..

Why HSR Should Start in Los Angeles

Testimony to the Senate Transportation and Housing Committee by Paul Dyson

High Speed Rail Informational Hearing, Sacramento, March 27, 2014

Chairman DeSaulnier and Honorable Senators:

My name is Paul Dyson — I am RailPAC President and Chair of the City of Burbank Transportation Commission, and a recently retired 45 year veteran of the railroad and logistics industry.

RailPAC is an all-volunteer 501c3 membership organization educating the public in the need for a more balanced transportation infrastructure since 1978. We have always advocated investment in modern passenger railroads, both in a dedicated high speed right of way for passenger trains linking the main centers of population in California, as well as continuous upgrades to regional rail and local transit.

Our concept continues to be one of incremental improvements, done smartly, so that each investment acts as a building block laid on the foundation of existing facilities. This policy is equally applicable for new high speed rail segments as well as regional rail. It is clearly not possible for a complete 800 mile system to fall from the sky and be instantly in place, so we have to ensure that each segment constructed fulfills a real need in its own right as well as being a part of the whole.

This hearing asks three questions:

1. What do we want to see as the end product?

2. Does the 2014 Business Plan move us in the right direction?

3. What alternatives might give the project better chances for success?

I will be brief in answering the first question, what does a world class passenger rail system look like? Our model is Switzerland, where the transit systems, regional and intercity railroads, even the steamers on the lakes, are coordinated to provide service from just about every bus stop or rail station to every other one in the country every thirty minutes, 18 hours a day, seven days a week.

You'll see from the map that Switzerland is about the size of the densely populated areas of northern or southern California, but actually faces far greater topographical challenges. It is an affluent country with high levels of automobile ownership, and yet has very high public transit usage. And of course there is a growing network of European high speed trains which links Switzerland with the major centers of Europe. Thus we advocate two robust regional systems, north and south, with a High Speed link between the two.

We can accomplish the same level of service with carefully planned infrastructure investments, strong central direction that requires cooperation between agencies, and excellent information and ticketing systems that provide seamless journeys, regardless of the mode selected.

Next, Id like to comment on the draft 2014 Business Plan. This plans calls for initial service between Merced and Palmdale, and, when complete, to an as-yet-undetermined location in the San Fernando Valley north of Los Angeles.

We believe that this strategy is exactly wrong for a number of reasons. Passenger rail is all about moving large numbers of people. It is also about providing a transportation product for which people will be prepared to pay their hard earned dollars.

SOUTHERN CALIFORNIA REGIONAL INTERCONNECT PROJECT

- **Currently trains can only enter and leave Los Angeles Union Station via the 'Throat' - the set of tracks to the north.**
- **This is inefficient, slow and congested. For example Pacific Surfliner operators have to get out and move to the other end of the train prior to continuing the journey through Los Angeles.**
- **With the proposed new tracks, the Pacific Surfliner can go through Los Angeles without reversing direction. Metrolink trains can also loop around.**
- **Reduces congestion and wait times. Improves circulation.**
- **Makes new Metrolink routes going through Los Angeles possible, such as a route between Orange County and the San Fernando Valley, without the need to change trains.**

The Authority proposes a service, that will be in place for a number of years, whereby passengers will travel by bus or regional train to and from Merced, take a High Speed Train to Palmdale, and a Metrolink train from Palmdale to Los Angeles or beyond. (p.12 of Draft Business Plan). We do not really know how long this service will be in place as funds are not identified to build further south into the L.A. Basin.

L.A. County MTA studied the route between Palmdale and Los Angeles a couple of years ago and concluded that even with significant investment there is little that could be done to improve journey times along this line which was originally completed in 1876. The line follows Soledad Canyon and is built cheaply to typical 19th century standards. As far as modern passenger transportation is concerned I regard it as obsolete. It would be faster to continue to take a bus from Bakersfield.

Assuming funds are made available to build a new line south from Palmdale, to this proposed interim terminus, we still do not have service to Los Angeles Union Station, the hub of transit and regional rail and the second largest city in the USA.

Where will this interim hub be? The {City of Burbank} Transportation Commission was told that a decision is imminent. But wherever it is there are no transit connections available to compare to those at Los Angeles Union Station, and clearly the majority of patrons will use either cars or special connecting buses.

Regardless of whatever projections of ridership and revenue might be found in the Business Plan, I ask you to apply the common sense test; would I spend my money on a bus–rail–bus journey say from Orange County to Sacramento, compared to the alternatives that are available? Some might, if they are so enthused about the new technology, but will the patronage be sufficient for the service to make a profit on operations? For that level of inconvenience and that slow a journey the fares will have to be pitched so low to attract passengers such that an operating profit is out if the question.

What Alternatives does RailPAC propose? We believe that the logical plan, the one most likely to be successful, is to start construction at Los Angeles Union Station, and build north. There are many very good reasons to adopt this strategy.

1. A rebuilt Los Angeles Union Station brings immediate benefits to eight of the most populous counties in the state. Converting the station from a stub end to through tracks has the same regional significance as the Transbay tube has to the BART system. It will bring improvements to the daily lives of thousands of Southern California commuters and intercity passengers.

2. Only Los Angeles in the south can generate sufficient numbers of passengers to allow for any prospect of a successful and profitable operation. Trying to initiate High Speed Rail interim service without one of the end points is like trying to open a shopping mall without an anchor tenant. You need a "big box" retailer to bring in the crowds. The Authority's decision to delay service to Union Station until 2028 at the earliest is incomprehensible.

3. The section between Los Angeles and Bakersfield is the most expensive and technically challenging. We believe it is better to solve these problems first, rather than "kick the can down the road" and build the easy parts first. Imagine the British and French building the approaches to the Channel Tunnel first before they knew whether the tunnel was feasible or affordable!

4. Construction at Los Angeles, under the High Speed Rail aegis, will provide a demonstration to the majority of Californians that the project is truly under way.

5. A grade separated right of way from Los Angeles to Saugus will eliminate dangerous grade crossings in the San Fernando Valley.

6. There is a gap in the existing state intercity service between the San Joaquin corridor at Bakersfield and the LOSSAN corridor in Los Angeles. Building this segment of new line first will allow through journeys, one seat rides, all the way from San Diego to Sacramento and the Bay Area. This will not be high speed rail but will reduce travel time, eliminate the bus connection, and enhance the travel experience.

7. Bridging the gap between Los Angeles and Bakersfield is truly a project which on its own represents independent utility, regardless of whether there is additional investment in High Speed Rail.

After the link is made to Bakersfield each additional segment of new line will incrementally reduce journey times by allowing higher speed operation over a greater distance. Convenience and speed sell tickets. A single seat ride plus gradually improving journey times will add to the commercial success of the service until end to end high speed operation is achieved.

Mr. Chairman, there is certainly a lot more that could be discussed here but I am delighted to answer any questions you may have.

I-5 Tejon Pass May Be the Only Politically Feasible HSR Alignment Into Los Angeles

Opinion by Michael D. Setty

In August 2014, Los Angeles County Supervisor Michael Antonovich asked the High Speed Rail Authority (HSRA) to consider a controversial new Eastern San Fernando Valley route. The currently preferred route runs parallel to State Highway 14 via Acton, Agua Dulce and Santa Clarita. Antonovich's alternative would go south from Palmdale, be largely in tunnel through the Angeles National Forest, then under Sunland-Tujunga and Shadow Hills, emerging in the eastern San Fernando Valley to reach Burbank.

Predictably, Antonovich's idea stirred up new opposition to HSR and placed citizens in each area at odds with one another. Santa Clarita, Acton and Agua Dulce residents are now demanding the eastern San Fernando Valley route. The latter communities want HSRA keep its original preferred routing parallel to Highway. 14.

On April 27, nearly 1,500 residents rallied at Santa Clarita's Canyon High School, while 2,000 residents from the eastern San Fernando Valley met to oppose HSR a few weeks earlier. Tensions have been high in the meetings, and many attendees have been outwardly hostile to the proposed arrival of a rail project that ostensibly will not serve local traffic at all.

The long-tunnel idea, which now has at least three variants, is not highly regarded by rail experts or geologists. Project insiders are among the most critical, and some claim that the meetings are only political theater, because the tunnels are not in fact feasible. Although cost issues have not been fully acknowledged by the HSRA, even if a tunnel could be feasibly built, adding even more miles of additional tunneling is expected to raise total project cost by many billions of dollars, making it even less likely that an operating high speed rail system will ever open.

Given the determined citizen opposition to both HSR routing options on the table thanks to their major negative impacts, a third option is essential: serious reconsideration of the Tejon Pass HSR alignment that parallels I-5 between the San Joaquin Valley and Southern California. The May-July 2013 California Rail News presented a detailed article about the Tejon Pass option.

While that article showed the HSR route alongside I-5 for its entire length through Santa Clarita (see map right), **the author recommends switching to the existing railroad right-of-way from Santa Clarita into Los Angeles via a 2 mile subway under Magic Mountain Blvd.** This routing would cut the capital cost and operating cost of the high speed rail project by shortening the route by at least 40 miles, add significant traffic, and facilitate an underground stop in central Valencia.

Best of all, it would refocus local improvements back on what area residents were originally promised last time they came out in force. These included upgrades to the existing Metrolink line between Palmdale, Santa Clarita, and San Fernando Valley, so that the local community receives service and benefit from the project.

Perhaps Supervisor Antonovich really believes in his tunnel idea. If he were to discover that project employees know that it is a fantasy and are trying to generate more engineering expenses, it would be a fitting denouement to the circus atmosphere created by HSRA.

Nearly 1,500 rally in Santa Clarita protesting proposed HSR route along Hwy 14. About 2,000 attended an anti-HSR rally in eastern San Fernando Valley.

PAGES 4-5: HSR TUNNELS UNDER NATIONAL FOREST?

California Rail News

Volume 26 Number 2 Sacramento, CA Oct.-Dec. 2015

Keys to HSR Success: Market-Based Route & Private Funds

CURRENT HIGH-SPEED PLAN ATTRACTS "INTEREST" BUT NO MONEY

By Michael D. Setty
TRAC Administrative Director

On June 22, 2015, the California High Speed Rail Authority (CHSRA) released its "Request for Expressions of Interest for the Delivery of an Initial Operating Segment," to firms interested in helping construct, finance or operate CHSRA's proposed high-speed rail (HSR) route between Burbank and Merced.

By its September 14 deadline, the CHSRA solicitation drew 36 responses from large international construction, management, engineering and financial firms possessing varying degrees of HSR experience and expertise. "They are not bringing their checkbook yet, but they are bringing their ideas, their interest, their commitment to work with us," said CEO Jeff Morales in an interview with the Los Angeles Times. CHSRA board member and financial expert Michael Rossi said, "There is no proposal, there is no commitment to do anything; We need to be very, very careful."

Access to $9 billion from Proposition 1A, approved in 2008 by voters, hangs on getting past the vociferous opposition of litigants claiming the project does not meet the requirements of the Bond Measure. Without those funds, CHSRA's plan to build the initial segment from a point near Madera to a point near Bakersfield are in doubt. Beginning in 2016-2017, approximately $500 million per year will be available for HSR construction from Cap & Trade funds. Those funds are not sufficient to build an HSR system, however.

Given that the prospects for additional state funding beyond Proposition 1A, Cap & Trade and more federal funding are slim to

(continued on Page Two)

INSIDE

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Keys to Success

(continued from Page One)

none, CHSRA's only hope is private sector financing to cover most of the additional $25-$30 billion it claims is needed to complete HSR from Burbank to Merced. They are at least $10 billion short. CHSRA Dan Richard said proposers either wanted a "revenue guarantee" or "…a record of financially successful operations."

The terms of Proposition 1A require HSR to cover its operating expenses out of fare revenues, without any form of state operating subsidies. A "revenue guarantee" is a polite word for subsidy. Proposition 1A was originally drafted with the expectation that the lion's share of HSR capital costs would also be covered by fare revenues, making private sector rail operations and major private capital investments feasible.

CHSRA released its solicitation with an expectation of private financing for a major portion of its current HSR plan. However, to paraphrase CHSRA Board Chairman Dan Richard, "there were lots of interesting ideas, but let's not delude ourselves that anyone wants to invest in our HSR plan."

Elizabeth Alexis of Californians Advocating Responsible Rail Design (CAARD), a TRAC ally in the effort to reform the HSR plan, said, "Everybody who is anybody responded to the authority, but the bad news is that everybody is telling them as kindly as possible they are nuts."

CA High Speed Rail Can Work, but the Current CHSRA Plan Cannot

When the CHSRA solicitation for "Expressions of Interest" was released, TRAC did not expect any private investment offers. And as a number of experts predicted, only taxpayer guarantees of operating revenues, or a "record of financially successful operations" would generate such financing offers. TRAC is no longer alone in believing that the current CHSRA plan cannot be built. No financing is forthcoming from major international players in the high-speed rail field, supporting conclusions that TRAC arrived at several years ago.

Stated simply, for high-speed rail to succeed in California, high-speed rail planning must be taken back to the drawing board to develop a financially feasible plan. This requires three things:

(1) Selecting a route best serving the intercity travel market between Northern and Southern California;

(2) Developing a plan that will actually provide travel times of under 3 hours, to be competitive with flying; and

(3) Designing a project that can not only cover its ongoing operating expenses, but generate a surplus. That would enable it to attract significant amounts of private investment in addition to Proposition 1A bonds and Cap & Trade funding.

Based on this, TRAC proposes abolishing the California High Speed Rail Authority. CHSRA duties should be rolled into those of a new statewide California Rail Commission (CRC) that would have responsibilities for coordinating all regional and intercity rail passenger services statewide, including HSR. The Governor and Legislature would appoint Commission members, in addition to representatives from each of the regional rail providers (including the three corridor joint powers agencies that oversee the Capitol Corridor, the San Joaquins and the Pacific Surfliners) that serve at least two counties over passenger routes connecting to the national rail system.

A major role of the proposed CRC would be to protect existing funding for rail passenger services, including sufficient funds to maintain the existing level of service and a robust conventional rail capital program. The new commission would recommend the allocation of Cap & Trade funds for rail projects, working from the perspective of improving the statewide network. It would coordinate intercity feeder bus networks and connections between regional and local transit operators.

The new CRC would also develop a franchising process for high-speed rail, designed to solicit proposals from experienced HSR operators to plan, build and operate a San Francisco to Los Angeles system. A vital feature would be to give potential bidders the option to propose new HSR alignments based on market requirements. At their discretion, bidders should be able to discard any, if not all, of CHRSA's current HSR plans and programs.

Unlike the products of the inexperienced CHSRA bureaucracy, private sector planning will be based on market feasibility and potential profitability, offering the flexibility to consider lower cost alternatives that meet real world market needs. This also can gain wide support from the California public rather than from just a few narrow, if powerful, political interests.

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Signed articles represent the views of their authors, not necessarily those of the above organizations.

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California Rail News encourages letters, comments, and reports on local issues. Please submit your material to California Rail News at the above address. Sorry, we cannot guarantee return of photos or articles submitted. Deadline for material to be included in the next issue of CRN is Dec. 31, 2015.

XpressWest HSR to Las Vegas Moves Ahead with Chinese Seed Funding

China Railway International USA Co., Ltd, an arm of mainland China's railway construction and rolling stock manufacturing industries, and XpressWest, announced on September 17th that they have formed a joint venture to develop, finance, build and operate the electrified, 150 mph XpressWest high-speed rail line between Las Vegas and Southern California. Stations are proposed in Las Vegas and Victorville, with eventual through service via the California HSR link from Palmdale to Los Angeles.

The Chinese have agreed to provide $100 million in startup capital for this new 180-mile high-speed rail line. The XpressWest project will introduce Chinese HSR technology to the United States. Proponents say that California and Southern Nevada will gain new economic development and tourism from the project, generating thousands of new jobs. XpressWest may also be the first effort establishing a high-speed rail manufacturing capability in the North American market.

XpressWest says it expects to begin construction in late 2016 or early 2017.

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HIGH SPEED RAIL: A WALK UNDER & TH

CURRENT RAIL LINE UPGRADES MUST BE TORN OUT IF HSR ROUTED THAT W

by Susan MacAdams
TRAC Board Member

With the passage of Proposition 1A, California voters agreed that the California High-Speed Rail Authority (CHSRA) would use existing rail corridors for the construction of a high-speed rail route. In Los Angeles, the Metrolink Antelope Valley Line is the designated rail corridor through the San Fernando Valley for high-speed rail (HSR). It starts in Palmdale, goes through the desert alongside SR-14, and ends at Los Angeles Union Station.

Currently, Caltrans, the Los Angeles County Metropolitan Transportation Authority (Metro) and Metrolink are spending tens of millions of construction projects along this corridor through the San Fernando Valley and Burbank. Metro has built twelve miles of bikeways along the Metrolink corridor in San Fernando. Caltrans is currently constructing a mile-long Metrolink rail bridge in Burbank along this corridor. CHSRA has given Metrolink $55 million dollars of Proposition 1A funding to rebuild fifteen new at-grade crossings, three platforms, three bridges and ten miles of track between Burbank and Sylmar along the Antelope Valley Line.

Why is this news? **Because these improvements will have to be torn out and replaced if HSR is built within the railroad corridor.** They would all need to be completely rebuilt to allow HSR.

Metro has identified dozens of potential bike routes throughout LA County that would benefit from the construction of new bikeways–projects that enhance the safety of riders, linking shopping with neighborhoods. Other bike paths are planned for existing Metro and Metrolink stops that would connect stations with local neighborhoods and businesses.

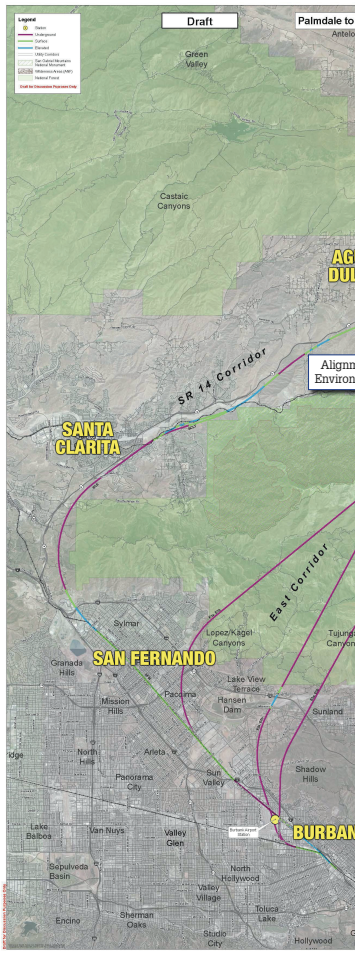
Yet the new San Fernando bike paths link one Metrolink stop to another down a rail corridor that lacks shade, local businesses, or direct access to housing, at a cost of two to three million dollars a mile. The paths would need to be removed to make space for HSR.

The Caltrans rail bridge construction uses a combination of local, state and federal funding. Yet the bridge cannot accommodate high-speed trains, because it was not designed to fit catenary poles to power the trains. To accommodate HSR, this mile-long bridge would need new foundations, new bridge support columns and a wider bridge deck to support four tracks (two for Metrolink and two for HSR). The only way HSR can go over the new bridge is if it is torn down and rebuilt.

It is curious that the fifteen rebuilt at-grade crossings are being paid for with Prop 1A funding. CHSRA's Design Standards require HSR tracks to have vertically separated crossings, so that trains never intersect with vehicles or people. But with the new construction, cars and pedestrians will continue to cross the railroad tracks at-grade.

These new at-grade crossings cannot be changed into the grade separations needed for high-speed trains without tearing them out and completely reconstructing the intersections.

These examples show a disturbing incompatibility between the planning of CHSRA, Metro, Metrolink and Caltrans. There appears to be no construction coordination whatsoever, as all this new work will have to be removed for HSR to be built in this corridor. These agencies have long been on notice of the problem, however.



"Base" tunnels are alternatives to CHSRA Clarita. Earthquake faults and variable g

FATAL FLAWS OF TUNNELS UNDER NATIONAL FOREST

The Los Angeles Times reported on October 25 that CHSRA's project has far larger difficulties than it has publicly disclosed: the earthquake faults and difficult geology northeast of Los Angeles will make tunnels extremely challenging to build. They will significantly increase costs and delay completion of the project--if they can ever be completed. A tunneling expert that consulted on the 35-mile long Gotthard Base Tunnel under the Swiss Alps called the CHSRA's tunnels "very, very ambitious--to put it mildly."

TRAC's Susan MacAdams has uncovered a dramatic twist to this story: tunnels under the Angeles National Forest can't be built at all! In the adjacent story, she reports on how CHSRA has approved projects by other agencies that will prevent HSR from fitting on the Antelope Valley Metrolink surface route. Here's her report:

The tunnels would need emergency escape routes, but they can't be built where the tunnel is 3000 feet below the surface. Even where the depth is not as great, emergency evacuation routes can't exit into the National Forest. I was curious about the emergency escape routes and took a hike into the National Forest to investigate. There's no place to build a road to the emergency escape locations without changing the nature of the National Forest. So even if they can tunnel, they can't get environmental clearance for the emergency escape routes. So this is one of the fatal flaws in the tunneling concept.

The FBI will not allow construction of the long tunnels because of the potential for terrorist bombings. The ends of the tunnels become like cannons, shooting the explosive blast waves into an underground Burbank HSR station. That means the E1, E2, and E3 Burbank Airport tunnel designs are not feasible.

Contrary to the direction given by Proposition 1A, Tunnels E1, E2 and E3 do not follow an existing transportation corridor. Following a high-voltage transmission corridor does not create an acceptable alternative, because high-voltage towers scale mountainous terrain in zig-zag patterns rather than maintain a steady grade.

The tunnels would cost much more than the State Highway 14 corridor.

Even if the tunneling itself were feasible, the damage and destruction caused by the mining operations at the tunnel staging areas would be beyond what any local neighborhood would tolerate. Tunneling excavation pits are the size of a high school football stadium, but much deeper.

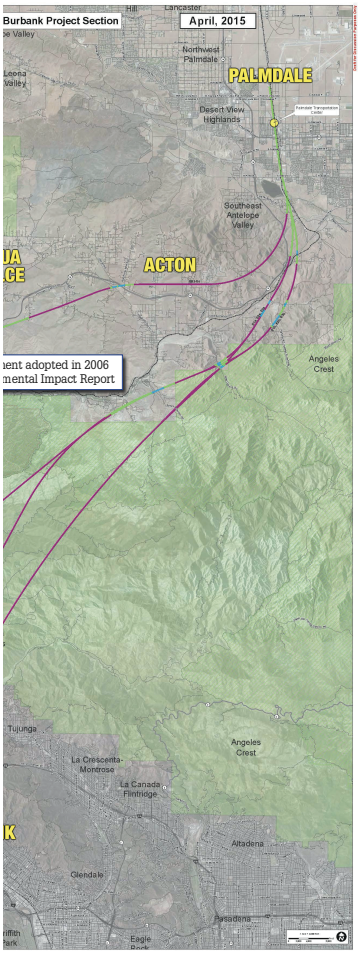
To construct tunnel E1, the Pacoima neighborhood bordered on the south by San Fernando Road and Glenoaks on the north, and between Paxton and Pierce will have many homes condemned. This includes the closing or shortening of the Whitman Airport runway for the tunnel portal location. This neighborhood appears to be the hardest hit as the entire distance between the tunnel portal and the tunneling pit would be excavated and

ROUGH THE ANGELES NATIONAL FOREST?

AY; NEW TUNNELS UNDER NATIONAL FOREST TO PLACATE SANTA CLARITA?

Over two years ago, an August 10, 2013 progress report from the CA High-Speed Rail Joint Venture, made up of Hatch Mott MacDonald, URS and Arup, states under "Key Issues and areas of Concern":

> "Metro continues to promote improvements in their ROW in the San Fernando Valley at the expense of high-speed rail alternatives. The shared corridor in the San Fernando Valley should be programmed to a sufficient level to better layout how the corridor should be developed and whether Metro's projects should be pushed as a separate agenda or in conjunction with bringing high-speed rail into the Los Angeles....Metro is taking an aggressive position regarding some of the projects which could lead to modification of the alignment alternatives or create unnecessary constraints."



's previously preferred routing via Santa eology greatly complicate tunnel options.

The Transcontinental Railroad was built in six years, between 1863 and 1869, during the chaos of the Civil War and its aftermath. Six years after Proposition 1A became law, there still is no coordination between Metro, Metrolink, Caltrans and CHSRA for construction along the Prop. 1A San Fernando Valley corridor.

By funding obvious bottlenecks, maintaining silence on sister agency projects, and investigating extraordinarily expensive tunnel alternatives, CHSRA sends a strong message that it has decided not to use the corridor.

At which meeting did the Authority decide to not use the San Fernando corridor and instead build HSR tunnels under the mountains from Burbank To Palmdale? Currently CHSRA has applied to take tunnel boring samples in the Angeles National Forest. If the tunnel borings in the mountains show that tunneling through the mountains is not feasible, then what corridor will CHSRA choose for HSR? Oops!

CHSRA has not conducted an environmental review process in this corridor. Because of that, it is still legally committed to the Antelope Valley Metrolink route selected in the 2005 Statewide Program EIR. Has the Authority made a decision to abandon that route?

If so, that decision would be in violation of law. CEQA requires a public decision-making process, which includes public comment and environmental analysis. Or is CHSRA oblivious of the work of its sister agencies? Neither explanation places CHSRA in a favorable light.

Have the local and statewide agencies--Caltrans, Metro, and Metrolink--come to the conclusion that CHSRA is never going to build high-speed rail, and decided to take advantage of CHSRA's free money?

How did we get to this state of affairs? The instructions to commence these actions did not descend from Heaven. Someone within each agency gave the permission to proceed with construction. These contracts would not have been awarded without the support of local partners.

Which board members, which local and regional politicians prompted Metro, Metrolink and Caltrans to forego building HSR in the Proposition 1A corridor and instead presume that tunneling under the Angeles National Forest from Burbank to Palmdale will work and be cost-effective?

Is it possible that the main point of accelerating development of the Palmdale-Burbank HSR segment is to build the vital connection to Los Angeles for the proposed XpressWest high-speed train paralleling I-15 from Victorville to Las Vegas?

---

remain an open trench.

To construct tunnel E2, the Sun Valley/ Burbank neighborhood bordered on the south by San Fernando Boulevard and on the north by the 5 Freeway, between Ledge and Ferncola, including Glenwood Elementary School, would be condemned to make room for the pit needed for the tunnel boring machines.

To construct tunnel E3, the Sun Valley neighborhood above North Glenoaks Boulevard along Glencrest, Rutledge, Sangamon, Milano and Hollywood Way would be condemned for the tunnel boring pit. Other streets would be closed, leaving remaining residents to face long detours, dust, debris and noise for up to ten years.

The proposed Burbank HSR station adjacent to the Bob Hope-Burbank Airport is the entrance to the tunnels. If the station can't be built, then the tunnels can't be built The station would be the size of the World Trade Center, built on its side. Building such a massive structure underground, in soil with known toxic contamination, would be enormously challenging. There is no building of that size in the Western United States. The infrastructure around Burbank Airport cannot support construction this massive without a complete degradation of existing services for a period of ten years. This will severely impact local businesses.

The station structure, plus the special trackwork on either end, is about a mile long. For tunnel option E1, an underground HSR station cannot be built along San Fernando Road. The distance is too short between the height of the new Caltrans bridge over Buena Vista and the depth of the underground station at Hollywood Way to construct platforms and special trackwork.

The tunnel portal for the HSR Burbank station would be located in a designated flood zone. Overflowing water will seek out its lowest level, in this case the portal opening flooding down into the station.

The Burbank Airport is also not an optimal location for an HSR station. It would not be centrally located for San Fernando Valley and Santa Clarita Valley residents. This will increase congestion on the I-5 Freeway. There are two million people in the Valley with very poor access to Burbank Airport. Burbank only has 105,000 residents.

Adding a fourth rail station to the Burbank Airport area is not needed and is an additional taxpayer expense with few rewards. Currently, only one percent of passengers and workers use existing shuttles from nearby transit stations to arrive and depart from the airport. Free shuttle service is available to the existing Metrolink station, and the North Hollywood Red Line subway station that has a direct link to downtown Los Angeles.

The existing Burbank Airport is wedged between two rail transportation corridors. Amtrak service to Santa Barbara and San Francisco runs on the south side of the airport. The Metrolink Antelope Valley line connecting Los Angeles Union Station to Palmdale runs along the north side. Road access into the airport terminal area is already constrained by existing grade crossings. A HSR station at this site will increase congestion, decrease revenue and create multiple safety issues.

Burbank Airport has recently completed a $112 million dollar renovation in the southeast quadrant of the site. If the Airport Terminal is moved to the north side of the runways, a new terminal complex will need to be built, with all-new parking structures. Duplicating the previous efforts would add little public benefit.

HSR in the Southland--Hollywood Has No Monopoly on Fantasy
by Susan MacAdams, TRAC Board Member

It currently takes nearly two hours to ride a Metrolink train from downtown Los Angeles to Palmdale, a distance of 63 miles. If that corridor were improved so trains could travel an average of 120 miles per hour, the travel time could be reduced to 30 minutes, saving an hour and a half.

The Los Angeles County Metropolitan Transportation Authority (Metro) owns the rail corridor running through the San Fernando and Santa Clarita Valleys. The San Fernando alignment is in a flat valley basin, while the Santa Clarita segment has steeper terrain.

Six years ago, Memorandums of Understanding (MOUs) were signed between Metro, Metrolink, Caltrans and the California High-Speed Rail Authority, CHSRA, to improve the designated corridor in a manner that would accommodate high-speed rail. It would be Metro's and CHSRA's responsibility to clear the trackway for high-speed rail. They were to negotiate terms for the relocation of businesses along the corridor, paying a fair market value for the properties, with a sufficient relocation costs.

Next Stop, Las Vegas

Instead of beginning the clearing of the trackway, however, just the opposite happened. Metro, Metrolink and Caltrans have been intentionally creating obstacles to discourage the use of the corridor by HSR. They built constraints along the corridor, including bike paths and bridges, which will all have to be removed for high-speed rail to be built. This was in direct violation of the MOUs. CHSRA has been a willing funding partner of these projects.

Six years ago, in 2010, tunneling directly from Burbank to Palmdale for HSR was discussed but disregarded as technically unfeasible; it was also too expensive, given the existing budget. In August of 2014, the tunnel alternative re-surfaced as a Yellow Banana shape on a HSR maps. Tunneling could shave ten minutes off the 30-minute trip on the surface. Local politicians were easily seduced by the idea, as it seemingly avoided impacts on their constituents. Many locals liked the idea and supported it for that reason.

Although many fatal flaws were noted, CHSRA disregarded the drawbacks and dangers of building a deep-bore long distance tunnel. Apparently, the proposed large-scale developments near the Burbank HSR station and in the High Desert Corridor outside Palmdale are what's actually driving this train. The tunnel was praised as a direct link from Burbank to Las Vegas through Palmdale. Discussions began between the various authorities to connect the high-speed train from Burbank to Las Vegas. A track interchange was planned. Caltrans, Metro, Metrolink, CHSRA and the CA State Transportation Agency attended. The public was not informed.

Tunneling is Not Viable

But tunneling from Burbank to Palmdale has a major drawback and a fatal flaw. The MOU agreements signed by all the local transportation agencies call for grade-separating the entire corridor, something that was promised by Proposition

1A. The change from a surface route to an underground route would mean that the San Fernando Corridor, in use as a rail corridor since 1874, would not receive the grade separations. The corridor would continue to degrade as long as trains continue to cross surface streets throughout the Valley.

The geological conditions of the San Gabriel mountain range prevent a long-distance tunnel from being constructed--a whopper of a fatal flaw. The location where the tunnel boring machine (TBM) needs to start on the Burbank side is an ancient dried-up river bed. The boring machine will encounter mixed face conditions: large boulders, soft sand and occasional deposits of tar and oil. Not good for tunnel boring machines. Not recommended. Such zones are notoriously difficult for all tunneling techniques, but especially for TBMs, which have to be fine-tuned to deal with specific geologic material types and conditions.

Deep beneath the surface of the San Gabriel Mountains, the interior has been shifting for hundreds of thousands of years, crushing the subsurface rock and turning it at 45-degree angles. The rock strata can change quickly, ranging from very hard to completely disintegrated material. These imperfections create hazardous working conditions for a TBM. There is a high degree of rock fallout at the face. This often occurs in severely jointed ground, causing voids above the tunneling machine. Rocks collapse into the face of a TBM, locking it up permanently. [Insert accompanying image here]

Cutter-head trapped in fault (Shen et al., 1999). http://bit.ly/1V2b5il

In addition, the proposed HSR tunnels go through an area which contains the ground water that provides nearly fifteen percent of Los Angeles' drinking water. The soil in the area also contains methane. Tunneling could contaminate the water and release the methane. Tunneling through active earthquake faults would increase the risk of hazardous sinkholes or craters occurring above. Attempting this deep bore tunnel to Palmdale could result in either the abandonment of the tunnel boring machine or radical alignment change that would render the effort a useless waste of taxpayer funds.

In conclusion, most of these flaws have been known for years, and were submitted as comments by concerned community members, professionals, and affected agencies. CHSRA chose to intentionally ignore these comments. Perhaps CHSRA's new Business Plan decision to shift its efforts away from Southern California is a backhanded recognition of these problems.

A Better Plan

I believe the tunneling plan is so flawed, it does not merit the expense or time for an EIR. In Southern California, I think the best option for High Speed Rail trains is the blended approach, with four tracks in the existing rail corridor: two for Metrolink to share with freight, and two tracks for high-speed rail. All tracks would be built to accommodate electrification. All street crossings would be grade-separated from the trackway.

At present, Metrolink uses four short tunnels in the Santa Clarita Valley on its journey to Palmdale. These tunnels are on the outer fringes of the San Gabriel Mountains and were built in 1874, using mules, gunpowder and pickaxes. They were solidly built to withstand the thunderous vibrations of steam locomotives. Each time an engine passed through a tunnel, it was like an earthquake was

happening.

After the great Northridge quake, when the Caltrans I-5/SR14 interchange collapsed, the Metrolink tunnels were the only passable transportation corridor from Los Angeles to Santa Clarita and Palmdale. During the time that the highways were closed, ridership on the Metrolink Antelope Line increased from 900 per day to 23,000 passengers a day.

Tunnels can be built for HSR, but they need to be much shorter tunnels than the ones proposed. The Soledad Canyon, an ancient river bed that lies between two mountain ranges, should be studied as the route for HSR. Currently this same route is used by Metrolink, but unfortunately this rail corridor has not appeared on any of the CHSRA maps until very recently.

Building a series of aerial structures and shorter tunnels through this isolated corridor would be less costly and less damaging to neighboring communities on all sides than tunnels under the National Forest. Elevating the tracks from the riverbed would restore the native habitat and water table, which has been severely damaged by using the creek bed as a rail corridor for over 140 years. Aerial structures would provide shade so that undergrowth can be more easily re-established. This type of environmental renewal has been successfully implemented under the 134 Freeway along the Arroyo Seco River in Pasadena. The lessons learned in Pasadena would work well this situation.

Susan MacAdams was formerly the HSR Planning Manager for LA Metro.

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Project Email
First Name :	Kathy
Last Name :	Hamilton
Stakeholder Comments/Issues :	Please find the revised commentary. Please replace this version for the one filed on April 15, 2016. Thank you so much. Can I receive back a note telling me that you received this version. Thank you, Kathy Hamilton
Notes :	
Attachments :	Final_Hamilton_Comment_Letter.pdf (299 kb)

Revised April 18, 2016: Note: Please remove the previous comments submitted on April 15, 201

To: HSR Authority
Subject: Comments on the 2016 Draft Business Plan
From: Kathy Hamilton, author of www.thehamiltonreport.com
Contact at Kathy@thehamiltonreport.com

EXECUTIVE SUMMARY:

The Authority's newest plan is incomplete and inadequate. The Rail Authority must face the truth, they do not have the available finances to build even the first segment despite what they say. They simply have the rest of the federal finances which is estimated to be about $2.6 billion of which around $1.7 billion expires September 31, 2017 and as Dan Richard confirmed at a Legislative meeting in April, there is no flexibility on a date extension for the ARRA funds. The rest of the funds have a December 31, 2018 end date.

Despite this reality the Authority board, their personnel and consultants "spin" they have over $20 billion dollars, which includes cap-and-trade funds of 25% of the auction proceeds and is estimated at $500 million per year. But the Rail Authority is counting on collection of cap-and-trade funds until 2050 and the current legislation only allows collection of those funds until 2020. Plus the funds are the subject of two lawsuits. One, which challenges the existence of the program since it was not passed by a 2/3rds vote since they consider the income a tax, the other challenges the high-speed rail project's validity as a receiver of cap-and-trade funds since it will pollute for decades. It should be paying in the future for its construction process since it's a polluter. They should not receiving benefit from the program.

The Project was supposed to be funded by about 1/3 each of state bond funds, federal funds and private investment. Here's an interesting preamble written by then state Senator Alan Lowenthal himself which gives you a flavor of the intentions of how the project was envisioned to proceed. Here's the link to the report and Lowenthal's famous preamble, which occurred before the vote occurred in 2008.
http://stran.senate.ca.gov/sites/stran.senate.ca.gov/files/FINALHSRREPORT.pdf

How does the project survive? It appears though that the Authority is on the winning side of political monkey business in Sacramento so it seems no matter how bad this program is, no Democrat has the nerve to stand up to the Governor or the Governor's wife, Anne Gust Brown who is rumored to be the puppet master behind the curtains.

Fear of political repercussions keeps the Democratic representatives in line. I am an independent voter but it appears that the Democratic majority in the California Legislature has proved extremely detrimental much like the Republican majority in both houses in DC is. Both situations are bad. Our Democratic representatives are not taking care of their fiduciary obligations to their constituents.

I will go through various topics now.

THE MONEY: HOW THE AUTHORITY PLANS ON PAYING FOR THE FIRST LEG OF THE PROGRAM:

You have to look at both available capital and cost. Do you have the money to fund the cost of construction? The answer is no. The rail authority expects to build the Initial Operating Segment headed north for $20.6 billion it certainly is an "iffy" propositions. One, there is no assurance the segment will cost $20.6 billion since it's been years since the project segments have been base-lined. Two, the Authority

doesn't have $20.6 billion dollars. Let's look at the source of the funds that the Authority says it "has."

- Authority says it has $3.165 billion in Federal grants

Problem: Today they don't have all $3.165 billion, which was the total of the American Recovery and Reconstruction ACT (ARRA) grants from the FRA, plus the FRA grant of $928 million of 2010 funds. Today, the total of the Grants must be adjusted down and the remaining balance estimated based on their spending over the past several years.

Based on an FRA report published at the end of January, they should have had $2.6 billion or less left of the total amount of grant funds. http://www.thehamiltonreport.com/downloads/2015-12-30-CHSR-Grant-Update-Status-Briefing-Jan-2016.pdf On page 19 of this report it shows they have spent $855 million of FRA funds. They had a total of $3.48 billion, which leaves around $2.6 billion at the end of January.

Note on page 20 in the same report the Authority hasn't updated State fund spending since 8/21/2015. That's $371 million, which includes Prop 1A funds for planning and environmental spending and Cap-and-Trade fund spending. Why?

- Authority believes it "has" $2.609 billion in Proposition 1A bond proceeds

Problem: This money has been appropriated but can't be spent. The Rail Authority admits on page 3 of the their September 2015 Semi Annual Operations Report they can't get the bond funds because lawsuits are preventing access. But in reality its the rail authority's fault since it hasn't completed a second funding plan nor has the environmental work been finished (completion target December 2017) or the funding found for neither the new or for that matter the old operating segment.

- **The Authority plans on going after $2.9 billion in additional federal funds** so they can extend the line to Bakersfield and to 4th and King in San Francisco, not TRANSBAY Terminal. In addition, it would cost another $3-4 billion to extend it there. Here's the temporary southern end station in Shafter closer to Bakersfield. A must see youtube.

Problem: Unless the Authority accumulates some small federal grants that the Federal Railroad Administration is in charge of doling out, it is highly unlikely Congress will allocate more funds to the high-speed rail program. Congressman Jeff Denham's comment so the new business plan, "Now that the California High Speed Rail Authority is finally acknowledging what the rest of us have known for years, tunneling through the Tehachapi's is going to cost them billions more than they have they must stop their efforts to put down tracks that will never connect in other parts of the state."

Congress is never going to allocate more money to a project that lacks the ridership numbers, speeds, private funding and voter support once promised. Without the billions in funding they need, the Authority's change in plans amounts to nothing more than wishful thinking." http://california.realestaterama.com/2016/02/22/denham-statement-on-california-high-speed-rail%E2%80%99s-route-change-ID04605.html.

- The Authority will seek an appropriation for $4.166 billion in Proposition 1A bond proceeds to help fund capital costs for this first high-speed rail line

Problem: This is all the remaining Prop 1A funds left, all their eggs are in this one basket, since they've spent so much on planning and environmental work. If they don't get new federal funds or private investment funds, they plan on matching state cap-and-trade funds to state bond funds to permit the release of the bond funds, which must

be matched. Where's the money for Southern California?

- The draft business plan says, "We will use Cap and Trade proceeds received through 2024 to help fund the capital costs for the Silicon Valley to Central Valley line. We estimate this amount to be $5.341 billion including amounts spent to date. "

Problem: AB 32 currently ends in 2020 and there are two lawsuits challenging the use of this money. See a broader section on Cap-and-Trade later in this letter.

LAO'S REVIEW OF THE PLAN

Here is the LAO's actual review of the business plan.
http://www.lao.ca.gov/reports/2016/3394/HSR-Draft-Business-Plan-Review-031716.pdf

They are concerned that the business plan does not address where the entire Phase one system will come from, they are concerned about the funding for the IOS North from Shafter to San Jose- 50% of it is coming from cap-and-trade funds which are not authorized beyond 2020. They are not enamored with the temporary station of Shafter since there are no services available for travelers.

There is also no money for that temporary station to be built and no mention of it in the environmental studies.

The LAO also say this:

"The Legislature may want to consider defining specific segments of the system and requiring future business plans and other legislative reports to provide information on the cost and schedule of these fixed scopes of work. This would make it easier to track changes over time and understand the reasons for cost changes. In addition, state law requires HSRA to identify the capital costs related to the planned system, but not other costs. The Legislature will want

to consider requiring future business plans to include all costs associated with the planned system and construction of the various segments, such as financing and administrative costs."

There are also various comments made by the LAO at Legislative Meetings that are through my comments.

HAS THE ENTIRE PROJECT REALLY HAD A REAL REDUCTION IN COST OR A SUBSTANTIAL REDUCTION IN SCOPE?

The Authority says, the entire project's reduced costs are based on low bids not actual construction, these are just the bids, which could be artificially low in order to capture the business. They also point to value engineering as a way they saved money on the cost projections. However they don't know what the true cost will be since they have not built any one segment. Also one segment can be very different than another, how could you ever predict that subsequent segments will have the same cost savings.

Californians Advocating Responsible Rail Design CARRD group, who fights for transparency, community engagement and correct process, says this about the cost estimates in their article: http://calhsr.com/california-high-speed-rail-an-exercise-in-constantly-moving-goalposts/

"*Our own analysis says it is 3 years late and at least 20% over the original budget. The Authority tells everyone that everything is coming in under bid. At first glance, this seems right. The contract bids are lower than engineer's estimates. Great, except for one thing. The engineer's estimates are for an entirely different scope of work than the actual contract bids."*

Later in this comment letter I will discuss the real way the Authority "reduced" it's cost. In a nutshell making these numbers work was

primarily accomplished by excluding many items that were in the previous business plans.

Two days before the release of the business plan the Authority personnel asked the board for contingency costs.

At the February 16, 2016 board meeting, https://www.youtube.com/watch?v=edJUp7Kp0eY&feature=youtu.be HSR staff ask for a contingency increase of $150 million for CP-1 (10% of the budget) for the ICS we forecast the need for another $260 million (5% of the budget) in the contingency.

Another way costs are going up are illustrated in a LA Times article: http://www.latimes.com/local/california/la-me-bullet-change-orders-20160328-story.html The contractor team on the first segment [29 miles] has sent the rail authority a log that includes more than 300 pending change orders and notices, about 200 of which do not yet include cost estimates. The rail authority has approved about $14 million in change orders, and the logs from Tutor Perini include an additional $51.7 million that the company has estimated.

This is confirmed by the Authority's own documents. There are hundreds of unprocessed change orders from Tutor Perini, which has to date added $14 million to their costs per the Finance, and Audit committee notes see page 5. .http://www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg_030816_FA_Committee_Meeting_Mins_022016_DRAFT.pdf

At the April 4, 2016 Senate Housing and Transportation Hearing Senator Richard Roth questions the Authority members about instructing URS to hold the costs to the 2012 business plan. Richard and Morales do not directly answer the question. They admit there is a legal dispute with URS at the 18-minute marker after they were questioned by the Senator about cost estimates. https://www.youtube.com/watch?v=rYq34TFI75Y&feature=youtu.be

Here is a letter by URS, which shows the seriousness of the situation. This was collected by way of a public records request. http://www.thehamiltonreport.com/downloads/4-13-16/URS-letter-response-2014-05-05.pdf

See the segment that Rep.Jim Patterson, Assembly Budget meeting on April 6, 2016, questions Dan Richard and Jeff Morales about where is the funding the project and other financial issues such as adding debt to the project by financing revenue streams of cap-and-trade.
https://www.youtube.com/watch?v=iBziL_H0xOc&feature=youtu.be

Can the Authority list out all the reductions in scope that they have eliminated since the 2014 Business Plan?

Even friends of the project such as the Metropolitan Transportation Commission (MTC) in between high-fives and applause for the new business plan, they discuss many issues about the current business plan in the comments they made April 1st. They state this:

"We also observe that the capital cost figures include significant proposed scope and funding changes, which include a reduction of funding support for the Transbay Transit Center/Downtown Extension project from $2 billion to $0.5 billion, the removal of aerial guideways at the San Jose station and the removal of dedicated guideway at Millbrae. Additionally it appears that all of the high-speed rail cap-and-trade funds are being used for the high-speed line itself. "

Green Caltrain another friend of the project, primarily because of the funds it offers Caltrain for the electrification of their route says this: http://www.greencaltrain.com/2016/02/high-speed-rail-to-bay-area-first-how-will-this-affect-the-caltrain-corridor/

The capital plan leaves out or defers a number of key investments on the Peninsula

- no funding for Caltrain capacity increases (longer platforms and longer trains), which will be needed to keep up with ridership growth in the early 2020s, and which HSR representatives had offered without commitments as compensation for supporting compatible platforms.
- reduced funding for the Downtown Extension to Transbay. The business plan appendix notes that the allowance toward DTX had been reduced by $1.5 billion, though there is a $550M allowance "for work done by others for Transbay connection"
- up to $500 Million for grade separations on the Peninsula "that may be required as environmental mitigation" – but not until after 2030
- no funding for a mid-Peninsula station yet, even if a city wants a station

Wisely they state in the article, "We need regional funding to move forward on Caltrain capacity improvements, grade separations, and DTX sooner than that. And it is prudent for Caltrain to be looking to potential backup plans in case there are challenges with High Speed Rail's financial support for electrification."

In Cindy Bloom's comments, MBA out of Southern California says in her March 30, 2016, http://www.thehamiltonreport.com/downloads/4-13-16/Cindy-Bloom-2016_BP-February_18_April_4_2016.pdf , that there are many items that are MIA, no longer included in the Draft Plan:

Bloom says this, *"It is essential to note that there are many items excluded from the cost estimates that could conceivably push the project way beyond its current projection of $64.2, even with all the built- in contingencies:*

- *Finance charges (entire project)*

- *CHSRA administration costs (entire project)*

- *Five mile track from Santa Clara to San Jose for UPRR (SF to SJ)*

- *Structural modifications to 4 existing tunnels (SF to SJ)*

- *Conversion of Caltrain platforms to level boarding except for stations shared with HSR (SF to SJ)*

- *Platform extension to 1400 feet (SF to SJ)*

- *Blast protection zone (Bakersfield to Palmdale)*

- *Metro/UPSS agreements for shared used (Burbank to Union Station)*

- *Burlington North Santa Fe Railroad's Hobart yard expansion (Burbank to Union Station) "*

So one can assume if all these items from Cindy Bloom, MTC and Friends of Caltrain's comments were put back in, the cost would be considerably over what the Authority is reporting today. Add new honest base-lining of each segment coupled with all the issues the Authority has found out to date such as change orders, increased contingency costs, subsidence issues, earthquake faults, the need for increased tunneling, the cost to build would easily soar beyond $80 billion. Then there's the question of no capital and if the Authority must wait, time will increase the costs even more.

In Cindy Bloom's report she offers these observations about the project, many echoed by the LAO.

"Although the CHSRA has properly included several contingency margins, at the same time it has also failed to include many necessary line items which could consume their $3.4 billion "savings" and possibly push the project's cost back up and possibly

beyond the 2014 BP's estimate of $67.6 billion. Additionally, the 2016 BP states that CHSRA will seek to secure loans and financing, yet it has excluded any interest or finance charges in its 2016 BP estimate. For example, interest expense on a $5.3 billion loan[2] will incur approximately $5 – $5.2 billion in interest expense. The Prop 1A bond of $9.95 billion will incur $9.4 billion in interest charges that will be repaid from the General Fund. It is unclear where the interest charges on any debt beyond the Prop 1A bond issue will be budgeted; the only true known is that there will be billions of dollars in interest and the taxpayers will be held accountable for repayment.

Another item of concern is that these costs are the capital costs only—they exclude overhead, administrative costs, and a portion of planning costs. For total expenditures, CHSRA is on track to spent $2.5 billion from inception through June 30, 2016. Of this, $138 million for administrative costs[3] is not part of the capital costs/budget.

MORE ABOUT FINANCING-IOS NORTH

This was also addressed in the April 6, 2016 Legislative meeting. The securitization plan would reap $5.2 billion immediately if they were able to get someone to lend them money from the cap-and-trade revenue stream. Richard said that the Legislature has given them permission to finance the cap-and-trade revenue stream. Some of the legislators balked at this approach. The other choice, according to Dan Richard, is "a pay as you go plan", frankly a ridiculous option since this would take 10 years to accumulate $5 billion dollars if in fact the Legislators vote for an extension of cap-and-trade, if in fact the 25% equals $500 million since the pot of money will no doubt drop as polluters learn how to create less pollution and third, if in fact the Authority does not lose either Cap-and-Trade lawsuits. The chance that everything will go the Authority's way is miniscule.

The honest approach would admit that the project does not have funding even for the first IOS and stop it. Better yet go back to the voters with a reconfigured plan, with the use of private railroads through a franchise agreement, which was originally envisioned that from the beginning can plan, build and run a profitable rail system if that is possible.

Richard informed the Assembly Members that the San Jose to Shafter would produce an operating profit in the April 6th meeting. The entire Assembly meeting can be viewed at http://media-12.granicus.com:443/ondemand/calchannel/calchannel_68991cfd-e79c-4bd0-b2a4-72d6c280421f.mp4

That statement is absolutely ridiculous since the Authority will not have the ridership it needs to be self-supporting. It seems that the Authority is willing to make public statements like this since there is no punishment for being completely wrong, even outright lying, even though the stakes are enormous for California and US taxpayers.

See more comments about the business plan from the Peer Review Group. http://www.cahsrprg.com/files/25-March-letter-from-PRG.pdf

They say this*: "The ability of the Authority to finance the IOS north to San Jose depends on assumptions about: (a) significantly lowered construction costs, (b) availability of Proposition 1A funding, (c) spending the full amount of federal American Recovery and Reinvestment Act (ARRA) funding; and, most important, (d) the authority's ability to securitize Cap and Trade (C&T) funding when needed in the future."*

CAP-AND-TRADE FUNDS, OTHERWISE KNOWN AS THE "EVERYTHING FUNDS."

The fact is in the comments the Metropolitan Transportation Commission (MTC) made are right, cap-and-trade funds are being spent on the project itself which doesn't leave these funds as the backup plan for the Prop 1A funds unavailable for spending at this time. The money needed for the Transbay Terminal in San Francisco or the improvements for the electrification of the Caltrain line or improvements in Southern California don't appear to be there.

These cap-and-trade funds are promised first to the feds as matching funds first since Prop 1A funds are not available and there is not any left for anything else. Therefore saying you are going to use them to build transportation projects in Southern California or use them as a substitute for Prop 1A funds for Caltrain electrification or projects in Southern California is not truthful.

The LAO confirms problems with future cap-and-trade funds:

Availability of Future Cap-and-Trade Revenue Could Require Legislative Actions. About half of the funding identified for the proposed IOS is from cap-and-trade auction revenues after 2020. Current law does not appear to authorize the program's continuation beyond 2020. Thus, without legislative action, the cap-and-trade funds HSRA plans to use to build the IOS would likely not be available. The Legislature will want to consider whether to approve the cap-and-trade program beyond 2020 based on the merits.

See the position paper written by the LAO on the subject of cap-and-trade. http://www.lao.ca.gov/reports/2016/3328/cap-trade-revenues-012116.pdf

The LAO points out in their newest report about the draft business plan that there is a significant problem since there is no statement where the dollars area coming from for the entire segment from Los Angeles to San Francisco Transbay Terminal. There is a $44 billion dollar gap.

Here is the LAO's actual review of the business plan. http://www.lao.ca.gov/reports/2016/3394/HSR-Draft-Business-Plan-Review-031716.pdf

They are concerned about the funding for the IOS North from Shafter to San Jose- 50% of it is coming from cap-and-trade funds, which are not authorized beyond 2020. They are not enamored with the temporary station of Shafter since there are no services available for travelers.

They also say this:

"The Legislature may want to consider defining specific segments of the system and requiring future business plans and other legislative reports to provide information on the cost and schedule of these fixed scopes of work. This would make it easier to track changes over time and understand the reasons for cost changes. In addition, state law requires HSRA to identify the capital costs related to the planned system, but not other costs. The Legislature will want to consider requiring future business plans to include all costs associated with the planned system and construction of the various segments, such as financing and administrative costs."

In a Senate Housing and Transportation Meeting held on April 4, 2016 .Senator Ted Gaines (R) asks the LAO about the stability of the funding wonders about companies existing the state. https://youtu.be/kuB2ECon1hc Ross Brown who is a member of the LAO and an expert in cap-and-trade suggests two factors about the pot of money, the number of allowances auction off, will likely decline and the price, what is the price in the long term.

Here is an editorial written by Gaines after this meeting on April 14, 2016. http://www.redding.com/opinion/speak-your-piece/high-speed-fail-3068a8b9-f5c2-1921-e053-0100007f92ce-375737791.html

So since there's lot of uncertainty about this source of money:

Where is the back up plan, Plan B so to speak, under the risk section, if the Authority does not get continuing cap and trade funds beyond 2020?

Where's the back up plan if you lose one or both of the two lawsuits against the cap-and-trade program?

One lawsuit is from the Pacific Legal Foundation that challenges the viability of the program since it is in fact a tax and should have been approved by 2/3 vote. Then there is the TRANSDEF case, which starts this year. It challenges the use of the cap-and-trade funds for the high-speed rail project since it will not save GHG gases for decades plus it will not be operational by 2020 which is the date by which projects are supposed to reduce the GHG gases to1990 levels. http://transdef.org/HSR/ARB.html

The LAO adds in order to get a lump of cash over $5 billion dollars that the Legislature would also need to take steps to facilitate the securitization of cap-and-trade auction revenues. April 4, 2016, Senator Lois Wolk, the Peer Review Group's director Lou Thompson, and the LAO made comments about this securitization using cap-and-trade dollars. Wolk is very reticent about this subject of securitization and wants to know where the beef is. The LAO revealed that the Authority had $7 billion dollars in financing costs in the current business plan. https://www.youtube.com/watch?v=xTK8-13P7iY&feature=youtu.be

As Lou Thompson reiterated in the previous youtube here was what Barclays Bank, answered the most recent Expressions of Interest (EOI). Here is what the Authority must be able to do before they get their hands on large amounts of capital. http://www.hsr.ca.gov/docs/about/doing_business/EOI/EOI_Barclays_Bank_PLC.pdf

No long-term stand-alone cap-and-trade financing is possible until ***four threshold issues*** are resolved:

- CARB and CHSRA must prevail against pending legal challenges to the cap-and-trade auctions and to the use of GGRF revenues for the high-speed rail project,
- The Authority must create the “plumbing” in law to support borrowing against GGRF revenues
- The Legislature and CARB, respectively, must extend the cap-and-trade program in law and regulation beyond 2020
- The Legislature must protect the 25% of GGRF revenue flowing to the Authority from future impairment by the Legislature as long as financing obligations are outstanding

What’s the backup plan if the cap-and-trade funds go away and there’s no more money? Dan Richard explains in the April 4th Legislative Meeting that they would have the first segment built and it could be tied in with Amtrak to give independent utility. He mentions that there was a Federal Railroad Administration (FR) meeting about independent utility around the 6 mm of this youtube. https://www.youtube.com/watch?v=rYq34TFI75Y&feature=youtu.be This independent utility factor was a requirement in order for the state to receive ARRA funds.

Question: **Do you think the public would have agreed to financing the building of the project using funds meant for environmentally friendly projects”**

And what are the chances that the project will obtain an extension and with a 2/3 vote? The LAO recommended a 2/3 vote would make the program was safer from the court challenge by the Pacific Legal Foundation now at the appellate level.

LIKELIHOOD OF PRIVATE INVESTMENT

See the board's comments after they were in receipt of 36 responses from the most recent Expressions of Interest (EOI) from the private sector. See financial expert and Board member Michael Rossi's statement at the May 12, 2015 Board Meeting https://w itww.youtube.com/watch?v=MxeSHZ9DoxQ (1 minute) It appears that basically the responses reaped nothing. October 6, 2015- whole discussion- 30 minutes https://youtu.be/1cHIEZ5ydtY

Remember any private investor will do an investment grade ridership report devoid of any spin or exaggeration. This will assure no one will ever invest in this system.

GHG Emissions- The train will take decades to be effectively GHG positive. The construction costs were never included in the report that the Authority. That is the source of the lawsuit by TRANSDEF http://transdef.org/HSR/ARB.html
The Authority will not use all renewable energy sources. Why? Because they don't have the money to do so. Take note of the notation of the Peer Review Group (PRG) letter dated August 14, 2013, which is one of the last documents located at the end of the 2014 Business Plan. http://www.cahsrprg.com/files/Final-Aug-14.pdf

The PRG say this, "the Authority has made two further commitments; first, the system will be operated with 100% renewable energy; and, second, the Authority assumes that the renewable energy will be generated from a mix of 20% solar, 40% wind, 35% geothermal and 5% biogas (see report, page 10)." "We believe these should be understood as laudable goals, not fixed requirements. The current project does not include an allowance for the investment needed to construct and operate the necessary additions to generating and transmission capacity and there is no clear way that the Authority can ensure that the planned mix actually happens."

STABILITY OF CONTRACTORS AND MYSTERY PAYMENTS

Why did the state of California agree to pay Tutor Perini $32

million before they were required to?

"The violation of the debt covenant should draw attention to a change in the payment terms for the CP 1 construction contract (First segment of the California high speed rail project) this summer. The "earned value" / invoiced amount of the contract jumped suddenly this summer. Project officials said that this did not represent additional work that had been done, but rather a change in how Tutor Perini was being compensated. The September 2015 operations report stated," The increase in CP 1 earned value during the August pay period is primarily a result of revising the way the Contractor is compensated for administrative overhead incurred to date." This was a substantial change."

It appears from the report called Glass House Research by mystery financial people, say Tutor Perini may be in trouble financially. **https://www.scribd.com/doc/305119241/GlassHouse-Research-TPC**

Here is a CARRD post about the stability of the Tutor Perini operation. http://calhsr.com/tutor-perini-lost-money-on-a-cashflow-basis-in-2015-again/

Does the Rail Authority check on the financial health of contractors chosen to lead major project work for the High-Speed Rail system?

AUDIT AND FINANCE SUB-COMMITTEE MEETINGS:

The Audit and Finance committee does not have the authority to check on the progress of environmental reviews and frankly should not be checking on acquisition process. Here's a sample of an Operations report, http://www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg_021616_Operations_Report.pdf It appears this sub-committee discusses every aspect of the project. This is quite a substantial meeting with lots of detail, not easily accessible before the public at large since they are

early in the morning and in rooms usually so small it would be hard to be welcoming to any visitor. Some of the detail and subjects should be discussed at the primary High-Speed Rail Meeting or with other sub-committee meetings that are meant to discuss those other items. One does not expect to hear a discussion about environmental at a committee meeting that concentrates on finance. At one time the Authority had other sub-committee meetings, either Operations or Administration that might have had discussions like that in their scope but not Audit and Finance.

These meetings should be at bare minimum be audio taped and should be posted and made available to the public.

HIRING SMALL BUSINESSES.

In the most recent April 12th, 2016, contractors came forward telling the board they are as much as 8 months behind in receiving paying. One business owner told the board she cashed in her 401K in order to pay her people. Maybe Parson Brinckerhoff can afford to carry on without payment, but small businesses cannot afford

Funny, these reports found at the Finance and Audit committee show they are not behind at all, expect for some disputed bills. http://www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg_041216_FA_Accounts_Payable_Aging_Report.pdf Many of the reports look good, are very slick and frankly hard to understand unless you have a finance degree but in this case, it is clearly inaccurate. How can you have people showing up at Rail Authority board meetings who tell the board that they have had to float their own payrolls out of their personal retirement funds because the Authority hasn't paid them. That doesn't sound like a board that is interested in working with smaller companies.

SOUTHERN CALIFORNIA PROMISES

The Authority promises the Legislature that they still intend to spend up to $4 billion dollars on early development in the South, yet there are no funds other than million in Prop 1A funds that was allocated in the July 2012 SB 1029 bill as bookend spending. Since the Prop 1A funds are not available, other than connectivity funds, which are mostly disbursed, there is nothing for Southern California. Dan Richard and Jeff Morales explain in the April 4, 2016 Senate Housing and Transportation Meeting to Senator Richard Roth that they have a commitment to fund the $500 million promised. When will they see the money? Jeff Morales says by 2020.

Also in this clip the Authority Senator Richard Roth questions the Authority members about instructing URS to hold the costs to the 2012 business plan. Richard admits a legal dispute with URS at the 18-minute marker after they were questioned about cost estimates. https://www.youtube.com/watch?v=rYq34TFI75Y&feature=youtu.be

See the LA Times article featuring issues with funding for Southern California. http://www.latimes.com/local/lanow/la-me-ln-bullet-train-doubts-20160328-story.html URS reported that their costs were estimated $1 billion higher than the 2012 Business Plan.

Where exactly do you plan on getting money for Southern California from since all your money (feds and cap-and-trade) is going to the IOS North and matching federal grant spending?

INADEQUATE RIDERSHIP FOR THE IOS NORTH:

It is a requirement in Prop 1A that the any HSR segment built have enough ridership to pay it's own operating costs. According to several experts the ridership that the Authority projects is not a realistic number.

For instance Professor James Moore from USC, Institute of Industrial

& Systems Engineers gave a very technical explanation as to why the Authority's ridership doesn't work out in the Draft 2016 Business plan. His comment is currently on pages 197-206 of the April 4th version of public comments to this draft plan. His comments were submitted April 3, 2016. The pages may change when the rest of the comments are posted however Professor Moore's comments should not be missed.

His comments cover issues, which include use of Per Passenger Mile (PPM) and Per Seat Mile (PSM) metrics, inadequate ridership survey data, and the misuse of Monte Carlo modeling. He states that**, "** No survey data has been used to validate Authority projections."

He states, *"It is unclear how the similar projections for the Initial Operating Segment (IOS) North period of operations were created. These projections should not be predicated on the mature market penetration characterizing the Phase I system. Specifically, the supporting documents show a ridership projection of about 7.6 Million in 2025, but this appears to reflect a mature penetration of this marketplace. These values appear to have been extrapolated from the Cambridge Systematics Ridership and Revenue forecasting results for a period in which the assumptions that underlie these results do not apply.*

There do not appear to have been any surveys of potential customers to estimate the level of interest in riding the HSR system between San Jose and Bakersfield in combination with the bus and conventional rail services that would be required to complete the journey into the LA Basin and the San Francisco Bay Area. Given the lack of such a survey or further model estimation efforts based on such a survey, how was the mature penetration forecast for the IOS North marketplace developed? Who developed these "mature penetration" projections?"

In another comment from Mark Powell, retired chemical engineer, did an in depth study on the ridership issue to give some prospective to

this complicated issue. His entire comment can be found on the Authority's site and The Hamilton Report's special document list.: http://www.thehamiltonreport.com/downloads/4-13-16/Powell-Ridership-etc-Draft-2016-Business-Plan-One.pdf

There are many other observations regarding the business plan in these two articles.

http://www.thehamiltonreport.com/review-of-chsra-2016-business-plan-part-1/

http://www.thehamiltonreport.com/review-of-chsra-2016-business-plan-part-2/

It is key per Prop 1A that the project is self-sustaining financially and that means it has to have the ridership to support it and therefore not requiring an operating subsidy. Mark Powell comments and overstated ridership on March 28, 2016 currently on page 227:

"In order to understand the Authority's new ridership numbers, it's insightful to look at past projections. In 1996, Charles River Associates conducted the first statewide high-speed rail ridership study for the Authority's predecessor – the Intercity High-Speed Rail Commission. Quoting from the Commission's High-Speed Rail Summary Report and Action Plan (December 1996): "To ensure investment grade results, the forecasts were subject to extensive peer review." This investment grade ridership study envisioned 1.9 million riders on the San Francisco to Bakersfield segment. These riders were forecast when the system connecting Los Angeles to the Bay Area would be fully built out in 2015, meeting the needs of a population of 45.7 million Californians.

Hindsight proved that the California Department of Finance's Demographic Research Unit (DRU), which provided this forecast in May 1993, was wildly optimistic with their population forecast. Now

in the 2016 Business Plan the Authority envisions 11 million riders a year – 6 times the original estimate – for that same segment in 2028, *while the DRU now predicts a state population of only 43.4 million.*

Mark Powell, performs extensive research and writes a blog, Against California High-Speed Rail, has uncovered these facts. He believes that the Commission's contractor, Charles River Associates, back in 1996, was more objective than today's projections because construction costs were expected to be much lower and there would have been little pressure to inflate ridership numbers to justify the project. The ridership numbers went up and down in subsequent years but always higher than Charles River Associates' 1996 original 1.9 riders for the San Francisco to Bakersfield segment. As a point of reference, California's population in 2015 was actually 39 million, not the projected 45.7 million, and is now expected to grow to 52 million by 2060.

A critical look at the 2016 Business Plan shows how the Authority envisions ridership of the mature Phase 1 system ramping up at 1.1% per year during the years 2035 and 2060 with no signs of slowing. In fact, the current DRU forecast (December 2014) shows that California's population is expected to grow at less than half this rate during this period and slowing to only .3% per year by 2060. "The Authority's excessive ridership growth rate yields higher profits that play into the Authority's lie about private capital someday funding construction," declares Powell."

MORE WORKERS WILL TRAVEL FROM THE CENTRAL VALLEY TO SAN JOSE. REALLY?

At the Local Policy Makers Meeting held March 24, 2016, Dan Richard and Mayor Pat Burt sparred about the north IOS. Is it really 40 minutes, are the tickets affordable, will this create sprawl and can cap-and-trade funds be used beyond 2020.

https://youtu.be/M2dbiOtlZQI

(19 minutes)

Mayor Pat Burt of Palo Alto asks substantial questions of Dan Richard about the newest business plan. Palo Alto is located in the midst of high-tech companies and Dan Richard made a claim that the high-speed rail train was going to act as a commuter line and would enable a worker to go from Fresno to a Silicon Valley job in about 40 minutes.

The problem, of course is that the 40-minute trip time takes you only to Diridon Station, which is hardly the heart of the Silicon Valley it the point Burt made. He explained that the trip time would really be 2X that, or around 80 minutes. Plus Burt asks the cost of a ticket for a worker to get to work everyday obviously questioning the affordability for a lower cost tech worker. Dan Richard sort of hesitates, gives the generic, 85% of discounted airline fares but finally gives the answer of $83 one way. Say being conservative, the fare is $70 each way because it's shorter than SF Transbay to LA Union Station and perhaps given a discount of a monthly pass. $140 per day X 20 business days, $2800 per month equals $33,600. No company is going to subsidize this level of commuting expenses. The high-speed rail service is a service for the wealthy, not as a commuter train for the middle class.

Dan Richard says during this meeting that ultimately the fare will be up to the private sector operator. So no matter what the Authority has said in the past about fares is correct since it will be out of their hands. Note there is no high-speed rail stop planned that will be in the heart of the Silicon Valley. Burt also questioned Richard about cap-and-trade funds beyond 2020 and if in fact the wording of a fully funded IOS North was truthful. Please see the 19 minute video. https://youtu.be/M2dbiOtlZQI

How can the Authority claim that people will live in Fresno and take a 40-minute train into Silicon Valley?

In addition Environmental groups are concerned promoting sprawl, essentially using the HSR train as a commuter train. In an article in Wired magazine, Kathryn Phillips, Director of Sierra Club California said this. “I have some concern that this will discourage decision makers to emphasize the benefits of people being able to travel quickly from 100 miles away, instead of providing affordable housing to those living nearby.

She also wonders at the wisdom of putting cap-and-trade money into the high-speed rail, saying “That money should be put into projects that get you near term emissions reductions as soon as possible.”

TRAVEL TIME REQUIREMENTS:

We have to look a little at history first. Sometimes looking at the past can define what the truth is before it became imperative to hide the truth. For instance back in 2011, former CEO Roelof van Ark said travel time from San Jose to Transbay Terminal in San Francisco can’t be accomplished in 30 minutes. He also added there was no way to transition stations that the train is not stopping at.

Van Ark stated this before the Senate, 4-28-2011 at a Senate Transportation & Housing Committee Hearing. In this video Van Ark he also defines what’s expected to satisfy the Prop 1A requirements. He talks about a real running express train-one that runs from San Francisco Transbay to LA Union Station, perhaps in the middle of the night, but still a real train operating.

LINKs :
https://www.youtube.com/watch?v=Pm2WpFLsfqY&list=UULpiKaBja

acPw7g5K1nkRXw See the four minute marker, Van ark says we can't make 30 minute time requirement and they can't transition stations and it won't be going 124 mph. Secondary link: Video from the Senate: http://24.104.59.141/channel/viewvideo/2391
Today's definition of travel time is a lot more complicated. The Rail Authority seems to think it merely has to show that it's technically possible to have the system which is designed to achieve a certain time so that "someday" it can make 30 minutes say between San Jose and 4th and King in San Francisco and someday it can make 2 hours and forty minutes from LA Union Station to 4th and King in San Francisco. BTW Judge Kenny in the recent case admonished the Authority for not using San Francisco Transbay as the northern destination. At the Tos/Fukuda/Kings County trial, the Authority's manager's (Frank Vacca) declaration says that the travel time can be made by a computer model if it operated unencumbered without Caltrain trains on the tracks and without adding in realistic and unexpected delays. There is no wiggle room on the travel times between certain cities. AB 3034 and Prop 1A says this, **Maximum nonstop service travel times for each corridor that shall not exceed the following:**

(1) San Francisco-Los Angeles Union Station: two hours, 40 minutes. (2) Oakland-Los Angeles Union Station: two hours, 40 minutes. (3) San Francisco-San Jose: 30 minutes. (4) San Jose-Los Angeles: two hours, 10 minutes. (5) San Diego-Los Angeles: one hour, 20 minutes. (6) Inland Empire-Los Angeles: 30 minutes.

This craziness is almost insulting around the wording "designed to achieve" means you can make those travel times listed above.

The Peer Review Group, who at times acts as a friendly consulting group to the Authority explains the complicated explanation of today in the quote below. But bottom line even the Peer Review Group says the trains won't operate at the required travel time now. That's what people care about. How quick can I get to my destination now, not in 20 years.

"Capacity simulations completed jointly by Caltrain and the Authority show that interactions between Caltrain and potential HSR schedules will produce an actual non-stop HSR run time from San Francisco to San Jose of 37 to 39 minutes during hours of normal operation (see "Caltrain/California HSR Blended Operations Analysis," March 2012, page 50). Again, we note that this is a different question than the TPC analysis oft he minimum travel time that could be achieved based on the system's design parameters.

For all these reasons, it is unlikely that trains would actually be scheduled to run during normal hours of operation within the 30-minute or 2 hours 40 minute limits at the completion of the Phase I Blended system. The Authority's service plans, ridership forecasts and 0&0 cost estimates include allowance for these factors and assume longer operating travel times than the times that the system is being designed to achieve. ***The Authority believes this is consistent with the Proposition 1A requirements*** *and the anticipation of various levels of services (e.g. express service, local service and other options)."*

See the Peer Review group letter, unfortunately not numbered, on the second/third page after the cover letter.
http://www.cahsrprg.com/files/Final-Aug-14.pdf

Judge Kenny reveals in his final decision that he questions the Authority's numbers for two reasons. 1. They used 4th and King and not Transbay Terminal and 2. There was unexplained monkey business with travel time estimates dropping it from 32 minutes to 30 minutes with yet a lower speed. Read the judges decision and specific commentary in regard to the travel time.
http://www.thehamiltonreport.com/ca-high-speed-rail-court-decision-putting-the-disappointing-ruling-in-perspective/

ENVIRONMENTAL WORK:

Why does the Rail Authority insist on clearing all ten segments of the high-speed rail project when they don't have the funds to do one? The clearance of these segments, which may not be built for decades, will hang over the heads like a sword to all those homeowners and businesses. Senator Joseph Simitian once offered this observation when the Authority was attempting to environmental clear a segment in Northern California that the Authority might never build, that is, a four-track system up a narrow corridor between San Jose and San Francisco.

Plus the Authority is about five years behind in their environmental work and has it's first EIR in 2005, it's getting old, it's getting stale, maybe a new one is needed.

Is the Authority using federal environmental planning only using NEPA or is the Authority following CEQA?

If the Authority is not following CEQA what is the back up plan should the State Supreme court rule in the Friends of Eel River case that CEQA must be followed? This might be a massive risk that the Authority has not identified if they are only following NEPA.

RAILROAD ISSUES

Where are the agreements with UPRR that are necessary to build the IOS North as well as the expanded IOS North heading into Transbay Terminal in SF? It appears from the business plan that the Central Valley has all agreements in place but one but the IOS North appears to be lacking agreements. If the Authority has negotiated those agreements, I would like a copy of them.

Specifically what kind of intrusion barriers has UPRR demanded in the Central Valley that will forecast what may be required in the IOS North?

What will these railroad agreements ultimately cost the Project?

SECURITY:

There is virtually no security plan included in the business plan and naturally no money allocated to it. There are screening processes in place in some areas in Europe so discounting travel time because no security is needed on trains compared with air travel is not correct.

SHAFTER AS A TEMPORARY STATION:

You cannot have this station since it's not in the environmental report and there is no construction money available to do build it. The LAO agrees that it is imprudent to do this for many reasons including the fact that the riders will not have services available to them at this location and suggests shortening the route to the last legal station in Wasco/Hanford. Dan Richard admitted that they were considering a change to this location at the April 6th Assembly Budget #3 meeting.

OVERSIGHT BY THE LAO?

In the past year the Authority has had their oversight reduced, not increased. http://www.breitbart.com/california/2015/06/17/ca-dems-use-budget-to-reduce-oversight-of-high-speed-rail/ " The Democrats used a trailer bill dealing with the state budget to implement measures that would require spending reports from managers of the rail project to be sent to the legislature every two years instead of twice per year."

But they need more supervision not less. According to the breitbart.com article, " Republicans charged that Democrats are letting the project continue minus the necessary supervision. Sen. Jeff Stone (R-Temecula) said that projects as large as the high-speed rail project "need more oversight, and not less," according to the *Sacramento Bee*.

Sen. Mark Leno (D-San Francisco) protested: “There’s no lack of transparency. We’re making this change just for efficiency.”

Senator Leno on June 16, 2015, also said the new provisions could be reversed if it was needed. Senator Leno, that bill needs to be reversed now. See Leno’s statement around 2 min 28 second mark. https://www.youtube.com/watch?v=3smrnFHnmJ8

The Peer Review Group stressed the need for supervision of the project by an outside source. They say in their March 28, 2016 statement for the Assembly’s Transportation committee, *“We have repeatedly emphasized that, if this massive project goes ahead, there will be a need for very thorough oversight to ensure that the promised benefits emerge and the potentially large risks to the state are managed. The Legislature may want to consider creating a select committee to ensure legislative oversight continuity. In addition, we believe this requires a dedicated and continuing oversight staff effort with adequate resources, possibly lodged within the LAO, though the exact location can certainly be discussed. The stakes for the state are far too high to rest solely on periodic oversight hearings and audits.” Here is the letter prepared for the March 28, 2016 meeting. http://www.cahsrprg.com/files/Thompson-statement-March-28-2016.pdf*

But the problem with this request is that no one pays attention to the LAO or any criticism, which show inadequacies of the project. See my article on the LAO reporting- http://www.thehamiltonreport.com/tip-toeing-around-chsras-2016-business-plan-legislative-analyst/

Here is an example of what the LAO wrote before the July 2012 appropriation vote.

See the LAO’s comments way back in 2011 prior to the funding of the first leg of the project. http://www.lao.ca.gov/reports/2011/trns/high_speed_rail/high_speed_

rail_051011.pdf High-Speed Rail is at a Critical Juncture. That was five years ago and the project still rocks on.

My fear is all that assigning a supervising body will do, is allow the Legislature to check off a box that says, we've provided supervision. But if the Legislature won't do anything with the information, as has been the case, then all this supervisory committee will do is to document the failure of yet another mega project, part 2 so to speak of Lessons Learned about the Bay Bridge, except this time, the project is much bigger and a lot more expensive. It will also document the failure of the Legislature to do anything to correct the situation. But in the end, no one goes to jail, there are no consequences for head government officials, legislators and agency personnel who deliberately deceive, outright lie and push for a damaging project. How about passing a law about this one, Legislature?

There have been many reports written by the LAO, which were ignored. There have been various requests for audits and they have been denied. This is simply a political exercise unless this stops now and the Legislature recognizes it's fiduciary responsibilities without this change in attitude, the appointment of a committee to supervise the High-Speed Rail project will be for naught.

So here's an example of one of things the Authority promised the Legislature. It's a dashboard set up, which is supposed to be a quick and easy way to see if the Rail Authority is on track in important areas but they kind of forgot some of that is a subjective call. Frankly the Authority can't be trusted with subjectivity. See CARRD's review of the Authority's dashboard approach. It would seem someone is trying to pull the wool over the public's eyes. See the ARRA fund button and how they categorized their progress. http://calhsr.com/california-high-speed-rail-an-exercise-in-constantly-moving-goalposts/ The CARRD group says this, "They should be seriously in the red zone- and someone should be in trouble. They

will not spend more than $1.6 billion which was the forecast – the number will be less than $800 million."

So much for the Authority's self–monitoring their project.

Here's what the Peer Review Group posted on their site: http://www.cahsrprg.com/files/Peer-Review-Group-report-ARRA-actual.pdf This is what the Rail Authority analyzed and produced to help fill the gap of the absence of reporting. The Peer Review group agreed on the data to be presented and the format.

Personally I am in favor of having an administrative body, like an LAO team, continuously monitoring the project quarterly but there MUST be action on their findings. The institutional memory of this project is very poor with representatives coming in and out of the capital. Since the public lost Senator Lowenthal, Senator Simitian and Senator DeSaulnier, there has been no Democratic representation monitoring this project.

The Auditor needs to be called in, regardless of whether Prop 1A funds, other state funds or federal funds are being obligated or spent to monitor the condition of the project. This project will cost billions of taxpayers' dollars for a dirt mound in order to make good on campaign promises to spend money on projects that will only advantage contractors and consultants.

REVENUE AND OPERATING COSTS:

I believe the Authority is using flawed methodology in the newest draft business plan. I have read four comments, which I would like to associate myself with. Professor James Moore, the Kings County commentary, Cindy Bloom, William Grindley's comments and specific parts of MTC commentary listed below:

These items must be addressed. In the case of the MTC and the Professor James Moore commentary, this is not the first time and just plain dishonest not to address these issues! The only reason those concerns are not being addressed is to deliberately show a lower risk factor.

First MTC states this," The Draft Plan currently combines the "Medium Revenue" scenario with the Medium Cost scenario as the basis of it's break-even analysis. To address uncertainty in both the operating costs and forecasted revenue from operations, MTC recommends additional sensitivity analysis that uses either a "Low Revenue/Medium Cost "scenario or a "Medium Revenue/High Cost" Scenario in order to provide a more conservative break-even point.

Next Professor James Moore from Stanford University submitted a comment about the Business plan on April 3, 2016.. **The Authority must be realistic about the worst-case scenario as far as revenue.** This was pointed out to the Authority for the 2014 Business Plan. MTC quote about profit likelihood. And the Professor at Stanford University. He references the comments Professor Evan Porteus of the Stanford University Business School submitted for the 2014 business plan located on page 721 of the 825 page PDF. Record #182.

According to James Moore, "i*n the Monte Carlo simulations that Prof. Porteus reviewed, the quantities simulated were assumed to be statistically independent. But in Section 6 of the 2014 Business Plan (pp 51-52), the scenarios for revenue and O & M costs were assumed to be perfectly positively correlated. This dictated, as he pointed out, that if the revenues were low, then so were the O & M costs. Enforcing the statistical independence the Authority claims on this portion analysis requires accounting for the possibility of low or medium revenue along with high O & M costs, or high revenue with low or medium O & M. Professor Porteus point out that it is not intellectually honest to assume that (i) different O & M cost*

categories in the same year and O & M costs in the same category but in different years, are statistically independent; a (ii) on different routes within a year and revenues between years are statistically independent, while, (iii) assuming total O & M costs in a year are perfectly correlated with total revenues in that year.

Professor Porteus recommended enriching the analysis in Section 6 (Financial Analysis and Funding) of the Draft 2014 Business Plan by displaying outcomes that involve uncorrelated instances of revenues and costs. In particular, he believed that the 2014 Plan should include, among other scenarios, the outcomes of (1) high revenue along with low O&M and (ii) low revenue along with high O&M cost, along with the likelihood of each outcome.

This analysis should probably be executed as a decision tree. For example, if ridership is higher than expected in the current month, this indicates that ridership is likely to be higher than expected in the following month, so increasing staffing (and O & M costs) would be appropriate to ensure acceptable levels of service.

The implication of Professor Porteus' recommendations is that the model would likely lead to substantially different results in the break-even analysis, as the model captures more realistic outcomes. It appears that this work has not been done as part of the 2016 Business Plan. Given that the Authority has been informed by Professor Porteus of the inconsistency in their methods and given that they persist in their modeling practices, I conclude that the current use of the modeling tools in the Draft 2016 Business Plan still conform to Professor Porteus' definition of intellectual dishonesty. It certainly conforms to mine.

In addition on February 25, 2016, the Kings County Government submitted their opinion of how using the Monte Carlo system is a risk in itself. They submitted this:

"Reliance on Monte Carlo simulation is dubious. Many financial experts warn against reliance on Monte Carlo simulation because it fails to account for the fact the future investment performance depends on as much on the sequence of future investment returns as on the average of those returns. According to Julie Crawshaw in an article in Wealth Management Magazine (www.wealthmanagement.com accessed February 24, 2016) in assessing risk, Monte Carlo simulation spreads potential losses across the full investment period, without giving consideration to the possible impact of multiple simultaneous loss years. A comparison may be draw to climactic conditions. An analysis of the Long-term impact of California droughts, for example, would be skewed if we assume that droughts happen at regular intervals without multiple dry years scenarios like the current one.

According to Crawshaw, Monte Carlo simulation also fails to treat a starting position as an action position, instead treating it as one scenario amongst many. Thus based upon the Authority's figures, HSR may well operate at a loss in its anticipated first year of 2025 with fare box revenues estimated at $186 to 339 million, and projected operation and maintenance costs running between $268 and $306 million. However, Monte Carlo simulation assumes that a loss is merely one scenario among many, and gives equal weight to it without any analysis of the actual likelihood of a loss or its impact on future years or the ability in future years to compensate for the loss. In fact, here the Authority first calculates the likelihood of profits in future years, and the assumes that those profits will be adequate to cover initial year losses, without instead factoring the need to replay losses into calculations of future year profitability."

So one has to ask if the Authority was aware of this defect and how it could use Monte Carlo to assume profitability knowing this about the program?

What is the risk to the taxpayers of California if the Monte Carlo plan fails?

What happens to the people who made the decisions that end in a failure of this system and the waste of billions of dollars?

See the extensive report, titled the," To Repeat Report" by William Grindley and William Warren. This report shows why the project will require a subsidy forever with exaggerated revenue and extremely low operating costs that will not result positive cash flow. They compare Europe's systems and Amtrak's fast trains and show how unrealistic the Authority's estimates are. **http://www.cc-hsr.org/assets/pdf/ToRepeatReport2ndEditionDec172012.pdf**

THE COST OF DOING NOTHING:

There was an analysis prepared by Parsons Brinckerhoff April 2012 widely, which was quoted by project proponents. It is not a valid report in the way it is being used.

http://www.thehamiltonreport.com/downloads/4-13-16/Powell-Myth-2-cost-of-doing-nothing-see-page-5cmb.pdf

Mark Powell wrote an amazing piece about the bogus work that was put together by the Authority's consultants so the project could make statements about the dire condition the state will be in if they don't build the high-speed rail project. However the report that Parsons Brinckerhoff wrote explained the report's goals but they are not an assessment of whether the state would need to or choose to build this infrastructure if it did not build high-speed rail. It says something entirely different:

Comparison of Providing the Equivalent Capacity to High-Speed Rail through Other Modes, dated April 2012. Quoting directly:

"This analysis was designed to answer the following questions:
1. What is the people-carrying capacity of the 520-mile Phase 1 HSR system?

2. What would be the composition and cost of providing this same capacity increase through freeways and airports?

Some of the factors in the report were also brought up by the City of Burlingame many years ago. http://www.calhsr.com/wp-content/uploads/2010/02/Burlingame-Comments-on-Draft-2012-Business-Plan-for-HSR.pdf In their letter they state that the Authority's report included these assumptions:

12 trains per hour in each direction

1000 seats per train

19 hours of operation every day

70% average load factor for trains.

The city goes on to say, "These assumptions would mean a train leaving San Francisco and Los Angeles every five minutes, loaded with 700 passengers, 19 hours a day, 365 days a year. This "maximum throughput capacity" analysis yields 115 million passengers a year that Parsons Brinckerhoff (PB) then needs to "accommodate" with larger airports and more highway lanes. This astounding number is completely divorced from any reality over the next 50 years, even by CHSRA forecasts. Undeterred, PB concludes that to provide equivalent new capacity through investment in highways and aviation would cost California almost twice as much ($177 billion) as the phase 1 high-speed rail system" and would require approximately: 2300 miles of new highways, 115 new airport gates and 4 new airport runways.

They asked that this flawed analysis be excluded from the draft business plan back in 2012.

TRANSPARENCY OR LACK THEREOF:

The perfect framing for this segment was announced on April 13, 2016. It appears the California High-Speed Rail Authority (CHSRA) has won the Independent Institute's first California Golden Fleece Award for its lack of transparency and history of misleading the public about key details of the state's "bullet-train" project, which no longer reflect what voters approved in 2008. Here's the link to the Rail Authority "honor." http://blog.independent.org/2016/04/13/californias-high-speed-rail-authority-wins-dishonor-of-the-california-golden-fleece-award/

One comment made by Cindy Bloom, MBA from Southern California is priceless and very much in the spirit of this section.

"Your agency frequently boasts of its transparency and this 2016 draft business plan is just that: Transparent. It is easy to recognize when a fiscal target is set and then input variables are manipulated. Your 2016 draft business plan is a textbook case of fudging numbers. Congratulations! "

Many of these examples below have to with the fight to obtain documents from the Authority and demonstrate the struggle to get them. If the Authority had nothing to hide they would not hinder, purposely obstruct or deliberately delay the fulfillment of requests under the Public Records Act.

The Authority commonly labels their documents with a draft stamp which was a predominate practice in the building of the Bay Bridge. In a January 24, 2014 legislative hearing called "Lessons Learned," it was disclosed that engineers were told whenever possible not to put anything in writing, not paper or email, communicate orally to avoid

issues from being discovered through the public records act. If they did put something in writing, they labeled many draft.

In some cases those attempting to get information about the Rail Project, didn't get documents for as much as 7 months. The High-Speed Rail Authority is following in their footsteps and purposely delays the public getting documents. Coincidently the Rail Authority is headed by CEO Jeff Morales who by the way was one of the directors of the Bay Bridge, The Rail Authority has gone to extreme measures of not only causing delays beyond six months but even changing formats in monthly progress reports to hide issues.

In a tweet from the Californians Advocating Responsible Rail Design (CARRD) they show the deliberate attempt to remove key information categories from these important reports in order "to avoid confusion in public records request. " The Authority told their consultants to remove the categories of **Major/Key Issues & Areas of Concern/Risk Management.** This change at the time directly contradicted the auditor requests for more information. One would think the companies involved, even the federal government, would like a written track record of the issues for a project of this magnitude.

The draft loophole is being used today to delay responses to public records requests, which is not intended by the existing law. The Draft exception is only allowed under very specific circumstances. This has become an obvious attempt to hide information. This law should be tightened up with substantial fines added especially if found to be habitual deliberate attempt to deceive with even imprisonment for those who engage in repeated and deliberate violations of the Public Records Act. Without drastic consequences, the same offenders have no reason to stop their behaviors and in many instances breaking the law. It actually comes down to theft of public trust and public funds. Currently the only recourse is for the public to sue the agency that is violating the law. Since most people won't do that, the agencies that violate the law get away with it.

Here is a prime example of delaying the release of the December 2015 year-end Funding plan report due to the FRA quarterly that happened in February and March of 2016. They did not use the draft excuse this time, just kept delaying answers would not release a key document by saying it wasn't available yet.

The report was probably completed by mid February at the latest and was in fact received by the FRA on 2/22/2016 according to this document I received from federal sources in Washington DC. See page 20 of this report and the notation where the information was received. http://www.thehamiltonreport.com/downloads/2016-02-26-CHSR-Grant-Update-Status-Briefing-March-2016.pdf

As it turns out I sent in my original request on Feb 23rd, coincidently the day after the FRA received the report I requested. After a delay, the Authority tells me on March 4th that they are delaying the determination" of the request for two weeks. (BTW without an explanation of why they were invoking this delay, which they must do.) So I couldn't even get a "determination of when they would release the information to me until March 17, 2016 and then they said on that date, "The Authority has determined that the December 2015 Funding Contribution Plan is not yet available." When it is available it will be posted on the Authority's website here. http://www.thehamiltonreport.com/downloads/4-13-16/Hamilton-FINAL-031716.pdf

I questioned what " available" means. Does that mean it's not available to me? Long story short, I went after answers in Washington DC. After I received the FRA report dated in March 2016 and saw the notation on page 20 indicating it was received by the FRA on February 22nd, I knew then the Rail Authority really had meant the report was not available to me.

This was an outright lie and a violation of the Public Records Act. They released the 2015 report to me and others who had a similar requests in, within a couple of days since they knew, we knew. There were at least 4 groups who had been asking for this information. http://calhsr.com/wp-content/uploads/2016/01/FCP-Report-Sept-2015-v1.5.pdf

We always suspected they were doing this kind of thing with the word "draft but never had outright proof as was the case here. So what were they hiding?

- In the report it shows they are asking for an extension of one year for their 2010 funds about $928 million with an expiration date of 12/31/2018 and then some really curious wording about ARRA funds, which has a September 30, 2017 expiration date.

The report also stated this, *"The Authority is requesting a one-year extension to the period of performance as a contingency to allow for potential use for testing and demonstration of high-speed service and/or integration with an Initial operating Segment. The proposed one-year extension does not reflect a change in any contractual delivery schedule." (This was referring to the ARRA money)*

I've asked three times what this means. I've asked them to give me an example and they have not been forthcoming with what that wording means yet and it's been nearly a month. With the Authority you are allowed to comment, you are allowed to ask questions but they do not have to answer your questions whether you are press or a private citizen. This is the way they operate whether it's a direct question calling the Authority or at a board meeting or a community meeting in the field.

In addition they deny there were cover letters or a narrative to this very complicated report with numbers of pages with very tiny

numbers. I have a public records request working for all communication on this report, which of course has been extended another two week since the Authority does not want to give me this information. This extension is becoming standard operating practice these days.

I'm left to believe if they had nothing to hide, they wouldn't be trying so hard to do so.

SUMMARY:

It appears the Authority has made several big mistakes in many key areas such as revenue, ridership, and cost projections. In fact in all the primary areas important for a viable project. They have attempted to hide the true status of the project by the draft stamp and dragging their feet to slowly release documents that should be publicly available without delay.

One is always left with the question if these mistakes are calculated missteps in order to purposely deceive or they are caused by lack of knowledge. It seems these are more than random mistakes because they always are in the favor of the Authority.

In some cases the facts are so much against the project it is impossible to understand how it continues except that the Governor and his wife Anne want it for Brown's legacy. T

While our legislators worry about their own skin and career, everybody is forgetting about fiduciary responsibility, which every one expects from their representatives. This seems like a perfectly impossible situation for the public in the state of California.

Many years ago a public comment was made in Palo Alto, California public meeting by a gentleman named Arnold Thackery from Menlo Park, simply said, "How bad does it have to get."

That question haunts me since I fear the Legislature will not take action no matter what, since everyone is waiting for someone else to do the deed. All the legislators, regardless of party, know it's a bad project. The hope is it will implode on it's own eventually, die because time runs out on Federal Funds, the Authority loses a decisive lawsuit or someone is elected as the Governor who understands the project must end. One of those things will happen but not before billions of dollars are wasted and lives of the public are destroyed by the senseless taking of land that there is no money to built on.

Too bad some elected officials don't have the courage to end it early before more damage is done. Too bad they believe that the few jobs that this project is providing for the consultants and unions trump the taxpayers that will be damaged financially and in some cases personally.

All bills offered to move or stop the Authority funding are always turned down. Of course they are offered by the Republicans in Sacramento since they have no political consequences.

We need changes in Sacramento now. I am an independent voter but I can see the effects of an imbalanced Legislature since those currently in power are afraid to do the responsible thing. Just because the Democratic Party has been at odds with the Republican Party forever, does not mean the Republicans are not completely right on this subject. They do not have the burden of backlash from the Governor in future political runs.

And finally just in time for the perfect ending for my comments, the high-speed rail project was just granted the dishonor of receiving the Golden Fleece Award.

The California High-Speed Rail Authority (CHSRA) has won the

Independent Institute's first California Golden Fleece Award for its lack of transparency and history of misleading the public about key details of the state's "bullet-train" project, which no longer reflect what voters approved in 2008

http://blog.independent.org/2016/04/13/californias-high-speed-rail-authority-wins-dishonor-of-the-california-golden-fleece-award/

No recipient could be more deserving.

Kathy Hamilton
Kathy@thehamiltonreport.com

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Website
First Name :	Ellen
Last Name :	Jamason
Stakeholder Comments/Issues :	I support choosing the northern route for the initial operating segment; however, that segment should terminate in downtown Bakersfield, rather than at a temporary station to the north. Funding of improvements to the Caltrain corridor should be given high priority made as soon as possible in order to support the overburdened rail system between San Jose and San Francisco.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Jim
Last Name :	Costa
Stakeholder Comments/Issues :	
Notes :	
Attachments :	2016-04-18 LTR to CHSRA re Merced in 2016 Draft Business Plan.pdf (362 kb)

JIM COSTA
16TH DISTRICT, CALIFORNIA
WEB PAGE: www.costa.house.gov

COMMITTEE ON NATURAL RESOURCES
SUBCOMMITTEE ON
ENERGY AND MINERAL RESOURCES
SUBCOMMITTEE ON
WATER, POWER AND OCEANS

COMMITTEE ON AGRICULTURE
SUBCOMMITTEE ON
LIVESTOCK AND FOREIGN AGRICULTURE
RANKING MEMBER
SUBCOMMITTEE ON
GENERAL FARM COMMODITIES AND RISK MANAGEMENT

CONGRESS OF THE UNITED STATES
HOUSE OF REPRESENTATIVES
WASHINGTON, DC 20515

April 18, 2016

The Honorable Dan Richard
Chairman
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

Dear Chairman Richard:

Thank you for your hard work to make high-speed rail in California a reality. On behalf of my constituents in Merced and the surrounding area, I would like to express my concerns regarding the route changes and urge you to reconsider the timeline for providing service to Merced in the 2016 Draft Business Plan and the location of the station.

The 2014 Business Plan designated a high-speed rail line connecting Merced and San Fernando Valley as the initial operating segment. However, the 2016 Draft Business Plan indicates the initial operating segment will run from north of Bakersfield to San Jose, diverting west prior to the City of Merced. Delaying the opening of a station in Merced by several years does not reflect Merced's enthusiasm for high-speed rail or the work Merced has already began in preparation for the station. Additionally, existing demand for commuter service from the Merced area to Silicon Valley will demonstrate the high potential ridership numbers for the rest of the system and provide a boon to both regional economies.

In an effort of good faith, the City of Merced already entered into a station area planning agreement and started laying the groundwork for creating a connected and livable stop in Downtown Merced. Furthermore, the founding of *I Will Ride*, the most vocal grassroots organization in support of the project, at the University of California, Merced, reinforces the community's unified support for this ambitious and critical project. The City of Merced wants to continue its role as a strong partner for the California High-Speed Rail Authority, and I believe it would be appropriate to amend the 2016 Draft Business Plan with that relationship in mind.

The people of Merced have consistently expressed their commitment to high-speed rail in the State of California. Like me, Merced appreciates how important high-speed rail is to the continued development of the San Joaquin Valley and is adamant in its dedication to the project's success. Thank you for your thoughtful consideration of my request and I look forward to our continued work together in support of California High-Speed Rail.

Sincerely,

JIM COSTA
Member of Congress

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2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Brian
Last Name :	Saeki
Stakeholder Comments/Issues :	Good Afternoon: Attached, please find correspondence from Brian Saeki, City Manager, City of San Fernando, regarding the City of San Fernando Response to Draft 2016 Business Plan. Thank you. Julie M. Fernandez Executive Assistant to the City Manager 117 Macneil St | San Fernando, CA 91340 Tel (818) 898-1202 | Fax (818) 361-7631 JFernandez@sfcity.org<mailto:JFernandez@sfcity.org> | www.sfcity.org<http://www.sfcity.org>
Notes :	
Attachments :	CHSRA re City of SF Response to Draft 2016 Business Plan (4-18-16).pdf (611 kb)

THE CITY OF
SAN FERNANDO

April 18, 2016

ATTN: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

SUBJECT: City of San Fernando Response to the California High-Speed Rail Authority's ("CHSRA") Draft 2016 Business Plan

The City of San Fernando is concerned with the current piecemeal approach of the CHSRA's Draft 2016 Business Plan, which seeks to change the Initial Operating System (IOS) in order to spend federal and state monies to build the modified IOS North from the Silicon Valley to Central Valley (Madera to North of Shafter) portion of the California High-Speed Rail Project (the "Project"). This proposed segment, and any future segments of the high-speed rail plan, should be considered in total in order to evaluate the Project's overall costs to build out the entire project. Not knowing the total cost of the entire Project, coupled with the reliance on federal transportation dollars and future availability of state cap and trade funds, increases concerns regarding the overall financial feasibility of the project. Under the current business plan it does not seem possible that the Project will be built on-time, on-budget, and without the need for additional state tax dollars to build and subsequently operate the system as required under voter approved Proposition 1A (2008).

The City of San Fernando requests that the proposed Draft 2016 Business Plan and the Project as a whole be reevaluated by the State Legislature to determine total Project costs to state tax payers. As noted in the State Legislative Analyst's Office Review of High-Speed Rail Draft 2016 Business Plan, "*while the plan does discuss some potential sources that might be able to partially fund additional portions of the Phase I (such as seeking additional federal funds and securitizing operating revenues), it does not include full funding*". Furthermore, Cintra/Ferrovial Agroman US Corporation's ("Cintra") Response to the Expression of Interest (RFE HSR#15-02; September 14, 2015) regarding the California High-Speed Rail Authority Delivery of An Initial Operating Segment calls into question the financial feasibility of raising sufficient funds to build IOS South and IOS North under the current Project scope. On Page 15 and 16 of Cintra's response to the Expression of Interest it is noted that they have reviewed data from the International Union Railways (September 2014), which assessed all 111 high-speed rail ("HSR") lines in operation in the world and determined that only three HSR lines operate with a profit and one additional HSR line is able to break even. (The report noted that the following HSR lines make an operating profit: France/TGV (Paris

ADMINISTRATION
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WWW.SFCITY.ORG

Sud), Japan (Shin Osaka), and United States (Acela Northeast Corridor); the report also noted the Japan (Hakata) HSR line as the only one that breaks even.) Of the HSR lines that break even and make a profit, these HSR lines "*have a different dynamic than CHSR [California High-Speed Rail], in that these lines are 30 to 50 years old and have much higher density of population in the areas that the train would serve. We believe it is highly unlikely that the CHSR will turn an operating profit within the first 10 years of operation. More likely, CHSR will require large government subsidies for years to come*".

Therefore, the City of San Fernando requests that the State Legislature direct the CHSRA to reevaluate which segment or segments should be constructed first based on criteria determined by the Legislature, such as potential statewide benefits from building a particular segment and whether a selected segment could generate the ridership and revenues to be financially viable on its own. The CHSRA should subsequently be directed to go back to the Legislature to seek a budget augmentation to fund the development of whatever segment the Legislature approves based upon these new criteria.

Sincerely,

Brian Saeki
City Manager

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	David
Last Name :	Schonbrunn
Stakeholder Comments/Issues :	Attached please find our comments. A return email indicating success in opening the file would be much appreciated. Thank you, --David David Schonbrunn, President Transportation Solutions Defense and Education Fund (TRANSDEF) P.O. Box 151439 San Rafael, CA 94915-1439 415-370-7250 cell & office David@Schonbrunn.org www.transdef.org
Notes :	
Attachments :	TRANSDEF Comment Set.pdf (2 mb)

Transportation Solutions Defense and Education Fund

P.O. Box 151439 San Rafael, CA 94915 415-331-1982

April 18, 2016
By E-Mail to:
2016businessplan
comments
@hsr.ca.gov

Dan Richard, Chair
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

Re: Draft 2016 Business Plan

Dear Mr. Richard:

The Transportation Solutions Defense and Education Fund, TRANSDEF, is a non-profit environmental group dedicated to the regional and interregional planning of transportation, land use and air quality. Our focus is on reducing GHG emissions from transportation. TRANSDEF has long been actively involved in HSR, starting with commenting on the Draft Statewide EIR in 2004. We have been a party in all three *Town of Atherton* EIR challenges and the appeal. We continue to be conceptually supportive of HSR, but do not believe the CHSRA's project can be economically viable--or even can be built--due to its being designed to meet priorities other than transportation.

With this Draft Business Plan, the Authority has pretty much admitted there is no way it can build to Southern CA. The $3.2 billion in projected monetization from the IOS (p. 64) is only a tiny fraction of the cost to complete Phase 1. With no likely sources of additional funding, the situation is grim. This moment requires courageous truth-telling and owning up to past mistakes. This Draft Plan is not that.

The Draft Business Plan repeatedly mentions bringing in the private sector early in the design process. That is what the Peer Review Group recommended. But it is not what was done. The private sector was not brought in for the most critical part of the design: route selection. The reason there is no private money in this project now is because the politically selected route is a money-loser. (Rail operators won't say that publicly for fear of retaliation.) HSR in California could be a moneymaking business if the route is optimized for operating profits, but political considerations and private interests have been foremost ever since CHSRA was formed. The public interest has been subverted.

TRANSDEF urges the Authority to consider the analysis contained herein, and put the project on hold. We continue to believe that the way forward is a Request for Proposals

that invites the private sector to propose their own route, environmentally cleared at State expense. A private sector-led project would have a completely different dynamic, and could potentially secure consensus support in the Legislature and Congress. If the drawdown were to stop immediately, Congress might be willing to reinstate the unused portion of the ARRA grant to a private sector-led project.

We note with dismay the Authority's overt contempt for the public. The complete irrelevance of public comments is evident in its announced adoption date for the Final Business Plan three days following the close of the comment period. We hereby incorporate by reference the 4/18/16 comments of the Train Riders Association of CA.

Initial Operating Segment

It did not help the Authority's flagging public support to put forward an IOS with a southern terminus in an orchard in Shafter. That decision led to news stories on The Train to Nowhere that wrote themselves. While the Chair has indicated that the Final Business Plan is likely to have a different terminus, the executive that signed off on the decision to put it in the draft deserves to be reprimanded for exceedingly poor judgment.

Greenhouse Gas Emissions

TRANSDEF produced an in-depth analysis of the 2013 GHG Emissions paper by CHSRA. (See Attachment 1.) It found many flaws, most notable of which was the failure to include the life-cycle emissions of the construction materials, especially concrete. TRANSDEF filed suit to challenge the Air Resources Board's inclusion of HSR as a GHG emissions reduction measure in the first update to the Scoping Plan. In addition, the suit asks the court to invalidate the appropriation of revenues from the Greenhouse Gas Reduction Fund to HSR. CHSRA is a Real Party in Interest in that case.

On the basis of evidence submitted to ARB (See Attachment 2), TRANSDEF concludes that HSR will be a net GHG emitter for at least the first twenty to thirty years of operations. It makes no sense to use the GHG Reduction Fund to build something that won't reduce GHGs for a long time to come. AB 32 recognized the need to get reductions early, when it can slow down movement towards the tipping point. That's when new feedback loops kick in and catastrophic climate change will become unstoppable.

Six years later, it is time for CHSRA to produce a credible GHG emissions analysis that considers all emissions related to the IOS (because that is the only part of the project that is claimed to be funded), using the ridership cited in the Business Plan. (Parenthetically, TRANSDEF notes its inability to suspend disbelief as to the projected ridership for the IOS. See discussion below.) The analysis should specifically determine which year of operations of the IOS the net GHG emissions will become negative. The study should be conducted by an identified author with appropriate credentials for the task.

Until we are convinced by a credible study, TRANSDEF will continue to assert that the current HSR project will be a net GHG emitter if built, and therefore should not receive cap and trade funds. Without cap and trade funds, it cannot access bond funds, making the project infeasible.

Ridership

The ridership projection from San Jose to the Central Valley seems unreasonably high, at about twice recent San Joaquin Amtrak annual ridership, for a trip that is significantly more expensive. It seems unlikely the market can support the pricing expected for HSR. If the projections based on stated preference surveys are to be believed, the documentation needs to confirm that the survey specifically asked about taking an HSR trip from San Jose to Fresno and a bus to Los Angeles. Asking about an HSR trip to Los Angeles would be irrelevant for projecting IOS ridership.

A brand new marketing direction is offered in this Business Plan: HSR is good for commuting to jobs in the Silicon Valley. This is laughable: The projected $63 fare each way is not feasible for commuters, especially for people that are commuting because they can't afford to live in the Bay Area. And it is beyond ludicrous to use cap and trade funds to facilitate the construction of sprawl, which greatly increases GHG emissions. The 2005 Statewide FEIR had an inadequate treatment of growth inducement. It offered no meaningful mitigation measures such as incentives to local jurisdictions to make their future land use patterns compact. Disincentives to continued sprawl would be needed if the long-time pattern is to change. There is no legal basis to expect that "effective land use and transit-oriented development" (p. 46) will replace generations of sprawl.

Capital Costs

Public trust of CHSRA's reporting of capital costs hit a new low following the revelation of the secret PB memo. The attempt at damage control was not at all convincing. It appears to informed members of the public that impending large cost increases have been held back. Meanwhile, at least some of the reduction in Phase 1 cost estimates are the result of scope reductions, of which the $1.5 billion reduction in funding for the Caltrain Downtown Extension is the most evident. Because it is a large enough number to be identified, but was not called out in Figure 1 of the Capital Cost Basis of Estimate Report, it appears that the $5.5 billion in cost reductions is actually a net figure, masking cost increases in certain SCCs or sections.

TRANSDEF suggests that a productive way to repair the public's trust in the project and its management would be to release a master spreadsheet (in .xlsx electronic format) as a supplement to the Capital Cost Basis of Estimate Report. It would tracks the cost estimate for each project segment (identified by specific mileposts) through each of the various Business Plans, starting with 2012. Each item for each Business Plan should have a quantity and a unit cost. That way, it will be possible to see exactly what changes from Plan to Plan. In addition, it should be a working spreadsheet with formulas, including those for updating costs for inflation. This would make it possible to verify that the 2014 Business Plan capital costs were in fact the 2012 Business Plan costs, with an inflation adjustment. A thoroughly informative spreadsheet would clarify such things. Where significant changes occur, it would be helpful to have notes keyed to the cells. A dramatic change in the degree of transparency might make the project more credible.

Funding

While the 2016 Draft Business Plan appears to demonstrate the needed full funding for the IOS, that funding is a mirage. It relies on cap and trade funding all the way out to 2050. The expectation is to raise $5 billion in bonds that are secured by the cap and trade revenues between 2025 and 2050. Those revenues are so speculative that it seems highly unlikely that money on that scale can be raised. Even if it can be raised, it would be very costly, as it would be treated as a junk bond.

It will also take several acts of the Legislature that are bound to be highly controversial: extending the life of cap and trade, putting funds into reserves to pay back the bonds, and pledging considerably more than HSR's 25% share of the funds. Without all the projected cap and trade funds, no pre-expenditure funding plan can qualify for bond funds. Without bond funds for construction, the HSR project cannot proceed. CHSRA will have to go out of business once the federal grant is spent.

Bookends

Bond funding for local projects in the north and south, known as the Bookends, cannot be released for construction. These projects include such projects as Caltrain electrification and grade separations in Southern California. Despite the Legislature having appropriated bond funding for them, they do not qualify for construction funding. To get the funding, a project would have to be part of a fully funded and environmentally cleared segment that will result in infrastructure that is HSR-ready and whose operations will be self-supporting financially. The Bookends can't pass these tests.

Urban Areas

In his April Senate Committee testimony, Chair Richard said trains would go 120 MPH through urban areas, presumably to lower the noise emitted by trains. However, it won't be possible to make the required travel time at that speed. Please show how you can keep the speed down and the speed up at the same time. Contrary to a statement made by HSRA communications staff, San Jose is not the heart of Silicon Valley.

Comments on Specific Pages

4. Where is the information on the estimated capital costs for each segment of the statewide high-speed rail system under PUC 185033(b)(1)(A)?

9. Cap and Trade funds are placed in the Greenhouse Gas Reduction Fund. They are not Greenhouse Gas Reduction Funds.

10 & 11. Cost estimates are not directly comparable. Some lower cost estimates are the result of downscoping. e.g., Elimination of $1.5 Billion contribution to DTX.

12. Please provide ridership breakout by destination to enable evaluation of the significance of commuter traffic, the credibility of the long-distance estimates and the potential impacts of induced sprawl.

12. Investment of public dollars may be the predicate for private sector investment, but without private sector involvement in route selection, the risk is too high that the private sector will never get involved, leaving a stranded asset. The current HSR project is a political deal and not a transportation project.

30. The structure of 1A is intended to prevent the expenditure of funds that could result in a segment that is not complete. The ICS managed to escape that fiscal discipline, but will not escape it in the future, should there be an attempt to use the bond funds.

31. So far, the HSR system is entirely a public works project. As stated on p. 35, it is government owned and constructed, based on government decisions.

32. In seeking to achieve zero GHG emissions construction, the full lifecycle emissions of the materials used in construction must be included. They were not included in the 2013 GHG analysis done for the Legislature.

35 & 36 & 38. Bringing in an operator after the route has already been selected is far too late, if the intent is to have significant private sector investment.

39. The train operator needed to be involved in the most important planning decision: the route. It is insulting to the public to claim that the train operator must be at the forefront of business model development, when the political process distorted the route selection so badly as to make the project infeasible.

40. The key decisions most important to the private sector have already been made. The likelihood of getting future investment is small, because the route can be expected to perform poorly. Adequate ridership is very unlikely.

45. The logical way to secure private sector participation would have been to offer rail operators the ability to propose their own routes, with the assumption of ridership risk. Instead, CHSRA proposes to place 100% of the risk of the first $21 billion on taxpayers. The Authority refused to consider route flexibility on an unsolicited proposal by SNCF America, which had the investment banking support to build the San Francisco-Los Angeles system. (See http://transdef.org/HSR/Private_Capital.html)

45. The assertion that HSR "will enable people to work at high-tech jobs in the Silicon Valley and San Francisco while having greater access to more affordable housing options in Central Valley..." is inconsistent with HSR as a profit-making business. Commuting is only viable with a subsidized public transit business model, because HSR is far more costly.

49. See above for a discussion of the packages of projects.

49. Greenhouse gases are not criteria pollutants that cause human health impacts. The cumulative global GHG emissions cause climate impacts, not direct health impacts. As a result, there is no relief provided to disadvantaged communities.

50. The Santa Fe Springs triple tracking may provide benefits to Amtrak and Metrolink, but isn't HSR supposed to have dedicated tracks here?

56. The cost estimate only covers access to 4th and King in San Francisco, which is not the terminus of the system. What is the total cost of Phase 1 to the Transbay Transit Center?

75. Does the inflation in O & M costs in Exhibit 7.16 portend future problems with ridership? The ridership model documentation is silent on whether this degree of inflation could eventually affect demand. It should not be assumed that price elasticity

remains constant. At some fare point, the elasticity has to hit a breaking point, resulting in a death spiral.

88. It would be appropriate to identify the program level risks of 1). the invalidation of cap and trade by the courts; 2) the invalidation of the HSR appropriation of cap and trade by the courts; and 3). the Legislature's inaction on extending cap and trade, and providing the necessary framework to enable securitization, which is the foundation of the Business Plan.

89. A major risk that remains unidentified is the absence of a regulatory structure for implementing 25 kv. overhead power on blended systems. There cannot be a Phase 1 without these rules, yet no proceeding is open at the CPUC.

89. The mitigations listed for declining shareholder support are unlikely to be effective. See transparency suggestion, above.

92. CHSRA petitioned STB for the preemption of CEQA. This should be listed as environmental risk mitigation. The uncertain future of preemption, on appeal both in federal court and in the California Supreme Court, is a risk that needs to be identified.

92. A major risk that remains unidentified in the Business Plan is the trackage right Union Pacific RR has on the Caltrain ROW. UP will have to give its permission for CHSRA to provide intercity rail service in the Corridor. Until an agreement is in place, CHSRA needs a fallback plan. We believe the fallback should be obvious, given TRANSDEF's past litigation.

Conclusion

In these comments and in the previous twelve years of advocacy, TRANSDEF has provided constructive suggestions for how to achieve a functioning and profitable HSR system in California. As we have continuously predicted, due to its non-viable business model, CHSRA is about to run out of money. TRANSDEF is always willing to meet with CHSRA staff and/or Board to assist in changing direction.

Sincerely,

/s/ DAVID SCHONBRUNN

David Schonbrunn,
President

Attachments

1. Analysis of the CHSRA's GHG Report. TRANSDEF. 2014.

2. High-speed rail with emerging automobiles and aircraft can reduce environmental impacts in California’s future. Chester, M. and Horvath, A. Environ. Res. Lett. 7 (2012) 034012.

Attachment 1

Transportation Solutions Defense and Education Fund

P.O. Box 151439 San Rafael, CA 94915 415-331-1982

Analysis of the CHSRA's GHG Report

On July 1, 2013, the California High-Speed Rail Authority released its *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels* (June 2013).[1] It is meant to fulfill the mandate contained in SB 1029 (the Legislature's authorization of HSR bonds for the Central Valley project) to provide "a report on the 'net impact of the high-speed rail program on the state's greenhouse gas emissions.'"[2] However, the report fails to quantify the project's emissions and emissions reductions, thereby making an evaluation of the program's net impact impossible.

The report is obviously intended to counter the Legislative Analyst's budget report[3] of April 2012, which concluded that the HSR project would result in a net increase in GHG emissions for the first 30 years of operations. Knocking down that report would open the door to funding HSR with cap and trade revenues. Interestingly, the CHSRA report never mentioned the LAO report and pretended it didn't exist. Someone must have concluded they couldn't win an argument on the merits.

Rather than dispute the LAO report, the CHSRA report claims to "detail[] the projected net greenhouse gas (GHG) emissions associated with the construction and operation of the high-speed rail system."[4] However, the report offers no details of those emissions. If numbers were developed during the preparation of the report, they weren't included in the publication. This is a politicized promotional piece and not a science-based document. It is simply not credible and not responsive to the legislative mandate.

Update: The Governor's Budget Proposal

The Governor proposed that $250 million in 2014-15 cap and trade revenues go to HSRA. He further requested that 33% of all cap and trade revenues starting with 2015-16 be continuously appropriated to HSRA.[5] These many billions of dollars, if not well-spent by the HSR project, could threaten the effectiveness of the entire cap and trade program. Careful scrutiny of the HSR project's net GHG benefits is warranted.

Methodology

A disclosure on p. 17 invalidates the entire report: "The timeframe and activities analyzed and discussed in this report were for CP1 [the first phase of the current Merced-Bakersfield project]. As the project moves forward, direct GHG emissions calculations will be carried out for each subsequent construction package." The construction impacts of CP1 cannot be meaningfully analyzed in relation to the operational emissions

reductions calculations, because the latter pertains to the Initial Operating Section (IOS), which is ten times its length. No HSR operations are planned for CP1.

This is critical, because the report is actually comparing the emissions benefits of the IOS to the emissions costs of the one-tenth-as-long CP1. Completing the IOS would require funding the $26 billion extension to the LA Basin, as well as building CP2, CP3, CP4 and CP5 [the remainder of the Merced-Bakersfield project]. Obviously, the net project emissions are going to be very different when the emissions arising from $26+ billion of construction are added in.

Evaluating the HSR program's net impacts requires either the operational emissions reductions of CP1 or the construction emissions of the IOS. This report offers neither.

Summary of Findings

The following six so-called Findings are mere restatements of vague intentions, with no identified funding to implement them:

- Commitment to 100% renewable energy during operations
- Zero net greenhouse gas emissions during construction
- Supportive transit and land use for greater cumulative benefits for the state
- Plans to plant thousands of new trees across the Central Valley
- Cleaner school buses and water pumps in Central Valley communities
- Agricultural conservation measures aimed at reducing Central Valley sprawl and preserving valuable agricultural land[6]

In addition, the report offers no evidence in support of the following two so-called Findings:

- Zero net greenhouse gas emissions during construction[7]

There is no evidence to support this claim. No numbers whatsoever are offered for GHG mitigation activities. This is a classic "aspirational goal" rather than a finding on a plan to achieve one.

- Significant contributions to the State's goals embodied in AB 32 and SB 375[8]

There is no evidence to support this claim.

Not only is there no evidence to support the following three so-called Findings, they are actively misleading, as they are entirely dependent on CHSRA receiving an additional $26 billion to build out the IOS to the Los Angeles Basin. In addition, they will mislead non-technical readers because they appear to be findings on the project's net emissions impacts. Because they exclude the construction emissions of both CP1 and the IOS, they represent only one side of the emissions ledger.

- Greenhouse gas savings from the first year of operations increasing to over 1 million tons of CO2 per year within 10 years[9]
- Result in net GHG emissions diversions that, conservatively, are the equivalent of the GHG emissions created from the electricity used in 22,440 houses, or removing 31,000 passenger vehicles from the road.[10]

- Using methodologies consistent with state practice, an estimated 4 to 8 million metric tons of CO2 saved by 2030, as if the state turned off a coal fired power plant[11]

As discussed below, this last assertion is also misleading because the 8 years of operations are being compared to roughly one year of such a power plant's emissions.

GHG Emissions Sources for High-Speed Rail System

The diagram on page 9 is the only rendition of emissions category totals in the report. Amazingly, there is no corresponding table. The diagram comes closer to identifying the net impact than anything else in the report. However, its use of graphic symbols instead of conventional chart bars makes it impossible to interpret quantitatively. It is unclear from the diagram (or its associated text) whether the symbols have any quantitative significance, and if they do, whether emissions totals are represented by the height or by the area of the symbols. This makes the diagram both useless and deceptive: it obscures more than it discloses. Given the central importance of this data, choosing this indecipherable diagram for its portrayal can only be interpreted as an act of bad faith.

Operational Emissions Reductions

This project has had a long history of challenges to the technical validity of the HSR ridership model and litigation about the hidden changes that were made to it that advantaged Pacheco ridership while penalizing Altamont ridership. Ridership is the key input to an analysis of operational emissions reductions. As will be discussed later, the GHG reduction benefits of the HSR project are very dependent on ridership. With the controversy surrounding the ridership projections, this net emissions analysis rests on a shaky foundation.

The most striking part of this section is the meaningless apples-and-oranges comparison between the annual emissions of a coal-fired power plant and the emissions reductions from 8 years of HSR operations.[12] This is an attempt to invite positive identification with HSR by creating a "Coal Bad--HSR Good" dualism, a classic technique of promotion.

Construction Emissions

While the report uses standard methods to calculate the direct emissions resulting from construction, it entirely leaves out the emissions resulting from the acquisition of construction materials, and offers a weak justification that these emissions shouldn't be counted against the project:

> Regarding the construction materials, for some it is possible to calculate the impacts over the material's life-cycle, from extraction through processing, use onsite, and disposal, and express those impacts in GHG emissions terms. Those GHG emissions are usually the reporting responsibility of the manufacturer, and in terms of a project GHG emissions

> inventory, happen "upstream" and outside the boundary of the project.
>
> For example, cement manufacturers in California are subject to ARB's Mandatory Reporting and Cap-and-Trade Regulations. These regulations require cement manufacturers to report their GHG emissions annually to ARB. The emissions from cement manufacturing count towards the statewide GHG emissions "cap." The GHG emissions covered under the "cap" are required to be reduced through emission controls or a limited amount (eight percent) may be offset through the purchase of ARB certified offset credits.[13]

The problem is that these emissions from construction materials constitute a very significant part of the project's overall emissions, because of the huge amount of concrete called for in the plans. This amount is large enough to increase the cement manufacturing sector's statewide emissions, which makes the "count it upstream" approach entirely inappropriate when evaluating the project's net impacts.

Perhaps recognizing this, the next paragraph of the report acknowledges the appropriateness of including the emissions from construction materials in its analysis, yet withholds the data on the flimsy excuse that the data is not "precise" enough:

> However, the Authority considers it important to disclose the GHG emissions that occur outside of the project associated with materials used during construction. **These have not yet been quantified, due to the limitations of available information at this stage of project delivery.** While it is understood that the rail infrastructure will consist, largely of aggregate, concrete, steel, rails, and ballast; the **precise** source and supplier of those materials is not yet known. Additionally, the **precise** quantities are not available, given the nature of the design-build procurement process... (emphasis added)[14]

This is a masterful exercise in appearing to be fair-minded while simultaneously holding back damaging information. It is obvious that in the course of putting the project out to bid, the Authority prepared estimates of construction material quantities. These estimates were the basis for the calculation of the direct construction emissions. The materials' emissions must be **huge** for the Authority to need to bury them with this kind of double-talk.

The Legislative Analyst's April 2012 report[15] relied on a 2010 pioneering study by Chester and Horvath entitled *Life-cycle assessment of high-speed rail: the case of California.*[16] The study's 2012 update produced data that enabled this calculation: Infrastructure construction and operations contribute between 40% and 51% of the

CHSRA project's GHG emissions per person per kilometer travelled. This figure rises to near 100% of the emissions for the scenario with 100% renewable power, and falls to 32% when the train's capacity is nearly doubled.[17] The paper found "CAHSR infrastructure construction effects are dominated by concrete use. Approximately 67% of CAHSR infrastructure emissions are the result of cement production for concrete use..."[18]

This is the smoking gun: Construction materials (as well as infrastructure construction, if one doesn't assume the success of the zero net GHG emissions program[19]) make up a highly significant percentage of the project's overall GHG emissions. Leaving them out so compromises the net impact analysis as to render it worthless.

The Chester and Horvath study calculated the project's payback period, the point at which the emissions reductions from the substitution of auto and air trips (measured as Vehicle Kilometers Traveled, or VKT) with HSR trips equals the HSR project's GHG emissions, including its cumulative prior emissions:

> The payback sensitivity reveals several important considerations for transportation planners and air quality policy makers. The cumulative plum-colored lines for the high, medium and low forecast figures show that the **GHG payback will likely occur between 20 and 30 yr** (D3) **after groundbreaking**, and acidification potential after 20–40 yr. **However, payback is highly sensitive to reduced automobile travel.** The 5.8 billion auto VKT displaced dominate emissions changes in the corridor and the effects from reduced air travel and CAHSR are small. The reduced auto impacts are significantly affected or dominated by life-cycle components, in particular, avoided vehicle manufacturing, vehicle maintenance and gasoline production. (emphasis added.)[20]

Chester and Horvath are thus warning that any slip in ridership from currently predicted levels would delay the GHG benefits of HSR even further.

Double Counting

When evaluating statewide benefits, it is important that GHG emissions reductions calculations represent only the project's own properties. The model that was used, on the other hand, "also reflects the GHG emissions benefits of ARB's recent rulemakings including on-road diesel fleet rules, Pavley Clean Car Standards, and the Low Carbon Fuel standard."[21] This means that the report's emissions reduction calculations overstate the benefits accruing to the HSR project.

Offset Activities

The only way the CHSRA's GHG Report is able to claim a net beneficial GHG impact is by buying offsets in the form of environmental mitigations, including construction mitigations,[22] and farmland protection.[23] The strategy of the Cap and Trade program is

to purchase GHG-reducing offsets at the lowest cost per ton. There's something very odd about committing Cap and Trade funds to a project that increases GHGs, which then has to buy GHG-reducing offsets. It would be dramatically less expensive on a per-ton basis to fund the GHG-reducing projects directly. Buying these same offsets as part of a CHSRA project package is inherently far more expensive.

Conclusion

The report offers no numbers capable of serving as a basis for the conclusion that "the high-speed rail program will have a positive impact on reducing the state's greenhouse gas emissions."[24] Instead, that conclusion "'feels right' without regard to evidence, logic, intellectual examination, or facts"--the Wikipedia definition of Stephen Colbert's 'truthiness'.

Endorsements

The uncritical endorsements of the report by agency heads expose the depth of its politicization. It simply is not credible that sophisticated agency heads and their staffs failed to spot the profound flaws identified above. Brian Kelly, now Secretary of the State Transportation Agency, "reviewed and approve[s]" the report.[25] Mary Nichols, Chair of the Air Resources Board, "believe[s] the analysis is reasonable..."[26] Instead of the comprehensive overview expected of someone of her subject matter expertise, she offered only superficial comments on the emissions reductions from mobility choices, and avoided construction emissions and offsets entirely. These two endorsements make it obvious that the Governor ordered his people to "make HSR funding happen" no matter what.

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[1] hsr.ca.gov/docs/programs/green_practices/HSR_Reducing_CA_GHG_Emissions_2013.pdf

[2] p. 13. (Unless otherwise noted, all references are to the report accessible at the URL above.)

[3] Legislative Analyst's Office, *Funding Requests for High-Speed Rail*, April 17, 2012, p. 8

[4] p. 13.

[5] Legislative Analyst's Office, *Cap-and-Trade Auction Revenue Expenditure Plan,* February 2014, p. 5

[6] p. 6.

[7] *Id.*

[8] *Id.*

[9] *Id.*

[10] *Id.*

[11] *Id.*

[12] p. 11.

[13] p. 14.

[14] p. 14.

[15] Legislative Analyst's Office, p. 8

[16] Mikhail Chester and Arpad Horvath, *Life-cycle assessment of high-speed rail: the case of California*, Environmental Research Letters, January 2010.

[17] Mikhail Chester and Arpad Horvath, *High-speed rail with emerging automobiles and aircraft can reduce environmental impacts in California's future*, Environmental Research Letters, July 2012, p. 5 [Interpolated from the chart data in Figure 1]
[18] Chester and Horvath, 2012, p. 4.
[19] pp. 13-15.
[20] Chester and Horvath, 2012, p. 9.
[21] p. 19.
[22] p. 13.
[23] p. 15.
[24] p. 20.
[25] p. 1.
[26] p. 5.

Attachment 2

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High-speed rail with emerging automobiles and aircraft can reduce environmental impacts in California's future

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Abstract
Sustainable mobility policy for long-distance transportation services should consider emerging automobiles and aircraft as well as infrastructure and supply chain life-cycle effects in the assessment of new high-speed rail systems. Using the California corridor, future automobiles, high-speed rail and aircraft long-distance travel are evaluated, considering emerging fuel-efficient vehicles, new train designs and the possibility that the region will meet renewable electricity goals. An attributional per passenger-kilometer-traveled life-cycle inventory is first developed including vehicle, infrastructure and energy production components. A consequential life-cycle impact assessment is then established to evaluate existing infrastructure expansion against the construction of a new high-speed rail system. The results show that when using the life-cycle assessment framework, greenhouse gas footprints increase significantly and human health and environmental damage potentials may be dominated by indirect and supply chain components. The environmental payback is most sensitive to the number of automobile trips shifted to high-speed rail, and for greenhouse gases is likely to occur in 20–30 years. A high-speed rail system that is deployed with state-of-the-art trains, electricity that has met renewable goals, and in a configuration that endorses high ridership will provide significant environmental benefits over existing modes. Opportunities exist for reducing the long-distance transportation footprint by incentivizing large automobile trip shifts, meeting clean electricity goals and reducing material production effects.

Keywords: life-cycle assessment, high-speed rail, transportation, greenhouse gas
S Online supplementary data available from stacks.iop.org/ERL/7/034012/mmedia

1. Background

Deployment of new and more fuel-efficient transportation modes is expected in the coming decades. Next generation automobiles and aircraft are already entering the market. Despite major political and economic roadblocks in the United States, federal, state, and regional transportation and land-use planners are discussing high-speed rail (HSR) as a potentially better investment for future mobility. The discussion of new transportation options is often coupled with the identification of strategies to help reduce congestion and travel times. With increasing populations

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and long-distance transportation demand forecasts, HSR was made a centerpiece of the American Recovery and Reinvestment Act as a modal diversification strategy. While several corridors are under study, California in 2008 authorized $9.95 billion in bonds for their 1200 km system and the state legislature recently approved funding to start construction. Engineering and planning work are already underway, with possible groundbreaking in 2013 (CAHSRA 2012). While many technical, legal, economic, community and political battles loom, the California HSR (CAHSR) Authority has made significant progress towards deploying the system, which will connect Sacramento, San Francisco, Los Angeles and San Diego. In addition to direct mobility benefits, CAHSR has the potential to reduce long-distance transportation energy consumption and air emissions, provided measures are taken to encourage high ridership, minimize construction effects, and establish clean electricity contracts (Chester and Horvath 2010).

To understand the comprehensive energy and air emissions effects of deployment and adoption of CAHSR, a life-cycle assessment (LCA) framework should be used to assess future modes in the California corridor. The energy and environmental tradeoffs of CAHSR have been examined with then-planned vehicles and fuels (Chester and Horvath 2010) by constructing a life-cycle inventory using information from CAHSRA (2005), the then-current design data and with groundbreaking expected around 2010. However, many new corridor plans and design considerations have been made warranting new outlooks for the system. Forecasts for a future long-distance transportation system should include emerging and expected automobile, aircraft and HSR improvements. In this study, an environmental assessment of future long-distance travel is developed using the California corridor as a case study. We start by developing a per passenger-kilometer-traveled (PKT) attributional assessment of future transportation systems that expands the results of Chester and Horvath (2010) by evaluating (i) emerging automobiles and aircraft, (ii) new train designs, and (iii) low-carbon electricity scenarios. We then develop a consequential assessment for the corridor to determine the net effects of the decision to build a new HSR system. Following our past work, we identify the critical system design parameters that lead to transportation systems having larger or smaller human and environmental footprints than their competitors. Our goal is to identify the potential design, construction and operation pitfalls early so that transportation planners and operators can reduce future impacts at potentially lower cost.

The goal of this research is to develop a framework for assessing the environmental effects of long-distance transportation in the California corridor to provide more comprehensive measures of the greenhouse gas, human health and other environmental damage potentials of future systems. We anticipate that this framework will (i) aid policy and decision makers in the assessment of long-distance transportation options, (ii) provide HSR designers, engineers and operators with information on how to best reduce environmental damage potentials, and (iii) provide a standard methodology by which other US and international transportation systems can be evaluated.

2. Methodology

An environmental assessment is developed for automobiles, aircraft and HSR operating in the California corridor between 2030 and 2050. When performing an LCA a year of analysis is generally defined. We choose to evaluate modes in a two-decade range to acknowledge the uncertainty in adoption of HSR and the challenges of estimating future life-cycle process improvements in a single year.

LCA is the preeminent framework for evaluating the energy and environmental effects of complex systems and can be used to understand the tradeoffs of transportation decisions. Life-cycle inventorying (LCI) is one stage of LCA, the quantification of environmental flows. Impact assessment must be performed to connect physical flows to the human health, ecosystem quality, climate change and resource effects of ultimate interest (ISO 2006, Jolliet *et al* 2003). End-use energy and air emissions are first inventoried. Air emissions include greenhouse gases (GHG) and conventional air pollutants (SO_x, CO, NO_x, VOCs, PM_{10} and $PM_{2.5}$). GHGs are reported as CO_2 equivalence (CO_2eq) using radiative forcing multipliers of 25 for CH_4 and 298 for N_2O for a 100 yr horizon. The US Clean Air Act established a regulatory framework for criteria air pollutants to reduce direct human and environmental impacts. SO_2, CO, NO_x, PM and ozone are regulated through National Ambient Air Quality Standards. We evaluate NO_x and VOCs because they are ozone precursors.

The LCI results are joined with human and environmental impact characterization factors from the Tool for the Reduction and Assessment of Chemical and Other Environmental Impacts (TRACI, v2.03) in the development of a life-cycle impact assessment (LCIA) (Bare *et al* 2002). Impact characterization factors are used to show the maximum potential effects of pollutant releases. In addition to global warming (CO_2eq), human health respiratory, acidification, tropospheric ozone (smog) and eutrophication impact potentials are determined. We stress that impact potentials are the maximum effects that can occur and actual effects may be lower, or potentials may never turn into damages. However, given the challenge of combining air transport and chemistry modeling with concentration-response functions, endpoint damages have not been determined for this study. Bare *et al* (2002) provide background for TRACI and how air emissions are used to determine impact potentials.

2.1. *Efficient and electric automobiles*

Improved gasoline efficiency and plug-in hybrid electric vehicles (PHEV) are expected to have significant market penetration by 2030 (EPRI 2011). The 2007 US Energy Independence and Security Act established fleet-wide fuel economy standards at 35 mpg (15 km l^{-1}) by 2020. Furthermore, the US EPA and the National Highway Traffic Safety Administration have proposed a 102 g km^{-1} CO_2 standard for 2025, which is equivalent to a fuel economy of 54.5 mpg (23 km l^{-1}) (EPA 2011). Given these policies and trends, it is reasonable to expect future long-distance

automobile travel to occur in a vehicle that has improved fuel economy from the 21 mpg (9.6 km l^{-1}) average today (ORNL 2011). While a fuel economy standard does not translate to actual onroad performance, the range of economies modeled is intended to illustrate future potential performance of improved vehicles. Congestion effects are not modeled and it is acknowledged that this would increase the automobile footprint. Second-generation biofuels are likely to be a widespread transportation fuel in the future (Scown *et al* 2012), but we focus on reformulated-gasoline and electric vehicles.

Vehicle manufacturing, battery manufacturing (including replacement) and operation are evaluated with the GREET 1 (fuel-cycle) and 2.7 (vehicle-cycle) models (ANL 2011). A 35 mpg, 1500 kg sedan and a 55 mpg, 900 kg (before batteries) PHEV (ANL 2011) are modeled to meet future fuel economy standards. Large battery pack plug-in and battery electric vehicles are expected to have market penetration gains in the next decades, and we evaluate a PHEV60 (60 mi, 97 km all electric range) assuming that the first 97 km of a 480 km California long-distance trip are in charge-depleting mode and the vehicle is configured as a parallel hybrid drivetrain. GREET models vehicle emissions with a drive cycle that is 43% city and 57% highway. Using drive cycle characterizations from Karabasoglu and Michalek (2012), vehicle emissions are adjusted assuming that the beginning and ending 24 km of the trip occur in cities with the remainder occurring on highways. We believe that our PHEV60 assessment is conservative as future vehicles may have improved battery energy densities and intelligent operational controls that more effectively utilize a blended mode. The PHEV60 is modeled with one lithium-ion battery replacement and specifications are consistent with those modeled by Michalek *et al* (2011). All automobiles are evaluated with a 260 000 km lifetime. Brake wear, tire wear and evaporative losses are included. General maintenance and tire replacement are evaluated using EIO-LCA (GDI 2011). Lead-acid and lithium-ion battery replacement are evaluated with GREET. The energy and environmental effects associated with insurance industry operation (e.g., electricity consumption, waste management) are captured using EIO-LCA (GDI 2011).

The energy inputs and air emission outputs generated by the construction and maintenance of the California highway (interstate and major arterial) system serve as the infrastructure basis for future long-distance statewide travel. There are currently 12 100 km of California highways facilitating 250 billion annual vehicle-kilometers-traveled (VKT) (FHWA 2009). Across all California roadways there are 380 billion annual VKT and this is forecast to increase to 480 billion VKT by 2040 absent a HSR system (CAHSRA 2012). The 74% of asphalt surfaces are specified with a 15 yr life and concrete surfaces at 25 yr (both surface sub-bases are assumed to last 100 yr). Material production, transport, equipment process, and direct emissions from construction and maintenance activities are modeled with PaLATE (2004). Roadway construction effects are allocated to vehicles based on VKT splits and maintenance to heavy duty vehicles since damage follows a fourth-power relationship to axle load (Huang 2004). Roadway design specifications, herbicide use and overhead lighting are included (Chester 2008).

Gasoline vehicle and PHEV60 energy production are evaluated with GREET and are specified with parameters commensurate with Michalek *et al* (2011). California reformulated gasoline is used, and GREET estimates that 18% of crude oil feedstock will be extracted from oil sands by 2020. For the PHEV60 and CAHSR, future regional electricity is used (this is detailed in later sections). Gasoline and electricity production include raw fuel feedstock inputs, transportation, processing (or generation) and distribution.

2.2. High-speed rail

HSR effects are determined following the approach of Chester and Horvath (2010) but updated to acknowledge that a future CAHSR system will likely see improved train performance and an opportunity for increased renewable electricity usage. The assessment by Chester and Horvath (2010) was designed to evaluate the high-speed rail system specified by CAHSRA (2005) under a life-cycle lens. CAHSRA (2005) performs an energy assessment based on large 1200 seat trains consuming an exaggerated 170 kWh of electricity per VKT. Despite acknowledging this over-estimate, Chester and Horvath (2010) chose not to redesign the CAHSRA (2005) system or challenge the publicized parameters. Given the uncertainty in the CAHSRA (2005) propulsion electricity estimate, primary data collection exercises were undertaken to develop improved electricity consumption estimates for a future CAHSR train. In this study, we evaluate three train sizes (400, 670 and 1200 seats) and use actual electricity consumption outcomes from Deutsche Bahn, instead of relying on literature. A range of HSR propulsion electricity exists in the literature and a survey and comparison are performed in the supplementary information (SI, available at stacks.iop.org/ERL/7/034012/mmedia). Actual electricity consumption factors for ICE trains (preliminarily chosen by CAHSRA 2005) were gathered from Deutsche Bahn (2011) and correspond to those reported by IFEU (2011) resulting in 13, 20 and 36 kWh/VKT for the respective train sizes. Regenerative braking effects are included. It is possible that the trains deployed in California will be several generations newer and will consume less electricity, but without data on future technologies we choose not to make projections, and instead assume current state-of-the-art technology for CAHSR.

A study has been performed for the CAHSR Authority to evaluate the feasibility of deploying wind and solar electricity to meet system-wide electricity demands (Navigant 2008) and strategies have been developed to power the stations and trains with 100% renewable energy (NREL 2011). While funding for a renewable electricity infrastructure remains uncertain, this future configuration is considered using existing PV and solar study LCIs (Pehnt 2006) with an 80% wind and 20% solar mix.

Vehicle (manufacturing, maintenance and insurance), infrastructure (construction, operation, maintenance and

parking), and non-renewable electricity generation scenarios follow the methodology used in Chester and Horvath (2010, 2011) and are adjusted for future electricity inputs. The infrastructure assessment matches the results of Chang and Kendall (2011) when a commensurate system boundary is used. Whenever possible, we apply the Western Electricity Coordinating Council (WECC) electricity mix generation emission factors to scenario life-cycle components. Without a contract to purchase electricity from a particular supplier, electricity consumption by CAHSR should be evaluated in the WECC reliability network (Marriott and Matthews 2005), capturing flows across nearby states, including imports to California. Vehicle and infrastructure effects from WECC electricity use are based on a mix that has reached 2020 Renewable Portfolio Standards (WECC-RPS) (WECC 2011). Furthermore, a projected 2040 mix that has reduced coal inputs resulting in 60% carbon emissions intensity of today is also included (WECC-2040).

2.3. Next generation aircraft

Midsize aircraft (130–160 seats) were responsible for 79% of domestic US air travel PKT in 2009 (BTS 2011) and current and future planes are evaluated to capture significant improvements in engine fuel use and emissions. A Boeing 737–800 is used to evaluate currently operating state-of-the-art aircraft. The 737–800 seats 160 and uses CFM56-7B26/2 engines. The Bombardier CS300-ER is an emerging aircraft that offers 20% fuel savings (and commensurate GHG savings) and additional emissions reductions over in-service planes. The CS300-ER will use Pratt and Whitney (PW) 1524G PurePower engines offering propulsive efficiency gains while carrying up to 130 passengers. For both aircraft, maintenance and insurance costs are based on 737–800 airframe materials, engine materials, insurance and hourly costs of employee benefits, reported by BTS (2011). To provide perspective on energy and environmental gains in air travel, the 737–800 and CS300-ER are compared against the legacy Boeing 737 series (<800) which has been a workhorse of the mid-haul market (Chester and Horvath 2010).

Fuel and emission indices are used to determine landing–takeoff (LTO) and cruise phase effects for a San Francisco to Los Angeles flight. In previous studies, LTO effects were determined with FAA (2010) and cruise phase with EEA (2006) data. These software and data do not offer the flexibility or transparency to evaluate future engine improvements. FAA (2010) reports fuel and emission indices which are combined with time-in-mode and rated thrust estimates to determine total flight effects for the 737s. The CFM56-7526/2 engines on the 737–800 achieve 25% reductions in CO, 27% in HC, 31% in NO_x, and 97% in smoke emissions relative to CAEP6 engine emission standards (ICAO 2010). ICAO (2010) does not yet report PW1524G engine testing results, however, Hoke (2011) reports 64% reductions in CO, 96% in HC, 58% in NO_x, and 50% in smoke emissions relative to CAEP6 standards, which were used to determine the CS300-ER flight emissions. Flight LTO and cruise fuel consumption and emissions were validated by PW engineers (Pratt and Whitney 2011). Aircraft energy and environmental effects are determined with fuel and emission indices and rated thrust estimates by flight phase (see the SI for details, available at stacks.iop.org/ERL/7/034012/mmedia). The potential for respiratory, acidification and eutrophication impacts from non-LTO emissions are included (Barrett *et al* 2010, Tarrasón *et al* 2002).

3. Modal attributional footprinting

The assessment and allocation of direct and ancillary processes to each transportation mode reveal the life-cycle activities that should be targeted for the greatest environmental improvements. Consistent with existing transportation LCA studies, results are normalized to a per-PKT functional unit to evaluate the effectiveness of providing passenger mobility. For automobiles and CAHSR, a dearth of data exists to provide a rigorous assessment of expected occupancy rates. For aircraft, detailed reporting provides strong indicators for future utilization (BTS 2011). To avoid universally characterizing modal performance by normalizing to an average occupancy, reasonable and expected high and low occupancies are assessed to capture the *potential* of modes. For all modes, the high occupancy is the number of seats. Low occupancies are designed to consider off-peak ridership. While it is possible for CAHSR and aircraft to operate with a single passenger, this outlying case is not informative and therefore not shown. Low occupancy for CAHSR is approximately one-quarter of seats, and for aircraft is the lower occupancy quartile in 2009, determined from BTS (2011). Figure 1 shows global warming and human health respiratory life-cycle results for each mode for high and low occupancy.

GHG emissions are dominated by vehicle propulsion (energy production for CAHSR and vehicle operation for automobiles and aircraft) but show increases of 38–54% for automobiles, 77–116% for future CAHSR and 13–34% for aircraft when all life-cycle components are included. Results for future long-distance modes are consistent with those identified in past transportation LCA studies (Chester and Horvath 2010, 2009) even when new data and modeling are included (ANL 2011). Automobile vehicle manufacturing is dominated by steel and plastic use (ANL 2011), and maintenance effects are largely the result of supply chain electricity (GDI 2011). CAHSR infrastructure construction effects are dominated by concrete use. Approximately 67% of CAHSR infrastructure emissions are the result of cement production for concrete use and 9% are related to steel production. Automobile infrastructure effects are small compared to past studies because only highways are included to isolate long-distance infrastructure. The inclusion of trip-specific infrastructure provides a clearer comparison of corridor travel by focusing only on roads, tracks and airports needed for each trip. Non-propulsion fuel-cycle effects are primarily the result of refineries, oil and gas extraction activities, and supply chain electricity use (ANL 2011, GDI 2011). With distributed hard infrastructure and its long-distance nature, the life-cycle effects of air

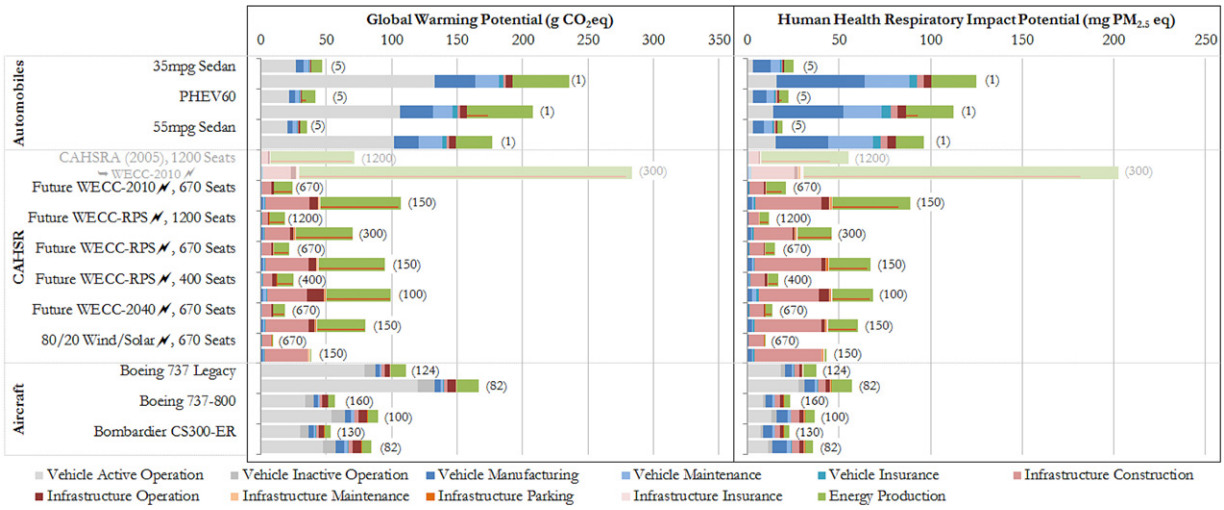

Figure 1. Global warming and human health respiratory impact potential results per PKT. For each mode, results at long-run average high and low occupancy (shown in parenthesis) are displayed as juxtaposing bars. Previous research by the authors reported electricity generation effects for electric vehicle propulsion in the *Vehicle Operation* life-cycle groupings. In an effort to improve the spatial characterization of effects, electricity generation for CAHSR propulsion is reported in *Energy Production* and differentiated from upstream effects (e.g., emissions from fuel extraction and transport) by a red line. The CAHSRA (2005) train is shaded gray to emphasize that it is an unlikely outcome, but reported for comparative purposes.

travel are diminished when results are normalized per PKT. WECC-2040 electricity reduces HSR GHG propulsion emissions by 26% but infrastructure construction effects continue to add heavy burdens to life-cycle results showing the need for low-CO_2 materials.

Across modes and life-cycle groupings, PM_{10} emissions are often generated by mining activities for raw materials, and $PM_{2.5}$ emissions by supply chain combustion processes including electricity generation, the latter contributing to human health respiratory impact potentials. While PHEV60s produce fewer $PM_{2.5}$ emissions during propulsion, battery manufacturing and associated electricity requirements have the potential to contribute significant $PM_{2.5}$ and SO_x emissions and increase respiratory impacts beyond the 35 mpg sedan. This implies that strategies should be developed that minimize human and environmental exposure as the battery industry expands, and that meeting or exceeding RPS standards will reduce impacts across automobiles and CAHSR. For CAHSR, concrete and steel production including upstream mining activities are larger than propulsion effects. The dominating share of environmental impact potentials are often in non-propulsion components and are shown in figure 2.

Several common processes dominate the environmental impact potentials. Vehicle manufacturing and maintenance are affected by assembly activities, but are dominated by the use of metals (i.e., steel, aluminum and copper) and its associated electricity demands for processing. Supply chain truck transport for these processes also contributes heavily to CO, NO_x and VOC emissions. Asphalt and concrete use dominate infrastructure construction and the use of these materials is affected primarily by direct emissions at hot-mix asphalt and cement kilns, and their associated electricity demands. Airport ground support equipment use contributes heavily to aircraft life-cycle results. For automobiles and aircraft, fuel production effects are largely the result of refinery electricity demands and extraction activities, and for HSR are dominated by primary fuel extraction, processing and transport. Air pollutant emission reductions may achieve the largest benefit-to-cost ratio by targeting infrastructure and supply chain effects.

Assuming that options exist, the decision by a traveler to take a mode produces marginal effects in the short-run, a subset of those reported in figures 1 and 2. For example, the decision to walk instead of driving immediately avoids fuel consumption and emissions from vehicle operation. Including mid-run life-cycle components avoids vehicle manufacturing, vehicle maintenance, vehicle insurance, infrastructure maintenance, and associated supply chain effects including fuel refining. Ultimately, a critical mass of travelers choosing to walk instead of drive would have long-run effects including reductions in roadway capacity needs avoiding future infrastructure construction. Marginal effects are critical for understanding the change in energy or environmental outcomes from a policy or decision. Long-run average effects are reported to provide a comprehensive set of indicators for analysts, however, future analyses with these results should consider marginal effects at specified timescales. Long-, mid- and short-run average and marginal comparisons are presented in the SI (available at stacks.iop.org/ERL/7/034012/mmedia).

Considering the potential of a mode to environmentally outperform another is critical to developing strategies that acknowledge different long-term operating characteristics. Modal potential considers the occupancy range in which transportation systems operate instead of averages which can mask peak and off-peak, position along lines and day-of-week characteristics, to name a few. Future CAHSR ridership forecasts have been developed and scrutinized (Brownstone *et al* 2010). Designs that do not access airports

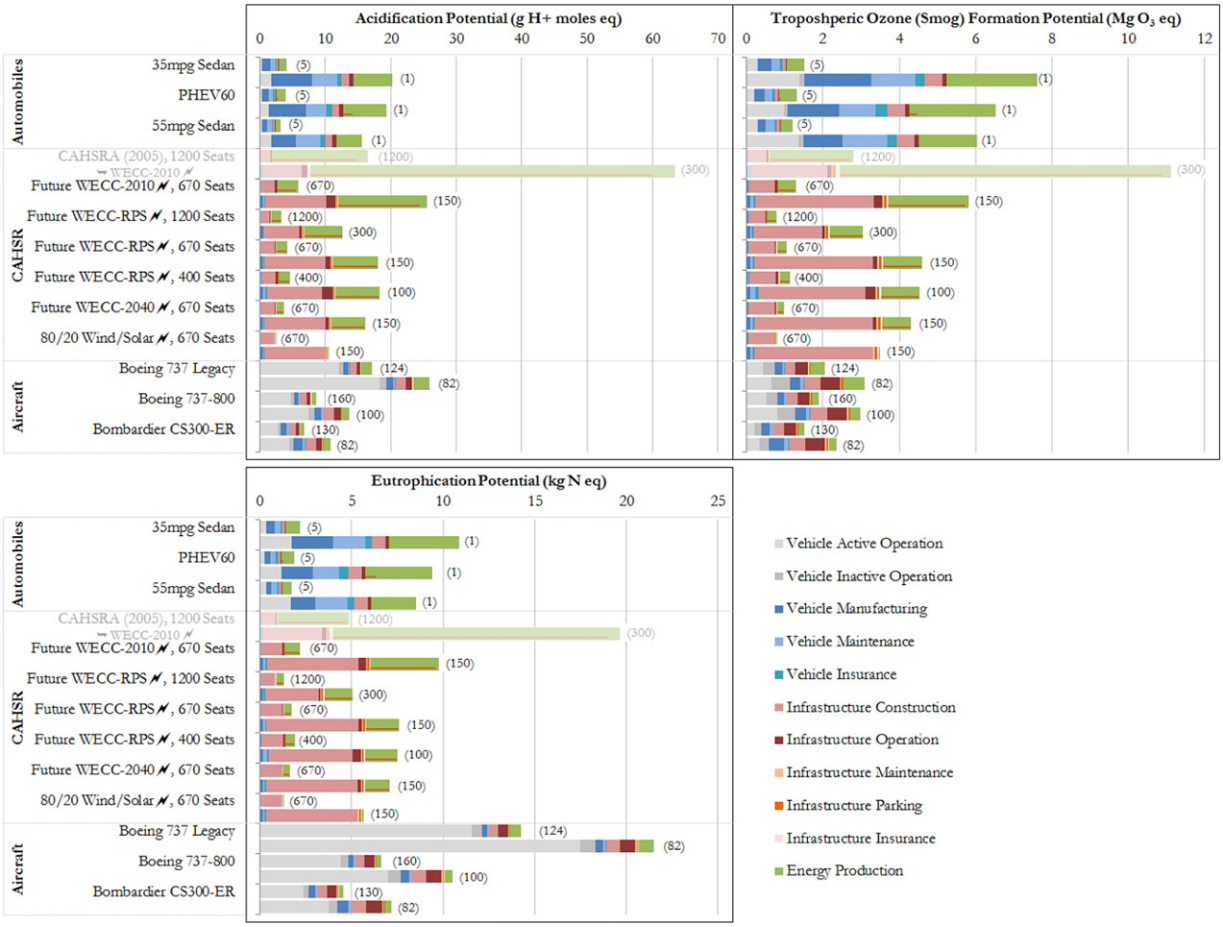

Figure 2. Environmental impact potentials per PKT.

and city centers, hub existing transit at HSR stations and encourage urban infill are inimical to high ridership, and risk disincentivizing trip takers switching from autos. Technical, political, community and economic roadblocks exist for many high ridership configuration options that could ultimately lead to lower than optimal adoption outcomes. Furthermore, even with high ridership configurations, the system will at times (whether during off-peak or end-of-lines) exhibit fluctuations and these instances should be considered in policies that target marginal operation. Given the large uncertainty in a future HSR system's ridership, figure 3 shows the CAHSR life-cycle and vehicle propulsion effects at varying occupancy levels against a current mean occupancy automobile and midsize aircraft (represented as a 2.2 passenger 35 mpg sedan and 116 passenger 737–800).

The sensitivity to vehicle occupancy is used to illustrate breakeven points, or the ridership levels where one mode is equivalent to another in the long-run. Occupancy levels of between 80 and 280 passengers produce HSR GHG-equivalency to future automobiles or aircraft (depending on train size). However, for acidification potential, this equivalency increases to between 160 and 420 passengers, or roughly 35–40% average occupancy for trains. This assumes that the WECC has met the RPS. The acidification breakeven points capture the dynamic of mode switching from low-sulfur liquid fuels to high-sulfur electricity and reaffirm the findings of Chester and Horvath (2010) that deployment of HSR should occur with mandates for cleaner propulsion electricity sources to avoid increased human and environmental impact potentials. The breakeven point assessment highlights the importance of future ridership scenario considerations in the determination of potential corridor effects.

4. Regional consequential effects

To evaluate the net effects of the decision to implement a new system in the corridor, a consequential assessment is developed. A consequential assessment should compare a *without HSR* future where additional automobile and aircraft capacities are needed to meet growing demands to a *with HSR* future where the new rail system reduces the need to fully build this capacity. Estimates of this capacity expansion have been produced by the Authority (PB 2011) and the LCA methods can be used to evaluate the change in effects in the corridor. The per-PKT results reported in figures 1 and 2 are valuable for understanding the footprint of each transportation system in the long-run but do not allow for direct assessment of the changes in corridor impacts when a new system is implemented. For example, an infrastructure will be constructed to facilitate an

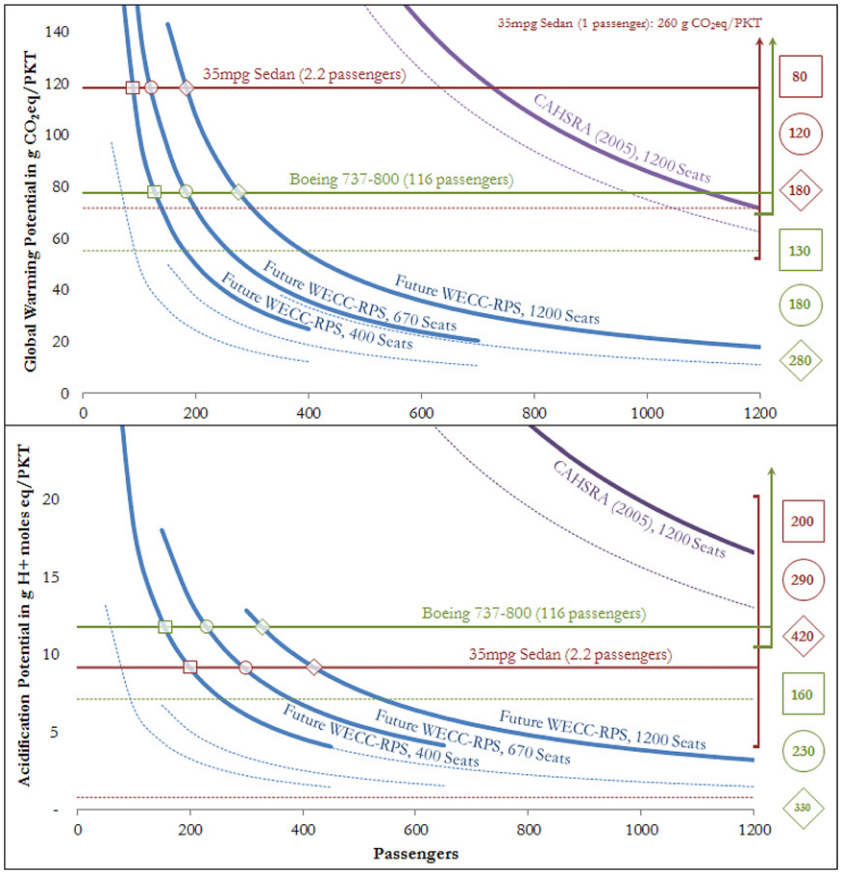

Figure 3. CAHSR global warming and acidification potential sensitivity to vehicle occupancy. Life-cycle results are shown as solid colored lines and vehicle propulsion as dotted. Breakeven points are shown as red and green shapes on the figure and corresponding ridership levels are shown on the right side. While average occupancies are shown for the 35 mpg sedan and 737–800, their potential ranges are shown as vertical lines on the right side.

expected level of service for CAHSR. This infrastructure may be flexible to accommodate more passengers if demand is greater than anticipated. Yet if the per-PKT GHG results in figure 1 are applied to the different PKT demand forecasts, different net infrastructure construction effects would be falsely determined (i.e., the infrastructure construction effects remain the same with different ridership outcomes). While the attributional assessment can inform questions like: *what are the major energy and environmental processes in the life-cycle of a transportation system, and how can they most effectively be reduced?* A consequential assessment is needed to answer questions such as: *how can California deploy a future multi-modal transportation system with the lowest human and environment impacts?*

The energy and environmental costs of a new HSR system should be compared against the avoided costs of automobile and air infrastructure expansion, assuming there is long-distance travel demand growth. PB (2011) estimated that 3600 freeway lane km and 13 000 m of runways, and 115 additional airport gates are needed to meet growing corridor demand in the coming decades. This is the only assessment of future infrastructure expansion needs to date and it is possible that this is an aggressive estimate. PB (2011) estimates are based on full corridor future capacity (117 million auto and air trips) and the most recent forecasts estimate 33 million HSR trips at high ridership. Therefore, 28% of infrastructure expansion effects are considered (i.e., 1000 lane km, 3600 m of runways and 32 additional airport gates) to account for only the avoided effects of HSR travelers and may be an aggressive allocation because of induced demand. Using roadway design guidelines (AASHTO 2001), construction and maintenance energy and emissions were calculated with PaLATE (2004) following Chester and Horvath (2009). The runway expansion would come with an estimated 670 000 m^2 of taxiways and tarmacs. Construction and maintenance of concrete runways and asphalt taxiways and tarmacs are also evaluated with PaLATE (2004) using dimensions reported by Chester (2008). For all surfaces, it is assumed that the wearing courses will last 20 yr and subbases 50 yr. It is also assumed that infrastructure expansion will start 10 yr after it has been decided not to build HSR, and will occur over 30 yr. Airport gate and corresponding concourse expansion construction follow the methodology of Chester (2008). Detailed construction and maintenance schedules for the infrastructure expansion are provided in the SI (available at stacks.iop.org/ERL/7/034012/mmedia).

Consequential effects are highly sensitive to modal shifts and forecasting of HSR energy and environmental effects should occur with uncertainty assessment. Forecasts for CAHSR adoption have only been reported by the Authority making rigorous uncertainty assessment challenging. Adoption discussions by the Authority have been presented through

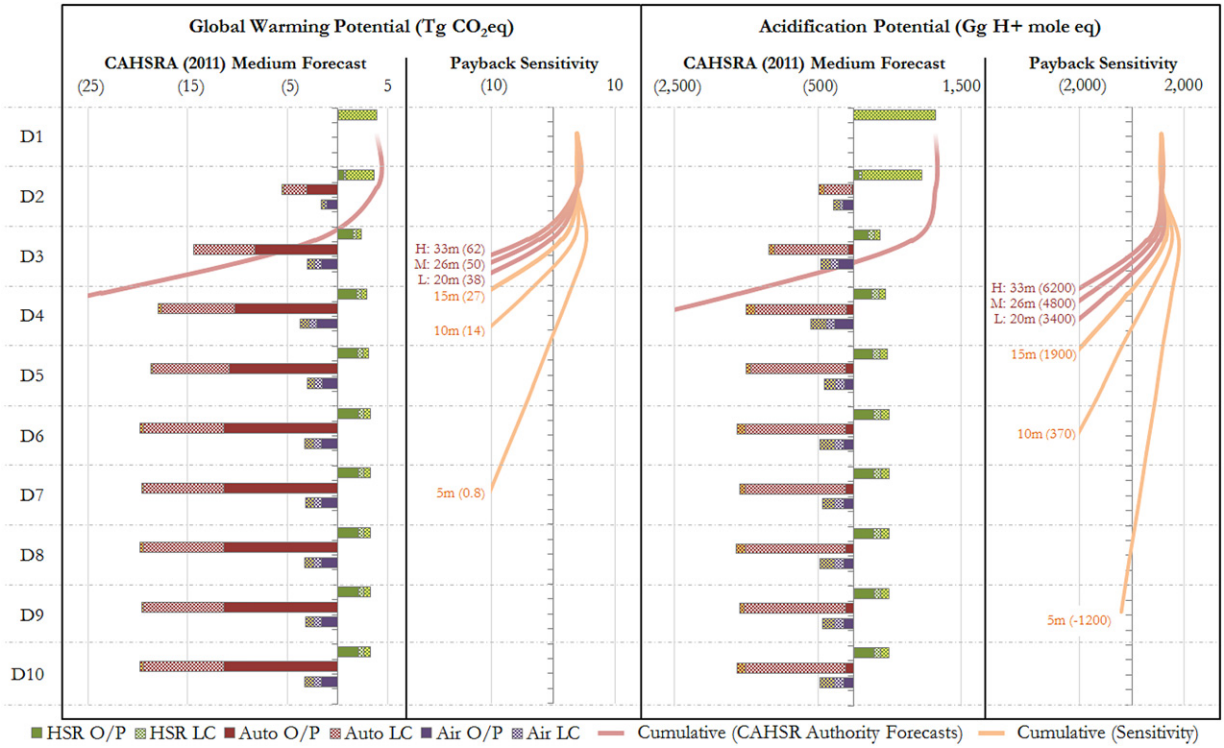

Figure 4. Decadal (D) consequential global warming and acidification potentials including payback for phase 1. O/P = operation and propulsion components (impacts from energy consumed to move vehicles). LC = life-cycle (excludes operation and propulsion components). Life-cycle effects are separated by infrastructure expansion (yellow background) and non-infrastructure (e.g., vehicle manufacturing and maintenance). After each ridership forecast (shown in millions (m) of annual trips in 2040), the 50 yr savings are shown in parentheses. These savings are the GHG or acidification benefit (negatives are costs) after 50 yr from groundbreaking.

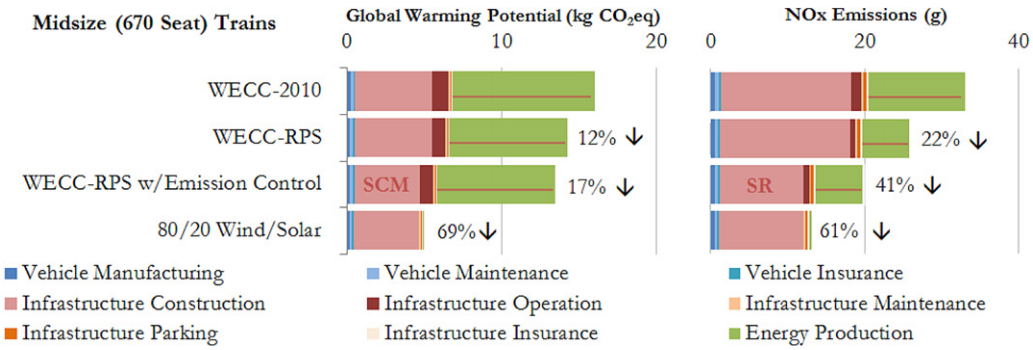

Figure 5. Energy and emission control strategies for reducing environmental impacts per VKT.

without HSR and *with HSR* forecasts. The consequential assessment considers the difference between these two, essentially, what environmental changes have occurred in California as a result of implementing HSR. The current forecasts report that by 2040 CAHSR Phase 1 (San Francisco to Los Angeles) will perform between 27 and 41 million annual VKT (PB 2012a). The Authority's medium *with HSR* forecast (34 million HSR VKT) displaces 5.8 billion auto VKT and 5.1 million air trips annually, generating between 20 and 33 million trips on the new mode (PB 2012a, 2012b). Using these forecasts, the Authority's medium (middle) projection is first evaluated to determine the consequential effects at full adoption in 2040. The WECC-RPS 670 seat HSR train is compared against displaced travel in a 35 mpg sedan and 737–800 aircraft (assumed to be reasonable representative vehicles for 2040). In the *without HSR* scenario, it is estimated that auto travel will increase from 380 billion VKT today to 480 billion VKT, and air travel will increase to 33 million trips (PB 2012b).

The deployment of CAHSR will create induced demand as a subset of trip takers who would not travel by auto or air now find the generalized cost for the journey lower than existing options (Outwater *et al* 2010). Additionally, access to and from HSR stations by autos and other modes may induce new system-wide demand. The CAHSRA (2012) *with HSR* forecast includes estimates of new trips and these are bundled in the aforementioned VKT. We model induced demand implicitly through the change in travel reported by CAHSRA (2012). A summary of the *with HSR* and *without*

HSR consequential analysis critical parameters is provided in the SI (available at stacks.iop.org/ERL/7/034012/mmedia).

The consequential assessment evaluates the difference between a future where CAHSR has or has not been constructed. Figure 4 shows the GHG and acidification potential for operation/propulsion and other life-cycle (including the avoided expansion of auto and air infrastructure) effects aggregated per decade for Phase 1 of the system (San Francisco to Los Angeles). The cumulative effect curve shows the time until payback. Given the uncertainty in the forecasts (Brownstone *et al* 2010), a payback sensitivity analysis is performed on the high adoption scenario as reported by the Authority (41 million VKT). The sensitivity analysis evaluates how long it takes CAHSR to achieve payback given certain adoption levels (for perspective, the Authority's low adoption scenario is 66% of ridership in the high adoption scenario) and considers the high (H), medium (M) and low (L) scenarios followed by decreases of 5 million (m) annual riders.

The payback sensitivity reveals several important considerations for transportation planners and air quality policy makers. The cumulative plum-colored lines for the high, medium and low forecast figures show that the GHG payback will likely occur between 20 and 30 yr (D3) after groundbreaking and acidification potential after 20–40 yr. However, payback is highly sensitive to reduced automobile travel. The 5.8 billion auto VKT displaced dominate emissions changes in the corridor and the effects from reduced air travel and CAHSR are small. The reduced auto impacts are significantly affected or dominated by life-cycle components, in particular, avoided vehicle manufacturing, vehicle maintenance and gasoline production. For GHGs the sooner the system is implemented the more opportunity it will have to help meet GHG reduction policies aiming for 80% of 1990 statewide emissions by 2050. Larger trains or more carbon-intensive electricity generation will delay the payback further. Acidification, the release of SO_x and NO_x emissions which are of concern for respiratory and cardiovascular (through secondary particle formation) effects, agricultural impacts and increased built environment maintenance costs, are dominated by life-cycle processes. For infrastructure life-cycle processes acidification is dominated by the combustion of sulfur-bearing compounds in clinker manufacturing for cement used in concrete freeways, and for non-infrastructure life-cycle processes supply chain electricity use. Ultimately, impacts should account for the time-based radiative forcing of GHGs, high-altitude CO_2 emissions effects, and the shifting of human and environmental effects from vehicle tailpipes to powerplants, to name a few additional factors. We reserve these analyses for future studies. The results of the consequential assessment are highly sensitive to automobile trips avoided and efforts should be made to validate the travel demand model used by the Authority.

5. Strategies for reducing environmental impacts

Given the dominating HSR life-cycle effects from electricity generation and infrastructure construction, strategies can be identified to reduce the system's footprint, prior to its construction and use. First, by meeting the RPS, GHG and NO_x emissions will be reduced by 12% and 22%. Next, emission control strategies are identified for reducing the infrastructure footprint. For GHGs, the use of supplementary cementitious materials (SCMs) such as fly ash or ground granulated blast furnace slag can reduce concrete's footprint by 14–22% depending on the mixture (Flower and Sanjayan 2007). It is expected that the portion of the infrastructure that impacts roadways will be required to use fly ash to meet California Department of Transportation requirements. Furthermore, if the Authority requires concrete producers to utilize cement kilns with selective catalytic and non-catalytic reduction (SR) advanced NO_x controls, material production emissions can be decreased between 35 and 95%, reducing the potential for acidification, respiratory, smog and eutrophication potential impacts (EPA 2007). Lastly, the use of 100% renewables lowers electricity generation impacts (to only power generation facility construction effects) and combined with the infrastructure control strategies produces the greatest reductions. The effects of these strategies are shown in figure 5.

The impact reduction strategies can decrease GHGs between 12 and 69% and NO_x emissions between 22 and 61%. The costs of implementing these strategies should be compared against other opportunities, particularly those identified by GHG and air quality policies. The 80/20 Wind/Solar train, outside of the infrastructure material footprint, has a payback within the first few years of operation and is equivalent to the GHG assessment developed by the Authority, based on NREL (2011), following California Environmental Quality Act requirements.

The transportation emissions reduction from CAHSR, if operating within a cap-and-trade system, should be evaluated. Cap-and-trade programs have been successfully implemented in the US for NO_x and SO_x, and California continues to discuss a GHG initiative. Cap-and-trade programs remove the potential of any single initiative to reduce aggregate emissions as offsets will be met by increases elsewhere in the economy (Millard-Ball 2009). This is because the cap is designed to equalize the marginal abatement cost and does not encourage each economic sector to undertake reductions. Furthermore, if road and rail emissions are part of the cap but aircraft emissions are not, then the only major GHG change resulting from HSR implementation will be the displaced airplane operational emissions. To meet GHG reduction goals, policy makers should consider where CAHSR potential reductions will be counted, whether that is in a cap-and-trade program or direct transportation mandates.

6. Planning for a sustainable mobility future

HSR has the *potential* to reduce passenger transportation impacts to people and the environment, but must be deployed with process and material environmental reduction measures and in a configuration that will ensure high adoption. We have highlighted the life-cycle hotspots that dominate modal success: (i) train size (affecting electricity consumption,

frequency of service and ridership); (ii) infrastructure construction; and (iii) the fossil fuel intensity of the electricity mix. By identifying low and high adoption outcomes, the potential benefits can be discussed, instead of speculating on a normative long-distance transportation future, especially in light of large uncertainty that surrounds many critical factors of the system. Ultimately, this research aims to inform planners and decision makers about providing sustainable mobility options. Planners and policy makers should be asking how a future sustainable transportation infrastructure can be deployed to meet increasing travel demands with the lowest total cost, including externalities. The environmental benefits of HSR should be joined with other considerations when making decisions about the system. Ultimately, decision assessment should include changes in travel time, productivity, congestion, safety, transportation infrastructure resilience, freight synergies, urban development opportunities and employment, in addition to GHG, human health and environmental damages.

Acknowledgments

The authors would like to thank several organizations and individuals for their intellectual support of this research. Elizabeth Mitchell and Domingo Sepulveda of Pratt and Whitney, and Professor Alan Epstein of MIT and Pratt and Whitney were instrumental in helping us determine future aircraft fuel consumption and emissions. Constantin Vogt of Deutsche Bahn provided valuable information and data on the operations of an established HSR system. Jeremy Michalek, Orkun Karabasoglu (Carnegie Mellon University) and Constantine Samaras (RAND) provided invaluable guidance for the PHEV assessment. Finally, the authors would like to express profound gratitude to Lee Schipper, who passed away during the development of this study, and provided continuous support and encouragement.

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2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Greg
Last Name :	Greenway
Stakeholder Comments/Issues :	Attached please find comments on the 2016 Draft HSR Business Plan from Peninsula Freight Rail Users Group (PFRUG). Thank you Greg Greenway
Notes :	
Attachments :	PFRUG Comments on HSR Business Plan 041816.pdf (463 kb)

Peninsula Freight Rail Users Group

April 18, 2016

Delivered by E-mail
2016businessplancomments@hsr.ca.gov

Dan Richard
Board Chairman
California High-Speed Rail Authority (CHSRA)
925 L Street, Suite 1425
Sacramento, CA 95814

RE: Comments on California High Speed Rail Business Plan

Dear Chairman Richard and Members of the Board of Directors:

The Peninsula Freight Rail Users Group (PFRUG) offers the following comments on the revised California High Speed Rail (HSR) Business Plan, building upon the comments we submitted on previous HSR business plans.

PFRUG is an industry association whose members include the freight rail shippers on the Caltrain rail corridor, the two public ports on the San Francisco Bay Peninsula (San Francisco and Redwood City) and other business and labor stakeholders. PFRUG has participated actively in the planning process for Caltrain modernization and high-speed rail since 2009.

A Lack of Attention to Freight Rail

Our comments on the Business Plan are restricted to the implications for freight rail on the Peninsula corridor. While PFRUG has in the past supported the concept of high-speed rail for California, provided that it is planned and developed in a way that is compatible with freight rail, our comments here do not reflect any judgment on the strength or viability of the business plan generally. Our evaluation pertains only to its approach to freight rail.

PFRUG is frankly surprised at the lack of attention to Northern California freight rail in the updated business plan. Past plans recognized that "America's freight rail system is the envy of the world" and that freight rail is a vital component of California's intermodal infrastructure for goods movement by "providing efficient connections to and from California's ports." These truths should inform every stage of planning and implementation for high-speed rail.

Unfortunately, the proposed 2016 business plan makes no mention of shared passenger and freight service on the Caltrain corridor, despite the fact that the most notable revision from past plans is the intention to connect the Bay Area and the Central Valley before connecting to Southern California. This is particularly perplexing given that the plan acknowledges the importance of planning for shared freight/passenger corridors in Southern California, and touts the benefits of HSR for freight capacity, safety, reliability and future growth (pp. 31, 48, 49, 51).

A "realistic, reasonable and achievable" approach to starting HSR service within ten years on the Peninsula MUST include consideration of freight rail in this business plan. Joint planning with freight rail partners for the future of high-speed rail, in the Bay Area and elsewhere, is essential and in the public interest. From a business standpoint, close attention to freight rail opens possibilities to attract private investment and generate revenue for the project.

Given CHSRA's apparent attention to, and appreciation of, freight rail in Southern California and the Central Valley (according to the draft business plan), a variety of lessons related to freight should also be applied to the Bay Area related to:

- Operational considerations
- Cost estimates
- Availability of federal and state funds
- Collaboration with other public agencies
- Collaboration with the private sector
- Right of way acquisition and utility agreements

It is inconceivable that HSR will achieve the ambitious goal of environmental clearance by the end of 2017 without considering the role and importance of freight rail on the Peninsula.

Planning for Compatibility with Freight Rail

PFRUG's central concern is that HSR take freight rail into account when planning for future high-speed passenger service. Caltrain provides a model of how to do this successfully, following a collaborative planning process that recognizes the mutual benefits of moving people and goods by rail. Following are considerations and lessons from that local planning process:

- Work closely with freight rail shippers in addition to freight rail operators during outreach, planning and design of the project. Designate staff contacts for regular updates and meetings with PFRUG. Reach out to PFRUG to allow us to participate constructively in the planning process. We appreciate early efforts on the part of HSR staff to inform and work with us, and we strongly encourage the agency to affirm this approach as part of the business plan.

- Make explicit the assumptions regarding design and operations that underlie cost estimates, specifically as they relate to freight and passenger rail compatibility on the Caltrain corridor.

- Ensure that design and operations assumptions support the long-term viability of shared freight rail use under a "blended system" on the Caltrain corridor, particularly continued freight rail operation during the hours of 8pm–5am. Caltrain has worked closely with local stakeholders to achieve this goal, and its 2015 petition to the FRA was approved by the federal government. This raises a critical question for HSR: What are the planned hours of operation of high-speed trains? What are the plans for HSTs between the hours of 8:00pm and 5:00am, the peak hours for freight rail use of the corridor?

- Ensure that design and operational assumptions support the continuation of the current regulatory standard of 22.5 feet for the overhead electrical lines used by high-speed trains.

- Protect the level of service for freight during the construction period. Electrification of a main line has not occurred in the United States for many years, and the engineers responsible for electrification of the Caltrain corridor will, to some degree, be learning on the job. PFRUG insists that construction be planned in a way that ensures full freight service during construction of the blended system, and Caltrain has committed to this goal for the PCEP.

- Build tracks to account for heavier rail cars in the future. The weight of loaded freight rail cars throughout the country is growing from the current 286,000 pounds to 315,000 pounds. Railroads have consistently raised the weight limits for rail cars and are likely to push for greater freight car weight capacity over the time horizon for HSR planning and construction. If HSR and Caltrain are building a system for the long term, it makes sense to build the system to accommodate heavier rail cars. High speed passenger trains also require tracks built to higher standards, which should also accommodate heavier freight trains, but it is important to discuss this issue explicitly at early stages of the planning process.

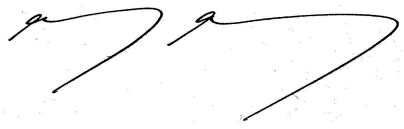
- Regarding the management and oversight of the project following environmental review, consider experience with freight rail as a desirable qualification, and seek substantial expertise in this area from employees and consultants who advise the board and staff.

- Consider the business opportunities of moving freight on high-speed trains and/or facilitating investments in electrification of existing freight service on corridors to be shared with high speed trains. Currently, major package delivery companies contract with freight railroads for intermodal service. The CHSRA should investigate market opportunities that could potentially attract investment to improve the infrastructure for both freight and passenger rail.

PFRUG is encouraged by the availability and proactive approach of CHSRA staff over the past few months and hope this promises the kind of collaborative relationship we have had with Caltrain during the modernization planning process. We urge you to incorporate our comments into the final business plan and look forward to working with CHSRA as the project moves forward.

cc: Jeff Morales, CHSRA
Ben Tripousis, CHSRA
Jim Hartnett, Caltrain
Michael Burns, Caltrain

Sincerely,



Greg Greenway
Executive Director, PFRUG

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Patrick
Last Name :	Prescott
Stakeholder Comments/Issues :	Attached is a comment letter from the City of Burbank on the Draft 2016 High Speed Rail Business Plan. Thank you. David David L. Kriske, AICP Assistant Community Development Director Transportation Division | City of Burbank 818.238.5269 www.burbankca.gov | www.burbankbus.org
Notes :	
Attachments :	CityofBurbank2016BusinessPlanCommentLetter.pdf (3 mb)

CITY OF BURBANK
COMMUNITY DEVELOPMENT DEPARTMENT
150 North Third Street, P.O. Box 6459, Burbank, California 91510-6459
www.burbankca.gov

April 18, 2016

Mr. Jeff Morales
Chief Executive Officer
California High Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814
Attn: Draft 2016 Business Plan

RE: City of Burbank Comments on Draft 2016 Business Plan

Dear Mr. Morales:

Thank you for the opportunity for affected communities to comment on the California High Speed Rail Authority's Draft 2016 Business Plan. The City of Burbank would like to provide the following comments to the Authority Board as it considers adoption of this revised Business Plan.

The City of Burbank notes that the Draft 2016 Business Plan shifts the sequencing of project construction so that the High Speed Rail section serving the City of Burbank would be constructed after the initial operating section is open. This new initial operating segment is now proposed to extend from Bakersfield to San Jose. Nonetheless, the City would like to stress that critical station planning, engineering, right-of-way, and environmental studies are now underway even as focus on the first operating segment has now shifted north. The City would like assurances that these important planning efforts will continue to be supported by the Authority, and the funding provided by High Speed Rail to support Burbank's role in these efforts will still remain available. In particular, the Authority should maintain its funding commitments to the City for station area planning as well as reimbursement to the City for right-of-way and engineering support activities. The City would also like to reiterate the importance of creating new local jobs during design and construction of the High Speed Rail project.

The Draft 2016 Business Plan proposes to invest $4 Billion in "early investment" to the Burbank-Anaheim Corridor in concert with construction of the Bakersfield-to-San Jose initial operating segment. This early investment would make near-term improvements to regional rail in Southern California that could also be used by the future High Speed Rail system. The City supports this early investment plan as it improves regional transit in Burbank that provides near term benefit while supporting the later operation of High Speed Rail. However, these capital investments in the Burbank-to-Anaheim corridor must be coupled with train operational resources to Metrolink and Amtrak so that the regional transit providers can actually take advantage of these new capital investments. The 2016 Business plan should identify additional funding that will be directed to Metrolink and Amtrak to improve service on the corridor in the near term. The Authority,

Metrolink and Amtrak should identify a goal of 30-minute peak and 60-minute off-peak service on the Antelope Valley Line once High Speed Rail investments on this corridor are completed.

Further, the Draft Business Plan identifies building grade separations and completing the Union Station "run-through" tracks as priorities for this early investment. The City agrees with this approach, and would like to specifically recommend that funding be identified to remove the at-grade crossing at the Downtown Burbank Metrolink Station and replace it with a pedestrian grade separation that extends from Downtown Burbank to the Metrolink Station as part of this early investment program. This crossing is the last grade crossing in Burbank along the Antelope Valley Line that is not planned to be grade-separated. The City requests that the Authority consider early investments in other regional transit that would serve the future Burbank Station, including expanded BurbankBus or Metro bus service and a possible extension of the Orange Line to Burbank. Regional and local transit remains critical to ensuring success of High Speed Rail as a viable travel mode. The Authority should also consider how to connect Southern California to Bakersfield once the initial operating segment is complete to allow travel to Northern California with one transfer in Bakersfield.

The 2016 Draft Business Plan suggests that because the Burbank-to-Anaheim corridor will be constructed later, that the additional time will allow for a "blended" system approach to extending High Speed Rail through Burbank. The City believes that a blended system, where High Speed Rail tracks share right-of-way with Metrolink and freight operations, provides the best opportunity to minimize right-of-way acquisition and lessen land use impacts of new High Speed Rail alignments. The City acknowledges that the current alignments proposed for study in the Palmdale-to-Burbank and Burbank-to-Anaheim project Draft EIRs include both a full "blended" right-of-way through Burbank as well as an alternate alignment that swings south of San Fernando Boulevard near the Burbank Bob Hope Airport. The City believes that any new alignment (blended or new) must be constructed in a way that does not divide neighborhoods and minimizes noise, vibration, and safety impacts. The Authority should consider how higher or lower train speeds may exacerbate or minimize these effects. Also, a decision on these two alternate alignments in Burbank should be made independently from the alignment decisions being made by other communities north of Burbank; therefore the two alignments in Burbank should be developed so that they integrate with all the alignment choices being considered north from Burbank to Palmdale so that every community has the opportunity to choose the alternative that best meets their needs and minimizes their impacts.

Finally, because the Draft 2016 Business Plan proposes to construct the Burbank-to-Anaheim section later, the City believes that the project phasing should be planned so that Burbank does not operate as a terminus to the system in Southern California for any interim period of time. The City is concerned that if the future Burbank Station is the terminus of the entire system, that the City will suffer from higher environmental

impacts, including higher traffic impacts. This is even more important now that the Southern California segment is now proposed to be constructed later under the revised plan. The risk of higher environmental impact of an interim terminal station is higher if the system is first built all the way to the Bay Area than under the previous plan. Therefore, the City requests that the Burbank Station not be planned as a terminus station as part of the Draft 2016 Business Plan.

Thank you again for providing an opportunity to comment on the Authority's 2016 Draft Business Plan. If you have any questions regarding the contents of this letter, please feel free to contact David Kriske, Assistant Community Development Director for Transportation, at 818.238.5269 or via email at dkriske@burbankca.gov.

Sincerely,

Patrick Prescott
Community Development Director

cc: Burbank City Council
Hon. Adam Schiff, United States House of Representatives
Hon. Robert Hertzberg, California State Senate
Hon. Carol Liu, California State Senate
Hon. Mike Gatto, California State Assembly
Hon. Michael Antonovich, Los Angeles County Board of Supervisors

Ron Davis, City Manager

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	John
Last Name :	Shirrey
Stakeholder Comments/Issues :	This letter was hand delivered this afternoon to the public reception office of CAHSRA, 770 L Street Suite 600. Gregory Taylor, AIA, LEED AP Supervising Architect Project Manager Sacramento Valley Station Department of Public Works City of Sacramento 915 I Street, 2nd Floor Sacramento, CA 95814 916. 808.5268 gtaylor@cityofsacramento.com www.sacramentovalleystation.com
Notes :	
Attachments :	CHSRA 04182016.pdf (682 kb)

City of
SACRAMENTO
Office of the City Manager

John F. Shirey
City Manager

City Hall
915 I Street, Fifth Floor
Sacramento, CA 95814-2604
916-808-5704

April 18, 2016

Mr. Dan Richard
Chairperson, California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

RE: California High-Speed Rail (CHSRA) Draft 2016 CHSRA Business Plan

Dear Dan:

As you know, for more than a decade, the City of Sacramento has been investing local, state and federal dollars in anticipation of constructing a Northern California terminus of High Speed Rail (HSR) at the Sacramento Valley Station. The City is very concerned that the current draft of the 2016 CHSRA Business Plan removes prior commitments made to the Sacramento to Merced corridor. The City of Sacramento has invested more than $357 million in federal, state, and local transportation dollars to build initial rail, road, and facility infrastructure in the Railyards Plan area, of which $152 million has been invested at the Sacramento Valley Station in anticipation of improved rail services.

Prior versions, as recent as 2012, of the Plan have consistently recognized the need for service improvements from Sacramento to the San Joaquin Valley connecting with the Initial Operating Segment in Merced with 125 mph speeds. The 2012 CHSRA plan stated that this improved corridor network "should become" a critical feeder service to the high-speed rail system." Sacramento is the 7th busiest station in the Amtrak national network with only two daily roundtrips to the Central Valley, a market largely untapped for the San Joaquin JPA (SJJPA) service.

While the Capitol Corridor remains the primary connection between the Sacramento Region and the Bay Area, Sacramento has looked to improvements to the San Joaquin Valley Network the "blended service" connection for future high ridership growth. Per previous Plans, it is designed to be a primary carrier to the Central Valley and Southern California via the San Joaquin service connecting at Merced and the Altamont Commuter Express service to the East Bay.

Sacramento is the pivot point between these two rail corridors. The growth potential for the San Joaquin corridor, as cited in the SJJPA Business Plan, is very promising to alleviate greenhouse gas emissions from overcrowded freeways and connect to a regional transportation hub in Sacramento. Sacramento has been anticipating the release of CHSRA appropriated funding for initial Phase 2 planning in order to coordinate with the City's secured state grant funding for initial station planning.

The City of Sacramento respectfully requests that the 2016 Plan include the release of the previously committed $53.9 million of Proposition 1A funding authorized by the Budget Act of 2012 for planning work in the Merced to Sacramento corridor in order to advance our own station planning efforts effectively and build on the significant investment of public funds to date.

Should you have any questions regarding this request, please contact Fran Halbakken, Assistant to the City Manager, at (916) 808-7194. Thank you in advance for your time and consideration.

Sincerely,

John F. Shirey
City Manager

cc: Honorable Richard Pan, California Senate
Honorable Kevin McCarty, California Assembly
Mayor and City Council Members

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Project Email
First Name :	William
Last Name :	Grindley
Stakeholder Comments/Issues :	See attached William Grindley
Notes :	
Attachments :	Supplemental Comment #7.pdf (5 mb)

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

April 18, 2016

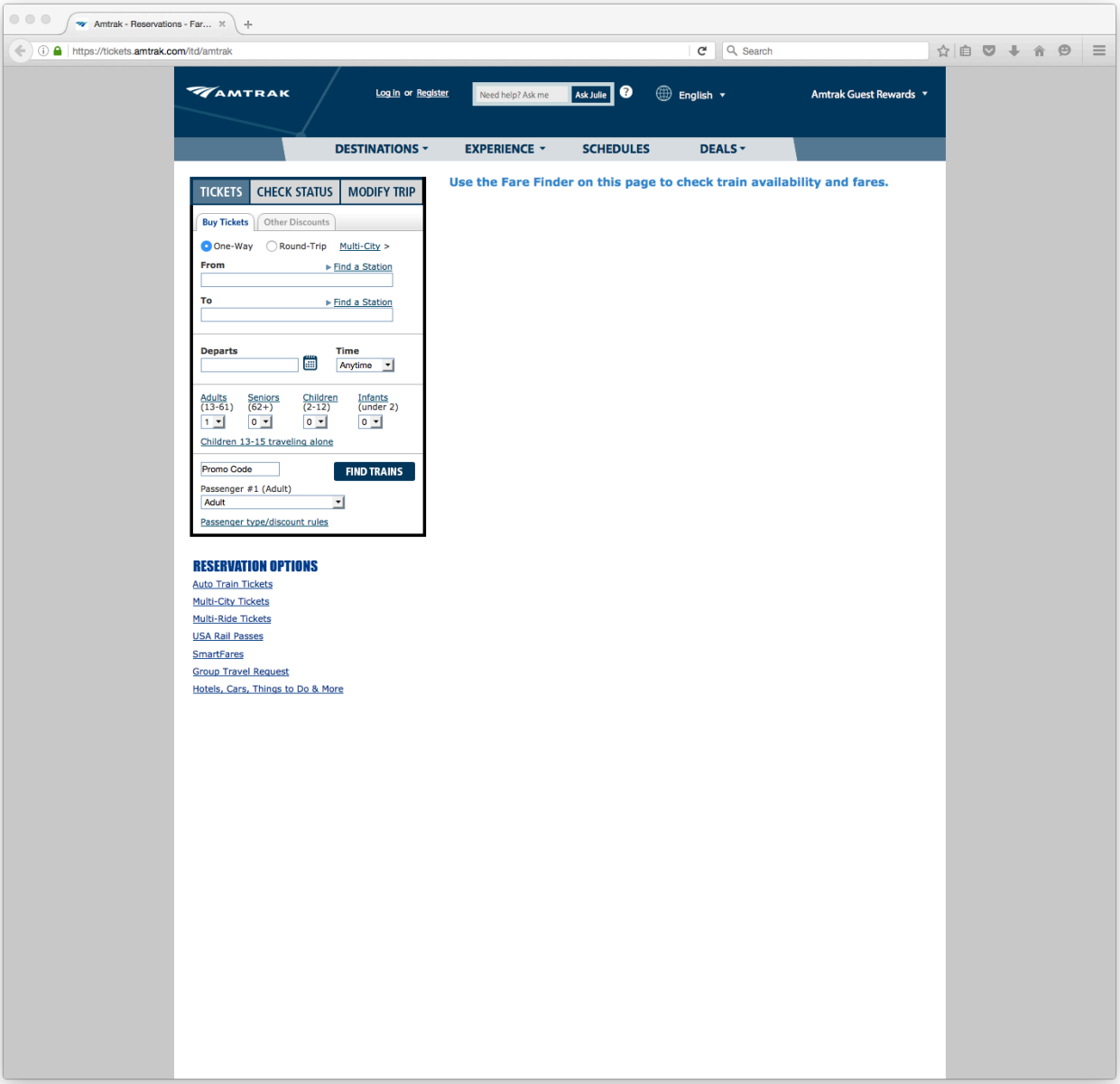
Subject – Supplemental Comment #7 Regarding Draft 2016 Business Plan

Topic –This Is A Supplemental Comment To Comment Of April12, 2016

The purpose of this Supplemental Comment is to augment my Comment of April 12, 2016. There are a number of places in my April 12, 2016 Comments where I refer to Web pages that provided mileage, costs and travel time information, etc.

Included as part of this Supplemental Comment are "screen shots" that provide the URL and mileage information that were referenced in my April 12, 2016 Comment.

William Grindley
151 Laurel Street
Atherton CA 94027
Email: williamgrindleybarch65@gmail.com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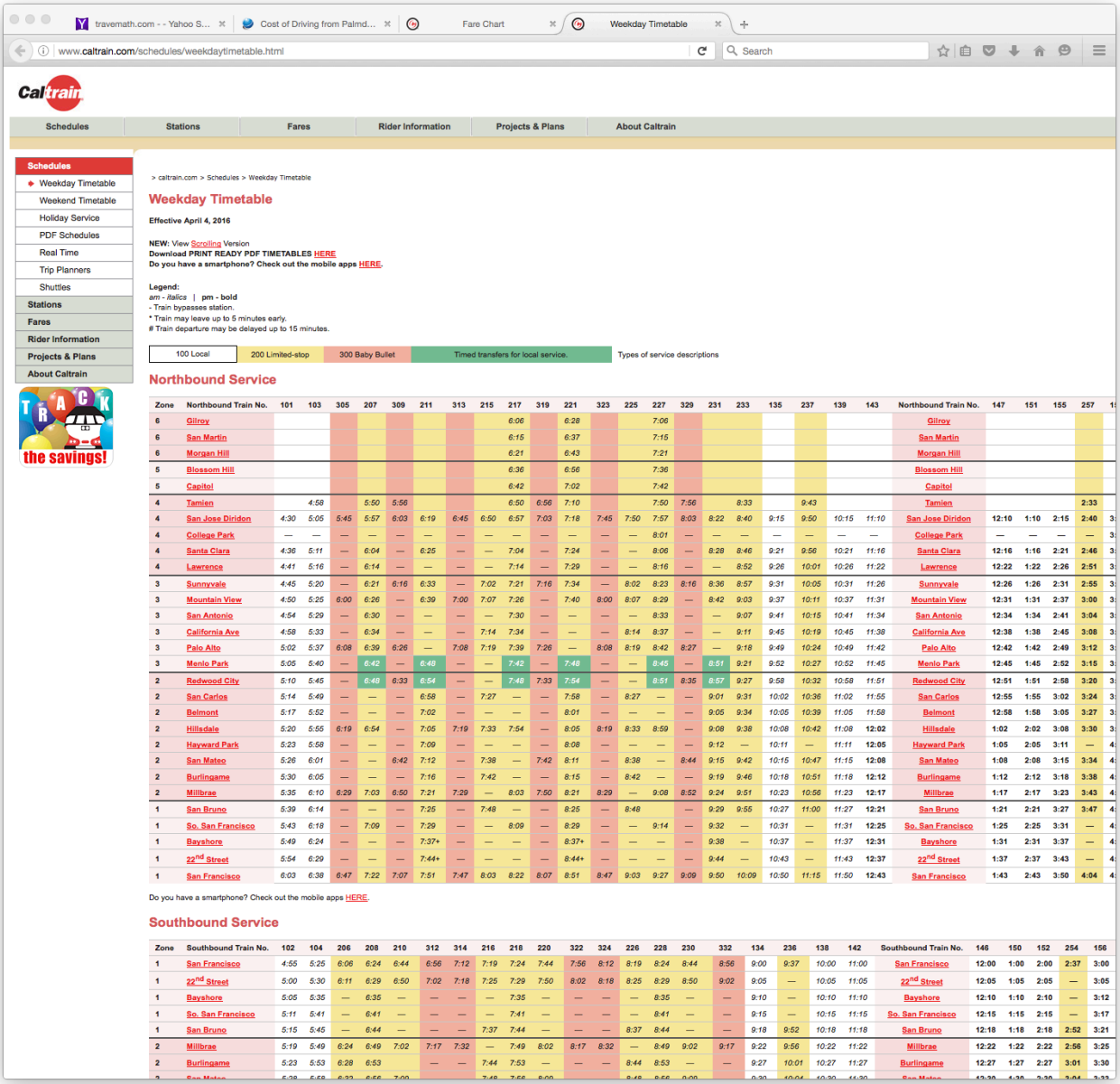

> caltrain.com > Schedules > Weekday Timetable

Weekday Timetable

Effective April 4, 2016

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Legend:
am - italics | **pm - bold**
- Train bypasses station.
* Train may leave up to 5 minutes early.
# Train departure may be delayed up to 15 minutes.

100 Local | 200 Limited-stop | 300 Baby Bullet | Timed transfers for local service. | Types of service descriptions

Northbound Service

Zone	Northbound Train No.	101	103	305	207	309	211	313	215	217	319	221	323	225	227	329	231	233	135	237	139	143	Northbound Train No.	147	151	155	257	1
6	Gilroy									6:06		6:28			7:06								Gilroy					
6	San Martin									6:15		6:37			7:15								San Martin					
6	Morgan Hill									6:21		6:43			7:21								Morgan Hill					
5	Blossom Hill									6:36		6:56			7:36								Blossom Hill					
5	Capitol									6:42		7:02			7:42								Capitol					
4	Tamien		4:58		5:50	5:56				6:50	6:56	7:10			7:50	7:56		8:33		9:43			Tamien				2:33	
4	San Jose Diridon	4:30	5:05	5:45	5:57	6:03	6:19	6:45	6:50	6:57	7:03	7:18	7:45	7:50	7:57	8:03	8:22	8:40	9:15	9:50	10:15	11:10	San Jose Diridon	12:10	1:10	2:15	2:40	3
4	College Park	—	—	—	—	—	—	—	—	—	—	—	—	—	8:01	—	—	—	—	—	—	—	College Park	—	—	—	—	3
4	Santa Clara	4:36	5:11	—	6:04	—	6:25	—	—	7:04	—	7:24	—	—	8:06	—	8:28	8:46	9:21	9:56	10:21	11:16	Santa Clara	12:16	1:16	2:21	2:46	3
4	Lawrence	4:41	5:16	—	6:14	—	—	—	—	7:14	—	7:29	—	—	8:16	—	—	8:52	9:26	10:01	10:26	11:22	Lawrence	12:22	1:22	2:26	2:51	3
3	Sunnyvale	4:45	5:20	—	6:21	6:16	6:33	—	7:02	7:21	7:16	7:34	—	8:02	8:23	8:16	8:36	8:57	9:31	10:05	10:31	11:26	Sunnyvale	12:26	1:26	2:31	2:55	3
3	Mountain View	4:50	5:25	6:00	6:26	—	6:39	7:00	7:07	7:26	—	7:40	8:00	8:07	8:29	—	8:42	9:03	9:37	10:11	10:37	11:31	Mountain View	12:31	1:31	2:37	3:00	3
3	San Antonio	4:54	5:29	—	6:30	—	—	—	—	7:30	—	—	—	—	8:33	—	—	9:07	9:41	10:15	10:41	11:34	San Antonio	12:34	1:34	2:41	3:04	3
3	California Ave	4:58	5:33	—	6:34	—	—	—	7:14	7:34	—	—	—	8:14	8:37	—	—	9:11	9:45	10:19	10:45	11:38	California Ave	12:38	1:38	2:45	3:08	3
3	Palo Alto	5:02	5:37	6:08	6:39	6:26	—	7:08	7:19	7:39	7:26	—	8:08	8:19	8:42	8:27	—	9:18	9:49	10:24	10:49	11:42	Palo Alto	12:42	1:42	2:49	3:12	3
3	Menlo Park	5:05	5:40	—	6:42	—	6:48	—	—	7:42	—	7:48	—	—	8:45	—	8:51	9:21	9:52	10:27	10:52	11:45	Menlo Park	12:45	1:45	2:52	3:15	3
2	Redwood City	5:10	5:45	—	6:48	6:33	6:54	—	—	7:48	7:33	7:54	—	—	8:51	8:35	8:57	9:27	9:58	10:32	10:58	11:51	Redwood City	12:51	1:51	2:58	3:20	3
2	San Carlos	5:14	5:49	—	—	—	6:58	—	7:27	—	—	7:58	—	8:27	—	—	9:01	9:31	10:02	10:36	11:02	11:55	San Carlos	12:55	1:55	3:02	3:24	3
2	Belmont	5:17	5:52	—	—	—	7:02	—	—	—	—	8:01	—	—	—	—	9:05	9:34	10:05	10:39	11:05	11:58	Belmont	12:58	1:58	3:05	3:27	3
2	Hillsdale	5:20	5:55	6:19	6:54	—	7:05	7:19	7:33	7:54	—	8:05	8:19	8:33	8:59	—	9:08	9:38	10:08	10:42	11:08	12:02	Hillsdale	1:02	2:02	3:08	3:30	3
2	Hayward Park	5:23	5:58	—	—	—	7:09	—	—	—	—	8:08	—	—	—	—	9:12	—	10:11	—	11:11	12:05	Hayward Park	1:05	2:05	3:11	—	4
2	San Mateo	5:26	6:01	—	—	6:42	7:12	—	7:38	—	7:42	8:11	—	8:38	—	8:44	9:15	9:42	10:15	10:47	11:15	12:08	San Mateo	1:08	2:08	3:15	3:34	4
2	Burlingame	5:30	6:05	—	—	—	7:16	—	7:42	—	—	8:15	—	8:42	—	—	9:19	9:46	10:18	10:51	11:18	12:12	Burlingame	1:12	2:12	3:18	3:38	4
2	Millbrae	5:35	6:10	6:29	7:03	6:50	7:21	7:29	—	8:03	7:50	8:21	8:29	—	9:08	8:52	9:24	9:51	10:23	10:56	11:23	12:17	Millbrae	1:17	2:17	3:23	3:43	4
1	San Bruno	5:39	6:14	—	—	—	7:25	—	7:48	—	—	8:25	—	8:48		—	9:29	9:55	10:27	11:00	11:27	12:21	San Bruno	1:21	2:21	3:27	3:47	4
1	So. San Francisco	5:43	6:18	—	7:09	—	7:29	—	—	8:09	—	8:29	—	—	9:14	—	9:32	—	10:31	—	11:31	12:25	So. San Francisco	1:25	2:25	3:31	—	4
1	Bayshore	5:49	6:24	—	—	—	7:37*	—	—	—	—	8:37*	—	—	—	—	9:38	—	10:37	—	11:37	12:31	Bayshore	1:31	2:31	3:37	—	4
1	22nd Street	5:54	6:29	—	—	—	7:44*	—	—	—	—	8:44*	—	—	—	—	9:44	—	10:43	—	11:43	12:37	22nd Street	1:37	2:37	3:43	—	4
1	San Francisco	6:03	6:38	6:47	7:22	7:07	7:51	7:47	8:03	8:22	8:07	8:51	8:47	9:03	9:27	9:09	9:50	10:09	10:50	11:15	11:50	12:43	San Francisco	1:43	2:43	3:50	4:04	4

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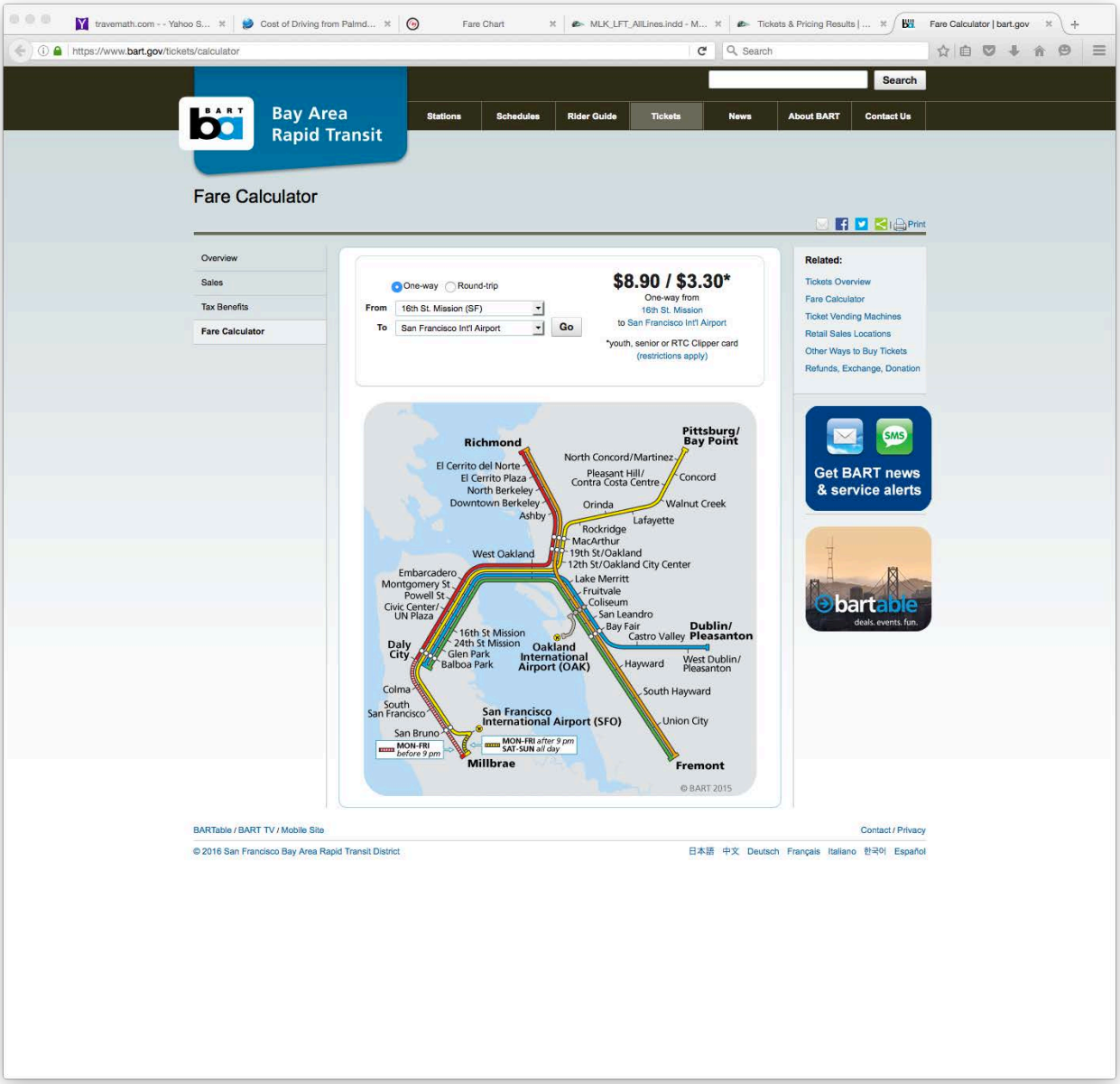
Southbound Service

Zone	Southbound Train No.	102	104	206	208	210	312	314	216	218	220	322	324	226	228	230	332	134	236	138	142	Southbound Train No.	146	150	152	254	156
1	San Francisco	4:55	5:25	6:06	6:24	6:44	6:56	7:12	7:19	7:24	7:44	7:56	8:12	8:19	8:24	8:44	8:56	9:00	9:37	10:00	11:00	San Francisco	12:00	1:00	2:00	2:37	3:00
1	22nd Street	5:00	5:30	6:11	6:29	6:50	7:02	7:18	7:25	7:29	7:50	8:02	8:18	8:25	8:29	8:50	9:02	9:05	—	10:05	11:05	22nd Street	12:05	1:05	2:05	—	3:05
1	Bayshore	5:05	5:35	—	6:35	—	—	—	—	7:35	—	—	—	—	8:35	—	—	9:10	—	10:10	11:10	Bayshore	12:10	1:10	2:10	—	3:12
1	So. San Francisco	5:11	5:41	—	6:41	—	—	—	—	7:41	—	—	—	—	8:41	—	—	9:15	—	10:15	11:15	So. San Francisco	12:15	1:15	2:15	—	3:17
1	San Bruno	5:15	5:45	—	6:44	—	—	—	7:37	7:44	—	—	—	8:37	8:44	—	—	9:18	9:52	10:18	11:18	San Bruno	12:18	1:18	2:18	2:52	3:21
2	Millbrae	5:19	5:49	6:24	6:49	7:02	7:17	7:32	—	7:49	8:02	8:17	8:32	—	8:49	9:02	9:17	9:22	9:56	10:22	11:22	Millbrae	12:22	1:22	2:22	2:56	3:25
2	Burlingame	5:23	5:53	6:28	6:53		—	—	7:44	7:53	—	—	—	8:44	8:53	—	—	9:27	10:01	10:27	11:27	Burlingame	12:27	1:27	2:27	3:01	3:30
2	San Mateo	5:28	5:58	6:33	6:58	7:08			7:48	7:58	8:08			8:48	8:58	9:08		9:32	10:04	10:32	11:32	San Mateo	12:32	1:32	2:32	3:04	3:33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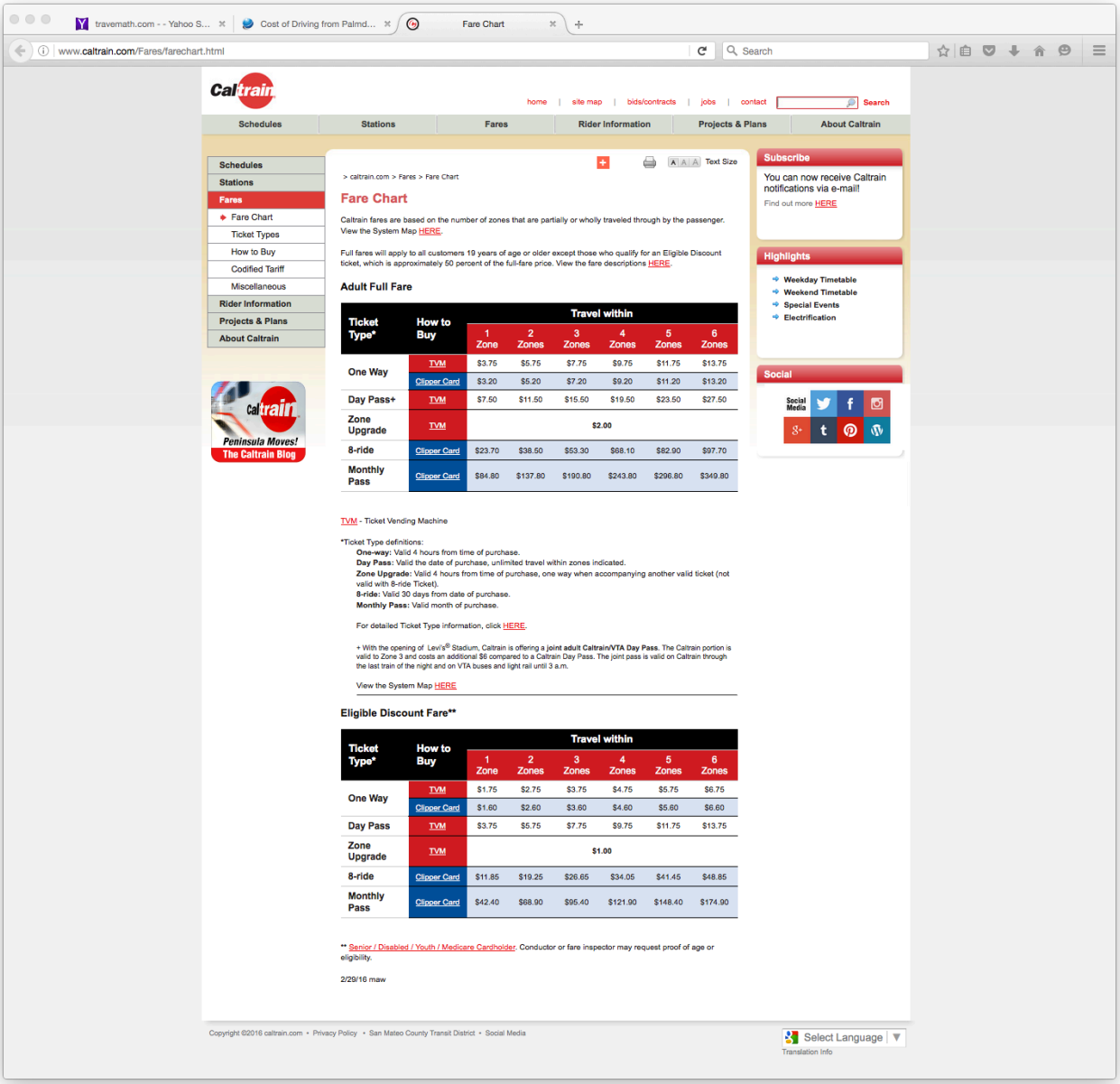
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Fare Chart
Caltrain fares are based on the number of zones that are partially or wholly traveled through by the passenger. View the System Map HERE.
Full fares will apply to all customers 19 years of age or older except those who qualify for an Eligible Discount ticket, which is approximately 50 percent of the full-fare price. View the fare descriptions HERE.
Adult Full Fare
Ticket Type* | How to Buy | Travel within | 1 Zone | 2 Zones | 3 Zones | 4 Zones | 5 Zones | 6 Zones
One Way | TVM | $3.75 | $5.75 | $7.75 | $9.75 | $11.75 | $13.75
Clipper Card | $3.20 | $5.20 | $7.20 | $9.20 | $11.20 | $13.20
Day Pass+ | TVM | $7.50 | $11.50 | $15.50 | $19.50 | $23.50 | $27.50
Zone Upgrade | TVM | $2.00
8-ride | Clipper Card | $23.70 | $38.50 | $53.30 | $68.10 | $82.90 | $97.70
Monthly Pass | Clipper Card | $84.80 | $137.80 | $190.80 | $243.80 | $296.80 | $349.80
TVM - Ticket Vending Machine
*Ticket Type definitions:
One-way: Valid 4 hours from time of purchase.
Day Pass: Valid the date of purchase, unlimited travel within zones indicated.
Zone Upgrade: Valid 4 hours from time of purchase, one way when accompanying another valid ticket (not valid with 8-ride Ticket).
8-ride: Valid 30 days from date of purchase.
Monthly Pass: Valid month of purchase.
For detailed Ticket Type information, click HERE.
+ With the opening of Levi's® Stadium, Caltrain is offering a joint adult Caltrain/VTA Day Pass. The Caltrain portion is valid to Zone 3 and costs an additional $6 compared to a Caltrain Day Pass. The joint pass is valid on Caltrain through the last train of the night and on VTA buses and light rail until 3 a.m.
View the System Map HERE
Eligible Discount Fare**
Ticket Type* | How to Buy | Travel within | 1 Zone | 2 Zones | 3 Zones | 4 Zones | 5 Zones | 6 Zones
One Way | TVM | $1.75 | $2.75 | $3.75 | $4.75 | $5.75 | $6.75
Clipper Card | $1.60 | $2.60 | $3.60 | $4.60 | $5.60 | $6.60
Day Pass | TVM | $3.75 | $5.75 | $7.75 | $9.75 | $11.75 | $13.75
Zone Upgrade | TVM | $1.00
8-ride | Clipper Card | $11.85 | $19.25 | $26.65 | $34.05 | $41.45 | $48.85
Monthly Pass | Clipper Card | $42.40 | $68.90 | $95.40 | $121.90 | $148.40 | $174.90
** Senior / Disabled / Youth / Medicare Cardholder. Conductor or fare inspector may request proof of age or eligibility.
2/29/16 maw
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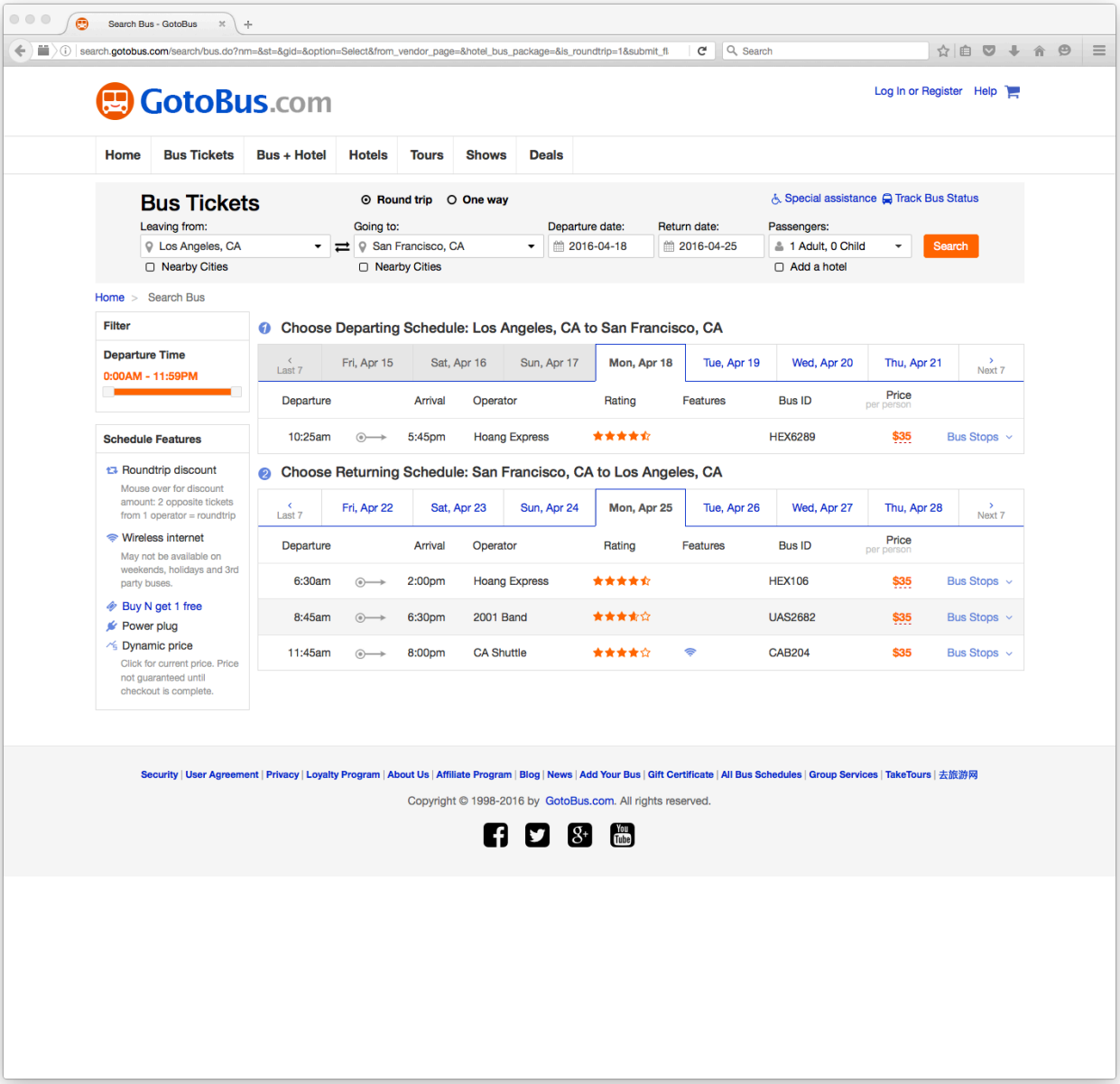
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One way
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Leaving from:
Los Angeles, CA
Going to:
San Francisco, CA
Departure date:
2016-04-18
Return date:
2016-04-25
Passengers:
1 Adult, 0 Child
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Nearby Cities
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Filter
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Mouse over for discount amount: 2 opposite tickets from 1 operator = roundtrip
Wireless internet
May not be available on weekends, holidays and 3rd party buses.
Buy N get 1 free
Power plug
Dynamic price
Click for current price. Price not guaranteed until checkout is complete.
Choose Departing Schedule: Los Angeles, CA to San Francisco, CA
Last 7
Fri, Apr 15
Sat, Apr 16
Sun, Apr 17
Mon, Apr 18
Tue, Apr 19
Wed, Apr 20
Thu, Apr 21
Next 7
Departure
Arrival
Operator
Rating
Features
Bus ID
Price
per person
10:25am
5:45pm
Hoang Express
HEX6289
$35
Bus Stops
Choose Returning Schedule: San Francisco, CA to Los Angeles, CA
Last 7
Fri, Apr 22
Sat, Apr 23
Sun, Apr 24
Mon, Apr 25
Tue, Apr 26
Wed, Apr 27
Thu, Apr 28
Next 7
Departure
Arrival
Operator
Rating
Features
Bus ID
Price
per person
6:30am
2:00pm
Hoang Express
HEX106
$35
Bus Stops
8:45am
6:30pm
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LOCAL / PolitiCal

Skin tests identify inmates for valley fever-stricken prisons

Inmates at Pleasant Valley State Prison in Coalinga wear masks to protect against valley fever. (Al Seib / Los Angeles Times)

By Paige St. John · Contact Reporter

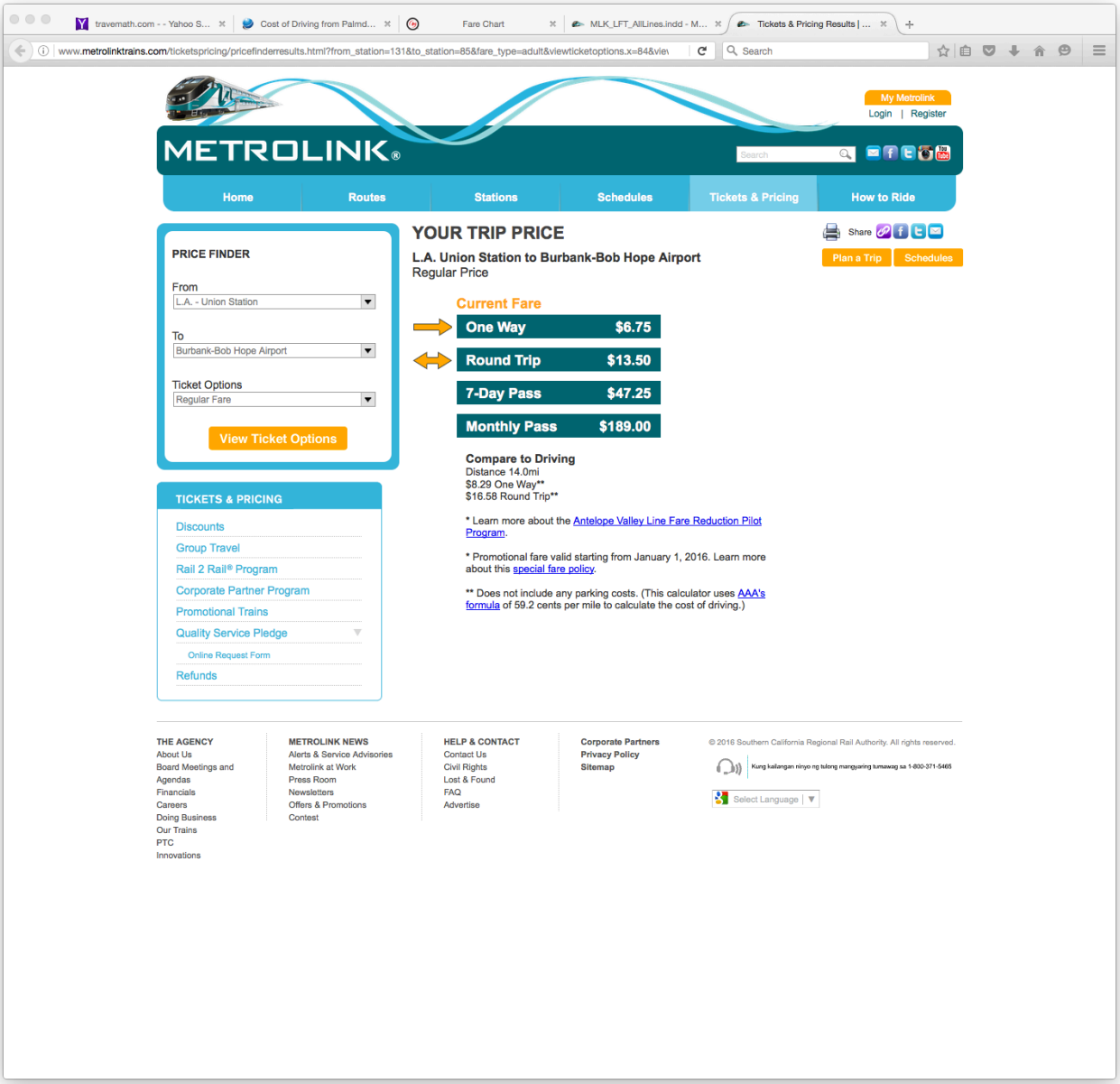
JANUARY 29, 2015, 1:18 PM | REPORTING FROM SACRAMENTO

Skin tests conducted by California prison officials this month show thousands of inmates have been exposed to valley fever, making them candidates for placement at two prisons stricken by the sometimes deadly fungus.

In Case You Missed It

State must remove thousands at risk of valley fever at two prisons
APR. 29, 2013

28 solar workers sickened by valley fever in San Luis Obispo County
MAY 1, 2013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Regular Price
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Plan a Trip
Schedules
Current Fare
One Way $6.75
Round Trip $13.50
7-Day Pass $47.25
Monthly Pass $189.00
Compare to Driving
Distance 14.0mi
$8.29 One Way**
$16.58 Round Trip**
* Learn more about the Antelope Valley Line Fare Reduction Pilot Program.
* Promotional fare valid starting from January 1, 2016. Learn more about this special fare policy.
** Does not include any parking costs. (This calculator uses AAA's formula of 59.2 cents per mile to calculate the cost of driving.)
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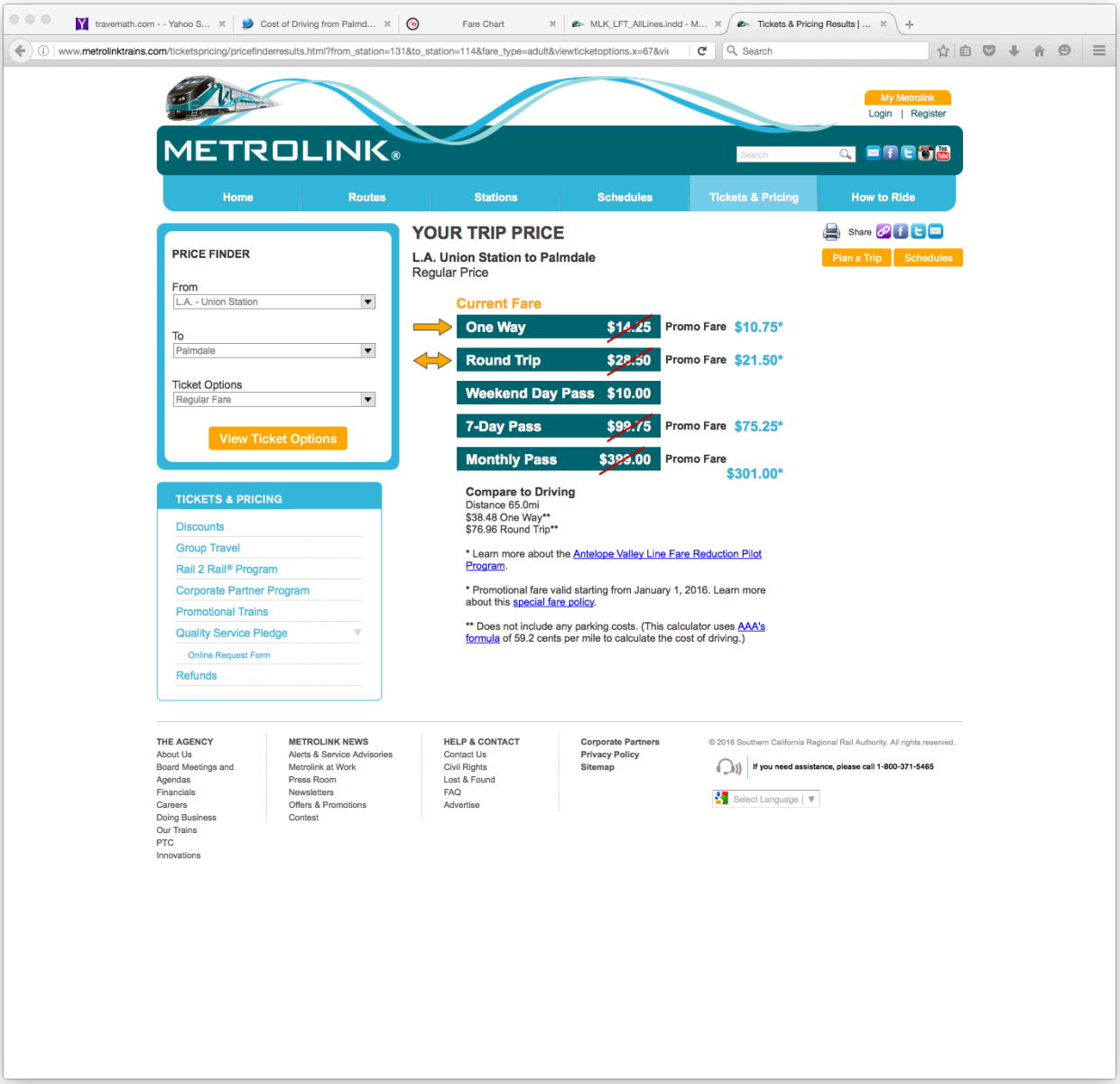
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Round Trip $28.50 Promo Fare $21.50*
Weekend Day Pass $10.00
7-Day Pass $99.75 Promo Fare $75.25*
Monthly Pass $399.00 Promo Fare $301.00*
Compare to Driving
Distance 65.0mi
$38.48 One Way**
$76.96 Round Trip**
* Learn more about the Antelope Valley Line Fare Reduction Pilot Program.
* Promotional fare valid starting from January 1, 2016. Learn more about this special fare policy.
** Does not include any parking costs. (This calculator uses AAA's formula of 59.2 cents per mile to calculate the cost of driving.)
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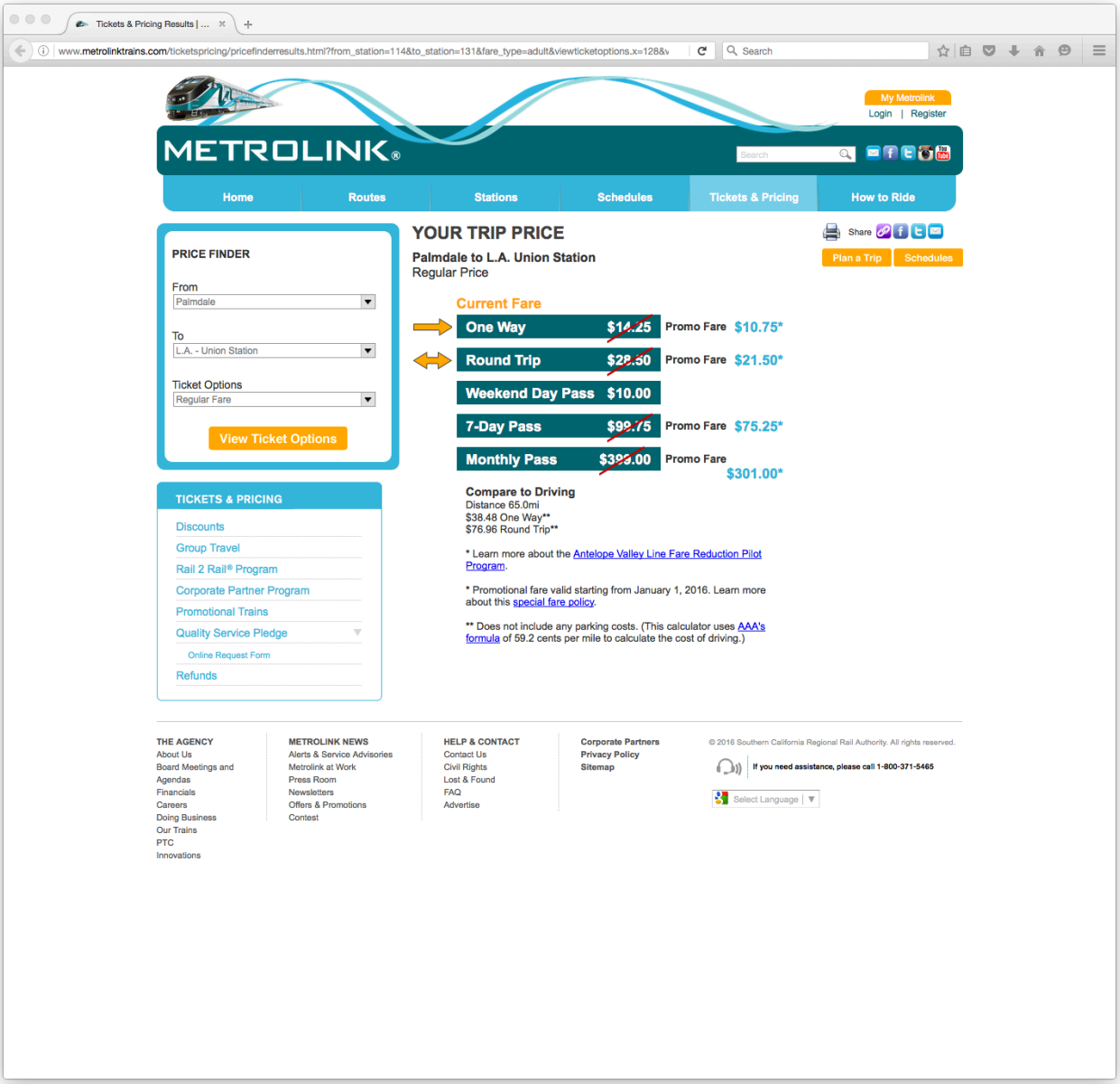
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7-Day Pass $99.75 Promo Fare $75.25*
Monthly Pass $399.00 Promo Fare $301.00*
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* Learn more about the Antelope Valley Line Fare Reduction Pilot Program.
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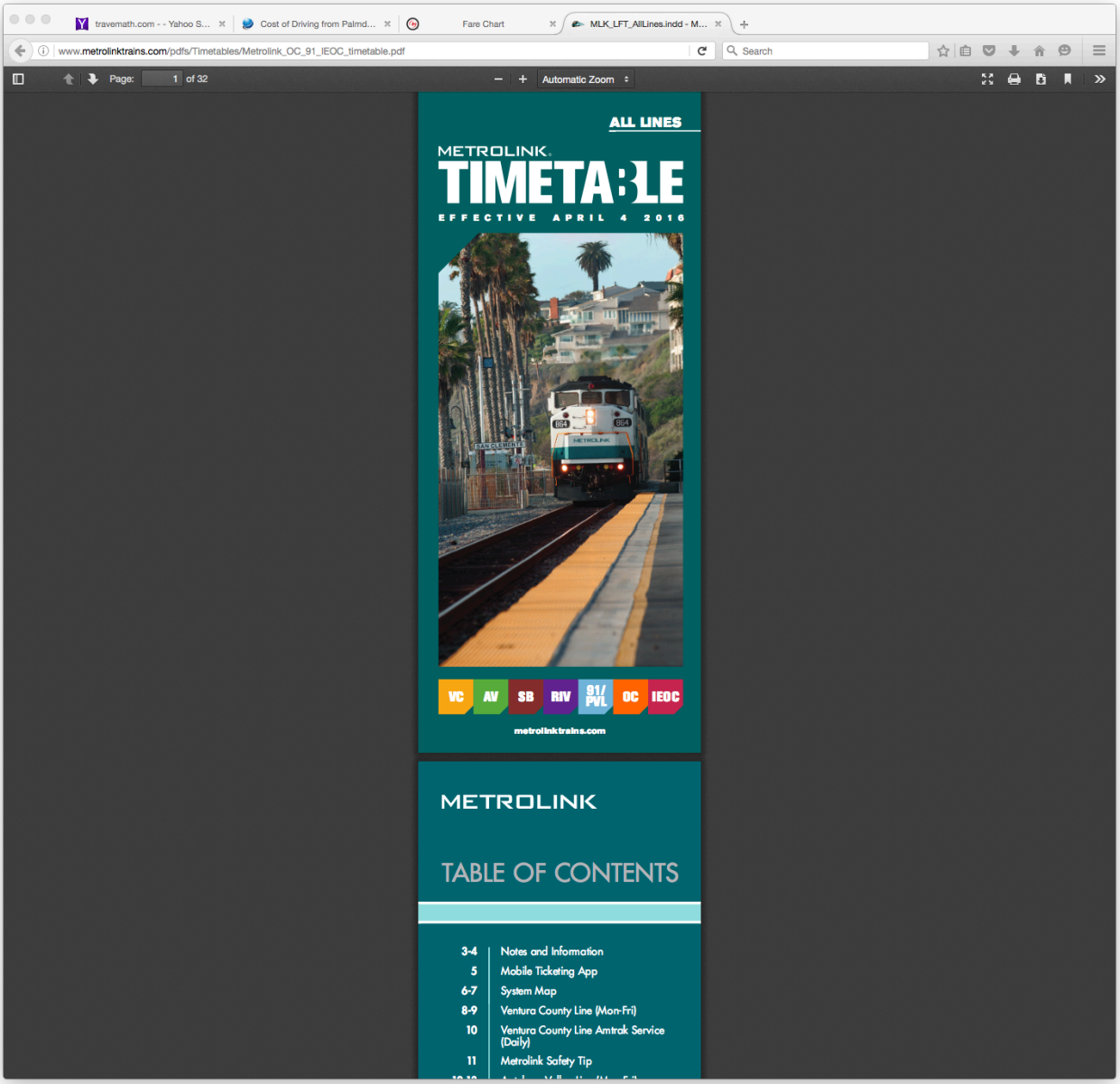
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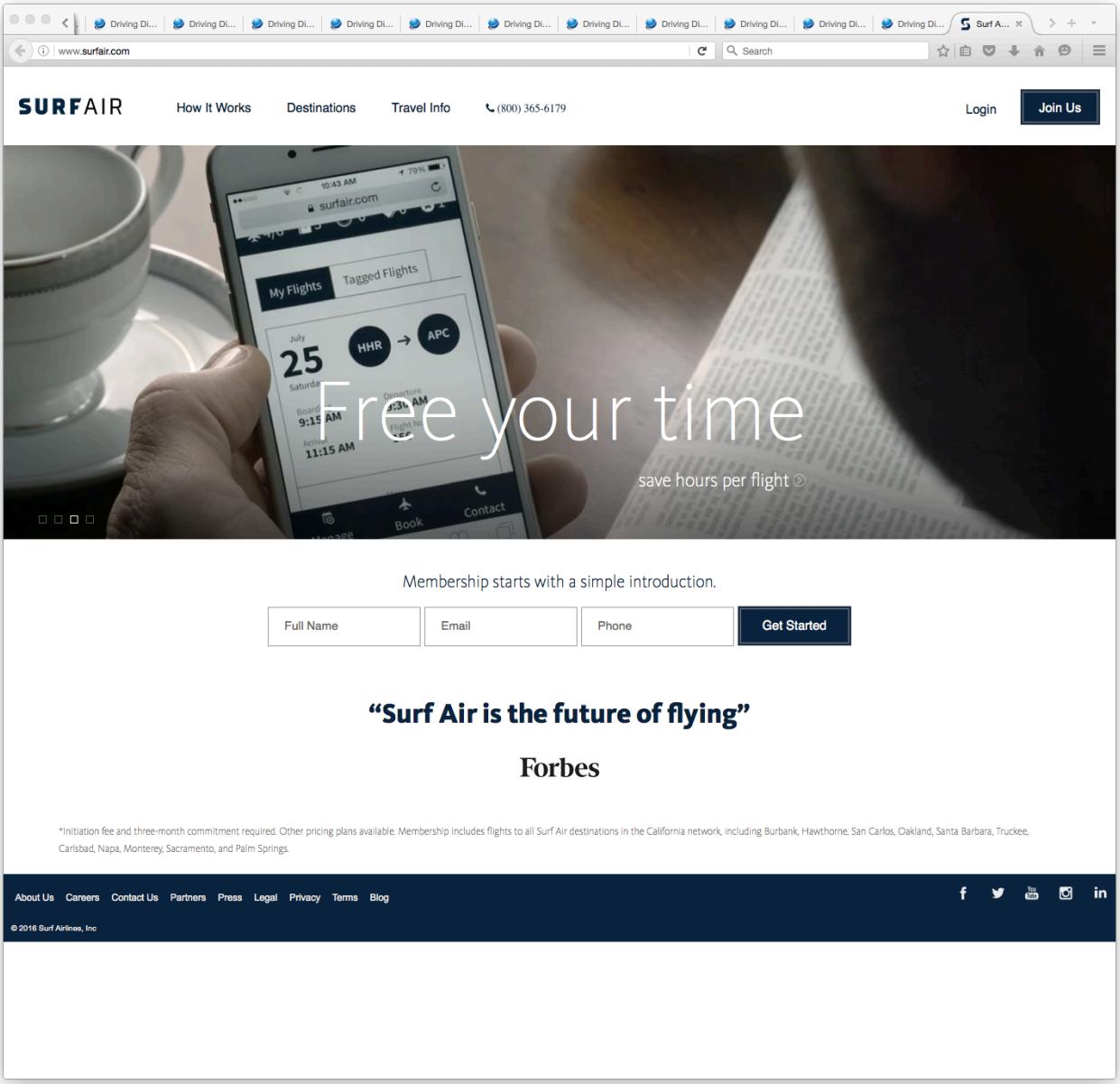
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2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Project Email
First Name :	William
Last Name :	Grindley
Stakeholder Comments/Issues :	See attached William Grindley
Notes :	
Attachments :	Supplemental Comment #6.pdf (3 mb)

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

April 18, 2016

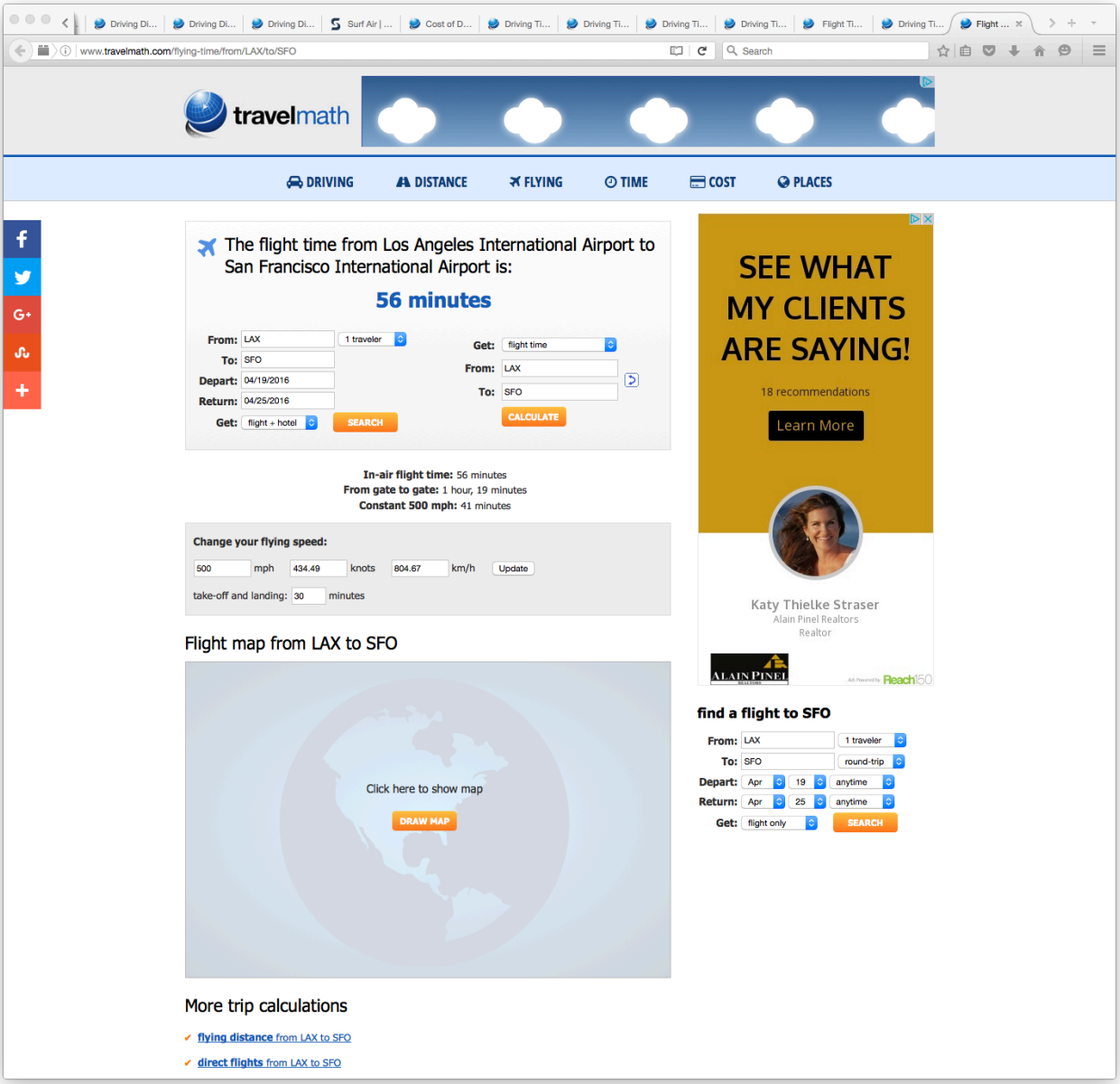
Subject – Supplemental Comment #6 Regarding Draft 2016 Business Plan

Topic –This Is A Supplemental Comment To Comment Of April12, 2016

The purpose of this Supplemental Comment is to augment my Comment of April 12, 2016. There are a number of places in my April 12, 2016 Comments where I refer to Web pages that provided mileage, costs and travel time information, etc.

Included as part of this Supplemental Comment are "screen shots" that provide the URL and mileage information that were referenced in my April 12, 2016 Comment.

William Grindley
151 Laurel Street
Atherton CA 94027
Email: williamgrindleybarch65@gmail.com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From gate to gate: 1 hour, 19 minutes
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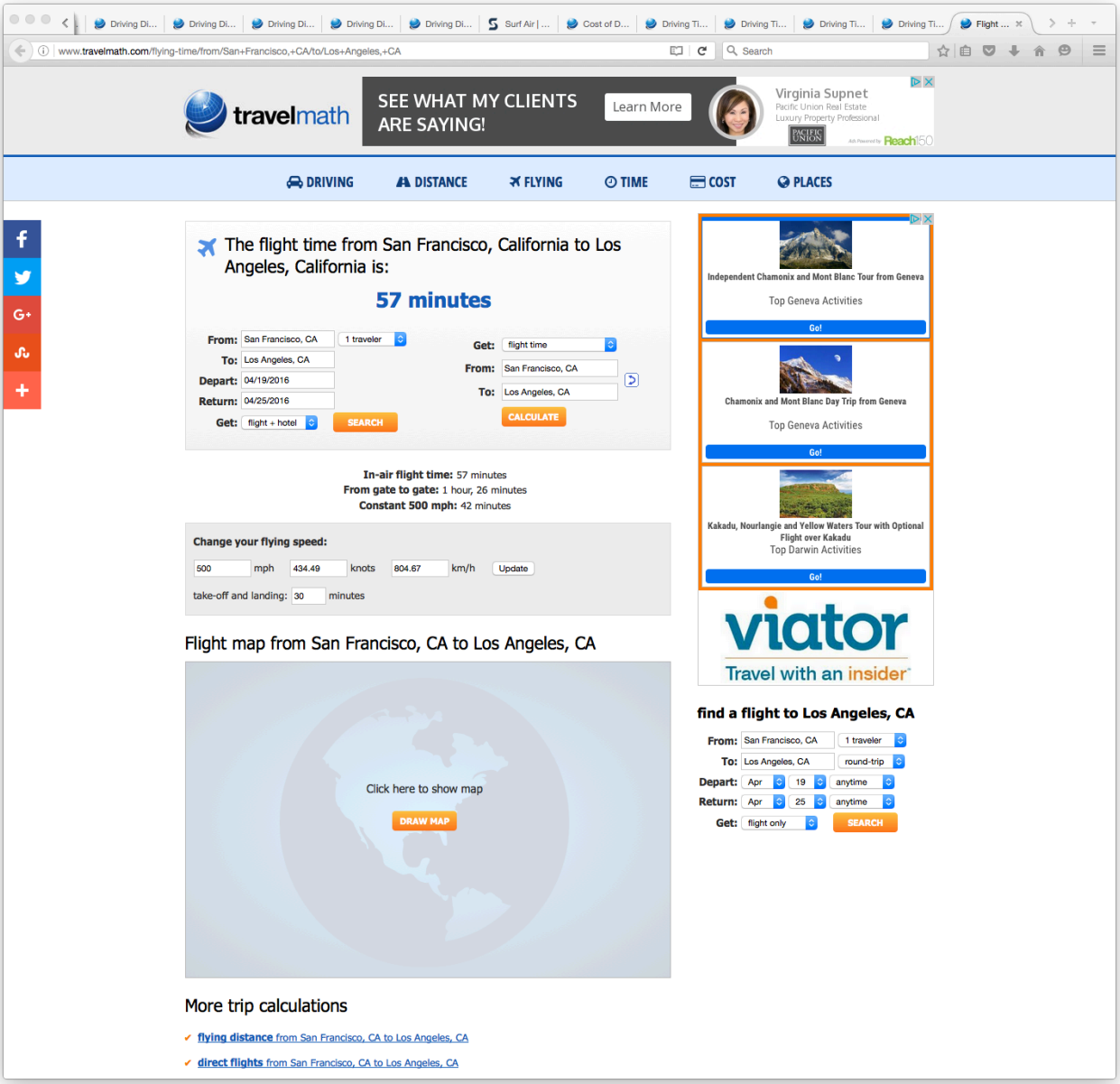
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1 traveler
To: Los Angeles, CA
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Return: 04/25/2016
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Get: flight time
From: San Francisco, CA
To: Los Angeles, CA
CALCULATE
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Constant 500 mph: 42 minutes
Change your flying speed:
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804.67 km/h
Update
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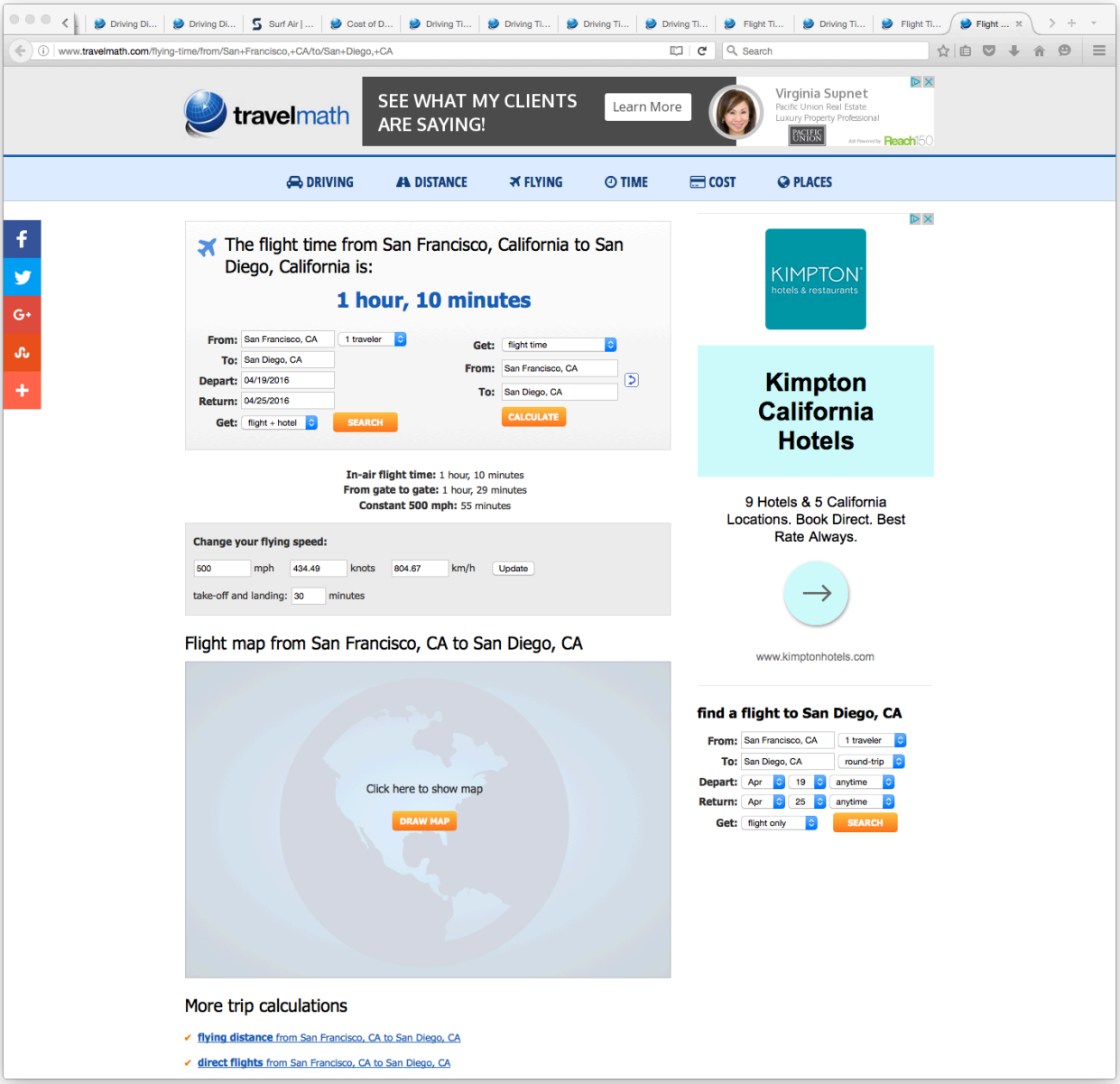
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To: San Diego, CA
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From gate to gate: 1 hour, 29 minutes
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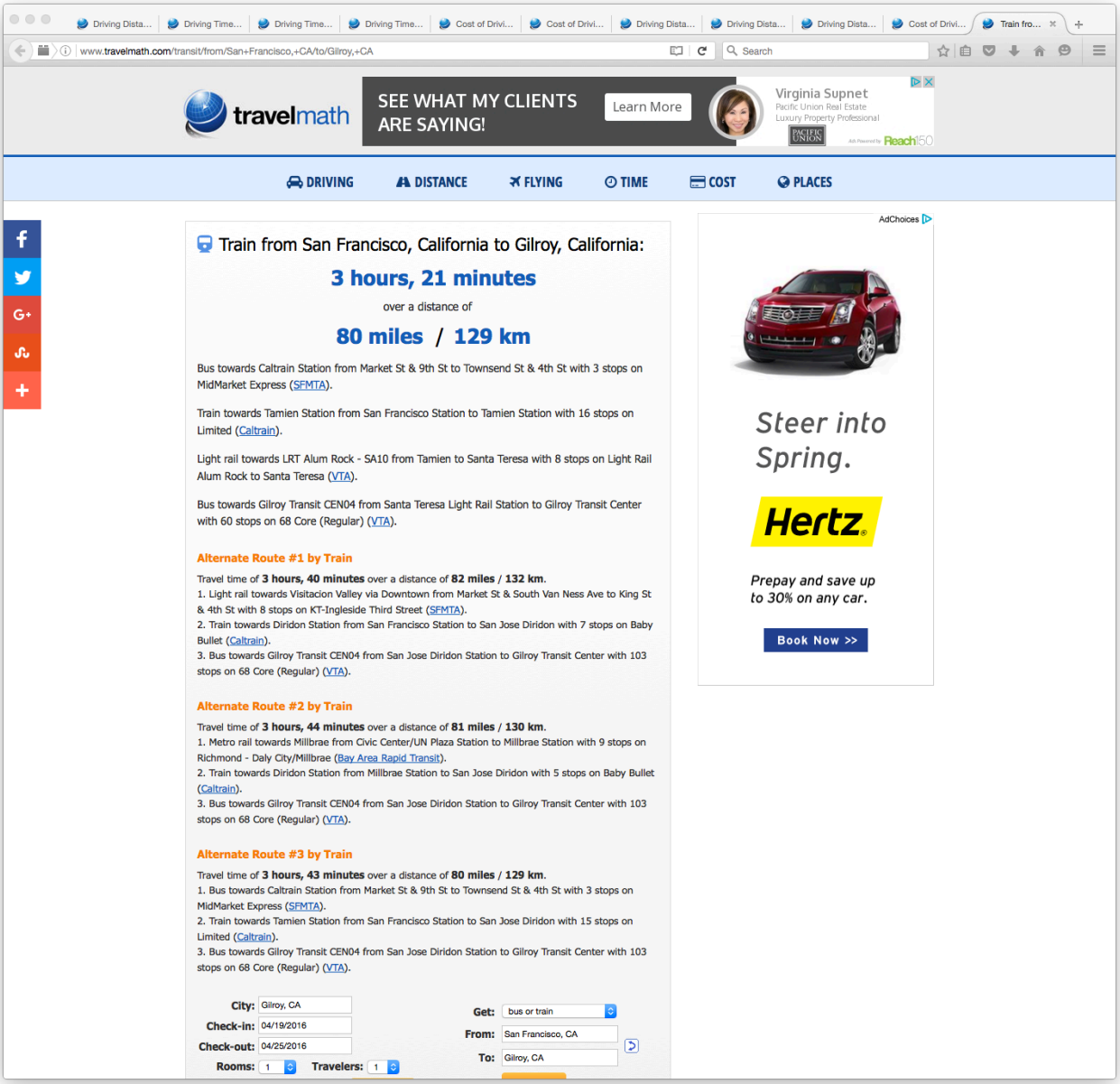
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DRIVING
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FLYING
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Train from San Francisco, California to Gilroy, California:
3 hours, 21 minutes
over a distance of
80 miles / 129 km
Bus towards Caltrain Station from Market St & 9th St to Townsend St & 4th St with 3 stops on MidMarket Express (SFMTA).
Train towards Tamien Station from San Francisco Station to Tamien Station with 16 stops on Limited (Caltrain).
Light rail towards LRT Alum Rock - SA10 from Tamien to Santa Teresa with 8 stops on Light Rail Alum Rock to Santa Teresa (VTA).
Bus towards Gilroy Transit CEN04 from Santa Teresa Light Rail Station to Gilroy Transit Center with 60 stops on 68 Core (Regular) (VTA).
Alternate Route #1 by Train
Travel time of 3 hours, 40 minutes over a distance of 82 miles / 132 km.
1. Light rail towards Visitacion Valley via Downtown from Market St & South Van Ness Ave to King St & 4th St with 8 stops on KT-Ingleside Third Street (SFMTA).
2. Train towards Diridon Station from San Francisco Station to San Jose Diridon with 7 stops on Baby Bullet (Caltrain).
3. Bus towards Gilroy Transit CEN04 from San Jose Diridon Station to Gilroy Transit Center with 103 stops on 68 Core (Regular) (VTA).
Alternate Route #2 by Train
Travel time of 3 hours, 44 minutes over a distance of 81 miles / 130 km.
1. Metro rail towards Millbrae from Civic Center/UN Plaza Station to Millbrae Station with 9 stops on Richmond - Daly City/Millbrae (Bay Area Rapid Transit).
2. Train towards Diridon Station from Millbrae Station to San Jose Diridon with 5 stops on Baby Bullet (Caltrain).
3. Bus towards Gilroy Transit CEN04 from San Jose Diridon Station to Gilroy Transit Center with 103 stops on 68 Core (Regular) (VTA).
Alternate Route #3 by Train
Travel time of 3 hours, 43 minutes over a distance of 80 miles / 129 km.
1. Bus towards Caltrain Station from Market St & 9th St to Townsend St & 4th St with 3 stops on MidMarket Express (SFMTA).
2. Train towards Tamien Station from San Francisco Station to San Jose Diridon with 15 stops on Limited (Caltrain).
3. Bus towards Gilroy Transit CEN04 from San Jose Diridon Station to Gilroy Transit Center with 103 stops on 68 Core (Regular) (VTA).
City: Gilroy, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
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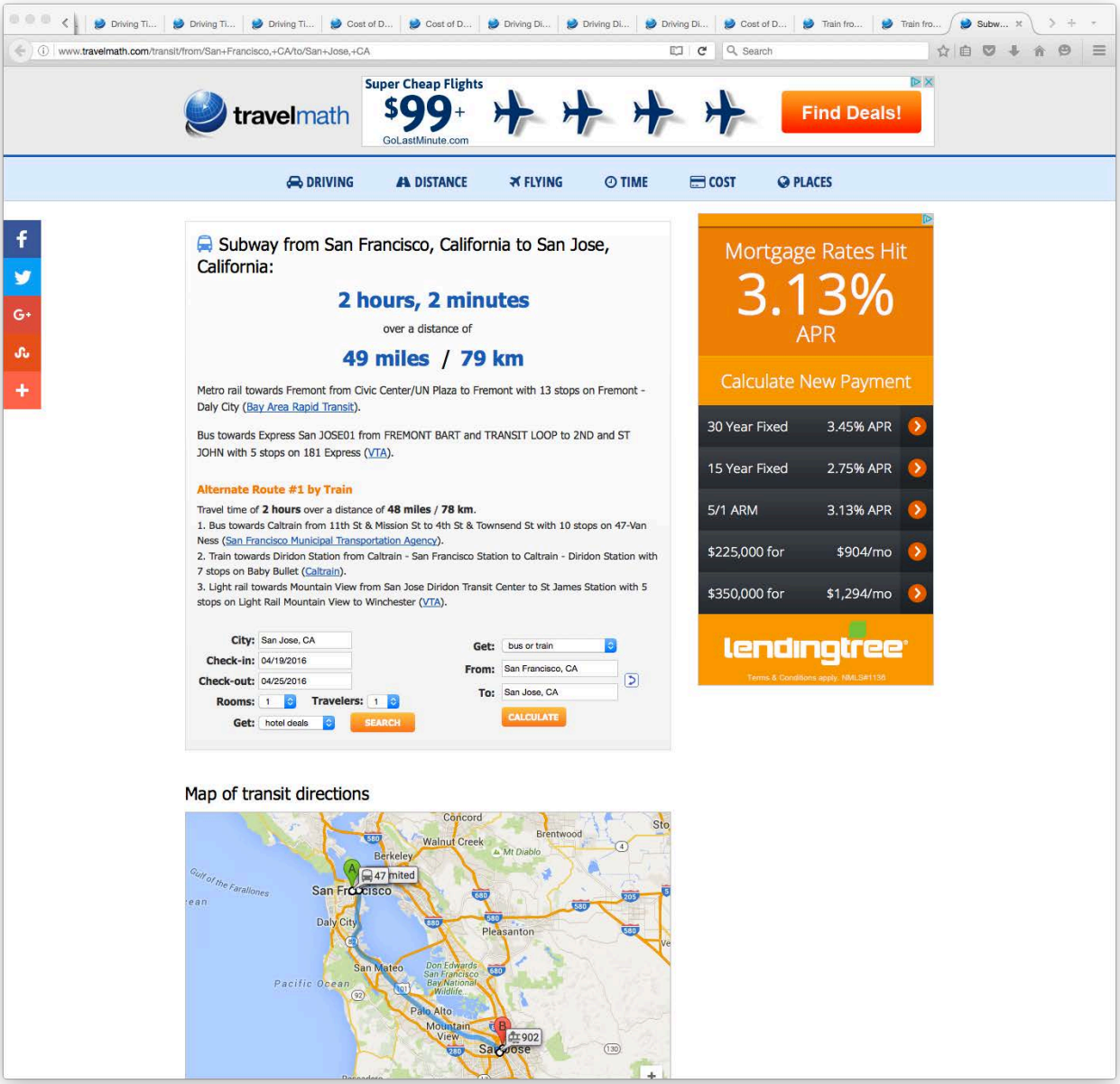
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DRIVING
DISTANCE
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TIME
COST
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Subway from San Francisco, California to San Jose, California:
2 hours, 2 minutes
over a distance of
49 miles / 79 km
Metro rail towards Fremont from Civic Center/UN Plaza to Fremont with 13 stops on Fremont - Daly City (Bay Area Rapid Transit).
Bus towards Express San JOSE01 from FREMONT BART and TRANSIT LOOP to 2ND and ST JOHN with 5 stops on 181 Express (VTA).
Alternate Route #1 by Train
Travel time of 2 hours over a distance of 48 miles / 78 km.
1. Bus towards Caltrain from 11th St & Mission St to 4th St & Townsend St with 10 stops on 47-Van Ness (San Francisco Municipal Transportation Agency).
2. Train towards Diridon Station from Caltrain - San Francisco Station to Caltrain - Diridon Station with 7 stops on Baby Bullet (Caltrain).
3. Light rail towards Mountain View from San Jose Diridon Transit Center to St James Station with 5 stops on Light Rail Mountain View to Winchester (VTA).
City: San Jose, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1 Travelers: 1
Get: hotel deals SEARCH
Get: bus or train
From: San Francisco, CA
To: San Jose, CA
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Mortgage Rates Hit
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5/1 ARM 3.13% APR
$225,000 for $904/mo
$350,000 for $1,294/mo
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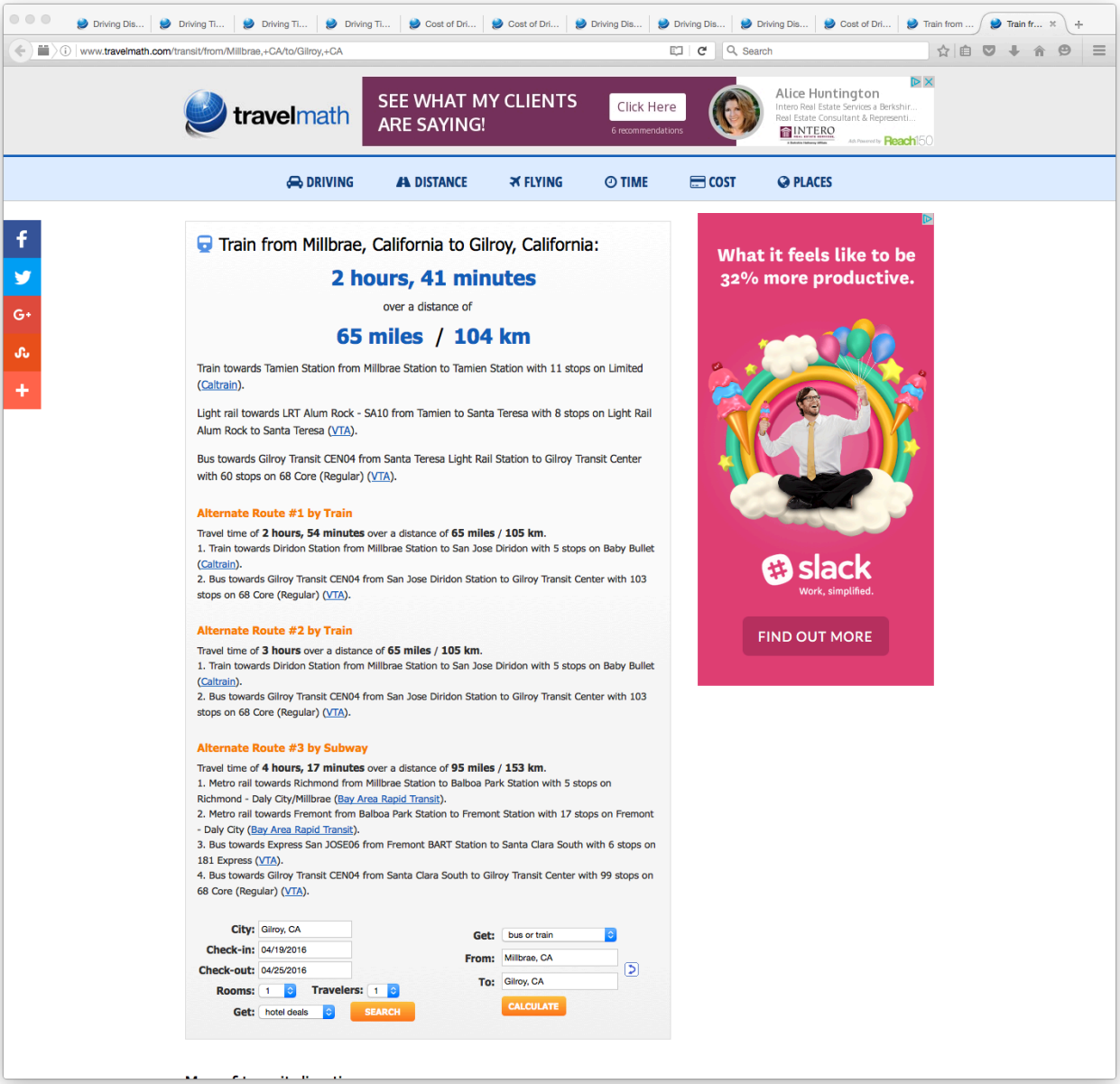
Map of transit directions
Concord
Walnut Creek
Brentwood
Berkeley
Mt Diablo
San Francisco
Daly City
Pleasanton
San Mateo
Pacific Ocean
Palo Alto
Mountain View
San Jose


Driving Dis...
Driving Ti...
Driving Ti...
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Cost of Dri...
Cost of Dri...
Driving Dis...
Driving Dis...
Driving Dis...
Cost of Dri...
Train from ...
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DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
Train from Millbrae, California to Gilroy, California:
2 hours, 41 minutes
over a distance of
65 miles / 104 km
Train towards Tamien Station from Millbrae Station to Tamien Station with 11 stops on Limited (Caltrain).
Light rail towards LRT Alum Rock - SA10 from Tamien to Santa Teresa with 8 stops on Light Rail Alum Rock to Santa Teresa (VTA).
Bus towards Gilroy Transit CEN04 from Santa Teresa Light Rail Station to Gilroy Transit Center with 60 stops on 68 Core (Regular) (VTA).
Alternate Route #1 by Train
Travel time of 2 hours, 54 minutes over a distance of 65 miles / 105 km.
1. Train towards Diridon Station from Millbrae Station to San Jose Diridon with 5 stops on Baby Bullet (Caltrain).
2. Bus towards Gilroy Transit CEN04 from San Jose Diridon Station to Gilroy Transit Center with 103 stops on 68 Core (Regular) (VTA).
Alternate Route #2 by Train
Travel time of 3 hours over a distance of 65 miles / 105 km.
1. Train towards Diridon Station from Millbrae Station to San Jose Diridon with 5 stops on Baby Bullet (Caltrain).
2. Bus towards Gilroy Transit CEN04 from San Jose Diridon Station to Gilroy Transit Center with 103 stops on 68 Core (Regular) (VTA).
Alternate Route #3 by Subway
Travel time of 4 hours, 17 minutes over a distance of 95 miles / 153 km.
1. Metro rail towards Richmond from Millbrae Station to Balboa Park Station with 5 stops on Richmond - Daly City/Millbrae (Bay Area Rapid Transit).
2. Metro rail towards Fremont from Balboa Park Station to Fremont Station with 17 stops on Fremont - Daly City (Bay Area Rapid Transit).
3. Bus towards Express San JOSE06 from Fremont BART Station to Santa Clara South with 6 stops on 181 Express (VTA).
4. Bus towards Gilroy Transit CEN04 from Santa Clara South to Gilroy Transit Center with 99 stops on 68 Core (Regular) (VTA).
City: Gilroy, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1 Travelers: 1
Get: hotel deals
SEARCH
Get: bus or train
From: Millbrae, CA
To: Gilroy, CA
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2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Project Email
First Name :	William
Last Name :	Grindley
Stakeholder Comments/Issues :	See attached William Grindley
Notes :	
Attachments :	Supplemental Comment #5.pdf (4 mb)

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

April 18, 2016

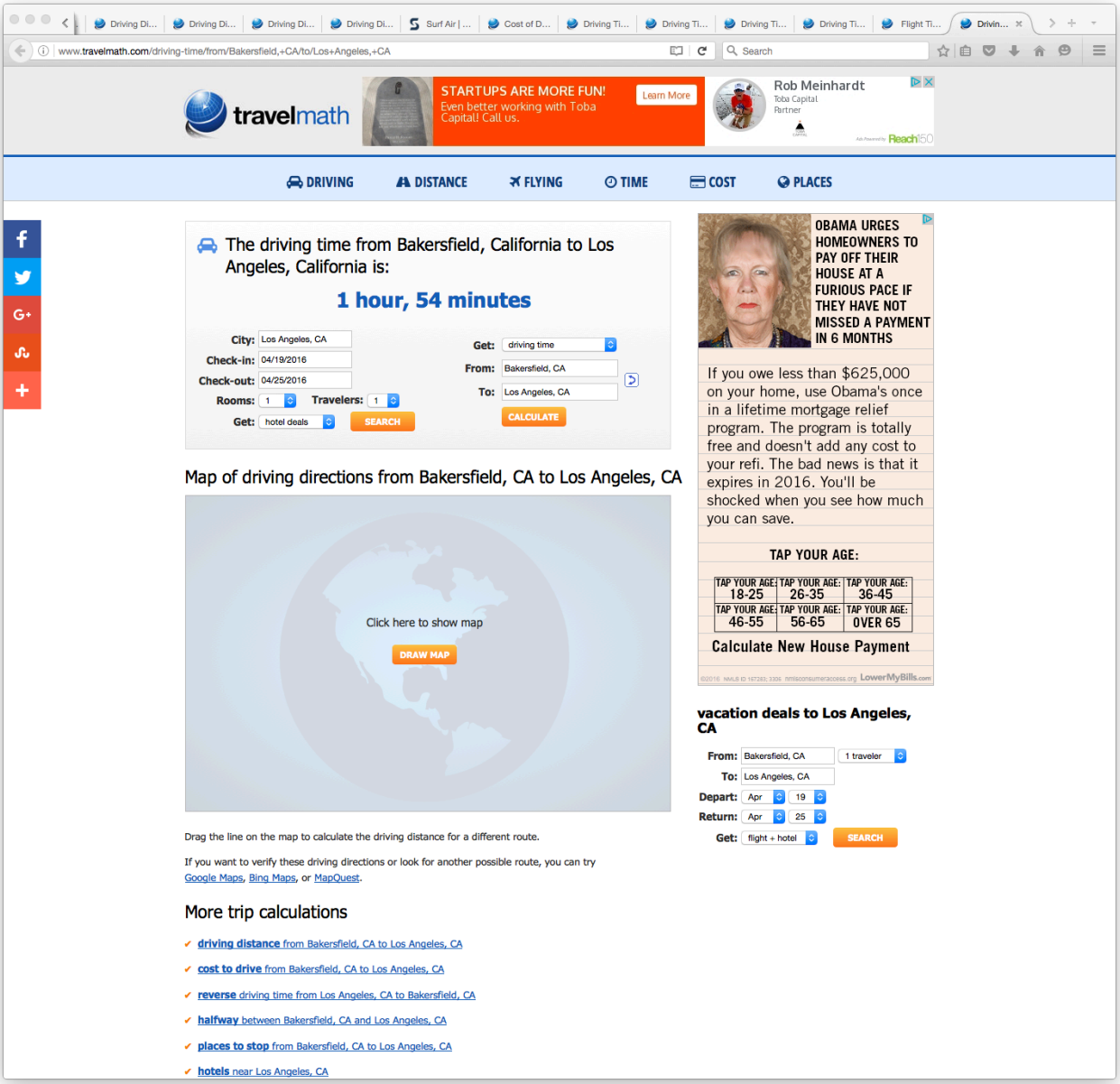
Subject – Supplemental Comment #5 Regarding Draft 2016 Business Plan

Topic –This Is A Supplemental Comment To Comment Of April12, 2016

The purpose of this Supplemental Comment is to augment my Comment of April 12, 2016. There are a number of places in my April 12, 2016 Comments where I refer to Web pages that provided mileage, costs and travel time information, etc.

Included as part of this Supplemental Comment are "screen shots" that provide the URL and mileage information that were referenced in my April 12, 2016 Comment.

William Grindley
151 Laurel Street
Atherton CA 94027
Email: williamgrindleybarch65@gmail.com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FLYING
TIME
COST
PLACES
The driving time from Bakersfield, California to Los Angeles, California is:
1 hour, 54 minutes
City: Los Angeles, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving time
From: Bakersfield, CA
To: Los Angeles, CA
CALCULATE
Map of driving directions from Bakersfield, CA to Los Angeles, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving distance from Bakersfield, CA to Los Angeles, CA
cost to drive from Bakersfield, CA to Los Angeles, CA
reverse driving time from Los Angeles, CA to Bakersfield, CA
halfway between Bakersfield, CA and Los Angeles, CA
places to stop from Bakersfield, CA to Los Angeles, CA
hotels near Los Angeles, CA
OBAMA URGES HOMEOWNERS TO PAY OFF THEIR HOUSE AT A FURIOUS PACE IF THEY HAVE NOT MISSED A PAYMENT IN 6 MONTHS
If you owe less than $625,000 on your home, use Obama's once in a lifetime mortgage relief program. The program is totally free and doesn't add any cost to your refi. The bad news is that it expires in 2016. You'll be shocked when you see how much you can save.
TAP YOUR AGE:
TAP YOUR AGE: 18-25
TAP YOUR AGE: 26-35
TAP YOUR AGE: 36-45
TAP YOUR AGE: 46-55
TAP YOUR AGE: 56-65
TAP YOUR AGE: OVER 65
Calculate New House Payment
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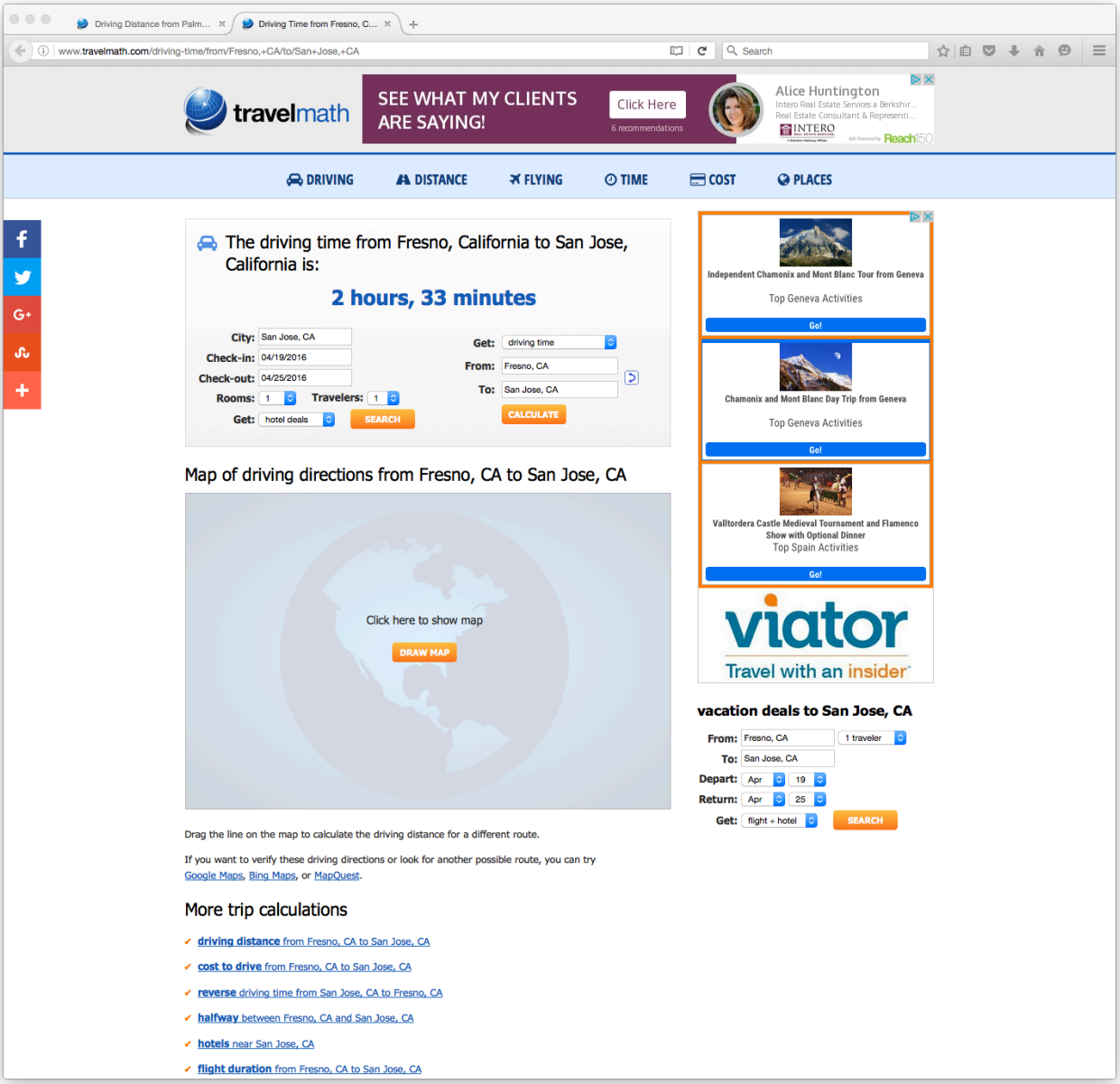
vacation deals to Los Angeles, CA
From: Bakersfield, CA
1 traveler
To: Los Angeles, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH


Driving Distance from Palm...
Driving Time from Fresno, C...
www.travelmath.com/driving-time/from/Fresno,+CA/to/San+Jose,+CA
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DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving time from Fresno, California to San Jose, California is:
2 hours, 33 minutes
City: San Jose, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving time
From: Fresno, CA
To: San Jose, CA
CALCULATE
Map of driving directions from Fresno, CA to San Jose, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving distance from Fresno, CA to San Jose, CA
cost to drive from Fresno, CA to San Jose, CA
reverse driving time from San Jose, CA to Fresno, CA
halfway between Fresno, CA and San Jose, CA
hotels near San Jose, CA
flight duration from Fresno, CA to San Jose, CA
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Go!
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Top Geneva Activities
Go!
Valltordera Castle Medieval Tournament and Flamenco Show with Optional Dinner
Top Spain Activities
Go!
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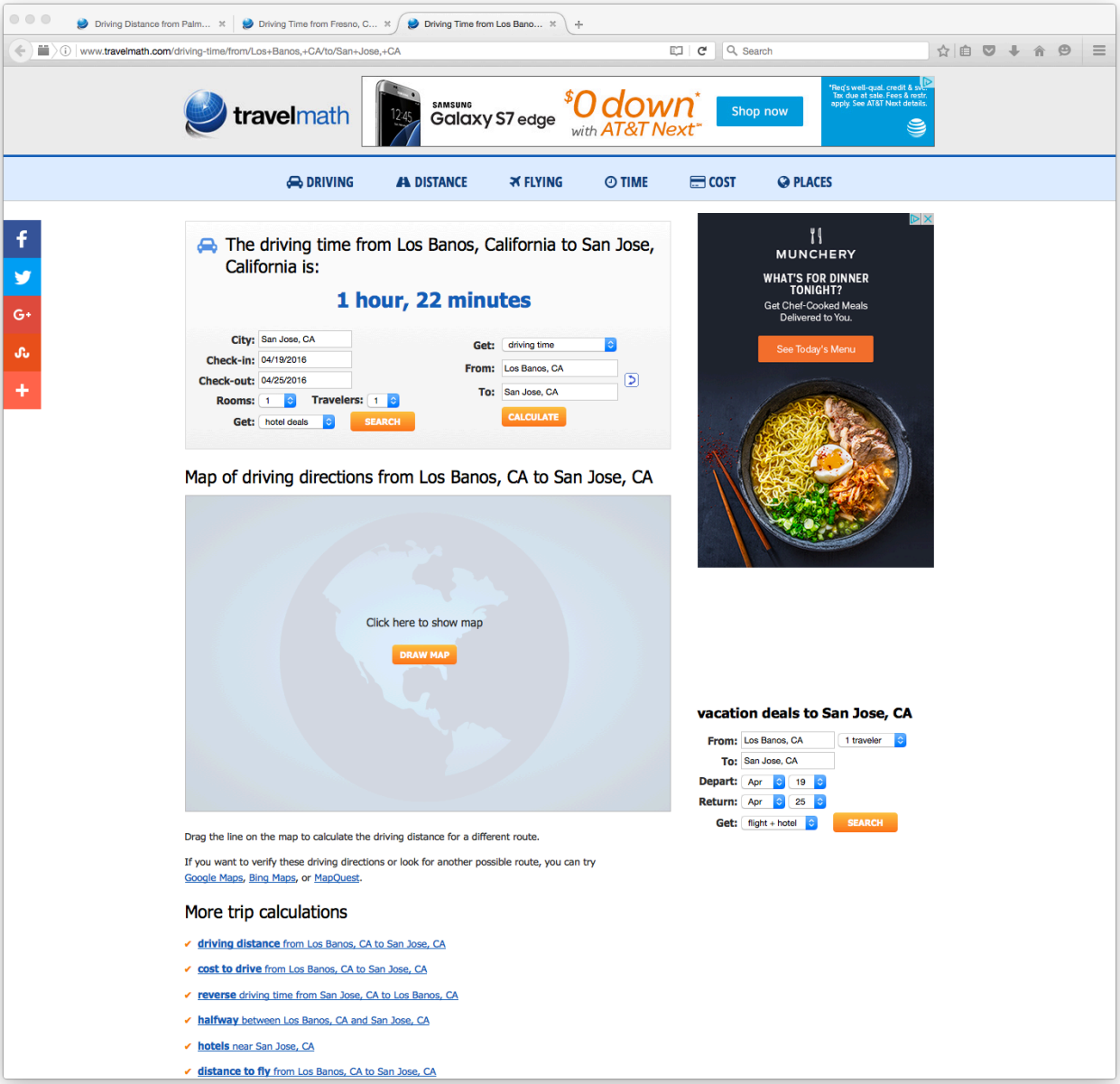
Travel with an insider
vacation deals to San Jose, CA
From: Fresno, CA
1 traveler
To: San Jose, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH


Driving Distance from Palm...
Driving Time from Fresno, C...
Driving Time from Los Bano...
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DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving time from Los Banos, California to San Jose, California is:
1 hour, 22 minutes
City: San Jose, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving time
From: Los Banos, CA
To: San Jose, CA
CALCULATE
MUNCHERY
WHAT'S FOR DINNER TONIGHT?
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See Today's Menu
Map of driving directions from Los Banos, CA to San Jose, CA
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From: Los Banos, CA
1 traveler
To: San Jose, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving distance from Los Banos, CA to San Jose, CA
cost to drive from Los Banos, CA to San Jose, CA
reverse driving time from San Jose, CA to Los Banos, CA
halfway between Los Banos, CA and San Jose, CA
hotels near San Jose, CA
distance to fly from Los Banos, CA to San Jose, CA


Driving Distance from Palm...
Driving Time from Fresno, C...
Driving Time from Los Bano...
Driving Time from Merced, ...
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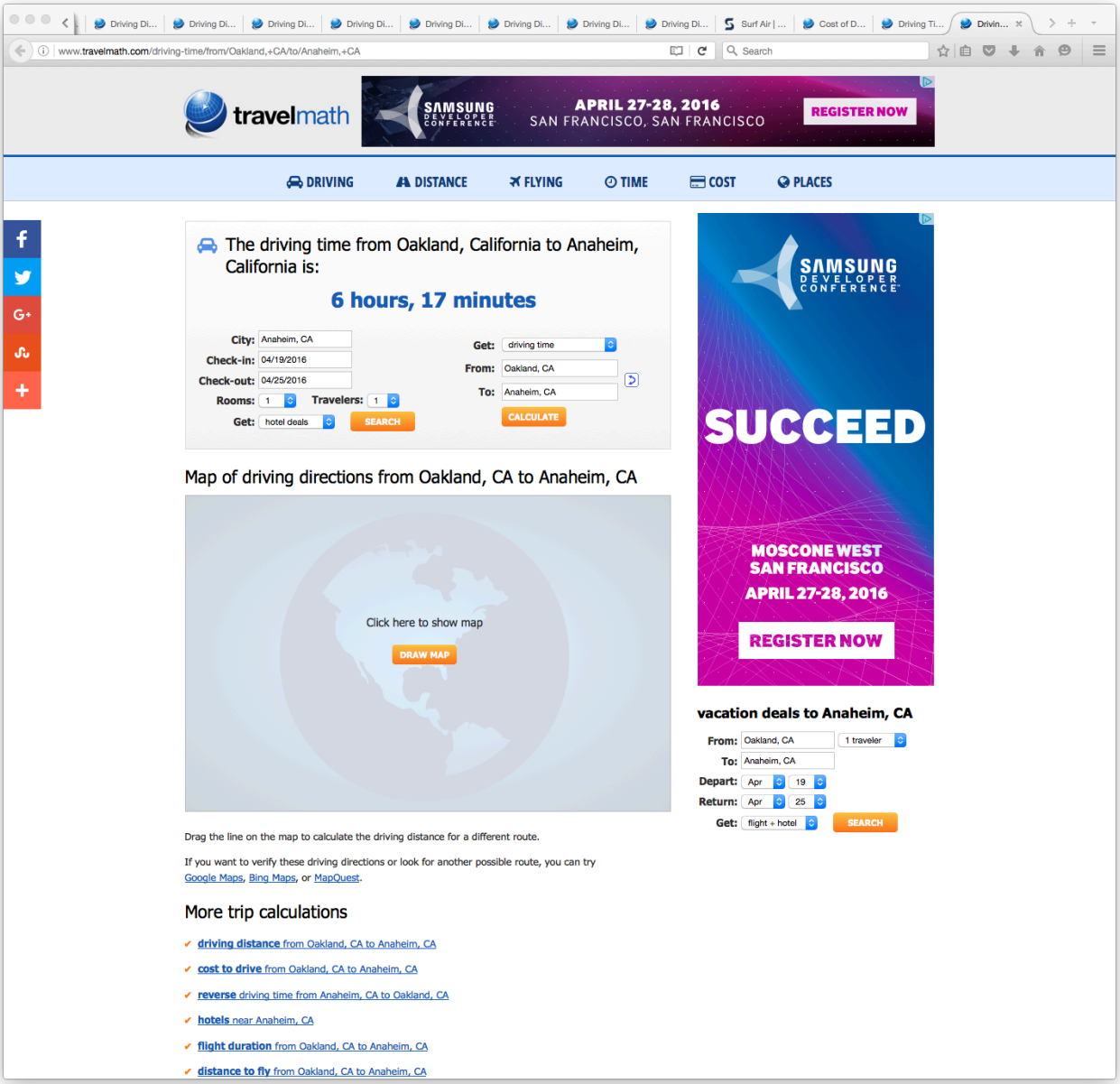
DISTANCE
FLYING
TIME
COST
PLACES
The driving time from Merced, California to San Jose, California is:
2 hours, 5 minutes
City: San Jose, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving time
From: Merced, CA
To: San Jose, CA
CALCULATE
Map of driving directions from Merced, CA to San Jose, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving distance from Merced, CA to San Jose, CA
reverse driving time from San Jose, CA to Merced, CA
halfway between Merced, CA and San Jose, CA
hotels near San Jose, CA
distance to fly from Merced, CA to San Jose, CA
airports near San Jose, CA
IF YOU HAVE NOT MISSED A MORTGAGE PAYMENT IN 6 MONTHS, YOU SHOULD TAKE ADVANTAGE OF OBAMA'S ONCE IN A LIFETIME MORTGAGE BAILOUT
If you owe less than $625,000 on your home, use Obama's once in a lifetime mortgage relief program. The program is totally free and doesn't add any cost to your refi. The bad news is that it expires in 2016. You'll be shocked when you see how much you can save.
TAP YOUR AGE:
18-25 26-35 36-45
46-55 56-65 OVER 65
Calculate New House Payment
LowerMyBills.com
vacation deals to San Jose, CA
From: Merced, CA
1 traveler
To: San Jose, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH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DISTANCE
FLYING
TIME
COST
PLACES
The driving time from Oakland, California to Anaheim, California is:
6 hours, 17 minutes
City: Anaheim, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving time
From: Oakland, CA
To: Anaheim, CA
CALCULATE
Map of driving directions from Oakland, CA to Anaheim, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving distance from Oakland, CA to Anaheim, CA
cost to drive from Oakland, CA to Anaheim, CA
reverse driving time from Anaheim, CA to Oakland, CA
hotels near Anaheim, CA
flight duration from Oakland, CA to Anaheim, CA
distance to fly from Oakland, CA to Anaheim, CA
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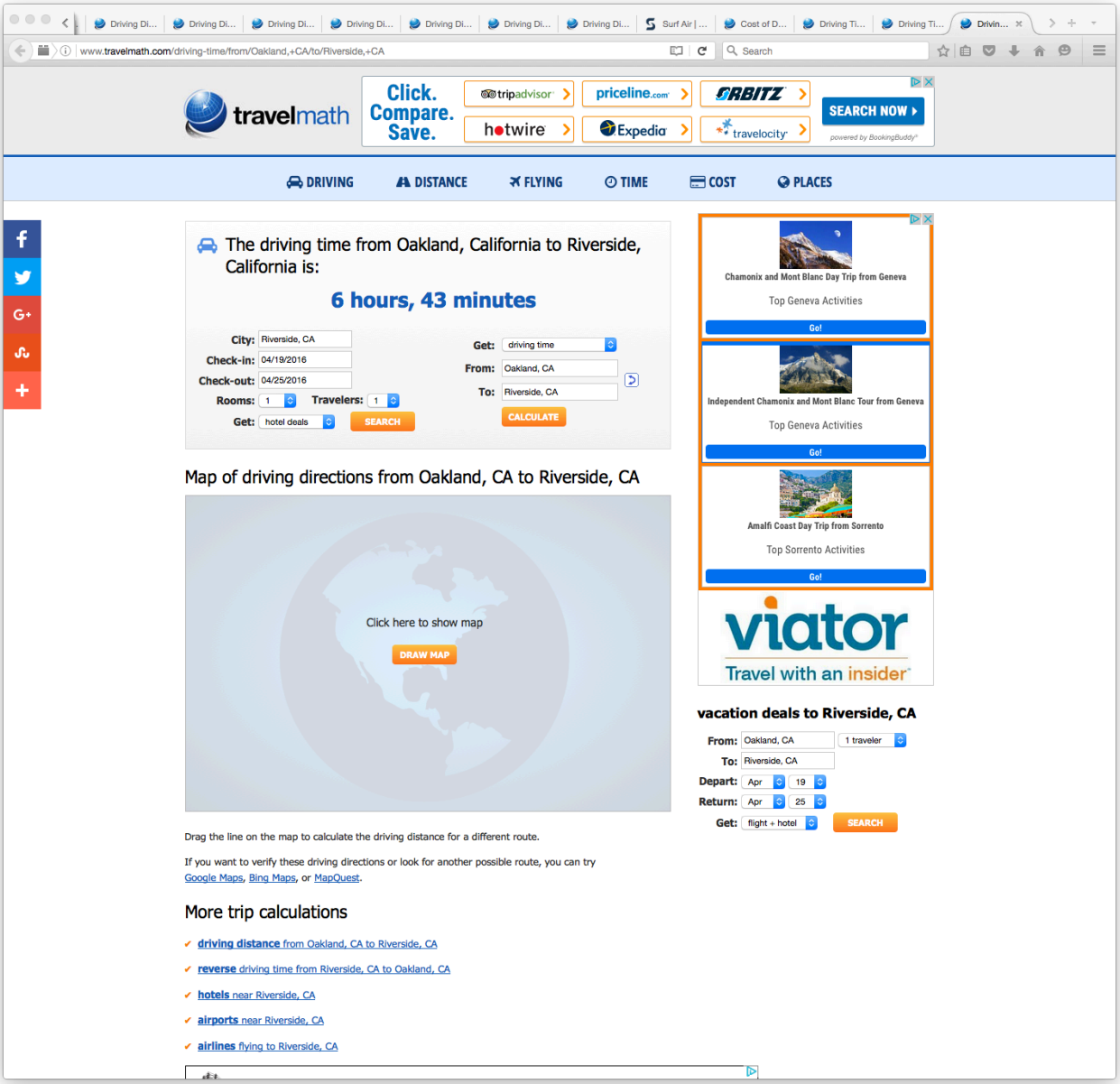
SUCCEED
MOSCONE WEST
SAN FRANCISCO
APRIL 27-28, 2016
REGISTER NOW
vacation deals to Anaheim, CA
From: Oakland, CA
1 traveler
To: Anaheim, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH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DISTANCE
FLYING
TIME
COST
PLACES
The driving time from Oakland, California to Riverside, California is:
6 hours, 43 minutes
City: Riverside, CA
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Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving time
From: Oakland, CA
To: Riverside, CA
CALCULATE
Map of driving directions from Oakland, CA to Riverside, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
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reverse driving time from Riverside, CA to Oakland, CA
hotels near Riverside, CA
airports near Riverside, CA
airlines flying to Riverside, CA
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vacation deals to Riverside, CA
From: Oakland, CA
1 traveler
To: Riverside, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
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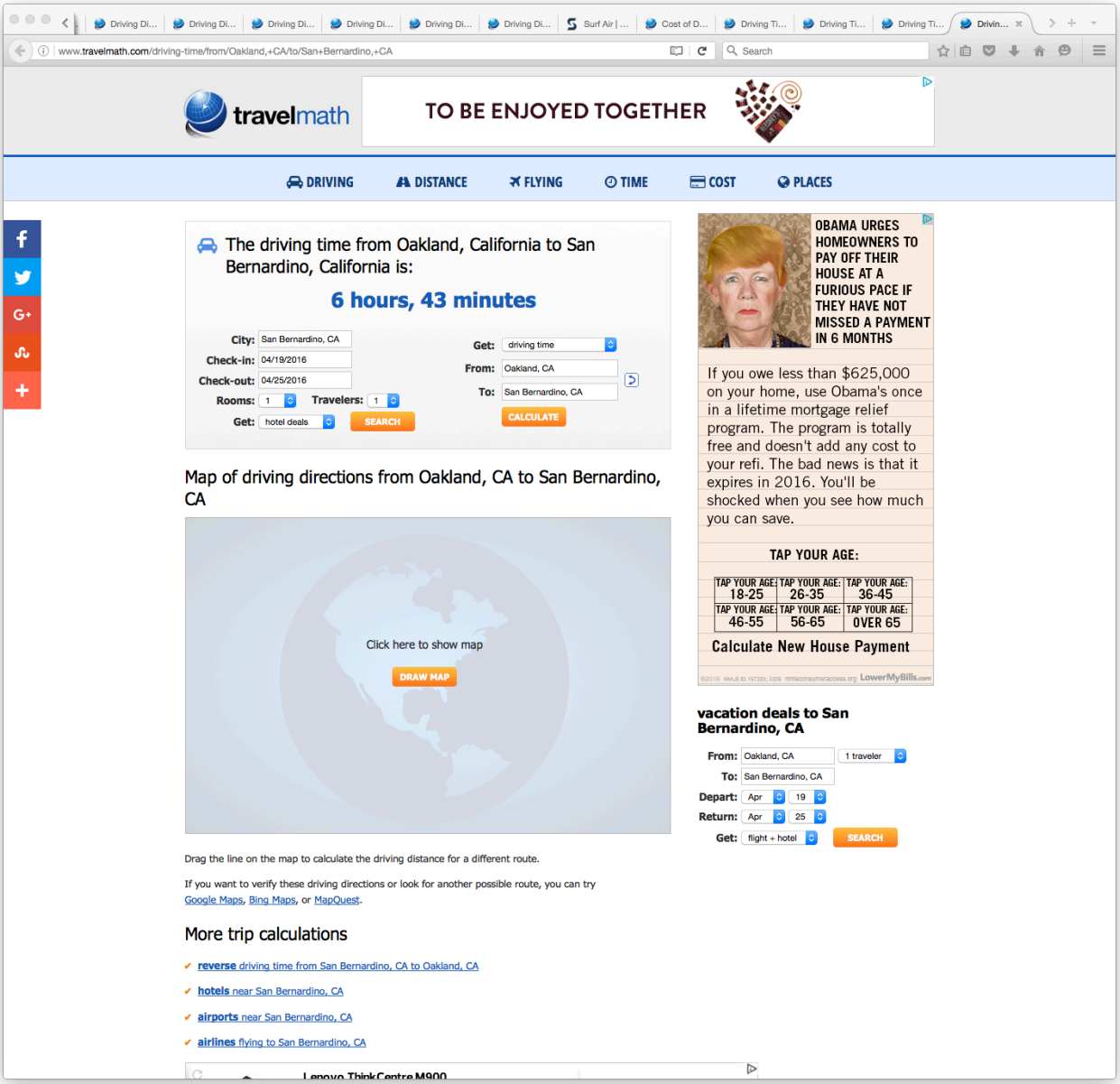
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DISTANCE
FLYING
TIME
COST
PLACES
The driving time from Oakland, California to San Bernardino, California is:
6 hours, 43 minutes
City: San Bernardino, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1 Travelers: 1
Get: hotel deals
SEARCH
Get: driving time
From: Oakland, CA
To: San Bernardino, CA
CALCULATE
Map of driving directions from Oakland, CA to San Bernardino, CA
Click here to show map
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Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
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hotels near San Bernardino, CA
airports near San Bernardino, CA
airlines flying to San Bernardino, CA
OBAMA URGES HOMEOWNERS TO PAY OFF THEIR HOUSE AT A FURIOUS PACE IF THEY HAVE NOT MISSED A PAYMENT IN 6 MONTHS
If you owe less than $625,000 on your home, use Obama's once in a lifetime mortgage relief program. The program is totally free and doesn't add any cost to your refi. The bad news is that it expires in 2016. You'll be shocked when you see how much you can save.
TAP YOUR AGE:
TAP YOUR AGE: 18-25
TAP YOUR AGE: 26-35
TAP YOUR AGE: 36-45
TAP YOUR AGE: 46-55
TAP YOUR AGE: 56-65
TAP YOUR AGE: OVER 65
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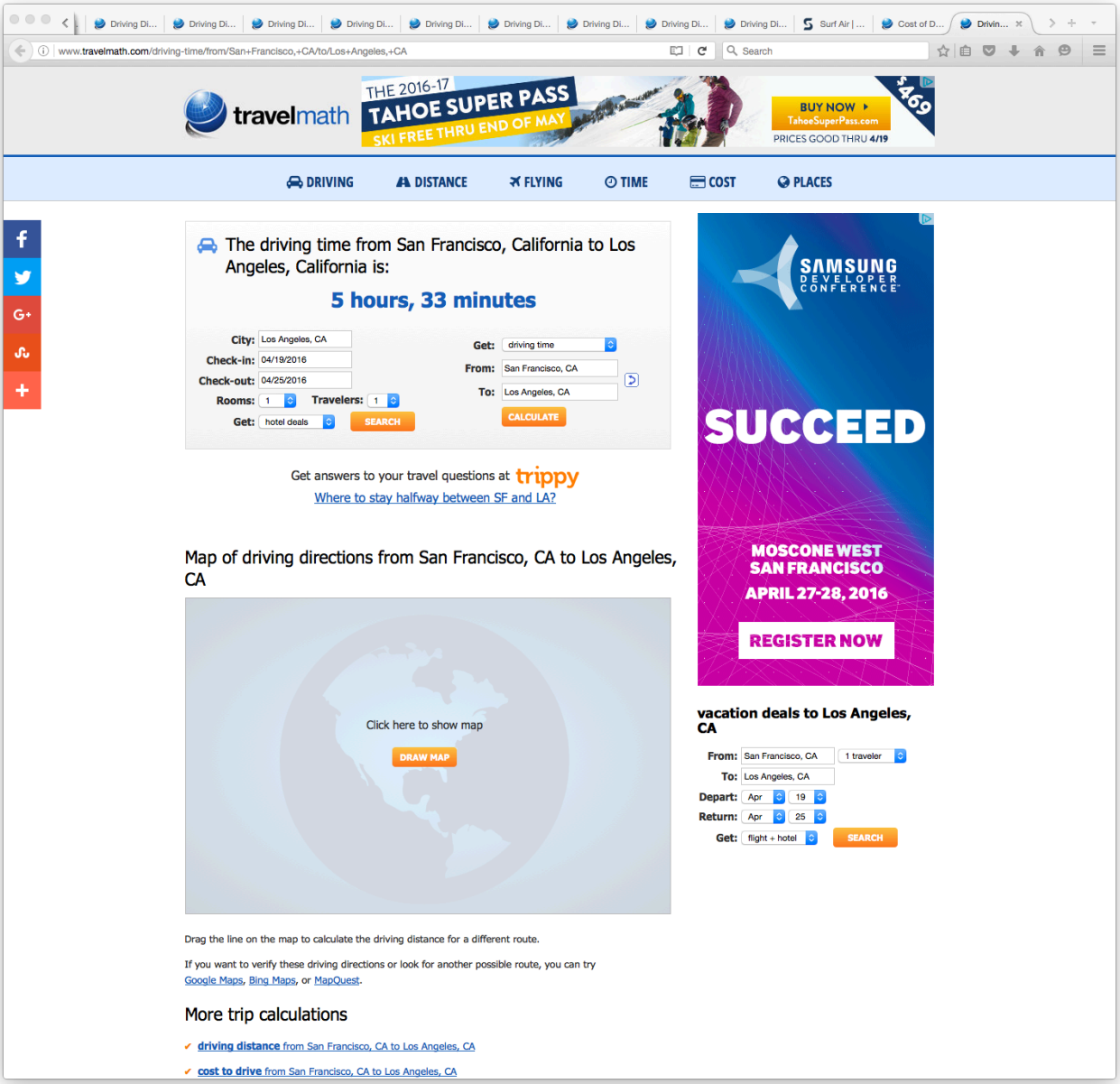
LowerMyBills.com
vacation deals to San Bernardino, CA
From: Oakland, CA 1 traveler
To: San Bernardino, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH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$469
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving time from San Francisco, California to Los Angeles, California is:
5 hours, 33 minutes
City: Los Angeles, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
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Get: driving time
From: San Francisco, CA
To: Los Angeles, CA
CALCULATE
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Where to stay halfway between SF and LA?
Map of driving directions from San Francisco, CA to Los Angeles, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving distance from San Francisco, CA to Los Angeles, CA
cost to drive from San Francisco, CA to Los Angeles, CA
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MOSCONE WEST
SAN FRANCISCO
APRIL 27-28, 2016
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vacation deals to Los Angeles, CA
From: San Francisco, CA
1 traveler
To: Los Angeles, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Project Email
First Name :	William
Last Name :	Grindley
Stakeholder Comments/Issues :	See attached William Grindley
Notes :	
Attachments :	Supplemental Comment #4.pdf (6 mb)

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

April 18, 2016

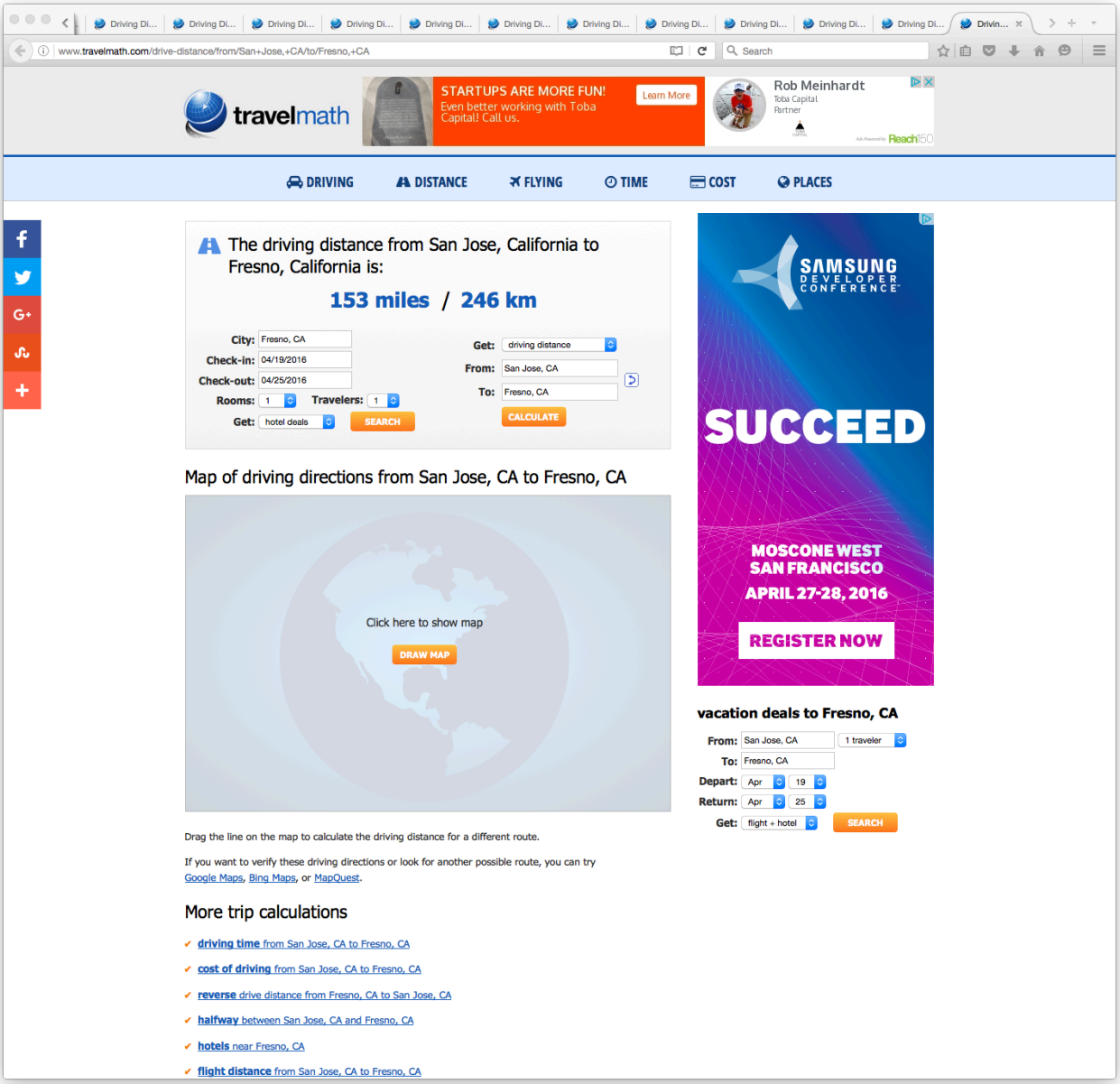
Subject – Supplemental Comment #4 Regarding Draft 2016 Business Plan

Topic –This Is A Supplemental Comment To Comment Of April12, 2016

The purpose of this Supplemental Comment is to augment my Comment of April 12, 2016. There are a number of places in my April 12, 2016 Comments where I refer to Web pages that provided mileage, costs and travel time information, etc.

Included as part of this Supplemental Comment are "screen shots" that provide the URL and mileage information that were referenced in my April 12, 2016 Comment.

William Grindley
151 Laurel Street
Atherton CA 94027
Email: williamgrindleybarch65@gmail.com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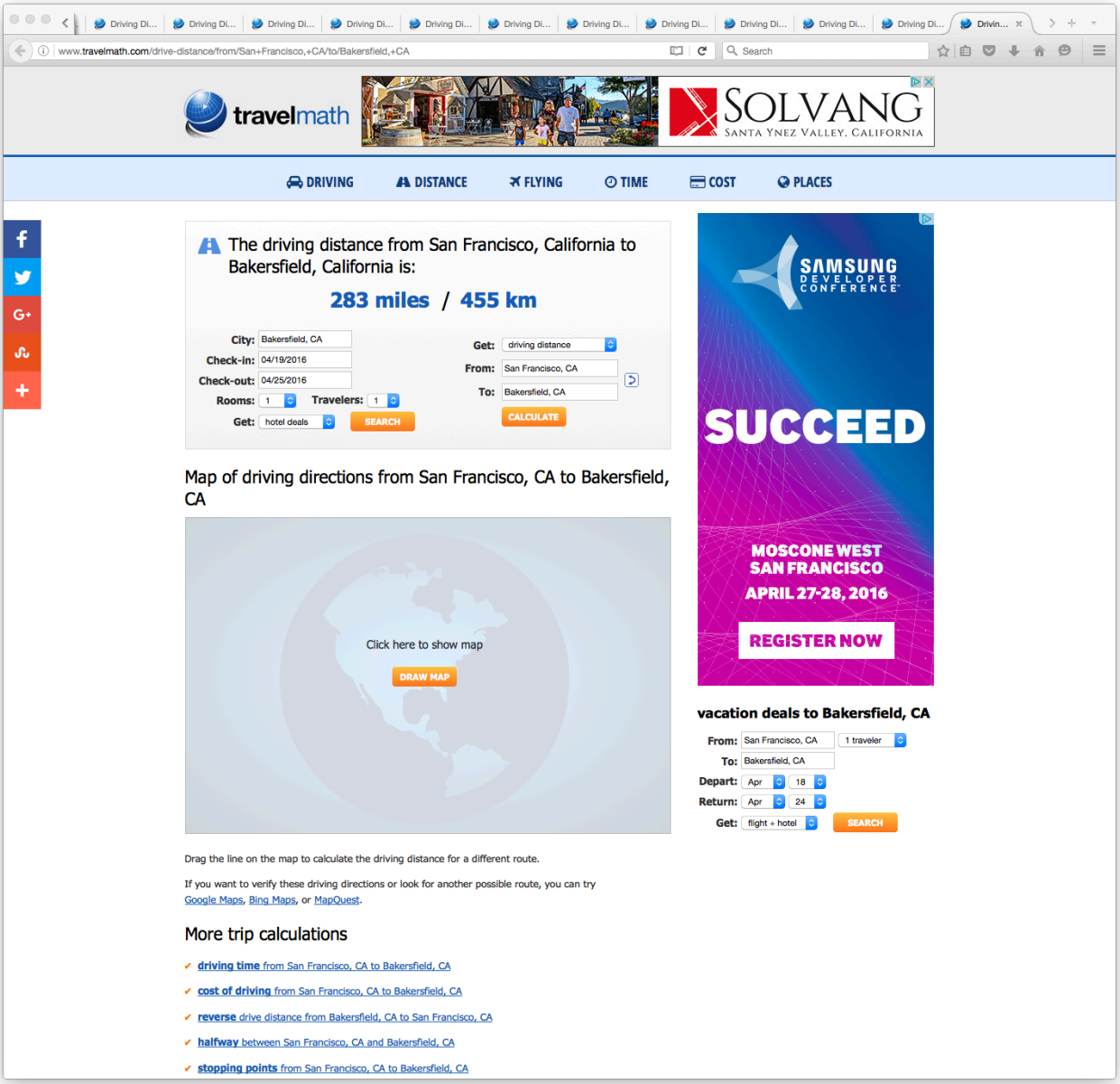
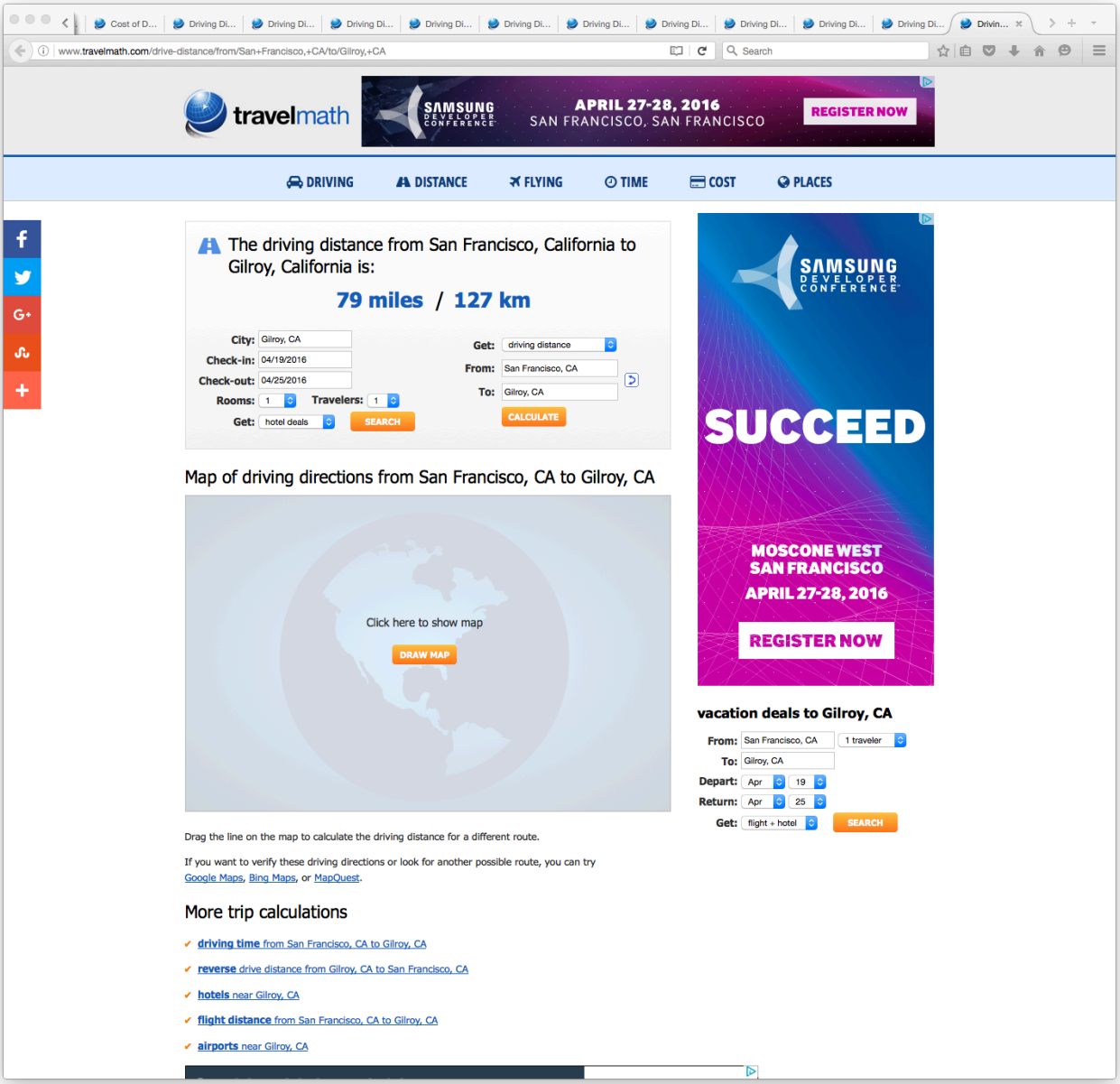
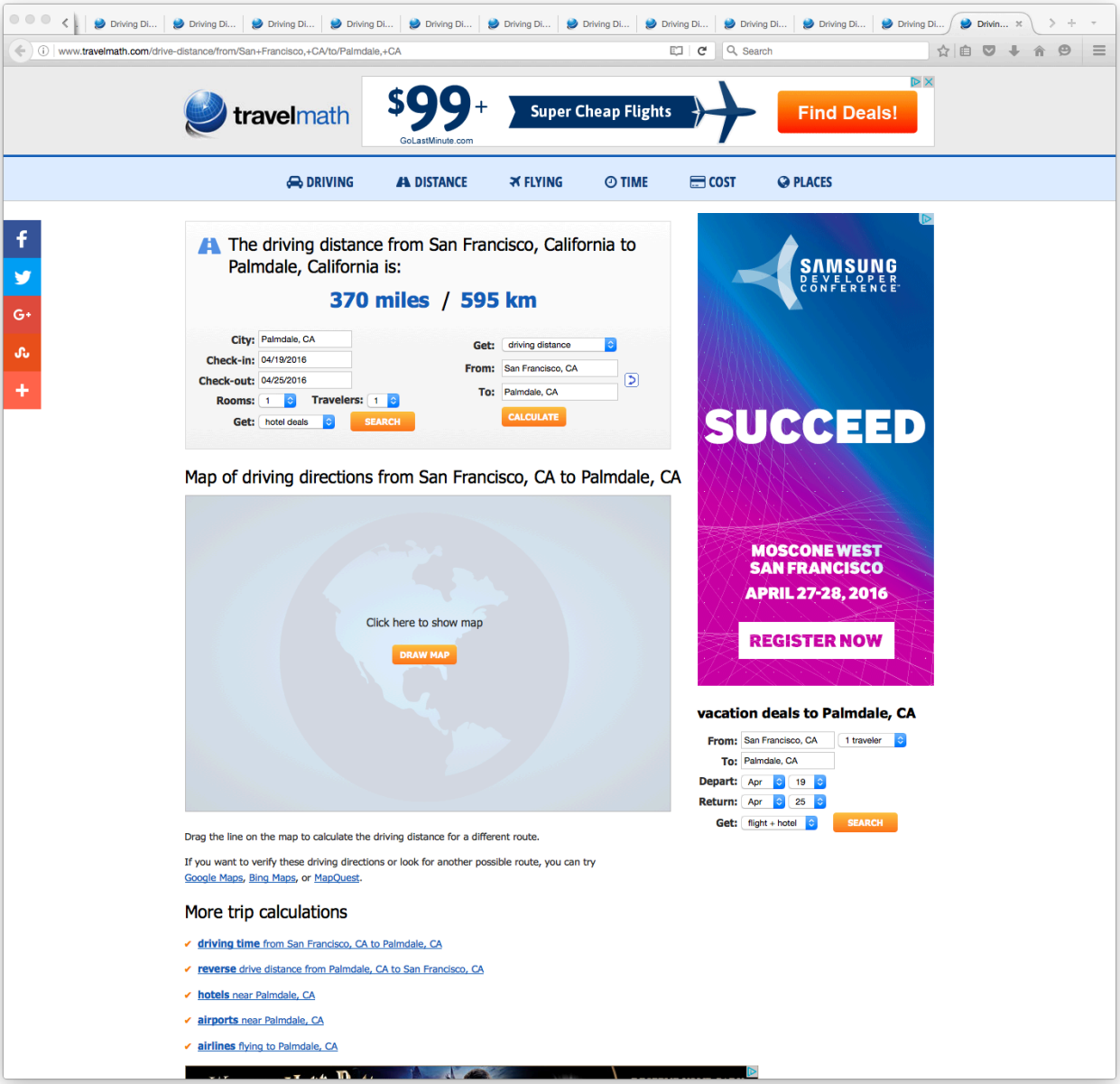
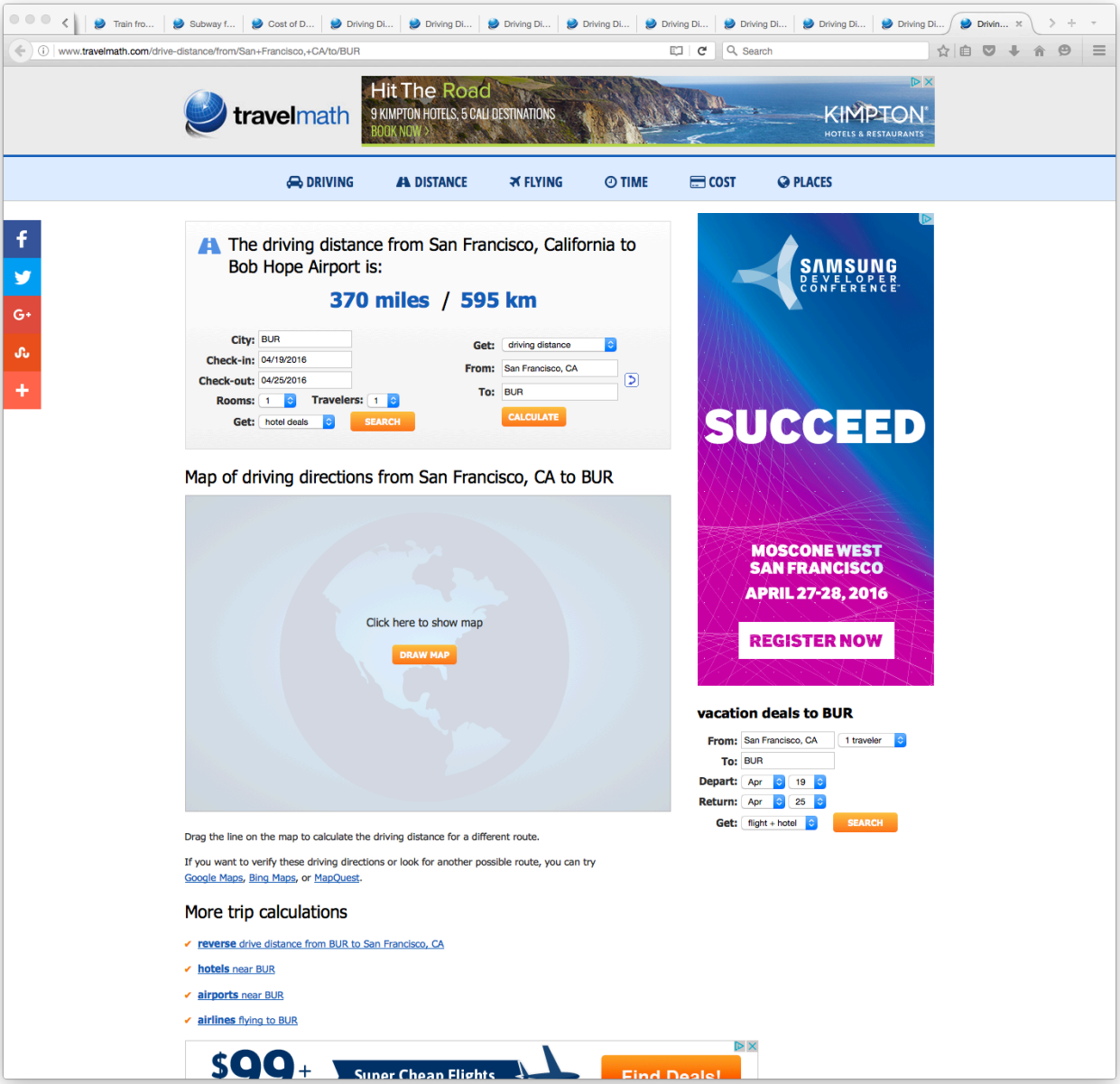
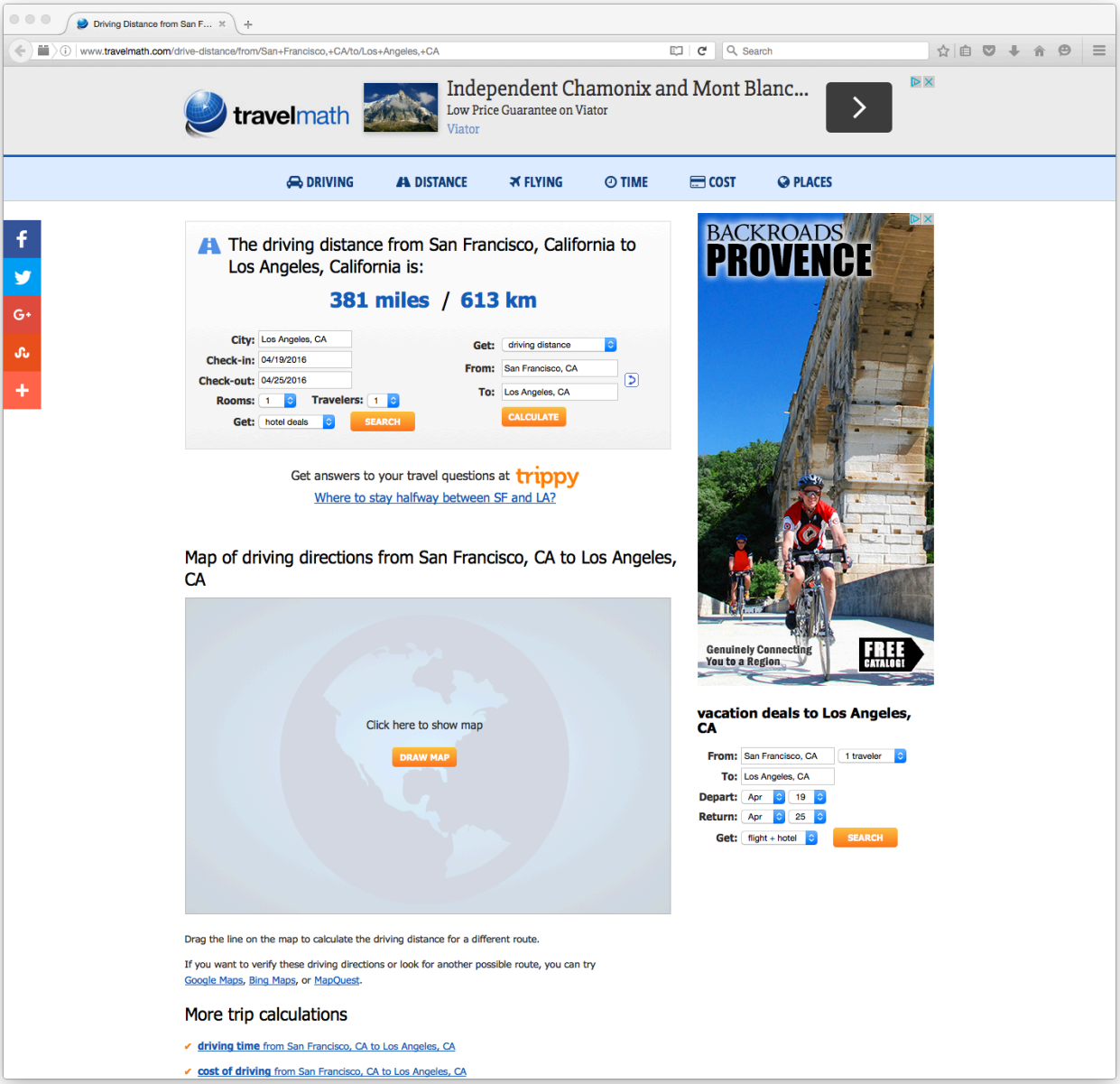
Partner
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from San Jose, California to Fresno, California is:
153 miles / 246 km
City: Fresno, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: San Jose, CA
To: Fresno, CA
CALCULATE
Map of driving directions from San Jose, CA to Fresno, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving time from San Jose, CA to Fresno, CA
cost of driving from San Jose, CA to Fresno, CA
reverse drive distance from Fresno, CA to San Jose, CA
halfway between San Jose, CA and Fresno, CA
hotels near Fresno, CA
flight distance from San Jose, CA to Fresno, CA
SAMSUNG DEVELOPER CONFERENCE
SUCCEED
MOSCONE WEST
SAN FRANCISCO
APRIL 27-28, 2016
REGISTER NOW
vacation deals to Fresno, CA
From: San Jose, CA
1 traveler
To: Fresno, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH

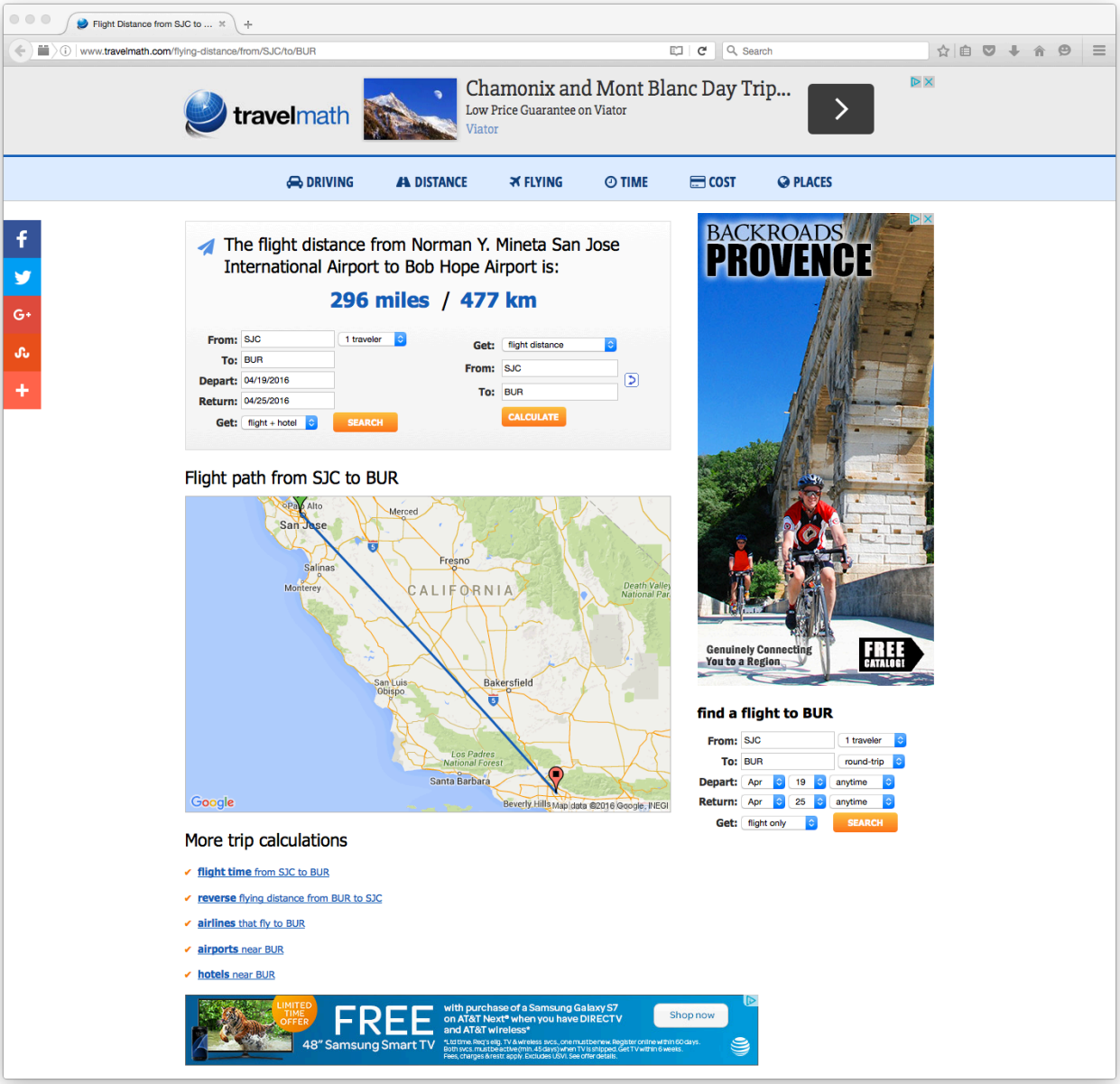

www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Bakersfield,+CA
travelmath
SOLVANG
SANTA YNEZ VALLEY, CALIFORNIA
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from San Francisco, California to Bakersfield, California is:
283 miles / 455 km
City: Bakersfield, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: San Francisco, CA
To: Bakersfield, CA
CALCULATE
SAMSUNG DEVELOPER CONFERENCE
SUCCEED
MOSCONE WEST SAN FRANCISCO
APRIL 27-28, 2016
REGISTER NOW
Map of driving directions from San Francisco, CA to Bakersfield, CA
Click here to show map
DRAW MAP
vacation deals to Bakersfield, CA
From: San Francisco, CA
1 traveler
To: Bakersfield, CA
Depart: Apr 18
Return: Apr 24
Get: flight + hotel
SEARCH
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving time from San Francisco, CA to Bakersfield, CA
cost of driving from San Francisco, CA to Bakersfield, CA
reverse drive distance from Bakersfield, CA to San Francisco, CA
halfway between San Francisco, CA and Bakersfield, CA
stopping points from San Francisco, CA to Bakersfield, CA


www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Gilroy,+CA
travelmath
SAMSUNG DEVELOPER CONFERENCE
APRIL 27-28, 2016
SAN FRANCISCO, SAN FRANCISCO
REGISTER NOW
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from San Francisco, California to Gilroy, California is:
79 miles / 127 km
City: Gilroy, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: San Francisco, CA
To: Gilroy, CA
CALCULATE
Map of driving directions from San Francisco, CA to Gilroy, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving time from San Francisco, CA to Gilroy, CA
reverse drive distance from Gilroy, CA to San Francisco, CA
hotels near Gilroy, CA
flight distance from San Francisco, CA to Gilroy, CA
airports near Gilroy, CA
SAMSUNG DEVELOPER CONFERENCE
SUCCEED
MOSCONE WEST
SAN FRANCISCO
APRIL 27-28, 2016
REGISTER NOW
vacation deals to Gilroy, CA
From: San Francisco, CA
1 traveler
To: Gilroy, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH


www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Palmdale,+CA
travelmath
$99+
Super Cheap Flights
GoLastMinute.com
Find Deals!
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from San Francisco, California to Palmdale, California is:
370 miles / 595 km
City: Palmdale, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: San Francisco, CA
To: Palmdale, CA
CALCULATE
Map of driving directions from San Francisco, CA to Palmdale, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving time from San Francisco, CA to Palmdale, CA
reverse drive distance from Palmdale, CA to San Francisco, CA
hotels near Palmdale, CA
airports near Palmdale, CA
airlines flying to Palmdale, CA
SAMSUNG DEVELOPER CONFERENCE
SUCCEED
MOSCONE WEST
SAN FRANCISCO
APRIL 27-28, 2016
REGISTER NOW
vacation deals to Palmdale, CA
From: San Francisco, CA
1 traveler
To: Palmdale, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH


www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/BUR
travelmath
Hit The Road
9 KIMPTON HOTELS, 5 CALI DESTINATIONS
BOOK NOW >
KIMPTON
HOTELS & RESTAURANTS
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from San Francisco, California to Bob Hope Airport is:
370 miles / 595 km
City: BUR
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: San Francisco, CA
To: BUR
CALCULATE
Map of driving directions from San Francisco, CA to BUR
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
reverse drive distance from BUR to San Francisco, CA
hotels near BUR
airports near BUR
airlines flying to BUR
SAMSUNG DEVELOPER CONFERENCE
SUCCEED
MOSCONE WEST
SAN FRANCISCO
APRIL 27-28, 2016
REGISTER NOW
vacation deals to BUR
From: San Francisco, CA
1 traveler
To: BUR
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH
$99+
Super Cheap Flights
Find Deals!


Driving Distance from San F...
www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Los+Angeles,+CA
Search
travelmath
Independent Chamonix and Mont Blanc...
Low Price Guarantee on Viator
Viator
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from San Francisco, California to Los Angeles, California is:
381 miles / 613 km
City: Los Angeles, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: San Francisco, CA
To: Los Angeles, CA
CALCULATE
Get answers to your travel questions at trippy
Where to stay halfway between SF and LA?
Map of driving directions from San Francisco, CA to Los Angeles, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving time from San Francisco, CA to Los Angeles, CA
cost of driving from San Francisco, CA to Los Angeles, CA
BACKROADS
PROVENCE
Genuinely Connecting You to a Region
FREE CATALOG!
vacation deals to Los Angeles, CA
From: San Francisco, CA
1 traveler
To: Los Angeles, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH


Flight Distance from SJC to ...
www.travelmath.com/flying-distance/from/SJC/to/BUR
Search
travelmath
Chamonix and Mont Blanc Day Trip...
Low Price Guarantee on Viator
Viator
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The flight distance from Norman Y. Mineta San Jose International Airport to Bob Hope Airport is:
296 miles / 477 km
From: SJC
1 traveler
To: BUR
Depart: 04/19/2016
Return: 04/25/2016
Get: flight + hotel
SEARCH
Get: flight distance
From: SJC
To: BUR
CALCULATE
Flight path from SJC to BUR
Palo Alto
San Jose
Merced
Fresno
Salinas
Monterey
CALIFORNIA
Death Valley National Park
San Luis Obispo
Bakersfield
Los Padres National Forest
Santa Barbara
Beverly Hills
Google
Map data ©2016 Google, INEGI
More trip calculations
flight time from SJC to BUR
reverse flying distance from BUR to SJC
airlines that fly to BUR
airports near BUR
hotels near BUR
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FREE CATALOG!
find a flight to BUR
From: SJC
1 traveler
To: BUR
round-trip
Depart: Apr 19 anytime
Return: Apr 25 anytime
Get: flight only
SEARCH
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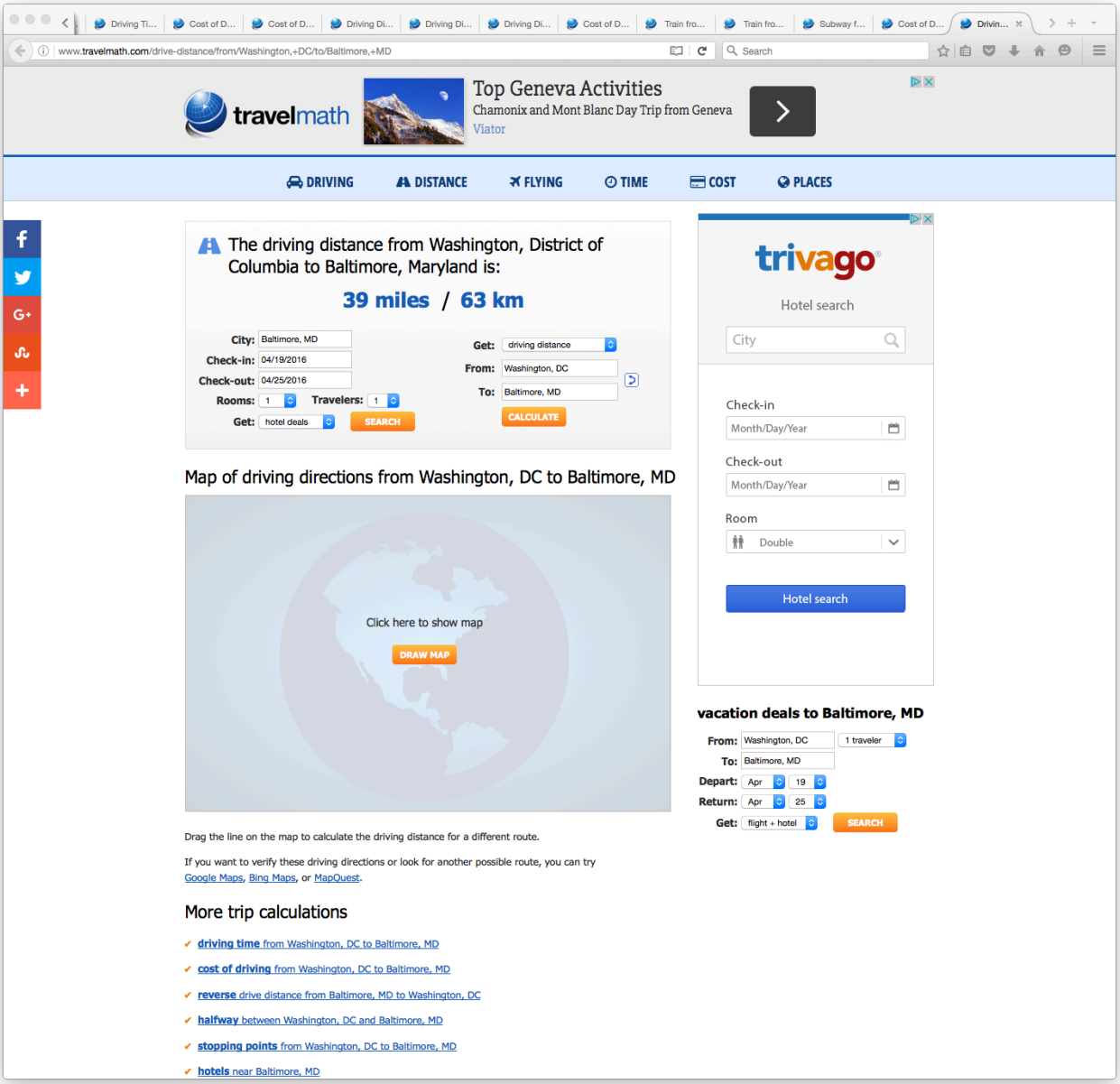
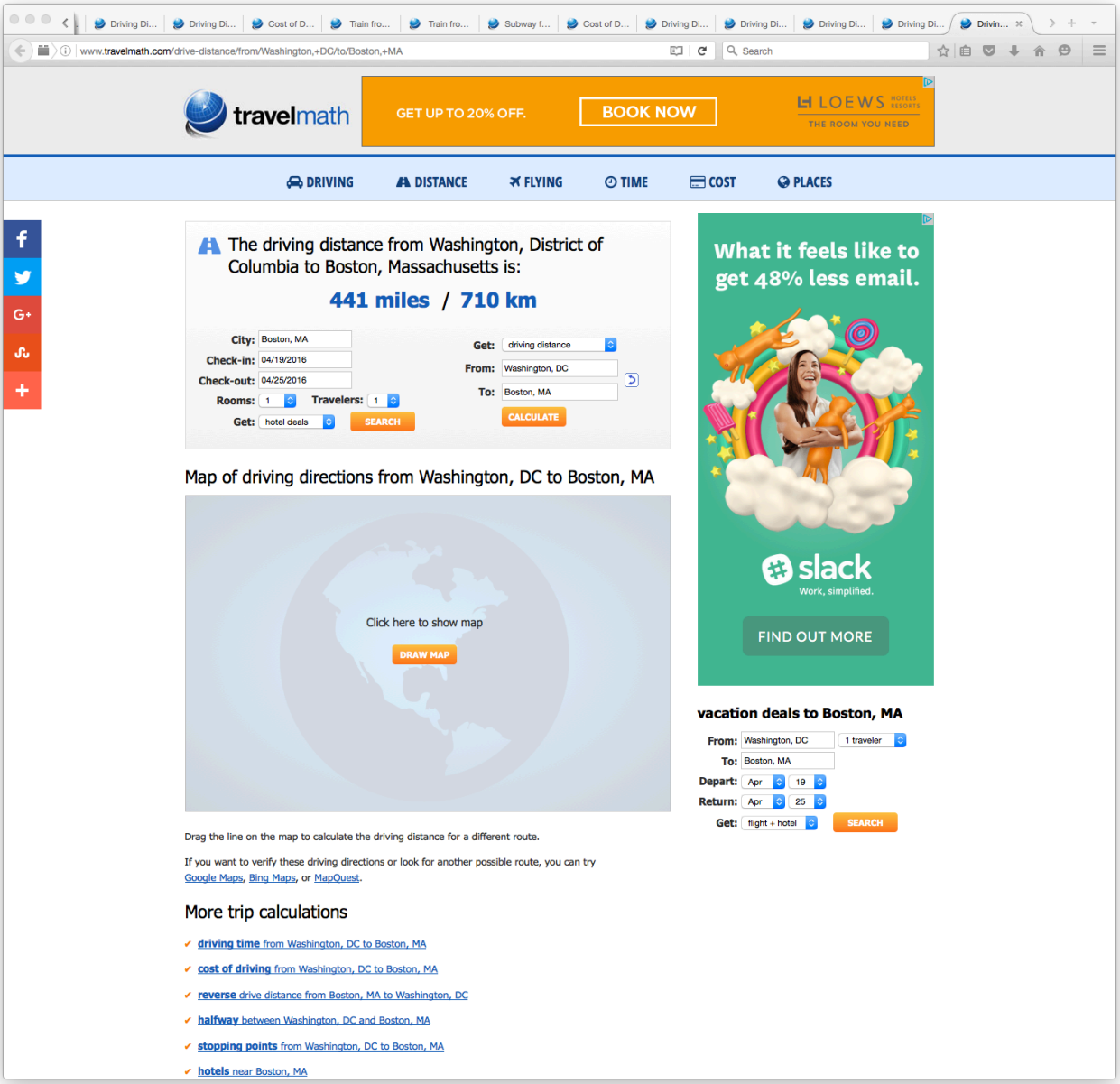
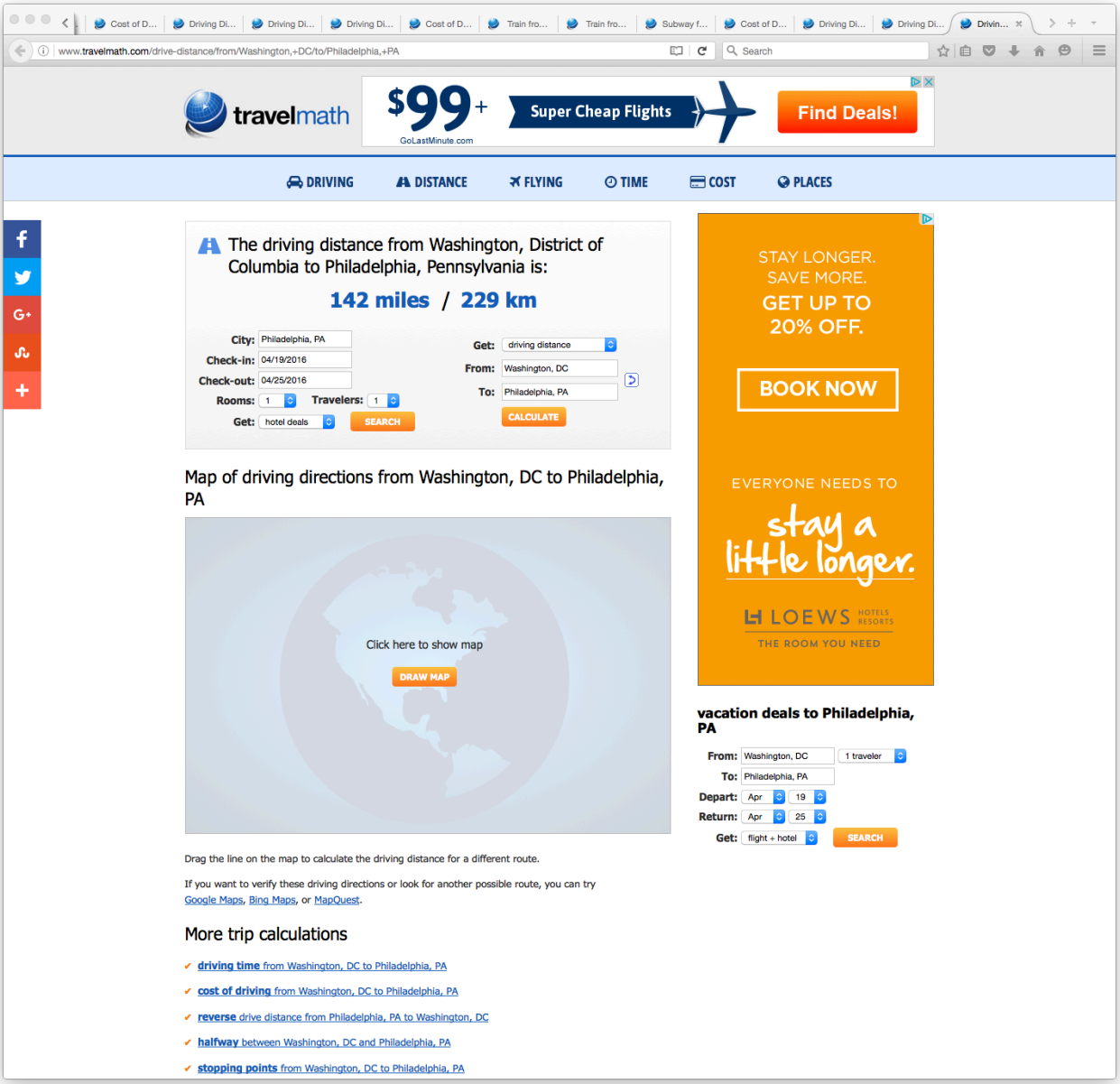
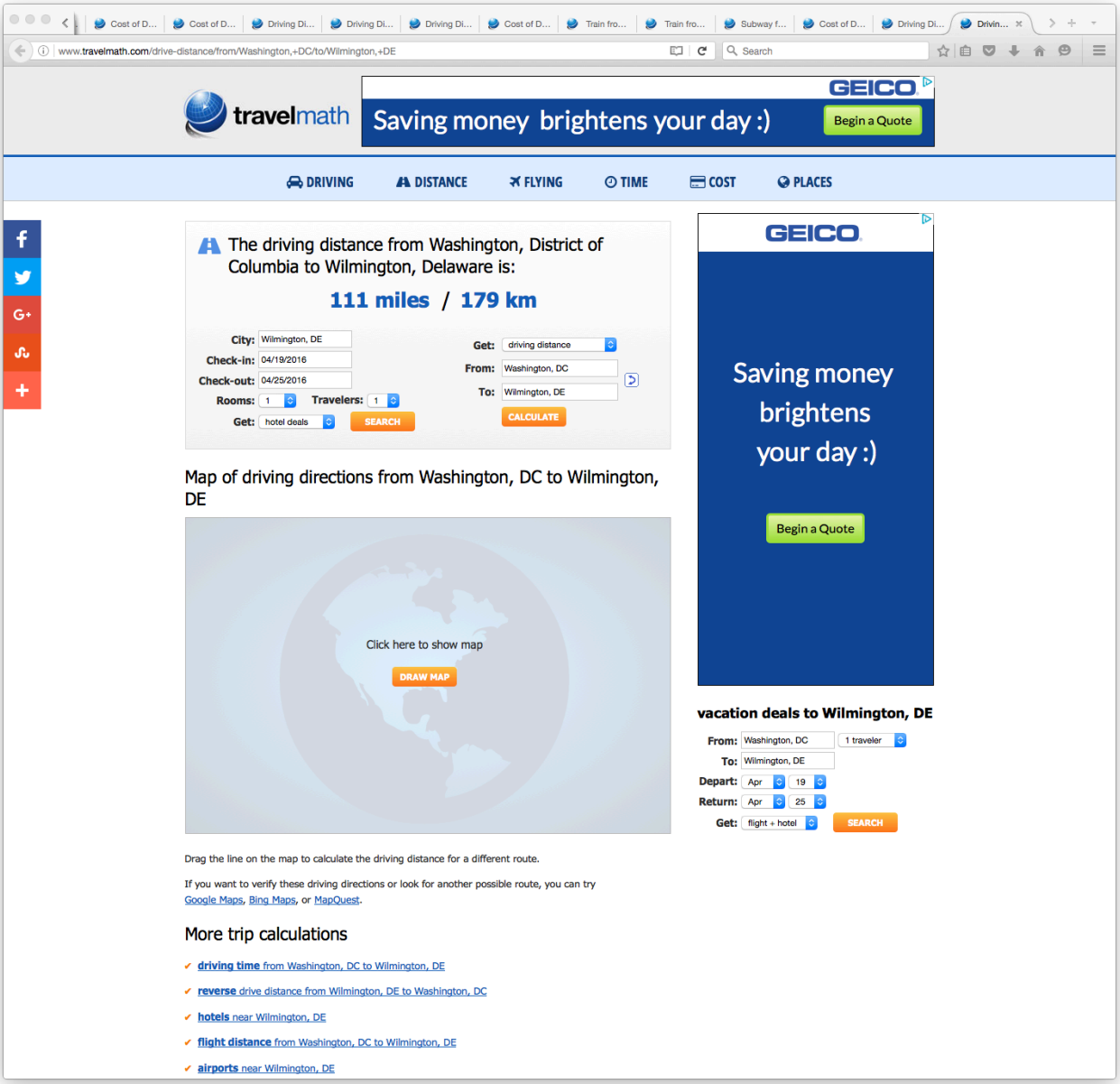
FREE 48" Samsung Smart TV
with purchase of a Samsung Galaxy S7 on AT&T Next* when you have DIRECTV and AT&T wireless*
Shop now


www.travelmath.com/drive-distance/from/Washington,+DC/to/Baltimore,+MD
travelmath
Top Geneva Activities
Chamonix and Mont Blanc Day Trip from Geneva
Viator
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from Washington, District of Columbia to Baltimore, Maryland is:
39 miles / 63 km
City: Baltimore, MD
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: Washington, DC
To: Baltimore, MD
CALCULATE
Map of driving directions from Washington, DC to Baltimore, MD
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving time from Washington, DC to Baltimore, MD
cost of driving from Washington, DC to Baltimore, MD
reverse drive distance from Baltimore, MD to Washington, DC
halfway between Washington, DC and Baltimore, MD
stopping points from Washington, DC to Baltimore, MD
hotels near Baltimore, MD
trivago
Hotel search
City
Check-in
Month/Day/Year
Check-out
Month/Day/Year
Room
Double
Hotel search
vacation deals to Baltimore, MD
From: Washington, DC
1 traveler
To: Baltimore, MD
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH


www.travelmath.com/drive-distance/from/Washington,+DC/to/Boston,+MA
travelmath
GET UP TO 20% OFF.
BOOK NOW
LOEWS HOTELS & RESORTS
THE ROOM YOU NEED
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from Washington, District of Columbia to Boston, Massachusetts is:
441 miles / 710 km
City: Boston, MA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: Washington, DC
To: Boston, MA
CALCULATE
Map of driving directions from Washington, DC to Boston, MA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving time from Washington, DC to Boston, MA
cost of driving from Washington, DC to Boston, MA
reverse drive distance from Boston, MA to Washington, DC
halfway between Washington, DC and Boston, MA
stopping points from Washington, DC to Boston, MA
hotels near Boston, MA
What it feels like to get 48% less email.
slack
Work, simplified.
FIND OUT MORE
vacation deals to Boston, MA
From: Washington, DC
1 traveler
To: Boston, MA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH


www.travelmath.com/drive-distance/from/Washington,+DC/to/Philadelphia,+PA
travelmath
$99+
Super Cheap Flights
GoLastMinute.com
Find Deals!
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from Washington, District of Columbia to Philadelphia, Pennsylvania is:
142 miles / 229 km
City: Philadelphia, PA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1 Travelers: 1
Get: hotel deals SEARCH
Get: driving distance
From: Washington, DC
To: Philadelphia, PA
CALCULATE
Map of driving directions from Washington, DC to Philadelphia, PA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving time from Washington, DC to Philadelphia, PA
cost of driving from Washington, DC to Philadelphia, PA
reverse drive distance from Philadelphia, PA to Washington, DC
halfway between Washington, DC and Philadelphia, PA
stopping points from Washington, DC to Philadelphia, PA
STAY LONGER.
SAVE MORE.
GET UP TO
20% OFF.
BOOK NOW
EVERYONE NEEDS TO
stay a little longer.
LOEWS HOTELS RESORTS
THE ROOM YOU NEED
vacation deals to Philadelphia, PA
From: Washington, DC 1 traveler
To: Philadelphia, PA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel SEARCH


www.travelmath.com/drive-distance/from/Washington,+DC/to/Wilmington,+DE
travelmath
GEICO
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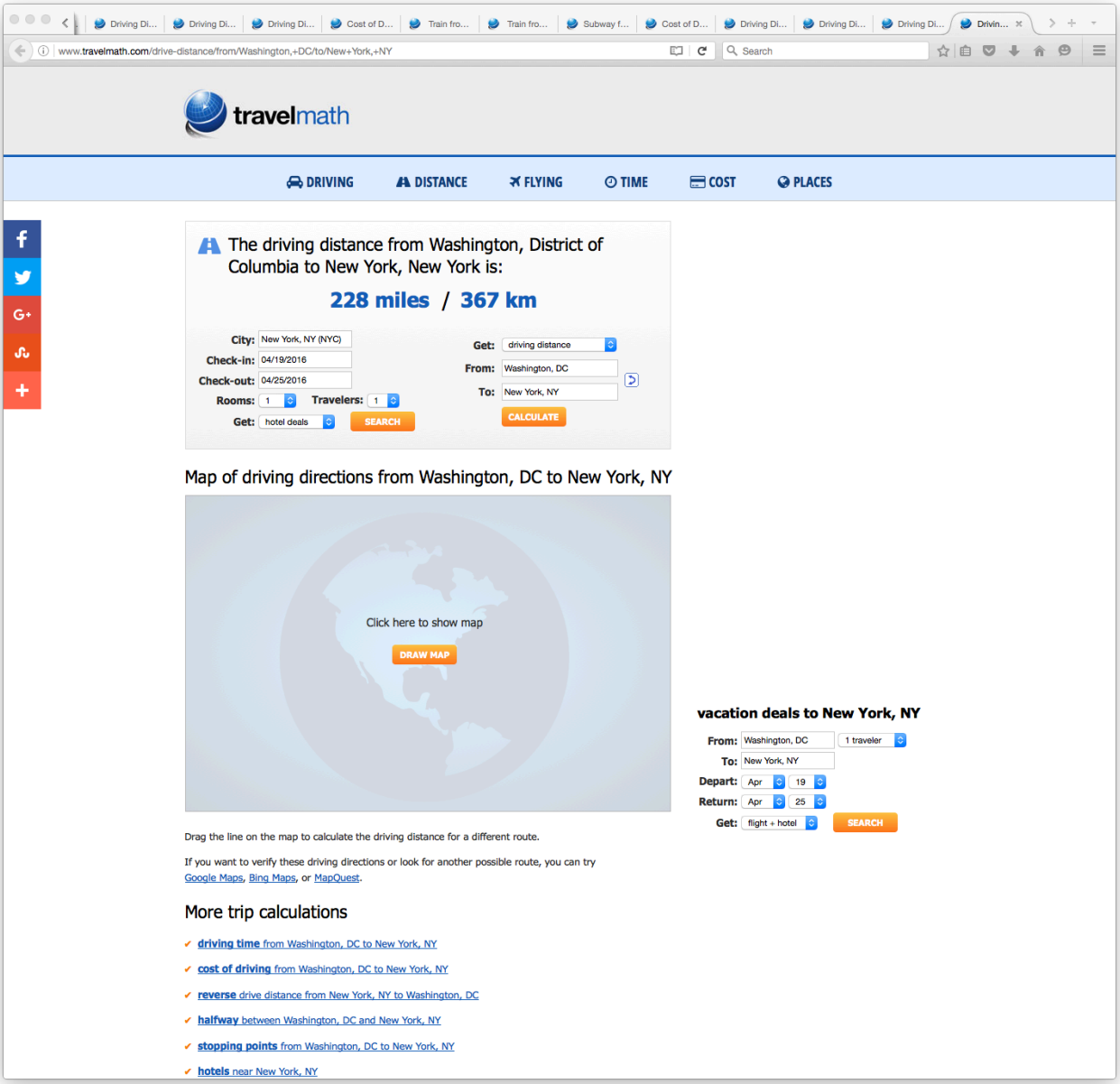
Begin a Quote
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from Washington, District of Columbia to Wilmington, Delaware is:
111 miles / 179 km
City: Wilmington, DE
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: Washington, DC
To: Wilmington, DE
CALCULATE
Map of driving directions from Washington, DC to Wilmington, DE
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving time from Washington, DC to Wilmington, DE
reverse drive distance from Wilmington, DE to Washington, DC
hotels near Wilmington, DE
flight distance from Washington, DC to Wilmington, DE
airports near Wilmington, DE
GEICO
Saving money brightens your day :)
Begin a Quote
vacation deals to Wilmington, DE
From: Washington, DC
1 traveler
To: Wilmington, DE
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH


www.travelmath.com/drive-distance/from/Washington,+DC/to/New+York,+NY
travelmath
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from Washington, District of Columbia to New York, New York is:
228 miles / 367 km
City: New York, NY (NYC)
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: Washington, DC
To: New York, NY
CALCULATE
Map of driving directions from Washington, DC to New York, NY
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving time from Washington, DC to New York, NY
cost of driving from Washington, DC to New York, NY
reverse drive distance from New York, NY to Washington, DC
halfway between Washington, DC and New York, NY
stopping points from Washington, DC to New York, NY
hotels near New York, NY
vacation deals to New York, NY
From: Washington, DC
1 traveler
To: New York, NY
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Project Email
First Name :	William
Last Name :	Grindley
Stakeholder Comments/Issues :	See Attached William Grindley
Notes :	
Attachments :	Supplemental Comment #3.pdf (6 mb)

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

April 18, 2016

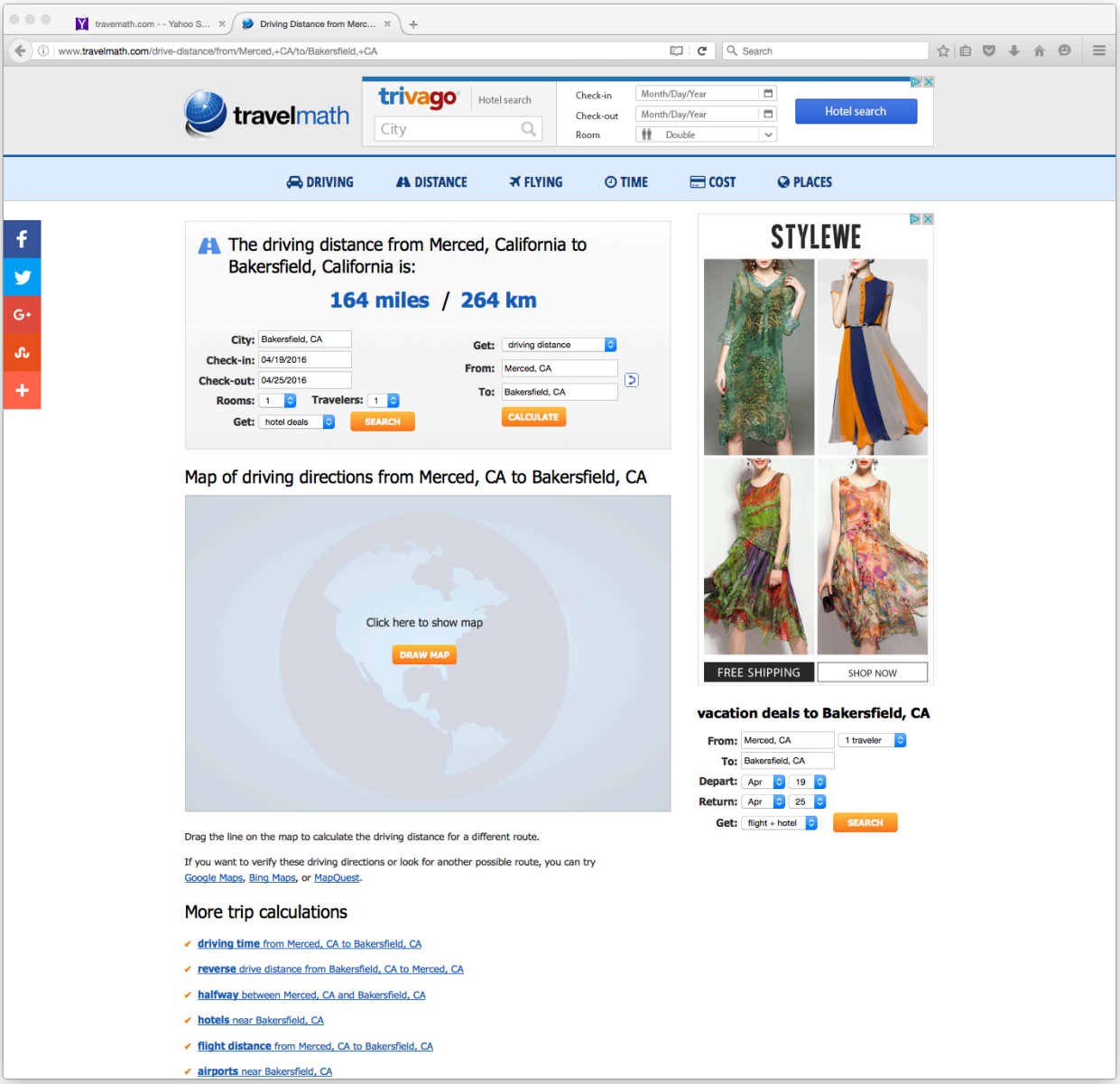
Subject – Supplemental Comment #3 Regarding Draft 2016 Business Plan

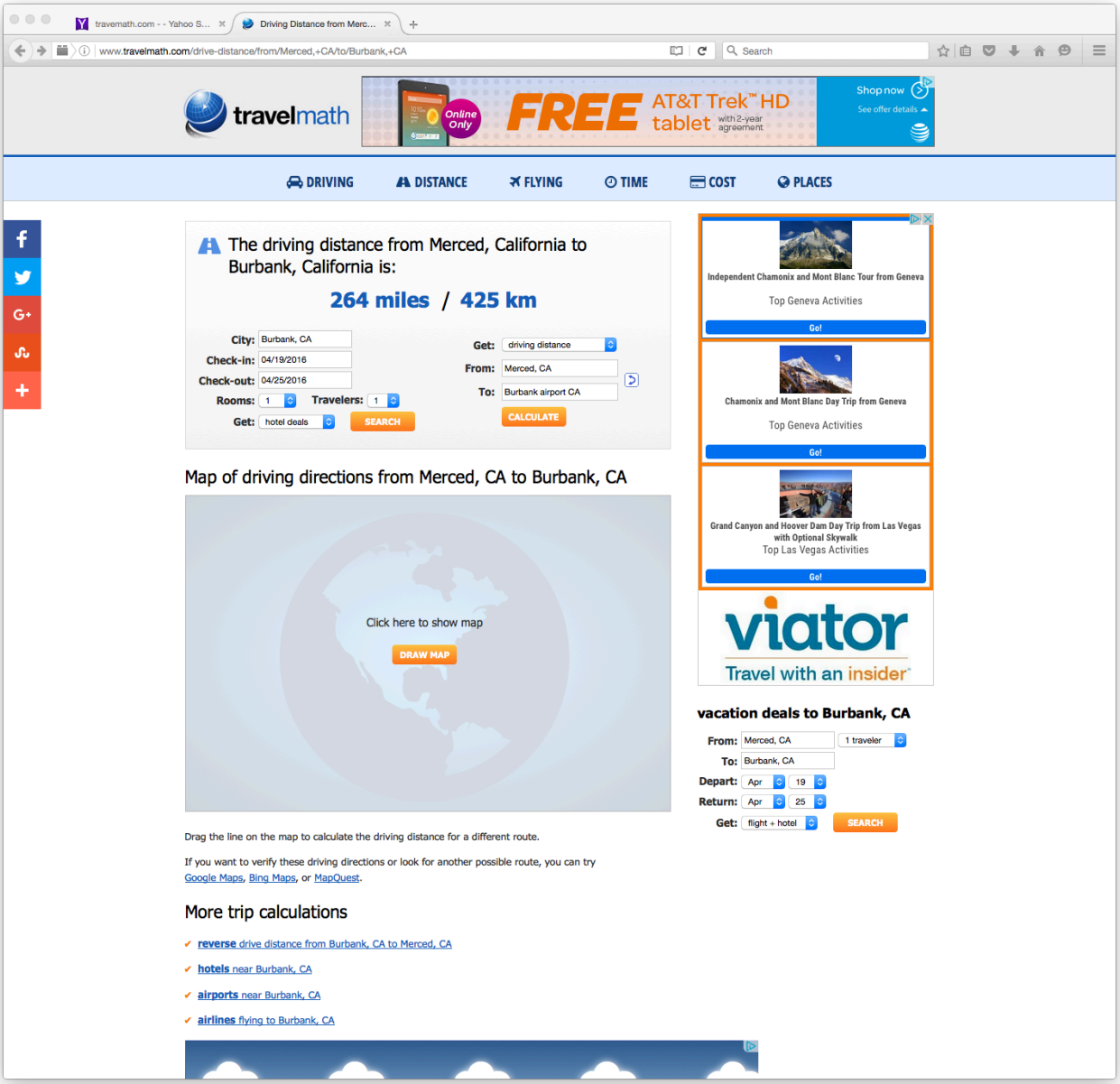
Topic –This Is A Supplemental Comment To Comment Of April12, 2016

The purpose of this Supplemental Comment is to augment my Comment of April 12, 2016. There are a number of places in my April 12, 2016 Comments where I refer to Web pages that provided mileage, costs and travel time information, etc.

Included as part of this Supplemental Comment are "screen shots" that provide the URL and mileage information that were referenced in my April 12, 2016 Comment.

William Grindley
151 Laurel Street
Atherton CA 94027
Email: williamgrindleybarch65@gmail.com


travemath.com - - Yahoo S...
Driving Distance from Merc...
www.travelmath.com/drive-distance/from/Merced,+CA/to/Bakersfield,+CA
Search
travelmath
trivago
Hotel search
City
Check-in
Month/Day/Year
Check-out
Month/Day/Year
Room
Double
Hotel search
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from Merced, California to Bakersfield, California is:
164 miles / 264 km
City: Bakersfield, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: Merced, CA
To: Bakersfield, CA
CALCULATE
Map of driving directions from Merced, CA to Bakersfield, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving time from Merced, CA to Bakersfield, CA
reverse drive distance from Bakersfield, CA to Merced, CA
halfway between Merced, CA and Bakersfield, CA
hotels near Bakersfield, CA
flight distance from Merced, CA to Bakersfield, CA
airports near Bakersfield, CA
STYLEWE
FREE SHIPPING
SHOP NOW
vacation deals to Bakersfield, CA
From: Merced, CA
1 traveler
To: Bakersfield, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH


travemath.com - - Yahoo S...
Driving Distance from Merc...
www.travelmath.com/drive-distance/from/Merced,+CA/to/Burbank,+CA
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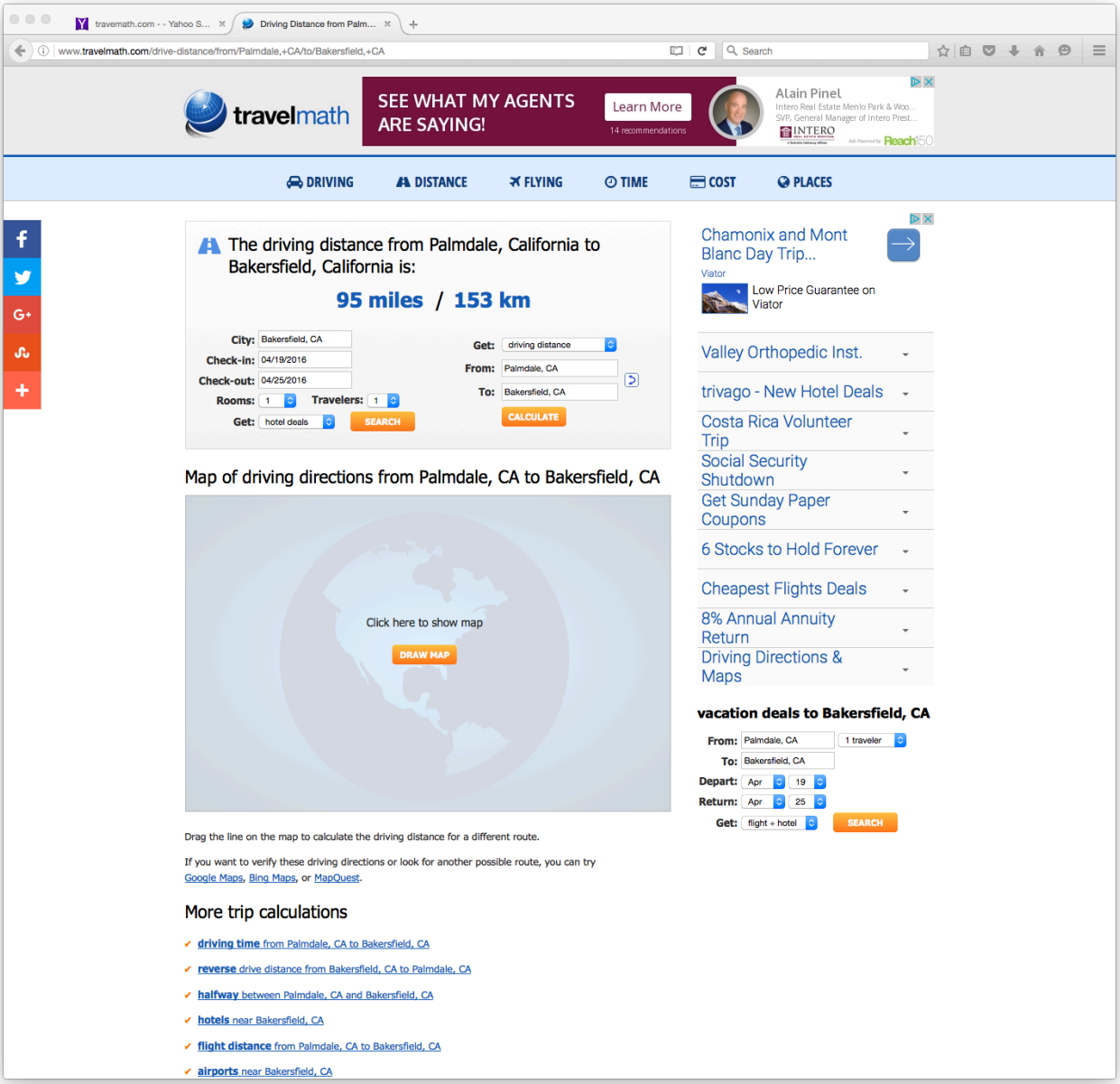
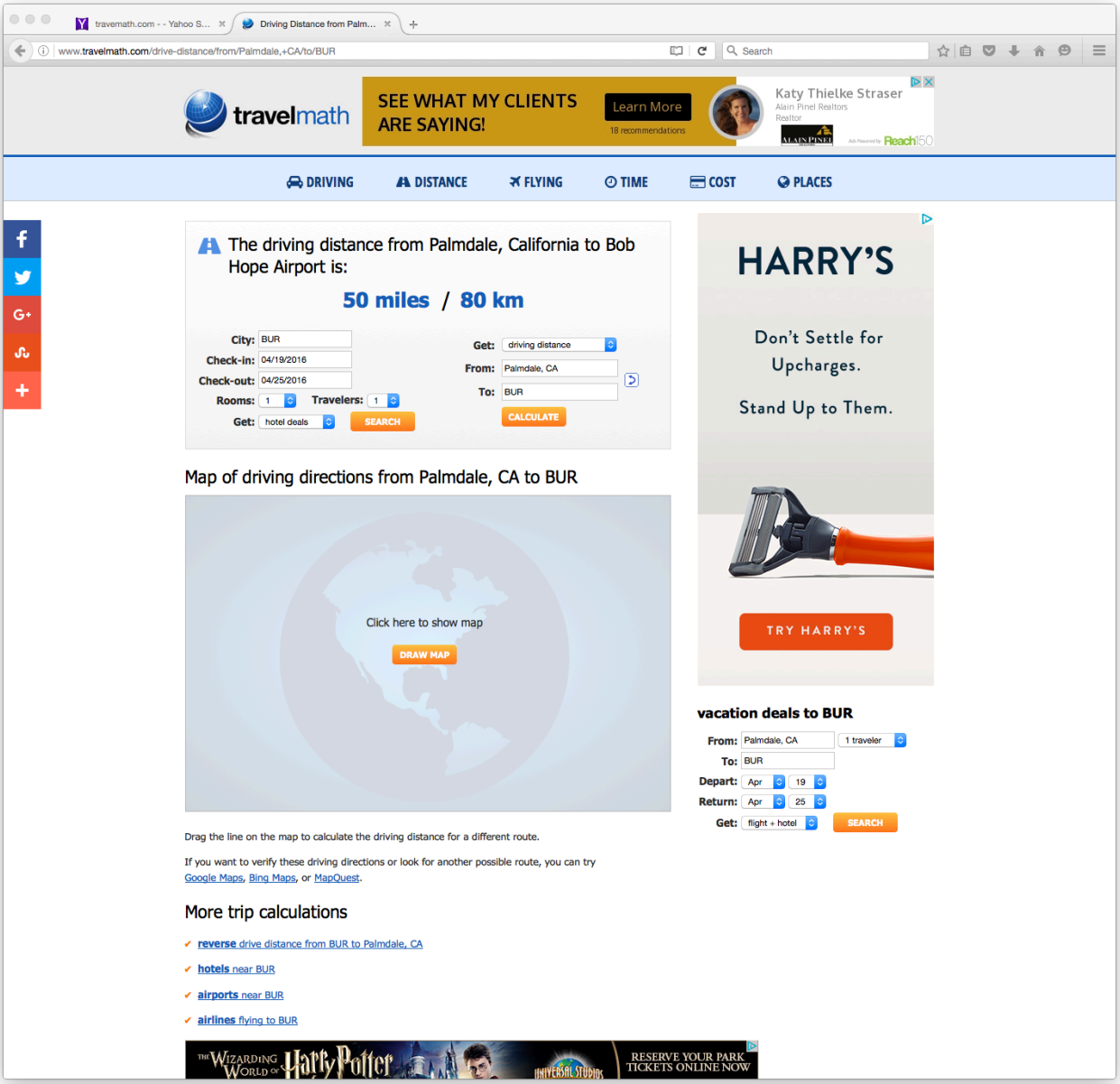
travelmath
Online Only
FREE AT&T Trek™ HD tablet with 2-year agreement
Shop now
See offer details
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from Merced, California to Burbank, California is:
264 miles / 425 km
City: Burbank, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: Merced, CA
To: Burbank airport CA
CALCULATE
Map of driving directions from Merced, CA to Burbank, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
reverse drive distance from Burbank, CA to Merced, CA
hotels near Burbank, CA
airports near Burbank, CA
airlines flying to Burbank, CA
Independent Chamonix and Mont Blanc Tour from Geneva
Top Geneva Activities
Go!
Chamonix and Mont Blanc Day Trip from Geneva
Top Geneva Activities
Go!
Grand Canyon and Hoover Dam Day Trip from Las Vegas with Optional Skywalk
Top Las Vegas Activities
Go!
viator
Travel with an insider
vacation deals to Burbank, CA
From: Merced, CA
1 traveler
To: Burbank, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH


travemath.com - - Yahoo S...
Driving Distance from Palm...
www.travelmath.com/drive-distance/from/Palmdale,+CA/to/Bakersfield,+CA
Search
travelmath
SEE WHAT MY AGENTS ARE SAYING!
Learn More
14 recommendations
Alain Pinel
Intero Real Estate Menlo Park & Woo...
SVP, General Manager of Intero Prest...
INTERO
Reach150
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from Palmdale, California to Bakersfield, California is:
95 miles / 153 km
City: Bakersfield, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: Palmdale, CA
To: Bakersfield, CA
CALCULATE
Map of driving directions from Palmdale, CA to Bakersfield, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving time from Palmdale, CA to Bakersfield, CA
reverse drive distance from Bakersfield, CA to Palmdale, CA
halfway between Palmdale, CA and Bakersfield, CA
hotels near Bakersfield, CA
flight distance from Palmdale, CA to Bakersfield, CA
airports near Bakersfield, CA
Chamonix and Mont Blanc Day Trip...
Viator
Low Price Guarantee on Viator
Valley Orthopedic Inst.
trivago - New Hotel Deals
Costa Rica Volunteer Trip
Social Security Shutdown
Get Sunday Paper Coupons
6 Stocks to Hold Forever
Cheapest Flights Deals
8% Annual Annuity Return
Driving Directions & Maps
vacation deals to Bakersfield, CA
From: Palmdale, CA
1 traveler
To: Bakersfield, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH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Driving Distance from Palm...
www.travelmath.com/drive-distance/from/Palmdale,+CA/to/BUR
Search
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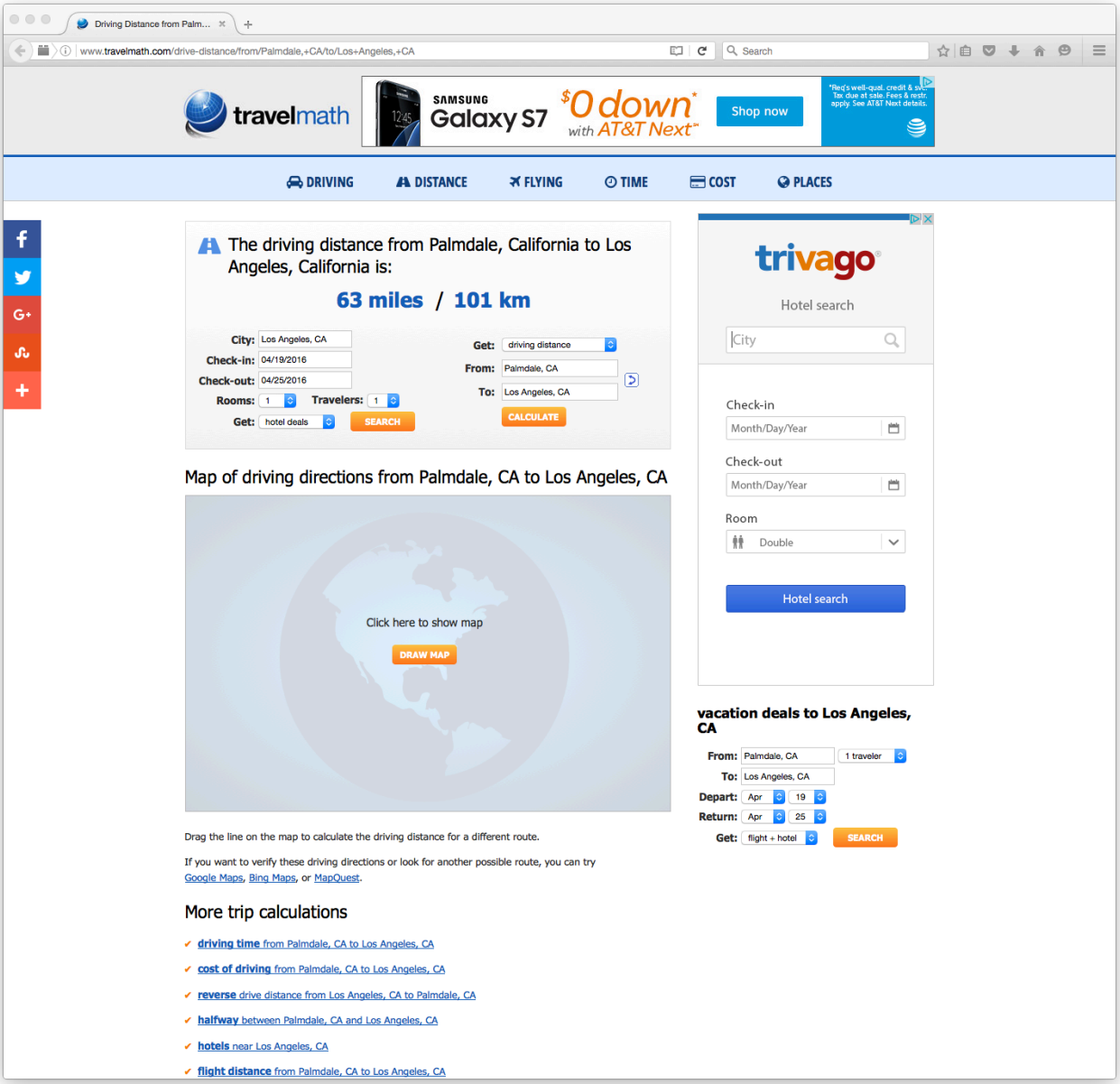
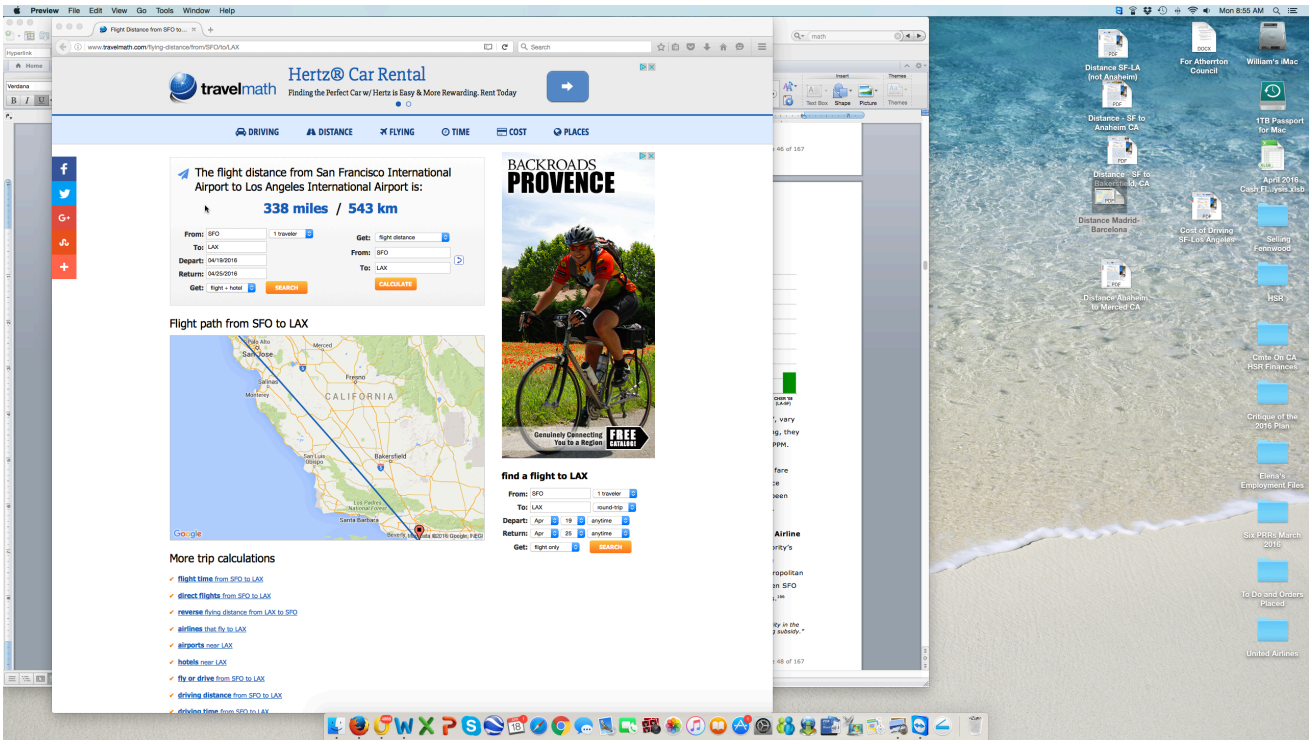
Learn More
18 recommendations
Katy Thielke Straser
Alain Pinel Realtors
Realtor
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from Palmdale, California to Bob Hope Airport is:
50 miles / 80 km
City: BUR
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: Palmdale, CA
To: BUR
CALCULATE
Map of driving directions from Palmdale, CA to BUR
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
reverse drive distance from BUR to Palmdale, CA
hotels near BUR
airports near BUR
airlines flying to BUR
HARRY'S
Don't Settle for Upcharges.
Stand Up to Them.
TRY HARRY'S
vacation deals to BUR
From: Palmdale, CA
1 traveler
To: BUR
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH
THE WIZARDING WORLD OF Harry Potter
UNIVERSAL STUDIOS
RESERVE YOUR PARK TICKETS ONLINE NOW


Driving Distance from Palm...
www.travelmath.com/drive-distance/from/Palmdale,+CA/to/Los+Angeles,+CA
Search
travelmath
SAMSUNG
Galaxy S7
$0 down with AT&T Next
Shop now
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from Palmdale, California to Los Angeles, California is:
63 miles / 101 km
City: Los Angeles, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: Palmdale, CA
To: Los Angeles, CA
CALCULATE
Map of driving directions from Palmdale, CA to Los Angeles, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving time from Palmdale, CA to Los Angeles, CA
cost of driving from Palmdale, CA to Los Angeles, CA
reverse drive distance from Los Angeles, CA to Palmdale, CA
halfway between Palmdale, CA and Los Angeles, CA
hotels near Los Angeles, CA
flight distance from Palmdale, CA to Los Angeles, CA
trivago
Hotel search
City
Check-in
Month/Day/Year
Check-out
Month/Day/Year
Room
Double
Hotel search
vacation deals to Los Angeles, CA
From: Palmdale, CA
1 traveler
To: Los Angeles, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH


travelmath
Hertz® Car Rental
Finding the Perfect Car w/ Hertz is Easy & More Rewarding. Rent Today
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The flight distance from San Francisco International Airport to Los Angeles International Airport is:
338 miles / 543 km
CALCULATE
SEARCH
Flight path from SFO to LAX
BACKROADS
PROVENCE
Genuinely Connecting You to a Region
FREE CATALOG!
find a flight to LAX
More trip calculations
flight time from SFO to LAX
direct flights from SFO to LAX
reverse flying distance from LAX to SFO
airlines that fly to LAX
airports near LAX
hotels near LAX
fly or drive from SFO to LAX
driving distance from SFO to LAX
Distance SF-LA (not Anaheim)
For Atherton Council
William's iMac
Distance - SF to Anaheim CA
1TB Passport for Mac
Distance - SF to Bakersfield, CA
April 2016 Cash Flows.xlsb
Distance Madrid-Barcelona
Cost of Driving SF-Los Angeles
Selling Fennwood
Distance Anaheim to Merced CA
HSR
Cmte On CA HSR Finances
Critique of the 2016 Plan
Elena's Employment Files
Six PRRs March 2016
To Do and Orders Placed
United Airlines

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Project Email
First Name :	William
Last Name :	Grindley
Stakeholder Comments/Issues :	See Attached William Grindley
Notes :	
Attachments :	Supplemental Comment #2.pdf (7 mb)

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

April 18, 2016

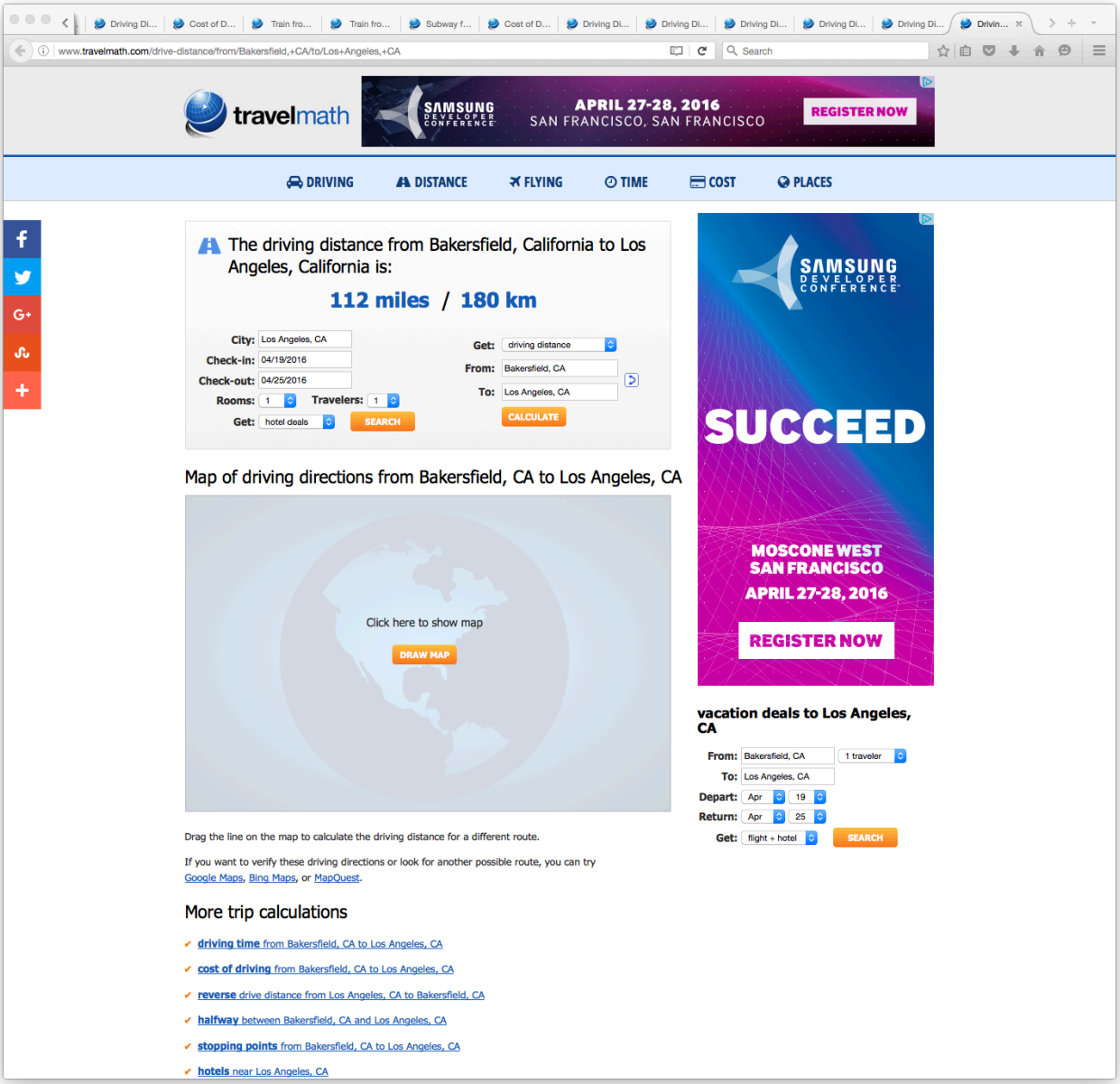
Subject – Supplemental Comment #2 Regarding Draft 2016 Business Plan

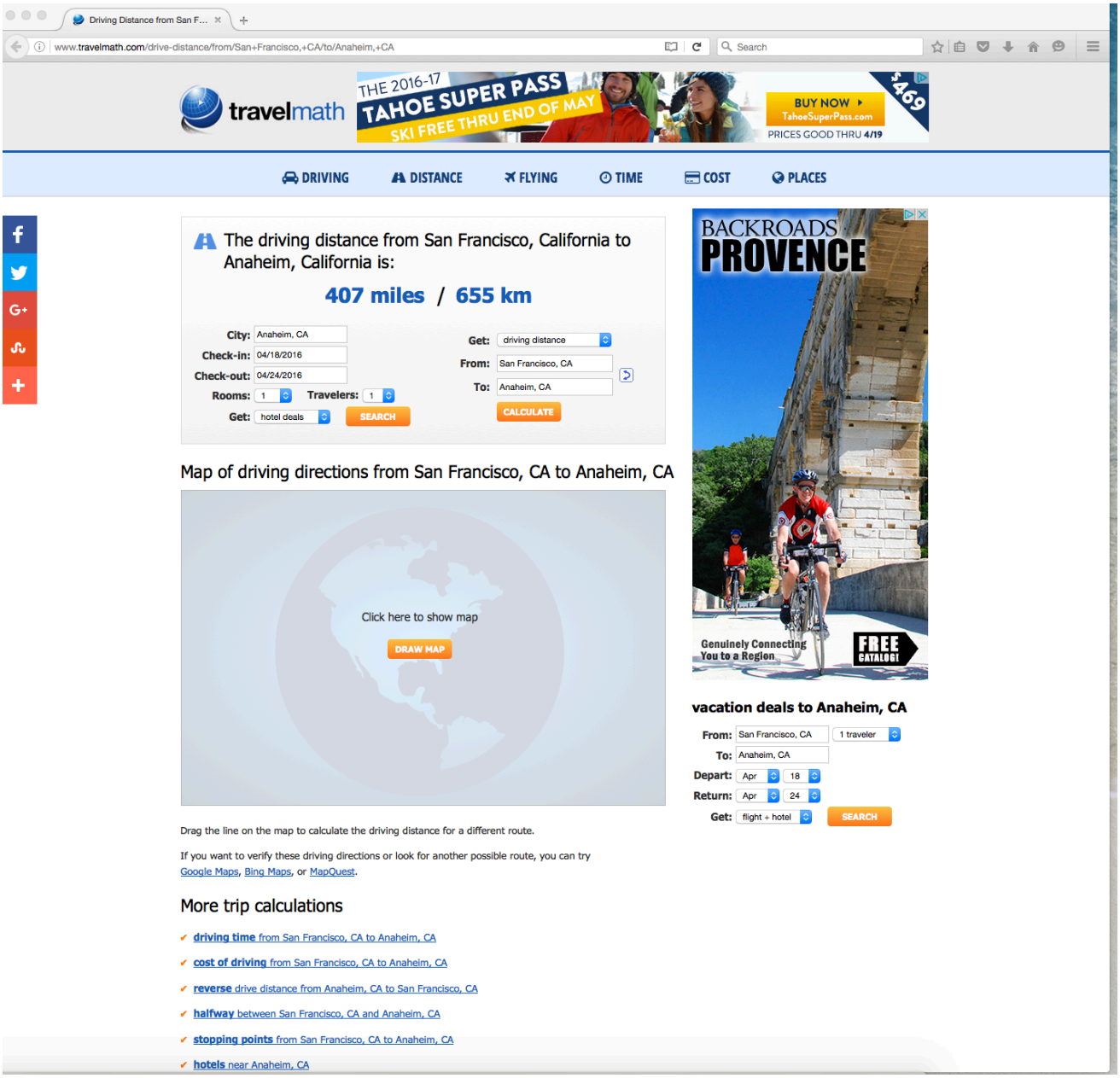
Topic –This Is A Supplemental Comment To Comment Of April12, 2016

The purpose of this Supplemental Comment is to augment my Comment of April 12, 2016. There are a number of places in my April 12, 2016 Comments where I refer to Web pages that provided mileage, costs and travel time information, etc.

Included as part of this Supplemental Comment are "screen shots" that provide the URL and mileage information that were referenced in my April 12, 2016 Comment.

William Grindley
151 Laurel Street
Atherton CA 94027
Email: williamgrindleybarch65@gmail.com


www.travelmath.com/drive-distance/from/Bakersfield,+CA/to/Los+Angeles,+CA
travelmath
SAMSUNG DEVELOPER CONFERENCE
APRIL 27-28, 2016
SAN FRANCISCO, SAN FRANCISCO
REGISTER NOW
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from Bakersfield, California to Los Angeles, California is:
112 miles / 180 km
City: Los Angeles, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: Bakersfield, CA
To: Los Angeles, CA
CALCULATE
Map of driving directions from Bakersfield, CA to Los Angeles, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving time from Bakersfield, CA to Los Angeles, CA
cost of driving from Bakersfield, CA to Los Angeles, CA
reverse drive distance from Los Angeles, CA to Bakersfield, CA
halfway between Bakersfield, CA and Los Angeles, CA
stopping points from Bakersfield, CA to Los Angeles, CA
hotels near Los Angeles, CA
SAMSUNG DEVELOPER CONFERENCE
SUCCEED
MOSCONE WEST
SAN FRANCISCO
APRIL 27-28, 2016
REGISTER NOW
vacation deals to Los Angeles, CA
From: Bakersfield, CA
1 traveler
To: Los Angeles, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH


Driving Distance from San F...
www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Anaheim,+CA
Search
travelmath
THE 2016-17
TAHOE SUPER PASS
SKI FREE THRU END OF MAY
BUY NOW
TahoeSuperPass.com
PRICES GOOD THRU 4/19
$469
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from San Francisco, California to Anaheim, California is:
407 miles / 655 km
City: Anaheim, CA
Check-in: 04/18/2016
Check-out: 04/24/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: San Francisco, CA
To: Anaheim, CA
CALCULATE
Map of driving directions from San Francisco, CA to Anaheim, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving time from San Francisco, CA to Anaheim, CA
cost of driving from San Francisco, CA to Anaheim, CA
reverse drive distance from Anaheim, CA to San Francisco, CA
halfway between San Francisco, CA and Anaheim, CA
stopping points from San Francisco, CA to Anaheim, CA
hotels near Anaheim, CA
BACKROADS
PROVENCE
Genuinely Connecting You to a Region
FREE CATALOG!
vacation deals to Anaheim, CA
From: San Francisco, CA
1 traveler
To: Anaheim, CA
Depart: Apr 18
Return: Apr 24
Get: flight + hotel
SEARCH

Driving Distance from San F... | Driving Distance from San F...

www.travelmath.com/drive-distance/from/San+Francisco,+CA/to/Bakersfield,+CA

travelmath

DRIVING | DISTANCE | FLYING | TIME | COST | PLACES

The driving distance from San Francisco, California to Bakersfield, California is:

283 miles / 455 km

City: Bakersfield, CA
Check-in: 04/18/2016
Check-out: 04/24/2016
Rooms: 1 Travelers: 1
Get: hotel deals SEARCH

Get: driving distance
From: San Francisco, CA
To: Bakersfield, CA
CALCULATE

Map of driving directions from San Francisco, CA to Bakersfield, CA

Click here to show map

DRAW MAP

Drag the line on the map to calculate the driving distance for a different route.

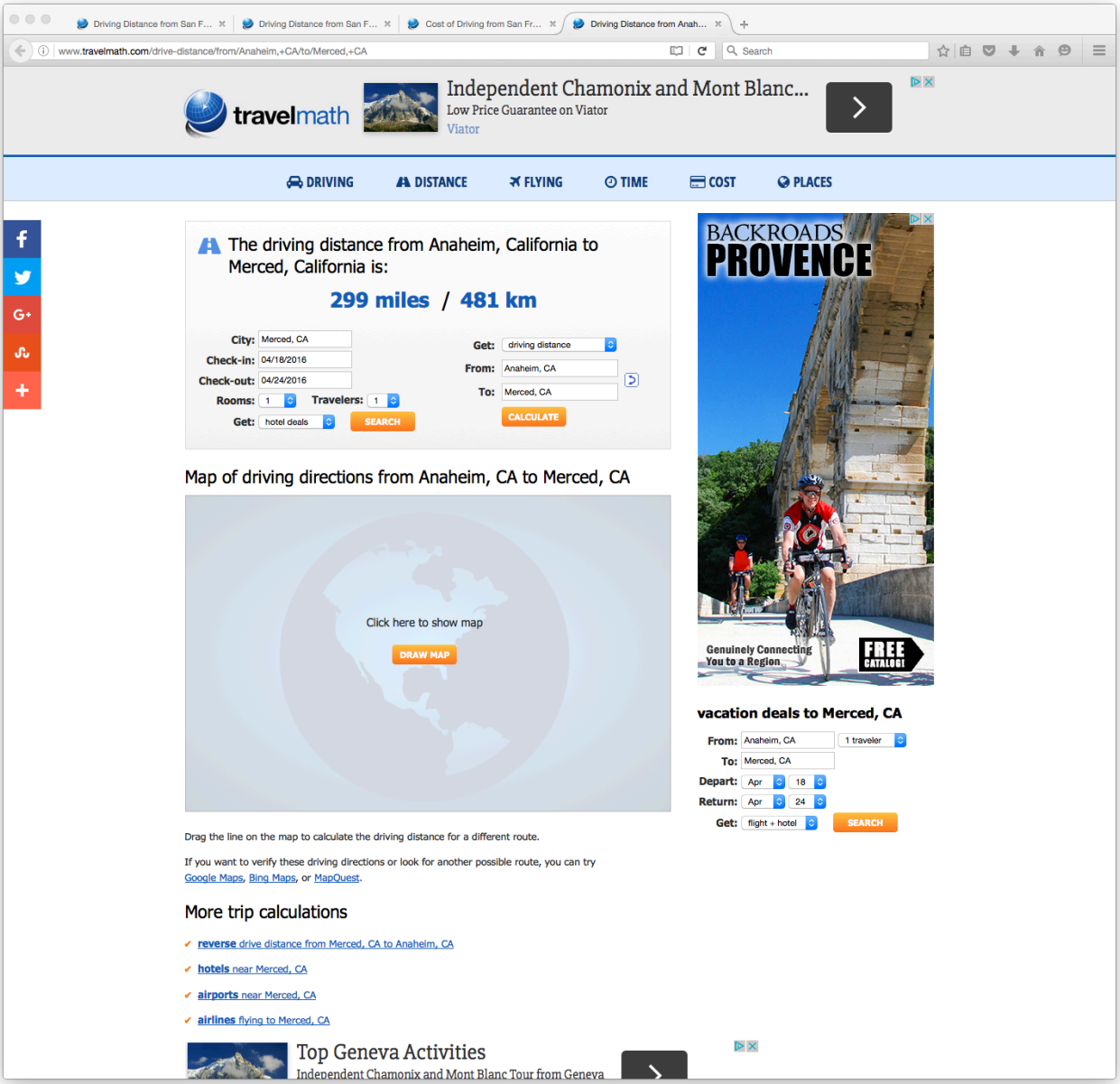
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.

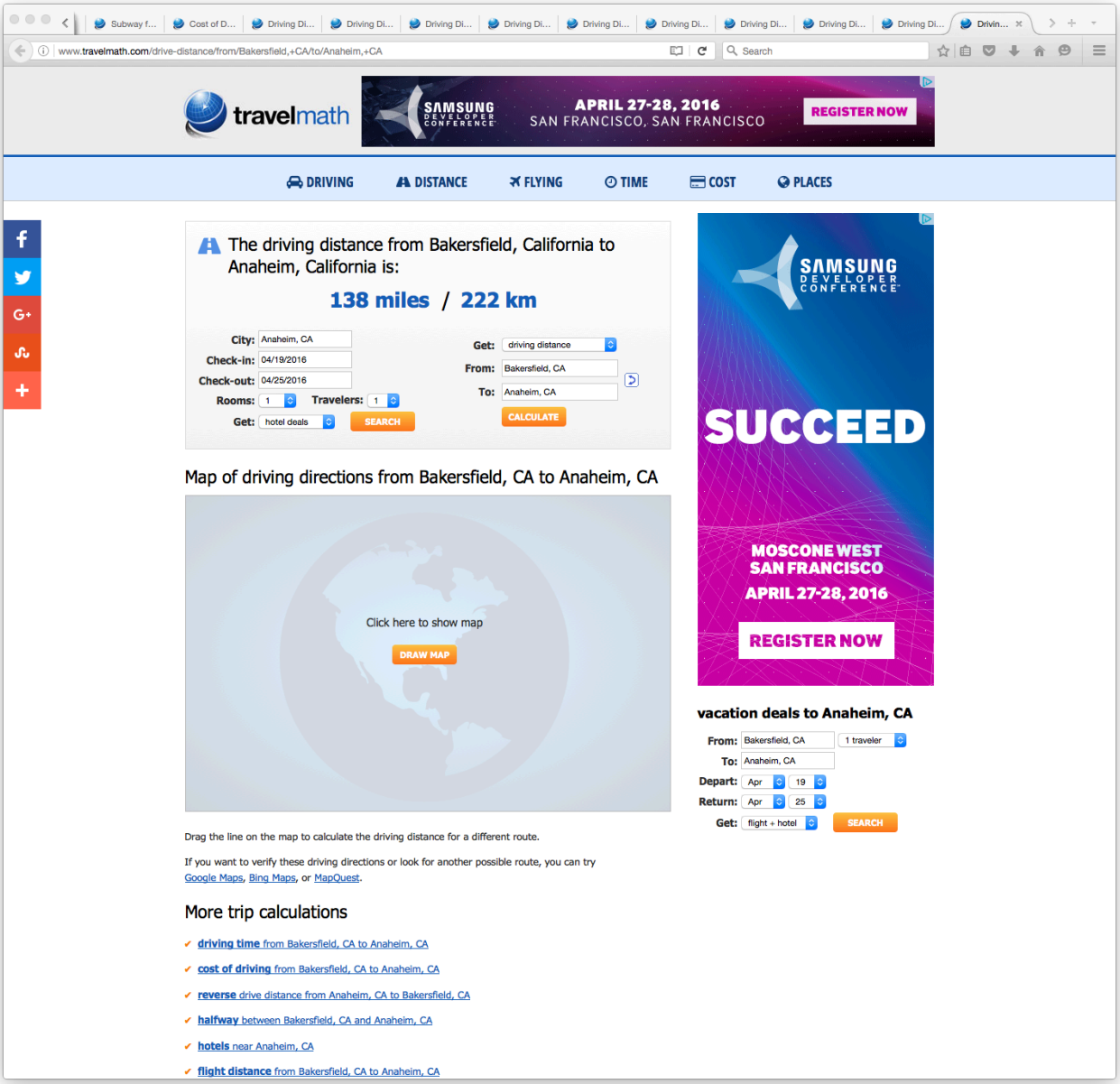
More trip calculations

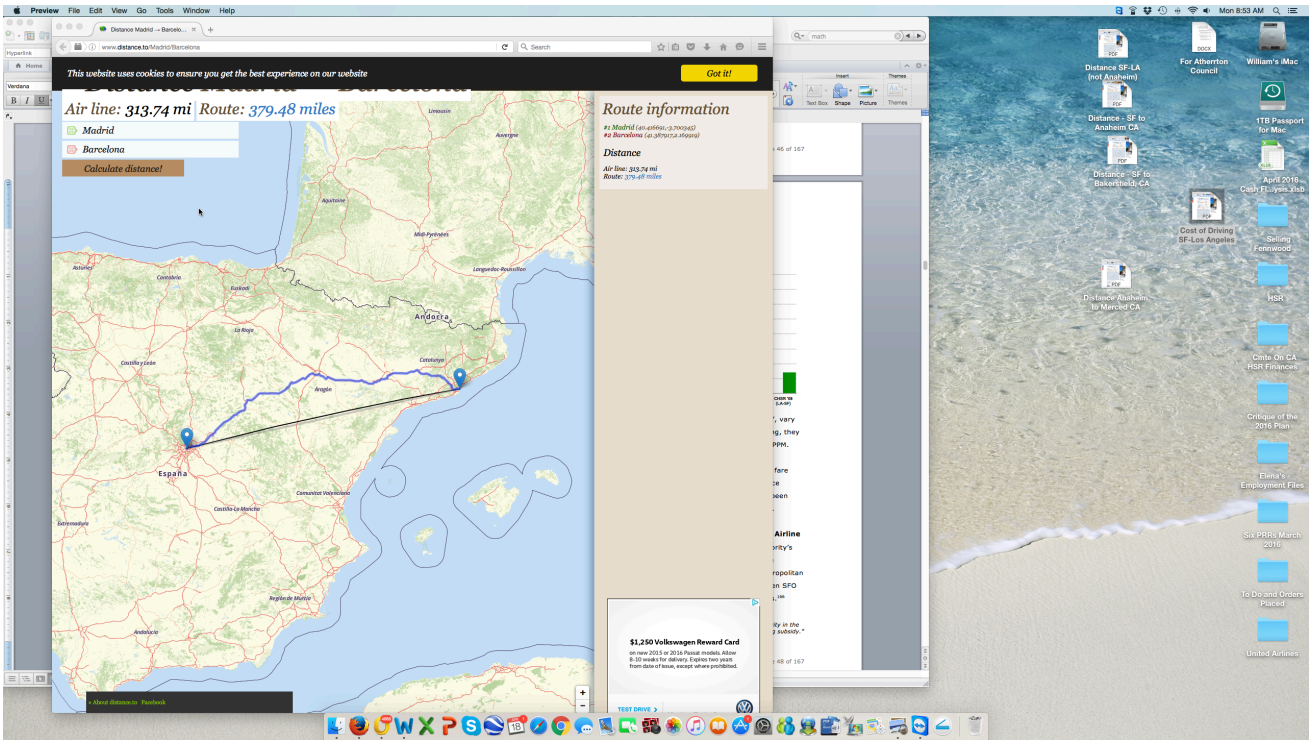
- **driving time** from San Francisco, CA to Bakersfield, CA
- **cost of driving** from San Francisco, CA to Bakersfield, CA
- **reverse** drive distance from Bakersfield, CA to San Francisco, CA
- **halfway** between San Francisco, CA and Bakersfield, CA
- **stopping points** from San Francisco, CA to Bakersfield, CA

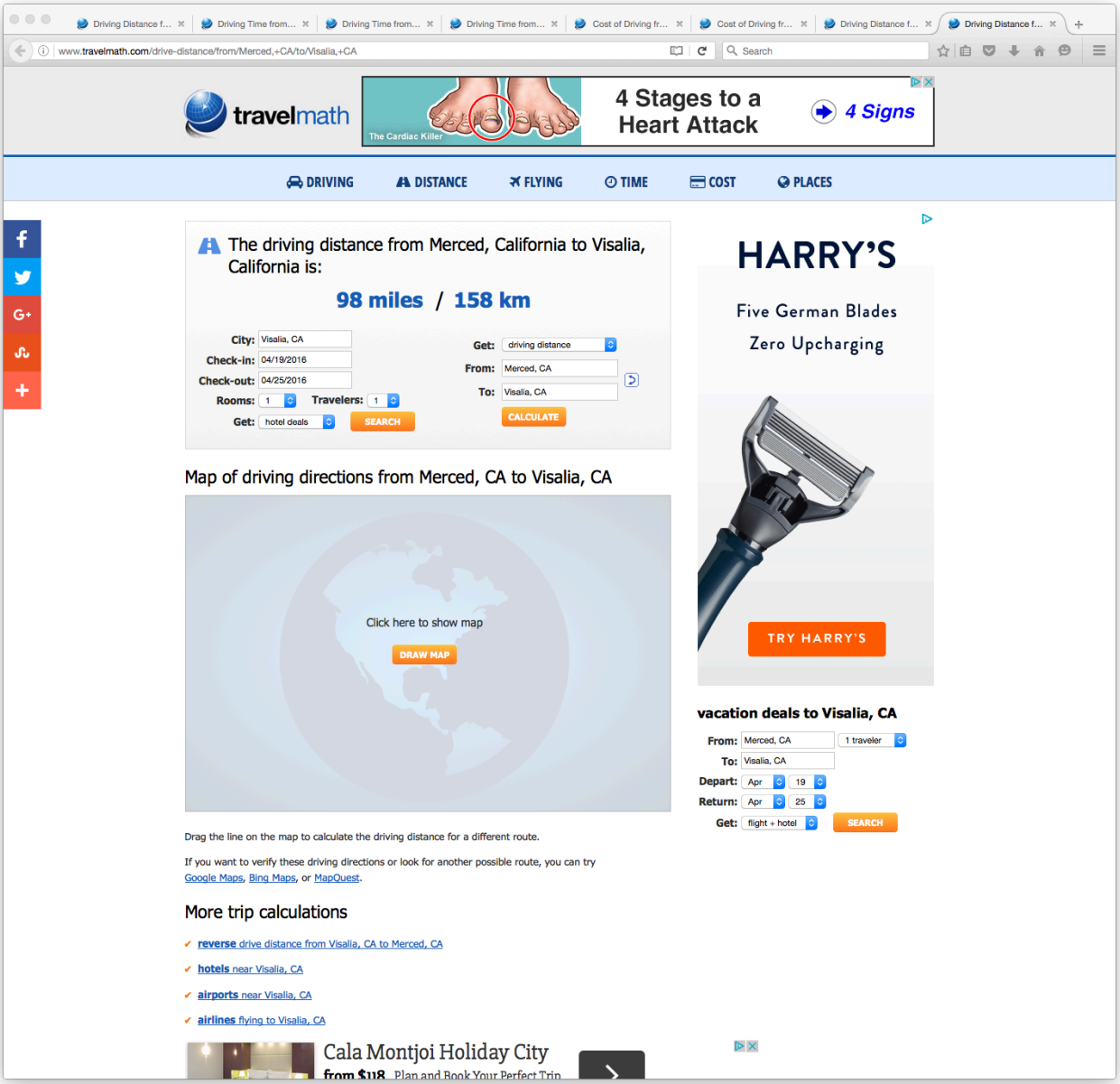
vacation deals to Bakersfield, CA

From: San Francisco, CA 1 traveler
To: Bakersfield, CA
Depart: Apr 18
Return: Apr 24
Get: flight + hotel SEARCH


Driving Distance from San F…
Driving Distance from San F…
Cost of Driving from San Fr…
Driving Distance from Anah…
www.travelmath.com/drive-distance/from/Anaheim,+CA/to/Merced,+CA
Search
travelmath
Independent Chamonix and Mont Blanc...
Low Price Guarantee on Viator
Viator
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from Anaheim, California to Merced, California is:
299 miles / 481 km
City: Merced, CA
Check-in: 04/18/2016
Check-out: 04/24/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: Anaheim, CA
To: Merced, CA
CALCULATE
Map of driving directions from Anaheim, CA to Merced, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
reverse drive distance from Merced, CA to Anaheim, CA
hotels near Merced, CA
airports near Merced, CA
airlines flying to Merced, CA
Top Geneva Activities
Independent Chamonix and Mont Blanc Tour from Geneva
BACKROADS PROVENCE
Genuinely Connecting You to a Region
FREE CATALOG!
vacation deals to Merced, CA
From: Anaheim, CA
1 traveler
To: Merced, CA
Depart: Apr 18
Return: Apr 24
Get: flight + hotel
SEARCH


www.travelmath.com/drive-distance/from/Bakersfield,+CA/to/Anaheim,+CA
travelmath
SAMSUNG DEVELOPER CONFERENCE
APRIL 27-28, 2016
SAN FRANCISCO, SAN FRANCISCO
REGISTER NOW
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from Bakersfield, California to Anaheim, California is:
138 miles / 222 km
City: Anaheim, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: Bakersfield, CA
To: Anaheim, CA
CALCULATE
Map of driving directions from Bakersfield, CA to Anaheim, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
driving time from Bakersfield, CA to Anaheim, CA
cost of driving from Bakersfield, CA to Anaheim, CA
reverse drive distance from Anaheim, CA to Bakersfield, CA
halfway between Bakersfield, CA and Anaheim, CA
hotels near Anaheim, CA
flight distance from Bakersfield, CA to Anaheim, CA
SAMSUNG DEVELOPER CONFERENCE
SUCCEED
MOSCONE WEST
SAN FRANCISCO
APRIL 27-28, 2016
REGISTER NOW
vacation deals to Anaheim, CA
From: Bakersfield, CA
1 traveler
To: Anaheim, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH


This website uses cookies to ensure you get the best experience on our website
Got it!
Air line: 313.74 mi
Route: 379.48 miles
Madrid
Barcelona
Calculate distance!
Route information
Distance
Air line: 313.74 mi
Route: 379.48 miles
$1,250 Volkswagen Reward Card
Distance SF-LA (not Anaheim)
For Atherton Council
William's iMac
Distance - SF to Anaheim CA
1TB Passport for Mac
Distance - SF to Bakersfield, CA
April 2016 Cash Flows.xlsb
Cost of Driving SF-Los Angeles
Selling Fennwood
Distance Anaheim to Merced CA
HSR
Cmte On CA HSR Finances
Critique of the 2016 Plan
Elena's Employment Files
Six PRRs March 2016
To Do and Orders Placed
United Airlines


Driving Distance f...
Driving Time from...
Driving Time from...
Driving Time from...
Cost of Driving fr...
Cost of Driving fr...
Driving Distance f...
Driving Distance f...
www.travelmath.com/drive-distance/from/Merced,+CA/to/Visalia,+CA
Search
travelmath
The Cardiac Killer
4 Stages to a Heart Attack
4 Signs
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The driving distance from Merced, California to Visalia, California is:
98 miles / 158 km
City: Visalia, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: driving distance
From: Merced, CA
To: Visalia, CA
CALCULATE
Map of driving directions from Merced, CA to Visalia, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the driving distance for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
More trip calculations
reverse drive distance from Visalia, CA to Merced, CA
hotels near Visalia, CA
airports near Visalia, CA
airlines flying to Visalia, CA
Cala Montjoi Holiday City
from $18 Plan and Book Your Perfect Trip
HARRY'S
Five German Blades
Zero Upcharging
TRY HARRY'S
vacation deals to Visalia, CA
From: Merced, CA
1 traveler
To: Visalia, CA
Depart: Apr 19
Return: Apr 25
Get: flight + hotel
SEARCH

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Project Email
First Name :	William
Last Name :	Grindley
Stakeholder Comments/Issues :	See Attached William Grindley
Notes :	
Attachments :	Supplemental Comment #1.pdf (4 mb)

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

April 18, 2016

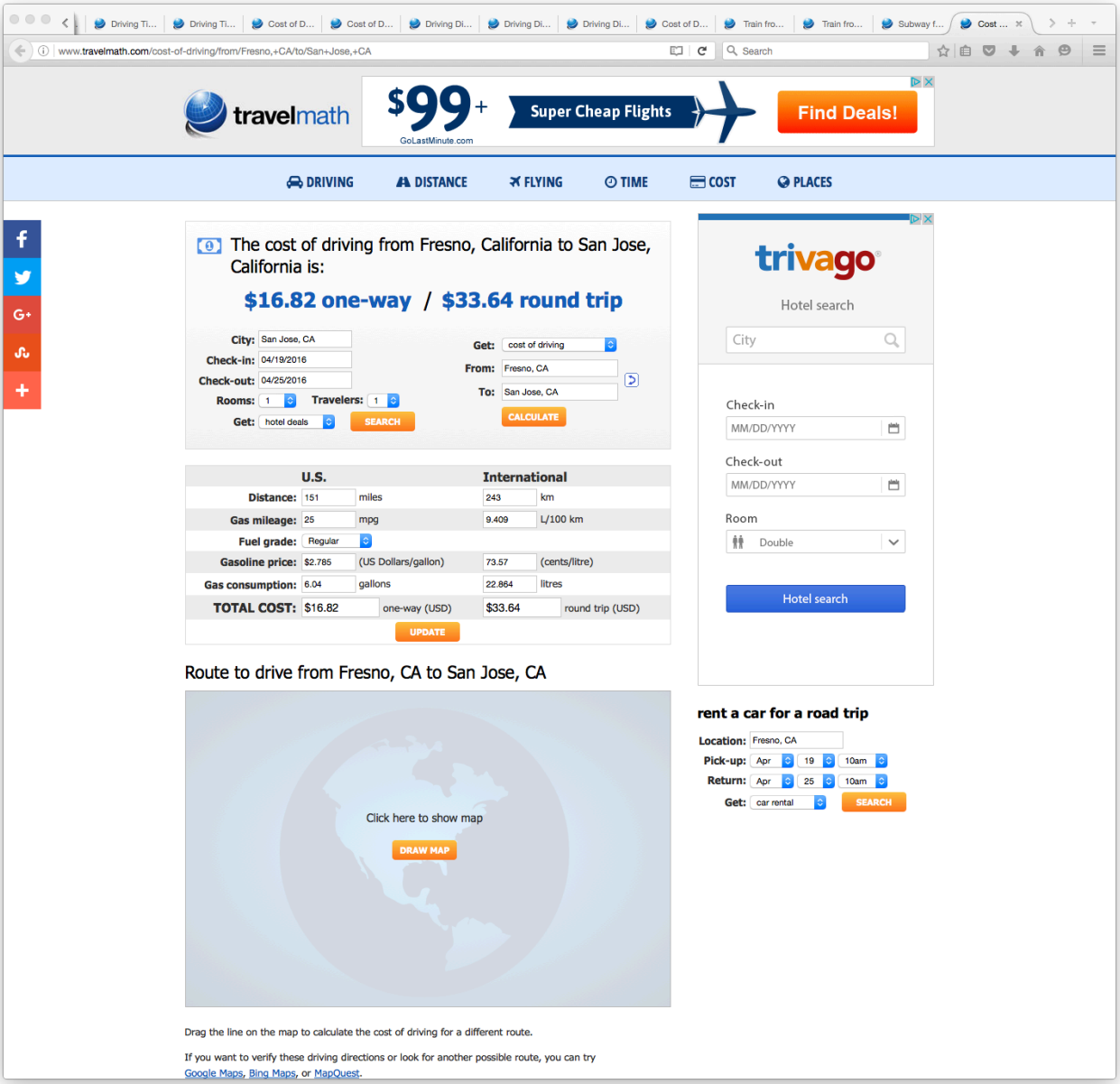
Subject – Supplemental Comment #1 Regarding Draft 2016 Business Plan

Topic –This Is A Supplemental Comment To Comment Of April12, 2016

The purpose of this Supplemental Comment is to augment my Comment of April 12, 2016. There are a number of places in my April 12, 2016 Comments where I refer to Web pages that provided mileage, costs and travel time information, etc.

Included as part of this Supplemental Comment are "screen shots" that provide the URL and mileage information that were referenced in my April 12, 2016 Comment.

William Grindley
151 Laurel Street
Atherton CA 94027
Email: williamgrindleybarch65@gmail.com


www.travelmath.com/cost-of-driving/from/Fresno,+CA/to/San+Jose,+CA
travelmath
$99+
Super Cheap Flights
GoLastMinute.com
Find Deals!
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The cost of driving from Fresno, California to San Jose, California is:
$16.82 one-way / $33.64 round trip
City: San Jose, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: cost of driving
From: Fresno, CA
To: San Jose, CA
CALCULATE
U.S.
International
Distance: 151 miles 243 km
Gas mileage: 25 mpg 9.409 L/100 km
Fuel grade: Regular
Gasoline price: $2.785 (US Dollars/gallon) 73.57 (cents/litre)
Gas consumption: 6.04 gallons 22.864 litres
TOTAL COST: $16.82 one-way (USD) $33.64 round trip (USD)
UPDATE
Route to drive from Fresno, CA to San Jose, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the cost of driving for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
trivago
Hotel search
City
Check-in
MM/DD/YYYY
Check-out
MM/DD/YYYY
Room
Double
Hotel search
rent a car for a road trip
Location: Fresno, CA
Pick-up: Apr 19 10am
Return: Apr 25 10am
Get: car rental
SEARCH

Driving Distance from Palm... | Driving Time from Fresno, C... | Driving Time from Los Bano... | Driving Time from Merced, ... | Cost of Driving from Merce... | Cost of Driving from Fresno...

www.travelmath.com/cost-of-driving/from/Fresno,+CA/to/San+Jose,+CA

travelmath

DRIVING | DISTANCE | FLYING | TIME | COST | PLACES

The cost of driving from Fresno, California to San Jose, California is:

$16.82 one-way / $33.64 round trip

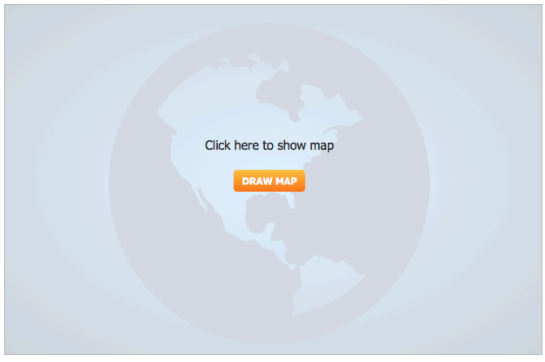
City: San Jose, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1 Travelers: 1
Get: hotel deals SEARCH

Get: cost of driving
From: Fresno, CA
To: San Jose, CA
CALCULATE

	U.S.		International	
Distance:	151	miles	243	km
Gas mileage:	25	mpg	9.409	L/100 km
Fuel grade:	Regular			
Gasoline price:	$2.785	(US Dollars/gallon)	73.57	(cents/litre)
Gas consumption:	6.04	gallons	22.864	litres
TOTAL COST:	$16.82	one-way (USD)	$33.64	round trip (USD)

UPDATE

Route to drive from Fresno, CA to San Jose, CA

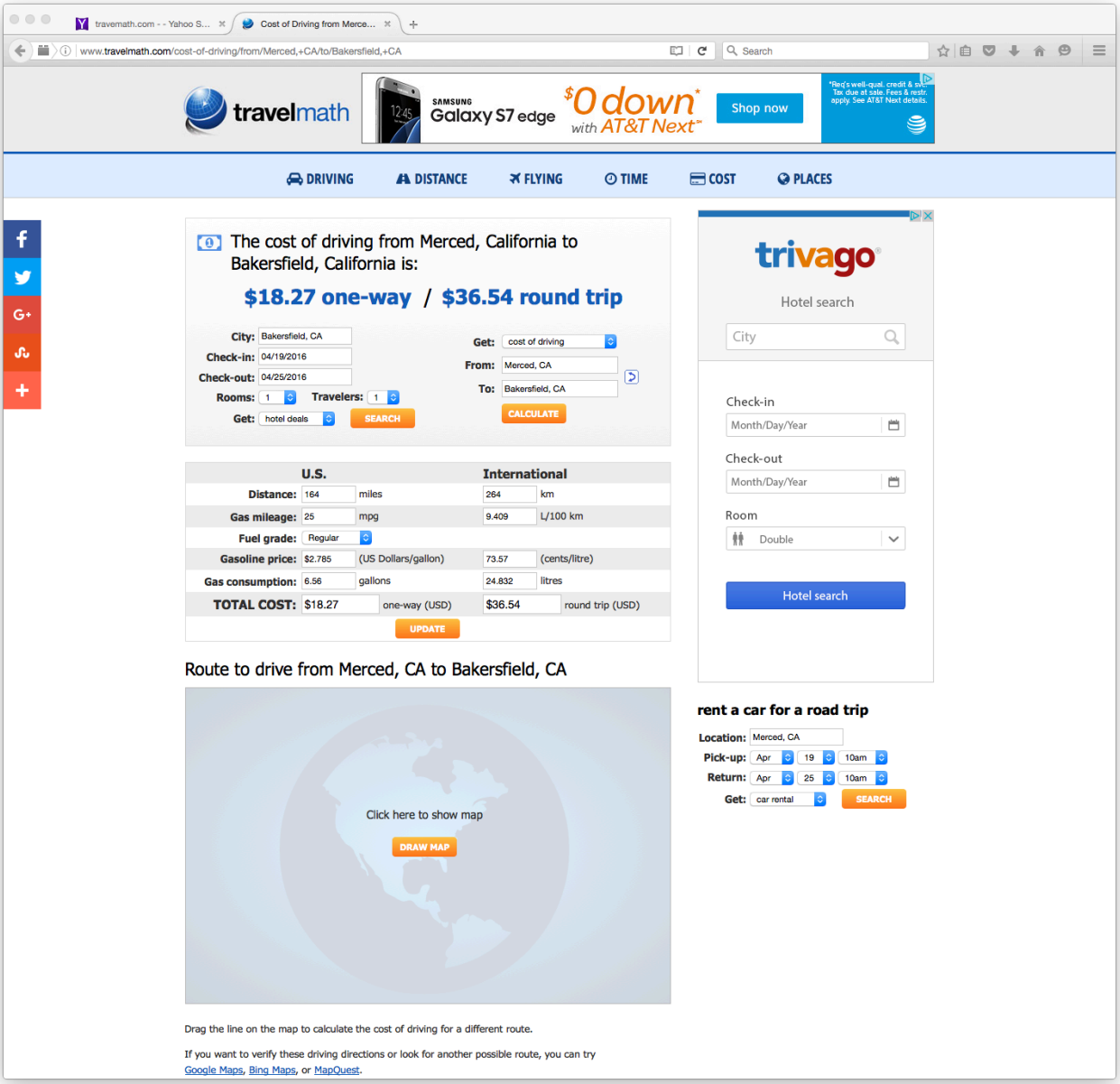


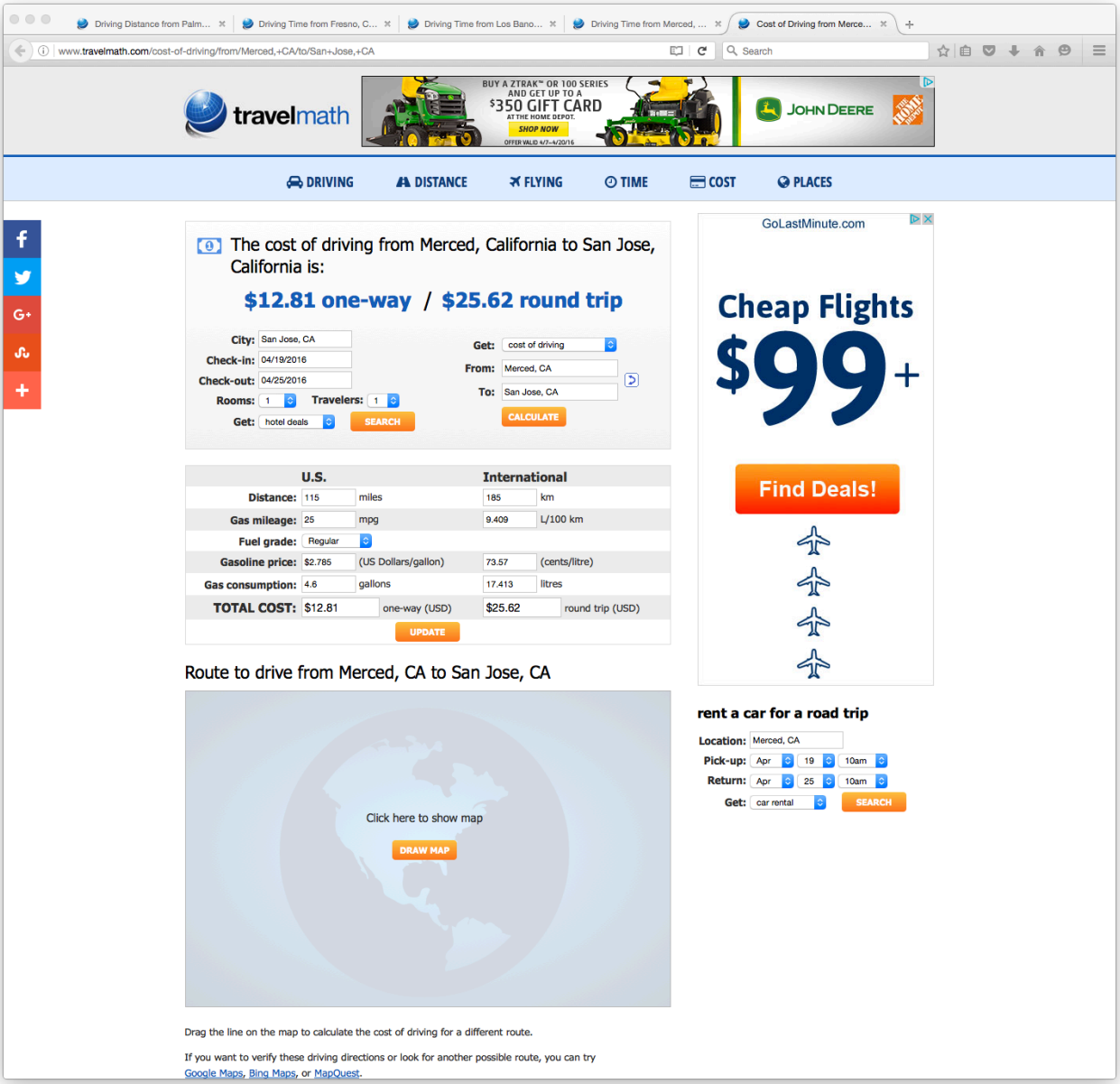
Drag the line on the map to calculate the cost of driving for a different route.

If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.

rent a car for a road trip

Location: Fresno, CA
Pick-up: Apr 19 10am
Return: Apr 25 10am
Get: car rental SEARCH


travemath.com - - Yahoo S...
Cost of Driving from Merce...
www.travelmath.com/cost-of-driving/from/Merced,+CA/to/Bakersfield,+CA
Search
travelmath
SAMSUNG
Galaxy S7 edge
$0 down with AT&T Next
Shop now
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The cost of driving from Merced, California to Bakersfield, California is:
$18.27 one-way / $36.54 round trip
City: Bakersfield, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: cost of driving
From: Merced, CA
To: Bakersfield, CA
CALCULATE
U.S.
International
Distance: 164 miles 264 km
Gas mileage: 25 mpg 9.409 L/100 km
Fuel grade: Regular
Gasoline price: $2.785 (US Dollars/gallon) 73.57 (cents/litre)
Gas consumption: 6.56 gallons 24.832 litres
TOTAL COST: $18.27 one-way (USD) $36.54 round trip (USD)
UPDATE
Route to drive from Merced, CA to Bakersfield, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the cost of driving for a different route.
If you want to verify these driving directions or look for another possible route, you can try Google Maps, Bing Maps, or MapQuest.
trivago
Hotel search
City
Check-in
Month/Day/Year
Check-out
Month/Day/Year
Room
Double
Hotel search
rent a car for a road trip
Location: Merced, CA
Pick-up: Apr 19 10am
Return: Apr 25 10am
Get: car rental
SEARCH


Driving Distance from Palm...
Driving Time from Fresno, C...
Driving Time from Los Bano...
Driving Time from Merced, ...
Cost of Driving from Merce...
www.travelmath.com/cost-of-driving/from/Merced,+CA/to/San+Jose,+CA
Search
travelmath
BUY A ZTRAK™ OR 100 SERIES AND GET UP TO A $350 GIFT CARD AT THE HOME DEPOT.
SHOP NOW
OFFER VALID 4/7–4/20/16
JOHN DEERE
DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The cost of driving from Merced, California to San Jose, California is:
$12.81 one-way / $25.62 round trip
City: San Jose, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: cost of driving
From: Merced, CA
To: San Jose, CA
CALCULATE
U.S.
International
Distance: 115 miles 185 km
Gas mileage: 25 mpg 9.409 L/100 km
Fuel grade: Regular
Gasoline price: $2.785 (US Dollars/gallon) 73.57 (cents/litre)
Gas consumption: 4.6 gallons 17.413 litres
TOTAL COST: $12.81 one-way (USD) $25.62 round trip (USD)
UPDATE
Route to drive from Merced, CA to San Jose, CA
Click here to show map
DRAW MAP
Drag the line on the map to calculate the cost of driving for a different route.
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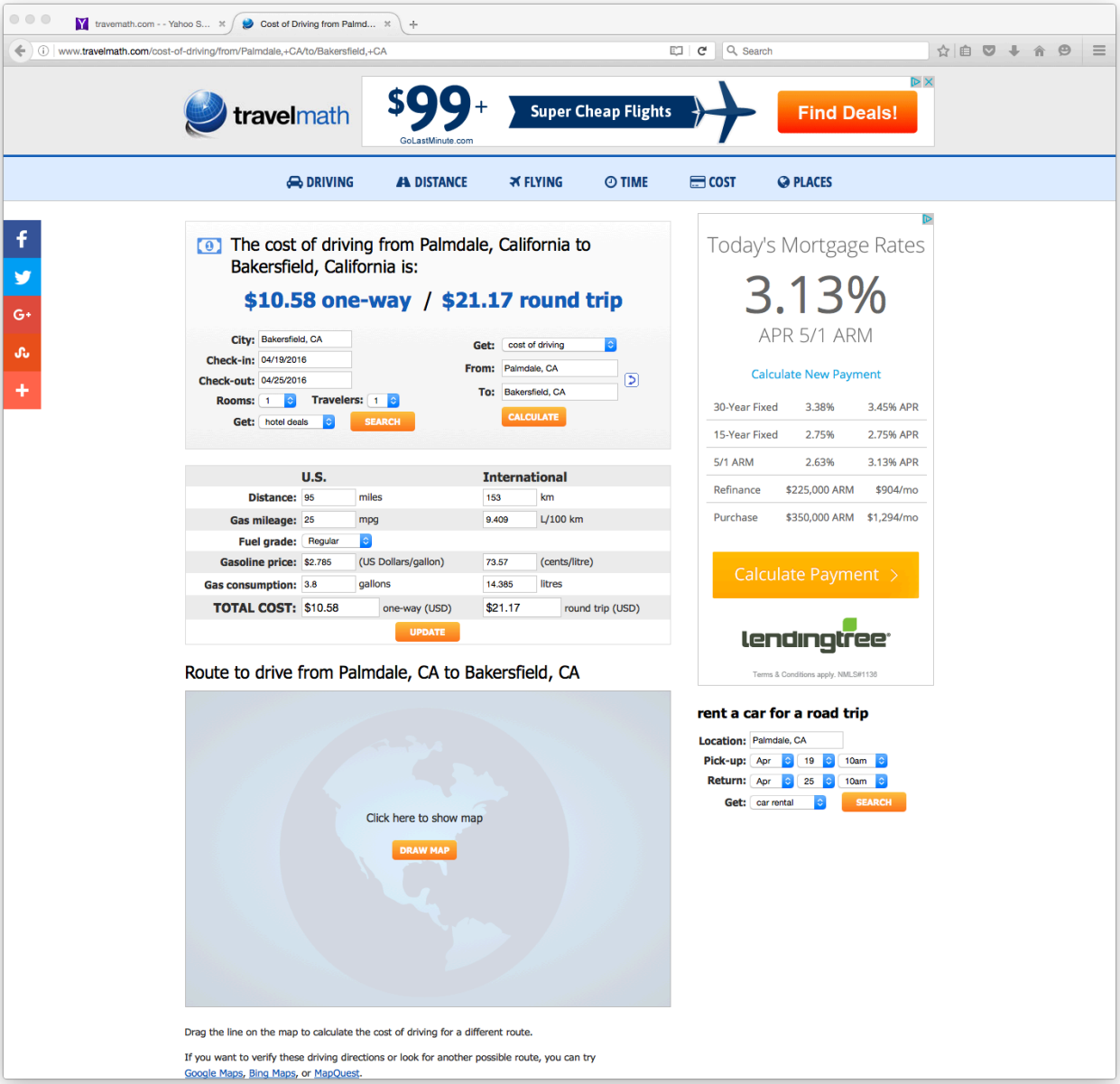
GoLastMinute.com
Cheap Flights
$99+
Find Deals!
rent a car for a road trip
Location: Merced, CA
Pick-up: Apr 19 10am
Return: Apr 25 10am
Get: car rental
SEARCH


travemath.com - - Yahoo S...
Cost of Driving from Palmd...
www.travelmath.com/cost-of-driving/from/Palmdale,+CA/to/Bakersfield,+CA
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DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The cost of driving from Palmdale, California to Bakersfield, California is:
$10.58 one-way / $21.17 round trip
City: Bakersfield, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: cost of driving
From: Palmdale, CA
To: Bakersfield, CA
CALCULATE
U.S.
International
Distance: 95 miles 153 km
Gas mileage: 25 mpg 9.409 L/100 km
Fuel grade: Regular
Gasoline price: $2.785 (US Dollars/gallon) 73.57 (cents/litre)
Gas consumption: 3.8 gallons 14.385 litres
TOTAL COST: $10.58 one-way (USD) $21.17 round trip (USD)
UPDATE
Route to drive from Palmdale, CA to Bakersfield, CA
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5/1 ARM 2.63% 3.13% APR
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Purchase $350,000 ARM $1,294/mo
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Return: Apr 25 10am
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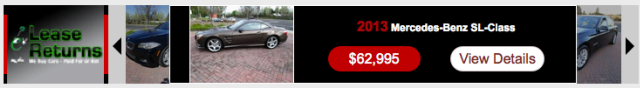


DRIVING | DISTANCE | FLYING | TIME | COST | PLACES

The cost of driving from Palmdale, California to San Fernando, California is:

$4.79 one-way / $9.58 round trip

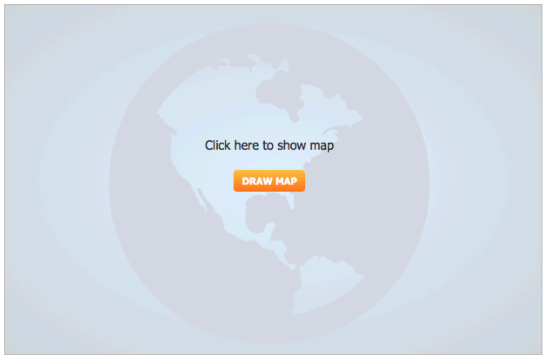
City: San Fernando, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1 Travelers: 1
Get: hotel deals SEARCH

Get: cost of driving
From: Palmdale, CA
To: San Fernando, CA
CALCULATE

	U.S.		International	
Distance:	43	miles	69	km
Gas mileage:	25	mpg	9.409	L/100 km
Fuel grade:	Regular			
Gasoline price:	$2.785	(US Dollars/gallon)	73.57	(cents/litre)
Gas consumption:	1.72	gallons	6.511	litres
TOTAL COST:	$4.79	one-way (USD)	$9.58	round trip (USD)

UPDATE

Route to drive from Palmdale, CA to San Fernando, CA



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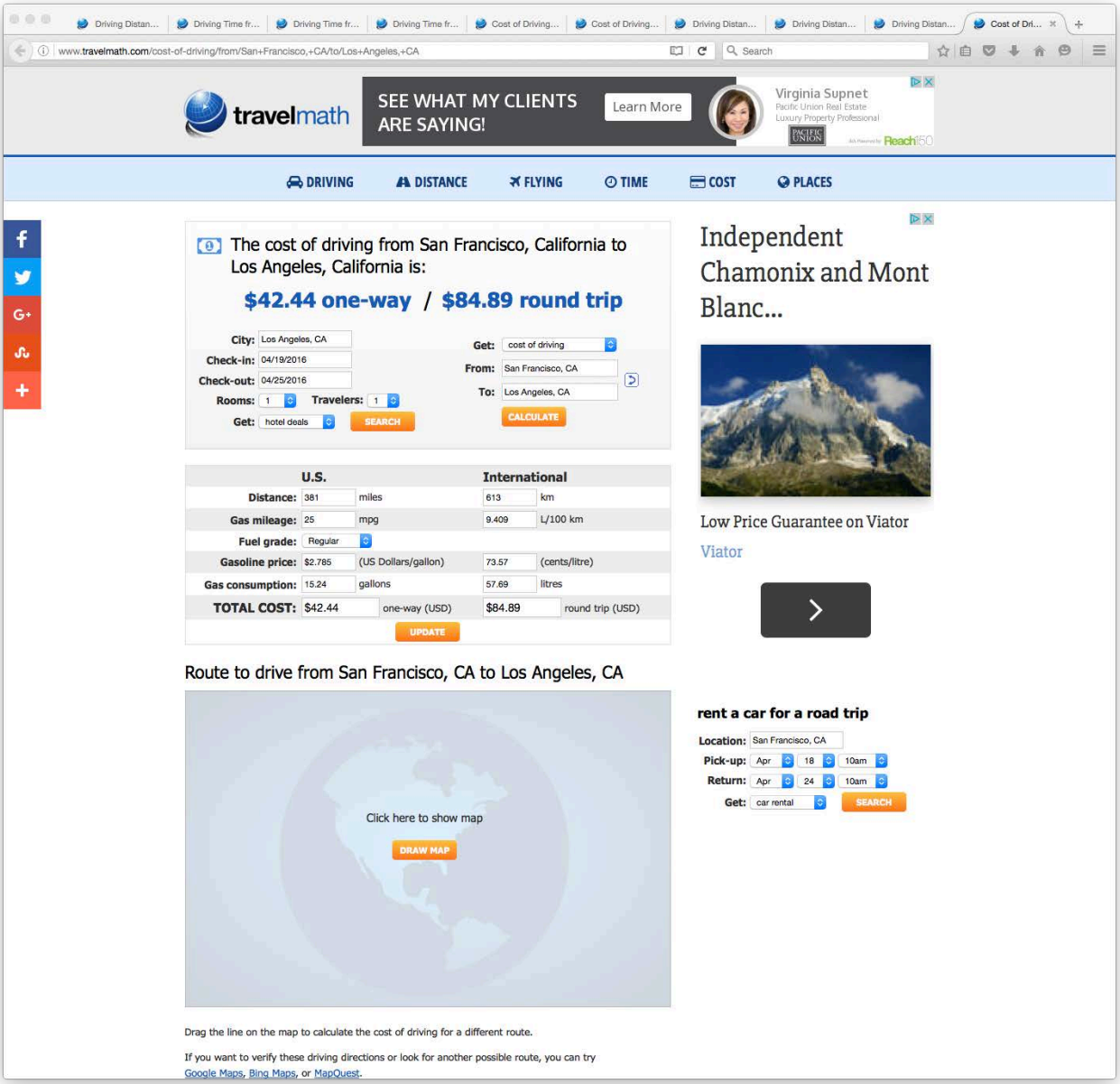
rent a car for a road trip

Location: Palmdale, CA
Pick-up: Apr 19 10am
Return: Apr 25 10am
Get: car rental SEARCH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DRIVING
DISTANCE
FLYING
TIME
COST
PLACES
The cost of driving from San Francisco, California to Los Angeles, California is:
$42.44 one-way / $84.89 round trip
City: Los Angeles, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
SEARCH
Get: cost of driving
From: San Francisco, CA
To: Los Angeles, CA
CALCULATE
U.S.
International
Distance: 381 miles 613 km
Gas mileage: 25 mpg 9.409 L/100 km
Fuel grade: Regular
Gasoline price: $2.785 (US Dollars/gallon) 73.57 (cents/litre)
Gas consumption: 15.24 gallons 57.69 litres
TOTAL COST: $42.44 one-way (USD) $84.89 round trip (USD)
UPDATE
Route to drive from San Francisco, CA to Los Angeles, CA
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DRAW MAP
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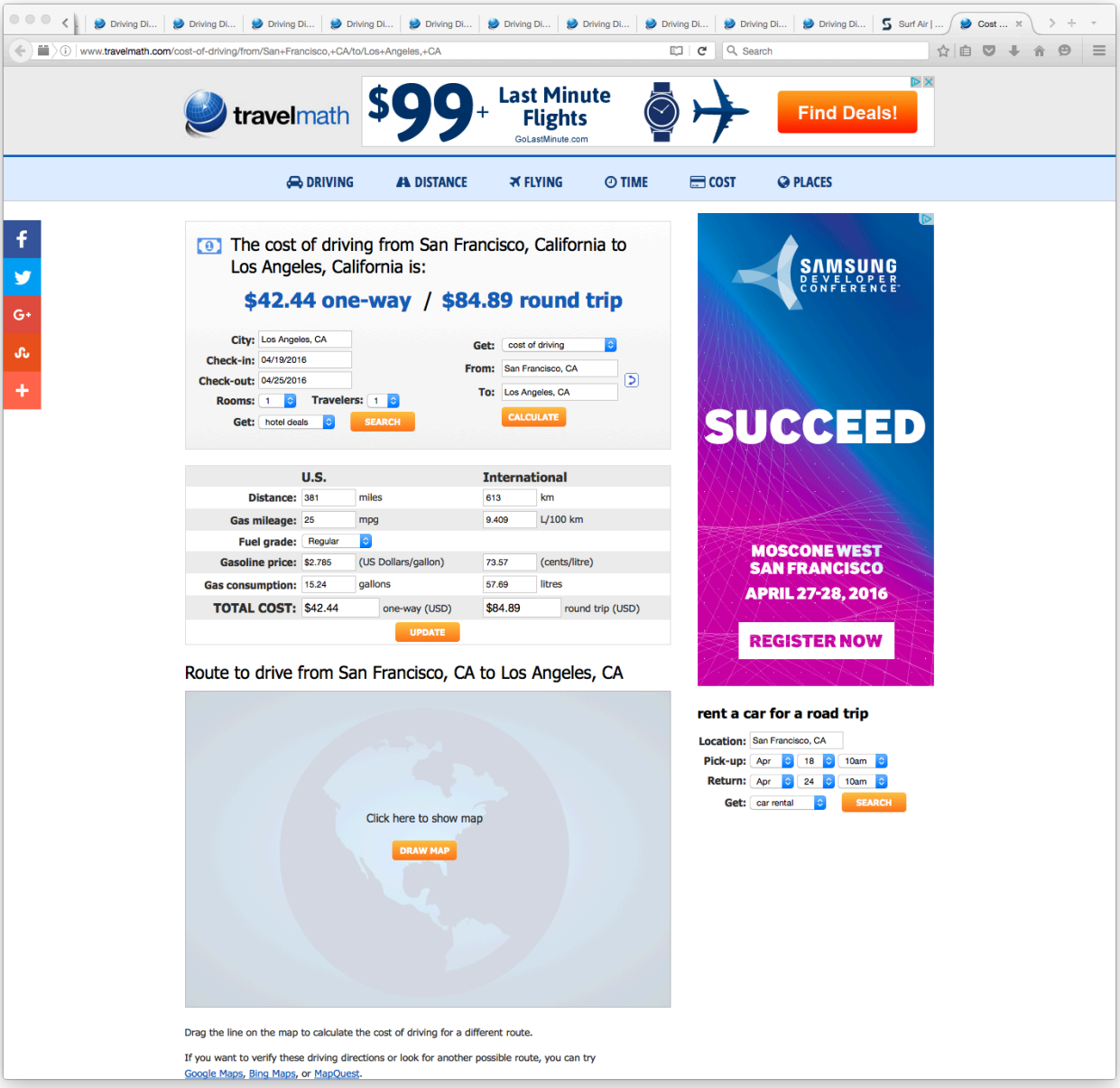
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DRIVING
DISTANCE
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TIME
COST
PLACES
The cost of driving from San Francisco, California to Los Angeles, California is:
$42.44 one-way / $84.89 round trip
City: Los Angeles, CA
Check-in: 04/19/2016
Check-out: 04/25/2016
Rooms: 1
Travelers: 1
Get: hotel deals
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Get: cost of driving
From: San Francisco, CA
To: Los Angeles, CA
CALCULATE
U.S.
International
Distance: 381 miles 613 km
Gas mileage: 25 mpg 9.409 L/100 km
Fuel grade: Regular
Gasoline price: $2.785 (US Dollars/gallon) 73.57 (cents/litre)
Gas consumption: 15.24 gallons 57.69 litres
TOTAL COST: $42.44 one-way (USD) $84.89 round trip (USD)
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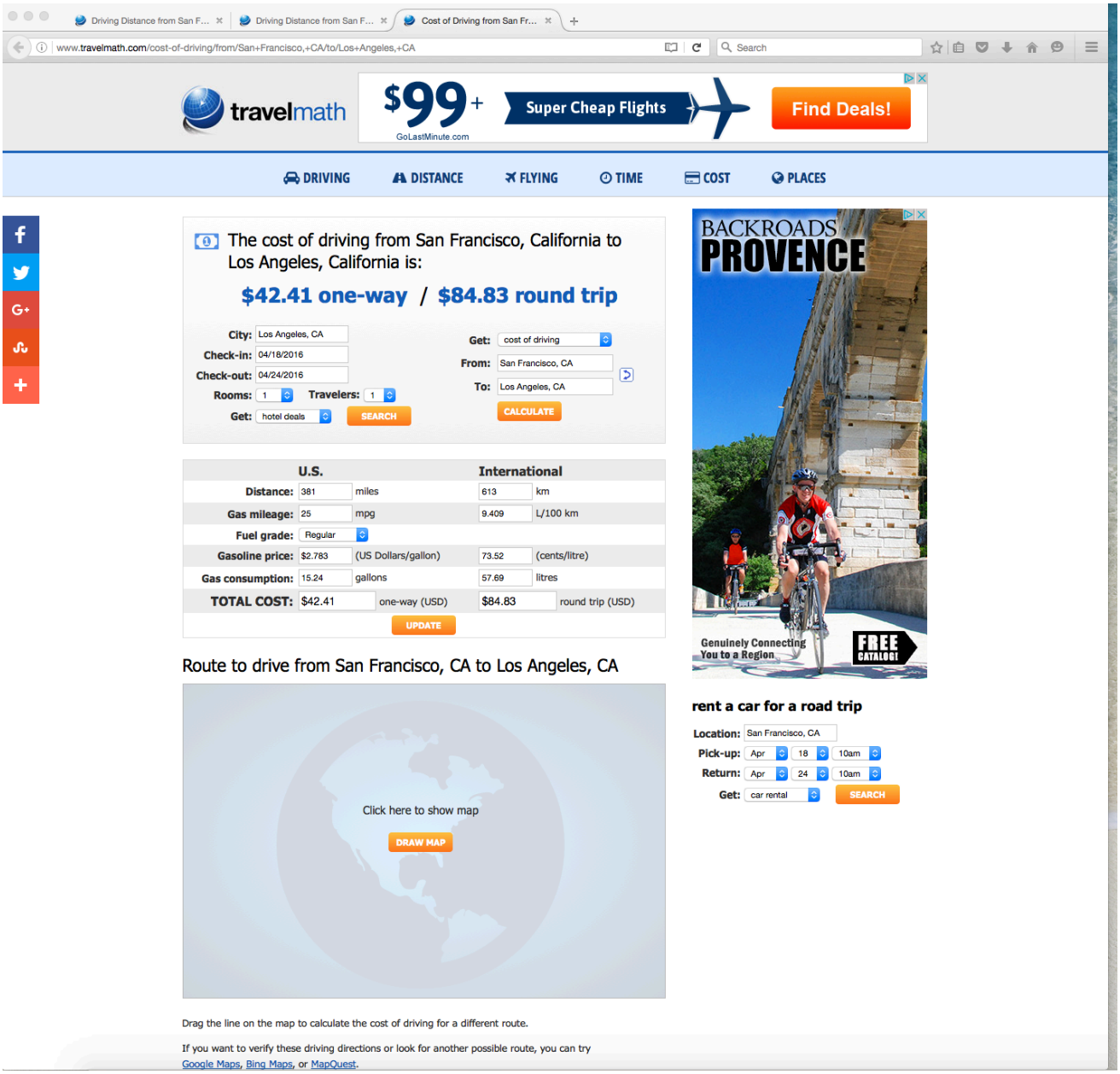
Driving Distance from San F…
Driving Distance from San F…
Cost of Driving from San Fr…
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COST
PLACES
The cost of driving from San Francisco, California to Los Angeles, California is:
$42.41 one-way / $84.83 round trip
City: Los Angeles, CA
Check-in: 04/18/2016
Check-out: 04/24/2016
Rooms: 1
Travelers: 1
Get: hotel deals
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Get: cost of driving
From: San Francisco, CA
To: Los Angeles, CA
CALCULATE
U.S.
International
Distance: 381 miles 613 km
Gas mileage: 25 mpg 9.409 L/100 km
Fuel grade: Regular
Gasoline price: $2.783 (US Dollars/gallon) 73.52 (cents/litre)
Gas consumption: 15.24 gallons 57.69 litres
TOTAL COST: $42.41 one-way (USD) $84.83 round trip (USD)
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Route to drive from San Francisco, CA to Los Angeles, CA
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2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Telephone
First Name :	Carol
Last Name :	Bender
Stakeholder Comments/Issues :	
Notes :	
Attachments :	voice_msg_457892362_1461017684.wav (70 kb) Bender_041816.pdf (40 kb)

Hello, My name is Carol Bender. I live in Bakersfield California and I have already submitted a comment, but upon reviewing the website a few minutes ago, I see that they're going to adopt the current business plan in two days, yet the comment period closed today. There's absolutely no way that the Board can thoroughly review all of that information up through the deadline today and make an informed decision on the 20th. I…this is my recommendation that they shall leave approval of that plan until they have time to thoroughly resolve all of the comments. Thank you.

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Natalie
Last Name :	Meeks
Stakeholder Comments/Issues :	Please see the attached comment letter on the Draft 2016 CHSR Business Plan. Thank you, Linda Johnson Principal Planner City of Anaheim Public Works Department ¦ Traffic and Transportation 200 South Anaheim Boulevard ¦ Suite 276 Anaheim, CA 92805 Office+ (714) 765-4957 E-mail+ LJohnson@anaheim.net<mailto:LJohnson@anaheim.net>
Notes :	
Attachments :	CHSR - Draft 2016 Business Plan_4-18-16.pdf (2 mb)

City of Anaheim
DEPARTMENT OF PUBLIC WORKS

April 18, 2016

Chairman Dan Richard
Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, California 95814

Subject: California High-Speed Rail – Draft 2016 Business Plan

Dear Chairman:

Thank you for the opportunity to review the Draft 2016 Business Plan for the California High-Speed Rail Project. This Plan reflects the Phase I high-speed rail system connecting San Francisco/Merced with Los Angeles/Anaheim through the phased and blended implementation of a one-seat ride adopted by the Authority in the 2012 and 2014 Business Plans.

In 2012, the City of Anaheim entered into a Memorandum of Understanding with the California High-Speed Rail Authority and other participating Southern California transportation agencies, to identify and move forward with a program of early investments in the regional and local rail systems to facilitate the blended approach described in the 2012 Business Plan. The blended approach was developed in Senate Bill 1029 which calls for the CHSRA to provide $1 billion in Proposition 1A funds by 2020 for potential early investment projects across the State. The Southern California region, specifically projects in the Anaheim-Los Angeles-Palmdale segment, were allocated $500 million of that funding to be used by agencies through a Memorandum of Understanding (MOU) with CHSRA. Orange County has three projects eligible for Proposition 1A funding, including the State College Boulevard grade separation project in Anaheim which has been identified as a priority project along the LOSSAN Rail Corridor. Implementation of the State College Boulevard grade separation continues to be identified as a priority project in the Draft 2016 Business Plan.

The Draft 2016 Business Plan also indicates there may be opportunities for additional early Phase 1 investments in the Los Angeles-Anaheim corridor. If additional funding is available, we request that the Ball Road and Orangethorpe grade separations in Anaheim be advanced. These grade separations are identified as priority projects on the LOSSAN Business Plan and are shown on the attached map.

Anaheim has several unique qualities that would make the City an excellent location for receiving additional early investment. With more than 351,000 residents, Anaheim has the largest population in Orange County and is the tenth most populated city in California. The City also welcomes more than 25 million visitors each year to major entertainment and sports destinations in The Anaheim Resort and the Platinum Triangle. This includes the Anaheim Convention Center (the largest convention center on the west coast, with over 1 million attending meetings and conventions each year), the Disneyland Resort (the largest

200 S. Anaheim Blvd., Suite 276
Anaheim, California 92805

TEL (714) 765-5176
FAX (714) 765-5225

www.anaheim.net

single site employer in the state with over 28,000 employees), the Honda Center (a major live concert venue and home to the Anaheim Ducks, with over 1.7 million visitors annually), and Angel Stadium (the largest sports venue in Orange County, drawing over 3 million Angel fans annually). The number of visitors and employees will also continue to grow with the recent announcement of Disneyland's Star Wars Land expansion. Over a year ago, the City also opened the Anaheim Regional Transportation Intermodal Center, a transportation hub for rail, bus and other modes of travel and the future terminus for CHSR Phase I. In addition, there is also demonstrated support from several major employers for the CHSR project citing benefits to the City and region for an integrated and efficient transportation system. In 2014, the Anaheim Chamber of Commerce, the Anaheim Orange County Visitor and Convention Bureau (now Visit Anaheim), Disneyland Resort, the Ducks/Honda Center, Angels Baseball, the City National Grove of Anaheim/Nederlander Concerts and the Orange County Business Council all submitted letters in support of the CHSR Phase I Project.

We support the Draft 2016 Business Plan as it reflects the Phase I Plan approved by the Authority in 2012 and in 2014, including the one-seat ride between San Francisco and Los Angeles/Anaheim. We also support collaboratively moving the blended projects forwarded as indicated in the MOU with the CHSRA and implementing additional early Phase I investments in Anaheim to improve mobility, safety and the environment in Orange County and benefit travelers through greater interconnectivity. We also encourage any opportunities to complete the Phase I Plan earlier than 2029.

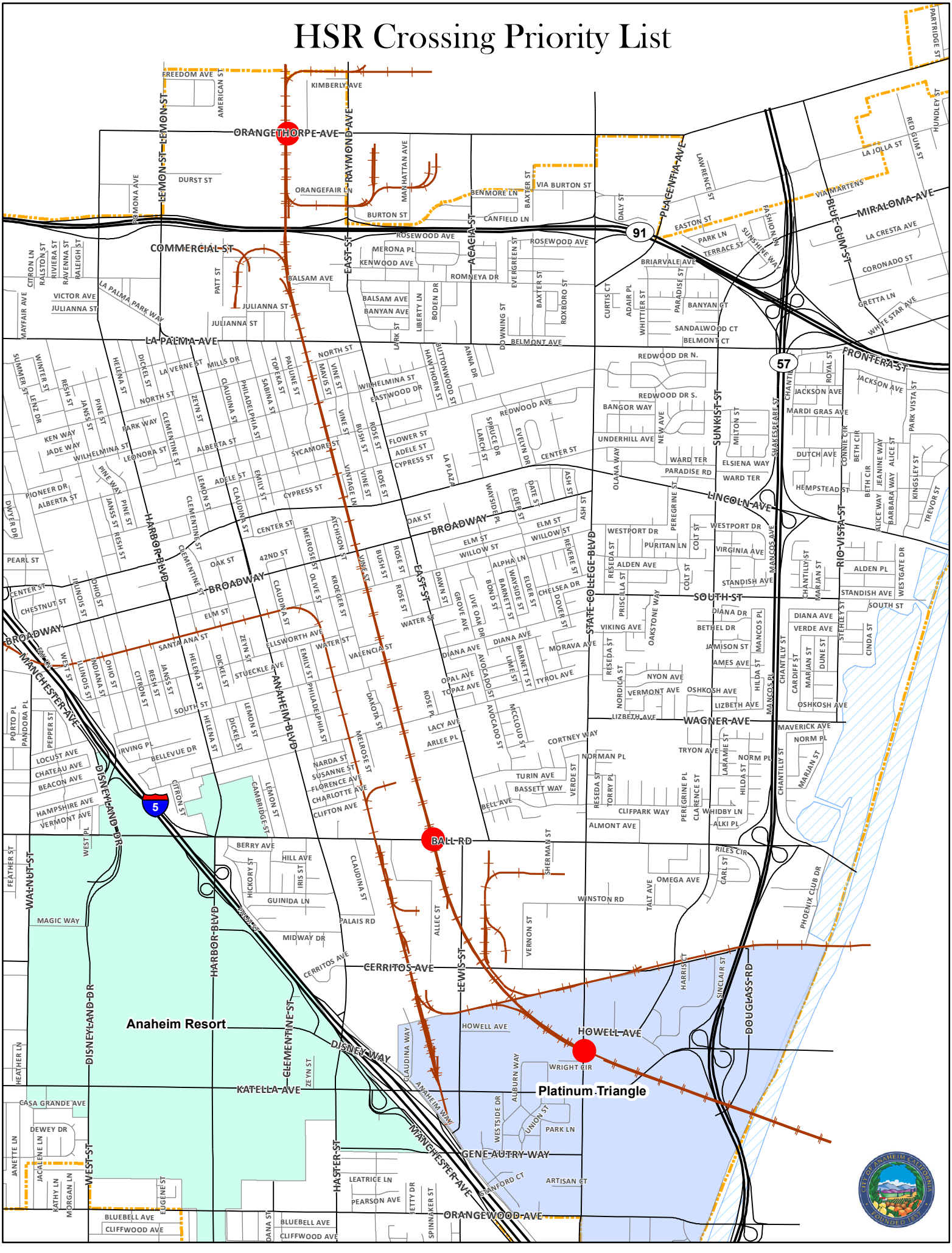
Should you have any questions, please contact me at (714) 765-4530 or NMeeks@anaheim.net.

Sincerely,

Natalie Meeks, P.E.
Public Works Director

C: Paul Emery, City Manager
Rudy Emami, City Engineer

HSR Crossing Priority List



2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Edward
Last Name :	Saum
Stakeholder Comments/Issues :	To Whom It May Concern: Attached please find a letter from the Shasta / Hanchett Park Neighborhood Association, expressing our comments and concerns regarding the Draft 2016 Business Plan. The Shasta / Hanchett Park Neighborhood Association represents 1,400 households in neighborhoods immediately West of San Jose Diridon Station, and along the West of the current Caltrain corridor from Park Avenue in the South, to West Taylor Street in the North. Please contact me if you have any questions or concerns. *Edward Saum* *President**, Shasta / Hanchett Park Neighborhood Association*
Notes :	
Attachments :	2016.04 SHPNA to CA HSR - Draft 2016 Business Plan Response.pdf (214 kb)

Shasta/Hanchett Park Neighborhood Association
P.O. Box 28634 ▪ San José, CA 95159 ▪ info@shpna.org ▪ www.shpna.org

April 18, 2016

Dan Richard, Chair
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

Dear Richard,

This letter is written on behalf of the Shasta / Hanchett Park Neighborhood Association (S/HPNA). The group was founded in 1984 to protect the interests of our historic and beloved community. Over the years, we have worked with the City of San Jose, developers, builders, and our neighbors to create a balanced neighborhood. Because of our involvement, we boast one of the most successful communities in the city of San Jose. The Shasta / Hanchett Park Neighborhood Association represents 1,400 households in neighborhoods immediately West of San Jose Diridon Station, and along the West of the current Caltrain corridor from Park Avenue in the South, to West Taylor Street in the North.

Since the first iteration of the San Jose Visual Design Guidelines for High Speed Rail, S/HPNA Board members and residents have been intimately involved in the planning stages of High Speed Rail's infrastructure, operational parameters, and project mitigations. Therefore, it is with not insubstantial concern that we are writing to you regarding the Draft 2016 Business Plan.

Our concerns include the following:

- – As early as the Draft Cooperative Agreement between the City of San Jose and the California High-Speed Rail Authority, specific emphasis has been placed upon the need for the HSR facilities in and around San Jose Diridon Station to be of the highest quality, and consistent with the Visual Design Guidelines as set forth in the Agreement. Per the Draft 2016 Business Plan, the funds allocated for visual and functional improvements at Diridon Station have been substantially reduced. Many tasked with selling the Draft 2016 Business Plan to the public talk of a grand vision for the improvements to Diridon Station, waxing philosophic about public / private cooperatives, proactive enlistment of private vendors, and the desire for a world class, "Grand Central Station of the West"; meanwhile, the Draft Business Plan reduces the funding for the improvements to little more than a platform. This flies in the face of the Visual Design Guidelines, and is a direct insult to the community members and municipalities that have spent the last five years working in good faith with the High Speed Rail Authority. The $50 million dollar allocation is woefully inadequate.

- – As one of the largest cities in California, the City of San Jose is still unique in its ability to support a number of wonderfully 'livable' neighborhoods. We ask that the Draft Business Plan respect these neighborhoods and their residents, and allow for healthy, relatively untouched areas.

- **–** Previous iterations of the Draft Business Plan included the time and funding for Caltrain to incorporate at least some aspects of the following improvements to the Caltrain corridor, which will be vital in the years and decades to come:

    - Additional passing tracks
    - Grade separations
    - At-grade crossing enhancements
    - Level boarding
    - Extended platforms.

    The current iteration of the Draft Business Plan is a significant departure from this carefully-considered, collaborative effort, and will be detrimental to Caltrain's ability to take full advantage of the increases in speed, efficiency, and capacity that are at the very heart of Caltrain's electrification and the use of EMUs.

- **–** The proposed at-grade alternative through Downtown and Willow Glen will have significant impacts upon the neighborhoods, traffic arteries, and community facilities adjacent to the proposed alignment. The taking of some or all of Fuller Park, in a City where many neighborhoods already suffer from a deficiency of park lands, is directly at-odds with the stated desire to have High-Speed Rail be an asset to the cities that it serves, rather than as a physical and economic barrier. The area immediately adjacent to Auzerais Avenue, just north of I-280, is experiencing a massive expansion in the number of housing units under construction. The traffic congestion already caused by the current at-grade crossing will increase by an order of magnitude if High-Speed Rail comes through there as part of the at-grade alignment.

- **–** Each iteration of the Visual Design Guidelines and Draft Business Plans have emphasized that mutual collaboration and substantial community outreach must be integral parts of the process. Yet, as part of the recent Community Working Group and public meetings, Ben Tripousis, the High Speed Rail Authority's Northern California Regional Director, has repeatedly confessed that the outreach for the Authority's most recent meetings have lacked both timeliness and coherence. While this mea culpa is appreciated, it does not speak well for the Authority's stated commitment to transparency, openness, and active solicitation of public input. As long ago as September, 2011, S/HPNA was expressing concerns, via email, regarding the lack of significant community input. To say that the current missteps are therefore a recent, isolated incident is disingenuous. The scale of this project will affect our neighborhoods for the next century, and deserves comprehensive, thorough community outreach. Instead, a condensed timetable is now being imposed upon the already limited community outreach.

Bringing a transportation service like High-Speed Rail to San Jose is something that can be of great benefit to us all. However, citing that benefit as a reason to approve unassailed a compressed timeline, and a substantially reduced / underfunded scope of improvements to the station and rail corridor is, if you will excuse the transportation idiom, putting the cart before the horse. The accelerated timeline has led to unacceptable reductions in the scope and vision for High-Speed Rail.

Respectfully submitted,

Edward Saum

President, Shasta/Hanchett Park Neighborhood Association

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Jason
Last Name :	Holder
Stakeholder Comments/Issues :	Please see the attached comment letter. Also attached are the documents referenced in the letter as Attachments A through J. Hard copies will follow by Overnight Mail. -- Jason W. Holder Holder Law Group Important: This electronic mail message, including any attached files, is being sent by or on behalf of a lawyer; it is confidential and it may contain or constitute information protected by the attorney-client and/or the attorney work-product privileges. If the person actually receiving this message, or any other reader of this message, is not the named recipient, or the employee or agent responsible to deliver it to the named recipient, you are not authorized to retain, read, copy or disseminate this communication or any part of it. If you have received this communication in error, please immediately notify Holder Law Group at (510) 338-3759 <jason@holderecolaw.com>. Thank you
Notes :	
Attachments :	Final CC-HSR CCHSRA Joint Comment Letter re DBP 041816.pdf (352 kb) Attachment A - Excerpts from Petitioners' MPAs ISO Preliminary Injunction.pdf (209 kb) Attachment B - CP1 Monthly Status Report brdmtg 030816.pdf (814 kb) Attachment C - DOT CCI_4QTR_2015.pdf (57 kb) Attachment D - DOT Construction-Cost-Indices-and-Forecast-01-2015.pdf (18 kb) Attachment E - URS-letter-response-2014-05-05.pdf (851 kb) Attachment F - CCHSRA and CC-HSR PRA Request for Const Cost Substantiation 101615.pdf (186 kb) Attachment G - Holder FINAL 111215.pdf (441 kb) Attachment H - Follow Up Letter to Authority re PRA Request for Const Cost Substantiation - FINAL 111815.pdf (830 kb) Attachment I - Excerpts from 1996 Intercity HSRC Action Plan.pdf (577 kb) Attachment J - Item4 Consider Delegating Authority to Negotiate and Finalize Agreements with BNSF 041216.pdf (251 kb)

Holder Law Group holderecolaw.com
1736 Franklin Street, Suite 550 (510) 338-3759
Oakland, CA 94612 jason@holderecolaw.com

April 18, 2016

VIA EMAIL AND EXPRESS MAIL

Dan Richard, Chairman CHSRA Board
Board of Directors
Jeff Morales, Chief Executive Officer
c/o Janice Neibel, Board Secretary
California High-Speed Rail Authority
770 L Street, Suite 1160
Sacramento, CA 95814
Email: 2016businessplancomments@hsr.ca.gov
boardmembers@hsr.ca.gov

Re: Joint Comments on Draft 2016 Business Plan

Dear Mr. Richard, Honorable Board Members, and Mr. Morales,

On behalf of Community Coalition on High-Speed Rail ("CC-HSR") and Citizens for California High-Speed Rail Accountability ("CCHSRA"), we submit the following comments on the Draft 2016 Business Plan (the "DBP") prepared by the California High-Speed Rail Authority (the "Authority"). CCHSRA and CC-HSR submit these comments while knowing, from long experience of past Authority recalcitrance, entrenchment, and denial, that these comments may be falling on primarily deaf ears. We implore each Authority Board member to be objective, reasonable, and empathetic when considering these and other public comments. We also call upon each member's fiduciary duty as well as his or her sense of public duty and responsibility when determining the adequacy of the DBP and influencing the direction of this Project.

We have reviewed comments submitted by the Gary Patton, County of Kings, and William Grindley, agree with those comments and incorporate them herein by reference. We have also reviewed the comments submitted by Mark Powell, agree with those comments and incorporate them herein by reference. We reiterate these commenters' requests for answers to a number of important questions concerning the California High-Speed Train Project (the "Project"). The comments herein supplement those submitted by others. For the reasons stated below and in the incorporated comments, the Authority should revise the seriously flawed DBP before considering it for approval and submitting the final 2016 Business Plan (FBP) to the Legislature.

Table of Contents

I. INTRODUCTION

CC-HSR and CCHSRA are grassroots, non-profit corporations based on the San Francisco Peninsula and in Kings County, California, respectively. These two groups have worked for years to ensure that the proposed California high-speed train project does not adversely affect the economy, environment, or the quality of life of California's existing communities. Their members are California residents, farmers, business people, and landowners who are concerned that the Project will have significant negative impacts throughout the state. Because of the Project's potential for extreme local, regional, and statewide environmental, economic, and social impacts, CC-HSR and CCHSRA have been engaged throughout the planning and environmental review processes for the Project and vigilant in monitoring and commenting on the Authority's ever-evolving plans for implementation.[1] Because the Authority has not candidly answered the tough questions facing the Project or resolved the considerable challenges, CC-HSR and CCHSRA and other concerned members of the public must again devote substantial resources and attention towards pointing out what the DBP and past business plans should have revealed. Instead, the groups observe that the DBP is just the latest manifestation of the Authority's penchant for evasion and manipulation.

As with previous so-called "business plans" and other glossy Authority documents, the DBP reads more like a propaganda or marketing piece than a serious and honest analysis of the costs, risks, benefits, and trade-offs of the Project. For years, it has been obvious to the concerned public that the Authority has been more concerned with protecting its agenda, and those that will profit from it, than with frankly and honestly assessing the merits, impacts, and costs of the Project. The Authority is not prioritizing the best interests of the current and future citizens of this State. The rosy tone and one-sided message of the DBP reveals the institutional bias of the Authority's staff, and, if adopted, by its Board.

As explained below, the DBP must be substantially revised to provide the public and the legislature the information and analysis required by Public Utilities Code, section 185033.

II. DISCUSSION

A. The San Jose Over the pass to Shafter ("SOS") Line Will Not Generate Sufficient Ridership to Enable the HSR System to Operate at a Profit

The Authority has previously acknowledged that an Initial Operating System ("IOS") from the Central Valley to the south (the IOS-South) would have higher ridership that an IOS to the north (the IOS-North).[2]

---

[1] CC-HSR and CCHSRA submitted comments on the 2014 Business Plan. *See*, *e.g.*, CCHSRA comments on 2014 draft Business Plan, dated April 6, 2014, pp. 3-4; *see also* my testimony at April 10, 2014 Authority Board meeting, Transcript, pp. 27-29. Because many of the concerns previously raised about the Project have not been addressed or remedied, those comments are incorporated herein by reference.

[2] *See* 2012 Revised Business Plan, p. ES-3.

> Based on factors including ridership and revenue forecasts, capital and operating costs, public input, and potential for private-sector investment, the Revised Plan identifies the IOS-South as the preferred implementation strategy. This will close the gap between Bakersfield and Palmdale and connect the Central Valley to the Los Angeles Basin at San Fernando Valley, creating the first fully operational high-speed rail system. This will be coupled with investments in Northern California to provide near term benefits and lay the foundation for high-speed rail service to San Jose and San Francisco. Upgrades to the existing San Joaquins service will provide further time savings.[3]

The newly proposed initial operating line, the San Jose Over the pass to Shafter ("SOS") line is a portion of IOS-North (it terminates short of both San Francisco and Bakersfield). This portion of IOS-North will not even have as much ridership as IOS-North because it will not extend to and directly connect with the heavily urbanized Peninsula, including San Francisco and will not directly connect with one of the largest cities in the Central Valley, Bakersfield. Thus, by the Authority's past assessments, the SOS line will have substantially lower ridership than the previously preferred IOS-South. The DBP indicates that the Authority has, at most, enough funding to complete the SOS line (assuming Cap and Trade funds remain available). The DBP does not explain how the SOS line will satisfy the statutory requirement to operate at a profit despite its lower projected ridership.

B. The DBP Provides an Unrealistically Low Construction Capital Cost Estimate

The DBP includes an unrealistically low, and frankly not believable, construction cost estimate for Phase 1 that represents an 8% decrease from the estimate provided in the 2014 Business Plan ("from $67.6 billion to $62.1 billion in YOE$").[4] For years many have criticized the construction cost estimates presented by the Authority in its Business Plans as unrealistically low.

The 2000 Business Plan estimated that it would cost just $25 Billion to construct the entire statewide Project (including what is now known as Phase 2, connecting Sacramento and San Diego to the San Francisco to Los Angeles line).[5] At that time, the Authority was highly confident in its estimates of future construction costs.

> **The Authority is confident that the capital cost estimates presented here will be sufficient to construct a high-speed train system.** Many of the cost components involved, such as electrification, signaling, rail, and track bed are quantities well known from rail projects around the world. The costs for major civil works, including tunneling and structures, are specific to California's geology, seismic conditions, and labor markets. Previously completed civil

[3] *See* 2012 Business Plan, p. ES-3.

[4] *See* DBP, p. 53.

[5] *See* 2000 Business Plan, p. 15.

> projects in California, including freeway construction, major water projects, urban rail projects, and preliminary engineering work done for the Los Angeles to Bakersfield segment of the network (Caltrans, 1994), all provide guidance on these more specialized costs. Thus, **capital costs can be estimated with a high degree of confidence even though the statewide engineering has proceeded only to the conceptual planning level**.[6]

Now, the Authority is less confident in its cost estimates:

> Although the estimates presented in this Draft 2016 Business Plan represent the best information we have available, **the schedules and estimates are subject to further changes based on both internal and external factors**, including the availability and timing of funding. **Estimates will continue to evolve over time as we receive additional information and the program advances**.[7]

The past assurances that the Authority could deliver the entire Project for a relatively low cost are now long gone. Now, the taxpaying public has no assurances that the Authority can deliver even just Phase 1 for an amount that is more than twice that estimated in 2000 to deliver the entire Project.

Past estimates did not fully and realistically account for:

1. the costs of relocating extensive infrastructure, such as roads, overpasses, irrigation and drainage canals, and gas, telecommunication, and electric lines;[8]

2. right-of-way acquisition costs;[9]

3. unaddressed technical issues, including, *inter alia*, the implications to HSR from widespread land subsidence in the Central Valley, more costly Project design changes demanded by local communities and railroads, and dedicated renewable

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[6] 2000 Business Plan, p. 16, emphasis added.

[7] DBP, p. 57, emphasis added.

[8] During the Authority Board's meeting on April 12, 2016, several Board members acknowledged the risks of cost escalation associated with relocating infrastructure. Because of the Authority's rudimentary 15% design-build approach and its limited investigation of infrastructure relocation requirements, Authority staff have acknowledged that they do not know the full cost of relocating required infrastructure.

In litigation challenging the EIR/S for the Merced to Fresno section of the Project ("M-F EIR/S"), counsel for petitioners pointed out that if the estimated $1.5+ Billion costs for infrastructure relocation and modification within the 29-mile Construction Package 1 ("CP1") were extrapolated to the entire 130-mile Initial Construction Section ("ICS") the costs for infrastructure relocation and modification alone would be almost $7 Billion. *See* Attachment A: Excerpt from Petitioners' Memorandum of Points and Authorities in Support of Preliminary Injunction, pp. 6-7.

[9] The Authority must provide a conservative estimate for ROW parcel acquisition necessary for the entire Project, especially since many landowners have disputed the accuracy of Authority appraisals and have refused to voluntarily sell their property to the Authority for the low amounts offered.

energy sources to comply with the Authority's commitment to using 100% renewables;

4. the costs of mitigating project impacts (e.g., traffic mitigation caused by HSR interference with transportation facilities and disruption of established travel patterns, compensating for loss of wildlife habitat and for agricultural lands preservation, planting trees to offset construction GHGs, etc.);[10] and

5. change orders that will likely be required during Project construction due to the Authority's 15% design-build approach (which defers too many design details).

Incredibly, rather than correct past inaccuracies and omissions that have resulted in underestimated construction costs, the DPB perpetuates them and predicts a lower overall capital cost for the Project than did the 2012 Business Plan and the 2014 Business Plan. The DBP does not fully account for the five cost categories identified above, despite recent evidence that utility relocations, ROW parcel acquisition, technical challenges, mitigation, and change orders will increase Project cost.[11] By including an unrealistically low capital cost estimates, Authority staff have proven themselves to be more interested in keeping the troubled Project "alive" politically than to honestly assessing the full cost of the Project.

Simply put, the DPB's 8% reduction in construction costs for Phase 1 is not believable. Much of the claimed cost savings come from items that were removed from the Project's scope. For example, the DBP removes a $1.5 billion contribution towards the Transbay Transit Center ("TTC") in San Francisco. Several planned viaducts in San Jose and in Fresno have been replaced with at grade alignments. Value engineering has apparently modified plans for tunnels over the Pacheco Pass (but these modifications are not described). The Authority has also accepted "design variances" for Construction Package ("CP") 1 and CP 2-3, and is considering design variances for CP 4, that will cause new or more severe environmental impacts.[12] Items that are being descoped or modified have not been discussed at the Board level or vetted by local

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[10] These mitigation costs will be substantial, especially if the California Supreme Court determines that CEQA is not preempted by the Interstate Commerce Commission Termination Act ("ICCTA"). Despite past assurances that it would comply fully with CEQA, the Authority has attempted to invoke federal preemption to avoid CEQA's more stringent requirements. *See* briefs filed by parties and amici curiae in *Friends of the Eel River v. North Coast Railroad Authority*.

[11] *See*, *e.g.*, Attachment B: CP1 Monthly Status Report for Authority Board Meeting 030816

[12] *See* Design Variance Reports for CP 1 and CP 2-3, available at: http://www.hsr.ca.gov/docs/programs/construction/HSR_13_06_B3_PtD_Sub5_Design_Variance_Report.pdf and http://www.hsr.ca.gov/docs/programs/construction/CP23_executed/P13_57_05_IVG_01_Design_Variance_Report.pdf, respectively (accessed April 18, 2016); *see also* CRB, Executive Summary and Technical Proposal, p. 21 [Figure 1-11] ["Environmental Re-examination for ATCs – Changes to approved alternative right-of-way and moving viaduct to an at-grade embankment (ATC 2); raised HSR alignment (ATC 11); and shift in HSR alignment (ATC 13b) trigger reexamination for transportation, aesthetics, air quality, noise and vibration], 37-39 [description of ATCs], available at: http://www.hsr.ca.gov/docs/programs/construction/CRB_Volume_2_Exec_Summary_and_Tech_Proposal.pdf (accessed April 18, 2016).

agencies and the public. We understand from recent news reports that the Authority may be scheduling planning meetings where decisions will be made concerning these and other Project design changes. The Authority staff should not consider these items off the books or modified until there are decisions to remove them by the Authority Board, and those decisions may only be made after supplemental environmental review.

Instead, the DBP should be based on the most conservative cost estimates for Project design features that have already been presented to the public and vetted, not based on the untested cost-saving design change proposals. The purpose of the business plan requirement is to give the public and the legislature an honest assessment of the Authority's developed plans for Project implementation and the challenges those plans face. This DBP instead assumes many untested cost-saving changes for the sake of political expediency.

Additionally, how can the Authority delay construction of the Tehachapi and San Gabriel range crossings (which will require extensive tunneling through faulted and geologically complex strata) and the southern sections through urbanized Southern California—some of the most costly sections of the entire Project—and claim with a straight face that overall construction costs for Phase 1 (excluding the planned "enhancements" in the L.A. to Anaheim corridor) will decrease by approximately $5 Billion? The DBP does not appear to have factored in expected cost escalation for construction materials and labor?[13] While construction costs declined in the recent recession, they can be expected to increase over time. Therefore, delayed construction of the sections in Southern California, including the tunnels and viaducts through and across the San Gabriel and Tehachapi Mountains and the relocation of extensive transportation infrastructure and other existing improvements in the urbanized southland can be expected to increase construction costs. The DBP appears to ignore or, even worse, purposefully disregard this fact.

In October 2015, the L.A. Times reported that the Authority had substantially underestimated the costs for crossing the Tehachapi mountains.[14] The article revealed how the Authority concealed a draft presentation from its lead consultant that reported a 31% increase in costs for this section of the Project (a.k.a., IOS-South). The Authority had previously instructed another contractor, URS, to not report a $1 Billion increase in estimated costs to construct the Fresno to Bakersfield section.[15] In both instances, the Authority denied any

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[13] *See* Attachment C: CA Dept. of Transportation ("DOT"), Construction Cost Indices and Forecast; *see also* Attachment D: DOT, Price Index for Selected Highway Construction Items, 4th Quarter Ending December 31, 2015.

[14] *See* L.A. Times, $68-billion California bullet train project likely to overshoot budget and deadline targets, dated Oct. 24, 2015, available at: http://www.latimes.com/local/california/la-me-bullet-train-cost-final-20151025-story.html (accessed April 16, 2016). This article is incorporated herein by reference.

[15] *See* L.A. Times, Estimated cost of key bullet train segment rises $1 billion, dated May 7, 2014, available at: http://www.latimes.com/local/la-me-bullet-train-costs-20140508-story.html (accessed April 16, 2016); *see also* The Press Enterprise, Editorial: California's money train bleeding cash, May 15, 2014, available at: http://www.pe.com/articles/cost-694564-rail-project.html (accessed April 16, 2016); *see also* Attachment E: Letter from URS to Authority's Regional Manager re: Fresno to Bakersfield Section Regional Consultant's January 2014 Monthly Progress Report, dated May 5, 2014.

wrongdoing and rejected the assertion that costs would increase above the initial estimates. However, true to its typical form, it did not provide the public with any substantiation for its estimates. Despite the Authority's best efforts to conceal the information, evidence of cost increases continues to surface.[16]

In Section 5 of the DBP, the Authority claims that it will cost $20,680,000,000 to complete the new shorter IOS from Shafter to San Jose.[17] It's unclear from the DBP and the appendices whether the Authority has considered the engineering and construction challenges associated with crossing the Pacheco pass. These engineering and construction challenges may be similar to those that will increase the costs of crossing the Tehachapi mountain range. According to Jacobs Associates, an engineering firm that provided conceptual tunnel design support for this portion of the Project:

> The California High Speed-Rail Authority undertaking envisions approximately five twin bore tunnels totaling some 63,800 linear feet (20,726 m) through Pacheco Pass. The tunnels will range in length from 3,000 to 26,000 feet (915–7,925 m). Geologic conditions vary from interbedded sandstone, siltstone, shale, and conglomerate to intensely sheared rocks of the Franciscan Complex.
>
> The HST tunnels along the Pacheco Pass corridor will be located in Seismic Zone 4—in close proximity to several active earthquake faults, including the San Andreas, Calaveras, Silver Creek, and Ortigalita faults. As such, it is likely that during their serviceable life the tunnels will be subjected to significant ground shaking caused by a major earthquake. Therefore, the conceptual design efforts for the tunnels focused on a final lining design that will ensure serviceability following the design earthquake.[18]

The challenges posed by tunneling through an area in close proximity to a number of active earthquake faults could be similar to those described in the L.A. Times article from last October reporting the risk of cost overruns associated with constructing the Project tunnels required to cross the Tehachapi mountain range.[19] The DBP's Capital Cost Basis of Estimate Report should list tunnels required for all of Phase 1 and should identify the estimated cost for each tunnel and the total estimated cost.

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[16] *See*, *e.g.*, L.A. Times, Changes could add hundreds of millions of dollars to first 29 miles of bullet train, dated March 28, 2016, available at: http://www.latimes.com/local/california/la-me-bullet-change-orders-20160328-story.html (accessed April 16, 2016).

[17] *See* DBP, p. 57; *see also* DBP, Technical Supporting Document: Capital Cost Basis of Estimate Report, p. 12.

[18] *See* Jacobs Associates website at: http://www.jacobssf.com/index.php/industry_overview/view/326 (accessed April 16, 2016).

[19] *See* fn. 14, *infra*.

According to a recent Authority-generated document "Tunnel construction costs generally range from $200 to $260 million per mile."[20] Assuming that the costs here will be on the higher end of this range due to the active faults and geologically complex strata, the 12 miles of tunnels required to cross the Pacheco Pass alone would cost approximately $3.1 Billion. This is approximately one third of the total amount the DBP projects it will cost to construct the entire 125-mile long San Jose to Merced section.[21] Estimating that it will only cost $6 Billion for the remaining 113 miles of this section seems highly optimistic, at best.[22]

Of course, the costs of the alignment through urbanized areas in Gilroy, Morgan Hill, and especially San Jose will also be significant, especially where aerial structures or tunnels are planned and where grade separations and/or extensive infrastructure relocation is required. Chairman Richard recently acknowledged that the grade separations necessary in urban areas will be "enormously expensive,"[23] yet the DBP does not fully account for this large cost category.[24] In 2009, a State Auditor's report identified the trend of increasing costs for grade separations, which then averaged $26 Million each.[25] That average cost has only increased in the past seven years. The DBP's Capital Cost Basis of Estimate Report should list the grade separations required for all of Phase 1 and should identify the estimated cost for each and the total estimated cost.

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[20] *See* Burbank to Los Angeles Project Section Supplemental Alternatives Analysis, April 2016, p. 29, citing Rostami, J., Sepehrmanesh, M., Gharahbaghm E.A., Mojtabai, N., Tunnelling and Underground Space Technology (2012).

[21] *See* DBP, Capital Cost Basis of Estimate Report, p. 15.

[22] The 2012 Business Plan included the following quote from a July 2010 World Bank report that estimated construction costs for high-speed rail projects:

Experience internationally is that construction and rolling stock capital costs [excluding the purchase or lease of real estate and professional services] . . . typically range from USD [$56–$112 million/mile], depending on the complexity of civil engineering works, the degree of urbanization along the route and required total rolling stock capacity. (2012 Business Plan, p. 3-12, quoting Amos, P., D. Bullock, J. Sondhi, High-Speed Rail: The Fast Track to Economic Development? (The World Bank, July 2010).

The DBP construction cost estimates purport to include the costs of rolling stock, real estate, and professional services. If the upper end of the World Bank average cost range ($112 M/mile) is used to calculate the cost of the remaining 113 miles of the SJ-M Section, excluding the cost of ROW parcels, the cost would total more than $12.6 Billion or more than twice the amount remaining in the DBP estimate for this section.

[23] *See* Silicon Valley Business Journal, Quicker arrival of high-speed rail causes expensive worries for Peninsula governments, dated March 25, 2016, available at: http://www.bizjournals.com/sanjose/news/2016/03/25/quicker-arrival-of-high-speed-rail-causes.html (accessed April 17, 2016).

[24] *See* DBP, p. 31; *see also* DBP, Capital Cost Basis of Estimate Report, p. 20.

[25] *See* California State Auditor Report 2009-406, dated February 2009, available at: https://www.bsa.ca.gov/pdfs/sr2009/2007-106.pdf (accessed April 17, 2016). A previous report by the State Auditor described how the actual costs of grade separations often exceed estimates. *See* BSA, Grade Separation Program: An Unchanged Budget and Project Allocation Levels Established More Than 30 Years Ago May Discourage Local Agencies From Taking Advantage of the Program, Report 2007-106, dated September 2007, pp. , available at: http://www.bsa.ca.gov/pdfs/reports/2007-106.pdf (accessed April 17, 2016).

The engineering and enhanced design features required to address challenges posed by land subsidence in the Central Valley also has apparently not been accounted for in the DBP.[26] According to the Authority's former Regional Consultant for the Central Valley sections:

> **Regional Subsidence**: The potential for ground subsidence as a result of groundwater extraction and oil extraction was raised in the FB geotechnical reports, and its potential impacts on the FB HST structures are being discussed with the EMT. The RC has identified subsidence as a project risk, and considers this a program-wide issue that affects several HST segments and that may influence the choice of HST infrastructure, such as trackform. This information was expanded in the revised Draft Geotechnical and Seismic Hazard Report issued on April 19, 2013. Recent survey of the existing Authority monuments indicated up to 18 inches of settlement since their installation circa 2011, as well as some lateral movement.[27]

In response to concerns over subsidence, the Authority has simply assumed that it can modify the ballast track bed to adjust for declining land surface levels. This assumed but untested solution would not apply, however, to elevated sections of the Project which cannot be easily adjusted to compensate for subsidence. It also may not be sufficient if subsidence is rapid, uneven, or severe.

The DBP should be revised to provide (1) a conservative description of the challenges presented by all mountain ranges that Phase 1 sections must cross, including the Coast Range via Pacheco Pass, (2) a conservative description of the challenges presented by planning and implementing this Project through heavily urbanized areas, (3) a conservative description of the challenges presented by land subsidence, and (4) a realistic assessment of the anticipated costs associated with addressing these challenges. As to the fourth point, the cost estimates should also be presented in year of expenditure ("YOE") amounts, and the Bakersfield to Los Angeles Union Station YOE figures should be adjusted to reflect the increased costs that will result from postponing construction of these Project sections.

The Authority must also revise the DBP to include a conservative cost estimate for Phase 2 of the Project. Proposition 1A's business plan requirements mandate a summary of costs for all Project sections, not just Phase 1.[28] By omitting the cost estimate for Phase 2, the Authority has not satisfied its statutory duties and has not provided the information the Legislature

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[26] *See* Capitol Public Radio, Amy Quinton, Central Valley Land Sink Issue For High Speed Rail, Flood Control, Water Deliveries, dated Nov. 20, 2013, available at: http://www.capradio.org/articles/2013/11/20/central-valley-land-sink-issue-for-high-speed-rail,-flood-control,-water-deliveries/ (accessed April 16, 2016); *see also* Another Headache For High Speed Rail: The Earth Is Falling, available at: http://sierra2thesea.net/central-valley/another-headache-for-high-speed-rail-the-earth-is-falling (accessed April 16, 2016).

[27] *See* Regional Consultant Monthly Progress Report Fresno to Bakersfield, for the period April 27, 2013 through May 24, 2013, dated June 10, 2013, p. 6, available at: http://www.calhsr.com/wp-content/uploads/2013/07/FB-URS-MPR-MAY-2013.pdf (accessed April 16, 2016).

[28] *See* Pub. Utilities Code, § 185033(b)(1)(A); *see also* Streets & Hwy Code, § 2704.04(a).

deemed necessary. Applying the World Bank's 2010 range for average international HSR costs per mile, the cost for the entire 800-mile Project, not including rolling stock and professional services, produces a rough estimate of between $44.8 and $89.6 Billion. Of course, this cost range does not include the cost of acquiring a substantial amount of ROW property. Also, construction costs in California have increased since 2010, and California's challenging geology, its built environment, as well as its high land values must also be taken into account.

In Section 6 of the DBP, the Authority now claims that it has the necessary funding to complete the SOS portion of Phase 1.[29] However, the DBP relies heavily on the continued availability of Cap and Trade ("C&T") funds for its SOS. As explained in the section concerning risks below, for several reasons this source of funding may cease to be available.

When enacting Proposition 1A, the voters did not give the Authority a blank check. And yet the Authority has acted as if it can spend the public's money however it wishes, with little real oversight or accountability. True, the Democrats that dominate the state legislature have generally abdicated their oversight role. And Governor Brown has not shown concern for the Project's enormous and growing costs. But the taxpaying public is very concerned about cost escalation, especially in light of the Authority's practice of providing unrealistically low estimates and other state agencies' scandals concerning ballooning costs for infrastructure. State agencies have repeatedly shown that they cannot be trusted when it comes to their early optimistic cost estimates and controlling growing costs for mega projects.[30] The DBP should provide conservative cost estimates that reflect a realistic assessment of the many challenging obstacles that will tend to increase costs.

C. The Authority Again Refuses to Substantiate or Provide Sufficient Details for Its Construction Cost Estimates

The Authority's past business plans and its other reports that provided information supporting cost estimates, while sometimes more detailed than the 2014 Business Plan and the DBP, have lacked substantiation for construction cost estimates.[31] When commenting on the Draft 2014 Business Plan, CCHSRA pointed out:

> The 2014 Business Plan and the supporting technical appendices do not provide any substantiation for the Authority's current cost estimates. Without detailed substantiation the public and decisionmakers are unable to verify the accuracy of

[29] *See* DBP, p. 61.

[30] *See* News To The Next Power, The San Francisco-Oakland Bay Bridge: Basic Reforms for the Future, July 2014, available at: http://stran.senate.ca.gov/sites/stran.senate.ca.gov/files/DeWolkreportfinal.pdf (accessed April 16, 2016); *see also* The Atlantic, CityLab, From $250 Million to $6.5 Billion: The Bay Bridge Cost Overrun, dated Oct. 13, 2015, available at: http://www.citylab.com/politics/2015/10/from-250-million-to-65-billion-the-bay-bridge-cost-overrun/410254/ (accessed April 16, 2016); *see also* SF Gate, Caltrans muzzled Bay Bridge critics, report says, dated Aug. 4, 2014, available at: http://www.sfgate.com/bayarea/article/Caltrans-muzzled-Bay-Bridge-critics-report-says-5660867.php (accessed April 16, 2016).

[31] *See* Revised 2012 Business Plan, Ch. 3; *compare*, *e.g.*, 2009 Report to the Legislature, pp. 84-89 *with* 2014 Business Plan and DBP.

> the estimates. This is a conspicuous omission, given the substantiation for other estimates (e.g., O&M costs, ridership, etc.). Based on our review of "Task Orders" concerning relocating infrastructure to make way for the ICS, the initial construction contract for Construction Package 1 ("CP1") of the ICS, the consultant contracts, and the major hurdles that the Authority faces in building Project sections through major metropolitan areas and over mountain ranges, we are convinced that the 2014 Business Plan again substantially underestimates the projected costs of the Project.
>
> Given the recent cost escalation for the east span of the Bay Bridge and the cost escalation for Boston's "Big Dig" project, it is imperative that the Authority substantiate its cost estimates and put measures in place to prevent costs from escalating. Without protective measures, taxpayers will bear the risk of higher Project costs.[32]

Last fall, in anticipation of the release of the DBP, we requested the substantiation for 2014 Business Plan construction cost estimate.[33] In response, after an inexplicable and apparently unnecessary two-week delay, the Authority asserted that the estimate for the last business plan was based on the 2012 Business Plan estimate and adjusted for inflation and there were no responsive documents.[34] We criticized that response as inconsistent with statements made by Authority officials and evasive and we reiterated our request for responsive documents.[35] We explained that the Authority's response was directly contradicted by claims by Chairman Richard and CEO Morales that "scores" of analysis were used in developing those cost estimates. The Authority never provided a further response or any responsive documents. The Authority's credibility is further eroded by these inconsistent statements concerning the basis for the 2014 Business Plan's capital cost estimates.

The Authority has now included a "Capital Cost Basis of Estimate Report" that purports to provide an explanation for the construction cost estimates presented in the DBP. This effort at substantiating the estimates only <u>appears</u> to be an improvement over the 2014 Business Plan. But the appendix document emphasizes the differences in cost estimates between the 2014 Business Plan and the DBP. Because the 2014 Business Plan itself failed to substantiate its cost estimates and because those estimates were based on outdated and incomplete 2012 information, this comparison is hardly helpful. Instead, the asserted reductions in costs are meaningless.

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[32] *See* CCHSRA Letter Commenting on Drat 2014 Business Plan ("2014 DBP"), p. 4. CCHSRA's and CC-HSR's comments on the 2014 DBP are incorporated herein by this reference.

[33] *See* <u>Attachment F</u>: CCHSRA and CC-HSR's Public Records Request, dated Oct, 16, 2015.

[34] *See* <u>Attachment G</u>: Authority Response to CCHSRA and CC-HSR Public Records Request, dated Nov. 12, 2015. The response letter did not explain why it was necessary to spend four weeks preparing a response that denied the existence of any responsive documents, the response should have been provided within 10 days, as required.

[35] *See* <u>Attachment H</u>: CCHSRA and CC-HSR Follow-up Letter re Public Records Request, dated Nov. 19, 2015.

Additional detailed information should be provided to substantiate the cost figures provided in Tables 7 through 17 Capital Cost Basis of Estimate Report. The information should include, at a minimum, the following:

- A brief description of the major features of each Project section (e.g., tunnels, viaducts, stations);
- A brief description of necessary major modifications to the existing roadways, utilities, and structures for each section;
- A brief description of the ROW parcels that must be acquired for each section; and
- A description of any unique features within a section that may lead to cost escalation.

The Authority should then provide corresponding cost estimates to each of the items described in the above categories and total costs for each category. Only by providing this detailed information, which can be scrutinized by the public, can the Authority claim that it has been "transparent."

We requested substantiation for the 2014 Business Plan construction cost estimates because we believed they would inform our analysis of the DBP. Because responsive documents were never provided, and because the DBP also fails to include substantiation, we, the public in general, and the legislature, will be unable to verify the accuracy of the DBP's cost estimates. Given the Authority's track record of obfuscation, evasion and concealment,[36] we can only conclude that the Authority purposefully makes its cost projections opaque.

Please revise the DBP to include more detailed information and substantiation supporting construction cost estimates.

D. The DBP Does Not Adequately Address the Significant Risks to Successful Project Implementation.

1. The DBP Does Not Analyze the High Risk of Cost Escalation Caused by the Authority's Failure to Meet Milestones on Schedule.

The schedule and timeline for constructing the Project has been slipping steadily for years. When Project planning was in its early stages, the Authority's predecessor agency, the Intercity High Speed Rail Commission, expected the entire statewide Project to take only 10 to 15 years to fully implement, from commencement of planning through the end of

[36] *See* news articles cited in Section II.B., above.

construction.[37] Yet already 10 years have elapsed since the Statewide PEIR/S was finalized and certified, and construction in the Central Valley is only now commencing.[38]

The Authority's assurances concerning the Project milestones that will be met are not worth the considerable volume of paper their printed on.

	Scheduled Milestones			
Document	**ICS/FCS**	**Phase 1/SOS**	**Phase 2**	**Full System Operational**
2000 Business Plan	N/A	Unspecified	Unspecified	2020[39]
2005 Statewide PEIR/S	Unspecified	Unspecified	Unspecified	2020[40]
FRA/CHSRA Coop. Agmt., Amd. 5	2017[41]	Unspecified	Unspecified	Unspecified
2012 Partially Revised Bay Area PEIR/S	Unspecified	2028 (blended Phase 1) 2033 (full)[42]	Unspecified[43]	Unspecified
2012 Business Plan	2017[44]	2028	Unspecified	Unspecified
M-F FEIR/S	2018[45]	2028	2027	2035
F-B FEIR/S	2022[46]	2026	2027	2035
2014 Business Plan	Unspecified	2028[47]	Unspecified	Unspecified
2016 Business Plan	Unspecified[48]	2028[49]	Unspecified[50]	Unspecified

[37] *See* Attachment I: Excerpts from 1996 Intercity HSRC Action Plan, p. 9-1 ["High-speed rail would be a major infrastructure project that would be implemented over a 10 to 15 year period, on par with building California's freeway system or water projects"].

[38] *See* Sacramento Bee, Groundbreaking at Fresno for California high-speed rail, dated Jan. 6, 2015, available at: http://www.sacbee.com/news/politics-government/capitol-alert/article5519280.html (accessed April 17, 2016).

[39] *See* 2000 Business Plan, p. 15 [Project "implementation is expected to take 16 years from the start of the environmental review process to full operation"], 17 [describing HSR service beginning in 2020], 58.

[40] *See* 2005 Statewide EIR/S, p. S-4 [describing HSR service beginning in 2020]

[41] *See* Grant Agreement, Amendment 5, p. 56; *see also* March 2011 Statement of Work attached to Grant Agreement, Amendment 5, p. 9, available at: http://www.hsr.ca.gov/docs/about/funding_finance/HSIPR/M-B%20Application.pdf (accessed April 15, 2016).

[42] *See* 2008 Partially Revised Bay Area EIR/S, p. 5-4.

[43] *See id.* at p. 10-5.

[44] 2012 Business Plan, p. 2-13.

[45] *See* M-F EIR/S, pp. 1-29 – 1-30 [added explanation re discrepancies between the timeline assumed in the M-F EIR/S analysis and the timeline assumed in the 2012 Business Plan].

[46] *See* Fresno to Bakersfield section EIR/S ("F-B EIR/S"), pp. 1-30 – 1-33 [added explanation re discrepancies between the timeline assumed in the F-B EIR/S analysis and the timeline assumed in the 2012 Business Plan].

[47] *See* 2014 Business Plan, p. 3.

[48] *See* DBP, pp. 85-86.

Given the Authority's poor track record in meeting the milestone's it has previously set, there is a strong likelihood that the schedule for Project implementation will slip even further. The DBP must analyze the very real risk that delays in implementation will increase Project costs. The current section of the DBP that addresses Risk Management (Section 9) mentions the possibility of delays that lead to increased construction costs, but it does not address the likelihood of delay or the amount that construction costs may increase for each month or year of delay.

2. The Project's Potential to Exacerbate Public Health Problems Caused by the Valley Fever Fungus May Delay Timely Project Completion and Increase Costs.

The serious public health hazards posed by Valley Fever (*Coccidioides immitis*) were brought to the Authority's attention in 2014, during its process of approving the Fresno to Bakersfield section of the Project. At that time, members of the public pointed out that the project-level EIR/S for that section did not adequately address the environmental impacts posed by Valley Fever. Construction of the Fresno to Bakersfield section alone will require excavation, transport, placement, and compaction of at least 24 million cubic yards of fill dirt.[51] Moving this massive volume of soil carries the risk of spreading Valley Fever.

The Authority assumed that standard dust control measures would be sufficient to address Valley Fever: on this basis, the Authority concluded, without analysis or factual support, that the risk of spreading Valley Fever during construction or operation was less than significant.[52] In contrast, in 2013 the CEC recommended enhanced dust control measures to reduce a project's potential to spread Valley Fever. Commenters requested that the F-B EIR/S be revised to provide a robust and transparent analysis of the risk the Project may exacerbate the Valley Fever problem. The Authority refused and it still has not squarely addressed the risks posed by Valley Fever and the Project's potential to exacerbate those risks.

The Valley Fever problem may also expose the Authority to substantial liability risks. Construction workers successfully sued CalTrans for failing to warn them of the risk of contracting Valley Fever.[53] In that lawsuit the jury awarded the victims $12 Million.[54] Has the

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[49] *See* DBP, p. 98.

[50] The 2016 vaguely predicts that sometime after 2015 there will be "Further planning and eventual construction of Phase 2 extensions to Sacramento and San Diego." (p. 86.)

[51] The F-B EIR/S only reported the need for 11.3 million cubic yards of fill dirt for the 114-mile Fresno to Bakersfield section. (F-B EIR/S, pp. 3.9-1 – 3.9-2.) In contrast, the Authority's application to the SJVAPCD for Indirect Source Review ("ISR") provided a more accurate estimate of the amount of fill required for CP1c, CP2 and CP3. There, the Authority's stated that 24 million cubic yards of imported fill would be required for only 70 miles of the 114-mile Section, directly contradicting the information and impact analysis in the FEIR/S.

[52] *See* Staff Response to Comments Raised Orally on May 6, 2014, p. 1. While the Staff Response document asserts that the F-B EIR/S analyzed the potential to cause Valley Fever impacts, Chapter 3.3 of that document, which addresses air quality impacts does not even mention Valley Fever.

[53] *See* L.A. Times, Jury awards $12 million in fungus-related valley fever lawsuit against Caltrans, available at: http://www.latimes.com/local/lanow/la-me-ln-caltrans-lawsuit-20160122-story.html (accessed April 16, 2016).

Authority considered the risk that its construction workers, members of the public, or local jurisdictions, may sue if Project construction causes Valley Fever infections?

3. The Growing Problem of Land Subsidence in the Central Valley Will Cause Engineering and Maintenance Costs to Soar.

As stated in comments concerning the DBP's unrealistically low construction cost estimates, above, the issue of land subsidence also poses risks to the Project's budget and completion timeline. The Authority's regional consultant expressed concerns about subsidence in 2013, but the Authority does not appear to have yet addressed those concerns in a serious manner.[55] Instead, as with so many other challenges, it simply assumes there will be a cheap and relatively easy solution.

However, subsidence can cause major damage to infrastructure, including to canals, roadways, and the HSR trackbed.[56] Designing the Project to avoid damage caused by subsidence and repairing any damage that does occur will add substantial cost to the Project that the DBP must account for.

4. All Necessary Third Party Agreements with Railroads Are Still Not in Place Compromising The Availability of Federal Funds.

The Authority still has not entered into all necessary agreements with railroads concerning the use of, or impingement upon, their rights-of-way along what is now described as the "First Construction Section" ("FCS") (a shrunken version of the 130-mile Initial Construction Section ("ICS")).[57] In fact, earlier this month the Authority finally delegated Authority to its staff to negotiate Relocation and Construction agreements and a Joint Corridor Agreement with Burlington Northern Santa Fe Railroad ("BNSF") Railroad ("BNSF Agreements for the FCS").

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[54] *Ibid.*

[55] In December, 2014, the Authority issued a Request for Qualifications ("RFQ") for firms to provide engineering services to address subsidence issues in the Central Valley and Antelope Valley. *See* Request for Qualifications for Professional and Technical Ground Subsidence Study Services, dated Dec. 5, 2014, available at: http://www.hsr.ca.gov/docs/about/doing_business/HSR14_31_RFQ_Ground_Subsidence_Study.pdf (accessed April 17, 2016). However, it does not appear that a contract has been awarded for this work or that any work has been performed to address the issue. *See* Memorandum re Preaward Review HSR14-31, dated May 13, 2015, available at: http://hsr.ca.gov/docs/brdmeetings/2015/brdmtg_060915_FA_14_Results_Memo_HSR14_31.pdf (accessed April 17, 2016).

[56] *See* Tara Moran, Janny Choy, and Carolina Sanchez, The Hidden Costs of Groundwater Overdraft (Stanford Woods Institute for the Environment, September 2014), ["Land surface elevation changes can have serious consequences for infrastructure, including the loss of conveyance capacity in canals, diminished levee effectiveness, and damage to roads, bridges, building foundations, and pipelines"] available at: http://waterinthewest.stanford.edu/groundwater/overdraft/index.html (accessed April 16, 2016).

[57] *See* Attachment J: Staff Report to Authority Board re "Consider Delegating Authority to Negotiate and Finalize Agreements with the BNSF Railway Company (BNSF)", dated April 12, 2016.

Yet, the December 21, 2012 Amendment No. 5 to the Grant Agreement between the Authority and the FRA states:

> The Grantee [Authority] represents that it has entered into and will abide by, or will enter into and abide by, a written agreement, in form and content satisfactory to FRA, with any railroad owning property on which the Project is to be undertaken, ... **The Grantee may not obligate or expend any funds (federal, state, or private) for final design and/or construction of the Project, or any component of the Project, without receiving FRA's prior written approval of the executed railroad agreement satisfying the requirements of this section [the ICS]**.[58]

Under the clear and unmistakable language of the Grant Agreement quoted above, the Authority must have entered into the BNSF Agreements for the FCS (and all other necessary agreements with BNSF and the Union Pacific ("UP") Railroad) before it can "obligate" or "expend" (spend) **any** of the federal grant funds for design and construction of the FCS portion of its Project. Pursuant to this contractual language between the federal Grantor and State Grantee, the Federal funds should simply not be presently available to the Authority.

Resolution #HSRA 16-11, adopted by the Authority Board implicitly acknowledged the importance of the railroad agreements by stating: "executing agreements for relocation, construction and join corridor sharing with BNSF Railway are critical to successfully constructing and operating the First Construction Section in the Central Valley." The DBP, however, does not address the risk of outstanding railroad agreements to "on time" and "on budget" delivery of the FCS and SOS.

Many miles of the Authority's proposed FCS alignments are located contiguous to, and maybe even within, the rights-of-way of both the UP and the BNSF Railroad. The work required within the FCS pursuant to the Agreements with BNSF is substantial. The staff report concerning Resolution #HSRA 16-11 summarized the anticipated costs for this work as follows:

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[58] Grant/Cooperative Agreement between FRA and Authority, Amendment No. 5, dated December 5, 2012, p. 8 (10 pdf) ("Grant Agreement, Amendment 5"), emphasis added, available at: http://www.hsr.ca.gov/docs/about/funding_finance/funding_agreements/FR-HSR-0009-10-01-05.pdf (accessed April 16, 2016).

DESCRIPTION	CP 1	CP 2-3	CP 4
TRACK STRUCTURE & TRACK		$23,595,666	$11,537,588
SITEWORK (REMOVAL OF BALLASTED TRACK)		$270,638	
COMMUNICATIONS AND SIGNALING		$6,968,637	$3,256,621
PROFESSIONAL SERVICES (FINAL DESIGN, PROJECT MANAGEMENT FOR DESIGN, CONSTRUCTION ADMIN & MANAGEMENT, PERMITS & FEES, SYSTEMS START-UP)		$4,580,835	$2,415,337
BNSF FLAGGING SERVICES, DOCUMENT REVIEW AND INSPECTIONS	$12,040,600	$23,696,740	$7,483,660
TOTAL BY CP	$12,040,600	$59,112,517	$24,693,206
ESCALATION 2014 3RD QTR. TO 2016 1ST QTR. (@ 3.75%/YR.)		$2,216,719	$925,995
SUBTOTAL FOR CP01, CP 2/3, CP04 AND ESCALATION			$98,989,037
		ROUNDED	$100,000,000

The Authority is currently construction CP1 and has entered into or will enter into Design-build contracts for CP-2, CP-3, and CP-4. The November 2012 Statement of Work in Grant Agreement, Amendment 5 states that the Authority expects to complete construction of the Merced to Fresno Section and the Fresno to Bakersfield Section (a portion of the Project that extends substantially beyond the termini of the FCS "by the end of September 2017."[59] The lack of railroad agreements (as well as many other challenges, including the slow progress of obtaining ROW properties, incomplete environmental review for portions of the F-B Section and M-F Section) will likely substantially interfere with the Authority's ability to meet its September 2017 completion target. The DBP does not address this.

Further, as was apparent at the Authority Board's April 12, 2016 meeting, the Authority has still not entered into all railroad agreements necessary for construction of the rest of the SOS. In fact, a March 2016 Federal Railroad Presentation indicates that the majority of railroad agreements remain outstanding.

Railroad Agreements:

Entity	Agreement Status
UPRR	5 executed, 1 pending
BNSF	1 executed, 4 pending
SJVRR	1 executed, 3 pending

Source: FRA, Grant Update and Status Briefing, March 2016

Thus, the Authority cannot count on the availability of Federal funding in its DBP until all necessary railroad agreements are final, executed, and approved by the FRA.

[59] *See* Grant Agreement, Amendment 5, pp. 56-57.

The DBP superficially acknowledges risks stemming from "Delays associated with railroad agreement review and approval." [60] But it does not wrestle with the contractual implication of the outstanding railroad agreements: namely, unavailable Federal funding for the FCS.

Thus, as CCHSRA pointed out in its comments on the 2014 Business Plan, "under the clear, unmistakable requirements of the Grant Agreement, it is difficult to see how the FRA can legally allow the Authority to obligate or spend federal grant funds before the essential requirement of master agreements with the railroads has been satisfied." CCHSRA understated the problem for the Authority: the absence of 100% of the required Railroad Agreements to complete the FCS should currently be a complete bar towards the Authority's access to the Federal funding.

5. Current Project Designs Do Not Reach the Required Phase 1 Termini: Union Station in L.A. and Transbay Transit Center in S.F.

The DBP indicates that the "extension" from San Jose to San Francisco would terminate at the existing Caltrain station at 4th and King St.[61] This station, however, is not the required location for the norther terminus of Phase 1.

The Bay Area PEIR stated that:

> The Transbay Transit Center site is the preferred station location option for the San Francisco HST Terminal. The Transbay Transit Center would offer greater connectivity to San Francisco and the Bay Area than the 4th and King site (about a mile from the financial district) because of its location in the heart of downtown San Francisco and since it would serve as the regional transit hub for San Francisco….
>
> [T]he Transbay Transit Center is compatible with existing and planned development and is the focal point of the Transbay redevelopment plan that includes extensive high-density residential, office, and commercial/retail development. Sensitivity analysis on the Pacheco Pass "Base" forecasts (low-end forecasts) concluded that the Transbay Transit Center would attract about 1 million more annual passengers a year by 2030 than the 4th and King station location option.[62]

In April 2010, the Authority Board voted to designate the TTC as the northern terminus for Phase 1 of the high-speed rail system.

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[60] DBP, p. 92.

[61] *See* DBP, pp. 61, 64.

[62] 2008 Bay Area PEIR/S, p. 8-18.

The DBP does not address the expansion of the TTC to accommodate Project requirements. It also does not address the costs and schedule for constructing the extension from the 4th and King Station to the Transbay Transit Center, a project known as the Downtown Rail Extension ("DTX").[63] We understand that the cost for DTX will be enormous,[64] but the DBP fails to include this cost in its Phase 1 estimates.

The DBP also lacks detailed information concerning the logistics for getting to the southern terminus of Phase 1, Union Station, and the associated costs. After years of planning for a tunnel alignment into Union Station, the Authority has again changed course by eliminating the plan for a tunnel and identifying an at-grade alignment. [65] While the Capital Cost Basis of Estimate Report includes a half million cost increase for planned work at Union Station, it does not provide any information concerning the work involved there, or within the approach alignment to Union Station, or the risk that the projected costs will increase.[66] For example, how will the new at-grade alignment cross I-5 and SR 110 near Union Station and how much will that crossing cost? In addition, the DBP does not address how this change, which, because of it' serpentine design, will likely result in longer travel times between Union Station and Burbank, may compromise the Project's ability to meet statutory speed requirements.

6. Because the Transbay Transit Center Has Limited Capacity for Trains, the Authority Cannot Satisfy Operational Headway Requirements of 12 Trains Per Hour, In and Out of the Station.

The Transbay Transit Center is apparently being designed to only handle four (4) trains in and out per peak hour (4 tpph/d), a frequency that is only one-third (1/3) of the statutory headway requirement of a train every five minutes or less (12 trains per hour).[67] This design is inconsistent with statutory requirements for HSR.

In January 2009, the Authority apparently informed the Transbay Joint Powers Authority ("TJPA") that the TTC would need to accommodate 12 trains per hour.[68] However, the TTC has

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[63] *See* Transbay Joint Powers Authority Website: http://transbaycenter.org/project/downtown-rail-extension (accessed April 16, 2016).

[64] *See* StreetsBlog SF, Guest Editorial: SF Needs to Get Serious About Connecting Caltrain [DTX will cost approximately $2.6 Billion], available at: http://sf.streetsblog.org/2016/01/05/guest-editorial-sf-needs-to-get-serious-about-connecting-caltrain/ (accessed April 16, 2016).

[65] Burbank to Los Angeles Project Section Supplemental Alternatives Analysis, April 2016, p. 3.

[66] *See* DBP, Technical Supporting Document: Capital Cost Basis of Estimate Report, p. 16.

[67] *See* Draft Supplemental Environmental Impact Statement/Environmental Impact Report for the Transbay Transit Center Program ("TTC DSEIS/R"), dated December 2015, pp. 2-14 [no project alternative includes four HSR tpph/d], 2-18 [project analyzed in DSEIS/R assumes same operational requirements]; available at: http://transbaycenter.org/uploads/2015/12/TJPA_Draft_SEIS-EIR_Main_Document_Final.pdf.pdf (accessed April 16, 2016); Sts. &Hy. Code, § 2704.09(c). Because the statute does not distinguish between peak hours and non-peak hours, the requirement for 12 trains per hour requires for all hours of HSR operation.

[68] *See* Presentation to TJPA Board, dated March 12, 2009 [Authority informed TJPA that "All trains coming to Bay Area will go into the [TTC]").

since been planned to accommodate only HSR's near-term ridership, not its forecasted long-term ridership demand.[69]

The statutory headway requirements for HSR are not divided into near-term and long-term levels. The DBP is required to evaluate the costs and challenges to fully carrying out the HSR Project pursuant to statutory requirements, including the requirement that "[a]chievable operating headway (time between successive trains) shall be five minutes or less." Because the TTC is the designated northern terminus of the HSR System, it cannot be a bottleneck to the five-minute headway requirement. Yet that is what the current designs of the TTC, the DTX, and the SF Extension contemplate. The DBP must be revised to analyze the risk that the current design for the TTC (and DTX) will further compromise the Authority's ability to satisfy its statutory mandates for the Project. It must also be revised to honestly assess the cost of completing the San Jose to San Francisco to TTC, its approved norther terminus for all HSR trains.

7. The Authority's Reliance on Cap and Trade Revenue as a Perpetual Project Funding Source is Misplaced.

The DBP does not adequately address the multiple risks threatening continued availability of Cap and Trade funding. Instead, it relies heavily upon C&T funding for 50% of the cost of the SOS section of Phase 1.[70] It unabashedly assumes that:

> The three sources of funding that have already been committed to the program will be directed to constructing the [SOS] line, include[e] previously appropriated Federal grant funds, Proposition 1A bond proceeds **and Cap and Trade proceeds**.
> …
>
> And
>
> **We will use Cap and Trade proceeds received through 2024** to help fund the capital costs for the Silicon Valley to Central Valley line. We estimate this amount to be $5.341 billion including amounts spent to date.
>
> And
>
> **We will use the $500 million of annual Cap and Trade proceeds received after 2024 to repay financing**.[71]

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[69] *See* TTC DSEIS/R, dated December 2015, pp. 2-14, ___; *see also* FRA memorandum re Environmental Clearance for advance construction of "train box" portion of [TTC], available at: http://transbaycenter.org/uploads/2010/05/Exhibit-6a-and-6b_FTA-Memo-re-Train-Box-and-FRA-letter-re-400-million-for-Train-Box.pdf (accessed April 16, 2016).

[70] *See* DBP, p. 61.

[71] DBP, p. 61, emphasis added.

The State implements its C&T program through authorization received through AB 32. The California Air Resources Board ("CARB") implements the C&T program as means to meet the State's GHG reduction targets through authority it receives via Health and Safety Code, section 38550, 38551, 38560, 38562, and 38570(c). Pursuant to Section 38562(c), the statutory authority for the C&T program will expire on December 31, 2020. If the Legislature wants CARB to continue to implement the C&T program it will have to extend this deadline.

However, by the time December 2020 arrives, the Legislature may be in no mood to extend the enabling legislation for the C&T program. Or it may exclude HSR from receiving funds through the program because it has not helped the state meet its GHG reduction goals prior to 2020, as required by the Authorizing statute.

The Legislature is already receiving lukewarm reviews of the use of C&T funding for HSR. In February 2014, the California Legislative Analyst's Office (LAO) released a report, "The 2014-15 Budget: Cap-and-Trade Auction Revenue Expenditure Plan," that described the then $250 million C&T proposal for the Project. The report was lukewarm about using C&T auction proceeds for HSR:

> **Some Outcomes Would Depend on Changes in Behavior**.
>
> In addition, the amount of greenhouse gas reductions for some proposed programs would depend on changes in behavior that are difficult to predict. For example, the administration assumes that the high-speed rail…proposals would result in some individuals shifting their mode of transportation, resulting in a net reduction in vehicle miles traveled in cars. While such changes might very well occur and could result in net greenhouse gas emission reductions, it would be difficult to predict with precision the likely marginal net greenhouse gas reduction due to these efforts. This uncertainty increases the risk that the administration's plan would not achieve its maximum potential emission reductions.
>
> **Some Reductions Would Likely Occur Beyond 2020.**
>
> We also find that some proposed activities would not contribute significant greenhouse gas reductions before 2020, which as mentioned above, is the statutory target for reaching 1990 emissions levels. For example, plans for the high-speed rail system indicate that the first phase of the project will not be operational until 2022. Moreover, the construction of the project would actually generate greenhouse gas emissions of 30,000 metric tons over the next several years. The High-Speed Rail Authority plans to offset these emissions with an urban forestry program that proposes to plant thousands of trees in the Central Valley. We also note that High-Speed Rail Authority's greenhouse gas emission estimates for construction do not include emissions associated with the production of construction materials, which suggests that the amount of emissions requiring mitigation could be much higher than currently planned. Therefore, it is possible that the construction of the Initial Operating Segment

> may result in a net increase in greenhouse gas emissions, even when accounting for proposed offsets."[72]

The LAO report also listed several implementation problems of the Governor's proposed plan to spend Cap-and-Trade auction proceeds. As the Project's completion date is further delayed and its costs escalate, the so-far complacent and complicit Legislature will have to answer to some long-deferred tough political questions. At that point, it may view continued diversion of a quarter of C&T funds as throwing good money after bad, and will turn off the Project's life support.

The Authority's reliance on C&T funds is further misplaced based on its past assurances of where those funds would be spent. In its 2012 Revised Business Plan ("2012 RBP"), the CHSRA made a commitment to the California Legislature when it asserted that in exchange for cap and trade funding, it would build the first leg of the High Speed Rail System south and would accelerate construction of the Burbank to Palmdale segment.[73]

In a letter addressed to Senator Fran Pavley on June 14, 2014, the HSRA committed to use the cap and trade funds granted to the agency through the Senator's SB 862 to "accelerate work on the segment from Burbank to Palmdale… The Burbank-Palmdale segment, which potentially could become an operating segment on its own, would accelerate benefits to the Los Angeles region."

Alternatively, the Authority's use of C&T funding may ultimately be barred through litigation.

Consequently, it is improper for the DBP to rely so heavily on the perpetual availability of C&T funding.

8. The Risk that Supplemental Environmental Review Will Be Required Due to Design Changes Threatens Both the Project's Completion Timeline as Well as the Low Construction Cost Estimate.

The DBP's discussion of Project risks does not address the real possibility that onging modifications to the Project will trigger the need for supplemental environmental review (discussed further below). As discussed below, there is a strong likelihood that changes made through value engineering and Project scope modifications will need to be addressed in new CEQA and NEPA analyses and in other permit determinations.

For example, URS, the former regional consultant for Central Valley sections observed in 2013 that:

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[72] *See* LAO report, pp. 11-12, underlining added, available at, http://www.lao.ca.gov/reports/2014/budget/cap-and-trade/auction-revenue-expenditure-022414.pdf (accessed April 16, 2016).

[73] *See* 2012 RBP, p. ES-3 ["Cap and trade funds are available, as needed, upon appropriation, as a backstop against federal and local support **to complete the IOS**"], emphasis added.

> Following discussions with Caltrans regarding the constrained area of HST alignment between BNSF and SR 43 north of Corcoran, the RC was tasked with assessing the environmental impacts of widening the corridor into an adjacent lacustrine and grassland habitats to facilitate Caltrans' long-term plan to widen SR 43 from two to four lanes…. It is understood that offsetting either the HST or Caltrans ROWs to the east will require re initiating consultation with the U.S. Fish and Wildlife Service (USFWS) and opening the recently issued Biological Opinion (BO). RC is awaiting further direction on the preferred option in this area.

In addition, the contract documents for CP 1, CP 2-3, and CP 4 indicate that supplemental environmental review may be required for approved changes to the design of the FCS. Because the Project's sections are only designed a relatively crude 15% level of design for the purposes of environmental review, the refinements and changes to that design following certification of EIR/S documents and issuance of permits carry the risk of triggering supplemental review. The DBP should be revised to address the very real risks to the Project's timeline and budget posed by the Authority's design-build approach to implementation.

E. Supplemental Environmental Review is Required for the Project

The DBP reveals that the Authority is considering and approving a number of substantial changes to Project design and scope based on its goal to cut costs. The changes to the Project will cause new and more severe impacts, triggering the need for supplemental environmental review, pursuant to CEQA and NEPA.

1. Changes to the Project, Including Those Made Through Value Engineering, and Will Result in New Impacts That Have Not Been Analyzed and Mitigated Pursuant to CEQA and NEPA, as Required.

The DBP and other Authority documents allude to, but do not specifically describe, numerous substantial changes to the Project's design that implicate the environmental review process. For example, in a number of locations at-grade alignments have replaced aerial structures and earthen berms have replaced viaducts.[74] The newly substituted earthen berms, which create impermeable barriers to movement, will result in impacts that were not considered in the already certified M-F EIR/S and F-B EIR/S. Impermeable earthen berms would result in numerous new and increased significant impacts, including increased traffic impacts in urban areas and increased impacts to wildlife in rural areas due to constrained wildlife habitat connectivity.

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[74] *See* , *e.g.*, DBP, Capital Cost Basis of Estimate Report, pp. 13 ["The San Jose-Merced section had a major cost reduction associated with changing the Diridon Station from being aerial to at-grade, extending the at-grade alignment in the Caltrain corridor to Tamien, and applying value engineering solutions to tunnel designs"], 15 [reporting "Increase in grade separations costs due to decrease in aerial guideway in CP 2-3"]; *see also* CRB, Executive Summary and Technical Proposal, p. 37 [proposed reduction of viaduct length through Wasco].

The Diridon station is now planned to be at grade, but the Bay Area PEIR's analysis was based upon an elevated station design.[75] An at-grade station through this heavily urbanized area will require a larger footprint for the station and connecting tracks. It also may create a barrier to movement around the station, causing new unanalyzed traffic impacts. It would also displace more people along the alignments leading to and from the station. These are all impacts that would need to be re-evaluated in an EIR.

During staff presentation of Agenda Item 5 at the March 8 Authority Board meeting, staff stated that the Project footprint for CP1 and CP 2-3 have had to be widened in order to accommodate changes to the Project's design.[76] While the staff report stated "Many of the [Alternative Technical Concepts ("ATCs")] introduce modifications to the needed ROW that must be acquired once those new features are environmentally cleared,"[77] there is no evidence that these changes have been subject to any environmental review pursuant to CEQA and NEPA.[78] This is surprising, given that the "design refinements" have led to approximately 500 parcels being required for the FCS beyond the original scope of services.[79] Project impacts within a widened footprint have the potential to increase the impacts analyzed in the M-F EIR/S and the F-B EIR/S and to cause new unanalyzed impacts.

Landowners have also discovered through investigation (rather than through Authority disclosure) that major alignment changes and secondary impacts to other facilities is causing increased construction-related impacts. For example, a the Authority now plans to relocate a section of Highway 198 and also plans to create a trenched railroad section of the Cross Valley Railroad.

Each of these Project changes will cause unanalyzed significant impacts that necessitates supplemental CEQA and NEPA review. Yet the Authority is planning these changes behind closed doors, without public participation, and without the required supplemental impact analysis and mitigation. **The Authority cannot approve a business plan that simply assumes cost-saving design changes without first analyzing and mitigating the environmental impacts of those changes, and adopting those changes after complying with CEQA and NEPA.**

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[75] *See* , *e.g.*, Bay Area PEIR, pp. 3.9-19 ["The HST would be accommodated by building a concourse and up to six HST tracks and three platforms above the existing platforms. The proposed platforms for HST would be located at 45 ft (13.7 m) above grade."], emphasis added, 3.9-21 [same], 4-13.

[76] *See* Transcript for March 8, 2016 Authority Board meeting, pp. 64-65, available at: http://www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg_030816_Board_Meeting_Transcript.pdf (accessed April 17, 2016).

[77] *See* Staff Report for Agenda Item 5, Authority March 8, 2016 Board Meeting, p. 1, available at: http://www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg_030816_Item5_Approval_to_Amend_Existing_ROW_Engineering_and_Survey_Support_Services_Contracts.pdf (accessed April 17, 2016).

[78] A search of CEQANet website for all CEQA documents filed with the State Clearinghouse since 2013 reveals no environmental clearance documents have been filed for the approved ATCs within the FCS.

[79] *See id.* at pp. 2-3. The staff report does not describe the ATC's or "design refinements" that have widened the FCS's footprint.

CC-HSR and CCHSRA hereby request notice, pursuant to both CEQA and NEPA, of any supplemental environmental review being conducted for changes to the Project's design. Such notice should be sent to the undersigned at the email address in the above letterhead and to the following recipients:

Gary A. Patton, Attorney at Law
Executive Director, Community Coalition on High-Speed Rail
P.O. Box 1038
Santa Cruz, CA 95061
Email: gapatton@gapattonlaw.com

Aaron Fukuda
Co-chairman, Citizens for California High Speed Rail Accountability
P.O. Box 881
Hanford, CA 93232
E-mail: afukuda77@gmail.com

2. The Advertised "Benefit" of Creating Bedroom Communities in the Central Valley for Silicon Valley Workers Would Have Significant Environmental Impacts That the Authority Has Previously Denied.

As approved by the California electorate in 2008, and as presently codified in California Streets and Highways Code, Proposition 1A includes express provisions that the Project be designed to achieve a number of very specific objectives, including the express requirements that "The high-speed train system shall be planned and constructed in a manner that minimizes urban sprawl and impacts on the natural environment."[80]

In spite of this statutory prohibition, the Authority is now advertising the first operating section of the Project as one that will facilitate the development of bedroom communities in the Central Valley that will house Silicon Valley workers. Specifically, it asserts:

> The implications of the Silicon Valley to Central Valley connection are tremendous. Today it takes about three hours to drive from Fresno to the Bay Area; flights are available but often at exorbitant prices. With this new connection, a trip from Fresno to San Jose will take about an hour on high-speed rail which is a game changer both for the people and the economy of the Central Valley and for Silicon Valley as well. New job markets will be opened up for people living in the Central Valley and creating a high-speed connection to the Central Valley would help address the affordable housing crisis in the Bay Area. New linkages will be created between higher education institutions in the Central Valley and high-tech and other cutting edge industries in the Silicon Valley. And some high-tech companies might choose to locate certain corporate functions in the Central Valley where commercial real estate is less expensive, generating new job opportunities in this region.[81]

[80] *See* St. & Hy Code, § 2704.09.

[81] DBP, p. 12, emphasis added.

However, in both the M-F EIR/S and the F-B EIR/S, the Authority denied that HSR would induce sprawl in the Central Valley and thereby contribute to conversion of agricultural lands to urban uses. (See General Response 3 in both documents, incorporated herein by reference).

> The HST will not be a below market cost, subsidized commuter rail service, but instead would provide rapid long-distance travel, priced at commercial market rates. HST fares are expected to be tied to typical airplane fares. The cost of the fares will discourage relocation and a daily commute to and from the Bay area and the Los Angeles Basin.[82]

Thus, the promised benefit upon which the Authority relies to justify its switch to a northern IOS directly contradicts the prior assertions made by Authority when denying that HSR would induce urban sprawl. The Authority is speaking out of both sides of its mouth: it denies growth inducement when it is convenient to not admit environmental impacts (such as agricultural land conversion and destroyed habitat) and advertises growth inducement when its convenient to emphasize the asserted economic benefits of its major shift in implementation strategy.

If HSR will indeed spur the development of new housing in the Central Valley for commuting workers, then the Authority must conduct supplemental environmental review for the M-F and F-B sections, revisiting the issue of potentially significant impacts caused by induced sprawl.

III. CONCLUSION

Please revise the DBP in response to the above comments and the incorporated comments. The Final DBP must fully and candidly address and substantiate Project cost increases, the Project completion schedule, and all the risks that threaten the Authority's highly optimistic estimates and assumptions. Until the DBP is revised as requested, it will not satisfy statutory requirements and will not provide the Legislature with accurate information upon which responsible decisions may be made concerning the Project.

You can contact me at 510-338-3759 or at jason@holderecolaw.com if you have any questions regarding the above comments.

Very truly yours,

Jason W. Holder

[82] F-B EIR/S, p. 35-26, emphasis added. As commenters noted when criticizing the above General Response 3, HSR will not necessarily encourage infill development. Instead, the growth induced by HSR could sprawl across valley farmland, exacerbating the existing sprawl problem.

Enclosures:

Attachment A: Excerpt from Petitioners' Memorandum of Points and Authorities in Support of Preliminary Injunction

Attachment B: CP1 Monthly Status Report for Authority Board Meeting 030816

Attachment C: DOT, Construction Cost Indices and Forecast

Attachment D: DOT, Price Index for Selected Highway Construction Items, 4th Quarter Ending December 31, 2015

Attachment E: Letter from URS to Authority's Regional Manager re: Fresno to Bakersfield Section Regional Consultant's January 2014 Monthly Progress Report, dated May 5, 2014

Attachment F: CCHSRA and CC-HSR's Public Records Request, dated Oct, 16, 2015

Attachment G: Authority Response to CCHSRA and CC-HSR Public Records Request, dated Nov. 12, 2015

Attachment H: CCHSRA and CC-HSR Follow Up Letter re Public Records Request, dated Nov. 19, 2015

Attachment I: Excerpts from 1996 Intercity HSRC Action Plan

Attachment J: Staff Report to Authority Board re "Consider Delegating Authority to Negotiate and Finalize Agreements with the BNSF Railway Company (BNSF)", dated April 12, 2016

cc: (via email only)
Client representatives

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EXEMPT FROM FILING FEES
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SUPERIOR COURT OF CALIFORNIA

COUNTY OF SACRAMENTO - GORDON D. SCHABER COURTHOUSE

COUNTY OF MADERA, et al.,

Petitioners and Plaintiffs,

vs.

CALIFORNIA HIGH-SPEED RAIL AUTHORITY, et al.,

Respondents and Defendants.

CITY OF CHOWCHILLA, a California municipal corporation,

Petitioner and Plaintiff,

vs.

CALIFORNIA HIGH-SPEED RAIL AUTHORITY, et al.,

Respondents and Defendants.

TIMELESS INVESTMENT, INC., et al.

Petitioners and Plaintiffs,

vs.

CALIFORNIA HIGH-SPEED RAIL AUTHORITY, et al.,

Respondents and Defendants.

Lead Case No.: 34-2012-80001165-CU-WM-GDS

Cases Consolidated for Case Management, Briefing and Trial Purposes Only With:

Case Nos.: 34-2012-80001166-CU-WM-GDS
34-2012-80001168-CU-WM-GDS

MEMORANDUM OF POINTS AND AUTHORITIES IN SUPPORT OF MOTION FOR PRELIMINARY INJUNCTION AND ALTERNATIVE APPLICATION FOR ADMINISTRATIVE STAY

Hearing on Motion / Application:
Date: Nov. 16, 2012
Time: 1:30 p.m.

ASSIGNED FOR ALL PURPOSES TO:
THE HONORABLE TIMOTHY FRAWLEY
DEPARTMENT 29

TABLE OF CONTENTS

B. Project Implementation

Since approving the Section in early May 2012, the Authority has begun expeditiously implementing its approved Section plans. It solicited bids from construction firms and, as early as January 2013, will enter into contracts with the firms that will perform the work included in Construction Package No. 1 ("CP1"), a 29±mile stretch of the ICS extending from Avenue 17 in the City of Madera to south of East American Avenue in the City of Fresno.[32] The Authority is already conducting land surveys of properties within the CP1 ROW and other areas within the ICS and will soon begin acquiring property.[33]

At least several months before this lawsuit can be resolved, the Authority and its contractors will complete design of CP1, enter into binding contracts, initiate pre-construction activities, and begin construction of the CP1.[34] The Authority is aggressively implementing CP1 before the Corps, CDFG, CalTrans, SJAPCD, and other agencies have made permitting decisions.[35] Under the Authority's timeline, construction activities may occur before critical mitigation measures for air quality, traffic, noise, and agricultural impacts are in place.[36]

In March 2012, the Authority estimated that design-build work for CP1 will cost $1.5 to 2 Billion.[37] This estimate – which does not include the cost of acquiring the ROW, as well as other costs – has changed little in the ensuing months, even in the face of mounting estimated construction costs.[38] The actual cost of constructing CP1 alone may substantially exceed the

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[32] *See* Exh. E, pp. C-3 – C-5; *see also* Exh. B, p. 7; *see also* Exh. C, Limits of Work Map.

[33] *See* Exh. F; *see also* Exh. G, Notes for CP-01 A and B ROW Acquisition Plans; *see also* Declaration of Sam Curran in Support of Motion ("Curran Declaration"), ¶8.

[34] *See* F146803-04 [Revised 2012 Business Plan – initial construction begins in early 2013]; Exh. A, pp. 2-108 – 2-113. The Authority anticipates the notice to proceed with CP1 construction ("NTP") to be issued as early as March 2013. *See* Exh. C, p. 7.

[35] *See* Exh. D, ROD, pp. 9-10 [Corps has not issued Section 404 permit for Section]; *see also* B000258-259 [FEIR, list of permits required].

[36] *See, e.g.*, A000038-39 [FOF, N&V MM#1 with no mandatory restrictions that measures be in place prior to ground disturbing activities], 70-74 [FOF, MM-Bio#].

[37] *See* Exh. H, Staff Report to AUTHORITY Board re RFP for CP1.

[38] *See* Exh. B, p. 8 ["budget goal" for design and construction "estimated at $1.2 billion to $1.8 billion"]; *see also* Exh. I, Table Summary of Estimated CP1 Costs Identified in Task Orders [$1.5 Billion in Task Order costs alone]; *see also* Exh. J [Task Orders for infrastructure

Authority's publicized estimates for constructing all of the ICS. Indeed, the enormous costs associated with just CP1 balloons when extrapolated to the many other infrastructure modification projects that will be necessary to build *the rest of the Section and the ICS.*[39]

III. ARGUMENT

A. Legal Standard

Preliminary injunctions preserve the *status quo* until a final determination of the merits of the action.[40] To issue a preliminary injunction, the Court must weigh two "interrelated" factors: (1) the likelihood that the moving party will ultimately prevail on the merits and (2) the relative interim harm to the parties from issuance or nonissuance of the injunction.[41] The Court's "determination must be guided by a 'mix' of the potential-merit and interim-harm factors; the greater the plaintiffs showing on one, the less must be shown on the other to support an injunction."[42] Where the moving party makes a sufficiently strong showing of likelihood of success on the merits, the injunction may issue, even where the balance of harms does not tip in its favor.[43] Finally, a court "must exercise its discretion 'in favor of the party most likely to be injured.' ... If the denial of an injunction would result in great harm to the plaintiff, and the defendants would suffer little harm if it were granted, then it is an abuse of discretion to fail to grant the preliminary injunction."[44]

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relocation and construction work within CP1 indicates more than $1.3 Billion will be spent on infrastructure relocation and new construction work within City of Fresno for city facilities impacted by CP1]; *see also* Exhs. K through Q, [Excerpts from draft Master Agreements between Authority and Fresno County, Fresno Irrigation District, Madera County, Fresno Municipal Flood Control District, Madera Irrigation District, PG&E and AT&T, respectively; *see* also Exh. R [relocating 2.5±miles of Highway 99 will cost $225,900,000].

[39] For example, the more than $1.5 Billion in Task Order costs for infrastructure modification projects would be over $6.9 Billion when extrapolated to 130-mile ICS.

[40] *Continental Baking Co. v. Katz* (1968) 68 Cal.2d 512, 528.

[41] *Butt v. State of California* (1992) 4 Cal.4th 668, 677-678; *see also* Code Civ. Proc. § 526(a).

[42] *Ibid.*

[43] *Common Cause of California v. Board of Supervisors* (1989) 49 Cal.3d 432, 447; *Pleasant Hill Bayshore Disposal v. Chip-It Recycling* (2001) 91 Cal.App.4th 678, 696.

[44] *Robbins v. Superior Court* (1985) 38 Cal.3d 199, 205.

Construction Manager:	Hugo Mejia Design & Construction Manager	**Project Director:**	Terry Ogle Director of Design & Construction
PCM:	John C. Lee D-B Oversight Manager	**Regional Director:**	Diana Gomez Central Valley Regional Director
Design-Builder:	TUTOR PERINI/ZACHRY/PARSONS JV		

Milestones	
RFQ Date:	11/15/2011
SOQ Date:	12/19/2011
RFP Date:	3/22/2012
Proposal:	1/18/2013
Bid Open Date:	4/13/2013
Award Date:	8/16/2013
NTP 1 Date:	10/15/2013
NTP 2 Date:	11/22/2013
NTP 3 Date:	7/11/2014
Original Completion Date:	3/31/2018
Current Completion Date:	3/31/2018

Contract Time Status	
Original Contract Days (Calendar Days):	1,628
CO Days:	0
Days Worked (thru 01/31/2016):	838

Expended to Date (Contract %'s)	
Time:	51.5%
Dollars:	19.6%

Growth %	
% Time Growth:	0.0%
% Dollars Growth:	1.4%

Contract Status	
Proposal Amount:	969,988,000.00
Provisional Sums:	53,000,000.00
Original Contract Amount:	1,022,988,000.00
Executed Change Orders:	14,465,034.89
Current Contract Amount:	1,037,453,034.89
Approved Invoices to Date:	203,079,466.09
Remaining Contract Balance:	834,373,568.80

Contingency Status	
Original Contingency Amount:	160,000,000.00
CHSRA Adds/Deducts to Contingency:	0.00
*Executed Change Orders:	13,974,882.78
Current Contingency Balance:	146,025,117.22

Budget Status	
Original Contract Amount:	1,022,988,000.00
Original Contingency Amount:	160,000,000.00
Original Budget Allotment:	1,182,988,000.00
CHSRA Adds/Deducts to Contingency:	0.00
Budget Transfers (Adds/Deducts):	490,152.11
Current Budget Allotment	1,183,478,152.11

*Contingency funded change orders only

Major Scheduled Activities Planned/Ongoing

- Continue design work (ongoing)
- Design engineering for utility relocations, including recently directed design for Excluded 3rd Party facilities (ongoing)
- Hazmat abatement and demolition of recently acquired parcels (ongoing)
- Clear and grub activities at Avenue 12 in Madera County, pending completion of parcel acquisition (planned)
- Clear and grub activities for Guideway Section 1 between Avenue 15 ½ and Avenue 15 in Madera County (ongoing)
- Started falsework erection between spans 2 to 11 at the Fresno River Viaduct (ongoing)
- Started preparatory work for installation of Fresno Trench lagging piles between Belmont Avenue and SR 180 (ongoing)
- Started preparatory work for installation of CIDH piles for the Downtown Viaduct (ongoing)
- PG&E electrical relocations are ongoing at Raymond Road in Madera County
- Demolition started at the Tuolumne Street Bridge (ongoing)
- CP1C utility relocations and additional work area re-exam is currently awaiting final signatory approval by the Authority (ongoing)
- San Joaquin River South re-exam is currently under FRA review (ongoing)
- Herndon ATC environmental re-exam is in review with the Authority; anticipate forwarding to the FRA by 2/10/2016 (ongoing)
- Downtown Fresno Utilities re-exam is in review with the Authority (ongoing)
- Level 12+ BO Amendment is currently with the USFWS awaiting finalization (ongoing)
- CDFW 2081 ITP Amendment is with the CDFW awaiting finalization (ongoing)
- RFC design engineering for project structures. RFC designs in review or comment resolution for:
    - Cottonwood Creek HST Bridge (In Review)
    - West Shaw Ave OC (In Review)
    - West Olive Ave OC (In Review)
    - Fresno St HST Underpass (In Review)
    - Tulare St HST Underpass (In Review)
    - East Church Ave OC (In Review)

Key Topics

- TPZP has submitted cost proposals for both design and construction of the 2.6 mile north extension. The Authority is developing an independent estimate and evaluating the potential to add these works to CP1.
- The Value Engineering Change Proposal (VECP) for the Fresno River Viaduct was agreed to with a credit of approximately $1.7M to the Authority. The PCM is drafting a change order to incorporate this change into the CP1 contract.
- The Authority is preparing a detailed evaluation of the necessary relocations and utility coordination needed for originally excluded PG&E and AT&T work. Preliminary information indicates that the scope to the existing contract will be increased for the originally excluded and additional relocations that were not originally identified, and to implement the management process that was originally contemplated. Additional funds will be required.
- Contractor needs to complete design to start construction at critical locations (approved ready-for-construction plans).
- Parcel acquisition is behind the dates specified in the Right-of-Way Acquisition Plan and continues to be a schedule risk.
- Avenue 7/San Joaquin River site experienced heavy rains that caused erosion and stream sedimentation. Authority oversaw implementation of additional BMPs to prevent further erosion. Agency investigation is ongoing.
- Construction has started at three (3) locations. The Authority continues to work with TPZP to start construction at identified priority locations.
- Three (3) NCRs were issued by TPZP and two (2) were closed during the reporting period. Authority-issued NCN 0003 remains open.

Key Work Accomplished this Period

- Fresno River Viaduct
    - Completed six column flares, all large-diameter CIDH piles, columns for bents #2 through #17, and CIDH piles for abutment #18
    - Started erection of the falsework
- Tuolumne Bridge
    - Closed street, established traffic detour
    - Completed installation of protection for UPRR and started demolition
- Downtown Viaduct
    - Site grading and SWPPP implementation
- Fresno Trench
    - ESOC 001 for Lagging Piles approved
    - SWPPP implemented and Becho mobilized to install lean piles
- As of January 31, 2016, sixty-nine (69) structures have been remediated, with twelve (12) awaiting remediation, sixty-eight (68) have been demolished, two (2) are in process and five (5) are ready for demolition.
- PG&E electrical relocations at SR 145 in Madera County were completed.
- Two (2) design submittals received a Statement of No Objection (SONO) and one (1) submittal received a Statement of No Objection with Comments. Fifteen (15) design submittals remain in review.

- Two (2) 3rd party submittals (for facilities crossing HSR Right-of-Way) Approved
- Transferred fourteen (14) parcels in 1A/1B and four (4) parcels in 1C to TPZP authorizing access to the property.

Safety

- The Authority and TPZP continue to conduct joint weekly safety and security site visits to observe and report on the conditions of the parcels and work taking place.
- There were zero (0) injuries, one (1) security incident, and zero (0) property damage incidents during this reporting period. The security incident consisted of trespassers living in a small vacant building.
- TPZP has been accepted into the Cal/OSHA Golden Gate Partnership Program. Golden Gate is an entry level site-specific recognition program in partnership with Cal/OSHA Consultation Services. Cal/OSHA Consultation is scheduled to visit the project March 10, 2016.
- John Viernes, Tutor-Perini Safety Director continues to serve as the Interim Safety and Security Manager until a qualified permanent replacement is identified.

3rd Party

- Thirty-eight (38) agreements have been executed with twenty one (21) 3rd Parties, while eight (8) agreements remain outstanding with four (4) 3rd Parties. Please note that some 3rd parties require multiple agreements.
- BNSF Construction Relocation Agreement is a priority for execution.
- AT&T
    - Avenue 7, 8, 9, 10, 11, 12, 13, 14, 15, and 15 ½ Duct Bank Relocation RFC submittal were approved
    - Design Coordination Meetings to review designs in progress
    - Utility Crossing Applications for the following crossings were sent to AT&T for signature:
        - Belmont Avenue (T1-67)
        - Olive Avenue (T1-83)
        - McKinley Avenue-Pine/West (T1-159)
    - AT&T poles for SR145 were delivered
    - Executed NTO 14,15 and 16
- Burlington Northern Santa Fe Railroad (BNSF)
    - Progressing 30% design submittals
    - Flagman observing construction activities at Fresno River Viaduct
    - Monthly coordination meetings in progress
- Caltrans
    - Reviewing SR180 RFC submittal
    - Reviewing SR145 90% submittal
    - Reviewing SR145 Feasibility Study
    - Reviewing SR99 Cedar North span configuration
    - Reviewing San Joaquin River Viaduct Fact Sheet
- Madera Irrigation District
    - Reviewed Madera Irrigation District standards against their design
- PG&E
    - Conducted Pre-Design kick off meetings for several electrical conflicts
    - Conducted Pre-Design kick off meetings for several gas conflicts
    - 65 Conflicts under design
    - Reviewing electrical submittals
    - Reviewing gas submittals
    - Executed NTO 15, 16, 17, 18
- San Joaquin Valley Railroad
    - Participated in Coordination Meetings
- Sebastian
    - Task order is in review with the 3rd Party
- Sprint
    - Task order executed
- Qwest
    - Task order executed
- Verizon
    - Task order signed by Verizon
- Union Pacific Rail Road (UPRR)

- Bi-weekly coordination meetings in progress
- Reviewed early start of construction areas
- Reviewed right-of-way limits
- Flagman are observing potholing and geotechnical activities
- Reviewed design and construction submittals
- Partnering Meeting with UPRR/HSR/TPZP/City of Fresno/Caltrans

- 3rd Parties with Executed Master/Cooperative Agreements
  1. AT&T
  2. Caltrans
  3. City of Fresno
  4. Comcast
  5. County of Fresno
  6. County of Madera
  7. CVIN
  8. Fresno Irrigation District
  9. Fresno Metropolitan Flood Control District
  10. Kinder Morgan
  11. Level 3
  12. Madera Irrigation District
  13. PG&E
  14. Qwest
  15. Sebastian
  16. Sprint
  17. Time Warner
  18. UPRR
  19. Verizon/MCI

California
Department of Transportation

Price Index for Selected Highway Construction Items
Fourth Quarter Ending December 31, 2015

SUMMARY

Index this quarter	**128.21**
Point change from last quarter	**10.3**
Percentage change from last quarter	**8.73%**
Index last 12 months	**122.02**
Point change from previous report	**2.33**
Percentage change from previous report	**1.94%**

Average number of bidders this quarter	**5.3**
Change in number of bidders from last quarter	**+0.5**

Notes: Price indices are computed using the Fisher formula and base year 2007.

Prepared by: Cuong Nguyen, cuong.hung.nguyen@dot.ca.gov
Division of Engineering Services – Office Engineer
1727 30th Street, 2nd Floor (MS43), Sacramento, California 95816.
Date: 01/14/16

California Department of Transportation

Price Index for Selected Highway Construction Items

4th Quarter Ending December 31, 2015

Prepared by Division of Engineering Services - Office Engineer

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NOTE: All information shown in the publication was assembled using the 2007 base year.

The California Price Index for Selected Highway Construction Items for the fourth quarter of 2015 stands at 128.21, up 10.30 points (8.73 percent) from the third quarter of 2015 index of 117.91. The Index for the year-to-date (January 1, 2015 through December 31, 2015) is 122.02, up 2.33 points (1.94 percent) from the third quarter of 2015 year-to-date index of 119.69.

Cost increases were recorded in Roadway Excavation, Aggregate Base, Asphalt Concrete (Pavement), Bar Reinforcing Steel, and Structural Steel in the fourth quarter.

The average number of bidders per project in the fourth quarter of 2015 is 5.3, more amount of bidder per project as compared to 4.8 in the third quarter of 2014 and down 0.5 as compared to 5.8 in the corresponding quarter of 2014.

Projects Bid Opened

(October 1, 2015 through December 31, 2015)

Range(by $)			Number of Projects	%	Amounts of Projects ($)	%
Up to 50,000			0	0.00%	0	0.000%
50,000	to	100,000	0	0.00%	0	0.00%
100,000	to	250,000	3	2.31%	646,070	0.06%
250,000	to	500,000	5	3.85%	1,804,203	0.18%
500,000	to	1,000,000	15	11.54%	11,430,024	1.13%
1,000,000	to	2,500,000	50	38.46%	86,927,040	8.60%
2,500,000	to	5,000,000	23	17.69%	77,730,855	7.69%
5,000,000 and above			34	26.15%	831,742,804	82.33%
Total			**130**	**100%**	**1,010,280,996**	**100%**

Construction Item Costs Based on English Units

Roadway Excavation: $17.6 per cubic yard

The price increased $3.32 from the average price of $14.28 per cubic yard last quarter. The bid prices ranged from $12.00 to $1500.00 per cubic yard.

Aggregate Base: $24.55 per ton

The price increased $4.83 from the average price of $19.72 per ton last quarter. The bid prices ranged from $20 to $1880 per ton.

Asphalt Concrete Pavement: $111.30 per ton

The price increased $28.90 from the average price of $84.2 per ton last quarter. The bid prices ranged from $64 to $8200.00 per ton.

Portland Cement Concrete (Pavement): $219.82 per cubic yard

The price increased $0.04 from the average price of $219.78 per cubic yard last quarter. The bid prices ranged from $180.00 to $320.00 per cubic yard.

Portland Cement Concrete (Structure): $689.72 per cubic yard

The price decreased $64.39 from the average price of $754.11 per cubic yard last quarter. The bid prices ranged from $240.00 to $18,800.00 per cubic yard.

Bar Reinforcing Steel: $1.27 per pound

The price increased $0.05 from the average price of $1.22 per pound last quarter. The bid prices ranged from $0.60 to 18.00 per pound.

Structural Steel: $16.32 per pound

The price increased $1.69 from the average price of $14.63 per pound last quarter. The bid prices ranged from $8.00 to $82 per pound.

Construction Item Costs Based on Metric Units

Roadway Excavation: $23.02 per cubic meter

The price increased $4.34 from the average price of $18.68 per cubic meter last quarter. The bid prices ranged from $7.86 to $1957 per cubic meter.

Aggregate Base: $27.06 per tonn

The price increased $5.32 from the average price of $21.74 per tonn last quarter. The bid prices ranged from $20.9 to $2039 per tonn.

Asphalt Concrete Pavement: $122.69 per tonn

The price increased $29.88 from the average price of $92.81 per tonn last quarter. The bid prices ranged from $63.8 to $8781 per tonn.

Portland Cement Concrete (Pavement): $287.51 per cubic meter

The price increased $0.05 from the average price of $287.46 per cubic meter last quarter. The bid prices ranged from $237.11 to $394.31 per cubic meter.

Portland Cement Concrete (Structure): $902.12 per cubic meter

The price decreased $84.22 from the average price of $986.34 per cubic meter last quarter. The bid prices ranged from $272.48 to $22,532 per cubic meter.

Bar Reinforcing Steel: $2.80 per kilogram

The price increased $0.13 from the average price of $2.67 per kilogram last quarter. The bid prices ranged from $1.36 to $37.40 per kilogram.

Structural Steel: $35.98 per kilogram

The price increased $3.42 from the average price of $32.56 per kilogram last quarter. The bid prices ranged from $11.02 to $149.60 per kilogram.

EXHIBIT A

Price Index for Selected
Highway Construction Items
2007 = 100, Fisher formula

YEAR		QTRLY	LAST 12 Months	Annual
1972				11.3
1973				11.4
1974				17.2
1975				17.2
1976				16.5
1977				19.8
1978				22.6
1979				29.3
1980				30.1
1981				34.4
1982				30.9
1983				31.0
1984				36.2
1985				36.0
1986				37.3
1987				39.7
1988				40.5
1989				43.9
1990				44.1
1991				40.4
1992				40.4
1993				42.2
1994				46.2
1995				45.0
1996				45.6
1997				47.6
1998				49.9
1999				52.9
2000				53.5
2001				58.7
2002				53.1
2003				56.6
2004				79.1
2005				98.1
2006				104.1
2007				100.0
2008				95.0
2009	(1st Quarter)	98.1	95.5	
2009	(2nd Quarter)	74.5	92.0	
2009	(3rd Quarter)	88.4	80.4	
2009	(4th Quarter)	74.3		
	(Year)			78.4
2010	(1st Quarter)	101.5	78.5	
2010	(2nd Quarter)	79.3	79.1	
2010	(3rd Quarter)	72.1	76.2	
2010	(4th Quarter)	76.7		
	(Year)			76.8
2011	(1st Quarter)	86.4	76.2	
2011	(2nd Quarter)	85.2	78.9	
2011	(3rd Quarter)	85.8	81.7	
2011	(4th Quarter)	81.4		
	(Year)			84.0
2012	(1st Quarter)	81.1	82.9	
2012	(2nd Quarter)	84.6	81.3	
2012	(3rd Quarter)	76.4	79.3	
2012	(4th Quarter)	82.8		
	(Year)			79.2

2013	(1st Quarter)	.....	117.9	80.7	
2013	(2nd Quarter)	.....	134.9	82.5	
2013	(3rd Quarter)	.....	81.6	85.7	
2013	(4th Quarter)	.....	106.2		
	(Year)	.....			97.09
2014	(1st Quarter)	.....	135.3	96.88	
2014	(2nd Quarter)	.....	109.11	104.56	
2014	(3rd Quarter)	.....	110.39	107.37	
2014	(4th Quarter)	.....	120.17	108.32	
2015	(1st Quarter)	.....	138.22	107.88	
2015	(2nd Quarter)	.....	110.93	109.91	
2015	(3rd Quarter)	.....	117.91	119.69	
2015	(4th Quarter)	.....	128.21	122.02	

EXHIBIT B

California Department of Transportation
Average Highway Contract Prices
(English Units)

	Roadway Excavation "1" Per Cu Yd	Aggregate Base Per Ton	Asphalt Concrete Pavement Per Ton	PCC Pavement Per Cu Yd	Class "A" PCC Structure Per Cu Yd	Bar Reinforcing Steel Per Lb	Structural Steel "2" Per Lb
1972	0.95	3.21	8.22	19.23	82.08	0.159	0.446
1973	0.75	3.14	9.02	19.24	93.60	0.169	0.635
1974	1.26	4.23	13.01	28.59	115.19	0.329	0.987
1975	1.19	4.70	14.24	30.63	132.10	0.239	0.838
1976	1.32	4.70	13.67	29.64	143.05	0.223	0.504
1977	1.76	5.44	15.15	35.17	150.03	0.239	1.228
1978	1.85	6.18	17.70	41.77	180.77	0.276	0.814
1979	2.36	7.49	22.40	52.39	234.24	0.383	1.960
1980	2.10	8.38	25.51	55.18	235.45	0.378	1.942
1981	3.14	8.63	28.53	59.45	226.84	0.386	2.091
1982	2.58	7.56	24.69	57.10	224.72	0.320	2.155
1983	2.10	9.20	27.57	52.04	225.84	0.335	2.155
1984	3.19	13.67	28.38	55.79	238.48	0.375	2.155
1985	2.77	11.55	30.15	64.13	232.39	0.413	2.288
1986	3.01	12.76	28.82	60.49	249.74	0.412	2.388
1987	2.97	17.57	27.54	70.62	280.40	0.418	2.546
1988	4.16	10.13	27.46	58.66	284.55	0.440	3.956
1989	4.19	10.62	29.43	73.78	303.49	0.483	3.103
1990	4.73	12.05	30.77	68.93	295.24	0.469	2.209
1991	3.08	10.07	33.43	62.64	295.21	0.431	2.284
1992	3.62	9.76	32.46	66.78	265.31	0.419	3.073
1993	4.53	9.89	35.41	66.76	243.79	0.464	2.706
1994	4.68	10.39	37.15	66.45	277.92	0.547	2.334
1995	4.10	10.18	35.29	63.85	298.80	0.499	2.266
1996	3.80	9.74	37.66	65.93	321.88	0.512	2.172
1997	5.25	10.29	36.07	78.48	308.54	0.496	2.337
1998	4.95	11.55	38.78	75.91	319.95	0.553	2.595
1999	6.55	12.86	40.14	77.95	321.22	0.521	3.215
2000	6.21	11.14	45.12	78.14	363.59	0.507	2.754
2001	5.83	14.58	43.89	75.74	425.17	0.612	3.906
2002	4.84	12.42	49.00	74.15	363.50	0.508	3.248
2003	5.05	15.05	48.35	109.96	362.75	0.600	1.710
2004	13.11	16.97	53.55	135.94	399.64	0.947	5.390
2005	14.13	20.61	75.72	171.22	567.31	0.968	2.666
2006	12.80	20.26	86.04	179.67	630.16	1.039	3.734
2007	10.84	20.54	85.48	204.69	566.25	0.935	6.966
2008	11.39	17.90	78.50	177.91	553.62	0.938	5.183
2009	9.37	14.91	80.38	125.41	484.78	0.593	4.492
1st Quarter 2010	26.70	21.79	85.51	116.22	609.73	0.775	3.999
2nd Quarter 2010	11.79	14.49	86.30	148.42	419.24	0.673	1.958
3rd Quarter 2010	5.49	16.61	75.00	131.73	434.65	0.669	8.227
4th Quarter 2010	7.67	12.81	76.54	112.71	547.98	0.788	1.826
Year 2010	**7.94**	**14.20**	**80.25**	**122.82**	**483.64**	**0.716**	**2.149**
1st Quarter 2011	11.37	11.79	84.60	150.76	431.25	0.870	7.212
2nd Quarter 2011	9.71	16.50	93.35	120.87	487.87	0.791	2.328
3rd Quarter 2011	11.56	15.34	97.53	143.76	421.50	0.891	7.255
4th Quarter 2011	13.51	14.49	81.33	147.29	335.31	0.900	2.023
Year 2011	**11.82**	**14.12**	**87.11**	**135.40**	**427.76**	**0.830**	**2.102**
1st Quarter 2012	8.34	16.43	99.70	117.18	506.31	0.878	2.858
2nd Quarter 2012	5.87	13.03	97.06	143.19	465.09	1.008	20.000
3rd Quarter 2012	7.39	13.77	72.92	138.70	454.53	0.907	1.895
4th Quarter 2012	12.73	17.77	94.41	153.24	458.51	0.952	2.586
Year 2012	**8.24**	**14.66**	**89.36**	**132.52**	**461.23**	**0.927**	**2.497**
1st Quarter 2013	13.98	34.74	102.58	135.96	731.69	1.292	11.018
2nd Quarter 2013	20.54	24.91	97.14	470.00	704.67	1.456	5.263
3rd Quarter 2013	5.47	16.32	100.47	172.27	502.10	0.912	17.647
4th Quarter 2013	16.80	25.14	110.07	159.50	462.23	0.943	8.00
Year 2013	**8.98**	**18.60**	**100.11**	**157.26**	**538.01**	**1.01**	**5.57**
1st Quarter 2014	22.47	27.26	103.56	242.47	771.12	1.084	3.21
2nd Quarter 2014	15.797	21.58	89.358	188.39	538.387	1.049	7.998

3rd Quarter 2014	14.51	18.14	81.85	227.8	750.82	1.16	13.88
4th Quarter 2014	17.20	25.44	113.10	166.23	582.22	1.18	15.44
Year 2014	**17.49**	**23.10**	**96.97**	**206.22**	**660.64**	**1.12**	**10.132**
1st Quarter 2015	17.40	25.55	116.21	166.41	588.18	1.21	16.46
2nd Quarter 2015	14.20	21.60	106.85	170.56	579.43	1.16	14.77
3rd Quarter 2015	14.28	19.72	84.20	219.78	754.11	1.16	14.63
4th Quarter 2015	17.60	24.55	113.10	219.82	689.72	1.27	16.32

1. Unclassified.
2. Beginning 1st quarter 2003, structural steel includes the furnish and the erect structural steel (bridge).

EXHIBIT B

California Department Of Transportation
Average Highway Contract Prices
(Metric Units)

	Roadway Excavation "1" Per M3	Aggregate Base Per Tonn	Asphalt Concrete Pavement Per Tonn	PCC Pavement Per M3	Class "A" PCC Structure Per M3	Bar Reinforcing Steel Per Kg	Structural Steel "2" Per Kg
1972	1.24	3.54	9.06	25.15	107.36	0.351	0.983
1973	0.98	3.46	9.94	25.16	122.42	0.373	1.400
1974	1.65	4.66	14.34	37.39	150.66	0.725	2.176
1975	1.56	5.18	15.70	40.06	172.78	0.527	1.847
1976	1.73	5.18	15.07	38.77	187.10	0.492	1.111
1977	2.30	6.00	16.70	46.00	196.23	0.527	2.707
1978	2.42	6.81	19.51	54.63	236.44	0.608	1.795
1979	3.09	8.26	24.69	68.52	306.37	0.844	4.321
1980	2.75	9.24	28.12	72.17	307.96	0.833	4.281
1981	4.11	9.51	31.45	77.76	296.70	0.851	4.610
1982	3.37	8.33	27.22	74.68	293.92	0.705	4.751
1983	2.75	10.14	30.39	68.07	295.39	0.739	4.751
1984	4.17	15.07	31.28	72.97	311.92	0.827	4.751
1985	3.62	12.73	33.23	83.88	303.95	0.911	5.044
1986	3.94	14.07	31.77	79.12	326.65	0.908	5.265
1987	3.88	19.37	30.36	92.37	366.75	0.922	5.613
1988	5.44	11.17	30.27	76.72	372.18	0.970	8.721
1989	5.48	11.71	32.44	96.50	396.95	1.065	6.841
1990	6.19	13.28	33.92	90.16	386.16	1.034	4.870
1991	4.03	11.10	36.85	81.93	386.12	0.950	5.035
1992	4.73	10.76	35.78	87.34	347.01	0.924	6.775
1993	5.93	10.90	39.03	87.32	318.87	1.023	5.966
1994	6.12	11.45	40.95	86.91	363.51	1.206	5.146
1995	5.36	11.22	38.90	83.51	390.82	1.100	4.996
1996	5.09	10.74	41.51	86.23	421.00	1.129	4.788
1997	6.87	11.35	39.76	102.65	403.56	1.094	5.152
1998	6.47	12.73	42.75	99.29	418.48	1.219	5.721
1999	8.57	14.17	44.24	101.95	420.15	1.148	7.088
2000	8.12	12.28	49.73	102.21	475.55	1.118	6.071
2001	7.63	16.07	48.39	99.06	556.10	1.349	8.612
2002	6.32	13.70	54.01	96.99	475.44	1.120	7.160
2003	6.60	16.59	53.30	143.82	474.45	1.313	3.769
2004	17.15	18.70	59.03	177.81	522.71	2.087	11.883
2005	18.48	22.72	83.47	223.94	742.02	2.134	5.878
2006	16.75	22.34	94.84	235.00	824.21	2.291	8.231
2007	14.18	22.64	94.23	267.73	740.62	2.062	15.358
2008	14.90	19.73	86.53	232.69	724.11	2.068	11.426
2009	12.25	16.44	88.61	164.03	634.07	1.308	9.902
1st Quarter 2010	34.92	24.02	94.26	152.01	797.50	1.708	8.816
2nd Quarter 2010	15.42	15.97	95.13	194.12	548.35	1.484	4.317
3rd Quarter 2010	7.18	18.31	82.68	172.30	568.50	1.476	18.138
4th Quarter 2010	10.03	14.12	84.37	147.42	716.74	1.738	4.027
Year 2010	**10.38**	**15.65**	**88.47**	**160.64**	**632.57**	**1.579**	**4.738**
1st Quarter 2011	14.87	12.99	93.26	197.19	564.05	1.918	15.901
2nd Quarter 2011	12.70	18.19	102.90	158.09	638.12	1.745	5.133
3rd Quarter 2011	15.12	16.91	107.51	188.03	551.31	1.964	15.994
4th Quarter 2011	17.68	15.97	89.65	192.65	438.56	1.985	4.460
Year 2011	**15.46**	**15.57**	**96.02**	**177.09**	**559.48**	**1.829**	**4.634**
1st Quarter 2012	10.91	18.11	109.90	153.26	662.23	1.936	6.301
2nd Quarter 2012	7.68	14.36	106.99	187.29	608.32	2.222	44.092
3rd Quarter 2012	9.67	15.18	80.38	181.41	594.50	2.000	4.177
4th Quarter 2012	16.65	19.59	104.07	200.42	599.70	2.099	5.701
Year 2012	**10.78**	**16.16**	**98.50**	**173.33**	**603.27**	**2.044**	**5.505**
1st Quarter 2013	18.28	38.29	113.08	177.83	957.02	2.848	24.291
2nd Quarter 2013	26.87	27.46	107.08	614.74	921.68	3.209	11.603
3rd Quarter 2013	7.15	17.99	110.75	225.32	656.73	2.010	38.904
4th Quarter 2013	21.98	27.71	121.33	208.61	604.58	2.078	17.637
Year 2013	**11.74**	**20.51**	**110.36**	**205.68**	**703.69**	**2.23**	**12.27**
1st Quarter 2014	29.39	30.045	114.15	317.142	1008.58	2.39	7.08
2nd Quarter 2014	20.662	21.58	98.5	246.405	704.184	2.312	17.632

3rd Quarter 2014	18.98	19.99	90.22	297.95	982.03	2.56	30.59
4th Quarter 2014	22.53	27.98	124.41	217.76	762.70	2.59	33.96
Year 2014	**22.89**	**24.90**	**106.82**	**217.76**	**864.37**	**2.46**	**22.31**
1st Quarter 2015	22.79	28.10	127.83	218.00	770.51	2.66	36.20
2nd Quarter 2015	18.57	23.18	117.78	223.08	757.87	2.56	32.56
3rd Quarter 2015	18.68	21.74	92.81	287.46	986.34	2.67	32.25
4th Quarter 2015	23.02	27.06	122.69	287.51	902.12	2.80	35.98

1. Unclassified.
2. Beginning 1st quarter 2003, structural steel includes the furnish and the erect structural steel (bridge).

Exhibit C

California Department of Transportation

Number and Dollar Value of Highway Projects
Total Number of Bids and Average Number of Bidders
(October 1, 2015 through December 31, 2015)

	RANGE1 UP to $50,000	**RANGE2** $50,000 to $100,000	**RANGE3** $100,000 to $250,000	**RANGE4** $250,000 to $500,000	**RANGE5** $500,000 to $1,000,000	**RANGE6** $1,000,000 to $2,500,000	**RANGE7** $2,500,000 to $5,000,000	**RANGE8** $5,000,000 and Above	**All Projects**
Road Projects									
Number of Projects	0	0	3	3	14	36	17	18	91
Total Value*	$0	$0	$646,070.00	$1,128,361	$10,889,287	$62,735,086	$57,839,041	$301,857,581	$435,095,427
Number of Bidders	0	0	19	14	75	187	79	93	474
Average No of Bidders	0.0	0	6.3	4.7	5.4	5.2	4.6	5.2	5.2
Structure Projects									
Number of Projects	0	0	0	2	1	10	5	8	26
Total Value*	$0	$0	$0	$675,842	$540,737	$18,179,288	$16,234,677	$147,473,430	$183,103,975
Number of Bidders	0	0	0	16	8	49	38	41	152
Average No of Bidders	0.0	0.0	0.0	8.0	8.0	4.9	7.6	5.1	5.8
Combination Projects									
Number of Projects	0	0	0	0	0	3	1	8	12
Total Value*	$0	$0	$0	$0	$0	$4,888,666	$3,657,137	$382,411,791	$390,957,594
Number of Bidders	0	0	0	0	0	15	8	46	69
Average No of Bidders	0.0	0.0	0.0	0.0	0	5.0	8.0	5.8	5.8
Summary									
Number of Projects	0	0	3	5	15	49	23	34	129
Total Value*	$0	$0	$646,070	$1,804,203	$11,430,024	$85,803,041	$77,730,855	$831,742,803	$1,009,156,997
Number of Bidders	0	0	19	30	83	251	125	180	688
Average No of Bidders	0.0	0	6.3	6.0	5.5	5.1	5.4	5.3	5.3

*Bid Items Only

Average Number of Bidders by Month

OCT	NOV	DEC
5.2	5.4	5.5

	IHS[1]	IHS[1]	UCLA[3]	IHS[5]	UCLA[3]	IHS[7]	UCLA[3]	IHS[8]	UCLA[3]	DOF[4]	DES-OE[9]		DES-Structures-OE	
	Highway & Street Construction Cost Index % change	Non-residential Construction Cost Index % change	CPI % change	CPI All Urban % change	PPI Finished Goods % change	PPI Finished Goods % change	US Housing Starts % change	Crude Oil Price Dollars / Barrel	CPI % change	CPI Urban % change	Historic California Highway Construc-tion Cost Index	% change	Historic Bridge Construc-tion Cost Index	% change
	National	National	National		National		National	National	California		California		California	
	3.9	4.2	2.9	2.9	4.8	4.5	-25.9	72.3	3.3	3.3		-3.9		-2.1
2008	7.7	8.3	3.8	3.8	9.8	7.4	-32.9	99.6	3.4	3.4	95.0	-5.0	99.8	-0.2
2009	-2.6	-4.3	-0.3	-0.3	-8.7	-3.8	-38.4	61.7	-0.3	-0.3	78.4	-17.5	78.3	-21.5
2010	3.7	3.7	1.6	1.6	6.8	5.5	5.8	79.4	1.3	1.3	76.8	-2.0	73.7	-5.9
2011	5.0	6.1	3.1	3.1	8.8	7.5	4.4	95.1	2.6	2.6	84.0	9.4	75.6	2.6
2012	2.2	1.8	2.1	2.1	0.5	2.0	27.9	94.2	2.2	2.2	79.2	-5.7	93.7	24.0
2013	0.6	1.0	1.5	1.5	0.6	1.4	18.6	98.0	1.5	1.5	97.1	22.6	110.1	17.5
2014*	1.3	1.1	1.9	1.6	2.7	2.1	15.4	93.1	2.0	1.9	107.4	10.6	109.4	-0.7
2015F	*0.0*	*-0.4*	*2.1*	*0.1*	*1.0*	*-3.0*	*28.5*	*59.0*	*2.3*	*2.1*				
2016F	*3.3*	*3.4*	*2.2*	*2.3*	*1.1*	*2.2*	*8.0*	*70.0*	*2.3*	*1.9*				
2017F	*2.9*	*2.8*		*2.4*		*2.8*		*73.6*	*2.0*	*1.9*				
2018F	*3.1*	*3.3*		*2.5*		*2.8*		*80.1*	*1.9*					
2019F	*3.0*	*3.3*		*2.4*		*2.5*		*92.1*	*1.8*					
2020F	*2.6*	*2.9*		*2.5*		*3.0*		*102.1*	*1.6*					
2021F	*2.8*	*3.1*		*2.4*		*2.5*		*117.2*	*1.5*					
2022F	*2.1*	*2.3*		*2.2*		*2.0*		*123.4*	*0.0*					
2023F	*2.1*	*2.3*		*2.3*		*2.3*		*130.0*	*0.0*					
2024F	*2.2*	*2.4*		*2.2*		*2.2*		*138.2*	*0.0*					

Note: All cost indices are normalized to 2007 and are cumulative from the base year. *F: Forecast numbers are italicized.*

*Current year indices are based on the previous quarter or past 12 month data were available, and are updated every quarter if and when updated by the source.

Last updated: 1/6/2015

(1) IHS Global Insight
(3) UCLA Anderson Forecast, Economic Outlook - The UCLA Anderson Forecast is a unit of The UCLA Anderson School of Management,
(4) California Department of Finance (DOF) - Consumer Price Index. DOF also publishes Economic Outlook report once annually as part of May Revision.
(5) IHS Global Insight - Consumer Price Index - All Urban, Source: BLS
(7) IHS Global Insight - Producer Price Index - Finished Consumer Goods, Source: BLS
(8) IHS Global Insight - United States West Texas Intermediate - Average Annual Crude Oil Spot Price Source: IHS Units: $/Barrel
(9) Division of Engineering Services (DES) Office Engineer (OE) - Only provides historic index, does not forecaste.

According to Bureau of Labor Statistics (BLS):

A consumer price index is a measure of the average price of consumer goods and services purchased by households. A consumer price index measures a price change for a constant market basket of goods and services from one period to the next within the same area (city, region, or nation). The percent change in the CPI is a measure of inflation.

A producer price index is a family of indexes that measure the average change over time in selling prices received by domestic producers of goods and services. PPIs measure price change from the perspective of the seller. This contrasts with other measures that measure price change from the purchaser's perspective, such as the Consumer Price Index (CPI). Sellers' and purchasers' prices may differ due to government subsidies, sales and excise taxes, and distribution costs.

Producer Price Index (PPI) data are commonly used in escalating purchase and sales contracts. These contracts typically specify dollar amounts to be paid at some point in the future. It is often desirable to include an escalation clause that accounts for changes in input prices. For example, a long-term contract for bread may be escalated for changes in wheat prices by applying the percent change in the PPI for wheat to the contracted price for bread. Consumer Price Index (CPI) data can also be used in escalation. For example, the CPI may be used to escalate lease payments or child support payments.

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916-679-2000

May 5, 2014

Ms. Diana Gomez, PE, Central Valley Regional Manager
California High-Speed Rail Authority
2550 Mariposa Mall, Suite 3015
Fresno, CA 93721

RE: Fresno to Bakersfield Section Regional Consultant's January 2014 Monthly Progress Report

Dear Ms. Gomez:

I received your letter dated April 30, 2014, regarding our January 2014 Monthly Progress Report (MPR), submitted to the Authority and PMT via SharePoint posting on February 12, 2014. In your letter, you indicate that the Authority believes a number of the RC's statements in the report are "misleading and not accurate," and you request that we revise and resubmit the MPR. We fully understand that the method of capital cost estimation is wholly at the Authority's discretion. The comments provided in the MPR document what the RC was told by the PMT, and the RC's professional opinion where it differed from the PMT's approach .Also note that the information provided in the MPR reflects what was known at the time of the report, and may not reflect subsequent revisions to the work products mentioned.

We have carefully reviewed the section of the MPR to which your specific comments apply, and have reproduced that excerpt here for reference:

> **15% Cost Estimate:** The RC participated in a teleconference with PMT on January 22 to discuss the RC's comments on the final FB cost estimate prepared by the PMT. The PMT explained that the capital cost estimates developed for the 2012 Business Plan were the costs agreed to by the Authority and that this Business Plan established the budget for the overall High-Speed Rail (HSR) program. The RC was instructed that the 2012 costs needed to be treated as the "baseline" costs, and that no adjustments could be made without formal review to obtain Authority acceptance. The RC voiced concern that the design has evolved over the past 3 years, and that the capital cost estimate should be "re-baselined" and account for escalation in costs to current year dollars. The RC also voiced their professional opinion that contrary to the PMT's explanation, cost increases since the 2012 Business Plan should not be accounted for in the allocated contingency. The RC further identified that costs for roadway improvements had been overlooked in the PMT's cost report, and should be added to the cost estimate.

You raised several points in your letter, which we review and address below.

> **Authority Letter Excerpt:** "First, as you are aware, the JV's role is to develop detailed quantities of work for the Fresno to Bakersfield project section. The PMT then uses these quantities to establish a cost estimate for the work to be performed by the design-build contractor(s). The final project section cost is based on the design-build contract(s)."
>
> **RC Response:** Per section 6.2.2 of *Technical Memorandum 1.1.19 Capital Cost Estimating Methodology for the 15% Design* Level, the RC is responsible for developing project-specific unit cost elements reflecting unique site conditions and configurations that are not covered by the prototypical unit prices developed by the PMT. Therefore, the RC has been closely involved in the

development of both detailed quantities and cost estimates, including reviewing the PMT's draft and final cost estimates, as described in our FY13/14 AWP v3.

Authority Letter Excerpt: "The PMT did not revise the quantities submitted by the JV nor did the PMT direct the JV to reduce the contingency to make up for potential cost increases. Therefore the JV's claims "that no adjustments could be made without formal review to obtain Authority acceptance" are incorrect."

RC Response: The January 2014 MPR does not indicate that the PMT altered the RC's quantities, though in fact, not all quantities provided in the RC's January 2014 Record Set 15% Basis of Quantities Report were reflected in the Capital Cost Report (e.g., new RC-generated assemblies for the Elevated Deck Structures over BNSF and BNSF Yard relocation costs).

The information relayed to the RC by the PMT during the January 22, 2014 conference call was in response to RC questions about contradictory statements in the Cost Report relating to the use of "current year" (i.e., 2013) dollars as the basis for the costs - when in fact the PMT costs were based on 2010 dollars, and an RC request for clarification on how the 2012 baseline was selected. The RC provided the comment in the MPR to document what had been explained to us on the teleconference with the PMT. Perhaps our use of the word "instructed" was taken to mean "directed," when in fact it simply meant this was how the cost decisions were explained to us.

Authority Letter Excerpt: "Secondly, cost increases cited by the JV in their monthly progress report were recognized in the Fresno to Bakersfield Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS). Any assertion that cost increases were to be accounted for in the contingency is inaccurate."

RC Response: At the time of both the January 22, 2014 conference call with PMT and preparation of the January 2014 MPR (issued on February 12), the PMT's explanation regarding cost increases was that new cost items not previously included in the 2012 Business Plan were to be accounted for in the allocated contingencies, and that 2010 base costs were being used for consistency in comparisons between business plan estimates. The RC estimator expressed his professional opinion that these costs should be included in an adjusted baseline cost with the unit prices being updated to current year dollars, consistent with industry best practices and to be consistent with Section 2.3.9 of the PMT Capital Cost Estimate Report, as well as Sections 6.2.4 (Construction Cost Estimate [Including Contingency]) and 6.5.4 (Base Year and Escalation) of *Technical Memorandum 1.1.19 Capital Cost Estimating Methodology for the 15% Design Level*. The RC merely documented what the PMT had explained about how costs were accounted for in their report, and our professional disagreement with the PMT's approach.

Our MPR does not comment on whether the base cost increases, costs for new assemblies identified in the RC's Basis of Quantities Report, or other costs excluded from the January 2014 Capital Cost Estimate Report were included in the costs provided for use in the Final EIR/EIS because in January 2014, we did not have such information.

Authority Letter Excerpt: "Finally, roadway improvement costs within the Fresno to Bakersfield project section have not been overlooked. They have been reallocated and accounted for in Capital Cost Estimate Report that is part of the Fresno to Bakersfield Final EIR/EIS."

RC Response: The PMT's January 2014 Capital Cost Report, as provided to the RC for review prior to the January 22nd teleconference, neglected to include roadway improvement costs. We agree that following the teleconference on January 22nd and the reporting period in question, the PMT corrected this omission in a subsequent revision of their Capital Cost Report, and that this subsequent revision occurred before final costs were provided to the RC for inclusion in the Final EIR/EIS.

Based on the information available to the RC during the January 2014 reporting period, the RC disagrees that the MPR contains information that is misleading or inaccurate. With the single exception of clarifying the intended meaning of our use of the word "instructed," the January 2014 MPR accurately represents information and circumstances available to the RC at the time. Therefore, we believe this MPR should stand as submitted.

I am happy to discuss this further with the Authority at your discretion.

Sincerely,

URS/HMM/Arup Joint Venture

Kinzie Gordon
Project Manager
Fresno to Bakersfield Section

Holder Law Group
holderecolaw.com
339 15th Street, Suite 202
Oakland, CA 94612
(510) 338-3759
jason@holderecolaw.com

October 16, 2015

VIA EMAIL AND U.S. MAIL

California High-Speed Rail Authority
Marie Hoffman/Public Records Officer
770 L Street, Suite 620 MS1
Sacramento, CA, 95814
Email: records@hsr.ca.gov

Re: Public Records Request for Summaries and Analysis Supporting HSR Phase 1 Construction Cost Estimates Presented in the 2014 Business Plan

Dear Ms. Hoffman,

On behalf of Community Coalition on High-Speed Rail ("CC-HSR") and Citizens for California High-Speed Rail Accountability ("CCHSRA"), we submit this request pursuant to the California Public Records Act (Government Code, § 6250, et seq.). As further described below, this request seeks public records held by the California High-Speed Rail Authority (the "Authority") concerning (1) the construction cost estimates for Phase 1 of the California High-Speed Rail Project (the "Project") presented in the Authority's final adopted 2014 Business Plan and (2) any Phase 1 construction costs that were not included in the cost estimates presented in the 2014 Business Plan. The presented construction cost estimates are found in Exhibit 3.4 (base year 2013 expenditures cost estimate) and Exhibit 3.5 (year-of-expenditure cost estimate) (the "Exhibits") on pages 35 and 36 of the final adopted 2014 Business Plan.[1]

More specifically, this letter serves as a formal request by CC-HSR and CCHSRA for copies of any and all Public Records within the categories specified below. We request the responsive public records be made available as soon as possible. For purposes of this Request, "Public Records" has the meaning specified in Government Code, section 6252(e). "Writing" has the meaning specified in Government Code, section 6252(g). We request copies of the following Public Records:

1) Any and all Writings that include summaries and/or analysis of construction-related costs for Phase 1 of the Project that were used to produce the construction cost estimates in the Exhibits. This request item includes, but is not limited to:

[1] The final adopted 2014 Business Plan is available at: http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2014_Business_Plan_Final.pdf.

a. Writings that summarize the costs described in every category included in the Exhibits; and

b. Writings that include analysis of the costs described in every category included in the Exhibits.

2) Any and all Writings that include summaries, analysis, or descriptions of construction-related costs for Phase 1 that were not included in the construction cost estimates in the Exhibits. For example, this request item may include, but is not limited to:

a. Writings that summarize, analyze, or describe the costs associated with mitigating the impacts of Phase 1 pursuant to CEQA and NEPA;[2] and

b. Writings that summarize, analyze, or describe the costs associated with modifying existing roadway, utility, and other infrastructure that will be affected by the Phase 1 right-of-way.[3]

Please note that, with the above two request items, we seek Writings that synthesize, compile, and/or summarize construction cost information. We do not seek every Writing pertaining to Phase 1 construction that includes a cost amount. We assume that the drafters of the 2014 Business Plan relied on such cost summaries and analyses when producing the Exhibits. Please let us know if assumption is incorrect.

We request that, pursuant to Government Code section 6253.1, the Authority assist us in identifying Public Records that are responsive to this Request. As you know, the Public Records Act imposes affirmative duties on the responding agency to assist the requester in at least three ways: (1) identifying records responsive to the request or its purpose; (2) describing the information technology and the physical location in which the records exist; and (3) providing suggestions for overcoming any practical basis for denial of records access. (Gov. Code, § 6253.1(a).) If the description of the Public Records we request above is determined to be too broad, ambiguous, duplicative or otherwise inadequate, please contact us so that we may discuss revising the language of our Request or otherwise clarify the Request so that we obtain all of the information we seek without unduly burdening Authority staff.

We request electronic production of the requested Public Records in a searchable format, so long as electronic copies can be read using our software (Adobe Acrobat, MS Word, MS Excel, MS Outlook). We therefore request that the Authority produce all responsive Public Records in electronic format, to the extent the Authority has used this format for the respective documents. (*See* Gov. Code, § 6253.9.)

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[2] The line item cost descriptions in the Exhibits suggest that these costs were not included in the cost estimates.

[3] We understand that these costs are described in, *inter alia*, "Task Orders" attached to draft and final executed "Master Agreements" with various public agencies and utilities.

If the Authority withholds from disclosure any Public Record responsive to this Request on the grounds that such Public Record is exempt from disclosure under the express provisions of the California Public Records Act, or otherwise, please provide the following information for the withholding of each such Public Record, as required by California Government Code, § 6255:

a) The general nature and subject matter of the Public Record;

b) The identity (name, address and position) of the author(s), and, if applicable, the sender(s) and recipient(s) of the Public Record;

c) The date on which the Public Record was prepared, and if applicable, the date(s) on which the Public Record was transmitted;

d) The claimed statutory or other legal basis for withholding the Public Record; and

e) Other information sufficient to demonstrate the propriety of withholding the Public Record.

Government Code §6253(c) requires that the Authority determine "within 10 days from receipt of [this] request" whether this Request seeks disclosable Public Records and that the Authority promptly notify me of its "determination and the reasons therefore." That section also requires that the Authority's determination "state the estimated date and time when the records will be made available." The time limit for making this determination may be extended by as many as 14 days, but only in "unusual circumstances."

When the total responsive document production cost is known, please let me know so I can arrange for payment and prompt delivery of the records. (See Gov. Code, § 6253(b).) If there is a postage charge for delivery of the requested Public Records, please let me know that amount as well.

You can contact me at 510-338-3759 or at jason@holderecolaw.com if you have any questions or concerns regarding this request. Thank you in advance for your timely cooperation.

Very truly yours,

Jason W. Holder

cc: (via email only)
Jim Janz
Aaron Fukuda
Stu Flashman
Mike Brady
Gary Patton

CALIFORNIA
High-Speed Rail Authority

November 12, 2015 **SENT VIA EMAIL**

Jason Holder, Esq.
Holder Law Group
339 15th Street, Suite 202
Oakland, CA 94612
Jason@holderecolaw.com

RE: Public Records Request for Summaries and Analysis Supporting HSR Phase 1 Construction Cost Estimates Presented in the 2014 Business Plan

Dear Mr. Holder:

On October 19, 2015 the Authority received your Public Records Act (PRA) request for:

> **"…public records held by the California High-Speed Rail Authority (the "Authority") concerning ((1) the construction cost estimates for Phase 1 of the California High-Speed Rail Project (the "Project") presented in the Authority's final adopted 2014 Business Plan and (2) any Phase 1 construction costs that were not included in the cost estimates presented in the 2014 Business Plan. The presented construction cost estimates are found in Exhibit 3.4 (base year 2013 expenditures cost estimate) and Exhibit 3.5 (year-of-expenditure cost estimate) (the "Exhibits") on pages 35 and 36 of the final adopted 2014 Business Plan.**
>
> **More specifically […]:**
> **1) Any and all Writings that include summaries and/or analysis of construction-related costs for Phase 1 of the Project that were used to produce the construction cost estimates in the Exhibits. This request item includes, but is not limited to:**
> **a. Writings that summarize the costs described in every category included in the Exhibits; and**
> **b. Writings that include analysis of the costs described in every category included in the Exhibits.**
>
> **2) Any and all Writings that include summaries, analysis, or descriptions of construction-related costs for Phase 1 that were not included in the construction cost estimates in the Exhibits. For example, this request item may include, but is not limited to:**
> **a. Writings that summarize, analyze, or describe the costs associated with mitigating the impacts of Phase 1 pursuant to CEQA and NEPA;2 and**
> **b. Writings that summarize, analyze, or describe the costs associated with**

modifying existing roadway, utility, and other infrastructure that will be affected by the Phase 1 right-of-way.

Please note that, with the above two request items, we seek Writings that synthesize, compile, and/or summarize construction cost information. We do not seek every Writing pertaining to Phase 1 construction that includes a cost amount. We assume that the drafters of the 2014 Business Plan relied on such cost summaries and analyses when producing the Exhibits. Please let us know if assumption is incorrect."

On October 28 the Authority sent you a letter invoking its right to an extension of the determination period by 14 days as allowed under Government Code section 6253(c)(2). The letter stated that a new determination letter would be sent to you no later than November 12, 2015.

The capital cost source document for the 2014 Business Plan is the 2012 Business Plan. For the 2014 Business Plan, dollar amounts from the 2012 Business Plan were adjusted for inflation. Further details regarding cost estimates for the 2012 Business Plan are available in the 2012 Business Plan Source Document "*Cost Changes from 2009 Report to 2012 Business Plan*." The 2012 Business Plan and source documents can be found here:

http://hsr.ca.gov/About/Business_Plans/2012_Business_Plan.html

The high-speed rail system is currently in the construction phase and many of the cost saving measures outlined in the "*Cost Changes from 2009 Report to 2012 Business Plan*" document have been effectively implemented. If you are interested in actual construction costs, the Authority posts its construction contracts on our website at the following location:

http://hsr.ca.gov/programs/construction/design_build_construction_contracts.html

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Project cost estimates are also discussed as part of the Environmental Planning documents, available here:

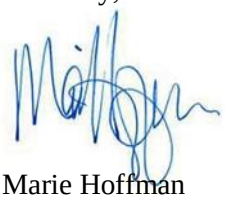
http://hsr.ca.gov/Programs/Environmental_Planning/index.html

Other information and records regarding project costs are updated monthly and posted to the Authority's website for the Board of Directors Finance and Audit Committee meetings. These materials are available at the following location:

http://hsr.ca.gov/Board/monthly_brdmtg.html

Please direct all email inquiries to records@hsr.ca.gov.

Sincerely,



Marie Hoffman
Public Records Act Staff

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Oakland, CA 94612
(510) 338-3759
jason@holderecolaw.com

November 19, 2015

VIA EMAIL AND U.S. MAIL

Dan Richard, Chairman CHSRA Board
Board of Directors
Jeff Morales, Chief Executive Officer
c/o Janice Neibel, Board Secretary
California High-Speed Rail Authority
770 L Street, Suite 1160
Sacramento, CA 95814
Email: boardmembers@hsr.ca.gov

California High-Speed Rail Authority
Marie Hoffman/Public Records Officer
770 L Street, Suite 620 MS1
Sacramento, CA, 95814
Email: records@hsr.ca.gov

Re: Inconsistent, Incomplete, Evasive, and Untimely Response to Public Records Request

Dear Mr. Richard, Honorable Board Members, Mr. Morales, and Ms. Hoffman,

For the reasons explained below, we hereby strenuously object to the response provided by the California High-Speed Rail Authority (the "Authority") to the request for public records we submitted on behalf of behalf of Community Coalition on High-Speed Rail ("CC-HSR") and Citizens for California High-Speed Rail Accountability ("CCHSRA"). CC-HSR and CCHSRA submitted their request for public records concerning the 2014 Business Plan construction cost estimates because their members have long believed that the Authority has not been forthright about known cost escalation for Phase 1 of the High-Speed Rail project (the "Project").[1] The Authority's inconsistent, incomplete, evasive, and untimely response to our Public Records Act request ("PRA Request") heighten my clients' concerns.

The response to our request is inconsistent with prominent statements made by Authority officials at the highest levels: In response to my clients' request for public records, the Authority's Public Records Officer asserted (quote):

> The capital cost source document for the 2014 Business Plan is the 2012 Business Plan. For the 2014 Business Plan, dollar amounts from the 2012 Business Plan were adjusted for inflation. (*See* Exhibit A.)

[1] *See*, *e.g.*, my testimony at April 10, 2014 Authority Board meeting, Transcript, pp. 27-29; *see also* CCHSRA comments on 2014 draft Business Plan, dated April 6, 2014, pp. 3-4.

This statement is inconsistent with, and directly contradicts, statements made by the highest of Authority officials to state lawmakers, the media, and others. For example, when addressing concerns about a so-called "draft" 2013 presentation by the Authority's project management consultant, Parsons Brinkerhoff (the "2013 PB Presentation"), Chairman Richard and CEO Morales stated in a letter to Assembly Speaker Toni Atkins:

> While the specific report referenced in the [L.A. Times article dated October 24, 2015] has not been provided to us by the newspaper reporter, we believe it is a reference to a draft PowerPoint presentation prepared for preliminary discussions about the 2014 Business Plan. Assuming this is the case, the article misrepresents both the nature of this document – a slide deck marked "Draft" – and how it played into the process of updating cost estimates. **Developing cost estimates, particularly for a project that will be built over a period of years and with many undefined elements, involves the consideration of a number of variables. We look at a variety of factors that can lead to high or low case estimates. In the end, the numbers used for project planning and management are based on best estimates and the most valid assumptions.**
>
> **…**
>
> **The enclosed document, which we assume the reporter was referring to, was one of scores of analyses and assessments considered in the development of our cost projections. That full documentation behind the final cost estimates was provided at the time of the release of the business plan** ….

(*See* Exhibit B: Letter from Chairman Richard and CEO Morales to Speaker Atkins, dated October 30, 2015, p. 3.) Of course, my clients are very concerned about the blatant inconsistency between the statements quoted above and the Authority's response to the PRA Request.[2]

Which is it? Did the Authority rely solely on the 2012 Business Plan when developing its construction cost estimates for the 2014 Business Plan? Or did the Authority consider "scores of analyses and assessments"? If the Authority truly did consider "scores of analyses and assessments" when developing the 2014 Business Plan cost projections, as claimed, then the response to the PRA Request contains false statements. Further, <u>those analyses and assessments must be produced in response to our request</u>.

As a reminder:

> The Legislature enacted the PRA "for the purpose of increasing freedom of information by giving members of the public access to information in the possession of public agencies.' [Citation.] **Legislative policy favors disclosure**.

[2] Incidentally, because the 2014 Business Plan projections for Phase 1 construction costs are less than the 2012 Business Plan projections, it does not seem possible that the latter projections were the basis for the former and adjusted for inflation. This implausibility also raises doubts about the validity of the claim in the response.

> [Citation.] '**All public records are subject to disclosure unless the Public Records Act expressly provides otherwise**.'[Citation.]"
>
> [¶][¶] … "Since disclosure is favored, all exemptions are narrowly construed. [Citation.] The agency opposing disclosure bears the burden of proving that an exemption applies. [Citation.]"

(*American Civil Liberties Union of Northern Cal. v. Superior Court* (2011) 202 Cal.App.4th 55, 66-67, quoting *County of Santa Clara v. Superior Court* (2009) 170 Cal.App.4th 1301, 1321, emphasis added.) "Not every disclosure which hampers the deliberative process implicates the deliberative process privilege. Only if the public interest in nondisclosure clearly outweighs the public interest in disclosure does the deliberative process privilege spring into existence." (*Marylander v. Superior Court* (2000) 81 Cal.App.4th 1119, 1128, quoting *California First Amendment Coalition v. Superior Court* (1998) 67 Cal.App.4th 159, 172.)

If the Authority claims that the "scores of analyses and assessments" that may have been considered when developing its cost estimates are exempt from disclosure under the deliberative process privilege, then it must explain what the public's specific interest in nondisclosure is with respect to these documents and it must explain why the public's interest in nondisclosure in this case "clearly outweighs" the public interest in disclosure. (*See Citizens for Open Government v. City of Lodi* (2012) 205 Cal.App.4th 296, 307.)

If, on the other hand, the Authority solely relied upon the 2012 Business Plan's cost estimates, as asserted in the response to our request, and ignored the 2013 PB presentation and all other more recent information, then it did not engage in the due diligence described in the letter to Speaker Atkins. Of course, if this is true, Mr. Richard and Mr. Morales made false statements to the legislator.

The response was incomplete and evasive: My clients requested public records substantiating both the construction costs estimates included in the 2014 Business Plan estimates **and** public records documenting costs that were **not** included in those estimates. More specifically, we requested the following categories of documents (quoted below):

> 2) Any and all Writings that include summaries, analysis, or descriptions of construction-related costs for Phase 1 that were **not** included in the construction cost estimates in the Exhibits. For example, this request item may include, but is not limited to:
>
> a. Writings that summarize, analyze, or describe the costs associated with mitigating the impacts of Phase 1 pursuant to CEQA and NEPA; and
>
> b. Writings that summarize, analyze, or describe the costs associated with modifying existing roadway, utility, and other infrastructure that will be affected by the Phase 1 right-of-way.

With respect to Item 2.a., above, we noted that "The line item cost descriptions in the [final adopted 2014 Business Plan] in [Exhibit 3.4 (base year 2013 expenditures cost estimate) and Exhibit 3.5 (year-of-expenditure cost estimate)] suggest that these costs were not included in the cost estimates." We expected the Authority to produce public records that synthesize, compile, and/or summarize all environmental impact mitigation costs in response to this item, but the Authority's response completely ignores it.

With respect to Item 2.b., above, we noted that "We understand that these costs are described in, inter alia, "Task Orders" attached to draft and final executed "Master Agreements" with various public agencies and utilities." We expected the Authority to produce public records that synthesize, compile, and/or summarize all costs associated with modifying existing roadway, utility, and other infrastructure that will be affected by the Phase 1 right-of-way in response to this item, but the Authority's response completely ignores it.

Item 2 was intended to be a broad request category that sought "any and all" public records that summarized, analyzed, or described construction-related costs **not** included in the 2014 Business Plan estimates. This category therefore should have prompted the Authority to produce, among other things, the now notorious 2013 PB Presentation.

Instead, the response focused on the first category of requested public records, that is, what the Authority supposedly based its 2014 Business Plan cost estimates on -- the 2012 Business Plan. Again, this response does not address the request for all public records that provide cost estimates that were supposedly **not** considered in the estimates in the 2014 Business Plan. Therefore, even it is true that the Authority did not consider "scores of analyses and assessments" when developing its cost projects, those analyses and assessments apparently existed and are responsive to our request.

Please also provide the requested public records responsive to this aspect of our PRA Request, as required by law. Again, this request includes (as described in Items 2.a. and 2.b.) any and all summaries, analyses, and compilation of environmental mitigation and infrastructure relocation costs dated prior to April 2014.

Reliance on the 2012 Business Plan cost estimates for the 2014 Business Plan cost estimates was irresponsible: By 2014, the Authority had more information concerning construction costs. This information includes construction contracts signed before April 2014 (such as the contract with CalTrans for relocating Highway 99 and the contract for CP1), right-of-way property acquisition costs, consultant costs, infrastructure relocation costs, mitigation costs, and all other costs known by April 2014. Indeed, some of these costs are summarized in the 2013 PB Presentation.

By instead choosing to rely instead on the 2012 Business Plan construction costs estimates, the Authority appears to have actively **concealed** evidence and information concerning the Project's growing costs. When preparing and ultimately approving the 2014 Business Plan, did the Authority choose to disregard the information it received from its consultants (including the 2013 PB Presentation) that projected increased construction costs?

Did it instead resort to relying on the 2012 Business Plan for construction cost estimates in order to avoid the political controversy, embarrassment, and potential denial of funding that could come with disclosing escalating construction costs? For those who are closely observing this process, this is certainly how it appears. If this is true, it is **not** the "transparency" that Chairman Richard and CEO Morales have been bragging about recently.

When preparing the 2016 Business Plan, we urge the Authority to frankly assess and fully disclose the known and all reasonably anticipated Project construction costs, with updated information. We also request that any cost estimates provided in the 2016 Business Plan be detailed, itemized, and substantiated in a technical appendix.

The response was untimely: It took the Authority's records staff **25 days** following receipt of our request on October 19th to inform us that, other than the 2012 Business Plan, there is no responsive public records providing substantiation for the construction cost estimates in the 2014 Business Plan. The response letter dated November 12, 2015 does not provide any explanation for this delay. If the Authority is as transparent as its officials claim, then why did it take 25 days to provide an inadequate and evasive response to our request?

* * *

Please comply with our public records request at your earliest convenience. When the total responsive document production cost is known, please let me know so I can arrange for payment and prompt delivery of the records. (See Gov. Code, § 6253(b).) If there is a postage charge for delivery of the requested Public Records, please let me know that amount as well.

You can contact me at 510-338-3759 or at jason@holderecolaw.com if you have any questions or concerns regarding this request or the above comments. Thank you in advance for your timely cooperation.

Sincerely,

Jason W. Holder

Enclosures:

Exhibit A: Authority's response to CC-HSR and CCHSRA public records request, dated Nov. 10, 2015

Exhibit B: Letter from Chairman Richard and CEO Morales to Speaker Atkin, dated Oct. 30, 2015, w/o attachment

cc: (via email only)
Client representatives

CALIFORNIA High-Speed Rail Authority

Exhibit A

November 12, 2015

SENT VIA EMAIL

Jason Holder, Esq.
Holder Law Group
339 15th Street, Suite 202
Oakland, CA 94612
Jason@holderecolaw.com

RE: Public Records Request for Summaries and Analysis Supporting HSR Phase 1 Construction Cost Estimates Presented in the 2014 Business Plan

Dear Mr. Holder:

On October 19, 2015 the Authority received your Public Records Act (PRA) request for:

"…public records held by the California High-Speed Rail Authority (the "Authority") concerning ((1) the construction cost estimates for Phase 1 of the California High-Speed Rail Project (the "Project") presented in the Authority's final adopted 2014 Business Plan and (2) any Phase 1 construction costs that were not included in the cost estimates presented in the 2014 Business Plan. The presented construction cost estimates are found in Exhibit 3.4 (base year 2013 expenditures cost estimate) and Exhibit 3.5 (year-of-expenditure cost estimate) (the "Exhibits") on pages 35 and 36 of the final adopted 2014 Business Plan.

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a. Writings that summarize the costs described in every category included in the Exhibits; and
b. Writings that include analysis of the costs described in every category included in the Exhibits.

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a. Writings that summarize, analyze, or describe the costs associated with mitigating the impacts of Phase 1 pursuant to CEQA and NEPA;2 and
b. Writings that summarize, analyze, or describe the costs associated with

modifying existing roadway, utility, and other infrastructure that will be affected by the Phase 1 right-of-way.

Please note that, with the above two request items, we seek Writings that synthesize, compile, and/or summarize construction cost information. We do not seek every Writing pertaining to Phase 1 construction that includes a cost amount. We assume that the drafters of the 2014 Business Plan relied on such cost summaries and analyses when producing the Exhibits. Please let us know if assumption is incorrect."

On October 28 the Authority sent you a letter invoking its right to an extension of the determination period by 14 days as allowed under Government Code section 6253(c)(2). The letter stated that a new determination letter would be sent to you no later than November 12, 2015.

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http://hsr.ca.gov/About/Business_Plans/2012_Business_Plan.html

The high-speed rail system is currently in the construction phase and many of the cost saving measures outlined in the "*Cost Changes from 2009 Report to 2012 Business Plan*" document have been effectively implemented. If you are interested in actual construction costs, the Authority posts its construction contracts on our website at the following location:

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Please direct all email inquiries to records@hsr.ca.gov.

Sincerely,

Marie Hoffman
Public Records Act Staff

CALIFORNIA
High-Speed Rail Authority

Exhibit B

October 30, 2015

The Honorable Toni G. Atkins
Assembly Speaker
California Assembly
State Capitol, Room 219
Sacramento, CA 95814

Dear Speaker Atkins:

We are writing in response to your inquiry regarding the October 24, 2015 *Los Angeles Times* article, "Special Report: $68-billion California bullet train project likely to overshoot budget and deadline targets." The article in question gave readers a dramatic, but wholly false impression of where our program stands in terms of costs and technical hurdles. Because of the Legislature's important role in conducting oversight of the program, we want to address several key issues that were either presented in a misleading manner or were incorrect, resulting in a rather distorted account of the program.

First and foremost, before turning to the article itself, as you know, the Legislature maintains strong oversight of the High-Speed Rail program through several mechanisms. Senate Bill 1029, which authorized expenditures for the program, contains strict reporting requirements. Our most recent SB 1029 report, submitted to the Legislature on March 1, 2015, lays out in great detail the progress and challenges faced by the program. You also have the benefit of an independent Peer Review Group which reports to the Legislature and with whom we maintain regular interactions so that they may independently advise you on project status and challenges. Beyond that, at the Legislature's behest, we have opened our Finance and Audit Committee meetings to the public which legislative staff often attends. The metrics and reports of that committee are available to all through our website.

To correct false impressions that may have been generated by the article's content we offer the following clarifying information about our program.

Construction Costs

The article implies that the program is or will be over budget in construction with a thin contingency. In fact, the first three construction packages are running well *under* budget. Construction packages 1 and 2-3 are under contract for aggregate amounts that are hundreds of millions of dollars below budget estimates. These contract savings are due to a combination of a competitive bidding environment and opportunities for lower contractor bids created by the design-build project delivery method.

The program's capital cost estimates include specific contingencies of up to 25 percent, not the reported 10 percent figure in the article. Additionally, there is a 5 percent "unallocated" contingency covering construction of the entire program. Our construction contracts contain risk based contingencies of over 15 percent. So, not only are we currently running under budget, but we have healthy contingencies built into our budgets and we manage against those.

Tunneling Challenges

The article also discusses the challenges of tunneling. When the Legislature and then the voters approved Proposition 1A, the basic route was established, including the connections through the Tehachapi and San Gabriel mountain ranges. Our responsibility is to find the most efficient and cost-effective way to create those connections.

In fact, the challenges of building tunnels in mountainous and seismically active areas are well-known and are being thoroughly addressed with particular focus on keeping the program within cost and schedule projections. We have some of the world's leading tunneling experts working on our program. International companies that built rail tunnels through the Pyrenees Mountains and the Swiss Alps are members of our team. We have conducted symposia to learn from the leading tunneling experts around the world, and have engaged with Japanese and Spanish experts who have been part of the construction of tunnels through similar conditions. None of those experts were included in the newspaper story, despite the fact that they were made available to the reporter. We are happy to make these same experts available to you, your colleagues, and your staff.

Our technical consultants have reiterated their comfort level with our schedule and approach. California has a vast array of tunnels for transit systems, roadways, and of course the State Water Project. These tunnels transect faults and cross mountain ranges. Modern tunneling technology has advanced considerably since even these tunnels were constructed. We and our array of international experts are quite confident that we understand the issues surrounding tunneling and that our schedule is realistic.

Infrastructure Program Risks

The article contained extensive comments and discussion of potential future cost increases based on other infrastructure projects. Unfortunately it glossed over the only actual data points dealing directly with our program – the first construction contracts have come in hundreds of millions of dollars below estimates.

It quotes the work of Dr. Flyvbjerg of Cambridge University, a renowned expert on the risks associated with large scale infrastructure projects. What it did not say was that we work very closely with Dr. Flyvbjerg, and based on his work, we have developed what may be the most sophisticated risk management system associated with any public infrastructure project to date. Our risk management program is constantly updated, monitoring and managing thousands of risk elements to assess their impact on schedule and cost. This information is routinely discussed in our Finance and Audit Committee meetings, but we would be pleased to brief you further on this very comprehensive approach, at your convenience.

Allegations of Hidden Reports

The article refers to a 2013 "report" by the state's main project management contractor, Parsons Brinkerhoff (PB), where estimates were provided that the cost of building the first phase from Burbank to Merced had risen 31% to $40 billion and projected that the cost of the entire project would rise at least 5%. While the specific report referenced in the article has not been provided to us by the newspaper reporter, we believe it is a reference to a draft PowerPoint presentation prepared for preliminary discussions about the 2014 Business Plan. Assuming this is the case, the article misrepresents both the nature of this document – a slide deck marked "Draft" – and how it played into the process of updating cost estimates. Developing cost estimates, particularly for a project that will be built over a period of years and with many undefined elements, involves the consideration of a number of variables. We look at a variety of factors that can lead to high or low case estimates. In the end, the numbers used for project planning and management are based on best estimates and the most valid assumptions.

Just as with the development of legislation, over the course of time, there will be multiple iterations of projections that are discussed, deliberated, and ultimately decided. The information in this draft document was preliminary, still in development and subject to review, clarification, and refinement. The enclosed document, which we assume the reporter was referring to, was one of scores of analyses and assessments considered in the development of our cost projections. That full documentation behind the final cost estimates was provided at the time of the release of the business plan and is available at:
http://hsr.ca.gov/About/Business_Plans/2014_Business_Plan.html

The Authority under the present leadership has always been forthcoming about the costs and risks of the program. We did not hesitate, upon assuming leadership of the program in 2011, to announce estimated program costs that were sharply higher than previous estimates. In addition to our highly sophisticated internal audit functions, we have been subject of numerous external audits, including a year-long review by the U.S. Governmental Accountability Office, which found that our capital cost projections were substantially consistent with applicable federal guidelines. We will continue to be open with you, your colleagues in the Legislature, and with the public about where the program stands.

As of today, the program is making steady progress, employing hundreds of people in an area of the state with the highest unemployment and poverty rates. We are meeting our goals that 30 percent of contract dollars flow to small businesses in California and three percent to businesses owned by disabled veterans. Our first construction segment in the Central Valley will not only serve as the spine of the High-Speed Rail system, but will also eliminate 55 at-grade railroad crossings as we build, which will markedly improve public safety by preventing accidents, injuries, and deaths.

We cannot guarantee that there will not be challenges or setbacks in the future. Yet, contrary to all the misstatements and manufactured pessimism, we have the team and tools in place to deliver the nation's first high-speed rail system to the people of California within the budget guidelines we've adopted and on our expected schedule.

If you wish to discuss the program further, please don't hesitate to contact us or Barbara Rooney, Deputy Director of Legislation, at (916) 330-5636 or Barbara.Rooney@hsr.ca.gov.

Sincerely,

DAN RICHARD
Chairman
California High-Speed Rail Authority

JEFF MORALES
Chief Executive Officer
California High-Speed Rail Authority

Attachment

9.0 Action Plan

9.1 Introduction

Over the past two years, the Commission has carefully studied high-speed rail from a number of perspectives. Now, the Commission has found that high-speed rail can be technically and environmentally feasible, and that it will generate positive economic benefits for the State. The proposed system will earn a profit on operations, but will require public funds to help finance design and construction. The Commission supports implementation of the proposed system in California, and has set forth recommendations for the technology, corridor-level alignment, financing, and operating of the system.

A number of high-speed rail projects in other states have reached this point and gone no further. High-speed rail would be a major infrastructure project that would be implemented over a 10 to 15 year period, on par with building California's freeway system or water projects. This Action Plan sets forth the tasks and steps that are necessary for implementation of high-speed rail in California.

The section below describes a newly created High Speed Rail Authority that has been given the powers to implement a high-speed rail system. The subsequent sections detail the major project phases and implementation issues that remain outstanding.

9.2 Institutional Authority – Senate Bill 1420

As concluded by the Institutional Analysis and Financing Options Evaluation (see Chapter 6.0), a high-speed rail system is best implemented by a special-purpose public agency or authority, given the complexity, size, and risk of the project. The Institutional Analysis also found that a special authority would be the type of entity best equipped to establish a relationship with a private partner who would design, build, and/or operate the system.

The recently enacted Senate Bill 1420 (SB 1420) created such an authority with the mandate to direct the development and implementation of intercity high-speed rail service in California. Broadly stated, the Authority's role is to protect the public's interest in bringing together the necessary elements for a successful high-speed rail project, implementing the project, and ensuring that partnership contract provisions are adhered to and the agreed upon levels of service to the public are maintained.

The new High Speed Rail Authority is to prepare a plan that would lead to construction and operation of a high-speed rail train network for the State, consistent with and continuing the work of the present Commission. Upon completion, the plan shall be

submitted to the Legislature and the Governor for approval by the enactment of a statute or to the voters of the State for approval.

The Authority is to consist of nine members: five appointed by the Governor, two appointed by the Senate Committee on Rules, and two appointed by the Speaker of the Assembly. Members of the Authority will hold office for four years. The Authority will be able to hire an Executive Director and staff.

Consistent with the findings of the Commission, the Authority is to plan for a system capable of achieving speeds of at least 200 mph. SB 1420 also emphasizes coordination and connectivity stating, "The [high-speed] intercity network...shall be fully coordinated and connected with commuter rail lines and urban rail transit lines...as well as other transit services through the use of common station facilities whenever possible."

Initially, the Authority will have the following powers to:

- Conduct engineering, environmental impact, and other studies;
- Evaluate alternatives and select a high-speed rail technology and operator;
- Establish criteria for the award of a franchise to design, build and/or operate parts or all of the system;
- Accept grants, fees, or allocations from the State, Federal government, local authorities, or private sources;
- Select a proposed franchisee, a proposed route, and proposed terminal sites;
- Enter into contracts with public and private entities for the preparation of the plan;
- Prepare a detailed financing plan, including any necessary taxes, fees, or bonds to pay for the construction of the high-speed rail network; and
- Submit the detailed financial plan to the Secretary of State for placement on the ballot at the November general election in 1998 or 2000.

Once funding for the high-speed rail network is secured, either by enactment of a statute by the Legislature and/or approval by the voters, the Authority would gain the following powers to:

- Enter into contracts with private or public entities for the design, construction and operation of high-speed trains (the contracts may be separated into individual tasks or segments or may include all tasks and segments, including a design-build or design-build-operate structure);
- Acquire rights-of-way through purchase or eminent domain;
- Issue debt, secured by pledges of State funds, federal grants, or project revenues (the pledge of State funds would be limited to those funds expressly authorized by statute or voter-approved initiatives);

- Enter into cooperative or joint development agreements with local governments or private entities;
- Set the fares and schedules for the system; and
- Relocate highways and utilities.

A key provision of SB 1420 concerns the funding of the High Speed Rail Authority. Through SB 1420, the Legislature will authorize a modest appropriation to sustain the Authority and its staff through preparation of the high-speed rail plan and financing scheme. Should the proposed system and financing scheme fail to gain approval either through the Legislature or by the voters, however, funding for the Authority will not continue. Furthermore, the Authority would sunset should it fail to gain approval of a high-speed rail funding measure by November 2000.

9.3 Project Phases

There are five major phases of the high-speed rail implementation process that will occur before the start of revenue operations. These include conceptual planning, preliminary engineering and environmental clearance, final design, construction, and startup testing. The phases are described below in roughly sequential order, although in actuality most phases will overlap to varying degrees. Also provided below are order of magnitude estimates of the resources required for each phase.

9.3.1 Conceptual Planning

This first phase of high-speed rail implementation is mostly complete, comprised by the work of the Intercity High Speed Rail Commission. The purpose of conceptual planning was to investigate high-speed rail alternatives throughout the State to identify the most promising alternatives to carry forward to the preliminary engineering phase.

Over the past two years, the Commission has overseen four technical studies, undertaken a public participation program, and developed a conceptual high-speed rail system. This Summary Report and Action Plan presents their findings and recommendations to the public, the Governor, and Legislature. The technical work encompassed an investment grade ridership and passenger revenue forecast, an evaluation of potential high-speed rail corridors and environmental constraints, an economic impacts study and mode cost comparison, and an evaluation of financing and institutional options. Outputs of the studies included route options, ridership and revenue forecasts, capital costs, operational and maintenance costs, travel times, environmental impacts, a cost/benefit analysis, and a

financing plan for various configurations of a high-speed rail system. Resources required for this phase have totaled approximately $5 million.[1]

9.3.2 Preliminary Engineering and Environmental Clearance

In civil engineering parlance, the preliminary engineering phase typically consists of design to the "35 percent level". This means analyses detailed enough to allow evaluation of environmental impacts and satisfy requirements of the environmental clearance process. While corridor level route alignments will be fixed at this stage, different sub-alignments will be analyzed in many areas to determine a preferred alternative. In many cases, preliminary engineering could yield new information that would influence or dictate the selection of an alternative for final design. Thus, there is a need to retain a degree of flexibility throughout the preliminary engineering process.

Preliminary engineering work will include geotechnical investigations, land surveying and mapping, engineering, architecture, landscape architecture, traffic engineering, preliminary operations and maintenance plans, and preparation of preliminary plans and analyses in all necessary technical disciplines to support the draft environmental document. The environmental review will complete the studies and analyses necessary for federal and state-required environmental documents, resulting in an environmentally-cleared project. This phase will last from two to three years and require about 3 percent of the final construction cost to complete, or several hundred million dollars. Order-of-magnitude estimates for these costs total about $210 million for the Los Angeles-San Francisco segment or $330 million for the entire recommended system.

9.3.3 Final Design

Final design involves preparation of construction and procurement documents for all facilities and systems. By the beginning of this stage, a single route alignment and system configuration will have been selected for construction, and will have been environmentally cleared.

This phase will include geotechnical investigations, land surveying and mapping, engineering, architecture, landscape architecture, traffic engineering, right-of-way engineering, and preparation of plans and specifications in all necessary technical disciplines. The final design phase also includes design support during construction and shop drawing review. While final design will require about two years to complete, there would be substantial overlap with the preliminary engineering and construction phases. Final design costs will total about 6 percent of the total construction cost, on the order of $410 million for the Los Angeles-San Francisco segment or $650 million for the entire recommended system (again, these are order-of-magnitude estimates).

[1]This figure includes approximately $1 million for the Commission's expenses and staff and $4 million in consultant contracts.

BRIEFING: April 12, 2016 BOARD MEETING AGENDA ITEM #4

TO: **Chairman Richard and Board Members**

FROM: **Frank Vacca, Chief Program Manager**
Paul Engstrom, Third Party Manager
Tom Fellenz, Chief Counsel

DATE: **April 12, 2016**

RE: **Consider Delegating Authority to Negotiate and Finalize Agreements with the BNSF Railway Company (BNSF)**

Background

The Authority's First Construction Section (FCS), which is being constructed under three design-build contracts (CP 1, CP 2-3 and CP 4), will be adjacent to the BNSF corridor in the Central Valley. At no point will high-speed rail share passenger tracks with BNSF, but it will pass over, under and in some areas be in close proximity to the BNSF right-of-way.

BNSF's cooperation and accommodation is crucial to successful delivery of construction in the Central Valley and the high-speed rail program is dependent on BNSF taking the following actions:

(1) Reviewing, commenting on, and approving designs and proposals for construction;

(2) Participating in conference calls, attending a variety of meetings, and coordinating ongoing site investigation, right-of-way and engineering planning and design meetings with the Authority staff, contractors and consultants;

(3) Granting permission to enter to assess potential environmental risks during construction and for appraisal of parcels to be acquired;

(4) Allowing safe access to their right-of-way for construction;

(5) Temporarily and permanently relocating operating tracks and train signal/communication systems;

(6) Approving of key design features, including overpasses and intrusion protection barriers;

(7) Continuously and safely operating freight service during and after construction.

BNSF Railway is one of the largest freight railroad networks in North America. BNSF is the product of mergers and acquisitions of nearly 400 different railroad lines, including two major

railroads (Burlington Northern Railroad and the Atchison, Topeka and Santa Fe Railway), over the course of 160 years.

In California, BNSF operates over 2,125 miles of track – 1,155 miles of which are owned by BNSF and 975 miles through trackage rights (rights of one railroad to operate on another's tracks). BNSF is a publicly traded corporation and a subsidiary of Berkshire Hathaway Inc., whose priority is to preserve and protect their ability to move freight through their systems in order to serve future and current customers.

Authority staff is negotiating the terms and conditions of BNSF's agreements to address the Authority's construction needs. A separate Reimbursement Agreement (within the CEO's delegated authority) was executed with BNSF to permit reimbursement for BNSF expenses to review and comment on the Authority's Design Builders Plans and Designs. The major terms of Construction & Relocation, as well as Joint Corridor Use Agreements have been resolved, allowing staff to seek Board approve for final negotiation and execution.

The Authority is seeking Board approval to delegate authority to the CEO to execute these agreements which are crucial to the Design-Build contracts for the FCS and successful delivery of the high-speed rail program.

Discussion

Relocation and Construction Agreements

In connection with the development and construction of the FCS, BNSF will modify or relocate certain facilities and implement improvements, either permanently or temporarily, to enable construction and/or operation of the high-speed rail system. This includes constructing rail-over-rail grade separation structures (either overpasses or underpasses); local streets/highway overpasses and/or underpasses over or under the existing BNSF property; and, replacement of existing at-grade crossings and closure of existing at-grade crossings. Separate Relocation and Construction Agreements will be signed for each Construction Package.

A portion of the work to modify BNSF facilities will be performed by and are included in the design build contracts. This work includes all civil work necessary to relocate BNSF facilities up to the track level.

Other portions of the work to modify BNSF facilities will be performed by BNSF. This work includes installing ballasted mainline tracks, freight yard tracks, train signals, removal of existing crossing gates, and relocation of existing signals near at-grade crossings.

Relocation and Construction Agreements will address:

(1) The cost of any BNSF facility modifications including:

   a. the cost of signal, track, civil and associated modifications required to modify or install grade crossing warning devices at at-grade crossings;

   b. the cost of any signal, track, civil and associated work;

c. the cost of installing at-grade crossing track integrity systems and modifications to active warning devices to accommodate such systems; and,

d. design review and approval costs, permit, construction costs, construction oversight costs, coordination necessary to facilitate the project.

(2) The Cost of flaggers who are freight railroad employees designated to communicate with the contractor which is required whenever the contractor's work could endanger or interfere with the freight railroad operations;

(3) The BNSF construction and/or maintenance costs during the construction of the Authority improvements caused by the Authority's construction activities;

(4) All BNSF construction management or inspection costs related to construction of the Authority Improvements;

(5) All emergency work costs caused by the Authority in connection Authority's project necessary to restore BNSF's operations or protect BNSF employees or property;

(6) All Costs associated with the BNSF Project Coordinator;

(7) All Costs associated with compliance with the Federal Flow Down Requirements; and,

(8) All Costs incurred under trackage, haulage or similar agreements between BNSF and other freight railroads in connection with detouring freight in BNSF's account onto track owned by another freight railroad in order to accommodate the Project's construction timeline.

Joint Corridor Agreement

The Joint Corridor Agreement addresses the use, operation and maintenance of the Authority's facilities including operation of its passenger service where the mainline tracks for Authority passenger service are within two hundred and fifty (250) feet of BNSF's property line.

Unlike the many intercity and commuter passenger rail services with which the freights have negotiated indemnification agreements, the Authority will not be sharing its dedicated tracks or right-of-way with the freight railroads. Safety design requirements include staying at least 102 feet away from the edge of the freights existing right-of-way (except for overpasses/viaducts), when feasible.

The federal Amtrak Reform and Accountability Act (Amtrak Act) explicitly authorizes passenger rail providers, including the Authority, to enter into indemnification agreements to allocate financial responsibility for claims. The Amtrak Act imposed a statutory $300 million liability cap (on aggregate damages from a single incident to be readjusted for inflation every five years) which was set by Congress to keep train systems such as Amtrak operating when faced with major lawsuits. The cap applies to claims by passengers on intercity, commuter, or high-speed rail service.

The terms within the Joint Corridor Agreement are based on existing state and federal laws, including the Amtrak Act, as adjusted, which specifically addresses commercial passenger liability. Also included is a commitment that the eventual Authority Rail Operator will provide

$500 million liability insurance policy to cover both the Authority and BNSF. The Authority's insurance experts have verified availability and cost for this insurance.
The Authority may be responsible for losses in excess of negotiated policy limits and coverage restrictions depending on responsibility. There are situations where, despite contractually agreed to insurance requirements, insurance companies will not agree to cover everything (or will specifically exclude coverage through endorsements, exclusions or otherwise). For example it is typical for general liability policies to exclude coverage for liability caused by asbestos, based upon punitive damages, arising out of an act of war or terrorism.

Reimbursement Agreement

The terms of the Reimbursement Agreement govern BNSF's on-going review of the design and construction plans for the Project and include BNSF's staff, consultants and contractors review, comment and approval of preliminary and final designs; project management for design; construction administration and management; and, any permits or fees required to be obtained by BNSF. The current agreement in place, HSR14-40, is for $5 million and was executed under the CEO's delegated authority. To cover all three construction packages, this agreement will require an amendment to increase the contract amount.

Work performed by BNSF under the Reimbursement Agreement is managed by Task Order, services performed are at the Authority's request, and are for actual and reasonable costs.

Other Agreements

In addition to the agreements discussed above, there will be additional agreements with BNSF. These agreements are described as information to the Board and are not included in this delegation request.

> **Purchase and Sale Agreements** will be executed for property interests or rights to be conveyed or granted to the Authority by BNSF Agreements and will be approved by the state's Public Works Board. Aerial easements which will be conveyed to the Authority by BNSF will be conveyed pursuant to the **Overpass Agreements**, other than rights to one or more temporary construction licenses from BNSF to the Authority which will be granted in the Relocation and Construction Agreement. Overpass Agreements involving construction of new or changes to existing at-grade crossings will require the approval of the California Public Utilities Commission. The costs for the property rights in the Purchase and Sale Agreements and the Overpass Agreements are included in the Right-of-Way Acquisition plan and budget. The costs of the Overpass Structures are included in the Design-Build Contracts.
>
> **Right of Entry Agreements** will be used for access to BNSF's property for appraisals, surveys, identification of underground utilities, testing for hazardous materials, and other related activities. Fees for access are paid by the applicable contractor and included within their contract costs.

Additionally, several construction elements and costs are included in the Authority's civil construction packages (CP 1, CP 2-3 and CP 4) which include, but are not limited to: any costs associated with the construction of high-speed rail; underground track conduit, duct banks, manholes or pull boxes; removal or treatment of hazardous materials; any costs for disruption of freight service or lost revenue; fencing or gates; intrusion protection devices including barriers, ditch/berms or detection monitoring; relocation of non-BNSF owned utilities; any costs for BNSF mitigations (shoofly, turntable, spurs, wyes); any costs incurred from Alternate Technical Concepts (ATCs); and demolition and removal of existing BNSF tracks when required for relocation.

Legal Approval

All BNSF agreements are negotiated with assistance and involvement by the Authority's in-house Counsel and contracted outside Counsel. All agreement will be approved as to form and compliance with laws by Counsel prior to execution.

Budget Implications

The $100 million budget for work associated with the BNSF Agreements is included in the Phase 1 and FCS budgets. The budget has recently been validated and independently checked. BNSF will provide complete labor rate schedules and will invoice on an hourly basis. The budget will be tracked and managed by developing estimates for various work components to be performed during the performance periods. Those estimates will include labor, materials and equipment. The progress and management of the BNSF work will be based on structured weekly coordination meetings to review schedule, priorities, delivery dates, responsibility assignments, and to identify issues and problems. The design progress will be tracked closely by implementing a global tracking commodity chart. This chart will be maintained with weekly updates, shared with team members, and used as a tool to gauge whether progress is sufficient or if action needs to be taken. The project teams will coordinate the contractors schedule with BNSF work activities on a four week look-ahead schedule and review progress at the weekly coordination meeting. BNSF design will be reviewed to assure all work proposed is within the scope of work identified in the Relocation and Construction agreement.

The project teams will monitor anticipated construction dates to the BNSF work matrix to aid in prioritizing designs. Actual progress should be updated weekly and compared to anticipated construction start dates. The team will develop trend-type charts as much as possible on the dashboard, as this type of chart shows both the current status and past trends. These trends will tell the team if they are on a course that will achieve the goals set by the project. Noted below are metrics that are being considered for the dashboard.

- Design Trends
- Construction Trends
- Cost Versus Budget
- Top Ten Issues/Problems
- Indicators of potential delay in contractors operation

Risk Analysis

Contingencies are typically included in large budget items of this nature but are not included in the request for Board approval. A contingency analysis and budget request for risks related to the BNSF contracts will be presented to the Board at a subsequent meeting.

Estimate

In March/April 2016 these estimates were prepared by Rail Delivery Partner estimators and independently checked. The estimates are based upon the most current underlying assumptions about work to be performed by and costs expected to be incurred by BNSF. The Preliminary Engineering Drawings included in the Final EIR were used as the basis for all quantities associated with relocation, construction, and adjacency to BNSF. RDP railroad experts and construction personnel from both the RDP and the Authority provided the underlying assumptions to the estimators and validated the final estimates.

Relocation and Construction costs were segregated using FRA unit price element codes. The RDP estimators prepared assembly costs for each element of construction that included both material and labor costs. Estimates were prepared with the understanding that BNSF will construct all trackway elements from the sub-ballast up (i.e. ballast, ties, and rail). Additionally, BNSF estimates included turnouts, crossovers, train control and communications, and a minor amount of demolition. RDP estimators reviewed quantities provided by the Regional Consultant and then independently developed quantities that were used with the unit prices to estimate relocation and construction costs.

For the Professional Services and support, two estimating methods were employed. In the first category, common industry averages were used against construction costs (i.e. 6% for final design, 3% for project management, etc.). Second category services were based upon average or blended rates (inspection services at $150/hour and flagging at $1,500/day). A 30% Overtime allowance was incorporated for flagging and Document Review for our adjacency was assumed at $451,000/Route Mile where the HSR is within 250’ of BNSF. Again, where unit costs were utilized for Professional Services, independent quantities were developed by the RDP estimators and applied.

The breakdown and description of costs is featured in the table on the next page.

DESCRIPTION	CP 1	CP 2-3	CP 4
Track Structure & Track		$23,595,666	$11,537,588
Sitework (Removal of Ballasted Track)		$270,638	
Communications and Signaling		$6,968,637	$3,256,621
Professional Services (Final Design, Project Management for Design, Construction Admin & Management, Permits & Fees, Systems Start-Up)		$4,580,835	$2,415,337
BNSF Flagging Services, Document Review and Inspections	$12,040,600	$23,696,740	$7,483,660
Total By CP	$12,040,600	$59,112,517	$24,693,206
Escalation 2014 3rd Qtr. to 2016 1st Qtr. (@ 3.75%/yr.)		$2,216,719	$925,995
SUBTOTAL FOR CP01, CP 2/3, CP04 and Escalation			$98,989,037
		Rounded	$100,000,000

Recommendation

Approve the proposed resolution delegating authority to the Chief Executive Officer (CEO) or a designee of the CEO, to execute Relocation and Construction agreements and the Joint Corridor Agreement with BNSF. Upon execution, these agreements will be set up as a five year reimbursement agreement for payment of all actual and eligible costs incurred by BNSF in an amount not to exceed $100,000,000. This amount is the estimated cost of: (1) a scheduled and dedicated flagging crew through construction; (2) materials and construction work performed by BNSF for temporary track relocation and signal/communication modifications; and, (3) the development of design standards and compliance review of Design-Builders' designs for all mutual benefit improvements.

Attachments

– Draft Resolution #HSRA 16-11

2016 Business Plan RECORD DETAIL

Submission Date :	4/15/2016
Submission Method :	Letter
First Name :	Cathleen
Last Name :	Galgiani
Stakeholder Comments/Issues :	Please see attached letter from Senator Galgiani regarding the 2016 business plan.
	Kaitlyn Johnson Legislative Aide Senator Cathleen Galgiani, 5th District State Capitol, RM 2059 916-651-4005 office
Notes :	
Attachments :	HSR Business Plan 2016 Public Comment.pdf (387 kb)

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California State Senate

SENATOR
CATHLEEN GALGIANI
FIFTH SENATE DISTRICT

STANDING COMMITTEES

AGRICULTURE
CHAIR

BUSINESS, PROFESSIONS & ECONOMIC DEVELOPMENT

GOVERNMENTAL ORGANIZATION

TRANSPORTATION & HOUSING

April 15, 2016

The Honorable Dan Richard
Chair, CA High Speed Rail Authority
925 L Street, Suite 1425
Sacramento, CA 95814

Re: 2016 HSR Business Plan – Extending the Test Track to Merced vs Bakersfield

Dear Chair Richard and Members:

As the Author of Proposition 1A, the High-Speed Passenger Train Bond Act of 2008, I am writing to you in response to the recent release of the High Speed Rail Authority's 2016 Draft Business Plan, and to share my viewpoint for optimizing California's $12.3 billion dollars in existing funding from Prop 1A, and ARRA funding for the Central Valley to the Silicon Valley.

I respectfully request that this opportunity for high-speed connectivity, and "one-ticket rides" which I outline below, be printed in the 2016 Business Plan, for public consideration and comment.

While the High Speed Rail Authority originally envisioned extending the Central Valley Test Track an additional 23 miles **south** to Bakersfield, **extending the test track north to Merced, instead of Bakersfield sets the stage for providing "one-ticket rides" via the Altamont Commuter Express (ACE) and Caltrain, for California workers who commute over the Altamont Pass on a daily basis to job centers in the Silicon Valley and Bay Area.** Construction into Merced can begin immediately, while planning and construction for full high speed rail through the Pacheco Pass to San Jose and San Francisco continues as outlined in the 2016 Draft Business Plan.

Extending the Central Valley test track to Merced, instead of Bakersfield will lay the groundwork to close the gap between the high-speed "test track", and existing passenger rail service (ACE & Caltrain) to job centers in San Jose and San Francisco. "One-seat rides" from the Central Valley to the Silicon Valley and Bay Area can be expedited by connecting the test track in Merced with the "Altamont Commuter Express" (ACE) system from Merced to Santa Clara. Passengers riding the ACE system can then exit the ACE train, walk across an already existing platform, and within minutes, board a newly electrified "Caltrain" system from Santa Clara into San Francisco.

One Ticket Rides to the Silicon Valley & Bay Area

As you know, the Legislature approved funding to begin planning for extending the Altamont Commuter Express train (ACE) south to Modesto, and Merced -- the northern end of the high speed rail test track. In addition, the Caltrain corridor was allocated Prop 1A funding through SB 1029 (2012) to electrify its track from San Francisco to San Jose, and implement a blended system for higher-speed service for commuter trains and future high-speed trains. Therefore, this strategy for "one-ticket rides" to the Silicon Valley and Bay Area can be delivered with available and allocated funds, is compliant with Prop 1A, and can generate operating revenue through partnerships with ACE & Caltrain.

"One ticket rides" to job centers will help mitigate the jobs-housing imbalance, and take tens of thousands of "texters and tweeters" off our already overburdened highways in the Silicon Valley and Bay Area.

Merced is Construction Ready

The Merced to Fresno high speed rail alignment was the first in the nation to have an approved EIR. In May 2012, the authority adopted the final EIR/EIS under CEQA for the Merced to Fresno segment - a distance of approximately 60 miles. In September 2012, the Federal Railroad Administration approved a Record of Decision under NEPA, thereby providing the required environmental clearance to proceed to construction.

It now makes sense to also immediately proceed with construction of the high-speed rail line from Madera north to Merced, using the money originally planned for extending the test track south another 23 miles to Bakersfield.

HSR and the Jobs Housing Imbalance

In the Bay Area and Silicon Valley, the jobs-housing imbalance is among the worst in the country. In 2008 alone, 900,000 Bay Area workers were found to live outside the county in which they worked. Faced with the nation's highest housing costs, Bay Area workers, unable to live close to their places of employment, make their homes in the "housing rich" Northern San Joaquin Valley.

Between 2010 and 2040, the population of the nine-county San Francisco Bay Area is projected to grow by 2.1 million people and 1.1 million jobs. However, the "Draft Bay Area Plan" of 2013 forecasts construction of only 660,000 new housing units to be built during this same timeframe. Continued employment growth will only exacerbate this jobs-housing imbalance in the coming years. And projections estimate the number of daily commuters over the Altamont Pass will grow from 50,000 to 250,000 by the year 2020.

By cooperating with our regional rail partners, high speed rail can link job growth to housing production, and mitigate the myriad of air quality, transportation congestion, and quality of life problems associated with the jobs-housing imbalance.

Summary of My Requests for Consideration in the Business Plan

1) I urge the HSRA to immediately proceed with construction of the high-speed rail line from Madera north to Merced, using existing funding originally planned for extending the test track south another 23 miles to Bakersfield.

2) I urge the HSRA to develop an immediate strategy for connecting the Central Valley Test Track at Merced with the "Altamont Commuter Express" train (ACE). Planning to extend ACE south to Modesto and Merced is already underway.

As the Author of Proposition 1A, I offer these comments and recommendations as a complimentary strategy to make immediate progress on implementing HSR, not as an ending point for the ultimate goal of a statewide system.

In closing, I respectfully ask that this letter be contained as written within the 2014 Business Plan, for public consideration and comment.

Sincerely,

Cathleen Galgiani
Senator, District 5

CG: cg/ra

Cc: The Honorable Governor Jerry Brown
Nancy McFadden, Chief of Staff, Governor Jerry Brown
Senator Dianne Feinstein
Senator Barbara Boxer
Congresswoman Nancy Pelosi
The Honorable Sarah E. Feinberg, Administrator, Federal Railroad Administration
Paul Nissenbaum, Associate Administrator for Policy, Federal Railroad Administration
Carlos Monje, Jr., Acting Under Secretary for Policy, U.S. Department of Transportation
Honorable Anthony Rendon, Speaker of the Assembly
Honorable Kevin De Leon, Senate President Pro Tempore
Honorable Jim Beall, Chair, Senate Transportation Committee
Honorable Jim Frazier, Chair, Assembly Transportation Committee
Honorable Mark Leno, Chair, Senate Budget and Fiscal Review Committee
Honorable Phil Ting, Chair, Assembly Budget Committee
Honorable Lois Wolk, Chair, Senate Budget & Fiscal Review Subcommittee No. 2
Honorable Richard Bloom, Chair, Assembly Budget Subcommittee No. 3
Honorable Hannah-Beth Jackson, Chair, Senate Select Committee on Passenger Rail
Honorable Adam Gray, Chair, Assembly Select Committee on Rail
Members of the State Senate
Members of the State Assembly

Michael Cohen, Director, CA Department of Finance
Amy Costa, Chief Deputy Director of Policy, CA Department of Finance
Laura Schiller, Chief of Staff, Senator Barbara Boxer
Brian P. Kelly, Secretary, California State Transportation Agency
Jeff Morales, Chief Executive Officer, California High-Speed Rail Authority
Dan Richard, Chair, California High-Speed Rail Authority Board of Directors
Thomas Richards, Vice Chair, California High-Speed Rail Authority Board of Directors
Lou Correa, Board Member, California High-Speed Rail Authority
Daniel Curtin, Board Member, California High-Speed Rail Authority
Bonnie Lowenthal, Board Member, California High-Speed Rail Authority
Michael Rossi, Board Member, California High-Speed Rail Authority
Lynn Schenk, Board Member, California High-Speed Rail Authority
Lorraine Paskett, Board Member, California High-Speed Rail Authority
Louis S. Thompson, Chair, California High-Speed Rail Peer Review Group
Stacey Mortensen, Executive Director, San Joaquin Regional Rail Commission

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	John
Last Name :	Urban
Stakeholder Comments/Issues :	Hello, Please find attached brief comments related to the 2016 Draft HSR Business Plan. John Urban Past President Newhall Neighborhood Association
Notes :	
Attachments :	Letter_to_HSR_for_draft_2016_Business_Plan_Newhall_NA.pdf (49 kb)

April 18, 2016

Dan Richard, Chair

California High Speed Rail Authority

770 L Street, Suite 620 MS-1

Sacramento, CA 95814

Chair Dan Richards,

I would like to point out the neighborhoods north of Diridon Station though Scott Street in Santa Clara should hold equal evaluation with regard to the impacts of the proposed HSR alignment as all other neighborhoods adjacent to the HSR Right of Way within the City of San Jose. North of Diridon neighborhoods have families, schools and playgrounds just like other parts of San Jose and will also be impacted by the aerial and at-grade alternatives. Although not as vocal in the past as other parts of San Jose, north of Diridon residents, school administrators and local workers are very concerned with the quality of life within their environments along the proposed aerial or at-grade High Speed Rail.

I would like the HSR Authority to recommend the at-grade alternative for the area north of San Jose's Diridon Station for the following reasons:

1) The quality of life for those in the College Park and Newhall neighborhoods which includes homes, schools, playgrounds and workers. A 60 foot aerial HSR structure and the accompanying noise will reduce significantly the quality of life for those in the surrounding homes, playgrounds, schools and places of work; more so than the at-grade alternative.
2) The lesser cost at-grade alternative is the correct path for taxpayers and the 2016 HSR Business Plan objectives:
    a) Deliver HSR quickly as possible
    b) Stay within federal and state 'to date' budget constraints
    c) Value Engineer alternatives

I strongly recommend the HSR Authority consider quality of life for those north of Diridon and the California taxpayer who demand a project budget be kept under control. Recommend the at-grade alternative for the track between Diridon Station and Scott Street in Santa Clara, CA.

John Urban

Past President Newhall Neighborhood Association

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Carol
Last Name :	Bender
Stakeholder Comments/Issues :	Please place my comments in the public record during this comment period of the 2016 HSR Business Plan. Attached is a 10 page letter with a 2 page attachment. I would greatly appreciate it if you would acknowledge its receipt. If there are any issues with its receipt, please contact me. Best regards, Carol Bender 13340 Smoke Creek Ave Bakersfield , CA 93314 661-588-0806
Notes :	
Attachments :	Comments Draft 2016 Business Plan Carol Bender April 17 2016.pdf (7 mb)

April 17, 2016

California High Speed Rail Authority Board

770 L Street, Suite 800

Sacramento, California 95814

Subject: **Formal Comments on 2016 Business Plans**

I would like to submit my comments on the Draft 2016 High Speed Rail Business Plan.

I am a citizen of Bakersfield, California and have been very active in research and follow up on the various EIRS and business plans since 2010. I have made many comments on the Fresno-Bakersfield EIR. Many of these concerns have still not been addressed/adequately mitigated. I will continue to illuminate some of those issues as they pertain to the 2016 Business Plan.

I. The Executive Summary

The 2016 Business Plan Executive Summary is riddled with misinformation. It makes broad statements that are misleading to the reader. This is particularly important because many readers ONLY read the summary. This misleading information includes:

1. Summary Statement: "Now more than 100 miles of construction is underway in the Central Valley(CV)".

No. The Authority is still in the process of acquiring land parcels. They have been struggling to acquire needed parcels. There are some projects dotting the proposed alignment, but most include project utility work or preliminary road or bridgework in a few specific locations.

2. The summary states that " the projected costs of the entire system is revised down $5.5 billion through value engineering, better operational and technical approaches to design and a favorable bidding environment".

This appears to be a somewhat lofty claim in that the current first Phase of the project is already at risk of going over contingency dollars, most of the land parcels have yet to be purchased, and much of the design and troubleshooting involved during the actual building phases of those segments is largely unknown. Additionally, 3rd party agreements and utility relocations are likely to increase current phase one cost projections according to current reports.

c. This summary (and the rest of this Business Plan frequently repeats this claim) states that 25% of cap and trade funds with be allotted to the HSR project on a **continuous** basis.

Not true. These Cap and trade funds are only available until 2020 unless the legislature extends the time frame. Additionally there is ongoing litigation regarding the cap and trade program that could jeopardize the use of that money. Cap and trade funds were supposed to go toward multiple projects that would immediately have an impact on reducing greenhouse gases. According to AB 1532, the funds were to be allocated for:

(1) Funding to reduce greenhouse gas emissions through energy efficiency, clean and renewable energy generation, distributed renewable energy generation, transmission and storage, and other related actions, including, but not limited to, at public universities, state and local public buildings, and industrial and manufacturing facilities.

(2) Funding to reduce greenhouse gas emissions through the development of state-of-the-art systems to move goods and freight, advanced technology vehicles and vehicle infrastructure, advanced biofuels, and low-carbon and efficient public transportation.

(3) Funding to reduce greenhouse gas emissions associated with water use and supply, land and natural resource conservation and management, forestry, and sustainable agriculture.

(4) Funding to reduce greenhouse gas emissions through strategic planning and development of sustainable infrastructure projects, including, but not limited to, transportation and housing.

(5) Funding to reduce greenhouse gas emissions through increased in-state diversion of municipal solid waste from disposal through waste reduction, diversion, and reuse.

(6) Funding to reduce greenhouse gas emissions through investments in programs implemented by local and regional agencies, local and regional collaboratives, and nonprofit organizations coordinating with local governments.

(7) Funding in research, development, and deployment of innovative technologies, measures, and practices related to programs and projects funded pursuant to this part.

When public criticism continued to rise with regard to the inability to fund the HSR project, the legislature enacted SB 535 which elaborated on AB 1532:

SEC. 3. Section 39713 is added to the Health and Safety Code, to read:

(a) The investment plan developed and submitted to the Legislature, pursuant to Section 39716, shall allocate a minimum of 25 percent of the available moneys in the fund to projects that provide benefits to communities described in Section 39711.

To understand how AB 1532 got "interpreted" to allow this 25% funding to go to the HSR project, one needs to see how they define projects that provide benefits to communities in this section:

39711. The California Environmental Protection Agency shall identify disadvantaged communities for investment opportunities related to this 90 Ch. 830 — 2 —chapter.

These communities shall be identified based on geographic, socioeconomic, public health, and environmental hazard criteria, and may include, but are not limited to, either of the following:

(a) Areas disproportionately affected by environmental pollution and other hazards that can lead to negative public health effects, exposure, or environmental degradation.

(b) Areas with concentrations of people that are of low income, high unemployment, low levels of homeownership, high rent burden, sensitive populations, or low levels of educational attainment

As a resident of Bakersfield (Kern County), an area inarguably adversely affected by environmental pollution and whose fellow residents include high numbers of the socioeconomically disadvantaged, I take great offense that the legislature chose to direct 25% of these funds to the High Speed Rail project. There would be so many more beneficial uses for this money that could have an immediate impact at improving our environmental pollution. Instead, we see it directed toward a single project that will likely not have the funding to be completely built. And if it were built, it would not reap the offset benefits claimed for decades. The benefits to our environment are contingent on completing the connection to the LA Basin AND having high ridership. In the meantime, the construction phase of the project, now outlined as San Jose (SV) to North of Bakersfield (CV), will create an extreme amount of environmental pollution. The CV could have benefited far more having those allotted 25% funds go toward uses described above in AB 1532.

3. Despite the fact that there is no actually money in hand to fully finance this project, the Executive summary claims, "savings of 8%, as Phase 1 costs have been reduced". The rationale here defies logic. The Authority proposed to "reinvest" this hypothetical monetary savings to enhance the level of service (LOS) in the LA to Anaheim segment (an extra $2.1 billion) touting that even in doing this, the new cost estimate for the full system is still reduced from $67.6 to $64.2 billion. This business plan states that it will adhere to specific guiding principles. It makes no sense to direct $2.1 billion to the LA-Anaheim segment when the monies could be spent to extend the SV to CV initial operating system to San Francisco and/or Bakersfield.

II. Section 2: Guiding Principles and Core Values

The Authority's listed guiding principle states, " Select an initial line for development, establish a funding plan for it and commit ALL resources necessary to build it. Begin offering high speed passenger service as quickly as possible." Resources should be directed to complete the initial segment, because according to this document (pg 30) and the other information in this business plan:

"To do otherwise would mean that the state would be left with a segment that would not be complete, could not meet the statutory requirements and/or that would not generate private sector participation.

III General Comments Business Plan/Ridership

Before I continue, it is best to state that I believe we should abort the current plan to build this HSR project. We simply do not have the money to complete it, nor do we have any private sector money to ensure participation. The business plan assumes that they have Proposition 1A money to spend. The business plan does not clearly state that Prop 1A funds to be spent on the SV to CV segment are on hold as a result of court rulings. Cap and Trade funds are only allotted through 2020. Some Federal funding must be used by 2017 or risk forfeiture. Public sentiment has changed such that the majority is NOT in favor of continuing the HSR project at this time.

Given this admission, I also realize that it is necessary to comment "as if" this project will go forward. Thus, further comments will address the issues/problems with the current plan as proposed.

Ridership and revenue numbers seem highly inflated given that current ridership on the San Joaquin Amtrak line is approximately 1.2 million. This plan shows "medium" ridership SV-CV as 2.9 million. Where are these new riders coming from? Are there 1.7B more riders willing to take a HSR train from San Jose to a rural outlying station 20+ miles north of Bakersfield? Likely not. Adding the extension to San Francisico and downtown Bakersfield is noted as having "medium" ridership of 5.1 million. Adding the extension, according to the plan's calculations, adds an additional 2.2 million riders and the revenues that follow.

While I can understand, largely from a political standpoint, that it would be nice to spend $2.1 billion in the Burbank to Anaheim segment, to do so, jeopardizes the completion of the initial construction segment that does not even have the funding to extend to San Francisco or to downtown Bakersfield.

The success of this project is highly contingent on bringing in private sector money. The plan outlines the best way to attract private sector money. It is necessary to show proven revenues on an initial segment. If money that could be used to extend the initial SV to CV segment is directed to infrastructure improvements in the Burbank-Anaheim section instead, Californians are shooting themselves in the foot. All of the data in this document indicate that ridership and revenues are MARKEDLY increased if the SV-CV segment is extended to include San Francisco and Downtown Bakersfield.

Using some sort of political posturing to " try" to get Federal Funds to complete this extension, rather than utilizing the $2.1 billion is a risky plan. Citizens of California deserve better. If the Authority is truly trying to attract private investment, all available money should be directed to building an extended version of the SV-CV plan.

IV Operations and Maintenance

I continue to stand by past convictions that using the Monte Carlo method to determine costs is very inaccurate. However, since that is what is used in this plan, I will comment accordingly. In looking at net cash flow after subtracting operation and maintenance costs from revenues, the SV to CV operating segment would run at multimillion dollar deficits in the first 1-2 years of operations. The Extended SV to CV initial operating segment would operate at a multi-million dollar **positive** cash flow. If the purpose is to attract private investors, why wouldn't the $2.1 billion dollars currently projected to go to the Burbank to Anaheim segment be re-assigned so that this extension could be completed? If the HSR project does not have funds to reach Bakersfield, why are we spending money to improve areas hundreds of miles away to prepare them for high speed rail? That is putting the cart before the horse indeed! Perhaps it will make locals in So. California feel like they are "at least" getting something...but it is a bad business decision.

Positive operating cash flow is what is needed to attract private investment. Private investment capital is expected to be one, if not **the** most important source of funds for construction of all future segments. A potential private investor will look at the initial operation segment as a potential stand-alone service. Having the southern terminus of the SV to CV initial segment terminate in a rural field 20+ miles north of Bakersfield will not resemble a stand-alone segment, nor will it attract private investors. What it will do is continue to prove that cars are the best option to choose for travel between SV and the CV.

In looking at extending the proposed SV to CV segment, it should be noted that the Authority should consider having an extension option be evaluated to include San Jose to Downtown Bakersfield. This would put the northern extension on hold until further funds were available and issues with incorporating a "blended" part of the system are resolved. In the meantime, there are connections available at the San Jose terminus through Cal Train etc. that would link to other Bay Area regions.

V. Risk Management

Current construction underway:

By 2020, the business plan states their goal is:

-Plan the delivery and testing of trainsets

-construction of Central Valley (CV) stations

-outfitting the Heavy Maintenance Facility in the CV

-Completing all environmental clearances SF to Merced and LA-Anaheim.

The Year 2020 is roughly a little over 3 ½ years away. These are lofty goals considering that these plans are in addition to building all tracks and infrastructure on land that has not even been acquired yet.

Currently there have been cost overruns on Package #1. Railroad agreements and utility agreements are still not solidly in place. Intrusion protection, utility relocation and securing 100% renewable energy sources for electrification are still being negotiated and will be costly. The plan states that there is potential to exceed the current contingency contract.

Program level Risks Identified in the Business Plan.

Some of these I have addressed, but it is important to note that the Authority also recognizes them:

1. Funding---failure to attract investors/lenders; potential increase in interest rates, delays that would jeopardize ARRA funds if they aren't spent by 9/2017.

2..Legal/Litigation---related to funding, environmental clearances, property acquisitions, contract disputes

3. Decline in stakeholder support—hampering local authorities and permitting processes

4. Ridership and Revenue—Consequences if ridership/revenue is not enough to support access to private capital as the project matures. (Note that the Cambridge supporting technical document states a specific disclaimer that their numbers are estimates, subjective and may change)

5. Operations and Maintenance---If the projected costs are inaccurate, this will damage the ability to attract private sector investment. **This will lead to increased need for more public funding.**

6. General Construction risks—to include difficulty acquiring parcels, additional contractor overhead

7. Environmental—Delays or increased costs associated with environmental approvals

8. Third Party Agreements—Additional costs for intrusion protection and betterments for the Railroads; delays associated with Railroad agreement reviews and approvals; delays due to Buy America Requirements; additional costs for utility relocation.

9. Technical Risks—Groundwater resources and geotechnical investigations

10. Passing through Energy Project Areas—to include relocation of wind turbines etc.

11. Availability of Traction Power Substations to Supply Power for Operations—This requires a long term commitment (up to 6 years) of planning, permitting and engineering each substation connection to high voltage grids AND potential for testing and operational delays.

Additional Risk expanded –Unmitigated Air Quality Exceedance

According to the Fresno-Bakersfield FEIR/EIS, there is a 5 year period when Annual Construction phase Emissions exceed conformity applicability thresholds (tons/year).

In the highest producing year (estimated in the EIR/EIS to be 2015, but now that date is inaccurate due to delays)Annual NOx levels increase 6079.9% over acceptable thresholds . VOC levels increase 266.9% over thresholds.

In real life, there is a problem with the notion that elevated levels can be identically mitigated pound for pound, by paying monies to programs that will offset these exponentially high emissions in some other location within the SJVAPCD. The air district is very large. Even though, the "intent" may be to offset these emissions in close proximity to where they are being produced, this is not always possible. The reality is that these emissions cannot be mitigated to a less than significant degree ON-SITE. Given the number and proximity of population groups this is unacceptable. Additional mitigation WILL increase project cost.

When reviewing the alignments proposed through Shafter and Bakersfield, there is a significant section that will be elevated. Concrete pillar/structure supports will be spaced 60-120 feet apart. In order to create the up to 720 concrete supports , concrete batch plants, chemicals and dust will be in very close proximity to schools, churches and a very large hospital. The site specific adverse impacts will remain even with programs funded under a VERA.

It is way too premature to be able to state that project operations would result in a net benefit. This relies on the assumption that monies will be found to actually fund the rest of the construction to reach the LA Basin and beyond. It assumes a functioning electrified high speed train with high ridership. If left incompletely constructed, the Valley worsens their air quality for no net benefit.

I list specifically what the EIR/EIS states in relation to some air pollution impacts:

AQ #1: Construction of the HST alternatives would exceed the CEQA emissions thresholds for VOCs, NOx, PM10, and PM2.5. Therefore, it could potentially cause violations of NO2, O3, PM10, and PM2.5 air quality standards or contribute substantially to NO2 O3, PM10, and PM2.5 existing or projected air quality violations.

AQ #2: Construction of the HST alternatives would exceed the CEQA emissions thresholds for VOC, NOx,PM10, and PM2.5. Therefore it would conflict with the 1-hour Ozone Attainment Plan,the 8-hour Ozone Attainment Plan, and the PM10 and PM2.5 Attainment Plans.

AQ #3: Material hauling outside the SJVAB would exceed CEQA emission thresholds for NOx in the BAAQMD, Mojave Desert AQMD, Eastern Kern County APCD, and the South Coast AQMD, and would exceed the VOC threshold in South Coast AQMD for certain hauling scenarios. Therefore, it could potentially cause violations of NO2, and O3 air quality standards or contribute substantially to NO2 and O3 existing or projected air quality violations in those air district (mm2 and mm5AQ-MM#5: Purchase Offsets for Emissions Associated with Hauling Ballast Material in Certain Air Districts(i.e., Mojave Desert AQMD, BAAQMD, and the South Coast AQMD).

AQ # 8: Construction of the alignment may expose sensitive receptors to temporary substantial pollutant concentrations from concrete batch plants.

AQ #16: Operation of the HST station, HMF/MOWF may cause the total PM10 and PM2.5 ambient concentrations to exceed CAAQS due to the existing exceedances in the area.

Additional Risk not included in Business Plan—VALLEY FEVER EXPOSURE

Until the final days of adopting the FEIR for the Fresno-Bakersfield Route, the increased risk of exposure to Valley Fever as a direct result of this project's construction was minimalized. What resulted was a last minute addition of general mitigation measures. These measures were to be instituted as soon as construction of any kind was to begin on the segment.

Since the adoption of the FEIR in 2014, a skin test to detect whether or not someone has already been exposed and likely acquired immunity to Valley Fever has been made available to the public. This is important because there is no vaccine to prevent Valley Fever. Specific ethnic groups are more susceptible than others. Workers never exposed would be at increased risk working on the HSR project. I was concerned that workers/citizens should have the option to be tested to see just how vigilant they needed to be with regard to mitigations/contracting Valley Fever. Additionally, some susceptible groups may decide NOT to work on the project or travel through the valley. Although it is mandated that workers be educated on the risks and mitigation measures to prevent exposure, I am concerned about the liability of the state and its citizenry if workers/citizens contract the disease during construction.

IN JULY 2013, LAWYERS representing several inmates at Pleasant Valley State Prison filed a class action lawsuit against the state. The suit alleged, among other accusations, that the CDCR and the state failed to protect and care for inmates vulnerable to cocci at several Central Valley prisons.

http://www.motherjones.com/environment/2015/01/valley-fever-california-central-valley-prison

To protect themselves, the government has made the decision to offer skin testing of inmates and choosing to ship out those vulnerable to other facilities outside the valley to limit their liability.

What I find interesting, is that if the government thinks it wise to move those ethnic groups most susceptible to Valley Fever out of CV prisons, what makes it safe for those same ethnic groups to work on the construction of a HSR system through the Valley (let alone, LIVE near the construction)? What is the government's/taxpayer's full liability here? Will signing a waiver that workers were informed about possible exposure and methods to reduce risk be enough to ward off lawsuits?

Subsequent to certifying the Final EIR and approval of the project from the City of Fresno south to 7th Standard Road (north of the City of Bakersfield), the Findings of Fact and Statement of Overriding Consideration and Mitigation Monitoring Reporting Program were revised to include this language:

1. Prior to construction, provide information on causes, preventive measures, symptoms, and treatments for valley fever to individuals who could potentially be exposed through construction activities (i.e. construction workers, monitors, managers, and support personnel).

2. Continue outreach and coordination with the California Department of Public Health. In addition, reach out to the departments of public health to ensure that above referenced information is readily available to nearby residents, schools, and businesses, and to obtain area information about Valley Fever outbreaks and so-called hotspots.

3. Provide a qualified person dedicated to overseeing implementation of Valley Fever prevention measures to encourage a culture of safety of the contractors and subcontractors. The individual should have the authority to manage the implementation of Valley Fever prevention measures adaptively and to effect change in coordination with the county Public health officer. The individual shall track reported cases of Valley Fever, if any, likely caused by or connected to project construction. This medical information will be maintained following applicable and appropriate confidentiality protections.

In the interest of worker safety, the Authority continually coordinates with sister California state agencies on health and safety issues in developing contract specifications for Injury and Illness Prevention Plans and CSHPs. Valley Fever information and research are part of these discussions. As the Authority is presented with information, the Authority's health and safety policy may be updated.

In March, I contacted Mark McLoughlin (Director of Environmental Services, HSRA) to underscore my concerns, as the media was reporting that "construction has begun". I am attaching our communication to this letter.

Shortly thereafter, I contacted the Fresno County Health Department, Kern County Health Department and So . California Kaiser Foundation. None of these medical locations offer the Valley Fever skin test. To my knowledge, no formal plan of coordination or education of citizens about the increased risks of Valley Fever exposure due to this project was instituted.

I am of the opinion that workers and citizens should have access to skin testing so that they can make the best decisions going forward with regard to protecting themselves against Valley Fever exposure.

Concluding Risk---Loss of Affordable Amtrak Service to Central Valley Locations –Increased Car use

The business plan does not specifically state that Amtrak service From Fresno to Bakersfield will be discontinued once the high speed rail alignment is operational. However, according to the tables within, it appears that this Amtrak service will be eliminated. Currently the Amtrak route is affordable to residents of the Valley and is used regularly. A high speed rail ticket will be exponentially higher and out of reach for many in the Central Valley. Residents would be content to use their slower and more affordable Amtrak train within the Valley. Eliminating Amtrak as an option will encourage increased use of buses and cars as the preferred alternative to an unaffordable high speed rail ticket. Additionally, car travel would be far cheaper, allowing for multiple passengers to travel together for additional cost savings.

I still believe that it is time to shelve the construction of this high speed rail project at this juncture. In the event that this does not happen, please carefully consider my concerns and suggestions and include them in the official record.

Sincerely,

Carol Bender RN, PHN

Carol Bender RN, PHN

13340 Smoke Creek Ave

Bakersfield CA 93314

See 1 attachment: E-mail copy of correspondence Mark McLoughlin (2 pages)

From: McLoughlin, Mark@HSR <Mark.McLoughlin@hsr.ca.gov>
To: [redacted] <[redacted]>
Cc: Parker, Annie@HSR <Annie.Parker@hsr.ca.gov>
Subject: RE: Question From Bakersfield--Second Attempt
Date: Thu, Mar 24, 2016 3:06 pm

Hi Carol,

I gave a call last night, left a message, the following is what I have gathered from our Construction group in Fresno.in regards to your request below.

The Authority has a Safety and Health representative, that coordinates with the Design Builder(s) Health and Safety Manager to ensure the measure 4C of the F-B MMEP is followed.

Currently Merced Fresno CP1 is underway in Fresno, CP2/3 Fresno to Bakersfield is getting ready to start, and CP4 preparing also.

"The following measures have been added to the requirements for the Construction Safety and Health Plans (CSHPs) regarding preventive measures to avoid Valley Fever exposure (Ch. 3.11, Design Features, 3.11.6). The following shall be included in the existing design feature for Ch. 3.11, "Safety and Security." The Construction Safety and Health Plan shall include the following:

1. Train workers and supervisors on how to recognize symptoms of illness, and ways to minimize exposure, such as washing hands at the end of shifts;
2. Provide washing facilities nearby for washing at the end of shifts;
3. Provide vehicles with enclosed, air conditioned cabs and make sure workers keep the windows closed. Equip heavy equipment cabs with high efficiency particulate air (HEPA) filters; and,
4. Make NIOSH approved respiratory protection with particulate filters as recommended by the CDPH available to workers who request them."

I will check with the teams to confirm any outreach to the Public Health Departments, and if there are existing programs set up as this is as Agricultural activities are beginning also.

Thanks,

Mark A. McLoughlin
Director of Environmental Services
California High Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814
Cell: 916-307-1571
Office: 916-403-6934
Email: mark.mcloughlin@hsr.ca.gov

CALIFORNIA
High-Speed Rail Authority

From: [redacted] [redacted]

Sent: Wednesday, March 23, 2016 2:17 PM
To: McLoughlin, Mark@HSR
Subject: Fwd: Question From Bakersfield--Second Attempt

Hi,
I sent this note to you over 2 weeks ago. Can you respond back that you have received this?
Thanks.
Carol B.

-----Original Message-----
From: [redacted]
To: Mark.McLoughlin <Mark.McLoughlin@hsr.ca.gov>
Sent: Mon, Mar 7, 2016 12:02 pm
Subject: Question From Bakersfield

Good morning,

If you recall, when we last spoke at a Fresno HSR Board meeting, you told me to contact you if I had any further questions about environmental issues/mitigation.

One popped up this past week when I decided to look into getting a Valley Fever skin test. I looked through the mitigation listing again and saw this:

"Provide a qualified person dedicated to overseeing implementation of Valley Fever prevention measures to encourage a culture of safety of the contractors and subcontractors. The individual should have the authority to manage the implementation of Valley Fever prevention measures adaptively and to effect change in coordination with the county Public health officer. The individual shall track reported cases of Valley Fever, if any, likely caused by or connected to project construction. This medical information will be maintained following applicable and appropriate confidentiality protections."

I am wondering who this "qualified person" is and what sort of outreach has been done to the local public health departments in the Valley with regard to education, outreach and possible availability of the Valley Fever skin tests to the general public. With construction beginning, I continue to be concerned.

I look forward to hearing from you at your earliest convenience.

Carol Bender

2016 Business Plan RECORD DETAIL

Submission Date : 4/18/2016

Submission Method : Project Email

First Name : Janet

Last Name : Gibson

Stakeholder Comments/Issues : I oppose the HSR for several reasons:

Financial

. the public approved a $10 B project not a $68 + B one

. Funding has not been secured for the project and the over run in costs hasn't even started yet

. Sustainable ridership has not been proven

. Most people don't know that 25% of their gas tax (Cap and Trade) is being directed to this

Routes

. E1, E2, SR14 require tunneling under the San Gabriel Mountains, an area crisscrossed with fault lines (remember the Sylmar quake?)

. SR 14 would require drilling under the Pacoima Dam

. All those routes would DESTROY the only remaining semi rural locations in Los Angeles

. The routes would destroy the quality of life for the residents of NE LA

. The equestrian lifestyle would be effectively eliminated.

Environmental

. The state is in a water crisis and the construction of such a project, especially any underground boring will require the use of Billions of acre feet of water.

. Hard to justify not flushing the toilet or tearing out a lawn when the govt has such little regard for a critical resource such as water.

. Agriculture MUST come before the follies of HSR. We feed not only our state and country but other countries as well.

. The State's current hydro infrastructure needs updating, innovation and repair yet there is "no funding available" or so we are told.

. The pollution and dust created by this activity will compromise the health of the residents in the area (Valley Fever)

. Regarding the wildlife adjacent to Los Angeles, this construction will be detrimental to their existence.

. Environmental/ Social Justice: I hate playing this card but the city of Sylmar has historically been the dumping ground for all things unwanted (sexual predators, halfway houses, sediment dumping areas, landfills.)

Cronyism

. SHOCKER!!!

. I know the Unions are strongly in favor of this project as it benefits their own.

. I know the Unions pay you a lot of money and guarantee their support

. This may come as a surprise but MOST OF THE CITIZENS OF THE STATE
ARE NOT IN THE CONSTRUCTION UNIONS!!

. The voice of the Unions is being listened to above the voice of those communities most affected by this travesty (this is not right!)

. This is a disgusting example of politics as usual.

How on earth this can even be considered for approval is beyond the imagination.

These issues need resolving BEFORE this project goes any further.

Thank you,

Janet Gibson

Notes :

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Clint
Last Name :	Schelbitzki
Stakeholder Comments/Issues :	
Notes :	
Attachments :	UP_Comment_Letter_041816.pdf (2 mb)

BUILDING AMERICA®

April 18, 2016

VIA EMAIL AND OVERNIGHT DELIVERY
E-Mail Address: 2016businessplancomments@hsr.ca.gov

Jeff Morales
Chief Executive Officer
California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

Re: Comments on CHSRA's Draft 2016 Business Plan

Dear Mr. Morales:

Union Pacific Railroad provides this letter in response to the California High-Speed Rail Authority's ("CHSRA") invitation to submit comments on its Draft 2016 Business Plan.

Union Pacific Railroad Company

Founded in 1862 and now the largest Class 1 railroad in California, Union Pacific Railroad ("Union Pacific" or "UP") owns, operates, maintains, and dispatches a significant network of critical freight rail routes in California and 22 other states. In California alone, Union Pacific has nearly 5,000 employees and 3,283 route miles of track.

Union Pacific's Freight Rail Network

Union Pacific owns and operates rail mainlines connecting the San Francisco Bay Area to Sacramento and points east and north, and to Los Angeles and points east and southeast. Union Pacific is the largest rail carrier in California in terms of both mileage and train operations.

Union Pacific's rail network in the Bay Area, the Central Valley and Southern California is vital to the economic health of California and the nation as a whole. The Union Pacific rail network serves the ports and other shippers, providing access to the interstate freight rail system. Businesses and industries throughout the state rely on Union Pacific to maintain and expand its freight network—as well as maintain and improve freight service—to meet present and future shipping needs.

In addition, the freight rail network also benefits the larger transportation system and the environment. By facilitating the transportation of goods by rail rather than truck, Union Pacific helps to relieve the state's crowded highways, thus reducing traffic congestion, air-pollutant emissions, greenhouse gas emissions, and energy consumption.

UNION PACIFIC CORPORATION
10031 Foothills Blvd.
Roseville, CA 95747

Clint Schelbitzki
General Dir. – Network Development

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E ceschelb@up.com

Position on CHSRA's High-Speed Rail Project

In November 2008, California voters approved Proposition 1A, which authorized issuance of $9.95B in state bonds to fund the beginning of construction of a high-speed passenger rail system. For the last 8 years, we have frequently communicated—by written correspondence[1] and in meetings—Union Pacific's position on the high-speed rail project ("HSR"), specifically:

- UP will not allow any part of the HSR system to be built on UP's operating corridor or operate on UP tracks.
- HSR facilities and operations must not restrict, delay or otherwise interfere with UP freight operations.
- HSR must not restrict, delay or otherwise interfere with UP's ability to serve current and future freight customers.
- HSR must not restrict, delay or otherwise interfere with UP's ability to add future freight service capacity, including through new mainline track and spurs.
- Where HSR and UP freight alignments are in proximity to each other, sufficient distance must be maintained between the tracks to facilitate maintenance, ensure safety and avoid disruption to either freight or HSR.
- The HSR project must not increase UP's safety and liability risks.

These operating principles serve not only Union Pacific's commercial interests and common carrier freight obligations, but also the interests of shipping customers and the larger economy that depend on the continued vitality of the interstate freight network. These principles have informed our past discussions, negotiations and agreements with CHSRA,[2] and they will continue to do so in the future.

General Comments on Draft 2016 Business Plan

The Draft 2016 Business Plan acknowledges the importance of freight rail to the Southern California and statewide economy. At page 11, CHSRA refers to the Burbank-Los Angeles-Anaheim corridor as "a vital freight and goods movement corridor." At page 49, CHSRA notes that 1.5 trillion tons of goods, worth $2 trillion, moved through Southern California in 2010. CHSRA says it plans specific improvements to the Burbank-Los Angeles-Anaheim corridor, including "greater reliability and fluidity of freight and goods movement" and allowance for future growth in freight. 2016 Bus. Plan., p. 49; see also p. 12 ("Immediate benefits will accrue to freight").

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[1] Union Pacific refers to and incorporates by reference all of its previous correspondence to CHSRA regarding the proposed HSR system, including letters dated May 13, 2008, July 7, 2008, February 23, 2009, March 13, 2009, April 23, 2010, September 1, 2010, October 12, 2011, March 23, 2012, May 2, 2012, May 8, 2012, May 29, 2012, October 19, 2012, February 27, 2014, April 3, 2014, May 5, 2014, and August 19, 2014.

[2] *See* Memorandum of Understanding and Implementing Agreement Related to High-Speed Rail Development in California, dated July 12, 2012 (the "MOU"). *See also* Engineering, Construction, and Maintenance Agreement Related to the California High-Speed Rail Authority Project Merced to Bakersfield Segment, dated December 23, 2014 (the "ECM Agreement").

We commend CHSRA for recognizing the importance of freight rail in Southern California, as well as for CHSRA's commitment to improved freight fluidity and allowance for future freight growth in the Burbank-Los Angeles-Anaheim corridor. However, the Business Plan should acknowledge the importance of freight statewide too, and it should confirm the planned HSR system will not interfere with freight elsewhere in the state.

Comments on "Risk Management" Section of Draft Business Plan

While not referring (at least not explicitly) to Union Pacific, the "Risk Management" section of the Draft Business Plan refers to "adjacent railroads" and "adjacency issues." Union Pacific offers the following comments on this section:

Intrusion Barriers. At page 92, the Draft Business Plan refers to "intrusion protection and betterments requested by railroads." CHSRA and Union Pacific have agreed to terms regarding where intrusion barriers will be required. In response to the language quoted above, UP wishes to confirm that intrusion barriers are not considered a "betterment" to Union Pacific: such barriers do not improve or add value to freight operations; rather, the barriers mitigate safety and operational risks caused by the addition of HSR tracks in proximity to freight rail.

Other Adjacency Issues. At page 92, the Draft Business Plan refers to "mitigating the adjacency issues" caused by addition of HSR tracks in proximity to freight rail. These issues are of great concern to Union Pacific. In addition to safety, close proximity of HSR and freight corridors creates potential conflicts related to operations, maintenance, access for emergency responders, and access to freight customers. It also may limit future commercial and industrial development near the freight rail corridors.

Electromagnetic Fields and Interference. At page 93, the Draft Business Plan refers to "Electromagnetic field concerns" with high-speed rail right-of-way passing near wind turbines or potential solar energy projects, and suggests considering "new alignments where feasible/desirable to avoid this risk."

As you know, Union Pacific has expressed concerns about HSR causing electromagnetic fields that—when HSR is in close proximity to Union Pacific rights-of-way—could interfere with Union Pacific's railroad signals, Positive Train Control ("PTC"), or other freight equipment or systems. Such interference could cause significant operational and safety concerns. In the ECM Agreement for Merced to Bakersfield, CHSRA acknowledged the potential for interference issues.

The Business Plan should acknowledge the concerns about electromagnetic interference with freight operations, and it should not suggest the issue arises only with nearby solar and wind energy projects.

Third-Party Agreements. In its risk management section, CHSRA cites "[d]elays associated with railroad agreement and approval" as a project risk. Union Pacific has worked in good faith with CHSRA to advance discussions about agreements, including the MOU and ECM Agreement referenced above. As always, Union Pacific reserves all rights it has related to the negotiation, execution, and enforcement of agreements with CHSRA.

Comments on Draft 2016 Business Plan "Source Documents"

On the portion of CHSRA's website relating to the Draft Business Plan, CHSRA has posted links to a half-dozen "source documents" that apparently were prepared in connection with the Business Plan. Given their voluminous nature, Union Pacific has not yet fully reviewed all of the technical supporting documents. That said, based on its limited review of the Capital Cost Basis of Estimate Report,[3] Union Pacific makes the following comments:

San Francisco to San Jose.

- P. 29: This section outlines general cost estimates for the route improvements and lists several assumptions regarding HSR operations:
    - Comment: UP retains an exclusive easement for freight operations on the Caltrain corridor, as well as exclusive rights for freight and intercity passenger service in the Caltrain corridor pursuant to a Trackage Rights Agreement with the Peninsula Corridor Joint Powers Board. In its Business Plan and related documents concerning the San Francisco to San Jose segment, CHSRA should acknowledge UP's rights and note that CHSRA has not secured any rights to operate on this route.

San Jose to Gilroy

- P. 31: "The Diridon station has been changed from aerial to at-grade, reducing station costs in this section, and the current alignment generally stays outside UPRR right-of-way and travels along the edge of Monterey Road/Monterey Highway to a Gilroy station on an embankment."

  P. 32: "Includes $50 million allowance for UPRR realignment at Communication Hill including a new single track bridge crossing."
    - Comment: The Union Pacific right-of-way in the Gilroy to San Jose corridor is reserved for current and future freight operations. Union Pacific expects CHSRA to be sufficiently separated from our right-of-way to allow for customer growth and new connections to the UP main line.

- P. 32: "An intrusion barrier where high-speed rail is at-grade in Caltrain right-of-way from San Jose to south of Tamien is not required due to operating speeds less than 125 mph."
    - Comment: UP requires an intrusion barrier at any location where the centerline of the closest HSR track will be one hundred two (102) feet or closer to UP operating right-of-way. This requirement applies regardless of HSR's speed at a particular location.[4]

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[3] The Capital Cost Basis of Estimate Report provides capital cost estimates for construction of segments of the Phase I HSR system, i.e. from San Francisco to LA/Anaheim.

[4] CHSRA has not cited any regulation, standard or study to support its assertion that intrusion barriers are not needed when operating speeds are less than 125 mph. UP is not aware of any such regulation, standard or study.

Palmdale to Burbank

By way of background for Union Pacific's comments on the Palmdale-to-Burbank and Burbank-to-Los Angeles segments, the Los Angeles County Metropolitan Transportation Authority ("LACMTA") owns a right-of-way on which the Southern California Regional Rail Authority ("SCCRA") operates a commuter rail service (Metrolink) between Palmdale and the Los Angeles Union Station.

- Comment: On August 29, 2014, UP submitted scoping comments on the Notice of Preparation of the EIR/EIS for the Palmdale-to-Burbank section. As set forth in those comments, UP has an exclusive freight easement, as well as rights under a trackage rights agreement with LACMTA, for conducting freight rail operations and providing common carrier rail service on the Saugus and Valley Lines which connect Palmdale, Burbank and Los Angeles. As we have previously discussed with both CHSRA and SCRRA, UP reserves these valuable property and contractual operation rights, which must not be impaired by HSR facilities or service. CHSRA must not interfere with UP's operating rights and responsibilities between Palmdale and Burbank.

Burbank to Los Angeles

- P. 41: "The Draft 2016 Business Plan capital cost estimate is based on a new alternative that includes relocation of existing at-grade double track in the Metrolink corridor right-of-way and constructing two new high-speed rail tracks from West Alameda Avenue to Fletcher Drive (5.3 miles). The 2014 Business Plan estimate for this section reflected dedicated high-speed rail tracks between Burbank and LA Union Station and included significant right-of-way acquisition costs associated with this alignment alternative. The current alternative utilizes retaining walls increasing the guideway costs, but also minimizing project footprint and reducing right-of-way acquisitions costs."
    - Comment: On August 29, 2014, UP submitted scoping comments on the Notice of Preparation of the EIR/EIS for this section. As set forth in those comments, UP has an exclusive freight easement, as well as rights under a trackage rights agreement with LACMTA, for conducting freight rail operations and delivery of common carrier rail service on the Valley Line which extends from Burbank to L.A. Union Station. As we have previously discussed with both CHSRA and SCRRA, UP reserves these valuable property and contractual rights of operation. CHSRA must not interfere with UP's operating rights and responsibilities between Burbank and Los Angeles.
    - Comment: UP also notes that the MOU says that CHSRA will not ask LACMTA to electrify any of the routes on which UP operates between Palmdale and Union Station.[5]
- P. 41: "Assumes Metrolink and High-Speed Rail will share tracks from approximately Metrolink's Central Maintenance Facility to Los Angeles Union Station."

[5] *See* MOU, § 2.L.

- Comment: UP operates freight rail service on the tracks between Metrolink's Central Maintenance Facility and Los Angeles Union Station. As stated above, CHSRA must not interfere with UP's freight operating rights and responsibilities on this route.

- P. 41: "Does not include allowances for agreements with Metro/UPRR for shared use of this corridor."

  - Comment: UP reserves its property and contractual rights of operation on the Burbank to Los Angeles corridor. CHSRA must not interfere with UP's freight operating rights and responsibilities on this route.

- P. 41: "Intrusion barriers were assumed to be not required in this section due to operating speeds less than 125 mph."

  - Comment: As discussed above, UP requires an intrusion barrier at any location where the centerline of the closest HSR track will be one hundred two (102) feet or closer to UP operating right-of-way. This requirement applies regardless of HSR's speed at a particular location.

Los Angeles to Anaheim

- Comment: In the original statewide EIR/EIS for the HSR project (issued in 2005), CHSRA was considering an alignment alternative between Los Angeles and Anaheim that would have used UP's Santa Ana subdivision right-of-way. There is no mention of this possible alignment in CHSRA's latest Capital Cost Report. Instead, the Capital Cost Report presents an alignment between Los Angeles and Anaheim that would primarily use right-of-way owned by BNSF and shared between BNSF freight and Metrolink. Please confirm the current alignment alternatives for HSR between Los Angeles and Anaheim will not cross, parallel or otherwise be in close proximity to UP facilities or operations.

Conclusion

We appreciate your attention to Union Pacific's comments as you revise and finalize the 2016 Business Plan. Union Pacific looks forward to continuing to work with CHSRA, consistent with these comments.

Sincerely,

Clint Schelbitzki
General Director-Network Development

cc: Wesley J. Lujan
Lupe C. Valdez
Francisco J. Castillo, Jr.
David M. Pickett

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Eric
Last Name :	Swallwell
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Rep. Swalwell Comment Letter.pdf (436 kb)

ERIC SWALWELL
15th District, California

PERMANENT SELECT COMMITTEE ON INTELLIGENCE
• Ranking Member Subcommittee on CIA
• Subcommittee on Department of Defense Intelligence and Overhead Architecture

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
• Subcommittee on Energy
• Subcommittee on Research & Technology

DEMOCRATIC STEERING & POLICY COMMITTEE

REGIONAL DEMOCRATIC WHIP

DEMOCRATIC POLICY & COMMUNICATIONS COMMITTEE

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129 Cannon House Office Building
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(202) 225-5065

Congress of the United States
House of Representatives
Washington, DC 20515-0515

April 18, 2016

Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

Dear Chairperson Richard:

I appreciate the opportunity to comment on the California High-Speed Rail Authority (CHSRA) Draft 2016 Business Plan.

California High Speed Rail (HSR) is moving fast, from an idea to a reality; and I am pleased that this reality is taking off in the Bay Area. Expanding public transportation is essential for growing our economy and creating jobs. I recently went to Fresno and Madera to see first-hand how a 21st-century high-speed rail transportation system will connect our state, put thousands of people to work, and reinvigorate the Central Valley economy that is in dire need of a boost. Seeing is believing, and I was encouraged to see the first HSR vertical structure in the United States.

I also witnessed how this type of investment in infrastructure had a tremendously positive impact for the economic growth of my hometown of Dublin. Prior to the arrival of BART, Dublin was just a sleepy bedroom community. Once BART arrived in 1997, it was transformed into one of California's most economically thriving cities with robust residential and commercial growth. Based on my own observations and experience, I know that HSR will provide a similar boost for the Central Valley, which in turn will provide tremendous benefits for California's overall economic growth.

The CHSRA Draft 2016 Business Plan presents a significant change for where high-speed rail service will be initiated. This new plan focuses on delivering an HSR line connecting the Silicon Valley to the Central Valley (north of Bakersfield) in 2025 instead of between Merced and the San Fernando Valley in 2022.

Silicon Valley is California's innovation epicenter. Given its rapid economic growth, the change in construction plans accelerating the connection with Silicon Valley will create more jobs, greater accessibility, and more usage in the short-term. This also bodes well for the HSR business model as a whole because the time and money it takes to connect the Central Valley with San Jose is significantly less than the original Southern California leg.

However, for our state's entire economy to reach its full potential, we must create greater connectivity between existing rail networks. Beyond the importance of building a vibrant high-speed rail system in California, one of the other benefits of High-Speed Rail is creating more vibrant feeder systems and transportation networks.

CHSRA has made significant Prop 1A resources available to the San Joaquin Regional Rail Commission (SJRRC) to enable the planning, environmental, and engineering work needed to provide improved passenger rail service for the Altamont Corridor Express (ACE). In fact, SJRRC expects to release a Draft EIR in 2016 for improving and expanding ACE service. I am thankful to CHSRA for providing the funding needed to progress the planning work to provide a superior connection between an improved and expanded ACE and the proposed HSR service

Although I am a big proponent in the changes in phasing of HSR, it does not change the need for coordination and integration between the HSR system with ACE as well as the Bay Area Rapid Transit (BART) District. With the exception of the Burbank to Anaheim improvements, the CHSRA Draft 2016 Business Plan places much less emphasis on "blended" service improvements than CHSRA's 2014 and 2012 Business Plans.

Throughout the CHSRA's 2012 Revised Business Plan, the importance of early investments in conventional services (including ACE) to connect to the HSR system was strongly emphasized. Having near-term improvement of the ACE Rail Service should continue to be identified as a priority for increased regional connectivity and as a "feeder" service to HSR in the CHSRA Final 2016 Business Plan.

Furthermore, it is my sincere hope that CHSRA can also be a catalyst to connect ACE to BART in the Tri-Valley near the vicinity of the Altamont Pass. The Tri-Valley region which I represent in Congress is a burgeoning center of innovation and commerce essential for the Bay Area's economic growth. Ultimately, an HSR-ACE-BART connection would provide a tremendous boost to High Speed Rail ridership and revenue by providing greater connectivity for the entire mega-region by linking Sacramento and the Central Valley with the growing East Bay region.

The current CHSRA Draft 2016 Business Plan provides important connections to the South Bay and Silicon Valley, but needs to provide more equity for the East Bay, which is one of California's fastest growing regions both in terms of residential and commercial growth. HSR ridership will dramatically increase if there is connectivity to BART via ACE. Although nearly 25% of Bay Area-bound Central Valley commuters are heading to Silicon Valley, the other 75% of commuters are headed to the Tri-Valley, the remainder of the East Bay, and San Francisco.

The connection between BART and ACE was identified by the Metropolitan Transportation Commission (MTC) as an important inter-regional link in the San Francisco Bay Area Regional Rail Plan. Currently there is a 10-mile gap between BART and ACE, and the entire region would be well served if there was an integration of the three rail systems (HSR, ACE, and BART), which is consistent with the spirit of past CHSRA Business Plans to enhance and provide coordination for existing rail services. A BART/ACE intermodal in the Tri-Valley would connect over $100 billion of infrastructure and provide a seamless transfer between both existing rail networks to HSR in the Central Valley.

By creating connectivity with HSR through an intermodal BART/ACE station along the Altamont corridor, it will create a vital interregional link for both commuters and goods movement. Many people have been displaced to the Central Valley due to the high cost of housing, yet they are still making the long commute on I-580 to work in the Bay Area. Jobs will leave California if we fail to ensure that employees can easily commute to work.

The Altamont is also the primary goods movement corridor between Southern California, the Central Valley, Sacramento, and the Bay Area. Our state's economic growth is dependent upon making all transit options (HSR, ACE, and BART) as viable as possible on a critical corridor for goods movement such as I-580. In addition, finding ways to support an HSR-ACE-BART connection in the Altamont corridor will reduce greenhouse gas (GHG) emissions and enhance transit-oriented development opportunities while further enhancing the burgeoning Central Valley economies by better connecting them with the East Bay.

I remain committed to supporting the phased implementation of HSR as recommended in the 2016 Draft Business Plan. In addition, I also look forward to working with CHSRA to implement a coordinated, complementary, and integrated rail network.

Sincerely,

Eric Swalwell

Eric Swalwell
Member of Congress

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Patrick
Last Name :	Burt
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Palo Alto Comments on HSR Draft 2016 Business Plan.pdf (328 kb)

City of Palo Alto
Office of the Mayor and City Council

April 18, 2016

Dan Richard
Chair, California High Speed Rail Authority
770 L Street, Suite 1160
Sacramento, CA 95814

RE: City of Palo Alto Comments on the California High Speed Rail Authority Draft 2016 Business Plan

Dear Chair Richard:

On February 18, 2016 the California High Speed Rail Authority (CHSRA) published its Draft 2016 Business Plan (Draft Plan). As you know, the CHSRA must prepare, publish, adopt and submit a business plan to the State Legislature every two years. Included in that process is a requirement that prior to submitting the Business Plan to the State Legislature the CHSRA must publish a draft business plan and solicit public comment for no less than 60 days.

Below are six key themes the City believes the CHSRA should address in greater detail in the Plan:

1. The impact of high speed rail (HSR) service on Caltrain service;
2. Shared use corridor operational conflicts under the Blended System;
3. Inadequate planning and funding for the 42 at-grade crossings between San Francisco and San Jose;
4. Unsecured Caltrain electrification funding;
5. The role of Context Sensitive Solutions; and
6. The general lack of detail for the San Francisco to San Jose segment.

Listed below is additional information the City would like to provide on the six key themes listed above:

1. <u>The Impact of HSR Service on Caltrain Service</u>

   A. The impact that HSR will have on the quality of Caltrain service, specifically without the construction of passing tracks, is significant and is not adequately addressed in the Draft Plan.
      i. Due to different train speeds, it appears under the Draft Plan that HSR will degrade the performance of Caltrain service. Adding four HSR trains per hour (two HSR trains per direction per hour) to future Caltrain service of 12 trains per hour (six Caltrain trains per direction per hour) may significantly degrade the performance of the Caltrain system. In addition, the differing train speeds and resulting bunching of trains will have negative impacts on corridor capacity and reliability of at-grade crossings. This impact will negatively affect the performance and connections of other modes of transit that operate parallel and perpendicular to the corridor.

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ii. An article by Green Caltrain titled "High Speed Rail to Bay Area first – how will this affect the Caltrain corridor?"
<http://www.greencaltrain.com/2016/02/high-speed-rail-to-bay-area-first-how-will-this-affect-the-caltrain-corridor/> includes a time-space diagram illustrating the limited crossing windows resulting from HSR.

2. Shared Use Corridor Operational Conflicts Under the Blended System

A. The Draft Plan fails to analyze, recognize the impact of, or plan for level boarding throughout the Blended System corridor.
   i. The lack of level boarding at non-HSR stops causes Caltrain delays, which on a shared corridor, decreases capacity and schedule adherence for both the CHSRA and Caltrain.

B. The Draft Plan does not provide the structure of the operating agreement between the CHSRA and Caltrain that should be provided. The operating agreement needs to clarify which train system has priority in the event of conflicts, which agency will be the controlling agency on the corridor and the business relationship between the CHSRA and Caltrain.
   i. The operating agreement belongs in the Draft Plan because it could require additional capital investments and funding depending on the arrangement.
   ii. Since the Draft Plan restricts Caltrain to 12 trains per hour (six trains per direction per hour) the ability of Caltrain to meet the rapidly growing demand for its transit services is severely constrained. Consequently, train and platform lengthening, as well as the necessary funding, are essential mitigations due to the fact that the CHSRA is taking capacity alternatives away from Caltrain.

3. Inadequate Planning and Funding for the 42 At-Grade Crossings Between San Francisco and San Jose

A. Exhibit 4.2 of the Draft Plan provides significant detail for the unfunded Burbank to Anaheim segment of the CHSRA system. Similar analysis should be provided for the San Francisco to San Jose segment.

B. The Draft Plan does not adequately analyze or address the critical issue of the sequencing of what grade separations need to be constructed prior to implementation of the Blended System so that construction costs and impacts to system service are held to a minimum. The Draft Plan must give full consideration to the severe impact the construction of grade separations would have on the system once there are up to 20 trains per hour (10 trains per hour per direction). The cost of constructing grade separations later - while operating more-and-more trains on the corridor - will likely make the construction of those grade separations significantly more expensive and therefore significantly less likely to occur than before the initiation of CHSRA operation. Therefore, phasing needs to be included in the Draft Plan as part of any cost analysis.

4. Unsecured Caltrain Electrification Funding

A. The City of Palo Alto is concerned that at this time the Caltrain electrification project is facing an approximately $600 million shortfall. The Draft Plan fails to account for that shortfall and what the impact would be on HSR if that shortfall is not met.

5. The Role of Context Sensitive Solutions

A. The City continues to believe that the HSRA made a prior commitment to Context Sensitive Solutions (CSS) for this segment and that CSS is the most effective process to identify and address issues and alternatives related to the Blended System. The process being proposed by the CHSRA is not CSS. Not utilizing CSS is likely to result in the failure to evaluate the full range of corridor alternatives resulting in a less effective system design, poorer resolution of issues, and a more contentious outcome that will result in a less successful and timely project.

6. The General Lack of Detail for the San Francisco to San Jose Segment

A. The CHSRA needs to clearly outline their communication protocols in the Draft Plan that they will use with both policymakers and staff to ensure no action is taken without community awareness and input.
B. The Draft Plan should acknowledge the significant impact freight rail operations have on the corridor both now and in the future under Blended System operation.

Thank you for your time and if you have any questions or comments please contact Palo Alto City Manager James Keene at (650) 329-2563 or by email at james.keene@cityofpaloalto.org.

Sincerely,

Patrick Burt
Mayor, City of Palo Alto

cc: Palo Alto City Council
Palo Alto City Manager
Congresswoman Anna Eshoo
Senator Jerry Hill
Assemblymember Rich Gordon
Executive Director of Caltrain Jim Hartnett
Peninsula Corridor Joint Powers Board
Senator Jim Beall, Chair, Senate Committee on Transportation and Housing
Assembly Member Jim Frazier, Chair, Committee on Transportation

2016 Business Plan RECORD DETAIL

Submission Date :	3/25/2016
Submission Method :	Letter
First Name :	Louis
Last Name :	Thompson
Stakeholder Comments/Issues :	
Notes :	
Attachments :	25 March letter from PRG.pdf (1 mb)

The Honorable Toni G. Atkins
Speaker of the Assembly
State Capitol Building
Room 219
Sacramento, CA 95814

The Honorable Jean Fuller
Senate Republican Leader
State Capitol Building
Room 305
Sacramento, CA 95814

The Honorable Chad Mayes
Assembly Republican Leader
State Capitol Building
Room 3104
Sacramento, CA 95813

Dear Honorable Members:

The California High-Speed Rail Peer Review Group is required by provisions of Proposition 1A (AB 3034) to provide comments on Business Plans developed by the California High-Speed Rail Authority. We have previously reported on Business Plans in 2009, 2012 and 2014. This letter reports our comments on the draft 2016 Business Plan.

The draft 2016 Business Plan is a marked departure from earlier Plans. It is the first Plan based on actual experience following the start of construction, and it shows how the Authority is learning from experience. It is also the first Plan in which the Authority is shaping its approach in accord with the funding it considers available rather than relying on unspecified sources. This shift from an "unconstrained" approach to a "constrained" approach lays out the Authority's assessment of what, given certain assumptions, they can deliver using existing funding sources.

In particular, shifting the Initial Operating Section (IOS) from one connecting Merced with the Los Angeles Basin as described in the 2012 and 2014 Business Plans to an IOS connecting a temporary station 20 miles north of Bakersfield with San Jose reflects the fact that the high costs

complete its mission of transforming the California economy and landscape, the Authority must partner with many other public and private entities. Another important way in which the draft 2016 Business Plan differs from earlier ones is in the extent to which required partnerships have been initiated and are now in operation. Private construction contractors and California labor are at work on the project. The legislature has strengthened the partnership between California's HSR program and the state's leading greenhouse gas reduction programs, including local efforts as well as state-wide programs. Plans for blended operations and the upgrading of rights- of-way on which other agencies and railroads operate trains are progressively being implemented. Utilizing grants from the Authority, local governments and regional planning agencies are now engaged in land use and ground access planning, and a few cities are already building facilities that eventually will serve HSR passengers. The Peer Review Group takes note of this progress and urges that the work of partners be made more explicit in future business plans. For example, recognition of progress on ground access and land use planning in terminal areas should gradually play increased roles in land acquisition and in the timing and location of construction packages.

While the draft 2016 Business Plan reflects progress that has been made, it also serves to emphasize the important challenges and questions that remain for the Authority, for local governments and for the Legislature. A summary of our comments on the draft Plan, also incorporating conclusions in our letter to the Legislature of January 14, 2016, is that:

1. The new sequence adopting an IOS north to San Jose rather than south to the Los Angeles Basin was driven by financial limitations and leaves the gap in rail service from south to north unfilled until completion of Phase 1;

2. If the initial northern IOS is completed as planned, the lack of a connection into Bakersfield and the lack of a fully functional connection from San Jose to the Transbay Terminal in San Francisco will limit system ridership and passenger revenue: closing the gap should be a matter of priority;

3. The ability of the Authority to finance the IOS north to San Jose depends on assumptions about: (a) significantly lowered construction costs, (b) availability of Proposition 1A funding, (c) spending the full amount of federal American Recovery and Reinvestment Act (ARRA) funding; and, most important, (d) the authority's ability to securitize Cap and Trade (C&T) funding when needed in the future;

Given these issues, the Legislature could establish an adequate and stable funding stream for the Authority so that it could securitize some income streams such as C&T and extend availability payment guarantees to potential private sector partners. In addition, expansion of Federal participation in the form of RRIF or TIFIA loans also would need to identify reliable repayment mechanisms. Given the Legislature's continuous appropriation of C&T funds, the Authority's assumption may be reasonable for purposes of the draft Plan, but the ultimate validity of the assumption depends upon further Legislative action. Extending the C&T program beyond 2020 and defining the Authority's share of the proceeds is one potential way to achieve at least part of the funding objective, but other mechanisms also should be considered.

These conclusions are not intended as criticisms. The Authority is learning from experience and is employing state-of-the-art methods for demand and revenue forecasting and for risk prediction and management. The Authority has undertaken a massive project in an extremely litigious environment. The project is in its early days, and all forecasts should acknowledge considerable uncertainty and be interpreted with caution. The Authority's forecasts do so by using Monte Carlo simulations to set forth a range of possible outcomes. Some issues such as right-of-way acquisition, utility relocation and future tunneling in the Tehachapi Mountains are proving more difficult than expected and make final costs difficult to project.

The primary unresolved issue remains the assumptions, gaps and uncertainties in funding. The private sector Expressions of Interest (EOI) showed that risk-based private investment will not become available until demand has actually been demonstrated, leaving at least the gap in funding for the proposed initial IOS north to be filled by public sources. The gap is influencing the implementation of the project as the unexpected shift from south to north shows. In the Attachment to this letter, we discuss in more detail questions relating to system structure, the new business model including the potential role of private funding, revised capital costs, revised demand forecasts and how the Legislature may wish to respond to them in the year's activities.

The Authority asserts in the draft 2016 Business Plan that building a line connecting northern California to the Central Valley and commencing revenue service will position it to attract private investment and unlock additional capital to help complete the system. A review of experience with high speed rail systems in Europe and Asia shows that, after initial ramp-up, patronage tends to grow gradually over long periods of time even where established markets have existed for rail service prior to upgrading to high speed operations. In some cases the rate of development of markets caused actual financial returns to be lower than forecast. In

stabilize its funding and to improve the Legislature's ability to oversee the project as it moves forward. On oversight, we raised a similar question in our January 14th letter "[l]ooking at the project as a whole and given its manifest importance to the State, is the current oversight adequate or should the Legislature create a focused committee along with a dedicated and adequately funded oversight staff lodged, for example, in the Legislative Analyst's Office?"

Please let me know if you have any questions about this report or if you would like to meet with members of the group to discuss the conclusions.

Sincerely,

Louis S. Thompson
Chairman, California High-Speed Rail Peer Review Group

cc: Hon. Jim Beall, Chair, Senate Transportation and Housing Committee
Hon. Anthony Canella, Vice Chair, Senate Transportation and Housing Committee
Hon. Jim Frazier, Chair, Assembly Transportation Committee
Hon. Katcho Achadjian, Vice Chair, Assembly Transportation Committee
Brian Kelly, Secretary, California State Transportation Agency
Mac Taylor, State Legislative Analyst
Ken Alex, Director, Governor's Office of Planning and Research
Dan Richard, Chair, California High-Speed Rail Authority
Jeff Morales, Chief Executive Officer, California High-Speed Rail Authority
Members, California High-Speed Rail Peer Review Group

[1] Legislative Analyst, "Review of High-Speed Rail Draft 2016 Business Plan," March 17, 2016, Summary page.

A second step would extend the system into Bakersfield and would look to providing service through San Jose to the existing 4th and King Station in San Francisco. The third step would be the completion of Phase 1 by completing the connection to the Transbay Station and by extending service from Bakersfield through Burbank and the Los Angeles Union Station to Anaheim, initially using blended service south of Burbank that would be similar to the blended approach to providing service between San Jose and San Francisco.

This approach is a significant departure from earlier Plans that proposed extending the system south from Bakersfield first, with extensions to the north later. In our comments on the 2012 draft Business Plan, we urged the Authority to commit to either the IOS south or IOS north as soon as possible and we supported the Authority's ensuing decision in the final 2012 Business Plan to begin with the IOS south because it would close the most important remaining gap in passenger rail service in California. The draft 2016 Business Plan proposal to adopt the northern connection is explicitly driven by funding considerations and will leave the southern gap open for many years to come if added funding is not identified.

The second stage – service into Bakersfield and to San Francisco from San Jose – was not a separate part of earlier Plans and was again driven by funding considerations discussed below. We note several emerging issues that could cause funding and service problems in the San Jose to San Francisco section.

First, the draft plan leaves unclear how the required link from the existing Caltrain terminus at 4th and King Streets to the new Transbay Terminal will be completed. In part, this reflects the fact that the City's plans for completion of the link are not yet completed or funded, but the eventual performance of the project will be strengthened with full access to Transbay Terminal.

Second, presentations to the SamTrans Board acknowledge that Caltrain's long-planned Positive Train Control (PTC-compliant) signal system (CBOSS) faces cost and schedule overruns; these will have to be resolved by Caltrain well before initiation of high-speed service.[2]

Third, the project to electrify the blended system lines, partly funded by the Authority, may also be experiencing cost overruns and schedule delays, some of which are linked to delays in release

[2] Caltrain staff presentation, "Communication Based Overlay Signal System Project Status," made to Board of Directors, February 4, 2016

The Authority also proposes in the draft 2016 Business Plan a series of "concurrent investments," which are near-term projects, such as elimination of grade crossings and the run-through tracks at Los Angeles Union Station, that will have immediate benefits for current users but will also be needed when the high-speed service arrives. These improvements reflect the 2012 Memorandum of Understanding (MOU) between the Authority, SCAG, LA County Metro, Orange County Transportation Authority (OCTA), Riverside County Transportation Commission (RCTC), SANDAG, SANBAG, and Metrolink to identify and prioritize "a program of early investments in regional and local rail systems to facilitate the blended approach… regarding coordination of increasing interregional connectivity of the existing system (rail, bus, airports, and highways)."[3] We believe this will contribute to the growth of rail patronage in Southern California and will be useful for the state no matter how high-speed service plans evolve. It also leads to the establishment of a working relationship between the Authority and Southern California transportation agencies that will be beneficial when later and more complex elements of the program are undertaken.

Finance

The Authority states that it can finance the first step (20 miles north of Bakersfield to San Jose) as follows:[4]

Appropriated Funds	Amount ($ billions)
State Bonds (Prop 1A)	2.609
Federal Grants (ARRA/FY10)	3.165
Planning Funds	0.338
Committed Funds	
State Bonds (Prop 1A)	4.166
Cap and Trade (C&T)	5.341
Financing Proceeds	
Long-term Cap and Trade (2025-2050)	5.237
TOTAL SOURCES OF FUNDS	20.856
Construction Cost	20.680
Reserve	0.176

[3] Memorandum of Understanding (2012). Available at: http://www.hsr.ca.gov/docs/brdmeetings/2012/April/brdmtg041212_MOU3120404.pdf

[4] Draft 2016 Business Plan, page 61.

survives legal challenges alleging that it is a tax that should have received 2/3 approval; (2) the C&T program is extended by law beyond 2020; and (3) the Authority's proceeds are guaranteed as to share and preferably as to absolute amount. Most of these assumptions are not under the control of the Authority, and addressing the issues related to C&T will require Legislative action.

The cost estimates for the completion of step 2, the extension into downtown Bakersfield and from San Jose to San Francisco, are also based on significant assumptions. It is assumed that $2.9 billion will be found from an unidentified source of grant funding, though the Authority intends to seek federal support. It also is assumed that funding for the Transbay Terminal link on the part of the City of San Francisco will be found and that the project will proceed essentially as planned while service terminates in the interim at the 4th and King Station. Neither of the funding streams is under the control of the Authority and it is difficult to predict the outcome of applications for additional federal support.

There is an additional gap in funding for the full Phase 1 system.[6] If we assume that the project is completed through the full connection from Bakersfield to the existing 4th and King Station, the cost will be $20.68 billion for the first step plus $2.9 billion for the second step, for a total of $23.58 billion funded by assumed existing funding plus an added $2.9 billion from assumed federal (or other sources).[7] The total cost of Phase 1 is now estimated at $55.295 billion,[8] leaving a gap of $31.7 billion. The Authority's medium estimate of the net discounted cash flow the project might generate if the Phase 1 system is operated through 2060 is $20.9 billion[9], with $10.8 billion left to be funded (in addition to the amounts based on assumptions above), even if all demand, revenue and O&M cost assumptions (which we consider to subject to a wide range of uncertainty) should prove to be true.

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[5] The provisions of the ARRA funding require that any money not spent by September 30, 2017 must be returned to the U.S. Treasury. It is not "all or nothing": it only affects the amounts not spent.

[6] To be accurate, as noted in previous letters, this gap has persisted in various forms since the initiation of Proposition 1A. The law always looked to unidentified sources of funding (Federal, State, local governments, private sector) to make up the difference between the $9 billion provided and the much larger total cost of the program.

[7] 2016 Draft Business Plan, page 61.

[8] Op cit, page 56.

[9] Op cit, page 64. This is the sum of the discounted cash flow generated through step 2 and the incremental discounted cash from completion of Phase 1. The comparable number for 8% is $29.9 billion, which would nearly erase the gap as compared with the $15.5 billion for 14%. These cash flow estimates do not appear to include the potential impact of taxes on a private investor. If taxes are due on positive cash flows (earnings), the value of the sums should be reduced accordingly.

levels that could fully fill the gap if the state is committed to the program.

Business Model

The basic business model proposed in the draft 2016 Business Plan is for the Authority to manage and complete the construction under HSRA control and funding.[11] Operation of the initial IOS north would be managed by the Authority using a management contractor to demonstrate demand and grow revenues, whereupon there could be private capital available to invest in completing a concession for the entire system that the Authority's demand, revenue and cost forecasts argue will generate positive cash flow. Because of the decisions and commitments established by the work already done, and the requirements of Proposition 1A, this is probably the only available model, but it means that almost all technical and integration risks will remain with the Authority, unless they can be transferred to contractors. We emphasized this point in our letter of January 14, 2016. The model's viability also rests on projections we consider to be subject to a wide range of uncertainty (as measured by the Authority's Monte Carlo simulation work) that there will be a positive cash flow after operations commence large enough to support a significant investment from other potential partners.

A review of the responses (EOIs) from the private sector underlines another point that is addressed in the draft 2016 Business Plan – the need to get the skills and viewpoint of a potential operator into the Authority's decision-making process as soon as possible. We have emphasized this in many of our earlier letters and continue to urge the Authority to develop and implement a way to obtain an operator's inputs earlier than planned in prior Plans. For example, the Authority plans to initiate operations with a management contractor (similar to the approach of

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[10] This issue is discussed in the EOI response by Barclay's Bank. "No long-term stand-alone cap-and-trade financing is possible until ***four threshold issues*** are resolved:
• CARB and CHSRA must prevail against pending legal challenges to the cap-and-trade auctions and to the use of GGRF revenues for the high-speed rail project
• The Authority must create the "plumbing" in law to support borrowing against GGRF revenues
• The Legislature and CARB, respectively, must extend the cap-and-trade program in law and regulation beyond 2020
• The Legislature must protect the 25% of GGRF revenue flowing to the Authority from future impairment by the Legislature as long as financing obligations are outstanding.
See Barclay's response dated September 28, 2015, at pages 9 and 11.

[11] We note that the major share of actual engineering and construction management is being assumed by contractors, of which Parsons Brinckerhoff is the largest.

ordinary passengers at some lower level (which would maximize public benefits but lower positive cash flow)? Who will control the "commuter" fares for shorter haul passengers? Who will oversee the safety of the system? Will the Authority's management contract and eventual concession serve to define its regulatory powers, and will the state let the Authority serve as the regulator, or will there be a separate regulator? These may appear to be distant issues, but they will eventually affect the value the state gets for its investment. While the details do not necessarily need to be settled immediately, we urge the Authority to provide more discussion in the final 2016 Business Plan so that the Legislature will be able to express its opinions on the policy aspects as soon as is feasible.

Changes in Capital Cost and in Demand/Cash Flow Forecasts

One notable aspect of the capital cost projections is the stability or even slight decrease (especially in cost/mile) in the capital cost estimates in the 2012 Plan and later. This permitted the addition in the draft 2016 Plan of a link to Anaheim while staying within the total dollar forecasts from prior Plans.

Another important aspect of the capital cost estimates is the shift within the total of costs from north to south. A technical document[12] indicates that the estimated capital costs of the Merced/San Jose and San Jose to San Francisco link fell from $20.8 billion to $13.0 billion (over 36%), while the estimated costs to complete from Merced to Los Angeles rose from $33.1 billion to $35.3 billion (6.6%). This estimate is based in part on the Authority's belief that lower bid costs and cost saving measures used in civil construction in the Central Valley will be carried over into the connection from Merced to San Jose as well as on a significant reduction in the costs associated with a revised and less costly design for the Diridon Station in San Jose and the Authority's assumed lower contribution to the costs of the extension to the Transbay Station. Without this shift, the initial IOS north, as proposed, would be significantly harder to finance within existing resources. The shift also highlights the facts that the Authority is not changing its estimates of the tunneling in the Tehachapi Mountains significantly (an increase of 17.6% from the comparable work in the 2014 Plan) and that its estimates of the cost of the link from Palmdale to Los Angeles have increased by only 0.1% from the 2014 Plan.

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[12] See "Capital Cost Basis of Estimate Report, Draft 2016 Business Plan: Technical Supporting Document," pages 14 and 15.

As we have stated in prior letters, the Authority's demand and revenue analysis is technically sophisticated and their Monte Carlo simulations to quantify uncertainty are more advanced than those available for most major rail passenger projects. With this said, the changes made by the Authority in its demand forecasting (primarily related to use of later demand surveys for input into the demand model) yielded results that are favorable when compared with the 2014 and 2012 Business Plans. While this is certainly not bad news, it also serves to highlight the sensitivity of demand models to input data and the modelers' assumptions, especially when forecasts relate to entirely new service rather than to improvements in existing service. Even accepting the results of the new modeling, cash flow varies by more than a factor of 100% from low to high ridership projections[13], with the low estimate suggesting a very small ability of private investors to contribute to overall project investment.

As we have observed before, however, if the Legislature continues to support the project, the demand, revenue and cash flow forecast changes in the draft 2016 Business Plan do not affect any near-term decisions. The Authority will have to build, or not build, the initial part of the IOS north without any further knowledge of demand. The later decision to go south (at least as the 2016 BP shows) will be based on actual and demonstrated demand from the management contract operation from Bakersfield (or 20 miles north of Bakersfield) to San Jose (with connections to San Francisco via Caltrain). At this point, demand will be revealed and it will be the at-risk concession operator who will decide what demand forecasts to rely on in investing (or not) in the full Phase 1 system.

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[13] See "High, Medium, Low Cash Flows, Draft 2016 Business Plan Technical Supporting Document," Exhibits 4, 5 and 6.

2016 Business Plan RECORD DETAIL

Submission Date : 4/18/2016

Submission Method : Website

First Name : Gilberto

Last Name : Ramirez

Stakeholder Comments/Issues : The idea of making the rail start a little later in2025 but overall having more coverage and getting it done by 2029 seem very reasonable. I like the reasoning behind it northern ca is having a housing problem and issue that the central valley has. Given today's technology many people from the central valley could telecommute and on days they have they need to get on the high speed rail to work in person.Then focusing on getting southern California rail made makes sense as well given they have the worst traffic in the country. I like agree with a quote about people don't want to drive for various reasons. Also there are people that don't want to fly. Given the issue with flying I'm imagine the high speed rail will be consistently faster.

Hopefully the line can be extended to the Transbay Transit Center in San Francisco makes sense that it would generate more revenue. The Earthquake and safety is good to know

I think 100% renewable energy is bold perhaps not necessary but if we're serious about avoiding fossil fuels then it makes sense to do.

I like the idea of what and how the pricing of tickets will work was mentioned. I think advisements is a must I don't know how they would look like whether it be digital screen but behind every seat or on the ceilings but certainly be wise to trying to take advantage of every forum of revenue that can be thought of.

For myself I live outside of where the rail line will run about 65 miles north of San Francisco in Santa Rosa, CA and yet I feel like I'm at the position to take advantage of the system perhaps the most in some sense. Having more options on the ground whether private or public should help make all forums of traveling more efficient and effective. In 2029 I will be 40 years old and when thinking about the first 20 years and the second 20 years of my life I will hopefully have wittiness one of the most dramatic periods in public transportation to have taken place in California both locally and statewide. living near downtown Santa Rosa I will be able to walk to the SMART Rail Service get off near the Larkspur Ferry Terminal. Get on a Golden Gate Ferry Boat to the Ferry Building in San Francisco. Then Make my way to Transbay Terminal and get on the CA High Speed Rail and get off say at the Union Station in Los Angeles. or Perhaps get off at Palmdale and get on XpressWest and head to Las Vegas. Note that only the Golden Gate Ferry Boat is the only service in existence right now out of all the services I mentioned above.

High Speed Rail could mean that I could work farther away in the south bay perhaps yet continue to live in the Santa Rosa. In can case I feel like I would fully utilized the whole rail line which is probably true for anyone living in the two most populated regions, the Bay Area and Southern California.

Notes :

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	David
Last Name :	Kutrosky
Stakeholder Comments/Issues :	
Notes :	
Attachments :	CCJPA Comment of CHSRA Draft 2016 Biz Plan.pdf (105 kb)

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April 18, 2016

Mr. Dan Richard
Chairperson, California High Speed Rail Authority
770 L Street, Suite 800
Sacramento, California 95814

Subject: Comments on the California High-Speed Rail Authority (CHSRA) Draft 2016 Business Plan

Dear Chairperson Richard:

The Capitol Corridor Joint Powers Authority (CCJPA) is supportive of the breadth and updated service goals reflected in the Draft 2016 Business Plan, especially the focus to serve Silicon Valley. The major shift in the phasing of High Speed Rail (HSR) towards serving the Bay Area market is significant for the CCJPA and the Capitol Corridor intercity passenger trains (Auburn/Sacramento-Oakland/San Francisco-San Jose).

The Draft CHSRA 2016 Business Plan aligns with recent efforts by the CCJPA to evaluate Capitol Corridor service expansion plans to/from Silicon Valley/San Jose enumerated in the CCJPA's *Vision Plan Update (November 2014).* It has also altered the conversations we are having with partner transit agencies such as Caltrain, Altamont Corridor Express (ACE), and with regards to a potential Capitol Corridor service expansion to Salinas with the Transportation Agency of Monterey County (TAMC).

The CCJPA is in the second phase of a three-phase *Vision Plan Update*. In this second phase we are taking an in-depth look at our operations which are today hosted on Union Pacific Railroad's freight rail network. The *Vision Plan* process has CCJPA squarely looking toward a future where we can obtain dedicated passenger tracks where service frequency is not limited by the capacity constraints of a shared freight and passenger rail corridor. Our preliminary analysis has indicated that we should focus on the Oakland to San Jose corridor as a priority for creating a dedicated passenger track situation given the various rail corridors in the southern Bay Area. This was the case before the Draft CHSRA 2016 Business Plan but now takes on a new urgency for CCJPA with the shift towards service in the Bay Area by 2025.

While both the CHSRA and CCJPA are in the planning stages to bring our respective train services into and out of San Jose, it is advantageous and imperative that communications are established and maintained between and among the CHSRA and all affected service providers throughout the planning, development and eventual operation of high speed and conventional intercity and commuter passenger train services. Specific areas of interest include:

- San Jose/Diridon Station and South Terminal facility (as run-through and terminus station)
- Tamien Yard storage facility (including access and storage requirements)
- Integration of passenger trains to/from Salinas with an intermodal station in Gilroy

For the proposed second phase of HSR, the coordination of long-term service objectives for Sacramento Valley Station is becoming important with the planned development of the Railyards area. Some planning focus is warranted with the CCJPA long-range plans, the CHSRA's plans for HST service to/from Sacramento and the San Joaquin Joint Powers Authority (SJJPA) plans for expansion of San Joaquin trains to/from Sacramento.

At the CCJPA, we have a strong customer service focus that guides our decisions on the delivery of the Capitol Corridor service. We would be remiss if we didn't draw attention the customer service aspects of fare collection and ticketing for the public between high speed trains and connecting services such as the Capitol Corridor. A concerted effort is needed by the CHSRA, the California State Transportation Agency (CalSTA) and the other rail operators throughout California to unify the current disjointed ticketing into one that breaks down the barriers to a common statewide ticketing system (or a combination of individual systems that appear as one system to the pubic customer). With 2025 just around the corner, we believe this type of ticketing integration should begin soon. We welcome the leadership of the CHSRA and the CalSTA to lead this effort.

We thank you and the CHSRA staff for the opportunity to comment on the Draft CHRSA 2016 Business Plan. The CCJPA looks forward to further and expanded communications between the CHSRA and the CCJPA to ensure that the implementation of the nation's first true high speed train system is fully integrated with connecting passenger transport services like the Capitol Corridor.

Sincerely,

David Kutrosky
Managing Director

cc: CCJPA Board of Directors
Jim Hartnett, Executive Director – Caltrain
Stacey Mortensen, Executive Director – San Joaquin Regional Rail Commission

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Scott
Last Name :	Haggerty
Stakeholder Comments/Issues :	Good Evening, Please find attached, my comments regarding the 2016 Business Plan. Thank you for your consideration. Sincerely, Scott Haggerty Alameda County Board of Supervisors, President First District
Notes :	
Attachments :	CHSRA Draft 2016 Business Plan.pdf (49 kb)

BOARD OF SUPERVISORS

SCOTT HAGGERTY
PRESIDENT
SUPERVISOR, FIRST DISTRICT

April 18, 2016

Mr. Dan Richard, Chairperson
California High Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

Subject: CHSRA Draft 2016 Business Plan

Dear Chairperson Richard,

I am writing to convey my full support for near-term connectivity improvements to ACE rail service, connecting jobs to workforce housing and benefiting goods movement and quality of life in the region. An ACE link to the high speed rail system in Merced and an ACE link to BART in the Tri-Valley will maximize high speed rail investments and provide vital connectivity throughout the Northern California Mega Region. These connections are part of the ACE Forward program to improve and expand ACE rail service; planning and environmental work are currently underway. I urge you to include this vital feeder service in the CHSRA 2016 Business Plan.

I look forward to working with the CHSRA to implement an integrated rail network that equitably serves the entire Bay Area.

Sincerely,

Scott Haggerty, President
Alameda County Board of Supervisors, President
First District

CC: Altamont Regional Rail Working Group Members:
Hon. Moses Zapien, Vice-Chair, San Joaquin County Board of Supervisors
Hon. David Haubert, Mayor, City of Dublin
Hon. Jerry Thorne, Mayor, City of Pleasanton
Hon. John Marchand, Mayor, City of Livermore
Hon. Veronica Vargas, Councilmember, City of Tracy
Hon. Vince Hernandez, Councilmember City of Manteca
Hon. John McPartland, Director, BART, District #5
Hon. Steven Spedowfski, Councilmember, City of Livermore

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2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Adina
Last Name :	Levin
Stakeholder Comments/Issues :	Chairperson Richard and Members, Board of Directors California High-Speed Rail Authority 770 L Street, Suite 1160 Sacramento, CA 95814 Dear Chair Richards and Esteemed CA High-Speed Rail Authority Board Members, Thank you for the opportunity to comment on the high speed rail business plan <http://www.hsr.ca.gov/docs/newsroom/2016_HSRA_Releases_Draft_2016_Business_Plan_021816.pdf>. Friends of Caltrain and Friends of DTX are advocacy groups supporting local and long-distance rail service in the Caltrain corridor from San Francisco through San Jose, with over 5,000 participants on the corridor. We are excited to see the proposal to bring the project North. We welcome the opportunity to comment on the High Speed Rail business plan and to contribute to the local and regional dialog to help create a plan that delivers great service for the Bay Area and long-distance travel. Attached please find comments with the goal of successful blended system implementation. Sincerely, Adina Levin Friends of Caltrain http://greencaltrain.com 650-646-4344 Thea Selby Friends of DTX thea@nextstepsmarketing.com 415-773-1841
Notes :	
Attachments :	CommentsonHSRbusinessplan-FriendsofCaltrainFriendsofDTX.pdf (479 kb)

Comments on HSR business plan

Chairperson Richard and Members
Board of Directors
California High-Speed Rail Authority
770 L Street, Suite 1160
Sacramento, CA 95814

SUBJECT: Comments on the California High-Speed Rail Authority from Friends of Caltrain and Friends of DTX

Dear Chair Richards and Esteemed CA High-Speed Rail Authority Board Members:

Thank you for the opportunity to comment on the high speed rail business plan. We are excited to see the proposal to bring the project North.

Following are comments with the goal of successful blended system implementation.

A successful blended system will provide service from the Transbay Transit Center in San Francisco, including High Speed service continuing to the Central Valley and eventually Southern California, and will support high-quality Caltrain service with increased local capacity for commute service and long-distance connections. A successful system will have convenient multi-modal access at thriving station locations, including the Transbay Transit Center in San Francisco via the Downtown Extension as funded priority.

Caltrain electrification

The capital plan calls for the High Speed Rail Authority to keep its commitment to contribute $600 million toward Caltrain electrification as a prerequisite for high speed rail service on the corridor.

Given the timing issues with funding for electrification - Caltrain needs funding soon to move forward with the project, and it is not clear which funding source from HSR would be used in the needed timeframe - we urge the High Speed Rail Authority and state legislature work to ensure realistic solutions so that the electrification funding can move ahead in a timely manner.

One of the major sources of funding for the HSR project is federal ARRA funding. In the event that timing does not work to fully expend the federal funds in the Central Valley, the

electrification investments are shovel-ready and we recommend the use of funds for this investment of benefit to the HSR project for the initial Northern segment.

High-quality blended service

The capital section in the High Speed Rail Business Plan proposes $900 million for a package initial investments on the Caltrain corridor to enable blended service. The investments include curve straightening to allow for higher speeds, upgrade of existing tracks and fencing, and 4-quadrant gates at 40 grade crossings for greater safety.

The plan assumes contribution soon of $90 million toward three grade separations in San Mateo within the Hayward Park to Hillsdale segment, and a two mile passing track segment there. The capital plan also Includes $50 million per station for high platform upgrades to Diridon and Millbrae, and $100 million for an interim terminal station at 4th & King. It proposes up to $500 million for grade separations on the Peninsula “that may be required as environmental mitigation.”

Our understanding is that this package of investments is tentative, and depends on the outcome of environmental analysis and planning for the Peninsula segment. CAHSRA should consider as part of the planning process the following:

- Effective passing tracks. The 2-mile passing track option proposed in the business plan has not yet been studied for effectiveness in supporting high quality blended service. Earlier analysis studied longer 4-track and 3-track sections. The passing track options that scored higher in the analysis were closer to the center of the line, and longer. If additional passing tracks/passing station designs are needed they should be included in the capital package. See analysis below.
- Grade separations that are needed in practices to increase rail frequency, without unacceptable and extreme performance degradation at intersections.
- Analysis and communication of the potential effect of compatible platforms on service and capacity at Transbay, Millbrae, and Diridon
- Grade separation planning to fully grade separate the corridor over time.
- Caltrain capacity increases (longer platforms and longer trains) to compensate for the capacity loss entailed in providing double doors to support compatible platforms with high speed rail.
- Systemwide level boarding for Caltrain. Level boarding is necessary to ensure punctuality for Caltrain and for HSR. With the existing stairs needed to board Caltrain trains, the time consuming process of boarding and alighting wheelchair passengers can randomly inject several minutes of delay, which could cause a domino effect when traffic increases to 10 trains/hour/direction. If Caltrain is 5

minutes late, the HSR behind it will be late too. Without level boarding, HSR on-time performance is unlikely to meet the high standards of punctuality that passengers would rightfully expect.

- Platform safety. The safety of waiting passengers on station platforms when trains pass by at 110 mph should be considered, and any mitigations identified in concert with safety regulators.

The draft business plan proposes to invest in grade separations as required for CEQA mitigation; however CEQA is changing to eliminate intersection delay as an environmental impact. HSRA and Peninsula corridor communities will need to work together to develop policy-based criteria to prioritize grade separations.

In summary, the spending plan to implement blended service on the Peninsula needs to include a package of investments that ensures high-quality Caltrain service without degradation in schedule quality or capacity.

Freight

It has been suggested that the use of short-haul freight operations could allow the use of lighter weight rolling stock that might be able to traverse higher grades and tighter curves, potentially reducing the cost of the grade separation and track improvements. This change has support from the local freight shippers. This option should be explored in the interest of lowering project capital costs.

Connection to San Francisco

According to the business plan, connecting High Speed Rail service to San Francisco and Bakersfield will provide tremendous business benefits and business risk reduction to the High Speed Rail project. Extending the project to San Francisco and Bakersfield would have the following benefits:

- Ridership will increase by 76%. In 2025 ridership will increase from 2.9 million to 5.1 million. —Exhibits 7.1 and 7.3, pages 69 and 70
- Farebox revenue will increase by 55%. In 2025, revenue would go from $239 million to $371 million in 2025 dollars. —Exhibits 7.6 and 7.9, pages 71 and 72
- Net cash flow will increase 181%. In the medium scenarios for 2025, the net cash flow will increase from $32 million to $90 million for the first five years of operation. —Exhibits 7.27 and 7.29, page 81
- Private investment will increase by 132%. According to the Plan, the cash flows from the medium range and costs forecasts the program will be able to generate $3.2 billion in private investment in 2027. If the Silicon Valley to Central Valley IOS is extended to San Francisco and Bakersfield, the increases in ridership and cash flows could

generate an additional $4.2 billion, for a total of $7.4 billion of private investment. —Page 64, last two bullets and Exhibit 6.3

Therefore we urge HSRA to proactively work to connected the system to San Francisco and Bakersfield, with a package of investments that ensures high-quality Caltrain service in the blended system.

Downtown Extension

The connection to Transbay is a crucial part of the system and as previously noted, will be part of an increase in ridership of 76% over the ridership with the current proposed operating segment. While we don't have the breakout of a segment that is north of Bakersfield to San Francisco, we can safely assume that Bakersfield to San Francisco includes a high percentage of San Francisco passengers. We have several concerns regarding High Speed Rail and the Downtown Extension.

1. Reduced funding: The business plan proposes reduced funding for the Downtown Extension to Transbay. The business plan capital appendix (p. 29) notes that the allowance toward DTX had been reduced by $1.5 billion. This is a significant drop in proposed revenue towards what is now the "most expensive bus station in the world."
2. While there is a , $550M allowance "for work done by others for Transbay connection" we are not clear what that allowance is for and would like further clarification. http://www.hsr.ca.gov/docs/about/business_plans/DRAFT_2016_Business_Plan_Basis_of_Estimate.pdf
3. Transbay Terminal, not 4th and King, is the terminal of record required in Proposition 1A. The Transbay Terminal is almost complete. San Francisco has contributed $2B to the Transbay Terminal. When High Speed Rail contributes funding to bring the tracks from 4th and King to the Transbay Terminal, passenger use will be much higher, revenues will increase, and the original intent of Proposition 1A will be fulfilled. Given that DTX is part of the critical path to success for profitability, enabling CAHSR to gain maximum ridership and passenger revenue, we would like to see more detailed plans on how CAHSR will assist in getting funds to pay for DTX. While we recognize that there will be another business plan in two years, the funding strategy needs to be considered <u>now</u>, not later. The Bay Area is looking at set of interrelated capital investments for the Transbay corridor. The plan to fully fund DTX needs to be done in concert with the work on moving a set of regional infrastructure investments such as BART and other transbay transit capacity improvements, and the potential for a second transbay tube. There are many other rail projects being considered in San Francisco. If we do not keep the Downtown Extension on the front burner, there is a possibility that any one of the other projects (a second tunnel for BART, Geary Street subway, etc) may take precedence, leading High Speed Rail to be in the unenviable position of trying

to redirect political will back to what is now seen as a top priority for rail projects into San Francisco.

It will take the effort of all the transit agencies, jurisdictions, and advocates combined with a strong political will to get the Downtown Extension done on time, on scope and on budget.

With excellent communication and a strong funding plan, we will be able not only to build on time, on scope and on budget, but likely to build the Downtown Extension early, which will be beneficial for the project as a whole.

Regional Transit Connections

Regional transit connections are essential. We request that CAHSRA strengthen connections to the BART system to facilitate East Bay connectivity. In particular, the underground connection from the Transbay Transit Center to Embarcadero Station will be a key Bay Area connection.

Station area planning

High speed service will bring additional passengers to stations, and will add multi-modal connectivity needs. The station foot traffic will create opportunities for regional attractions with economic value, and even greater opportunities for transit-oriented development and value capture revenue sources to contribute to infrastructure.

The Plan anticipates improvements at the 4th and King, Millbrae, and Diridon stations. In addition, the plan includes an option for a mid-Peninsula station. One of the proposed benefits of the “Valley to Valley” Northern segment is to provide new commute routes, putting Fresno only an hour’s commute from San Jose, and enabling Central Valley towns to serve as bedroom communities for Silicon Valley. The environmental benefit or impact of this strategy depends on whether “smart growth” practices are used to protect agricultural lands and open space, and create locally walkable, mixed use communities, and economic strategies to bring jobs to developing station areas.

- We recommend that planning resources be available to communities on the Caltrain corridor and Valley to Valley segments to foster:
    - excellent transit and active transportation connectivity to the stations, including safe and appealing access and crosstown connections for people walking and bicycling.

- station area planning including smart growth practices to protect the environment, and assessment to achieve housing and economic development goals
- value capture analysis to assess opportunities for complementary local funding and infrastructure improvements

We believe that additional investment in and around all three stations from San Jose to San Francisco (Diridon, Millbrae, and the Transbay Transit Center) will be critical to the success of High Speed Rail. Investments should ensure excellent connectivity with local and regional transit, including BART connections at Diridon and Transbay.

With regard to approach to Diridon station, the latest business plan proposes an at-grade alignment, however a final decision has not been made. The process to make these decision, like the process to address other key blended system planning issues, needs to be made utilizing an open and transparent community stakeholder process.

The benefits of a mid-Peninsula station should be studied with regard to long-distance ridership and the opportunity for supplementary commute service. If there are benefits and a willing partner, the investment plan should include the mid-Peninsula station.

Blended service

The blended system imposes limits on the amount of capacity available for local commute service. Depending on business planning and schedule assumptions, long-distance trains could potentially supplement commute capacity with super-express Bay Area commute trips between San Francisco and San Jose.

Different business plan variants have included varying assumptions about the amount of such supplementary commute service - the current draft business plan assumes less than $10 million in revenue from such service, according to table 6.3 here, which is lower than earlier estimates.

Business planning should continue to explore opportunities to provide such supplementary commute service. At an appropriate time service planning should consider how to make this service convenient for passengers deciding among various options, and should determine how to design business and operational arrangements that work for the providers of local and long-distance service.

Open and transparent stakeholder process for blended system planning

The process to plan and environmentally clear the blended system, including blended service, grade separations, station planning and access, and other topics covered in these comments, should be conducted with an open, transparent multi-stakeholder process. We support the set of effective practices described by Mountain View Council Member Siegel (see attachment below), including the following key points :

- Meetings that are open to the public, with a “fishbowl” style in which the main dialog is among stakeholder representatives
- Stakeholder group includes representatives of all major interests and agencies
- One overall stakeholder group to address issues in common, rather than replicating the same topics in different group
- Subcommittees to address issues for particular geographies or topics
- Meetings are moderated by facilitators who have domain expertise, but are not members of any of the stakeholder groups.
- Use of online meeting technology to handle remote participation

Importance of effective passing tracks / passing stations

Passing tracks and grade separations will be critically important for the performance of Caltrain service and crosstown travel.

Earlier studies had shown that the Peninsula corridor could support a blended system with six Caltrain trains per hour and two high speed trains without passing tracks.

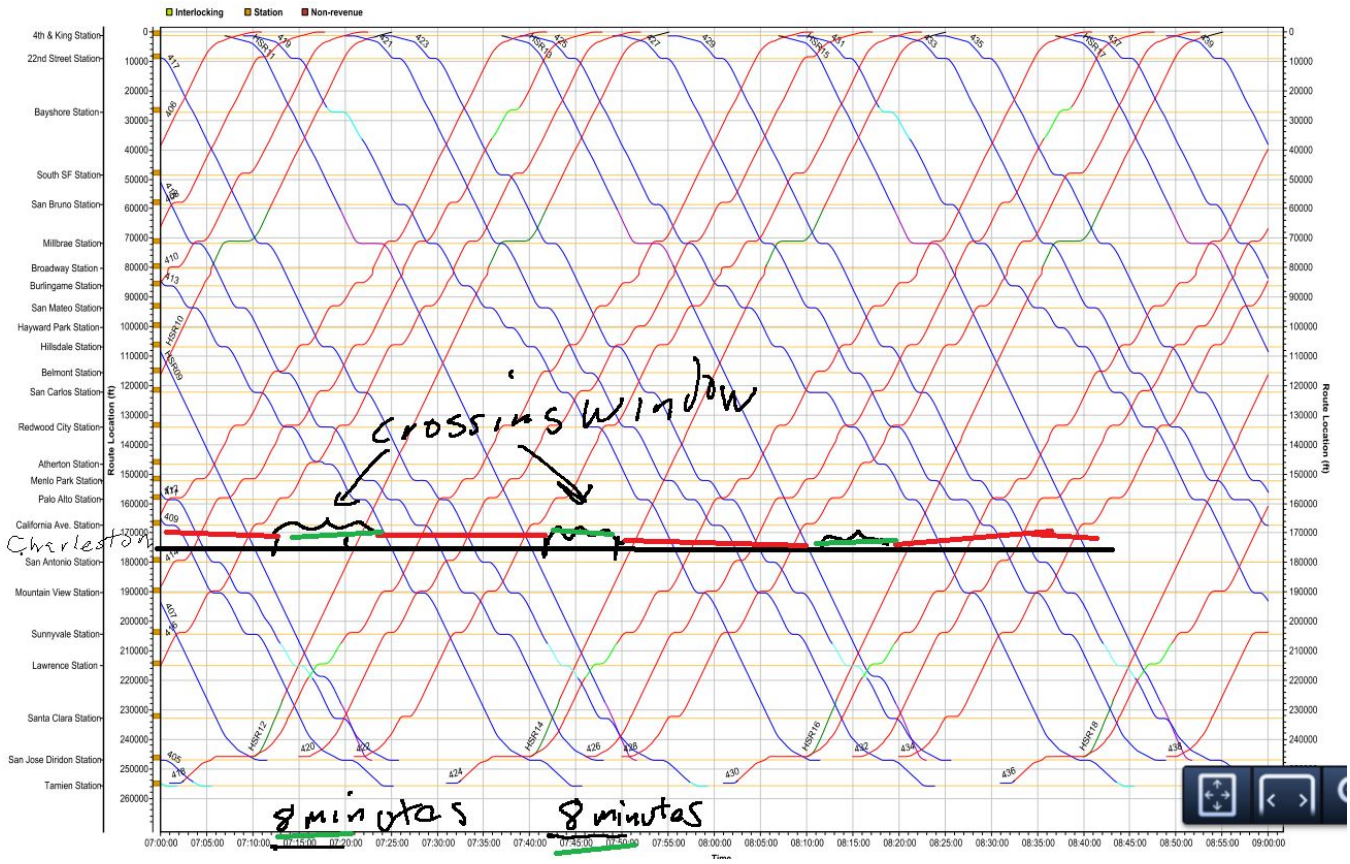
If High Speed Rail services is added before passing tracks, or if the passing schedule does not work well, this could severely degrade Caltrain service. Caltrain trains might need to bunch up in smaller segments of time, creating some longer gaps between trains, a confusing schedule for riders, and reducing the potential benefits of electrification to provide a clock-face, regular, more frequent BART-like schedule.

Without passing tracks, the blended system analysis conducted in 2012 by Caltrain and High Speed Rail shows trains arriving in Palo Alto from San Francisco at the following times. There’s a 20 minute gap between the 7:30 and 7:52 train, and the other trains are a few minutes apart. This schedule is much less useful than a service that arrives and departs every 10 minutes.

7:21 / 7:24 / 7:30 / 7:52 / 7:57 / 8:01

The inclusion of up to $500 million for grade separations will help, but will likely not be enough, even with local and regional funding, to address performance at some of the more highly-used intersections where performance will degrade significantly with more frequent service. Bunching caused by inefficient passing would make the situation worse, with gates down nearly continuously for 20 minutes at a time (see green and red horizontal lines).

The system will need effective passing tracks and grade separations to ensure a high-quality Caltrain schedule and community acceptance of increased rail frequency.



We welcome the opportunity to comment on the High Speed Rail business plan and to contribute to the local and regional dialog to help create a plan that delivers great service for the Bay Area and long-distance travel.

Sincerely,

Adina Levin, Friends of Caltrain
http://greencaltrain.com
650-646-4344

Thea Selby, Friends of DTX
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Attachment: Multi-stakeholder dialogue for blended system planning

As a follow-up to the most recent Local Policy Maker Group discussion of the blended system on the Peninsula Corridor, I'd like to share more about my experience with multi-stakeholder processes that have a proven record of building, in a timely manner, shared agreements on complex issues where there are a variety of perspectives. Such agreements often accelerate the progress of associated formal reviews. The dialogue could be sponsored jointly by CalTrain, High Speed Rail, and perhaps the Metropolitan Transportation Commission.

My professional background includes over 25 years of reaching solutions on environmental issues, focused on toxics remediation.

The characteristics of successful multi-stakeholder processes include:

- The dialogue group invites representatives of all major interests and agencies.
- Groups with up to 40 primary stakeholders can be effective.
- The facilitator meets with the participants in advance and develops the scope of work and ensures that all major perspectives are at the table.
- Goals and ground rules are established at the beginning.
- The general schedule - such as which months meeting will be held - of primary dialogue meetings is established at the outset, and meetings are long enough - four, six, or eight hours, depending on the complexity of the subject matter - to get beyond posturing.
- Subcommittees may be used for topics that are specific to geographic or topic areas that are of interest to a subset of stakeholders. Other representatives may participate in the subcommittees. Subcommittee work is reviewed by the main dialogue.
- If the dialogue is intended to create a consensus document, small writing groups can cooperate via conference calls, e-mail, or webinars.
- Meetings are moderated by facilitators who have domain expertise, but are not members of any of the stakeholder groups.
- When subcommittees are used, there may be be a team of facilitators to cover multiple meetings.
- The process does not have parallel bodies working on the same topic.
- The meetings are primarily discussions among the participants, rather than the comment-and-response approach built into many environmental statutes. Meetings may also include presentations.

- Meetings are open to the public, with limited participation by members of the general public.
- Meetings use a physical layout where every seat is equal - in a room large enough so members of the public can sit around the outside. Common layouts are hollow squares or a U-shaped table arrangement.
- With regard to attendance by general public and media, “it is better for the public to be bored than to be excluded.”

The dialogue’s goal may be consensus or simply general agreement. Since the dialogue is advisory, the commitment that participants make is to advocate for the agreement within their interest groups and agencies.

Often multi-stakeholder dialogues designed along these lines build trust among people from diverse constituencies with seemingly conflicting perspectives.

These processes are intended to reach agreement in a timely manner. Typically a process will take 18 months to 2 years. Efficient progress toward the goal is fostered by a contract with a facilitator for a defined number of meetings over a time period.

On the Peninsula corridor, there is broad agreement and support for the solution to create a blended system with High Speed Rail and Caltrain sharing tracks. There are also a variety of issues that need to be worked out to achieve environmental clearance and create a system that delivers the ridership and financial benefits expected from the blended system for both long-distance and local commute service.

I’d be happy to meet and discuss more about my experience with successful multi-stakeholder processes, with a goal of timely and collaborative progress toward blended rail service on the Peninsula corridor.

Sincerely,

Lenny Siegel

2016 Business Plan RECORD DETAIL

Submission Date : 4/18/2016

Submission Method : Letter

First Name : David

Last Name : DePinto

Stakeholder Comments/Issues : _*Unfinished Business*_

"Unfinished Business" is the best title we can give to the 2016 Business Plan and the most recent SAA Report. Those of us residing in the northeast San Fernando Valley have already seen how fast CHSRA has dropped the ball in our region by suspending all community outreach activities since last May 2015 and the very poor job it did of executing, not completing and, taken further, falsely fabricating at least one of the upfront environmental studies (Equine Study conducted by Mineta Transportation Institute) promised to our elected officials and residents/communities. These actions combine negligence and arrogance by leaving property owners with the unfinished business of route selections, debate and discussion about those route selections, and continued decline of property values and lives held in limbo for an even longer time period than originally envisioned. This is no way for a California agency, funded by taxpayers, to conduct State business, and no way for the nation's largest potential infrastructure project to be managed.

I and residents of the northeast San Fernando Valley stand in complete opposition to the 2016 Business Plan. The primary reasons for our opposition are that the Plan lacks funding and the agency's recent performance has caused us to lose faith and trust in a fair and transparent environmental review process. In addition, we question the accuracy and integrity of every proposed benefit and feature of the proposed project:

* the financial debate is not about $64 vs. $68 billion in funding to us; to us the debate is the original cost of $33 billion vs. whatever is forecasted in this or any succeeding business plan. The cost estimates in this Business Plan are speculative and do not allow significant contingency for cost overruns and change orders.
* it will not achieve GHG emissions reductions to the level and or timetable projected
* ridership will not achieve proposed levels
* ticket pricing will not be at projected levels without subsidy, which would be illegal
* the time and speed for the train to travel from north to south, even non-stop, is misleading and unattainable. Voters were led to believe ALL travel would meet the time and speed requirements, not just non-stop routes, which likely won't even exist.

Please make sure the Board of Directors is aware of this as we saw a very crude "table" at the recent CHSRA board meeting in Anaheim that simply indicated how many comments had been received. There was not qualitative or substantive analysis of the comments received. *_The Board, which has experienced significant turnover, has representatives that were not present at meetings in past years and may not have read our significant input from prior years (see attached for partial documentation). Our efforts meet with, brief and take a new Board member on a tour of our area, due to the resignation of past representative Katherine Perez-Estolano, have not been fruitful to this point. The Board must be made aware of the unilateral opposition to the Business Plan, not just how many letters from various parts of the state were received._*

Our comments follow.
_*
1. Past Comments Submitted to CHSRA*_

We've not seen the hundreds of letters, and thousands of verbal and written comments provided by our communities responded to substantively by CHSRA. The above ground route, E2, remains under consideration despite our groups having provided the Authority with a virtual EIR/EIS report of impacts and immitigable damage created by the routes. We have provided extensive and indisputable evidence of immitigable impacts/damage to endangered species (wildlife, fish and riparian), LA's perennial water supply (Haines Canyon Creek), view of the Big Tujunga Watershed, trees/vegetation that would be plowed over during construction and operations, noise, air quality, truck trips, vibration and changing of our community's character.

Thus, CHSRA loses all credibility with our region as we've conducted ourselves within the rules of a legally required EIR/EIS process, as well as CHSRA's own SAA process, and have been ignored. In our recent testimony at the CHSRA board meeting in Anaheim, as well as the recent submittal by Mr. Eick and me, we called the Authority's action/lack of action an "abuse of discretion."

Given the major delay in completion of the southern California IOS, there is ample time, NOW, for the Authority remove E2 from consideration and add new routes for environmental review. There is no defensible legal or environmental reason to push this process forward further with a clearly infeasible route alternative such as E2. We urge the Authority to add 1-2 new routes, including a non-Burbank alternative which would be a good fallback for CHSRA should Burbank prove infeasible. It's unconscionable for CHSRA to NOT have a backup plan in case the Burbank station effort fails.

_*2. Refined Alternative E2 is Infeasible; Its Significant, Unavoidable Impacts Cannot Be Mitig*__*ated*_

We have already established the facts relative to the immitigable impacts of the E2 route (see attached, past correspondence). Our prior letters, which we call upon the new Board members to read and become familiar with, have provided great detail about the indisputable environmental impacts. The recent westerly move of the route to avoid the Big Tujunga Mitigation Area is cosmetic at best, political and contrived in nature, and insulting in reality. To think CHSRA could appease political and community sentiment by such a superficial "change" show desperation and forcing of this alternative, by an abuse of discretion.

_*3. Unanimous Political and Community Opposition to E2/*__*Damaging Above Ground Route Alternatives*_

Every elected official representing the northeast San Fernando Valley, as well as communities and community leaders united north through Santa Clarita and part of the North LA County Community Protection Coalition, have voiced opposition to E2. CHSRA Board and Staff have seen this clear community consensus as recently as the San Fernando Valley Council of Governments meeting in Van Nuys, as well as the CHSRA Board meeting in Anaheim. To leave E2 under consideration is an affront to the political and community will expressed clearly to CHSRA. Further, our research of SAA Alternatives shows the E2 route is being held to an unfair and unjustifiable standard - dozens of routes have been changed for far fewer reasons and "show stoppers/fatal flaws" than exist for E2. Again, continued retention of the E2 route is an abuse of discretion and brings the entire concept of "Klopping Damages" into consideration. The sustained retention of this route now appears to be an intentional and pre-meditated means of damaging our communities, property values, economy and quality of life.

_*4. Upfront Environmental Studies for Palmdale to Burbank Project Section Not Done Prop*__*erly and Not Completed*_

To the extent that the status of the routes in the project section,

particularly E2, were considered in evaluating the shift of the IOS from southern to northern California, the Authority relied on false, fabricated, unprofessional and biased environmental studies to conclude that Equine, Water and Tunneling issues were mitigatable and not "show stoppers." As has been documented and testified extensively to CHSRA, the studies were to have been done collaboratively with the community, were supposed to have been completed by November/December 2015, and were
to include independent, third-party professionals. For Chairman Richard to testify at the San Fernando Valley COG meeting that the fourth of these studies, related to seismic studies, had somehow been forgotten about or slipped through the cracks, as well his admission about the existence of conflicts between supporters of CHSRA and the Mineta Board being a result of people's busy schedules, are admissions of the Authority's negligence.

*5. Cessation of Community Outreach in the Burbank to Palmdale Project Section*

We are very concerned that theBurbank to Palmdale project section environmental reviews are being put on auto pilot with unacceptable routes, no community outreach, interminable delays, etc. There has not been one CHSRA sponsored community outreach or working group meeting since May 2015, nearly one year ago, despite those meetings being promised to our communities and leaders by CHSRA outreach consultants. Given zero community outreach in the last year, not only is the SAA Report flawed and lacking of public input, but so is the process leading to the IOS switch.

_*6. Ongoing False and Misleading Timelines for Environmental Studies*__**_

From day one, CHSRA has promoted false and misleading timelines for environmental studies. As we have written exhaustively, the original plan by CHSRA to produce draft environmental documents by June 2016 has now been proven seriously wrong and inept. Present claims by CHSRA to produce draft and final environmental documents in 2017 are similarly wildly, recklessly and intentionally false. With the nearby environmental studies for the approximate 4-mile 710 Freeway extension project taking 4 years to proceed from scoping to draft EIR, there is no doubt that the 35-45 mile CHSRA Burbank to Palmdale project section environmental studies will take at least 4-5 years to complete, which would make their completion feasible by 2018 or 2019. We are supremely confident that the proposed environmental study timelines, thus, the timelines for the completion of the southern California section are not accurate in time or in cost.

*7. Lack of Funding Sources for Completion of the Project*

The California Legislative Analyst Office and the Sunday, April 17, LA Times editorial, both independent, third-party experts, both consistently make the point that the project lacks funding. CHSRA statements that transportation projects typically are in this mode, are completely unacceptable given the amount of missing funding which exceeds $30 billion and the damage created on communities facing potential displacement, damage, condemnation and threat.

We'd add that Cap and Trade Funding represents a last ditch, desperate funding source for CHSRA, not a sustainable or even legal funding source. The fact that Cap and Trade funding expires in 2020 is one major factor affecting the IOS whether it be in northern or southern California. Further, we do not believe it is legal to use those non-recurring, temporary funds as a source of loans or debt to finance CHSRA.

_*8. Inappropriate and Illegal*__**__*Use of Funds for Non-CHSRA Bookend Projects*_

We view the present effort to fund bookend projects in northern and southern California due to the change in the IOS as "throwing money" at the problem and at special interests to keep them supportive of CHSRA. Voters approved funding for a high speed train project with specific metrics. We find these "off track" funding promises to be nothing more than "pork" to buy political support for delays and funding inadequacies.

*9. Lack of Transparency and Accountability*

The speed by which this new Business Plan was created and the new SAA Reports calendared (with no action by the CHSRA board at its April/Anaheim meeting) raise serious questions about the Authority's transparency and commitment to being accountable to the public and the Legislature. What better example can we give than the FACT that the public comment period for the new Business Plan ends, today, April 18, and the Board, several of whom are newly appointed, is scheduled to vote to approve the plan in just 3 days at the Board meeting in San Jose on April 21. High speed trains are one thing; high speed review and reading and understanding of public comments on the new Business Plan by the over-burdened, volunteer CHSRA Board is not plausible. This Business Plan is being "railroaded" through an illusory public and Board review process out of desperation created by a lack of planning and execution in prior years.

As the saying goes, "A lack of planning on your (CHSRA) part does not constitute an emergency on mine (the public).The 2016 Business Plan should be rejected and appropriate funding and environmental work should precede future action by the Authority.

Sincerely,

Dave DePinto
President, Shadow Hills Property Owners Assn.
Member, S.A.F.E. Coalition

--
David J. DePinto
818-352-7618 office
818-352-6781 fax
310-502-7928 mobile

Notes :

Attachments :

Common Ground Final NEPA-EIS CHSRA Letter.pdf (606 kb)
Legal Eick February 2015.pdf (389 kb)
SAA Route Elimination Analysis - Final October 2015.pdf (743 kb)
E2 Letter 5-14-15.pdf (1 mb)
East Corridor 12-22-14.pdf (3 mb)
SAA April 11, 2016 Final.pdf (8 mb)

May 14, 2015

SUBJECT: COMMON GROUND/COMMON SENSE RECOMMENDATIONS FOR DISCUSSION AT ELECTED OFFICIAL BRIEFING ON FRIDAY, MAY 15, 2014

Dear California High Speed Rail Board, Management and Consultants:

This letter is submitted on the eve of CHSRA briefings to elected officials in the San Fernando Valley and is a prelude to a detailed letter you will receive from me and Bill Eick later today. This is related to E2 and other issues we have been discussing with CHSRA staff and consultants for several weeks. For the record, the points included in this letter have been presented to CHSRA representatives in community working group meetings, small group meetings at CHSRA offices downtown, in one-on-one conversations with CHSRA representatives at all levels and with elected officials throughout the San Fernando Valley.

I have also reached out to Chairman Dan Richard, who responded back to me that he would read recent correspondence from me. I have not heard from Dan whether he's read the correspondence or not or if he has any response to it. I've called and emailed CHSRA Board Secretary Janice Neibel for two weeks attempting to speak and meet directly with board member Perez-Estolano who represents southern California. Ms. Neibel said she referred my inquiry to External Affairs staff and that they would contact me. It's now been two weeks and they have not contacted me.

Thus, after careful review of the latest high speed rail route plans, as well as unsatisfactory meetings with California High Speed Rail Authority (CHSRA) staff at their downtown offices on Thursday, April 30, this letter will formally enter our recommendations on the day prior to CHSRA's briefing of elected officials on Friday, May 15, prior to the next round of "community open house meetings." We recommend these requests be included in the agenda for tomorrow's elected official briefing by CHSRA.

Summary of Requests

Some of our communities have struggled with CHSRA proposals for more than 7 years; some for about 8 months; and some for just a few weeks. Over this entire time period, our communities have united together, and many of our elected officials concur publicly and privately with us on the matters discussed below. On the eve of your briefing to elected officials tomorrow in Burbank, we recommend these matters be discussed and agreed to:

1. **Request #1** - due to their infeasibility and strong community opposition, remove above-ground portions of all routes impacting densely populated or sensitive environmental areas from further consideration. E2, for example, is the above-ground, at-grade and elevated track running from tunnel openings in the heart of Lake View Terrace, across the Big T Wash, and then into tunnel openings in the heart of Shadow Hills, and must be eliminated from further consideration. With the Amtrak derailment in Philadelphia fresh in our minds, it is clear high speed trains are incompatible with and have no place in densely populated areas. As I and many other community leaders have been saying since at least mid-August 2014, routes must be revised, removed and/or placed underground wherever dense populations and sensitive environmental areas are concerned.
2. **Request #2** - for newly identified routes which have been studied for less than one year, given that some routes have been studied for 7-8 years, we request upfront, immediate, independent, expert studies of water resources, tunneling construction/impacts and seismic safety prior to completion of the SAA Report and selecting routes for NEPA/EIS environmental studies.
3. **Request #3** - including a "no-Burbank or no-San Fernando Valley station" alternative as part of the upcoming NEPA/EIS environmental studies for both the Palmdale to Burbank project section and the Burbank to LA/Union Station project section.
4. **Request #4 –** support and participate in a town hall or public hearing conducted by San Fernando Valley elected officials in the San Fernando Valley prior to the final SAA Report and NEPA/EIS alternatives are chosen.

We believe CHSRA is rushing to finalize its Supplemental Alternatives Analysis (SAA Report) and selection of initial NEPA/EIS routes with little responsiveness to the extensive input and requests for change provided by all communities in the Palmdale to Burbank project section. We have pointed out on numerous occasions CHSRA's terrible track record with respect to open and transparent dialogue with Foothills communities, as well as numerous instances of last-minute, devastating announcements with no advance notice.

Without regurgitating all of those past slights by CHSRA, I'll point out that last week we found out by email that the date and location for the upcoming Foothills communities "open house" had changed at the last minute from Tuesday, May 19 to Saturday, May 30, and that the location had changed from the familiar, centrally-located All Nations Church, to Verdugo Hills High School, which is located on the far eastern edge of our communities, far from easy freeway access and far from the high speed rail routes themselves (note: on the same date/time, the school is concurrently hosting an American Cancer Society Relay which will hinder parking and traffic). This poor handling of our community is the norm, not the exception.

On the eve of your briefings to elected officials, which is on the eve of public presentation of what CHSRA project management team member Juan Carlos Velasquez indicated would likely be the routes included the SAA Report and the NEPA/EIS studies, we again call for your attention to and response to our requests. CHSRA decisions related to the SAA Report and NEPA/EIS alternatives are **not required** to be finalized in June. Your direction is severely flawed and not congruent with united communities and elected officials throughout the Palmdale to Burbank project section. Simply

moving into the NEPA/EIS process is a do-nothing response and will not address our concerns. **These decisions will chart the course for the future of millions of people and thousands of businesses in the San Fernando Valley and should be done right.**

Detailed Requests - Common Ground/Common Sense Requests from NE San Fernando Valley Communities

We've refined these requests in discussions with most of our Northeast San Fernando Valley elected officials and their staffs in the past several weeks, as well as with CHSRA. Each request below is fair, timely and needed at this crucial juncture before the start of what will be a grueling, 3-5 year environmental review (NEPA/EIS) process. We believe strongly that "what goes into the EIS is as important as what comes out" and feel several alternatives that CHSRA is proposing for study should be eliminated now from further consideration.

These "common ground/common sense" requests should be acted upon PRIOR to CHSRA finalizing the Supplemental Alternatives Analysis Report (SAA Report) and PRIOR to the start of the NEPA/EIS environmental study process. Action is needed to prevent a prolonged assault on our quality of life, the character of communities, property values and the health of local businesses and economies.

1. **REQUEST #1: IMMEDIATE ELIMINATION FROM FURTHER CONSIDERATION OF AT-GRADE AND ELEVATED ROUTES/SEGMENTS, AS WELL AS TUNNEL OPENINGS, IN DENSELY POPULATED AND SENSITIVE ENVIRONMENTAL AREAS**

    - ***Why?*** As if we needed anymore evidence or any more of a public wake-up call, the Amtrak derailment in Philadelphia underscores that all of the construction and operational impacts of an at or above ground high speed train (noise, vibration, visual/aesthetic, dust, etc.), which FAR exceed the threats posed by Amtrak, are incompatible with, threaten public safety and would alter the character of densely populated and sensitive environmental areas in the Northeast San Fernando Valley, while presenting untenable risks for humans, wildlife, water, businesses and commerce. CHSRA has been provided with an abundance of evidence and united community opposition demonstrating the infeasibility of such above ground structures/operations and that a NEPA/EIS analysis will be redundant and wasteful. CHSRA has eliminated or modified dozens of alternatives and routes throughout the State with far less compelling evidence of infeasibility. For example, it is clear environmental analysis will conclude that cumulative impacts warrant removal of E2 from further consideration. Communities must not be forced to have such infeasible route options hanging over their heads for an interminably long environmental study period such as we've witnessed for the nearby 710 freeway extension. In particular, with respect to East Corridor routes, above ground structures in routes E1 and E2 along the San Fernando Road Corridor and spanning across Foothill Blvd., the 210 Freeway and Big Tujunga Wash from Lake View Terrace across to Shadow Hills must be eliminated immediately. Tunneling, which creates massive impacts of its own, requires significant additional study.

2. **REQUEST #2: DELAY FINAL SAA REPORT AND START OF NEPA/EIS PROCESS UNTIL THIRD-PARTY, INDEPENDENT ANALYSIS OF WATER QUALITY/SUPPLY, DEEP TUNNELING AND SEISMIC/GEOLOGICAL RISKS ALONG PROPOSED ROUTES ARE CONDUCTED**

- ***Why?*** First, CHSRA is rushing to complete its SAA Report and start its NEPA/EIS process because it is behind schedule and because it is changing consulting teams on July 1. That's not our problem and this "rush to judgment" is not in our communities' best interests. CHSRA's outreach and technical work have been deficient and our communities must not pay the price. Involvement in a poorly constituted NEPAEIS process is not a pleasant process; it will be an ongoing nightmare for impacted communities. Second, this project is the largest infrastructure proposal in the United States and CHSRA's claims that its NEPA/EIS process will be completed within two years is patently false, misleading and negligent to our communities. The 5-mile, 710 freeway extension DEIR has taken 4 years already and is still proceeding; certainly the 35-45 mile Palmdale to Burbank project section will take at least as long. Third, there is a large disparity in the depth of analysis given to alternatives being considered for the environmental studies, particularly related to their newest route proposals which include extensive tunneling, have been public for only two weeks, and for which CHSRA has yet to provide detailed, profile maps. A true inequity exists in the amount of information and thus, peace of mind, certain communities possess about potential construction and operational impacts. Our demand is that all routes initially included in the NEPA/EIS environmental studies receive comparable initial study and fatal flaw analysis on major issues such as water, tunneling feasibility and impacts, and seismic/geological risks PRIOR to the final SAA Report and selection of alternatives for the NEPA/EIS environmental studies. To conduct such independent studies, we suggest our elected officials assist the process by drawing from a pool of experts for such studies including the Sierra Club, California Department of Water Resources, Army Corps of Engineers, U.S. Forest Service, Santa Monica Mountains Conservancy, National Park Service, Cal State University Northridge, LA Department of Water and Power and LA County Flood Control District. Parameters for such studies include:
    a. *Water Study* – review of water resources and flood control near routes in Angeles National Forest, San Gabriel Mountains National Monument, Big Tujunga Wash Flood Plain, San Fernando Groundwater Basin, Santa Clara River Watershed, Burbank and all nearby aquifers, wells and spreading grounds.
    - *Tunneling Study* – since CHSRA is now devoting so much attention to tunneling and has so little experience and expertise to share with us locally, we're proposing a similar array of third-party, independent national and international experts be convened to review the feasibility and impacts of tunneling, during both construction and operational phases, along all sections of above grade or elevated segments on all present Palmdale to Burbank project section route alternatives; and to review the feasibility of tunneling through San Gabriel Mountains National Monument, Angeles National Forest and areas soon to be designated "Rim of the Valley." For example, how long will tunnel segments be? How many above ground power stations will be built? Where will gargantuan construction pits and staging areas be located? What roads will trucks use to transport dirt, debris and materials?

Where will the dirt be transported to? These are critical, massive impacts that more should be known about and communicated to the public BEFORE completion of the SAA Report and NEPA/EIS studies begin. We disagree that the NEPA/EIS process is the time to be informed about such basic information.

- *Seismic/Geology Study* – given the destruction wrought by recent quakes worldwide, the imminent danger presented by the San Andreas and other local faults, we again propose our elected delegation assist CHSRA in convening an array of third-party, independent national and international experts to review and assess all available seismic and geological reports available to determine level of risks associated with drilling, testing, construction, tunneling, etc., as well as whether conducting updated seismic studies is warranted.

3. **REQUEST #3: INCLUDE A NO-BURBANK OR NO-SAN FERNANDO VALLEY STATION (PALMDALE DIRECT TO LA/UNION STATION) ALTERNATIVE IN ENVIRONMENTAL STUDIES FOR BOTH THE PALMDALE TO BURBANK PROJECT SECTION AND THE BURBANK TO LA/UNION STATION PROJECT SECTION**

- ***Why?*** With respect to a possible high speed rail station in Burbank, we are concerned about CHSRA reaching its conclusion and working backwards. Top management of CHSRA has consistently misrepresented the facts related to the Burbank station option, selling it as required by the legislation. We have corrected CHSRA repeatedly in public on this matter. <u>The fact is a Burbank station was not in the ballot measure language approved by voters.</u> It is well-known that the vast majority of residents in the City of Burbank are not engaged on high speed rail and are overwhelmingly pre-disposed AGAINST expansion of activity at the Burbank Airport that would result in increased construction and operational impacts such as traffic, noise, air pollution, etc. **<u>A no-Burbank station alternative is prudent and feasible for all concerned parties because:</u>**
    - CHSRA owns/possesses no agreement for land in Burbank upon which to build a station.
    - Land CHSRA is potentially interested in as a site for the Burbank station is a highly contaminated and controversial Superfund site.
    - The City Council was recently re-configured by an election that occurred April 7, 2015, and has not taken a position or produced a binding or public agreement with CHSRA for a Burbank station.
    - The City of Burbank will receive a "station grant" of approximately $600,000 from CHSRA to conduct its own planning and environmental studies. That study will guide much of the City's decision-making; the City has no official position in support of a station at the Airport.
    - The public in Burbank, which consists of more than 100,000 residents, knows virtually NOTHING about CHSRA plans. Residents must be engaged, made aware of and allowed to study CHSRA plans before the City Council, Airport Authority or CHSRA select a site for construction and operations. The public will vote on the Airport terminal project and, if engaged and informed, would likely demand a vote on a high speed rail station, as well.

- Plans for connecting Burbank to LA/Union Station will result in Burbank being the terminus for CHSRA for at least seven years, resulting in increased traffic, congestion and other impacts that the City has not studied or communicated to residents. Again, Burbank residents and businesses are not engaged or informed on high speed rail.
- To those that contend the San Fernando Valley needs to be connected to high speed rail and not be short-changed, we point to Metrolink and all existing Metro light rail options that are already in place and proposed that can transport people to LA/Union Station to access high speed rail.
- Certainly, avoiding the cost of a Burbank station would help CHSRA lower its over-budget situation.
- Other Palmdale to LA/Union Station routes are feasible and have been studied in the past. If feasible, they must be studied. A no-Burbank or no San Fernando Valley station alternative provides insurance to CHSRA that if a Burbank station proves infeasible or unacceptable, that other Palmdale to LA/Union Station alternatives are studied. CHSRA should welcome study of such an alternative as both feasible and wise. Or has CHSRA reached its conclusion and is CHSRA working backwards? Doesn't that violate the law and premise of NEPA and CEQA?

4. **REQUEST #4: SUPPORT AND PARTICIPATE IN A TOWN HALL OR PUBLIC HEARING IN THE SAN FERNANDO VALLEY PRIOR TO THE FINAL SAA REPORT AND NEPA/EIS ALTERNATIVES BEING CHOSEN**

    - ***Why?*** Historically, and presently, elected officials representing the San Fernando Valley have not been engaged to a great extent in the high speed rail debate and are not fully aware of the depth and strength of local opposition to high speed rail. First, many local elected officials are relatively new representatives of the San Fernando Valley and were not in office in 2008 when high speed rail was voted upon or succeeding years when decisions related to stations in Palmdale and Burbank, as well as the East Corridor, were announced. Second, as various open houses and community working group meetings have occurred since our group recommended such meetings in December 2014, attendance by local elected officials, themselves, at such meetings has been virtually non-existent. All the meetings held in the San Fernando Valley regarding this mammoth project have been held by CHSRA and community organizations; not a single meeting has been held where elected officials are all together at the same time and where THEY control the agenda. As a result, San Fernando Valley residents have not been able to speak out on this issue in front of their elected officials without CHSRA control of the meeting. We believe such a meeting would have a dramatic effect on the positions of key elected officials in the region.

Conclusion

In the next month, CHSRA plans to take action resulting in our communities being subjected to and held hostage by a very long, dispiriting and time and energy consuming NEPA/EIS process. At the conclusion of its years-long environmental studies, one unfortunate area will be designated as the preferred alternative. To avoid the possibility that CHSRA has already come to its conclusion and is working backwards, and to ensure that NEPA and CEQA are not violated, caution and prudence are called for. While hastily beginning the NEPA/EIS process is expedient for CHSRA, for our communities it will be a time of unrelenting stress and depressed property values, rife with potential for conflict as communities are pitted against one another.

CHSRA has the funding to do this right and the united Northeast San Fernando Valley communities deserve fair and just treatment. Thank you.

Sincerely and on behalf of residents, businesses and community leaders in the Northeast San Fernando Valley:

Dave DePinto
President, Shadow Hills Property Owners Assn.
Member, S.A.F.E. Coalition

SHPOA

Shadow Hills Property Owners Association

Dedicated To Preserving Rural Community

Sent Via Email:
palmdale_burbank@hsr.ca.gov

February 20, 2015

Mark A. McLoughlin, Director of Environmental Services
ATTN: PALMDALE TO BURBANK PROJECT SECTION
California High-Speed Rail Authority 700 North Alameda St. Room 3-532
Los Angeles, CA 90012

California High Speed Rail Authority Board
Chairman Dan Richard and Honorable Board Members
c/o Mr. Mark McLoughlin
1770 "L" Street, Ste. 800
Sacramento, CA 95814

Federal Railroad Administration
Joseph C. Szabo, Administrator
c/o Mr. David Valenstein
MS-20, W38-303
1200 New Jersey Ave, SE
Washington, DC 20590

Surface Transportation Board
Chairman Elliot and Honorable Board Members
395 E. Street, SW
Washington, DC 20423

Mr. Horace Greczmiel
Associate Director for NEPA Oversight Council on Environmental Quality
Executive Office of the President
722 Jackson Place N.W.
Washington, DC 20503

Re: Elimination of High Speed Rail/Palmdale to Burbank Alternative Routes Through Angeles National Forest; Lake View Terrace; Big Tujunga Wash; Shadow Hills; San Gabriel Mountains National Monument; Kagel Canyon; La Tuna Canyon; and Verdugo Mountains

Dear Environmental Services, California High Speed Rail Authority Board, Federal Railroad Administration, Surface Transportation Board, Mr. Horace Greczmiel:

1. Introduction: Before we start this analysis we would like to state that none of the alternatives for the Palmdale to Burbank project section presented to date by High Speed Rail (HSR) are acceptable to residents of the San Fernando Valley. This includes

the proposed SR 14/5 alternatives and the East or West Corridor alternatives. HSR needs to go back to the drawing board. That said, we have several additional points about why alternatives E1, E2 and E3 for the Palmdale to Burbank route and unique, corridor/route-specific through the Angeles National Forest and the recently created San Gabriel Mountains National Monument are all illegal or inappropriate. Further, we call upon the Authority, as has Congressman Adam Schiff, to remove the East Corridor alternatives from further consideration and from the project's upcoming environmental studies (EIR/EIS). Every day these infeasible and illegal alternatives remain under consideration, irreparable damage is being inflicted on the lives of innocent and unsuspecting residents who had and have every right to expect the intent of the legislation to be implemented, not to be manipulated and finagled, and upon property values and economic activity throughout the northeast San Fernando Valley.

2. The E1, E2 and E3 Proposals Do Not Follow Existing Transportation or Utility Corridors and Are Thus Illegal: The proposed E1, E2 and E3 paths do not follow existing transportation or utility corridors as required by Proposition 1A and Streets and Highway Code Section 240709(g). That section provides as follows:

> "(g) In order to reduce impacts on communities and the environment, the alignment for the high-speed train system shall follow existing transportation or utility corridors to the extent feasible and shall be financially viable, as determined by the authority.

It should be noted that nowhere in Proposition 1A is there a definition of "transportation corridor" or "utility corridor" but the purpose of requiring the placement of the train in a transportation or utility corridor is, "[to] reduce impacts on communities and the environment," as quoted above.

HSR's attempt to designate electrified transmission lines in the Angeles National Forest as a "utility corridor" for purposes of Proposition 1A is without a basis in fact or in law and increases the impacts caused to both our communities and environment.

Additional relevant mandatory requirements are found in the Street and Highway Code Section 2407.09(i) which provides as follows:

> "(i) The high-speed train system shall be planned and constructed in a manner that minimizes urban sprawl and impacts on the natural environment."

Thus, while there is no definition of a transportation or utility corridor, no route can be designated as such which fails to meet the criteria and purposes set forth in Proposition 1A. The route through the Angeles National Forest and the San Gabriel Mountains National Monument are destructive of communities, the "environment" and

the "natural environment" and prohibited by Proposition 1A as determined in prior correspondence and as on public record. The failure of the Angeles National Forest Alternatives to meet the criteria for what constitutes a "utility corridor"or East Corridor means that it cannot be classified as a "utility corridor" despite the existence of a transmission line, and furthermore, as a matter of law, cannot be a "utility corridor" for purposes of Proposition 1A.

As noted above HSR must use routes along existing transportation and utility corridors to the extent they are "feasible". HSR has studied and re-studied the SR 14/5 route for any many years and it is still part of the analysis. The SR 14/5 route follows the transportation corridor of State Route 14 and the Interstate 5 freeway. Since these SR 14/5 routes are feasible and follow a transportation corridor, HSR cannot adopt an alternate route which does not also go through a "transportation" or "utility corridor". We'd add that with further research, there are likely many other feasible, lawful alternatives for HSR to consider. If not, that reflects poor work on the part of the Authority and does not justify under any circumstances the creation of infeasible and illegal alternatives, especially alternatives that have a political basis given their promulgation by Supervisor Mike Antonovich. Thus the Angeles National Forest or East Corridor alternatives cannot be used when a feasible route which uses an already existing transportation or utility corridor is available. Again let us reiterate that the SR 14/5 routes have serious defects that must be addressed or mitigated to the satisfaction of neighboring stakeholders. We reject any notion that the lesser of two evils or the least damaging alternative should be the preferred alternative.

HSR has written an Opinion Editorial (Op-Ed) in which it contends that the train will not go "through" the Forest but rather "under" the Forest and thus there will not be any effect on the environment. While a seriously defective premise, this legal theory is an example of HSR attempting to "have it's cake and eating it too." In that Op-Ed, CAHSR Authority Chair Dan Richard had the audacity to discuss a 30-foot diameter tunnel boring machine that would need to remove more than 8 million cubic yards of dirt and debris, necessitating more than one million truck trips on local roads, in the same context as HSR's objective of preserving our "pristine" Forest environment. HSR cannot contend that the underground tunneling is not going "through" the forest then simultaneously contend that the at-surface electrical transmission lines constitute a "utility corridor" for underground trains. Where is the below surface "utility corridor"? It does not exist. HSR cannot on one hand use the surface of the Angeles National Forest to justify that route as a "utility corridor" while on the other hand ignore the surface for creating damage to the environment. HSR's legal gymnastics are merely another indication of its lack of good faith.

3. Forest Service Permits: When speaking to an HSR engineer at one of the scoping meetings we were told about the process needed to obtain a permit in the National Forest property to the east. This was for a water tunnel. The permitting

process was long and complicated, but most interesting was the fact that once the project was preliminarily approved and the tunnel was built, FINAL approval was not granted for THREE more years. The Forest Service wanted to make sure that the tunneling activity and the operation of the tunnel itself did not "dewater" the forest. They therefore monitored the surface water levels. After THREE years, they then issued a final permit for the water tunnel, subject to revocation of such a permit if water ever started to seep from the surface. Thus HSR could be in the position of drilling a tunnel through the forest and having train operations commence, only to find out AFTER THE FACT that the tunnel must be abandoned. This constitutes an enormous risk to HSR and the tax payers of the State of California. We would add that the additional layer of permitting, public hearings and official review required for Special Use Permits by the U.S. Forest Service add both additional time and expense to a project already riddled by cost overruns and planning, entitlement and construction delays. As Congressman Schiff stated in his letter urging the Authority to scrap its plans for the Forest, not only are the National Monument and National Forest standing in the way of rail/train line development, but so are additional protective measures such as Rim of the Valley. You may add "bad policy" to the already stated objections of infeasibility and illegality of the East Corridor alternatives.

We also spoke to one of the engineers about "dewatering issues" and we pointed out the Red Line dewatering issue in Runyon Canyon in which the Red Line tunneled 1,300 feet below Runyon Canyon and caused dewatering of the surface. The engineer responded that HSR could fix that by piping water to the affected area. We doubt that would work from a practical point of view. Water is a very scarce commodity in California and we do not know where that water would come from to re-water the Angeles National Forest or at what cost.

4. Proposition 1 A and State and Highway Code Section 2704.08(f) Mandates Use of a Route Other than E1, E2, or E3: Proposition 1A/Streets and Highways Code§2407.08(f) provides in part as follows:

> "(f) In selecting corridors or usable segments thereof for construction, the authority shall give priority to those corridors or usable segments thereof that are expected to require the least amount of bond funds as a percentage of total cost of construction. Among other criteria it may use for establishing priorities for initiating construction on corridors or usable segments thereof, the authority shall include the following: (1) projected ridership and revenue, (2) the need to test and certify trains operating at speeds of 220 miles per hour, (3) the utility of those corridors or usable segments thereof for passenger train services other than the high-speed train service that will not result in any un-reimbursed operating or maintenance cost to the authority, and (4) the extent to

> which the corridors include facilities contained therein to enhance the connectivity of the high-speed train network to other modes of transit, including, but not limited to, conventional rail (intercity rail, commuter rail, light rail, or other rail transit), bus, or air transit."

It is important to analyze each of the mandatory priority criteria required by the voters of the State of California.

4.1 Tunneling Costs Make The Angeles Forest Route the Lowest Priority: The costs of tunneling through the Angeles National Forest or East Corridor routes are exorbitant. Some of that tunneling would likely need to be more than 1,000 feet BELOW the surface. The engineers from HSR described the very expensive measures which need to be instituted to tunnel at that depth and attempt to limit the "dewatering". These costs far exceed the costs of tunneling along the other routes. Apologists for the Angeles National Forest Route or East Corridor alternatives say that there will be an equal number of miles of tunnel on SR 14/5 route. Even if true, the number of miles tunneled is not relevant. What is relevant is the cost and the environmental damage. While HSR has steadfastly refused to provide information about the costs of tunneling, they obviously have estimated costs. In conversations with HSR engineers we were told that tunneling would be more than 1,000 feet below the surface of the Angeles National Forest with its earthquake faults and dewatering issues is many magnitudes greater than the cost of tunneling on the other routes. Thus any of the Angeles National Forest routes or East Corridor represent the lowest priority for HSR based on cost. There are other possible increased costs such as the availability, or lack thereof, of electricity through the Forest.

4.2 Projected Ridership and Revenue Appear to be Neutral. The ridership and revenue number should not change much with the use of any current alternative since it goes from Palmdale to Burbank without stops in between, provided that people do not have an aversion to traveling 2,000 feet below the surface through earthquake faults. At this point, no alternative appears to have priority over the other using the Ridership/Revenue analysis.

4.3 The Criteria of the Need to Test and Certify Trains Operating at Speeds of 220 Miles Per Hour Dictates Routes Which Do Not Go Through the Angeles National Forest. The train cannot travel at 220 miles per hour through the E1, E2 and E3 alternatives. As the train reaches Burbank it must make a sharp left turn which the engineers acknowledge can only be done at about 80-miles per hour. Additionally this assumes that it can go under the Burbank flood control channel and under the 5 freeway in Burbank, which will be expensive and time consuming if it can be done at all and assuming that HSR does not enter the

superfund clean up site at the Lockheed portion of the Burbank Airport. Trains traveling at 220 miles per hour require a five mile turning radius and can only travel at a specific angle. The 220mph requirement cannot be accomplished using the E1, E2, and E3 corridors, which makes all of them the lowest priority of all alternatives.

4.4 The Utility of The Angeles National Forest or East Corridors for Passenger Train Services Other Than High Speed Rail is Non Existent and Thus the Lowest Priority. Traveling through the Angeles National Forest actually precludes the use of those train lines by other passenger trains. For example, opportunities for Metrolink and HSR to share track are non-existent in the Angeles National Forest/East Corridor routes. Thus the Angeles Forest alternatives have the lowest of priorities using this criteria.

4.5 The Unreimbursed Operating and Maintenance Costs to the Authority. There is no entity with whom to share the costs of operation and maintenance of HSR through the Angeles National Forest. Nobody else goes through the National Forest. Other alternatives may be able to share costs with Metrolink especially if the blended approach is used. Thus the Angeles National Forest or East Corridor alternatives have the lowest priority.

4.6 The Angeles Forest or East "Corridor" Alternatives Do Not Contain Facilities Therein to Enhance the Connectivity of the High Speed Tram Network to Other Modes of Transit. A route through the Angeles National Forest does not enhance any connectivity. It goes through the Forest and except for the beginning in Palmdale and the end in Burbank, it does not enhance connections. At least along other HSR proposed alternatives, HSR could enhance the connection to Metrolink and various bus routes. Traveling through the Forest requires passengers to exit in Burbank and walk or take some other mode of transportation to the Metrolink to get to downtown L.A.. We do not think that other alternatives would have such a problem. In this category, the Angeles Forest or East Corridor alternatives have the lowest priority.

In every possible category as to which priority is mandated, the Angeles Forest or East Corridor routes are at the bottom of the list or tied for the bottom of the list. Every other proposed route has a higher overall priority. HSR is REQUIRED to follow these priorities and thus cannot even consider the Angeles National Forest or East Corridor alternatives.

5. Use of a "Blended Approach. A recent article in the newspaper stated that the Metrolink line should be coordinating with High Speed Rail and that failure to do so now, at these planning stages, would foreclose that possibility in the future. Metrolink does not go through the Angeles National Forest and any route through the Angeles National Forest/National Monument would preclude any version of a "blended" approach.

For all the reasons stated above and also stated in our prior correspondence the E1, E2, and E3 corridors through the Angeles National Forest must be eliminated from consideration and cannot be included in any E1R/ E1S process.

Very truly yours,

David J. DePinto /WEE

Shadow Hills Property Owners Association
David J. DePinto
President

William E. Eick

Shadow Hills Property Owners Association
William E. Eick
Land Use Chairman

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SAFE Members

ANALYSIS OF ALIGNMENT/ROUTE ELIMINATION
PRESENTED TO
CALIFORNIA HIGH SPEED RAIL AUTHORITY

By Cindy Bloom

REVISED OCTOBER 2015

(Updated to Include June 2015 SAA Report)

SAFE
SAVE ANGELES FOREST FOR EVERYONE
Don't Railroad Our Communities!

SAFE
SAN FERNANDO VALLEY

Contents

INTRODUCTION

The High Speed Rail project in California is one of the most ambitious and largest infrastructure projects ever built in the United States, rivaled only by other iconic projects as the Hoover Dam, the interstate highway system, the transcontinental railroad, and the Golden Gate Bridge. The California High Speed Rail Authority ("CHSRA" or "the Authority"), the governmental agency overseeing the design and construction of the high speed rail train (HSR), was officially created in 1996 by the Legislature and was tasked with preparing a plan and design for the construction of a system to connect the state's major metropolitan areas.

California Statewide Project. The project's budget has ranged from $16.5 billion to $98.1 billion, with the most commonly published budget being $68 billion.

The CHSRA's Operating Sections and spending are broken down into sections as follows[1]:

Section	Cume Length in Miles	From/To	Operational	Cumulative Cost (billions)
IOS	300	Merced to San Fernando Valley	2022	$31
Bay to Basin	410	San Jose and Merced to San Fernando Valley	2026	$51
Phase 1 Blended	**520**	**San Francisco to Los Angeles/Anaheim**	**2028**	**$68**
Phase 2	800	Los Angeles to San Diego Merced to Sacramento		

The Phase 1 Blended Operating Section of 520 miles is broken down into more manageable "project sections":

- San Francisco to San Jose
- San Jose to Merced
- Merced to Sacramento
- Merced to Fresno
- Fresno to Bakersfield
- Bakersfield to Palmdale
- Palmdale to Burbank
- Burbank to Los Angeles
- Los Angeles to Anaheim

Phase 2 is comprised of:

- Los Angeles to San Diego

[1] http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2012EIR.pdf, p. 16

- Merced to Sacramento

Each project section is further broken down into "corridors" (optional), then "alignments," "routes," or "subsections[2]." The items studied for the Authority's "alternative analysis" are:

- Design Objectives
- Disruption to Communities
- Land Use
- Environmental Resources
- Agency and Public Input

Then, these categories are further studied in the Environmental Document (EIR/EIS):

- Aesthetics & Visual Quality
- Agricultural, Farm & Forest Land
- Air Quality & Global Climate Change
- Biological Resources & Wetlands
- Cultural Resources
- Cumulative Impacts
- Electromagnetic Interference/Fields (EMI/EMF)
- Geology, Soils, Seismicity & Paleontology
- Hazardous Materials & Wastes
- Hydrology & Water Resources
- Station Planning, Land Use & Development
- Noise & Vibration
- Parks, Recreation & Open Space
- Public Utilities & Energy
- Regional Growth
- Safety & Security
- Socioeconomics & Communities
- Environmental Justice
- Transportation
- Section 4(f) & Section 6(f) Evaluations

During the EIR/EIS process, which can take up to 5 years, alignments are studied in depth based on multiple criteria in order to ultimately select one alignment[3] which is then constructed. However, it makes no sense to include any alignment in the EIR/EIS process if it is a clearly infeasible choice prior to inclusion in the environmental process review. It is a waste of money, time, and resources.

PURPOSE

The purpose of this report is to analyze the number and reasons why alignments were withdrawn, not carried forward or eliminated within their Project Section. Although the above-referenced categories are roughly followed, this report utilizes more detailed categories to better articulate the rationale for alignment elimination.

METHODOLOGY AND SCOPE

The source for all documents is from CHRSA's website, www.hsr.ca.gov. The search criteria used in order to bring up the pertinent documents were: (1) "reason for elimination"; (2) "reasons for elimination"; (3) "withdrawn"; (4) "withdrawal" (5) "not carried forward"; and (6) "infeasible." Of the approximate 60 documents found that fulfilled the search criteria, after eliminating redundant information, about 35 documents were eventually used as source documents.

[2] Subsections were used primarily in Northern California

[3] If no alignments are deemed satisfactory, then the "no project" alternative is chosen

Each document was studied and the following were input into a spreadsheet:

- Operating Segment
- Alignment
- Reason for Elimination
- Source Document
- Secondary Source Document
- Year of Document
- Remarks

The "Reason for Elimination," although more specific than the overall categories for an EIR/EIS, were standardized in order to perform a more meaningful analysis that could be applied to all alignments. For example, if the source document read, "The residents of CITY NAME and the officials of CITY NAME opposed this alignment," this would then be classified as "Local citizenry and local elected opposition." This standardization of Reasons for Elimination allowed for a tally to be accomplished. Three alignments did not have a reason cited, so they fell into the category of "No reason." This category of "No reason" was included as a reason for analysis purposes as the end result was that an alignment was eliminated from further study.

The data was then organized by Project Section, Alignment, and Reason for Elimination. As would be expected, many alignments were eliminated due to multiple reasons, i.e., cumulative impact, not just for a single reason. However, it was surprising to discover that a significant number of alignments were eliminated for just a single reason. It should be noted that most of the "single reasons" were because the alignment was incompatible with a carried forward design.

The study ranges from 2005 through 2014. Some items of note:

- Over these 10 years, the CHSRA has changed its format of documents and many documents included redundant information, therefore, every effort was made to ensure that each alignment that was eliminated was included only once.
- As Operating Segments were refined due in most part to station options being changed, some of the names changed. For example, "Sylmar to Palmdale" evolved into "Palmdale to Burbank." Again, every effort was used to ensure that each alignment was included only once.
- If an alignment was eliminated due to ridership or revenue concerns, it was not included in this analysis because it is outside the scope and purpose of this report.

ISSUES

1. For the period 2005-2014, how many alignments have been eliminated?
2. What were the reasons for such eliminations?
3. What potential reasons for elimination based on prior alignment withdrawals do alignments E1, E2, and E3 within the Palmdale to Burbank Project Section possess that would qualify them for elimination prior to an EIR/EIS?

ANALYSIS

The following is a summary of number of Project Sections, Eliminated Alignments, and Reasons for Elimination for the period 2005-2014 compared to E1, E2 and E3. The average number of reasons for elimination per alignment ranges depending on the method of calculating the average from 2.0 – 2.7. Based on local experts, including but not limited to, environmental scientists, land use attorneys, and civil engineers in the foothill communities, E1 has 10 compelling reasons for elimination, E2 has 15 compelling reasons for elimination, and E3 has 10 compelling reasons for elimination. Yet, E2, the one alignment with the most reasons for withdrawal from consideration within the Eastern Corridor, is still actually being considered for study by the Authority in an EIR/EIS even though the average number of reasons for elimination average between 2.0 (mode and median) – 2.7 (mean).

AVERAGE NUMBER OF REASONS FOR ELIMINATION PER ALIGNMENT

Item	2005-2014 All Eliminated Alignments	E1	E2	E3
No. of Project Sections	26	n/a	n/a	n/a
No. of Eliminated Alignments	227	n/a	n/a	n/a
Total No. of Unique Reasons for Elimination	64	10	15	10
Total No. of Reasons for Elimination for all Project Sections[4]	612	n/a	n/a	n/a
Average No. Eliminated Alignments/Project Section	8.4	n/a	n/a	n/a
Average No. of Reasons for Elimination per Alignment (mean)[5]	***2.7***	***10***	***15***	***10***
Average No. of Reasons for Elimination per Alignment (median)	***2.0***			
Average No. of Reasons for Elimination per Alignment (mode)	***2.0***			

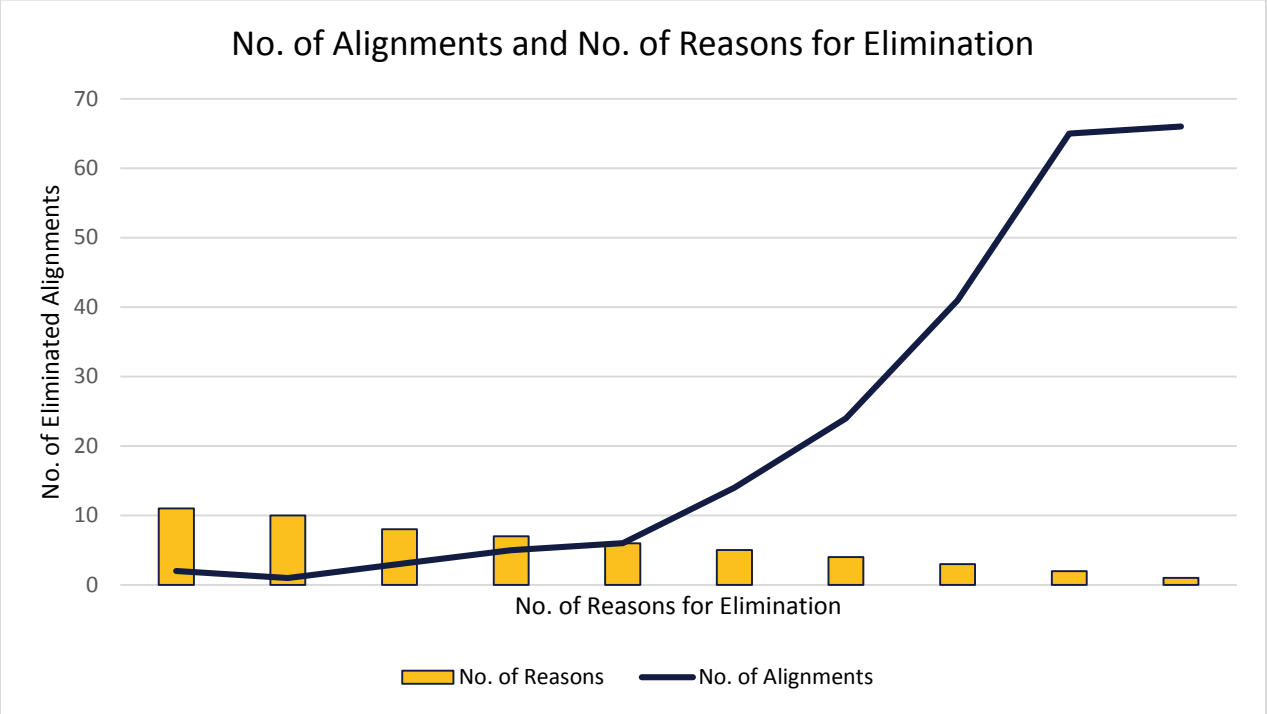
This chart and accompanying graph illustrate the number of eliminated alignments and how many reasons for elimination led to their withdrawal. For example, only 2 alignments were eliminated for 11 reasons, and the majority, 66 (29.1%) were eliminated for only 1 reason.

Sorted by Reasons=Descending			
No. of Reasons	**No. of Alignments**	**%**	**Cume %**
11	2	0.9%	0.9%
10	1	0.4%	1.3%
8	3	1.3%	2.6%

[4] Includes multiple occurrences of the same reason; used to calculate average reasons per alignment

[5] None of the E routes have been eliminated. The number listed represents the number of reasons based on internal studies

Sorted by Reasons=Descending			
No. of Reasons	**No. of Alignments**	**%**	**Cume %**
7	5	2.2%	4.8%
6	6	2.6%	7.5%
5	14	6.2%	13.7%
4	24	10.6%	24.2%
3	41	18.1%	42.3%
2	65	28.6%	70.9%
1	66	29.1%	100.0%
TOTAL ALIGNMENTS	**227**	**100.0%**	



NUMBER OF REASONS FOR ELIMINATION OF ALIGNMENTS SORTED BY FREQUENCY-DESCENDING

This report identified 64 reasons for alignment elimination. The most popular reason was the requirement for additional rights-of-way purchases for businesses, residences, and other property; the top 17 of 64 reasons account for 75% of reasons for elimination.

Other observations follow:

- All Eastern Corridor alignments traverse a sensitive environmental area and the number 2 reason for contributing to an alignment's removal is for negative environmental impacts.
- "Visual impact/scenic resources" ranks as number 6 with 28 instances of contributing to an alignment's withdrawal.
- In light of the fact that all elected officials and residents in the affected areas in or in proximity to alignment E2 are 100% opposed to this route, it was interesting to note that number 13, "Local citizenry and elected official opposition," appeared 14 times as a reason for elimination for previously removed routes.
- The language contained in Proposition 1A of "following transportation corridors" occurred 6 times in eliminating alignments, ranking at number 23.

Rank	Reason for Elimination	No.	%	Cume %
1	Add'l ROW required/displacement of residents/businesses/non-profits	66	10.8%	10.8%
2	Environmental (water, biology [wildlife, plants, birds])	52	8.5%	19.3%
3	Incompatible with existing/proposed transportation	47	7.7%	27.0%
4	High capital cost	44	7.2%	34.2%
5	Construction challenges and/or lengthy schedule	36	5.9%	40.0%
6	Visual impact/scenic resources	28	4.6%	44.6%
7	Community impacts & concerns/cultural impacts	27	4.4%	49.0%
8	Incompatible with existing neighborhoods/planned development	27	4.4%	53.4%
9	Impact to agricultural/farm lands	26	4.2%	57.7%
10	Connectivity issues	15	2.5%	60.1%
11	Seismic concerns	15	2.5%	62.6%
12	Barrier to communities and/or land use/open spaces	14	2.3%	64.9%
13	Local citizenry and elected official opposition	14	2.3%	67.2%
14	New, difficult or intrusive tunnel construction required	14	2.3%	69.4%
15	Encroachment on UPRR parcels or cooperation w/UPRR required	13	2.1%	71.6%
16	Noise/vibration	13	2.1%	73.7%
17	Impact to aquatic resources	12	2.0%	75.7%
18	Incompatible with carried forward design	12	2.0%	77.6%
19	Parkland resources	12	2.0%	79.6%
20	Impact on endangered species/bisection of wilderness lands	10	1.6%	81.2%
21	Extensive reconstruction/relocation	9	1.5%	82.7%
22	Impracticable/redundant construction	9	1.5%	84.2%
23	Will not follow existing transportation corridors/ROWs	6	1.0%	85.1%
24	Construction and maintenance and freeway impact	5	0.8%	85.9%
25	Location too far away from urban core	5	0.8%	86.8%
26	Eliminated in Record of Decision (ROD)	4	0.7%	87.4%
27	EPA and/or other govt officials/agencies rejected and refused	4	0.7%	88.1%
28	Hazardous materials site or risk of encountering hazardous materials during excavation	4	0.7%	88.7%

Rank	Reason for Elimination	No.	%	Cume %
29	Historically and/or culturally significant properties impacted	4	0.7%	89.4%
30	Access issues	3	0.5%	89.9%
31	Aerial crossings of other RR required	3	0.5%	90.4%
32	Costly and complex construction	3	0.5%	90.8%
33	Displaces bike path	3	0.5%	91.3%
34	Excessive road closures	3	0.5%	91.8%
35	Inability to maintain operating speeds	3	0.5%	92.3%
36	Limited LAUS station site alternatives	3	0.5%	92.8%
37	No reason	3	0.5%	93.3%
38	Viaduct height excessive and/or incompatible with surrounding area	3	0.5%	93.8%
39	Archeological site	2	0.3%	94.1%
40	Crosses or encroaches on Angeles National Forest	2	0.3%	94.4%
41	Displaces metrolink station	2	0.3%	94.8%
42	Extensive aerial guideway along freeway(s)	2	0.3%	95.1%
43	Impact on coastal resources	2	0.3%	95.4%
44	Incompatible with UC Riverside Master Plan	2	0.3%	95.8%
45	Land use impacts	2	0.3%	96.1%
46	Major realignment of thoroughfare required	2	0.3%	96.4%
47	Reconstruction issues	2	0.3%	96.7%
48	Tunnel ROW issues	2	0.3%	97.1%
49	Urban environment issues	2	0.3%	97.4%
50	High constructability/ROW risks due to cooperative agreement with UP	2	0.3%	97.7%
51	Aerial alignment over freeways	1	0.2%	97.9%
52	Alignment eliminated	1	0.2%	98.0%
53	Closing major arterials required	1	0.2%	98.2%
54	Dewatering, utility relocation, muck removal at portals, staging area, vibration issues	1	0.2%	98.4%
55	Excessive bridge height/length	1	0.2%	98.5%
56	Impact on open space	1	0.2%	98.7%
57	Impact on Section 4(f) property	1	0.2%	98.9%
58	Impact to parklands	1	0.2%	99.0%
59	Impacts to publicly-owned lands	1	0.2%	99.2%
60	Incompatible with airport/landfill	1	0.2%	99.3%
61	Nature preserves	1	0.2%	99.5%
62	ROW risk in quarry with state-designated mineral resource	1	0.2%	99.7%
63	Slope concerns	1	0.2%	99.8%
64	Subsurface easement issues	1	0.2%	100.0%
	TOTAL	**612**	**100%**	

NUMBER OF REASONS FOR ELIMINATION SORTED BY ALIGNMENT DESCENDING

The following chart ranks the alignments by the number of reasons for elimination in descending order:

Alignment	No. of Reasons
LAP1B West bank option	11
Soledad Canyon	11
LAP1A Viaduct from At-Grade or Elevated LAUS	10
Caltrain Corridor	8
Golden State Blvd/Mixed At-Grade & Elevated/BNSF B9	8
Sand Canyon River Option	8
AV3A	7
Downtown San Jose Subsection	7
Metrolink CMF to SR2 Pacoima Wash PWS	7
Mulford Line	7
SJ Station Approach Subsection-So. Of Caltrain Tracks	7
AV4	6
Golden State Blvd/Elevated/BNSF B3	6
LAUS to Metro CMF LAPT1	6
SJ Station Approach Subsection-Refined program alignment	6
SR14 South	6
UPRR West/Mixed At-Grade & Elevated/BNSF B7	6
Ave 24 to Road 13 Wye	5
Caltrain/Morgan Hill/Foothill/Pacheco Pass	5
Diablo Range-Northern Tunnel	5
Gilroy station loop	5
Hayward/Tunnel/Mulford	5
LAUS to Metro CMF LAPT2	5
Palo Alto 6A	5
San Bernardino/I-215 through Riverside via UC Riverside A1.3	5
San Joaquin Valley Henry Miller to SR 152	5
San Joaquin Valley South of GEA	5
San Joaquin Valley SR 140	5
San Mateo, Belmont, San Carlos, Redwood City 4B(2)-4C	5
UP Niles/Niles Tunnel EBUC-1	5
WPRR/Tunnel/Mulford	5
Atherton and Menlo Park 5B	4
AV2	4
Ave 24 to Road 11 Wye	4
Ave 24 to Road 12 Wye	4

Alignment	No. of Reasons
BNSF A1	4
Burlingame and San Mateo 3A	4
Caltrain/UP Coast Subdivision/ UP Centreville Line EB-1	4
Corcoran Through Town (at-grade) CTT1A	4
East of R-99	4
Golden State Blvd/Elevated/UPRR B6	4
Golden State Blvd/Mixed At-Grade & Elevated/UPRR B12	4
I-280 Alignment	4
LAUS to March Air Reserve Base BNSF Fullerton Line/SR-91	4
Monterey Highway East of Caltrain/UPRR	4
North of GEA	4
Orange County to Oceanside LOSSAN south of Irvine	4
Palo Alto 6B	4
Palo Alto 6C	4
SR-152 (south) to Ave 21 to Road 19 Wye	4
US-101	4
Wasco East Bypass, Through Shafter (at-grade) CTT2C	4
Wasco/Shafter Through Town (at-grade in Wasco, elevated in Shafter) CTT2F	4
Wasco/Shafter Through Town (at-grade) CTT2A	4
Wasco/Shafter Through Town (elevated in Wasco, at-grade in Shafter) CTT2E	4
Atherton and Menlo Park 5C	3
BNSF Hanford West Bypass (mod program alignment) CPAA	3
Coastal Corridor	3
E3: SR-58 median	3
I-10 through Riverside/I-215 via Riverside A3.3	3
I-5	3
I-580 Bay Fair to Pleasanton	3
I-680/I-580 TV-1	3
I-880 Alignment	3
LAUS to Orange County Garden Grove PE ROW at SR-22	3
Metrolink CMF to SR2 In Trench	3
Metrolink CMF to SR2 San Fernando Road in trench	3
Mira Mesa to San Diego I-15 to Coast via SR-52	3
Mira Mesa to San Diego I-15/SR-163 to Santa Fe	3
Monterey Highway Subsection SR 87/85	3
Morgan Hill/Caltrain/Pacheco Pass	3
Mountain View and Sunnyvale 7A	3
Mountain View and Sunnyvale 7B	3
Mountain View and Sunnyvale 7D(1)	3

Alignment	No. of Reasons
Mountain View and Sunnyvale 7D(2)	3
Oceanside to San Diego LOSSAN Corridor	3
Orange County to Oceanside I-5 and Foothill Corridor SR-241	3
San Joaquin Valley Henry Miller to Ave 22	3
San Jose Subsection approach downtown aerial	3
South of Pleasanton/d.t. Livermore	3
SR-152 (north) to Road 11 Wye	3
SR-152 (south) to Ave 21 to SR-99 Wye	3
SR-152 Wye Ave 22	3
SR-152 Wye to A1-BNSF	3
SR-84/South of Livermore	3
Through BNSF yard/Adjacent to Amtrak Station/North of UPRR D1-N	3
TV-3	3
UP Centreville/Niles Junction/Niles Tunnel EBF-1	3
UP San Joaquin River, Stockton TS-2	3
UPRR East/Mixed At-Grade & Elevated/BNSF B8	3
UPRR Fresno South Below Grade D1	3
UPRR to BNSF (99 Station)-Fresno South Below Grade E1	3
UPRR/SR-99 A4	3
Warm Springs to San Jose	3
West of R-99	3
WPRR/Hayward/I-880	3
1B	2
1C	2
2A	2
2C	2
Atherton and Menlo Park 5A	2
Ave 21 to Road 99 Wye	2
BNSF Straight South of Corcoran West 3B	2
BNSF-Hanford East Bypass/Separate East Side Align C3	2
BNSF-Hanford East Bypass/Separate West Side Align C2	2
Brisbane, S SF, San Bruno, Millbrae 2B	2
Brisbane, S SF, San Bruno, Millbrae 2C(1)	2
Caltrain/Morgan Hill/East 101/Pacheco Pass	2
Caltrain/UP Coast Subdivision/South of Grimmer EB-2	2
D2-5	2
Diablo Range-Direct Tunnel	2
Diablo Range-Tunnel under Coe Park & wilderness preserve	2
E99	2

Alignment	No. of Reasons
E99/BNSF	2
Hayward/Niles/Mulford	2
I-5 (2.5% grade)	2
I-605/I-10 to Ontario International Airport via Metro A5	2
I-680,UP ROW tunnel Pleasanton/Livermore	2
I-880 Oakland to Fremont only	2
I-880/UP Warm Springs	2
Lathrop, Adjacent to UP Fresno to Modesto TM-1a	2
LAUS to east of I-605 via UPRR via Redondo Junction above-grade A3.2	2
LAUS to east of I-605 via UPRR via Sixth Street A3.1	2
LAUS to I-605 via land adjacent to the UPRR via Redondo Junction A4.2	2
LAUS to I-605 via land adjacent to the UPRR via Sixth Street A4.1	2
LAUS to LAX I-405 and I-10	2
LAUS to LAX I-405 and I-110	2
LAUS to March Air Reserve Base I-10	2
LAUS to Orange County Anaheim I-5	2
LAUS to Orange County I-5	2
LAUS to Orange County Pacific Electric ROW	2
Morgan Hill to Pacheco Pass	2
Mountain View and Sunnyvale 7C	2
Mulford Line Oakland to Newark only	2
Murrieta/Temecula to SDIA via SR I-15 and I-8 A4	2
NGEA/SR-140	2
Oceanside to San Diego I-5	2
Orange County to Oceanside I-5	2
Orange County to Oceanside San Joaquin River Corridor SR-73 with I05	2
Over BNSF Main Line/One Block South of Amtrak Station/South of UPRR D2-S	2
Panoche Pass	2
Riverside/I-215 through Riverside via Chicago Ave A2.1	2
Riverside/I-215 through Riverside via Iowa Ae A2.2	2
Riverside/I-s15 through Riverside via UC Riverside A2.3	2
San Bernardino/I-215 through Riverside via Iowa Ave A1.2	2
San Jose 9(a)A & 9(a)B	2
San Mateo, Belmont, San Carlos, Redwood City 4D	2
SGEA Wye to A1-BNSF	2
Southern Pacific River Line/WPRR	2
SR-152 (north) to Road 19 Wye	2
SR-163/I-8	2
SR-84/I-580/UPRR	2

Alignment	No. of Reasons
SR-84/Isabel Ave.,Railroad Ave., east of d.t. Livermore	2
Tehachapi Subsection T2	2
Tracy to Stockton T5-2	2
TV-2c	2
UP Fresno through Manteca	2
UPRR to BNSF/Separate East Side Alignment C6	2
UPRR to BNSF/Separate West Side Alignment C5	2
UPRR to BNSF/Shared ROW C4	2
Waso/Shafter/7th Standard Road East Bypass CTT2G	2
2B	1
99 Center Station (south of 198) Alignment CVSB	1
99 North Station (Goshen) Alignment CVSC	1
AA E2A	1
Aqueduct/Soledad Canyon	1
Aqueduct/SR-14	1
BNSF A1-DO4	1
Brisbane, S SF, San Bruno, Millbrae 2C(2)	1
Brisbane, S SF, San Bruno, Millbrae 2D	1
Caltrain/UP Coast Subdivision/South of Cushing/UP Warm Springs EB-3	1
Caltrain/UP Coast Subdivision/South of Grimmer EB-3	1
Corcoran Bypass At Grade CTT1C	1
Corcoran Elevated Through Town CTT1B	1
Diablo Range-Merced Southern	1
Downtown Fresno to Tulare West County W99	1
Downtown Stockton to Modesto West W99	1
East of SR-99	1
Eastern Bypass East of SR-99	1
Fowler/Selma/Kingsburg Greenfield Bypass CBPA	1
Fowler/Selma/Kingsburg Near-Town Bypass CBPB	1
Fresno East to Tulare East County E99	1
I-10 through Riverside via Iowa Ave A3.2	1
I-15 Corridor-Milliken/Hamner to Corona A4.1	1
I-5 Corridor	1
I-5 via Comanche Point	1
I-880 EB-7	1
LAUS San Diego Approach Interstate 10	1
LAUS San Diego Approach Route Route 101	1
LAUS San Diego Approach State Route 60	1
LAUS to March Air Reserve Base I-215/I-15 long tunnel	1

Alignment	No. of Reasons
LAUS to March Air Reserve Base SR-60	1
Merced Castle to Fresno East E99	1
Merced Downtown to Fresno West W99	1
Mira Mesa to San Diego I-15 to SR-163 to Coast	1
Modesto Briggsmore to Merced University	1
Modesto West to Merced Muni Airport W99	1
Murrieta/Temecula to Qualcomm Stadium Terminus via I-15 A5	1
Murrieta/Temecula to SDIA via I-15 to Mira Mesa and LOSSAN Carroll Cyn A2.1	1
Murrieta/Temecula to SDIA via I-15 to Mira Mesa and LOSSAN Rose Cyn A2.3	1
Murrieta/Temecula to SDIA via SR 56 and LOSSAN A1	1
San Jose Subsection approach downtown tunnel	1
San Mateo, Belmont, San Carlos, Redwood City 4A	1
San Mateo, Belmont, San Carlos, Redwood City 4B(1)	1
Sierra Foothills	1
SJ Station Approach Subsection-3 Track	1
SR-138	1
SR-138/SR-14	1
SR14-3	1
SR14-4	1
SR-58/Soledad Canyon (2.5% grade)	1
Tulare East County to Bakersfield Gold State E99	1
Tulare East County to Bakersfield Gold State W99	1
Tunnel Under Fremont Central Park	1
UPRR East elevated through Fresno to BNSF B2	1
UPRR East/Elevated/UPRR B5	1
UPRR East/Mixed At-Grade & Elevated/UPRR B11	1
UPRR from east of I-605 to Ontario International Airport A7	1
UPRR to BNSF (99 Station)-Fresno South Bypass E2	1
UPRR West elevated through Fresno to BNSF B1	1
UPRR West/Elevated/UPRR B4	1
UPRR West/Mixed At-Grade & Elevated/UPRR B10	1
Visalia 198 East Station Alignment CVSA	1
W99	1
West of SR-99	1
Western Alt. West of SR-99	1
WPRR/Niles/Mulford	1
Grand Total	612

NUMBER OF REASONS FOR ELIMINATION GROUPED BY PROJECT SECTION AND ALIGNMENT

The next section reveals, in detail, the reasons why various alignments were eliminated by Project Section and alignment (sorted alphabetically):

Project Section / Alignment	Count
Altamont	**43**
Caltrain/UP Coast Subdivision/ UP Centreville Line EB-1	**4**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Environmental (water, biology [wildlife, plants, birds])	1
Impact on endangered species/bisection of wilderness lands	1
Visual impact/scenic resources	1
Caltrain/UP Coast Subdivision/South of Cushing/UP Warm Springs EB-3	**1**
Environmental (water, biology [wildlife, plants, birds])	1
Caltrain/UP Coast Subdivision/South of Grimmer EB-2	**2**
Environmental (water, biology [wildlife, plants, birds])	1
Impact on endangered species/bisection of wilderness lands	1
Caltrain/UP Coast Subdivision/South of Grimmer EB-3	**1**
Impact on endangered species/bisection of wilderness lands	1
I-680,UP ROW tunnel Pleasanton/Livermore	**2**
High capital cost	1
High constructability/ROW risks due to cooperative agreement with UP	1
I-680/I-580 TV-1	**3**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Extensive reconstruction/relocation	1
Incompatible with existing/proposed transportation	1
I-880 EB-7	**1**
High capital cost	1
I-880/UP Warm Springs	**2**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Environmental (water, biology [wildlife, plants, birds])	1
Lathrop, Adjacent to UP Fresno to Modesto TM-1a	**2**
Environmental (water, biology [wildlife, plants, birds])	1
High capital cost	1
South of Pleasanton/d.t. Livermore	**3**
Construction challenges and/or lengthy schedule	1
Environmental (water, biology [wildlife, plants, birds])	1
ROW risk in quarry with state-designated mineral resource	1
SR-84/Isabel Ave.,Railroad Ave., east of d.t. Livermore	**2**
Environmental (water, biology [wildlife, plants, birds])	1
High constructability/ROW risks due to cooperative agreement with UP	1
Tracy to Stockton T5-2	**2**
Environmental (water, biology [wildlife, plants, birds])	1

Project Section / Alignment	Count
High capital cost	1
TV-2c	**2**
Encroachment on UPRR parcels or cooperation w/UPRR required	1
High capital cost	1
TV-3	**3**
Encroachment on UPRR parcels or cooperation w/UPRR required	1
Environmental (water, biology [wildlife, plants, birds])	1
Impact to agricultural/farm lands	1
UP Centreville/Niles Junction/Niles Tunnel EBF-1	**3**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Environmental (water, biology [wildlife, plants, birds])	1
Impact on endangered species/bisection of wilderness lands	1
UP Fresno through Manteca	**2**
Environmental (water, biology [wildlife, plants, birds])	1
High capital cost	1
UP Niles/Niles Tunnel EBUC-1	**5**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Connectivity issues	1
Environmental (water, biology [wildlife, plants, birds])	1
Incompatible with existing neighborhoods/planned development	1
Visual impact/scenic resources	1
UP San Joaquin River, Stockton TS-2	**3**
Environmental (water, biology [wildlife, plants, birds])	1
High capital cost	1
Impracticable/redundant construction	1
Bakersfield to Los Angeles	**8**
Aqueduct/SR-14	**1**
Seismic concerns	1
I-5 (2.5% grade)	**2**
Environmental (water, biology [wildlife, plants, birds])	1
Seismic concerns	1
LAUS San Diego Approach Interstate 10	**1**
Limited LAUS station site alternatives	1
LAUS San Diego Approach Route Route 101	**1**
Limited LAUS station site alternatives	1
LAUS San Diego Approach State Route 60	**1**
Limited LAUS station site alternatives	1
SR-138/SR-14	**1**
Seismic concerns	1
SR-58/Soledad Canyon (2.5% grade)	**1**

Project Section / Alignment	Count
Seismic concerns	1
Bakersfield to Palmdale	**26**
AA E2A	**1**
Reconstruction issues	1
Aqueduct/Soledad Canyon	**1**
Seismic concerns	1
AV2	**4**
Access issues	1
Construction challenges and/or lengthy schedule	1
Encroachment on UPRR parcels or cooperation w/UPRR required	1
High capital cost	1
AV3A	**7**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Closing major arterials required	1
Displaces bike path	1
Displaces metrolink station	1
Encroachment on UPRR parcels or cooperation w/UPRR required	1
Incompatible with existing neighborhoods/planned development	1
Major realignment of thoroughfare required	1
AV4	**6**
Access issues	1
Add'l ROW required/displacement of residents/businesses/non-profits	1
Displaces metrolink station	1
Encroachment on UPRR parcels or cooperation w/UPRR required	1
Major realignment of thoroughfare required	1
Noise/vibration	1
E3: SR-58 median	**3**
Construction and maintenance and freeway impact	1
High capital cost	1
Reconstruction issues	1
I-5 via Comanche Point	**1**
Seismic concerns	1
SR-138	**1**
Seismic concerns	1
Tehachapi Subsection T2	**2**
New, difficult or intrusive tunnel construction required	1
Slope concerns	1
Bakersfield to San Fernando Valley	**3**
SR14 South	**3**
High capital cost	1

Project Section / Alignment	Count
Incompatible with existing neighborhoods/planned development	1
New, difficult or intrusive tunnel construction required	1
Bay Area to Merced	**2**
Panoche Pass	**2**
Connectivity issues	1
High capital cost	1
Central Valley	**7**
East of R-99	**4**
Environmental (water, biology [wildlife, plants, birds])	1
EPA and/or other govt officials/agencies rejected and refused	1
Impact to agricultural/farm lands	1
Will not follow existing transportation corridors/ROWs	1
West of R-99	**3**
Environmental (water, biology [wildlife, plants, birds])	1
Impact to agricultural/farm lands	1
Will not follow existing transportation corridors/ROWs	1
East Bay to Central Valley	**8**
I-580 Bay Fair to Pleasanton	**3**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction challenges and/or lengthy schedule	1
Incompatible with existing/proposed transportation	1
SR-84/I-580/UPRR	**2**
Environmental (water, biology [wildlife, plants, birds])	1
Impact to agricultural/farm lands	1
SR-84/South of Livermore	**3**
Environmental (water, biology [wildlife, plants, birds])	1
Impact on endangered species/bisection of wilderness lands	1
Impact to agricultural/farm lands	1
Fresno to Bakersfield	**104**
1B	**2**
Inability to maintain operating speeds	1
Land use impacts	1
1C	**2**
Inability to maintain operating speeds	1
Land use impacts	1
2A	**2**
Impact on Section 4(f) property	1
Incompatible with existing neighborhoods/planned development	1
2B	**1**
Incompatible with existing neighborhoods/planned development	1

Project Section / Alignment	Count
2C	**2**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Incompatible with existing neighborhoods/planned development	1
99 Center Station (south of 198) Alignment CVSB	**1**
Incompatible with carried forward design	1
99 North Station (Goshen) Alignment CVSC	**1**
Incompatible with carried forward design	1
BNSF Hanford West Bypass (mod program alignment) CPAA	**3**
Impact to agricultural/farm lands	1
Incompatible with existing neighborhoods/planned development	1
Location too far away from urban core	1
BNSF Straight South of Corcoran West 3B	**2**
Environmental (water, biology [wildlife, plants, birds])	1
Impact to agricultural/farm lands	1
BNSF-Hanford East Bypass/Separate East Side Align C3	**2**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Incompatible with existing neighborhoods/planned development	1
BNSF-Hanford East Bypass/Separate West Side Align C2	**2**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Incompatible with existing neighborhoods/planned development	1
Corcoran Bypass At Grade CTT1C	**1**
Community impacts & concerns/cultural impacts	1
Corcoran Through Town (at-grade) CTT1A	**4**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Barrier to communities and/or land use/open spaces	1
High capital cost	1
Incompatible with existing/proposed transportation	1
D2-5	**2**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Costly and complex construction	1
Fowler/Selma/Kingsburg Greenfield Bypass CBPA	**1**
Incompatible with carried forward design	1
Fowler/Selma/Kingsburg Near-Town Bypass CBPB	**1**
Incompatible with carried forward design	1
Golden State Blvd/Elevated/BNSF B3	**6**
Community impacts & concerns/cultural impacts	1
Hazardous materials site or risk of encountering hazardous materials during excavation	1
High capital cost	1
Local citizenry and elected official opposition	1
Location too far away from urban core	1

Project Section / Alignment	Count
Noise/vibration	1
Golden State Blvd/Elevated/UPRR B6	**4**
Community impacts & concerns/cultural impacts	1
High capital cost	1
Local citizenry and elected official opposition	1
Location too far away from urban core	1
Golden State Blvd/Mixed At-Grade & Elevated/BNSF B9	**8**
Community impacts & concerns/cultural impacts	1
Hazardous materials site or risk of encountering hazardous materials during excavation	1
High capital cost	1
Incompatible with existing neighborhoods/planned development	1
Local citizenry and elected official opposition	1
Location too far away from urban core	1
Noise/vibration	1
Impracticable/redundant construction	1
Golden State Blvd/Mixed At-Grade & Elevated/UPRR B12	**4**
Community impacts & concerns/cultural impacts	1
High capital cost	1
Local citizenry and elected official opposition	1
Location too far away from urban core	1
Over BNSF Main Line/One Block South of Amtrak Station/South of UPRR D2-S	**2**
Incompatible with existing neighborhoods/planned development	1
Impracticable/redundant construction	1
Through BNSF yard/Adjacent to Amtrak Station/North of UPRR D1-N	**3**
Encroachment on UPRR parcels or cooperation w/UPRR required	1
Incompatible with existing neighborhoods/planned development	1
Impracticable/redundant construction	1
UPRR East elevated through Fresno to BNSF B2	**1**
Extensive reconstruction/relocation	1
UPRR East/Elevated/UPRR B5	**1**
Incompatible with carried forward design	1
UPRR East/Mixed At-Grade & Elevated/BNSF B8	**3**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Barrier to communities and/or land use/open spaces	1
Noise/vibration	1
UPRR East/Mixed At-Grade & Elevated/UPRR B11	**1**
Incompatible with carried forward design	1
UPRR Fresno South Below Grade D1	**3**
Community impacts & concerns/cultural impacts	1
Encroachment on UPRR parcels or cooperation w/UPRR required	1

Project Section / Alignment	Count
New, difficult or intrusive tunnel construction required	1
UPRR to BNSF (99 Station)-Fresno South Below Grade E1	**3**
Encroachment on UPRR parcels or cooperation w/UPRR required	1
Environmental (water, biology [wildlife, plants, birds])	1
New, difficult or intrusive tunnel construction required	1
UPRR to BNSF (99 Station)-Fresno South Bypass E2	**1**
Environmental (water, biology [wildlife, plants, birds])	1
UPRR to BNSF/Separate East Side Alignment C6	**2**
Extensive reconstruction/relocation	1
Impact to agricultural/farm lands	1
UPRR to BNSF/Separate West Side Alignment C5	**2**
Extensive reconstruction/relocation	1
Impact to agricultural/farm lands	1
UPRR to BNSF/Shared ROW C4	**2**
Extensive reconstruction/relocation	1
Impact to agricultural/farm lands	1
UPRR West elevated through Fresno to BNSF B1	**1**
High capital cost	1
UPRR West/Elevated/UPRR B4	**1**
Incompatible with carried forward design	1
UPRR West/Mixed At-Grade & Elevated/BNSF B7	**6**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Barrier to communities and/or land use/open spaces	1
Hazardous materials site or risk of encountering hazardous materials during excavation	1
Incompatible with existing neighborhoods/planned development	2
Noise/vibration	1
UPRR West/Mixed At-Grade & Elevated/UPRR B10	**1**
Incompatible with carried forward design	1
Visalia 198 East Station Alignment CVSA	**1**
Incompatible with carried forward design	1
Wasco East Bypass, Through Shafter (at-grade) CTT2C	**4**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Barrier to communities and/or land use/open spaces	1
High capital cost	1
Incompatible with existing/proposed transportation	1
Wasco/Shafter Through Town (at-grade in Wasco, elevated in Shafter) CTT2F	**4**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Barrier to communities and/or land use/open spaces	1
High capital cost	1
Incompatible with existing/proposed transportation	1

Project Section / Alignment	Count
Wasco/Shafter Through Town (at-grade) CTT2A	**4**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Barrier to communities and/or land use/open spaces	1
High capital cost	1
Incompatible with existing/proposed transportation	1
Wasco/Shafter Through Town (elevated in Wasco, at-grade in Shafter) CTT2E	**4**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Barrier to communities and/or land use/open spaces	1
High capital cost	1
Incompatible with existing/proposed transportation	1
Waso/Shafter/7th Standard Road East Bypass CTT2G	**2**
Impact to agricultural/farm lands	1
Incompatible with existing neighborhoods/planned development	1
Corcoran Elevated Through Town CTT1B	**1**
High capital cost	1
Fresno to Tulare	**2**
E99	**1**
Impact to agricultural/farm lands	1
W99	**1**
Impact to agricultural/farm lands	1
Los Angeles to San Diego via Inland Empire	**50**
I-10 through Riverside/I-215 via Riverside A3.3	**3**
Community impacts & concerns/cultural impacts	1
Incompatible with existing/proposed transportation	1
Incompatible with UC Riverside Master Plan	1
I-15 Corridor-Milliken/Hamner to Corona A4.1	**1**
No reason	1
I-605/I-10 to Ontario International Airport via Metro A5	**2**
Encroachment on UPRR parcels or cooperation w/UPRR required	1
Incompatible with existing/proposed transportation	1
LAUS to east of I-605 via UPRR via Redondo Junction above-grade A3.2	**2**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Incompatible with existing/proposed transportation	1
LAUS to east of I-605 via UPRR via Sixth Street A3.1	**2**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Incompatible with existing/proposed transportation	1
LAUS to March Air Reserve Base BNSF Fullerton Line/SR-91	**4**
Community impacts & concerns/cultural impacts	1
Impact to aquatic resources	1
Parkland resources	1

Project Section / Alignment	Count
Visual impact/scenic resources	1
LAUS to March Air Reserve Base I-10	**2**
Construction challenges and/or lengthy schedule	1
Environmental (water, biology [wildlife, plants, birds])	1
LAUS to March Air Reserve Base I-215/I-15 long tunnel	**1**
New, difficult or intrusive tunnel construction required	1
LAUS to March Air Reserve Base SR-60	**1**
Impact to aquatic resources	1
Mira Mesa to San Diego I-15 to Coast via SR-52	**3**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Incompatible with existing neighborhoods/planned development	1
Parkland resources	1
Mira Mesa to San Diego I-15 to SR-163 to Coast	**1**
Urban environment issues	1
Mira Mesa to San Diego I-15/SR-163 to Santa Fe	**3**
Community impacts & concerns/cultural impacts	1
Incompatible with existing neighborhoods/planned development	1
Urban environment issues	1
Murrieta/Temecula to Qualcomm Stadium Terminus via I-15 A5	**1**
Connectivity issues	1
Murrieta/Temecula to SDIA via I-15 to Mira Mesa and LOSSAN Carroll Cyn A2.1	**1**
Impact on endangered species/bisection of wilderness lands	1
Murrieta/Temecula to SDIA via I-15 to Mira Mesa and LOSSAN Rose Cyn A2.3	**1**
Impact on endangered species/bisection of wilderness lands	1
Murrieta/Temecula to SDIA via SR 56 and LOSSAN A1	**1**
Environmental (water, biology [wildlife, plants, birds])	1
Murrieta/Temecula to SDIA via SR I-15 and I-8 A4	**2**
New, difficult or intrusive tunnel construction required	1
Viaduct height excessive and/or incompatible with surrounding area	1
Riverside/I-215 through Riverside via Chicago Ave A2.1	**2**
Aerial crossings of other RR required	1
Encroachment on UPRR parcels or cooperation w/UPRR required	1
Riverside/I-215 through Riverside via Iowa Ae A2.2	**2**
Aerial crossings of other RR required	1
Encroachment on UPRR parcels or cooperation w/UPRR required	1
Riverside/I-s15 through Riverside via UC Riverside A2.3	**2**
Aerial crossings of other RR required	1
Encroachment on UPRR parcels or cooperation w/UPRR required	1
San Bernardino/I-215 through Riverside via Iowa Ave A1.2	**2**
Extensive aerial guideway along freeway(s)	1

Project Section / Alignment	Count
Visual impact/scenic resources	1
San Bernardino/I-215 through Riverside via UC Riverside A1.3	**5**
Community impacts & concerns/cultural impacts	1
Impact to aquatic resources	1
Incompatible with existing/proposed transportation	1
Incompatible with UC Riverside Master Plan	1
Visual impact/scenic resources	1
UPRR from east of I-605 to Ontario International Airport A7	**1**
Incompatible with existing/proposed transportation	1
I-10 through Riverside via Iowa Ave A3.2	**1**
Extensive aerial guideway along freeway(s)	1
LAUS to I-605 via land adjacent to the UPRR via Redondo Junction A4.2	**2**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Incompatible with existing/proposed transportation	1
LAUS to I-605 via land adjacent to the UPRR via Sixth Street A4.1	**2**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Incompatible with existing/proposed transportation	1
Los Angeles to San Diego via Orange County	**29**
LAUS to LAX I-405 and I-10	**2**
Community impacts & concerns/cultural impacts	1
Parkland resources	1
LAUS to LAX I-405 and I-110	**2**
Community impacts & concerns/cultural impacts	1
Parkland resources	1
LAUS to Orange County Anaheim I-5	**2**
Community impacts & concerns/cultural impacts	1
Environmental (water, biology [wildlife, plants, birds])	1
LAUS to Orange County Garden Grove PE ROW at SR-22	**3**
Alignment eliminated	1
Community impacts & concerns/cultural impacts	1
Environmental (water, biology [wildlife, plants, birds])	1
LAUS to Orange County I-5	**2**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction challenges and/or lengthy schedule	1
LAUS to Orange County Pacific Electric ROW	**2**
Connectivity issues	1
Construction challenges and/or lengthy schedule	1
Oceanside to San Diego I-5	**2**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Connectivity issues	1

Project Section / Alignment	Count
Oceanside to San Diego LOSSAN Corridor	**3**
Community impacts & concerns/cultural impacts	1
Impact on coastal resources	1
Visual impact/scenic resources	1
Orange County to Oceanside I-5	**2**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction challenges and/or lengthy schedule	1
Orange County to Oceanside I-5 and Foothill Corridor SR-241	**3**
Construction challenges and/or lengthy schedule	1
Impact on endangered species/bisection of wilderness lands	1
Impact to aquatic resources	1
Orange County to Oceanside LOSSAN south of Irvine	**4**
Community impacts & concerns/cultural impacts	1
Environmental (water, biology [wildlife, plants, birds])	1
Impact on coastal resources	1
Visual impact/scenic resources	1
Orange County to Oceanside San Joaquin River Corridor SR-73 with I05	**2**
Connectivity issues	1
Construction challenges and/or lengthy schedule	1
Los Angeles to San Francisco	**4**
Coastal Corridor	**3**
Community impacts & concerns/cultural impacts	1
High capital cost	1
Visual impact/scenic resources	1
I-5 Corridor	**1**
Connectivity issues	1
Merced to Fresno	**50**
Ave 21 to Road 99 Wye	**2**
Excessive road closures	1
High capital cost	1
Ave 24 to Road 11 Wye	**4**
Community impacts & concerns/cultural impacts	1
Impact to agricultural/farm lands	1
Impact to aquatic resources	1
Local citizenry and elected official opposition	1
Ave 24 to Road 12 Wye	**4**
Community impacts & concerns/cultural impacts	1
Impact to agricultural/farm lands	1
Impact to aquatic resources	1
Local citizenry and elected official opposition	1

Project Section / Alignment	Count
Ave 24 to Road 13 Wye	**5**
Excessive road closures	1
Impact to agricultural/farm lands	2
Impact to aquatic resources	1
Local citizenry and elected official opposition	1
BNSF A1	**4**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Environmental (water, biology [wildlife, plants, birds])	1
High capital cost	1
Local citizenry and elected official opposition	1
BNSF A1-DO4	**1**
Community impacts & concerns/cultural impacts	1
East of SR-99	**1**
Eliminated in Record of Decision (ROD)	1
Eastern Bypass East of SR-99	**1**
Eliminated in Record of Decision (ROD)	1
NGEA/SR-140	**2**
Community impacts & concerns/cultural impacts	1
Environmental (water, biology [wildlife, plants, birds])	1
SGEA Wye to A1-BNSF	**2**
Environmental (water, biology [wildlife, plants, birds])	1
Impracticable/redundant construction	1
Sierra Foothills	**1**
Connectivity issues	1
SR-152 (north) to Road 11 Wye	**3**
Environmental (water, biology [wildlife, plants, birds])	1
Impact to agricultural/farm lands	1
Impact to aquatic resources	1
SR-152 (north) to Road 19 Wye	**2**
Impact to agricultural/farm lands	1
Impact to aquatic resources	1
SR-152 (south) to Ave 21 to Road 19 Wye	**4**
Environmental (water, biology [wildlife, plants, birds])	1
Excessive road closures	1
Impact to agricultural/farm lands	1
Impact to aquatic resources	1
SR-152 (south) to Ave 21 to SR-99 Wye	**3**
High capital cost	1
Impact to agricultural/farm lands	1
Impact to aquatic resources	1

Project Section / Alignment	Count
SR-152 Wye Ave 22	**3**
Incompatible with airport/landfill	1
Incompatible with existing neighborhoods/planned development	1
Incompatible with existing/proposed transportation	1
SR-152 Wye to A1-BNSF	**3**
Community impacts & concerns/cultural impacts	1
High capital cost	1
Impracticable/redundant construction	1
UPRR/SR-99 A4	**3**
Environmental (water, biology [wildlife, plants, birds])	1
High capital cost	1
Local citizenry and elected official opposition	1
West of SR-99	**1**
Eliminated in Record of Decision (ROD)	1
Western Alt. West of SR-99	**1**
Eliminated in Record of Decision (ROD)	1
Mira Mesa to San Diego	**2**
SR-163/I-8	**2**
Construction challenges and/or lengthy schedule	1
Incompatible with existing/proposed transportation	1
Modesto to Merced	**3**
E99	**1**
Impact to agricultural/farm lands	1
E99/BNSF	**2**
Impact to agricultural/farm lands	1
Parkland resources	1
Oakland to San Jose	**4**
I-880 Oakland to Fremont only	**2**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction challenges and/or lengthy schedule	1
Mulford Line Oakland to Newark only	**2**
Barrier to communities and/or land use/open spaces	1
Visual impact/scenic resources	1
Palmdale to Burbank	**2**
SR14-3	**1**
Community impacts & concerns/cultural impacts	1
SR14-4	**1**
Community impacts & concerns/cultural impacts	1
Palmdale to Los Angeles	**53**
LAP1A Viaduct from At-Grade or Elevated LAUS	**10**

Project Section / Alignment	Count
Add'l ROW required/displacement of residents/businesses/non-profits	1
Barrier to communities and/or land use/open spaces	1
Costly and complex construction	1
Displaces bike path	1
Impact to parklands	1
Local citizenry and elected official opposition	1
Noise/vibration	1
Viaduct height excessive and/or incompatible with surrounding area	1
Visual impact/scenic resources	1
Historically and/or culturally significant properties impacted	1
LAP1B West bank option	**11**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Barrier to communities and/or land use/open spaces	1
Costly and complex construction	1
Displaces bike path	1
Hazardous materials site or risk of encountering hazardous materials during excavation	1
Incompatible with existing/proposed transportation	1
Local citizenry and elected official opposition	1
Noise/vibration	1
Viaduct height excessive and/or incompatible with surrounding area	1
Visual impact/scenic resources	1
Historically and/or culturally significant properties impacted	1
LAUS to Metro CMF LAPT1	**6**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction challenges and/or lengthy schedule	1
Incompatible with existing/proposed transportation	1
Local citizenry and elected official opposition	1
Subsurface easement issues	1
Visual impact/scenic resources	1
LAUS to Metro CMF LAPT2	**5**
Barrier to communities and/or land use/open spaces	1
Incompatible with existing/proposed transportation	1
New, difficult or intrusive tunnel construction required	1
Noise/vibration	1
Visual impact/scenic resources	1
Metrolink CMF to SR2 In Trench	**3**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Inability to maintain operating speeds	1
Incompatible with existing/proposed transportation	1
Metrolink CMF to SR2 Pacoima Wash PWS	**7**

Project Section / Alignment	Count
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction and maintenance and freeway impact	1
High capital cost	1
Noise/vibration	1
Seismic concerns	1
Visual impact/scenic resources	1
Impracticable/redundant construction	1
Metrolink CMF to SR2 San Fernando Road in trench	**3**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Incompatible with existing neighborhoods/planned development	1
Parkland resources	1
Sand Canyon River Option	**8**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction challenges and/or lengthy schedule	1
Environmental (water, biology [wildlife, plants, birds])	1
High capital cost	1
Impact to aquatic resources	1
Noise/vibration	1
Visual impact/scenic resources	2
Sacramento to Bakersfield	**9**
Downtown Fresno to Tulare West County W99	**1**
Connectivity issues	1
Downtown Stockton to Modesto West W99	**1**
Connectivity issues	1
Fresno East to Tulare East County E99	**1**
Connectivity issues	1
Merced Castle to Fresno East E99	**1**
Connectivity issues	1
Merced Downtown to Fresno West W99	**1**
Connectivity issues	1
Modesto Briggsmore to Merced University	**1**
Connectivity issues	1
Tulare East County to Bakersfield Gold State E99	**1**
No reason	1
Tulare East County to Bakersfield Gold State W99	**1**
No reason	1
Modesto West to Merced Muni Airport W99	**1**
Connectivity issues	1
Sacramento to Stockton	**1**
Southern Pacific River Line/WPRR	**1**

Project Section / Alignment	Count
Parkland resources	1
San Francisco to San Jose	**104**
Atherton and Menlo Park 5A	**2**
Access issues	1
Incompatible with existing/proposed transportation	1
Atherton and Menlo Park 5B	**4**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction challenges and/or lengthy schedule	1
High capital cost	1
Incompatible with existing/proposed transportation	1
Atherton and Menlo Park 5C	**3**
Construction challenges and/or lengthy schedule	1
High capital cost	1
Incompatible with existing/proposed transportation	1
Brisbane, S SF, San Bruno, Millbrae 2B	**2**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Incompatible with existing/proposed transportation	1
Brisbane, S SF, San Bruno, Millbrae 2C(1)	**2**
Construction challenges and/or lengthy schedule	1
Incompatible with existing/proposed transportation	1
Brisbane, S SF, San Bruno, Millbrae 2C(2)	**1**
Incompatible with carried forward design	1
Brisbane, S SF, San Bruno, Millbrae 2D	**1**
Incompatible with existing/proposed transportation	1
Burlingame and San Mateo 3A	**4**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction challenges and/or lengthy schedule	1
High capital cost	1
Incompatible with carried forward design	1
Caltrain Corridor	**8**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Barrier to communities and/or land use/open spaces	1
Construction challenges and/or lengthy schedule	1
High capital cost	1
Incompatible with existing/proposed transportation	1
New, difficult or intrusive tunnel construction required	1
Visual impact/scenic resources	1
Historically and/or culturally significant properties impacted	1
Hayward/Niles/Mulford	**2**
Environmental (water, biology [wildlife, plants, birds])	1

Project Section / Alignment	Count
Parkland resources	1
Hayward/Tunnel/Mulford	**5**
High capital cost	1
Incompatible with existing neighborhoods/planned development	1
Seismic concerns	1
Tunnel ROW issues	1
Will not follow existing transportation corridors/ROWs	1
I-280 Alignment	**4**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction and maintenance and freeway impact	1
Nature preserves	1
Visual impact/scenic resources	1
I-880 Alignment	**3**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction and maintenance and freeway impact	1
High capital cost	1
Mountain View and Sunnyvale 7A	**3**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction challenges and/or lengthy schedule	1
Incompatible with existing/proposed transportation	1
Mountain View and Sunnyvale 7B	**3**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction challenges and/or lengthy schedule	1
Incompatible with existing/proposed transportation	1
Mountain View and Sunnyvale 7C	**2**
Construction challenges and/or lengthy schedule	1
Incompatible with existing/proposed transportation	1
Mountain View and Sunnyvale 7D(1)	**3**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction challenges and/or lengthy schedule	1
Incompatible with existing/proposed transportation	1
Mountain View and Sunnyvale 7D(2)	**3**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction challenges and/or lengthy schedule	1
Incompatible with existing/proposed transportation	1
Mulford Line	**7**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Environmental (water, biology [wildlife, plants, birds])	1
High capital cost	1
Incompatible with existing/proposed transportation	1

Project Section / Alignment	Count
Local citizenry and elected official opposition	1
Parkland resources	1
Visual impact/scenic resources	1
Palo Alto 6A	**5**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction challenges and/or lengthy schedule	1
Environmental (water, biology [wildlife, plants, birds])	1
High capital cost	1
Incompatible with existing/proposed transportation	1
Palo Alto 6B	**4**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction challenges and/or lengthy schedule	1
High capital cost	1
Incompatible with existing/proposed transportation	1
Palo Alto 6C	**4**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction challenges and/or lengthy schedule	1
High capital cost	1
Incompatible with existing/proposed transportation	1
San Jose 9(a)A & 9(a)B	**2**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction challenges and/or lengthy schedule	1
San Mateo, Belmont, San Carlos, Redwood City 4A	**1**
Impracticable/redundant construction	1
San Mateo, Belmont, San Carlos, Redwood City 4B(1)	**1**
Incompatible with carried forward design	1
San Mateo, Belmont, San Carlos, Redwood City 4B(2)-4C	**5**
Construction challenges and/or lengthy schedule	1
Dewatering, utility relocation, muck removal at portals, staging area, vibration issues	1
High capital cost	1
Incompatible with existing/proposed transportation	1
Impracticable/redundant construction	1
San Mateo, Belmont, San Carlos, Redwood City 4D	**2**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Incompatible with existing/proposed transportation	1
Southern Pacific River Line/WPRR	**1**
Impact to agricultural/farm lands	1
Tunnel Under Fremont Central Park	**1**
Seismic concerns	1
US-101	**4**

Project Section / Alignment	Count
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction and maintenance and freeway impact	1
New, difficult or intrusive tunnel construction required	1
Visual impact/scenic resources	1
Warm Springs to San Jose	**3**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Incompatible with existing/proposed transportation	1
New, difficult or intrusive tunnel construction required	1
WPRR/Hayward/I-880	**3**
Construction challenges and/or lengthy schedule	1
Incompatible with existing/proposed transportation	1
Visual impact/scenic resources	1
WPRR/Niles/Mulford	**1**
Construction challenges and/or lengthy schedule	1
WPRR/Tunnel/Mulford	**5**
High capital cost	1
Incompatible with existing neighborhoods/planned development	1
Seismic concerns	1
Tunnel ROW issues	1
Will not follow existing transportation corridors/ROWs	1
San Jose to Central Valley	**20**
Caltrain/Morgan Hill/East 101/Pacheco Pass	**2**
Incompatible with existing neighborhoods/planned development	1
Incompatible with existing/proposed transportation	1
Caltrain/Morgan Hill/Foothill/Pacheco Pass	**5**
Environmental (water, biology [wildlife, plants, birds])	1
Impact on open space	1
Incompatible with existing neighborhoods/planned development	1
Incompatible with existing/proposed transportation	1
Visual impact/scenic resources	1
Diablo Range-Direct Tunnel	**2**
New, difficult or intrusive tunnel construction required	1
Seismic concerns	1
Diablo Range-Merced Southern	**1**
Environmental (water, biology [wildlife, plants, birds])	1
Diablo Range-Northern Tunnel	**5**
Environmental (water, biology [wildlife, plants, birds])	1
EPA and/or other govt officials/agencies rejected and refused	1
Impact on endangered species/bisection of wilderness lands	1
Seismic concerns	1

Project Section / Alignment	Count
Will not follow existing transportation corridors/ROWs	1
Diablo Range-Tunnel under Coe Park & wilderness preserve	**2**
Environmental (water, biology [wildlife, plants, birds])	1
Local citizenry and elected official opposition	1
Morgan Hill/Caltrain/Pacheco Pass	**3**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Environmental (water, biology [wildlife, plants, birds])	1
Will not follow existing transportation corridors/ROWs	1
San Jose to Merced	**61**
Downtown San Jose Subsection	**7**
Archeological site	2
Construction challenges and/or lengthy schedule	1
Environmental (water, biology [wildlife, plants, birds])	1
Extensive reconstruction/relocation	2
Incompatible with existing neighborhoods/planned development	1
Gilroy station loop	**5**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Community impacts & concerns/cultural impacts	1
Environmental (water, biology [wildlife, plants, birds])	1
High capital cost	1
Visual impact/scenic resources	1
Monterey Highway East of Caltrain/UPRR	**4**
Construction challenges and/or lengthy schedule	1
Environmental (water, biology [wildlife, plants, birds])	1
Extensive reconstruction/relocation	1
Incompatible with existing/proposed transportation	1
Monterey Highway Subsection SR 87/85	**3**
Aerial alignment over freeways	1
Extensive reconstruction/relocation	1
Incompatible with existing/proposed transportation	1
Morgan Hill to Pacheco Pass	**2**
New, difficult or intrusive tunnel construction required	1
Seismic concerns	1
North of GEA	**4**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Environmental (water, biology [wildlife, plants, birds])	1
Impact to agricultural/farm lands	1
Impacts to publicly-owned lands	1
San Joaquin Valley Henry Miller to Ave 22	**3**
Add'l ROW required/displacement of residents/businesses/non-profits	1

Project Section / Alignment	Count
Construction challenges and/or lengthy schedule	1
Environmental (water, biology [wildlife, plants, birds])	1
San Joaquin Valley Henry Miller to SR 152	**5**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Construction challenges and/or lengthy schedule	1
Environmental (water, biology [wildlife, plants, birds])	1
Excessive bridge height/length	1
New, difficult or intrusive tunnel construction required	1
San Joaquin Valley South of GEA	**5**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Environmental (water, biology [wildlife, plants, birds])	1
EPA and/or other govt officials/agencies rejected and refused	1
Impact on endangered species/bisection of wilderness lands	1
Incompatible with existing neighborhoods/planned development	1
San Joaquin Valley SR 140	**5**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Environmental (water, biology [wildlife, plants, birds])	1
EPA and/or other govt officials/agencies rejected and refused	1
Incompatible with existing neighborhoods/planned development	1
Incompatible with existing/proposed transportation	1
San Jose Subsection approach downtown aerial	**3**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Incompatible with existing neighborhoods/planned development	1
Visual impact/scenic resources	1
San Jose Subsection approach downtown tunnel	**1**
Construction challenges and/or lengthy schedule	1
SJ Station Approach Subsection-Refined program alignment	**6**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Community impacts & concerns/cultural impacts	1
Environmental (water, biology [wildlife, plants, birds])	1
Noise/vibration	1
Parkland resources	1
Visual impact/scenic resources	1
SJ Station Approach Subsection-So. Of Caltrain Tracks	**7**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Community impacts & concerns/cultural impacts	1
Environmental (water, biology [wildlife, plants, birds])	1
Noise/vibration	1
Parkland resources	1
Visual impact/scenic resources	1

Project Section / Alignment	Count
Historically and/or culturally significant properties impacted	1
SJ Station Approach Subsection-3 Track	**1**
Incompatible with existing/proposed transportation	1
Sylmar to Los Angeles	**3**
I-5	**3**
Barrier to communities and/or land use/open spaces	1
Parkland resources	1
Visual impact/scenic resources	1
Sylmar to Palmdale	**14**
Soledad Canyon	**11**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Barrier to communities and/or land use/open spaces	1
Construction challenges and/or lengthy schedule	1
Crosses or encroaches on Angeles National Forest	1
Encroachment on UPRR parcels or cooperation w/UPRR required	1
Environmental (water, biology [wildlife, plants, birds])	1
Impact to agricultural/farm lands	1
New, difficult or intrusive tunnel construction required	1
Noise/vibration	1
Seismic concerns	1
Visual impact/scenic resources	1
SR14 South	**3**
Add'l ROW required/displacement of residents/businesses/non-profits	1
Crosses or encroaches on Angeles National Forest	1
High capital cost	1
Grand Total	**612**

PALMDALE TO BURBANK PROJECT SECTION --EASTERN CORRIDOR ALIGNMENTS (E1, E2, E3)

All three of the Eastern Corridor Alignments (E1, E2, and E3) negatively impact the foothill communities with regard to open space, dewatering, community character, and sensitive environmental areas. However, of the three alignments, E2 is by far the most egregious with its unsightly and noise-producing above ground elements that traverse the delicate Tujunga Wash. While E1 and E3 are bad enough with their tunneled construction, E2 is even worse because it is comprised of both tunneled components and above-ground elements, making it the most revolting of the Eastern Corridor routes. Therefore, it should be eliminated prior to even being considered for inclusion in any EIR/EIS document. The most conspicuously atrocious components of its construction are the at-grade and long bridge span over the Tujunga Wash with tunnel

portals at either end. The noise, the visual impact, the impact to wildlife (including endangered species), the dissecting of Lake View Terrace, the intrusiveness to the natural environment including water resources are just a few of the many qualitative reasons identified for it not to be carried forward.

In quantitative terms, E2 stands as follows:

- It has 15 compelling reasons for elimination[6]
- It has 4 more reasons for elimination than the next closest previously eliminated alignments (Soledad Canyon and LAP1B West Bank which both have 11)
- It has 15 reasons versus the 2.7 average per alignment for elimination
- If eliminated, there are 5 remaining alternatives for study in the EIR/EIS (2 within SR-14, E1, E3, "no project alternative).
- Additionally, if the Authority would prudently include the "no Burbank route," (also known as the direct "Palmdale to L.A. Union Station route"), there would be 6 remaining alternatives for inclusion in the EIR/EIS.

Alignment	Count of Reasons for Elimination
Palmdale to Burbank	**35**
E1	**10**
Community impacts & concerns/cultural impacts	1
Costly and complex construction	1
Crosses or encroaches on Angeles National Forest	1
Environmental (water, biology [wildlife, plants, birds])	1
Impact to aquatic resources	1
Local citizenry and elected official opposition	1
New, difficult or intrusive tunnel construction required	1
Noise/vibration	1
Seismic concerns	1
Will not follow existing transportation corridors/ROWs	1
E2	**15**
Barrier to communities and/or land use/open spaces	1
Community impacts & concerns/cultural impacts	1
Costly and complex construction	1
Crosses or encroaches on Angeles National Forest	1
Environmental (water, biology [wildlife, plants, birds])	1
Extensive reconstruction/relocation	1
History of natural disasters	1

[6] Letter from William E. Eick, Esq. dated May 14, 2015

Impact on endangered species/bisection of wilderness lands	1
Impact to aquatic resources	1
Local citizenry and elected official opposition	1
New, difficult or intrusive tunnel construction required	1
Noise/vibration	1
Seismic concerns	1
Visual impact/scenic resources	1
Will not follow existing transportation corridors/ROWs	1
E3	**10**
Community impacts & concerns/cultural impacts	1
Costly and complex construction	1
Crosses or encroaches on Angeles National Forest	1
Environmental (water, biology [wildlife, plants, birds])	1
Impact to aquatic resources	1
Local citizenry and elected official opposition	1
New, difficult or intrusive tunnel construction required	1
Noise/vibration	1
Seismic concerns	1
Will not follow existing transportation corridors/ROWs	1
Grand Total	**35**
Average	**11.7**

Not surprisingly, since all three alignments are geographically close to one another, they share many of the same reasons for elimination:

Palmdale to Burbank
Barrier to communities and/or land use/open spaces
E2
Community impacts & concerns/cultural impacts
E1
E2
E3
Costly and complex construction
E1
E2
E3
Crosses or encroaches on Angeles National Forest
E1
E2
E3

Palmdale to Burbank
Environmental (water, biology [wildlife, plants, birds])
E1
E2
E3
Extensive reconstruction/relocation
E2
History of natural disasters
E2
Impact on endangered species/bisection of wilderness lands
E2
Impact to aquatic resources
E1
E2
E3
Local citizenry and elected official opposition
E1
E2
E3
New, difficult or intrusive tunnel construction required
E1
E2
E3
Noise/vibration
E1
E2
E3
Seismic concerns
E1
E2
E3
Visual impact/scenic resources
E2
Will not follow existing transportation corridors/ROWs
E1
E2
E3

CONCLUSION

This analysis recognizes that alignments are not eliminated based solely on the number of reasons for elimination and that not all reasons are of equal weight. However, it cannot be denied that alignments have been and should be eliminated based on the cumulative impact. All routes in the Eastern Corridor possess this requisite "cumulative impact" for removal.

Moreover, historically alignments were eliminated for far fewer and less compelling reasons than E1, E2, and E3. While the average number of reasons for elimination per alignment range from 2.0 to 2.7, E1 has 10 reasons for elimination, ***E2 has 15 reasons for elimination,*** and E3 has 10 reasons for elimination***.*** It is clear that all of these alignments have a weak basis for inclusion in any EIR/EIS. In particular, E2 is the most infeasible of the three, and needs to be removed immediately from further consideration before entering into an EIR/EIS.

APPENDIX A – ALIGNMENT PRIMARY SOURCE DOCUMENTS

Alignment	Reason for Elimination	Primary Source Document
Caltrain/UP Coast Subdivision/ UP Centreville Line EB-1	Impact on endangered species/bisection of wilderness lands	Altamont Corridor EIR/EIS Appendix A, p. E-3
Caltrain/UP Coast Subdivision/ UP Centreville Line EB-1	Visual impact/scenic resources	Altamont Corridor EIR/EIS Appendix A, p. E-4
Caltrain/UP Coast Subdivision/ UP Centreville Line EB-1	Add'l ROW required/displacement of residents/businesses/non-profits	Altamont Corridor Rail Proj Environ Impact Report/S
Caltrain/UP Coast Subdivision/ UP Centreville Line EB-1	Environmental (water, biology [wildlife, plants, birds])	Altamont Corridor Rail Proj Environ Impact Report/S
Caltrain/UP Coast Subdivision/South of Cushing/UP Warm Springs EB-3	Environmental (water, biology [wildlife, plants, birds])	Altamont Corridor Rail Proj Environ Impact Report/S
Caltrain/UP Coast Subdivision/South of Grimmer EB-2	Impact on endangered species/bisection of wilderness lands	Altamont Corridor EIR/EIS Appendix A, p. E-4
Caltrain/UP Coast Subdivision/South of Grimmer EB-2	Environmental (water, biology [wildlife, plants, birds])	Altamont Corridor Rail Proj Environ Impact Report/S
Caltrain/UP Coast Subdivision/South of Grimmer EB-3	Impact on endangered species/bisection of wilderness lands	Altamont Corridor EIR/EIS Appendix A, p. E-4
I-680,UP ROW tunnel Pleasanton/Livermore	High capital cost	Altamont Corridor Rail Proj Environ Impact Report/S
I-680,UP ROW tunnel Pleasanton/Livermore	High constructability/ROW risks due to cooperative agreement with UP	Altamont Corridor Rail Proj Environ Impact Report/S
I-680/I-580 TV-1	Incompatible with existing/proposed transportation	Altamont Corridor EIR/EIS Appendix A, p. E-13
I-680/I-580 TV-1	Add'l ROW required/displacement of residents/businesses/non-profits	Altamont Corridor Rail Proj Environ Impact Report/S
I-680/I-580 TV-1	Extensive reconstruction/relocation	Altamont Corridor Rail Proj Environ Impact Report/S
I-880 EB-7	High capital cost	Altamont Corridor Rail Proj Environ Impact Report/S
I-880/UP Warm Springs	Add'l ROW required/displacement of residents/businesses/non-profits	Altamont Corridor Rail Proj Environ Impact Report/S
I-880/UP Warm Springs	Environmental (water, biology [wildlife, plants, birds])	Altamont Corridor Rail Proj Environ Impact Report/S
Lathrop, Adjacent to UP Fresno to Modesto TM-1a	Environmental (water, biology [wildlife, plants, birds])	Altamont Corridor Rail Proj Environ Impact Report/S
Lathrop, Adjacent to UP Fresno to Modesto TM-1a	High capital cost	Altamont Corridor Rail Proj Environ Impact Report/S
South of Pleasanton/d.t. Livermore	Construction challenges and/or lengthy schedule	Altamont Corridor Rail Proj Environ Impact Report/S
South of Pleasanton/d.t. Livermore	Environmental (water, biology [wildlife, plants, birds])	Altamont Corridor Rail Proj Environ Impact Report/S
South of Pleasanton/d.t. Livermore	ROW risk in quarry with state-designated mineral resource	Altamont Corridor Rail Project Prelim. AA, February
SR-84/Isabel Ave.,Railroad Ave., east of d.t. Livermore	Environmental (water, biology [wildlife, plants, birds])	Altamont Corridor Rail Proj Environ Impact Report/S
SR-84/Isabel Ave.,Railroad Ave., east of d.t. Livermore	High constructability/ROW risks due to cooperative agreement with UP	Altamont Corridor Rail Proj Environ Impact Report/S
Tracy to Stockton T5-2	Environmental (water, biology [wildlife, plants, birds])	Altamont Corridor Rail Project Prelim. AA, February
Tracy to Stockton T5-2	High capital cost	Altamont Corridor Rail Project Prelim. AA, February
TV-2c	High capital cost	Altamont Corridor EIR/EIS Appendix A, p. E-13
TV-2c	Encroachment on UPRR parcels or cooperation w/UPRR required	Altamont Corridor EIR/EIS Appendix A, p. E-15
TV-3	Encroachment on UPRR parcels or cooperation w/UPRR required	Altamont Corridor EIR/EIS Appendix A, p. E-15
TV-3	Environmental (water, biology [wildlife, plants, birds])	Altamont Corridor EIR/EIS Appendix A, p. E-15
TV-3	Impact to agricultural/farm lands	Altamont Corridor EIR/EIS Appendix A, p. E-16
UP Centreville/Niles Junction/Niles Tunnel EBF-1	Impact on endangered species/bisection of wilderness lands	Altamont Corridor EIR/EIS Appendix A, p. E-7
UP Centreville/Niles Junction/Niles Tunnel EBF-1	Add'l ROW required/displacement of residents/businesses/non-profits	Altamont Corridor Rail Proj Environ Impact Report/S
UP Centreville/Niles Junction/Niles Tunnel EBF-1	Environmental (water, biology [wildlife, plants, birds])	Altamont Corridor Rail Proj Environ Impact Report/S
UP Fresno through Manteca	Environmental (water, biology [wildlife, plants, birds])	Altamont Corridor Rail Project Prelim. AA, February
UP Fresno through Manteca	High capital cost	Altamont Corridor Rail Project Prelim. AA, February
UP Niles/Niles Tunnel EBUC-1	Connectivity issues	Altamont Corridor EIR/EIS Appendix A, p. E-11
UP Niles/Niles Tunnel EBUC-1	Incompatible with existing neighborhoods/planned development	Altamont Corridor EIR/EIS Appendix A, p. E-11
UP Niles/Niles Tunnel EBUC-1	Add'l ROW required/displacement of residents/businesses/non-profits	Altamont Corridor Rail Proj Environ Impact Report/S
UP Niles/Niles Tunnel EBUC-1	Environmental (water, biology [wildlife, plants, birds])	Altamont Corridor Rail Proj Environ Impact Report/S
UP Niles/Niles Tunnel EBUC-1	Visual impact/scenic resources	Altamont Corridor Rail Proj Environ Impact Report/S
UP San Joaquin River, Stockton TS-2	Impracticable/redundant construction	Altamont Corridor EIR/EIS Appendix A, p. E-124
UP San Joaquin River, Stockton TS-2	Environmental (water, biology [wildlife, plants, birds])	Altamont Corridor Rail Proj Environ Impact Report/S
UP San Joaquin River, Stockton TS-2	High capital cost	Altamont Corridor Rail Proj Environ Impact Report/S
Aqueduct/SR-14	Seismic concerns	Staff Report for Final Program for the Final Program
I-5 (2.5% grade)	Seismic concerns	Staff Report for Final Program for the Final Program
I-5 (2.5% grade)	Environmental (water, biology [wildlife, plants, birds])	Staff Report for Final Program for the Final Program
LAUS San Diego Approach Interstate 10	Limited LAUS station site alternatives	Bakersfield to Los Angeles HST Station/Alignment Sc
LAUS San Diego Approach Route Route 101	Limited LAUS station site alternatives	Bakersfield to Los Angeles HST Station/Alignment Sc
LAUS San Diego Approach State Route 60	Limited LAUS station site alternatives	Bakersfield to Los Angeles HST Station/Alignment Sc
SR-138/SR-14	Seismic concerns	Staff Report for Final Program for the Final Program
SR-58/Soledad Canyon (2.5% grade)	Seismic concerns	Staff Report for Final Program for the Final Program
AA E2A	Reconstruction issues	February 2, 2012 Board Meeting Agenda Item #5 da
Aqueduct/Soledad Canyon	Seismic concerns	Preliminary Alternatives Analysis Report Vol. 1 Septe
AV2	Access issues	Preliminary Alternatives Analysis Report Working Dr
AV2	Construction challenges and/or lengthy schedule	Preliminary Alternatives Analysis Report Working Dr
AV2	Encroachment on UPRR parcels or cooperation w/UPRR required	Preliminary Alternatives Analysis Report Working Dr
AV2	High capital cost	Preliminary Alternatives Analysis Report Working Dr
AV3A	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Alternatives Analysis Report Working Dr
AV3A	Closing major arterials required	Preliminary Alternatives Analysis Report Working Dr
AV3A	Displaces bike path	Preliminary Alternatives Analysis Report Working Dr
AV3A	Displaces metrolink station	Preliminary Alternatives Analysis Report Working Dr
AV3A	Encroachment on UPRR parcels or cooperation w/UPRR required	Preliminary Alternatives Analysis Report Working Dr
AV3A	Incompatible with existing neighborhoods/planned development	Preliminary Alternatives Analysis Report Working Dr
AV3A	Major realignment of thoroughfare required	Preliminary Alternatives Analysis Report Working Dr
AV4	Encroachment on UPRR parcels or cooperation w/UPRR required	Preliminary Alternatives Analysis Report Working Dr
AV4	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Alternatives Analysis Report Working Dr
AV4	Major realignment of thoroughfare required	Preliminary Alternatives Analysis Report Working Dr
AV4	Noise/vibration	Preliminary Alternatives Analysis Report Working Dr
AV4	Access issues	Preliminary Alternatives Analysis Report Working Dr

Alignment	Reason for Elimination	Primary Source Document
AV4	Displaces metrolink station	Preliminary Alternatives Analysis Report Working Dr
E3: SR-58 median	Construction and maintenance and freeway impact	Preliminary Alternatives Analysis Report Working Dr
E3: SR-58 median	High capital cost	Preliminary Alternatives Analysis Report Working Dr
E3: SR-58 median	Reconstruction issues	Preliminary Alternatives Analysis Report Working Dr
I-5 via Comanche Point	Seismic concerns	Preliminary Alternatives Analysis Report Vol. 1 Septe
SR-138	Seismic concerns	Preliminary Alternatives Analysis Report Vol. 1 Septe
Tehachapi Subsection T2	Slope concerns	Preliminary Alternatives Analysis Report Vol. 1 Septe
Tehachapi Subsection T2	New, difficult or intrusive tunnel construction required	Preliminary Palmdale to Los Angeles Section Alterna
SR14 South	New, difficult or intrusive tunnel construction required	Conceptual I-5 Corridor Study Bakersfield to San Fer
SR14 South	High capital cost	Conceptual I-5 Corridor Study Bakersfield to San Fer
SR14 South	Incompatible with existing neighborhoods/planned development	Conceptual I-5 Corridor Study Bakersfield to San Fer
Panoche Pass	Connectivity issues	Statewide_EIR_vol3_appendix2H1.archive.pdf, Tabl
Panoche Pass	High capital cost	Statewide_EIR_vol3_appendix2H1.archive.pdf, Tabl
East of R-99	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-11
East of R-99	EPA and/or other govt officials/agencies rejected and refused	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-11
East of R-99	Impact to agricultural/farm lands	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-11
East of R-99	Will not follow existing transportation corridors/ROWs	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-11
West of R-99	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-11
West of R-99	Impact to agricultural/farm lands	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-11
West of R-99	Will not follow existing transportation corridors/ROWs	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-11
I-580 Bay Fair to Pleasanton	Construction challenges and/or lengthy schedule	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-10
I-580 Bay Fair to Pleasanton	Incompatible with existing/proposed transportation	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-10
I-580 Bay Fair to Pleasanton	Add'l ROW required/displacement of residents/businesses/non-profits	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-11
SR-84/I-580/UPRR	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-10
SR-84/I-580/UPRR	Impact to agricultural/farm lands	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-10
SR-84/South of Livermore	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-9
SR-84/South of Livermore	Impact on endangered species/bisection of wilderness lands	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-9
SR-84/South of Livermore	Impact to agricultural/farm lands	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-9
1B	Inability to maintain operating speeds	Letter dated April 21, 2011 from CHSRA attachment
1B	Land use impacts	Letter dated April 21, 2011 from CHSRA attachment
1C	Inability to maintain operating speeds	Letter dated April 21, 2011 from CHSRA attachment
1C	Land use impacts	Letter dated April 21, 2011 from CHSRA attachment
2A	Impact on Section 4(f) property	Letter dated April 21, 2011 from CHSRA attachment
2A	Incompatible with existing neighborhoods/planned development	Letter dated April 21, 2011 from CHSRA attachment
2B	Incompatible with existing neighborhoods/planned development	Letter dated April 21, 2011 from CHSRA attachment
2C	Add'l ROW required/displacement of residents/businesses/non-profits	Letter dated April 21, 2011 from CHSRA attachment
2C	Incompatible with existing neighborhoods/planned development	Letter dated April 21, 2011 from CHSRA attachment
99 Center Station (south of 198) Alignment CVSB	Incompatible with carried forward design	Board Meeting Agenda Item #6 dated May 25, 2010
99 North Station (Goshen) Alignment CVSC	Incompatible with carried forward design	Board Meeting Agenda Item #6 dated May 25, 2010
BNSF Hanford West Bypass (mod program alignment) CPAA	Impact to agricultural/farm lands	Board Meeting Agenda Item #6 dated May 25, 2010
BNSF Hanford West Bypass (mod program alignment) CPAA	Incompatible with existing neighborhoods/planned development	Board Meeting Agenda Item #6 dated May 25, 2010
BNSF Hanford West Bypass (mod program alignment) CPAA	Location too far away from urban core	Board Meeting Agenda Item #6 dated May 25, 2010
BNSF Straight South of Corcoran West 3B	Environmental (water, biology [wildlife, plants, birds])	Letter dated April 21, 2011 from CHSRA attachment
BNSF Straight South of Corcoran West 3B	Impact to agricultural/farm lands	Letter dated April 21, 2011 from CHSRA attachment
BNSF-Hanford East Bypass/Separate East Side Align C3	Add'l ROW required/displacement of residents/businesses/non-profits	Board Meeting Agenda Item #6 dated May 25, 2010
BNSF-Hanford East Bypass/Separate East Side Align C3	Incompatible with existing neighborhoods/planned development	Board Meeting Agenda Item #6 dated May 25, 2010
BNSF-Hanford East Bypass/Separate West Side Align C2	Add'l ROW required/displacement of residents/businesses/non-profits	Board Meeting Agenda Item #6 dated May 25, 2010
BNSF-Hanford East Bypass/Separate West Side Align C2	Incompatible with existing neighborhoods/planned development	Board Meeting Agenda Item #6 dated May 25, 2010
Corcoran Bypass At Grade CTT1C	Community impacts & concerns/cultural impacts	Letter dated April 21, 2011 from CHSRA attachment
Corcoran Elevated Through Town CTT1B	High capital cost	Letter dated April 21, 2011 from CHSRA attachment
Corcoran Through Town (at-grade) CTT1A	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Fresno to Bakersfield AA Volume 1, June
Corcoran Through Town (at-grade) CTT1A	Barrier to communities and/or land use/open spaces	Preliminary Fresno to Bakersfield AA Volume 1, June
Corcoran Through Town (at-grade) CTT1A	High capital cost	Preliminary Fresno to Bakersfield AA Volume 1, June
Corcoran Through Town (at-grade) CTT1A	Incompatible with existing/proposed transportation	Preliminary Fresno to Bakersfield AA Volume 1, June
D2-5	Add'l ROW required/displacement of residents/businesses/non-profits	Letter dated April 21, 2011 from CHSRA attachment
D2-5	Costly and complex construction	Letter dated April 21, 2011 from CHSRA attachment
Fowler/Selma/Kingsburg Greenfield Bypass CBPA	Incompatible with carried forward design	Board Meeting Agenda Item #6 dated May 25, 2010
Fowler/Selma/Kingsburg Near-Town Bypass CBPB	Incompatible with carried forward design	Board Meeting Agenda Item #6 dated May 25, 2010
Golden State Blvd/Elevated/BNSF B3	Community impacts & concerns/cultural impacts	Board Meeting Agenda Item #6 dated May 25, 2010
Golden State Blvd/Elevated/BNSF B3	High capital cost	Board Meeting Agenda Item #6 dated May 25, 2010
Golden State Blvd/Elevated/BNSF B3	Location too far away from urban core	Board Meeting Agenda Item #6 dated May 25, 2010
Golden State Blvd/Elevated/BNSF B3	Local citizenry and elected official opposition	Board Meeting Agenda Item #6 dated May 25, 2010
Golden State Blvd/Elevated/BNSF B3	Hazardous materials site or risk of encountering hazardous materials during excavation	Preliminary Fresno to Bakersfield AA Volume 1, June
Golden State Blvd/Elevated/BNSF B3	Noise/vibration	Preliminary Fresno to Bakersfield AA Volume 1, June
Golden State Blvd/Elevated/UPRR B6	Community impacts & concerns/cultural impacts	Board Meeting Agenda Item #6 dated May 25, 2010
Golden State Blvd/Elevated/UPRR B6	High capital cost	Board Meeting Agenda Item #6 dated May 25, 2010
Golden State Blvd/Elevated/UPRR B6	Location too far away from urban core	Board Meeting Agenda Item #6 dated May 25, 2010
Golden State Blvd/Elevated/UPRR B6	Local citizenry and elected official opposition	Board Meeting Agenda Item #6 dated May 25, 2010
Golden State Blvd/Mixed At-Grade & Elevated/BNSF B9	Community impacts & concerns/cultural impacts	Board Meeting Agenda Item #6 dated May 25, 2010

Alignment	Reason for Elimination	Primary Source Document
Golden State Blvd/Mixed At-Grade & Elevated/BNSF B9	High capital cost	Board Meeting Agenda Item #6 dated May 25, 2010
Golden State Blvd/Mixed At-Grade & Elevated/BNSF B9	Local citizenry and elected official opposition	Board Meeting Agenda Item #6 dated May 25, 2010
Golden State Blvd/Mixed At-Grade & Elevated/BNSF B9	Impracticable/redundant construction	Preliminary Fresno to Bakersfield AA Volume 1, June
Golden State Blvd/Mixed At-Grade & Elevated/BNSF B9	Incompatible with existing neighborhoods/planned development	Preliminary Fresno to Bakersfield AA Volume 1, June
Golden State Blvd/Mixed At-Grade & Elevated/BNSF B9	Hazardous materials site or risk of encountering hazardous materials during excavation	Preliminary Fresno to Bakersfield AA Volume 1, June
Golden State Blvd/Mixed At-Grade & Elevated/BNSF B9	Location too far away from urban core	Preliminary Fresno to Bakersfield AA Volume 1, June
Golden State Blvd/Mixed At-Grade & Elevated/BNSF B9	Noise/vibration	Preliminary Fresno to Bakersfield AA Volume 1, June
Golden State Blvd/Mixed At-Grade & Elevated/UPRR B12	Community impacts & concerns/cultural impacts	Board Meeting Agenda Item #6 dated May 25, 2010
Golden State Blvd/Mixed At-Grade & Elevated/UPRR B12	High capital cost	Board Meeting Agenda Item #6 dated May 25, 2010
Golden State Blvd/Mixed At-Grade & Elevated/UPRR B12	Location too far away from urban core	Board Meeting Agenda Item #6 dated May 25, 2010
Golden State Blvd/Mixed At-Grade & Elevated/UPRR B12	Local citizenry and elected official opposition	Board Meeting Agenda Item #6 dated May 25, 2010
Over BNSF Main Line/One Block South of Amtrak Station/South of UPRR D2-S	Impracticable/redundant construction	Preliminary Fresno to Bakersfield AA Volume 1, June
Over BNSF Main Line/One Block South of Amtrak Station/South of UPRR D2-S	Incompatible with existing neighborhoods/planned development	Preliminary Fresno to Bakersfield AA Volume 1, June
Through BNSF yard/Adjacent to Amtrak Station/North of UPRR D1-N	Encroachment on UPRR parcels or cooperation w/UPRR required	Preliminary Fresno to Bakersfield AA Volume 1, June
Through BNSF yard/Adjacent to Amtrak Station/North of UPRR D1-N	Impracticable/redundant construction	Preliminary Fresno to Bakersfield AA Volume 1, June
Through BNSF yard/Adjacent to Amtrak Station/North of UPRR D1-N	Incompatible with existing neighborhoods/planned development	Preliminary Fresno to Bakersfield AA Volume 1, June
UPRR East elevated through Fresno to BNSF B2	Extensive reconstruction/relocation	Letter dated April 21, 2011 from CHSRA attachment
UPRR East/Elevated/UPRR B5	Incompatible with carried forward design	Board Meeting Agenda Item #6 dated May 25, 2010
UPRR East/Mixed At-Grade & Elevated/BNSF B8	Add'l ROW required/displacement of residents/businesses/non-profits	Board Meeting Agenda Item #6 dated May 25, 2010
UPRR East/Mixed At-Grade & Elevated/BNSF B8	Barrier to communities and/or land use/open spaces	Board Meeting Agenda Item #6 dated May 25, 2010
UPRR East/Mixed At-Grade & Elevated/BNSF B8	Noise/vibration	Board Meeting Agenda Item #6 dated May 25, 2010
UPRR East/Mixed At-Grade & Elevated/UPRR B11	Incompatible with carried forward design	Board Meeting Agenda Item #6 dated May 25, 2010
UPRR Fresno South Below Grade D1	Community impacts & concerns/cultural impacts	Letter dated April 21, 2011 from CHSRA attachment
UPRR Fresno South Below Grade D1	Encroachment on UPRR parcels or cooperation w/UPRR required	Letter dated April 21, 2011 from CHSRA attachment
UPRR Fresno South Below Grade D1	New, difficult or intrusive tunnel construction required	Letter dated April 21, 2011 from CHSRA attachment
UPRR to BNSF (99 Station)-Fresno South Below Grade E1	Encroachment on UPRR parcels or cooperation w/UPRR required	Letter dated April 21, 2011 from CHSRA attachment
UPRR to BNSF (99 Station)-Fresno South Below Grade E1	Environmental (water, biology [wildlife, plants, birds])	Letter dated April 21, 2011 from CHSRA attachment
UPRR to BNSF (99 Station)-Fresno South Below Grade E1	New, difficult or intrusive tunnel construction required	Letter dated April 21, 2011 from CHSRA attachment
UPRR to BNSF (99 Station)-Fresno South Bypass E2	Environmental (water, biology [wildlife, plants, birds])	Letter dated April 21, 2011 from CHSRA attachment
UPRR to BNSF/Separate East Side Alignment C6	Extensive reconstruction/relocation	Board Meeting Agenda Item #6 dated May 25, 2010
UPRR to BNSF/Separate East Side Alignment C6	Impact to agricultural/farm lands	Board Meeting Agenda Item #6 dated May 25, 2010
UPRR to BNSF/Separate West Side Alignment C5	Extensive reconstruction/relocation	Board Meeting Agenda Item #6 dated May 25, 2010
UPRR to BNSF/Separate West Side Alignment C5	Impact to agricultural/farm lands	Board Meeting Agenda Item #6 dated May 25, 2010
UPRR to BNSF/Shared ROW C4	Extensive reconstruction/relocation	Board Meeting Agenda Item #6 dated May 25, 2010
UPRR to BNSF/Shared ROW C4	Impact to agricultural/farm lands	Board Meeting Agenda Item #6 dated May 25, 2010
UPRR West elevated through Fresno to BNSF B1	High capital cost	Letter dated April 21, 2011 from CHSRA attachment
UPRR West/Elevated/UPRR B4	Incompatible with carried forward design	Board Meeting Agenda Item #6 dated May 25, 2010
UPRR West/Mixed At-Grade & Elevated/BNSF B7	Add'l ROW required/displacement of residents/businesses/non-profits	Board Meeting Agenda Item #6 dated May 25, 2010
UPRR West/Mixed At-Grade & Elevated/BNSF B7	Barrier to communities and/or land use/open spaces	Board Meeting Agenda Item #6 dated May 25, 2010
UPRR West/Mixed At-Grade & Elevated/BNSF B7	Noise/vibration	Board Meeting Agenda Item #6 dated May 25, 2010
UPRR West/Mixed At-Grade & Elevated/BNSF B7	Barrier to communities and/or land use/open spaces	Preliminary Fresno to Bakersfield AA Volume 1, June
UPRR West/Mixed At-Grade & Elevated/BNSF B7	Hazardous materials site or risk of encountering hazardous materials during excavation	Preliminary Fresno to Bakersfield AA Volume 1, June
UPRR West/Mixed At-Grade & Elevated/BNSF B7	Incompatible with existing neighborhoods/planned development	Preliminary Fresno to Bakersfield AA Volume 1, June
UPRR West/Mixed At-Grade & Elevated/UPRR B10	Incompatible with carried forward design	Board Meeting Agenda Item #6 dated May 25, 2010
Visalia 198 East Station Alignment CVSA	Incompatible with carried forward design	Board Meeting Agenda Item #6 dated May 25, 2010
Wasco East Bypass, Through Shafter (at-grade) CTT2C	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Fresno to Bakersfield AA Volume 1, June
Wasco East Bypass, Through Shafter (at-grade) CTT2C	Barrier to communities and/or land use/open spaces	Preliminary Fresno to Bakersfield AA Volume 1, June
Wasco East Bypass, Through Shafter (at-grade) CTT2C	High capital cost	Preliminary Fresno to Bakersfield AA Volume 1, June
Wasco East Bypass, Through Shafter (at-grade) CTT2C	Incompatible with existing/proposed transportation	Preliminary Fresno to Bakersfield AA Volume 1, June
Wasco/Shafter Through Town (at-grade in Wasco, elevated in Shafter) CTT2F	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Fresno to Bakersfield AA Volume 1, June
Wasco/Shafter Through Town (at-grade in Wasco, elevated in Shafter) CTT2F	Barrier to communities and/or land use/open spaces	Preliminary Fresno to Bakersfield AA Volume 1, June
Wasco/Shafter Through Town (at-grade in Wasco, elevated in Shafter) CTT2F	High capital cost	Preliminary Fresno to Bakersfield AA Volume 1, June
Wasco/Shafter Through Town (at-grade in Wasco, elevated in Shafter) CTT2F	Incompatible with existing/proposed transportation	Preliminary Fresno to Bakersfield AA Volume 1, June
Wasco/Shafter Through Town (at-grade) CTT2A	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Fresno to Bakersfield AA Volume 1, June
Wasco/Shafter Through Town (at-grade) CTT2A	Barrier to communities and/or land use/open spaces	Preliminary Fresno to Bakersfield AA Volume 1, June
Wasco/Shafter Through Town (at-grade) CTT2A	High capital cost	Preliminary Fresno to Bakersfield AA Volume 1, June
Wasco/Shafter Through Town (at-grade) CTT2A	Incompatible with existing/proposed transportation	Preliminary Fresno to Bakersfield AA Volume 1, June
Wasco/Shafter Through Town (elevated in Wasco, at-grade in Shafter) CTT2E	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Fresno to Bakersfield AA Volume 1, June
Wasco/Shafter Through Town (elevated in Wasco, at-grade in Shafter) CTT2E	Barrier to communities and/or land use/open spaces	Preliminary Fresno to Bakersfield AA Volume 1, June
Wasco/Shafter Through Town (elevated in Wasco, at-grade in Shafter) CTT2E	High capital cost	Preliminary Fresno to Bakersfield AA Volume 1, June
Wasco/Shafter Through Town (elevated in Wasco, at-grade in Shafter) CTT2E	Incompatible with existing/proposed transportation	Preliminary Fresno to Bakersfield AA Volume 1, June
Waso/Shafter/7th Standard Road East Bypass CTT2G	Impact to agricultural/farm lands	Preliminary Fresno to Bakersfield AA Volume 1, June
Waso/Shafter/7th Standard Road East Bypass CTT2G	Incompatible with existing neighborhoods/planned development	Preliminary Fresno to Bakersfield AA Volume 1, June
E99	Impact to agricultural/farm lands	Staff Report for Final Program for the Final Program
W99	Impact to agricultural/farm lands	Staff Report for Final Program for the Final Program
I-10 through Riverside/I-215 via Riverside A3.3	Incompatible with existing/proposed transportation	Los Angeles to San Diego via the Inland Empire Preli
I-10 through Riverside/I-215 via Riverside A3.3	Incompatible with UC Riverside Master Plan	Los Angeles to San Diego via the Inland Empire Preli
I-10 through Riverside/I-215 via Riverside A3.3	Community impacts & concerns/cultural impacts	Los Angeles to San Diego via the Inland Empire Preli
I-10 through Riverside via Iowa Ave A3.2	Extensive aerial guideway along freeway(s)	Los Angeles to San Diego via the Inland Empire Preli

Alignment	Reason for Elimination	Primary Source Document
I-15 Corridor-Milliken/Hamner to Corona A4.1	No reason	Los Angeles to San Diego via the Inland Empire Preli
I-605/I-10 to Ontario International Airport via Metro A5	Incompatible with existing/proposed transportation	Los Angeles to San Diego via the Inland Empire Preli
I-605/I-10 to Ontario International Airport via Metro A5	Encroachment on UPRR parcels or cooperation w/UPRR required	Los Angeles to San Diego via the Inland Empire Preli
LAUS to east of I-605 via UPRR via Redondo Junction above-grade A3.2	Incompatible with existing/proposed transportation	Los Angeles to San Diego via the Inland Empire Preli
LAUS to east of I-605 via UPRR via Redondo Junction above-grade A3.2	Add'l ROW required/displacement of residents/businesses/non-profits	Los Angeles to San Diego via the Inland Empire Preli
LAUS to east of I-605 via UPRR via Sixth Street A3.1	Incompatible with existing/proposed transportation	Los Angeles to San Diego via the Inland Empire Preli
LAUS to east of I-605 via UPRR via Sixth Street A3.1	Add'l ROW required/displacement of residents/businesses/non-profits	Los Angeles to San Diego via the Inland Empire Preli
LAUS to I-605 via land adjacent to the UPRR via Redondo Junction A4.2	Incompatible with existing/proposed transportation	Los Angeles to San Diego via the Inland Empire Preli
LAUS to I-605 via land adjacent to the UPRR via Redondo Junction A4.2	Add'l ROW required/displacement of residents/businesses/non-profits	Los Angeles to San Diego via the Inland Empire Preli
LAUS to I-605 via land adjacent to the UPRR via Sixth Street A4.1	Incompatible with existing/proposed transportation	Los Angeles to San Diego via the Inland Empire Preli
LAUS to I-605 via land adjacent to the UPRR via Sixth Street A4.1	Add'l ROW required/displacement of residents/businesses/non-profits	Los Angeles to San Diego via the Inland Empire Preli
LAUS to March Air Reserve Base BNSF Fullerton Line/SR-91	Impact to aquatic resources	Staff Report for Final Program for the Final Program
LAUS to March Air Reserve Base BNSF Fullerton Line/SR-91	Visual impact/scenic resources	Staff Report for Final Program for the Final Program
LAUS to March Air Reserve Base BNSF Fullerton Line/SR-91	Parkland resources	Staff Report for Final Program for the Final Program
LAUS to March Air Reserve Base BNSF Fullerton Line/SR-91	Community impacts & concerns/cultural impacts	Staff Report for Final Program for the Final Program
LAUS to March Air Reserve Base I-10	Construction challenges and/or lengthy schedule	Staff Report for Final Program for the Final Program
LAUS to March Air Reserve Base I-10	Environmental (water, biology [wildlife, plants, birds])	Staff Report for Final Program for the Final Program
LAUS to March Air Reserve Base I-215/I-15 long tunnel	New, difficult or intrusive tunnel construction required	Bakersfield to Los Angeles HST Station/Alignment Sc
LAUS to March Air Reserve Base SR-60	Impact to aquatic resources	Staff Report for Final Program for the Final Program
Mira Mesa to San Diego I-15 to Coast via SR-52	Add'l ROW required/displacement of residents/businesses/non-profits	Bakersfield to Los Angeles HST Station/Alignment Sc
Mira Mesa to San Diego I-15 to Coast via SR-52	Incompatible with existing neighborhoods/planned development	Bakersfield to Los Angeles HST Station/Alignment Sc
Mira Mesa to San Diego I-15 to Coast via SR-52	Parkland resources	Bakersfield to Los Angeles HST Station/Alignment Sc
Mira Mesa to San Diego I-15 to SR-163 to Coast	Urban environment issues	Bakersfield to Los Angeles HST Station/Alignment Sc
Mira Mesa to San Diego I-15/SR-163 to Santa Fe	Incompatible with existing neighborhoods/planned development	Bakersfield to Los Angeles HST Station/Alignment Sc
Mira Mesa to San Diego I-15/SR-163 to Santa Fe	Urban environment issues	Bakersfield to Los Angeles HST Station/Alignment Sc
Mira Mesa to San Diego I-15/SR-163 to Santa Fe	Community impacts & concerns/cultural impacts	Bakersfield to Los Angeles HST Station/Alignment Sc
Murrieta/Temecula to Qualcomm Stadium Terminus via I-15 A5	Connectivity issues	Los Angeles to San Diego via the Inland Empire Preli
Murrieta/Temecula to SDIA via I-15 to Mira Mesa and LOSSAN Carroll Cyn A2.1	Impact on endangered species/bisection of wilderness lands	Los Angeles to San Diego via the Inland Empire Preli
Murrieta/Temecula to SDIA via I-15 to Mira Mesa and LOSSAN Rose Cyn A2.3	Impact on endangered species/bisection of wilderness lands	Los Angeles to San Diego via the Inland Empire Preli
Murrieta/Temecula to SDIA via SR 56 and LOSSAN A1	Environmental (water, biology [wildlife, plants, birds])	Los Angeles to San Diego via the Inland Empire Preli
Murrieta/Temecula to SDIA via SR I-15 and I-8 A4	New, difficult or intrusive tunnel construction required	Los Angeles to San Diego via the Inland Empire Preli
Murrieta/Temecula to SDIA via SR I-15 and I-8 A4	Viaduct height excessive and/or incompatible with surrounding area	Los Angeles to San Diego via the Inland Empire Preli
Riverside/I-215 through Riverside via Chicago Ave A2.1	Encroachment on UPRR parcels or cooperation w/UPRR required	Los Angeles to San Diego via the Inland Empire Preli
Riverside/I-215 through Riverside via Chicago Ave A2.1	Aerial crossings of other RR required	Los Angeles to San Diego via the Inland Empire Preli
Riverside/I-215 through Riverside via Iowa Ae A2.2	Encroachment on UPRR parcels or cooperation w/UPRR required	Los Angeles to San Diego via the Inland Empire Preli
Riverside/I-215 through Riverside via Iowa Ae A2.2	Aerial crossings of other RR required	Los Angeles to San Diego via the Inland Empire Preli
Riverside/I-s15 through Riverside via UC Riverside A2.3	Encroachment on UPRR parcels or cooperation w/UPRR required	Los Angeles to San Diego via the Inland Empire Preli
Riverside/I-s15 through Riverside via UC Riverside A2.3	Aerial crossings of other RR required	Los Angeles to San Diego via the Inland Empire Preli
San Bernardino/I-215 through Riverside via Iowa Ave A1.2	Extensive aerial guideway along freeway(s)	Los Angeles to San Diego via the Inland Empire Preli
San Bernardino/I-215 through Riverside via Iowa Ave A1.2	Visual impact/scenic resources	Los Angeles to San Diego via the Inland Empire Preli
San Bernardino/I-215 through Riverside via UC Riverside A1.3	Incompatible with existing/proposed transportation	Los Angeles to San Diego via the Inland Empire Preli
San Bernardino/I-215 through Riverside via UC Riverside A1.3	Incompatible with UC Riverside Master Plan	Los Angeles to San Diego via the Inland Empire Preli
San Bernardino/I-215 through Riverside via UC Riverside A1.3	Visual impact/scenic resources	Los Angeles to San Diego via the Inland Empire Preli
San Bernardino/I-215 through Riverside via UC Riverside A1.3	Community impacts & concerns/cultural impacts	Los Angeles to San Diego via the Inland Empire Preli
San Bernardino/I-215 through Riverside via UC Riverside A1.3	Impact to aquatic resources	Los Angeles to San Diego via the Inland Empire Preli
UPRR from east of I-605 to Ontario International Airport A7	Incompatible with existing/proposed transportation	Los Angeles to San Diego via the Inland Empire Preli
LAUS to LAX I-405 and I-10	Community impacts & concerns/cultural impacts	Staff Report for Final Program for the Final Program
LAUS to LAX I-405 and I-10	Parkland resources	Staff Report for Final Program for the Final Program
LAUS to LAX I-405 and I-110	Community impacts & concerns/cultural impacts	Staff Report for Final Program for the Final Program
LAUS to LAX I-405 and I-110	Parkland resources	Staff Report for Final Program for the Final Program
LAUS to Orange County Anaheim I-5	Community impacts & concerns/cultural impacts	Statewide_final_EIR_vol1ch2_part7.pdf, p. 2-81
LAUS to Orange County Anaheim I-5	Environmental (water, biology [wildlife, plants, birds])	Statewide_final_EIR_vol1ch2_part7.pdf, p. 2-81
LAUS to Orange County Garden Grove PE ROW at SR-22	Community impacts & concerns/cultural impacts	Statewide_final_EIR_vol1ch2_part7.pdf, p. 2-81
LAUS to Orange County Garden Grove PE ROW at SR-22	Environmental (water, biology [wildlife, plants, birds])	Statewide_final_EIR_vol1ch2_part7.pdf, p. 2-81
LAUS to Orange County Garden Grove PE ROW at SR-22	Alignment eliminated	Statewide_final_EIR_vol1ch2_part7.pdf, p. 2-81
LAUS to Orange County I-5	Construction challenges and/or lengthy schedule	Staff Report for Final Program for the Final Program
LAUS to Orange County I-5	Add'l ROW required/displacement of residents/businesses/non-profits	Staff Report for Final Program for the Final Program
LAUS to Orange County Pacific Electric ROW	Construction challenges and/or lengthy schedule	Staff Report for Final Program for the Final Program
LAUS to Orange County Pacific Electric ROW	Connectivity issues	Staff Report for Final Program for the Final Program
Oceanside to San Diego I-5	Add'l ROW required/displacement of residents/businesses/non-profits	Staff Report for Final Program for the Final Program
Oceanside to San Diego I-5	Connectivity issues	Staff Report for Final Program for the Final Program
Oceanside to San Diego LOSSAN Corridor	Visual impact/scenic resources	Staff Report for Final Program for the Final Program
Oceanside to San Diego LOSSAN Corridor	Community impacts & concerns/cultural impacts	Staff Report for Final Program for the Final Program
Oceanside to San Diego LOSSAN Corridor	Impact on coastal resources	Staff Report for Final Program for the Final Program
Orange County to Oceanside I-5	Construction challenges and/or lengthy schedule	Staff Report for Final Program for the Final Program
Orange County to Oceanside I-5	Add'l ROW required/displacement of residents/businesses/non-profits	Staff Report for Final Program for the Final Program
Orange County to Oceanside I-5 and Foothill Corridor SR-241	Construction challenges and/or lengthy schedule	Staff Report for Final Program for the Final Program
Orange County to Oceanside I-5 and Foothill Corridor SR-241	Impact to aquatic resources	Staff Report for Final Program for the Final Program
Orange County to Oceanside I-5 and Foothill Corridor SR-241	Impact on endangered species/bisection of wilderness lands	Staff Report for Final Program for the Final Program

Alignment	Reason for Elimination	Primary Source Document
Orange County to Oceanside LOSSAN south of Irvine	Visual impact/scenic resources	Staff Report for Final Program for the Final Program
Orange County to Oceanside LOSSAN south of Irvine	Community impacts & concerns/cultural impacts	Staff Report for Final Program for the Final Program
Orange County to Oceanside LOSSAN south of Irvine	Environmental (water, biology [wildlife, plants, birds])	Staff Report for Final Program for the Final Program
Orange County to Oceanside LOSSAN south of Irvine	Impact on coastal resources	Staff Report for Final Program for the Final Program
Orange County to Oceanside San Joaquin River Corridor SR-73 with I05	Construction challenges and/or lengthy schedule	Staff Report for Final Program for the Final Program
Orange County to Oceanside San Joaquin River Corridor SR-73 with I05	Connectivity issues	Staff Report for Final Program for the Final Program
Coastal Corridor	High capital cost	Statewide_EIR_vol3_appendix2H1.archive.pdf, Tabl
Coastal Corridor	Visual impact/scenic resources	Statewide_EIR_vol3_appendix2H1.archive.pdf, Tabl
Coastal Corridor	Community impacts & concerns/cultural impacts	Statewide_EIR_vol3_appendix2H1.archive.pdf, Tabl
I-5 Corridor	Connectivity issues	Statewide_EIR_vol3_appendix2H1.archive.pdf, Tabl
Ave 21 to Road 99 Wye	Excessive road closures	Supplemental Alternatives Analysis Report Merced t
Ave 21 to Road 99 Wye	High capital cost	Supplemental Alternatives Analysis Report Merced t
Ave 24 to Road 11 Wye	Community impacts & concerns/cultural impacts	Supplemental Alternatives Analysis Report Merced t
Ave 24 to Road 11 Wye	Impact to agricultural/farm lands	Supplemental Alternatives Analysis Report Merced t
Ave 24 to Road 11 Wye	Impact to aquatic resources	Supplemental Alternatives Analysis Report Merced t
Ave 24 to Road 11 Wye	Local citizenry and elected official opposition	Supplemental Alternatives Analysis Report Merced t
Ave 24 to Road 12 Wye	Community impacts & concerns/cultural impacts	Supplemental Alternatives Analysis Report Merced t
Ave 24 to Road 12 Wye	Impact to agricultural/farm lands	Supplemental Alternatives Analysis Report Merced t
Ave 24 to Road 12 Wye	Impact to aquatic resources	Supplemental Alternatives Analysis Report Merced t
Ave 24 to Road 12 Wye	Local citizenry and elected official opposition	Supplemental Alternatives Analysis Report Merced t
Ave 24 to Road 13 Wye	Impact to agricultural/farm lands	Supplemental Alternatives Analysis Report Merced t
Ave 24 to Road 13 Wye	Excessive road closures	Supplemental Alternatives Analysis Report Merced t
Ave 24 to Road 13 Wye	Impact to aquatic resources	Supplemental Alternatives Analysis Report Merced t
Ave 24 to Road 13 Wye	Local citizenry and elected official opposition	Supplemental Alternatives Analysis Report Merced t
BNSF A1	Add'l ROW required/displacement of residents/businesses/non-profits	Merced to Fresno Section AA:FRA Workshop Octobe
BNSF A1	Environmental (water, biology [wildlife, plants, birds])	Merced to Fresno Section AA:FRA Workshop Octobe
BNSF A1	High capital cost	Merced to Fresno Section AA:FRA Workshop Octobe
BNSF A1	Local citizenry and elected official opposition	Merced to Fresno Section AA:FRA Workshop Octobe
BNSF A1-DO4	Community impacts & concerns/cultural impacts	Merced to Fresno Prelim AA April 2010, p. 21
East of SR-99	Eliminated in Record of Decision (ROD)	Merced to Fresno Prelim AA April 2010, p. 10
Eastern Bypass East of SR-99	Eliminated in Record of Decision (ROD)	Merced to Fresno Prelim AA April 2010, p. 9
NGEA/SR-140	Community impacts & concerns/cultural impacts	Merced to Fresno Prelim AA April 2010, p. 22
NGEA/SR-140	Environmental (water, biology [wildlife, plants, birds])	Merced to Fresno Prelim AA April 2010, p. 22
SGEA Wye to A1-BNSF	Environmental (water, biology [wildlife, plants, birds])	Merced to Fresno Prelim AA April 2010, p. 22
SGEA Wye to A1-BNSF	Impracticable/redundant construction	Merced to Fresno Prelim AA April 2010, p. 22
Sierra Foothills	Connectivity issues	Merced to Fresno Prelim AA April 2010, p. 21
SR-152 (north) to Road 11 Wye	Environmental (water, biology [wildlife, plants, birds])	Supplemental Alternatives Analysis Report Merced t
SR-152 (north) to Road 11 Wye	Impact to agricultural/farm lands	Supplemental Alternatives Analysis Report Merced t
SR-152 (north) to Road 11 Wye	Impact to aquatic resources	Supplemental Alternatives Analysis Report Merced t
SR-152 (north) to Road 19 Wye	Impact to agricultural/farm lands	Supplemental Alternatives Analysis Report Merced t
SR-152 (north) to Road 19 Wye	Impact to aquatic resources	Supplemental Alternatives Analysis Report Merced t
SR-152 (south) to Ave 21 to Road 19 Wye	Environmental (water, biology [wildlife, plants, birds])	Supplemental Alternatives Analysis Report Merced t
SR-152 (south) to Ave 21 to Road 19 Wye	Excessive road closures	Supplemental Alternatives Analysis Report Merced t
SR-152 (south) to Ave 21 to Road 19 Wye	Impact to agricultural/farm lands	Supplemental Alternatives Analysis Report Merced t
SR-152 (south) to Ave 21 to Road 19 Wye	Impact to aquatic resources	Supplemental Alternatives Analysis Report Merced t
SR-152 (south) to Ave 21 to SR-99 Wye	High capital cost	Supplemental Alternatives Analysis Report Merced t
SR-152 (south) to Ave 21 to SR-99 Wye	Impact to agricultural/farm lands	Supplemental Alternatives Analysis Report Merced t
SR-152 (south) to Ave 21 to SR-99 Wye	Impact to aquatic resources	Supplemental Alternatives Analysis Report Merced t
SR-152 Wye Ave 22	Incompatible with airport/landfill	Supp AA Report Presentation August 5, 2010
SR-152 Wye Ave 22	Incompatible with existing neighborhoods/planned development	Supp AA Report Presentation August 5, 2010
SR-152 Wye Ave 22	Incompatible with existing/proposed transportation	Supp AA Report Presentation August 5, 2010
SR-152 Wye to A1-BNSF	Community impacts & concerns/cultural impacts	Merced to Fresno Prelim AA April 2010, p. 22
SR-152 Wye to A1-BNSF	High capital cost	Merced to Fresno Prelim AA April 2010, p. 22
SR-152 Wye to A1-BNSF	Impracticable/redundant construction	Merced to Fresno Prelim AA April 2010, p. 22
UPRR/SR-99 A4	Environmental (water, biology [wildlife, plants, birds])	Merced to Fresno Section AA:FRA Workshop Octobe
UPRR/SR-99 A4	High capital cost	Merced to Fresno Section AA:FRA Workshop Octobe
UPRR/SR-99 A4	Local citizenry and elected official opposition	Merced to Fresno Section AA:FRA Workshop Octobe
West of SR-99	Eliminated in Record of Decision (ROD)	Merced to Fresno Prelim AA April 2010, p. 10
Western Alt. West of SR-99	Eliminated in Record of Decision (ROD)	Merced to Fresno Prelim AA April 2010, p. 9
SR-163/I-8	Construction challenges and/or lengthy schedule	Staff Report for Final Program for the Final Program
SR-163/I-8	Incompatible with existing/proposed transportation	Staff Report for Final Program for the Final Program
E99	Impact to agricultural/farm lands	Staff Report for Final Program for the Final Program
E99/BNSF	Impact to agricultural/farm lands	Staff Report for Final Program for the Final Program
E99/BNSF	Parkland resources	Staff Report for Final Program for the Final Program
I-880 Oakland to Fremont only	Construction challenges and/or lengthy schedule	Statewide_final_EIR_vol1_chp2_part3.pdf, p.2-43
I-880 Oakland to Fremont only	Add'l ROW required/displacement of residents/businesses/non-profits	Statewide_final_EIR_vol1_chp2_part3.pdf, p.2-43
Mulford Line Oakland to Newark only	Visual impact/scenic resources	Statewide_final_EIR_vol1_chp2_part3.pdf, p.2-43
Mulford Line Oakland to Newark only	Barrier to communities and/or land use/open spaces	Statewide_final_EIR_vol1_chp2_part3.pdf, p.2-43
LAP1A Viaduct from At-Grade or Elevated LAUS	Local citizenry and elected official opposition	Preliminary Palmdale to Los Angeles Section Alterna

Alignment	Reason for Elimination	Primary Source Document
LAP1A Viaduct from At-Grade or Elevated LAUS	Viaduct height excessive and/or incompatible with surrounding area	Preliminary Palmdale to Los Angeles Section Alterna
LAP1A Viaduct from At-Grade or Elevated LAUS	Costly and complex construction	Preliminary Palmdale to Los Angeles Section Alterna
LAP1A Viaduct from At-Grade or Elevated LAUS	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Palmdale to Los Angeles Section Alterna
LAP1A Viaduct from At-Grade or Elevated LAUS	Historically and/or culturally significant properties impacted	Preliminary Palmdale to Los Angeles Section Alterna
LAP1A Viaduct from At-Grade or Elevated LAUS	Visual impact/scenic resources	Preliminary Palmdale to Los Angeles Section Alterna
LAP1A Viaduct from At-Grade or Elevated LAUS	Impact to parklands	Preliminary Palmdale to Los Angeles Section Alterna
LAP1A Viaduct from At-Grade or Elevated LAUS	Displaces bike path	Preliminary Palmdale to Los Angeles Section Alterna
LAP1A Viaduct from At-Grade or Elevated LAUS	Noise/vibration	Preliminary Palmdale to Los Angeles Section Alterna
LAP1A Viaduct from At-Grade or Elevated LAUS	Barrier to communities and/or land use/open spaces	Preliminary Palmdale to Los Angeles Section Alterna
LAP1B West bank option	Visual impact/scenic resources	Preliminary Palmdale to Los Angeles Section Alterna
LAP1B West bank option	Hazardous materials site or risk of encountering hazardous materials during excavation	Preliminary Palmdale to Los Angeles Section Alterna
LAP1B West bank option	Local citizenry and elected official opposition	Preliminary Palmdale to Los Angeles Section Alterna
LAP1B West bank option	Barrier to communities and/or land use/open spaces	Preliminary Palmdale to Los Angeles Section Alterna
LAP1B West bank option	Viaduct height excessive and/or incompatible with surrounding area	Preliminary Palmdale to Los Angeles Section Alterna
LAP1B West bank option	Costly and complex construction	Preliminary Palmdale to Los Angeles Section Alterna
LAP1B West bank option	Incompatible with existing/proposed transportation	Preliminary Palmdale to Los Angeles Section Alterna
LAP1B West bank option	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Palmdale to Los Angeles Section Alterna
LAP1B West bank option	Historically and/or culturally significant properties impacted	Preliminary Palmdale to Los Angeles Section Alterna
LAP1B West bank option	Displaces bike path	Preliminary Palmdale to Los Angeles Section Alterna
LAP1B West bank option	Noise/vibration	Preliminary Palmdale to Los Angeles Section Alterna
LAUS to Metro CMF LAPT1	Construction challenges and/or lengthy schedule	Supplemental Palmdale to Los Angeles Alternative A
LAUS to Metro CMF LAPT1	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Palmdale to Los Angeles Alternative A
LAUS to Metro CMF LAPT1	Incompatible with existing/proposed transportation	Supplemental Palmdale to Los Angeles Alternative A
LAUS to Metro CMF LAPT1	Subsurface easement issues	Supplemental Palmdale to Los Angeles Alternative A
LAUS to Metro CMF LAPT1	Visual impact/scenic resources	Supplemental Palmdale to Los Angeles Alternative A
LAUS to Metro CMF LAPT1	Local citizenry and elected official opposition	Supplemental Palmdale to Los Angeles Alternative A
LAUS to Metro CMF LAPT2	New, difficult or intrusive tunnel construction required	Supplemental Palmdale to Los Angeles Alternative A
LAUS to Metro CMF LAPT2	Noise/vibration	Supplemental Palmdale to Los Angeles Alternative A
LAUS to Metro CMF LAPT2	Visual impact/scenic resources	Supplemental Palmdale to Los Angeles Alternative A
LAUS to Metro CMF LAPT2	Barrier to communities and/or land use/open spaces	Supplemental Palmdale to Los Angeles Alternative A
LAUS to Metro CMF LAPT2	Incompatible with existing/proposed transportation	Supplemental Palmdale to Los Angeles Alternative A
Metrolink CMF to SR2 In Trench	Inability to maintain operating speeds	Supplemental Palmdale to Los Angeles Alternative A
Metrolink CMF to SR2 In Trench	Incompatible with existing/proposed transportation	Supplemental Palmdale to Los Angeles Alternative A
Metrolink CMF to SR2 In Trench	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Palmdale to Los Angeles Alternative A
Metrolink CMF to SR2 Pacoima Wash PWS	Impracticable/redundant construction	Supplemental Palmdale to Los Angeles Alternative A
Metrolink CMF to SR2 Pacoima Wash PWS	Seismic concerns	Supplemental Palmdale to Los Angeles Alternative A
Metrolink CMF to SR2 Pacoima Wash PWS	Construction and maintenance and freeway impact	Supplemental Palmdale to Los Angeles Alternative A
Metrolink CMF to SR2 Pacoima Wash PWS	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Palmdale to Los Angeles Alternative A
Metrolink CMF to SR2 Pacoima Wash PWS	Visual impact/scenic resources	Supplemental Palmdale to Los Angeles Alternative A
Metrolink CMF to SR2 Pacoima Wash PWS	Noise/vibration	Supplemental Palmdale to Los Angeles Alternative A
Metrolink CMF to SR2 Pacoima Wash PWS	High capital cost	Supplemental Palmdale to Los Angeles Alternative A
Metrolink CMF to SR2 San Fernando Road in trench	Parkland resources	Supplemental Palmdale to Los Angeles Alternative A
Metrolink CMF to SR2 San Fernando Road in trench	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Palmdale to Los Angeles Alternative A
Metrolink CMF to SR2 San Fernando Road in trench	Incompatible with existing neighborhoods/planned development	Supplemental Palmdale to Los Angeles Alternative A
Sand Canyon River Option	Environmental (water, biology [wildlife, plants, birds])	Palmdale to Los Angeles Supplemental Alternatives
Sand Canyon River Option	Visual impact/scenic resources	Palmdale to Los Angeles Supplemental Alternatives
Sand Canyon River Option	Add'l ROW required/displacement of residents/businesses/non-profits	Palmdale to Los Angeles Supplemental Alternatives
Sand Canyon River Option	High capital cost	Palmdale to Los Angeles Supplemental Alternatives
Sand Canyon River Option	Construction challenges and/or lengthy schedule	Palmdale to Los Angeles Supplemental Alternatives
Sand Canyon River Option	Impact to aquatic resources	Palmdale to Los Angeles Supplemental Alternatives
Sand Canyon River Option	Add'l ROW required/displacement of residents/businesses/non-profits	Palmdale to Los Angeles Supplemental Alternatives
Sand Canyon River Option	Noise/vibration	Palmdale to Los Angeles Supplemental Alternatives
Sand Canyon River Option	Visual impact/scenic resources	Palmdale to Los Angeles Supplemental Alternatives
Downtown Fresno to Tulare West County W99	Connectivity issues	Statewide_EIR_vol3_appendix2H2_archive Table 2-I
Downtown Stockton to Modesto West W99	Connectivity issues	Statewide_EIR_vol3_appendix2H2_archive Table 2-I
Fresno East to Tulare East County E99	Connectivity issues	Statewide_EIR_vol3_appendix2H2_archive Table 2-I
Merced Castle to Fresno East E99	Connectivity issues	Statewide_EIR_vol3_appendix2H2_archive Table 2-I
Merced Downtown to Fresno West W99	Connectivity issues	Statewide_EIR_vol3_appendix2H2_archive Table 2-I
Modesto Briggsmore to Merced University	Connectivity issues	Statewide_EIR_vol3_appendix2H2_archive Table 2-I
Modesto West to Merced Muni Airport W99	Connectivity issues	Statewide_EIR_vol3_appendix2H2_archive Table 2-I
Tulare East County to Bakersfield Gold State E99	No reason	Statewide_EIR_vol3_appendix2H2_archive Table 2-I
Tulare East County to Bakersfield Gold State W99	No reason	Statewide_EIR_vol3_appendix2H2_archive Table 2-I
Southern Pacific River Line/WPRR	Parkland resources	Staff Report for Final Program for the Final Program
Atherton and Menlo Park 5A	Access issues	Supplemental Alternatives Analysis Report SF to SJ S
Atherton and Menlo Park 5A	Incompatible with existing/proposed transportation	Supplemental Alternatives Analysis Report SF to SJ S
Atherton and Menlo Park 5B	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Alternatives Analysis Report SF to SJ S
Atherton and Menlo Park 5B	Construction challenges and/or lengthy schedule	Supplemental Alternatives Analysis Report SF to SJ S
Atherton and Menlo Park 5B	High capital cost	Supplemental Alternatives Analysis Report SF to SJ S
Atherton and Menlo Park 5B	Incompatible with existing/proposed transportation	Supplemental Alternatives Analysis Report SF to SJ S

Alignment	Reason for Elimination	Primary Source Document
Atherton and Menlo Park 5C	Construction challenges and/or lengthy schedule	Supplemental Alternatives Analysis Report SF to SJ S
Atherton and Menlo Park 5C	High capital cost	Supplemental Alternatives Analysis Report SF to SJ S
Atherton and Menlo Park 5C	Incompatible with existing/proposed transportation	Supplemental Alternatives Analysis Report SF to SJ S
Brisbane, S SF, San Bruno, Millbrae 2B	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Alternatives Analysis Report SF to SJ S
Brisbane, S SF, San Bruno, Millbrae 2B	Incompatible with existing/proposed transportation	Supplemental Alternatives Analysis Report SF to SJ S
Brisbane, S SF, San Bruno, Millbrae 2C(1)	Construction challenges and/or lengthy schedule	Supplemental Alternatives Analysis Report SF to SJ S
Brisbane, S SF, San Bruno, Millbrae 2C(1)	Incompatible with existing/proposed transportation	Supplemental Alternatives Analysis Report SF to SJ S
Brisbane, S SF, San Bruno, Millbrae 2C(2)	Incompatible with carried forward design	Supplemental Alternatives Analysis Report SF to SJ S
Brisbane, S SF, San Bruno, Millbrae 2D	Incompatible with existing/proposed transportation	Supplemental Alternatives Analysis Report SF to SJ S
Burlingame and San Mateo 3A	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Alternatives Analysis Report SF to SJ S
Burlingame and San Mateo 3A	Construction challenges and/or lengthy schedule	Supplemental Alternatives Analysis Report SF to SJ S
Burlingame and San Mateo 3A	High capital cost	Supplemental Alternatives Analysis Report SF to SJ S
Burlingame and San Mateo 3A	Incompatible with carried forward design	Supplemental Alternatives Analysis Report SF to SJ S
Caltrain Corridor	Add'l ROW required/displacement of residents/businesses/non-profits	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-1
Caltrain Corridor	Barrier to communities and/or land use/open spaces	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-1
Caltrain Corridor	Construction challenges and/or lengthy schedule	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-1
Caltrain Corridor	Historically and/or culturally significant properties impacted	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-1
Caltrain Corridor	High capital cost	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-1
Caltrain Corridor	Incompatible with existing/proposed transportation	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-1
Caltrain Corridor	New, difficult or intrusive tunnel construction required	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-1
Caltrain Corridor	Visual impact/scenic resources	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-1
Hayward/Niles/Mulford	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-4
Hayward/Niles/Mulford	Parkland resources	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-4
Hayward/Tunnel/Mulford	High capital cost	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-4
Hayward/Tunnel/Mulford	Incompatible with existing neighborhoods/planned development	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-4
Hayward/Tunnel/Mulford	Seismic concerns	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-4
Hayward/Tunnel/Mulford	Tunnel ROW issues	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-4
Hayward/Tunnel/Mulford	Will not follow existing transportation corridors/ROWs	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-4
I-280 Alignment	Add'l ROW required/displacement of residents/businesses/non-profits	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-2
I-280 Alignment	Construction and maintenance and freeway impact	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-2
I-280 Alignment	Nature preserves	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-2
I-280 Alignment	Visual impact/scenic resources	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-2
I-880 Alignment	Add'l ROW required/displacement of residents/businesses/non-profits	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-3
I-880 Alignment	Construction and maintenance and freeway impact	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-3
I-880 Alignment	High capital cost	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-3
Mountain View and Sunnyvale 7A	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Alternatives Analysis Report SF to SJ S
Mountain View and Sunnyvale 7A	Construction challenges and/or lengthy schedule	Supplemental Alternatives Analysis Report SF to SJ S
Mountain View and Sunnyvale 7A	Incompatible with existing/proposed transportation	Supplemental Alternatives Analysis Report SF to SJ S
Mountain View and Sunnyvale 7B	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Alternatives Analysis Report SF to SJ S
Mountain View and Sunnyvale 7B	Construction challenges and/or lengthy schedule	Supplemental Alternatives Analysis Report SF to SJ S
Mountain View and Sunnyvale 7B	Incompatible with existing/proposed transportation	Supplemental Alternatives Analysis Report SF to SJ S
Mountain View and Sunnyvale 7C	Construction challenges and/or lengthy schedule	Supplemental Alternatives Analysis Report SF to SJ S
Mountain View and Sunnyvale 7C	Incompatible with existing/proposed transportation	Supplemental Alternatives Analysis Report SF to SJ S
Mountain View and Sunnyvale 7D(1)	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Alternatives Analysis Report SF to SJ S
Mountain View and Sunnyvale 7D(1)	Construction challenges and/or lengthy schedule	Supplemental Alternatives Analysis Report SF to SJ S
Mountain View and Sunnyvale 7D(1)	Incompatible with existing/proposed transportation	Supplemental Alternatives Analysis Report SF to SJ S
Mountain View and Sunnyvale 7D(2)	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Alternatives Analysis Report SF to SJ S
Mountain View and Sunnyvale 7D(2)	Construction challenges and/or lengthy schedule	Supplemental Alternatives Analysis Report SF to SJ S
Mountain View and Sunnyvale 7D(2)	Incompatible with existing/proposed transportation	Supplemental Alternatives Analysis Report SF to SJ S
Mulford Line	Add'l ROW required/displacement of residents/businesses/non-profits	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-3
Mulford Line	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-3
Mulford Line	High capital cost	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-3
Mulford Line	Incompatible with existing/proposed transportation	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-3
Mulford Line	Local citizenry and elected official opposition	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-3
Mulford Line	Parkland resources	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-3
Mulford Line	Visual impact/scenic resources	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-3
Palo Alto 6A	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Alternatives Analysis Report SF to SJ S
Palo Alto 6A	Construction challenges and/or lengthy schedule	Supplemental Alternatives Analysis Report SF to SJ S
Palo Alto 6A	Environmental (water, biology [wildlife, plants, birds])	Supplemental Alternatives Analysis Report SF to SJ S
Palo Alto 6A	High capital cost	Supplemental Alternatives Analysis Report SF to SJ S
Palo Alto 6A	Incompatible with existing/proposed transportation	Supplemental Alternatives Analysis Report SF to SJ S
Palo Alto 6B	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Alternatives Analysis Report SF to SJ S
Palo Alto 6B	Construction challenges and/or lengthy schedule	Supplemental Alternatives Analysis Report SF to SJ S
Palo Alto 6B	High capital cost	Supplemental Alternatives Analysis Report SF to SJ S
Palo Alto 6B	Incompatible with existing/proposed transportation	Supplemental Alternatives Analysis Report SF to SJ S
Palo Alto 6C	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Alternatives Analysis Report SF to SJ S
Palo Alto 6C	Construction challenges and/or lengthy schedule	Supplemental Alternatives Analysis Report SF to SJ S
Palo Alto 6C	High capital cost	Supplemental Alternatives Analysis Report SF to SJ S
Palo Alto 6C	Incompatible with existing/proposed transportation	Supplemental Alternatives Analysis Report SF to SJ S

Alignment	Reason for Elimination	Primary Source Document
San Jose 9(a)A & 9(a)B	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Alternatives Analysis Report SF to SJ S
San Jose 9(a)A & 9(a)B	Construction challenges and/or lengthy schedule	Supplemental Alternatives Analysis Report SF to SJ S
San Mateo, Belmont, San Carlos, Redwood City 4A	Impracticable/redundant construction	Supplemental Alternatives Analysis Report SF to SJ S
San Mateo, Belmont, San Carlos, Redwood City 4B(1)	Incompatible with carried forward design	Supplemental Alternatives Analysis Report SF to SJ S
San Mateo, Belmont, San Carlos, Redwood City 4B(2)-4C	High capital cost	Supplemental Alternatives Analysis Report SF to SJ S
San Mateo, Belmont, San Carlos, Redwood City 4B(2)-4C	Impracticable/redundant construction	Supplemental Alternatives Analysis Report SF to SJ S
San Mateo, Belmont, San Carlos, Redwood City 4B(2)-4C	Incompatible with existing/proposed transportation	Supplemental Alternatives Analysis Report SF to SJ S
San Mateo, Belmont, San Carlos, Redwood City 4B(2)-4C	Construction challenges and/or lengthy schedule	Supplemental Alternatives Analysis Report SF to SJ S
San Mateo, Belmont, San Carlos, Redwood City 4B(2)-4C	Dewatering, utility relocation, muck removal at portals, staging area, vibration issues	Supplemental Alternatives Analysis Report SF to SJ S
San Mateo, Belmont, San Carlos, Redwood City 4D	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Alternatives Analysis Report SF to SJ S
San Mateo, Belmont, San Carlos, Redwood City 4D	Incompatible with existing/proposed transportation	Supplemental Alternatives Analysis Report SF to SJ S
Southern Pacific River Line/WPRR	Impact to agricultural/farm lands	Staff Report for Final Program for the Final Program
Tunnel Under Fremont Central Park	Seismic concerns	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-5
US-101	Add'l ROW required/displacement of residents/businesses/non-profits	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-1
US-101	Construction and maintenance and freeway impact	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-1
US-101	New, difficult or intrusive tunnel construction required	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-1
US-101	Visual impact/scenic resources	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-1
US-101	Visual impact/scenic resources	Staff Report for Final Program for the Final Program
US-101	Add'l ROW required/displacement of residents/businesses/non-profits	Staff Report for Final Program for the Final Program
Warm Springs to San Jose	Add'l ROW required/displacement of residents/businesses/non-profits	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-5
Warm Springs to San Jose	Incompatible with existing/proposed transportation	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-5
Warm Springs to San Jose	New, difficult or intrusive tunnel construction required	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-5
WPRR/Hayward/I-880	Construction challenges and/or lengthy schedule	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-4
WPRR/Hayward/I-880	Incompatible with existing/proposed transportation	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-4
WPRR/Hayward/I-880	Visual impact/scenic resources	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-4
WPRR/Niles/Mulford	Construction challenges and/or lengthy schedule	Staff Report for Final Program for the Final Program
WPRR/Tunnel/Mulford	High capital cost	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-4
WPRR/Tunnel/Mulford	Incompatible with existing neighborhoods/planned development	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-4
WPRR/Tunnel/Mulford	Seismic concerns	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-4
WPRR/Tunnel/Mulford	Tunnel ROW issues	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-4
WPRR/Tunnel/Mulford	Will not follow existing transportation corridors/ROWs	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-4
Caltrain/Morgan Hill/East 101/Pacheco Pass	Incompatible with existing neighborhoods/planned development	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-7
Caltrain/Morgan Hill/East 101/Pacheco Pass	Incompatible with existing/proposed transportation	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-7
Caltrain/Morgan Hill/Foothill/Pacheco Pass	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-7
Caltrain/Morgan Hill/Foothill/Pacheco Pass	Impact on open space	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-7
Caltrain/Morgan Hill/Foothill/Pacheco Pass	Incompatible with existing neighborhoods/planned development	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-7
Caltrain/Morgan Hill/Foothill/Pacheco Pass	Incompatible with existing/proposed transportation	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-7
Caltrain/Morgan Hill/Foothill/Pacheco Pass	Visual impact/scenic resources	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-7
Diablo Range-Direct Tunnel	New, difficult or intrusive tunnel construction required	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-6
Diablo Range-Direct Tunnel	Seismic concerns	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-6
Diablo Range-Merced Southern	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-6
Diablo Range-Northern Tunnel	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-7
Diablo Range-Northern Tunnel	EPA and/or other govt officials/agencies rejected and refused	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-7
Diablo Range-Northern Tunnel	Impact on endangered species/bisection of wilderness lands	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-7
Diablo Range-Northern Tunnel	Seismic concerns	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-7
Diablo Range-Northern Tunnel	Will not follow existing transportation corridors/ROWs	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-7
Diablo Range-Tunnel under Coe Park & wilderness preserve	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-6
Diablo Range-Tunnel under Coe Park & wilderness preserve	Local citizenry and elected official opposition	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-6
Morgan Hill/Caltrain/Pacheco Pass	Add'l ROW required/displacement of residents/businesses/non-profits	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-8
Morgan Hill/Caltrain/Pacheco Pass	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-8
Morgan Hill/Caltrain/Pacheco Pass	Will not follow existing transportation corridors/ROWs	BayCValley 2008 EIR Vol2 Appendix 2-G, p. 2-G-8
Downtown San Jose Subsection	Archeological site	Preliminary Alt AA June 3, 2010, p. 18
Downtown San Jose Subsection	Environmental (water, biology [wildlife, plants, birds])	Preliminary Alt AA June 3, 2010, p. 18
Downtown San Jose Subsection	Extensive reconstruction/relocation	Preliminary Alt AA June 3, 2010, p. 18
Downtown San Jose Subsection	Incompatible with existing neighborhoods/planned development	Preliminary Alt AA June 3, 2010, p. 18
Downtown San Jose Subsection	Archeological site	Preliminary Alt AA June 3, 2010, p. 5
Downtown San Jose Subsection	Construction challenges and/or lengthy schedule	Preliminary Alt AA June 3, 2010, p. 5
Downtown San Jose Subsection	Extensive reconstruction/relocation	Preliminary Alt AA June 3, 2010, p. 5
Gilroy station loop	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Alternatives Analysis Report San Jose to
Gilroy station loop	Community impacts & concerns/cultural impacts	Preliminary Alternatives Analysis Report San Jose to
Gilroy station loop	Environmental (water, biology [wildlife, plants, birds])	Preliminary Alternatives Analysis Report San Jose to
Gilroy station loop	High capital cost	Preliminary Alternatives Analysis Report San Jose to
Gilroy station loop	Visual impact/scenic resources	Preliminary Alternatives Analysis Report San Jose to
Monterey Highway East of Caltrain/UPRR	Environmental (water, biology [wildlife, plants, birds])	Preliminary Alternatives Analysis Report San Jose to
Monterey Highway East of Caltrain/UPRR	Extensive reconstruction/relocation	Preliminary Alternatives Analysis Report San Jose to
Monterey Highway East of Caltrain/UPRR	Incompatible with existing/proposed transportation	Preliminary Alternatives Analysis Report San Jose to
Monterey Highway East of Caltrain/UPRR	Construction challenges and/or lengthy schedule	San_Jose_to_Merced_Preliminary_Alternatives_Ana
Monterey Highway East of Caltrain/UPRR	Incompatible with existing/proposed transportation	San_Jose_to_Merced_Preliminary_Alternatives_Ana
Monterey Highway Subsection SR 87/85	Aerial alignment over freeways	California High-Speed Rail Authority Public Meeting

Alignment	Reason for Elimination	Primary Source Document
Monterey Highway Subsection SR 87/85	Extensive reconstruction/relocation	California High-Speed Rail Authority Public Meeting
Monterey Highway Subsection SR 87/85	Incompatible with existing/proposed transportation	California High-Speed Rail Authority Public Meeting
Morgan Hill to Pacheco Pass	New, difficult or intrusive tunnel construction required	San Jose to Merced Section High-Speed Train Projec
Morgan Hill to Pacheco Pass	Seismic concerns	San Jose to Merced Section High-Speed Train Projec
North of GEA	Add'l ROW required/displacement of residents/businesses/non-profits	Authority/FRA AA Workshop 12-2009, p. 9
North of GEA	Environmental (water, biology [wildlife, plants, birds])	Authority/FRA AA Workshop 12-2009, p. 9
North of GEA	Impact to agricultural/farm lands	Authority/FRA AA Workshop 12-2009, p. 9
North of GEA	Impacts to publicly-owned lands	Authority/FRA AA Workshop 12-2009, p. 9
San Joaquin Valley Henry Miller to Ave 22	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Alternatives Analysis Report San Jose to
San Joaquin Valley Henry Miller to Ave 22	Environmental (water, biology [wildlife, plants, birds])	Preliminary Alternatives Analysis Report San Jose to
San Joaquin Valley Henry Miller to Ave 22	Construction challenges and/or lengthy schedule	San_Jose_to_Merced_Preliminary_Alternatives_Ana
San Joaquin Valley Henry Miller to SR 152	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Alternatives Analysis Report San Jose to
San Joaquin Valley Henry Miller to SR 152	Excessive bridge height/length	San Jose to Merced Section High-Speed Train Projec
San Joaquin Valley Henry Miller to SR 152	New, difficult or intrusive tunnel construction required	San Jose to Merced Section High-Speed Train Projec
San Joaquin Valley Henry Miller to SR 152	Construction challenges and/or lengthy schedule	San_Jose_to_Merced_Preliminary_Alternatives_Ana
San Joaquin Valley Henry Miller to SR 152	Environmental (water, biology [wildlife, plants, birds])	San_Jose_to_Merced_Preliminary_Alternatives_Ana
San Joaquin Valley South of GEA	Add'l ROW required/displacement of residents/businesses/non-profits	San_Jose_to_Merced_Preliminary_Alternatives_Ana
San Joaquin Valley South of GEA	Environmental (water, biology [wildlife, plants, birds])	San_Jose_to_Merced_Preliminary_Alternatives_Ana
San Joaquin Valley South of GEA	EPA and/or other govt officials/agencies rejected and refused	San_Jose_to_Merced_Preliminary_Alternatives_Ana
San Joaquin Valley South of GEA	Impact on endangered species/bisection of wilderness lands	San_Jose_to_Merced_Preliminary_Alternatives_Ana
San Joaquin Valley South of GEA	Incompatible with existing neighborhoods/planned development	San_Jose_to_Merced_Preliminary_Alternatives_Ana
San Joaquin Valley SR 140	Add'l ROW required/displacement of residents/businesses/non-profits	San_Jose_to_Merced_Preliminary_Alternatives_Ana
San Joaquin Valley SR 140	Environmental (water, biology [wildlife, plants, birds])	San_Jose_to_Merced_Preliminary_Alternatives_Ana
San Joaquin Valley SR 140	EPA and/or other govt officials/agencies rejected and refused	San_Jose_to_Merced_Preliminary_Alternatives_Ana
San Joaquin Valley SR 140	Incompatible with existing neighborhoods/planned development	San_Jose_to_Merced_Preliminary_Alternatives_Ana
San Joaquin Valley SR 140	Incompatible with existing/proposed transportation	San_Jose_to_Merced_Preliminary_Alternatives_Ana
San Jose Subsection approach downtown aerial	Add'l ROW required/displacement of residents/businesses/non-profits	San Jose to Merced Section High-Speed Train Projec
San Jose Subsection approach downtown aerial	Incompatible with existing neighborhoods/planned development	San Jose to Merced Section High-Speed Train Projec
San Jose Subsection approach downtown aerial	Visual impact/scenic resources	San Jose to Merced Section High-Speed Train Projec
San Jose Subsection approach downtown tunnel	Construction challenges and/or lengthy schedule	San Jose to Merced Section High-Speed Train Projec
SJ Station Approach Subsection-Refined program alignment	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Alternatives Analysis Report San Jose to
SJ Station Approach Subsection-Refined program alignment	Community impacts & concerns/cultural impacts	Preliminary Alternatives Analysis Report San Jose to
SJ Station Approach Subsection-Refined program alignment	Environmental (water, biology [wildlife, plants, birds])	Preliminary Alternatives Analysis Report San Jose to
SJ Station Approach Subsection-Refined program alignment	Noise/vibration	Preliminary Alternatives Analysis Report San Jose to
SJ Station Approach Subsection-Refined program alignment	Parkland resources	Preliminary Alternatives Analysis Report San Jose to
SJ Station Approach Subsection-Refined program alignment	Visual impact/scenic resources	Preliminary Alternatives Analysis Report San Jose to
SJ Station Approach Subsection-So. Of Caltrain Tracks	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Alternatives Analysis Report San Jose to
SJ Station Approach Subsection-So. Of Caltrain Tracks	Community impacts & concerns/cultural impacts	Preliminary Alternatives Analysis Report San Jose to
SJ Station Approach Subsection-So. Of Caltrain Tracks	Historically and/or culturally significant properties impacted	Preliminary Alternatives Analysis Report San Jose to
SJ Station Approach Subsection-So. Of Caltrain Tracks	Environmental (water, biology [wildlife, plants, birds])	Preliminary Alternatives Analysis Report San Jose to
SJ Station Approach Subsection-So. Of Caltrain Tracks	Noise/vibration	Preliminary Alternatives Analysis Report San Jose to
SJ Station Approach Subsection-So. Of Caltrain Tracks	Parkland resources	Preliminary Alternatives Analysis Report San Jose to
SJ Station Approach Subsection-So. Of Caltrain Tracks	Visual impact/scenic resources	Preliminary Alternatives Analysis Report San Jose to
SJ Station Approach Subsection-3 Track	Incompatible with existing/proposed transportation	Preliminary Alternatives Analysis Report San Jose to
I-5	Barrier to communities and/or land use/open spaces	Staff Report for Final Program for the Final Program
I-5	Visual impact/scenic resources	Staff Report for Final Program for the Final Program
I-5	Parkland resources	Staff Report for Final Program for the Final Program
Soledad Canyon	Crosses or encroaches on Angeles National Forest	Preliminary Palmdale to Los Angeles Section Alterna
Soledad Canyon	Construction challenges and/or lengthy schedule	Preliminary Palmdale to Los Angeles Section Alterna
Soledad Canyon	Encroachment on UPRR parcels or cooperation w/UPRR required	Preliminary Palmdale to Los Angeles Section Alterna
Soledad Canyon	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Palmdale to Los Angeles Section Alterna
Soledad Canyon	Environmental (water, biology [wildlife, plants, birds])	Preliminary Palmdale to Los Angeles Section Alterna
Soledad Canyon	Barrier to communities and/or land use/open spaces	Preliminary Palmdale to Los Angeles Section Alterna
Soledad Canyon	Impact to agricultural/farm lands	Preliminary Palmdale to Los Angeles Section Alterna
Soledad Canyon	Noise/vibration	Preliminary Palmdale to Los Angeles Section Alterna
Soledad Canyon	Visual impact/scenic resources	Preliminary Palmdale to Los Angeles Section Alterna
Soledad Canyon	New, difficult or intrusive tunnel construction required	Preliminary Palmdale to Los Angeles Section Alterna
Soledad Canyon	Seismic concerns	Preliminary Palmdale to Los Angeles Section Alterna
SR14 South	High capital cost	Preliminary Palmdale to Los Angeles Section Alterna
SR14 South	Crosses or encroaches on Angeles National Forest	Preliminary Palmdale to Los Angeles Section Alterna
SR14 South	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Palmdale to Los Angeles Section Alterna
SR14 South	Barrier to communities and/or land use/open spaces	Preliminary Palmdale to Los Angeles Section Alterna
W99	Alignment eliminated	Staff Report for Final Program for the Final Program

APPENDIX B – ALIGNMENT SECONDARY SOURCE DOCUMENTS

Alignment	Reason for Elimination	Secondary Source
99 Center Station (south of 198) Alignment CVSB	Incompatible with carried forward design	Preliminary Fresn
99 North Station (Goshen) Alignment CVSC	Incompatible with carried forward design	Preliminary Fresn
Aqueduct/Soledad Canyon	Seismic concerns	Staff Report for Fi
BNSF A1	Add'l ROW required/displacement of residents/businesses/non-profits	Public Information
BNSF A1	Environmental (water, biology [wildlife, plants, birds])	Public Information
BNSF A1	High capital cost	Public Information
BNSF A1	Local citizenry and elected official opposition	Public Information
BNSF Hanford West Bypass (mod program alignment) CPAA	Impact to agricultural/farm lands	Preliminary Fresn
BNSF Hanford West Bypass (mod program alignment) CPAA	Incompatible with existing neighborhoods/planned development	Preliminary Fresn
BNSF Hanford West Bypass (mod program alignment) CPAA	Location too far away from urban core	Preliminary Fresn
BNSF-Hanford East Bypass/Separate East Side Align C3	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Fresn
BNSF-Hanford East Bypass/Separate East Side Align C3	Incompatible with existing neighborhoods/planned development	Preliminary Fresn
BNSF-Hanford East Bypass/Separate West Side Align C2	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Fresn
BNSF-Hanford East Bypass/Separate West Side Align C2	Incompatible with existing neighborhoods/planned development	Preliminary Fresn
Caltrain Corridor	Add'l ROW required/displacement of residents/businesses/non-profits	BayCValley 2008 E
Caltrain Corridor	Barrier to communities and/or land use/open spaces	BayCValley 2008 E
Caltrain Corridor	Construction challenges and/or lengthy schedule	BayCValley 2008 E
Caltrain Corridor	Historically and/or culturally significant properties impacted	BayCValley 2008 E
Caltrain Corridor	High capital cost	BayCValley 2008 E
Caltrain Corridor	Incompatible with existing/proposed transportation	BayCValley 2008 E
Caltrain Corridor	New, difficult or intrusive tunnel construction required	BayCValley 2008 E
Caltrain Corridor	Visual impact/scenic resources	BayCValley 2008 E
Caltrain/Morgan Hill/East 101/Pacheco Pass	Incompatible with existing neighborhoods/planned development	BayCValley 2008 E
Caltrain/Morgan Hill/East 101/Pacheco Pass	Incompatible with existing/proposed transportation	BayCValley 2008 E
Caltrain/Morgan Hill/Foothill/Pacheco Pass	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 E
Caltrain/Morgan Hill/Foothill/Pacheco Pass	Impact on open space	BayCValley 2008 E
Caltrain/Morgan Hill/Foothill/Pacheco Pass	Incompatible with existing neighborhoods/planned development	BayCValley 2008 E
Caltrain/Morgan Hill/Foothill/Pacheco Pass	Incompatible with existing/proposed transportation	BayCValley 2008 E
Caltrain/Morgan Hill/Foothill/Pacheco Pass	Visual impact/scenic resources	BayCValley 2008 E
Caltrain/UP Coast Subdivision/ UP Centreville Line EB-1	Add'l ROW required/displacement of residents/businesses/non-profits	Altamont Corrido
Caltrain/UP Coast Subdivision/ UP Centreville Line EB-1	Environmental (water, biology [wildlife, plants, birds])	Altamont Corrido
Caltrain/UP Coast Subdivision/South of Cushing/UP Warm Springs EB-3	Environmental (water, biology [wildlife, plants, birds])	Altamont Corrido
Caltrain/UP Coast Subdivision/South of Grimmer EB-2	Environmental (water, biology [wildlife, plants, birds])	Altamont Corrido
Corcoran Through Town (at-grade) CTT1A	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Fresn
Corcoran Through Town (at-grade) CTT1A	Barrier to communities and/or land use/open spaces	Preliminary Fresn
Corcoran Through Town (at-grade) CTT1A	High capital cost	Preliminary Fresn
Corcoran Through Town (at-grade) CTT1A	Incompatible with existing/proposed transportation	Preliminary Fresn
Diablo Range-Direct Tunnel	New, difficult or intrusive tunnel construction required	BayCValley 2008 E
Diablo Range-Direct Tunnel	Seismic concerns	BayCValley 2008 E
Diablo Range-Merced Southern	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 E
Diablo Range-Northern Tunnel	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 E
Diablo Range-Northern Tunnel	EPA and/or other govt officials/agencies rejected and refused	BayCValley 2008 E
Diablo Range-Northern Tunnel	Impact on endangered species/bisection of wilderness lands	BayCValley 2008 E
Diablo Range-Northern Tunnel	Seismic concerns	BayCValley 2008 E
Diablo Range-Northern Tunnel	Will not follow existing transportation corridors/ROWs	BayCValley 2008 E
Diablo Range-Tunnel under Coe Park & wilderness preserve	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 E
Diablo Range-Tunnel under Coe Park & wilderness preserve	Local citizenry and elected official opposition	BayCValley 2008 E
Downtown San Jose Subsection	Archeological site	Millpond Mobile H
Downtown San Jose Subsection	Environmental (water, biology [wildlife, plants, birds])	Millpond Mobile H
Downtown San Jose Subsection	Extensive reconstruction/relocation	Millpond Mobile H
Downtown San Jose Subsection	Incompatible with existing neighborhoods/planned development	Millpond Mobile H
Downtown San Jose Subsection	Construction challenges and/or lengthy schedule	Millpond Mobile H
East of R-99	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 E
East of R-99	EPA and/or other govt officials/agencies rejected and refused	BayCValley 2008 E
East of R-99	Impact to agricultural/farm lands	BayCValley 2008 E

Alignment	Reason for Elimination	Secondary Source
East of R-99	Will not follow existing transportation corridors/ROWs	BayCValley 2008 E
Fowler/Selma/Kingsburg Greenfield Bypass CBPA	Incompatible with carried forward design	Preliminary Fresn
Fowler/Selma/Kingsburg Near-Town Bypass CBPB	Incompatible with carried forward design	Preliminary Fresn
Gilroy station loop	Add'l ROW required/displacement of residents/businesses/non-profits	Executive Summa
Gilroy station loop	Community impacts & concerns/cultural impacts	Executive Summa
Gilroy station loop	Environmental (water, biology [wildlife, plants, birds])	Executive Summa
Gilroy station loop	High capital cost	Executive Summa
Gilroy station loop	Visual impact/scenic resources	Executive Summa
Golden State Blvd/Mixed At-Grade & Elevated/UPRR B12	Community impacts & concerns/cultural impacts	Preliminary Fresn
Golden State Blvd/Mixed At-Grade & Elevated/UPRR B12	High capital cost	Preliminary Fresn
Golden State Blvd/Mixed At-Grade & Elevated/UPRR B12	Location too far away from urban core	Preliminary Fresn
Golden State Blvd/Mixed At-Grade & Elevated/UPRR B12	Local citizenry and elected official opposition	Preliminary Fresn
Hayward/Niles/Mulford	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 E
Hayward/Niles/Mulford	Parkland resources	BayCValley 2008 E
Hayward/Tunnel/Mulford	High capital cost	BayCValley 2008 E
Hayward/Tunnel/Mulford	Incompatible with existing neighborhoods/planned development	BayCValley 2008 E
Hayward/Tunnel/Mulford	Seismic concerns	BayCValley 2008 E
Hayward/Tunnel/Mulford	Tunnel ROW issues	BayCValley 2008 E
Hayward/Tunnel/Mulford	Will not follow existing transportation corridors/ROWs	BayCValley 2008 E
I-10 through Riverside via Iowa Ave A3.2	Extensive aerial guideway along freeway(s)	Los Angeles to San
I-10 through Riverside/I-215 via Riverside A3.3	Incompatible with existing/proposed transportation	Los Angeles to San
I-10 through Riverside/I-215 via Riverside A3.3	Incompatible with UC Riverside Master Plan	Los Angeles to San
I-10 through Riverside/I-215 via Riverside A3.3	Community impacts & concerns/cultural impacts	Los Angeles to San
I-15 Corridor-Milliken/Hamner to Corona A4.1	No reason	Los Angeles to San
I-280 Alignment	Add'l ROW required/displacement of residents/businesses/non-profits	BayCValley 2008 E
I-280 Alignment	Construction and maintenance and freeway impact	BayCValley 2008 E
I-280 Alignment	Nature preserves	BayCValley 2008 E
I-280 Alignment	Visual impact/scenic resources	BayCValley 2008 E
I-5 via Comanche Point	Seismic concerns	Staff Report for Fi
I-580 Bay Fair to Pleasanton	Construction challenges and/or lengthy schedule	Brdmtg0806_bayl
I-580 Bay Fair to Pleasanton	Incompatible with existing/proposed transportation	Brdmtg0806_bayl
I-580 Bay Fair to Pleasanton	Add'l ROW required/displacement of residents/businesses/non-profits	Brdmtg0806_bayl
I-605/I-10 to Ontario International Airport via Metro A5	Incompatible with existing/proposed transportation	Los Angeles to San
I-605/I-10 to Ontario International Airport via Metro A5	Encroachment on UPRR parcels or cooperation w/UPRR required	Los Angeles to San
I-680,UP ROW tunnel Pleasanton/Livermore	High capital cost	Altamont Corrido
I-680,UP ROW tunnel Pleasanton/Livermore	High constructability/ROW risks due to cooperative agreement with UP	Altamont Corrido
I-680/I-580 TV-1	Incompatible with existing/proposed transportation	Altamont Corrido
I-680/I-580 TV-1	Add'l ROW required/displacement of residents/businesses/non-profits	Altamont Corrido
I-680/I-580 TV-1	Extensive reconstruction/relocation	Altamont Corrido
I-880 Alignment	Add'l ROW required/displacement of residents/businesses/non-profits	BayCValley 2008 E
I-880 Alignment	Construction and maintenance and freeway impact	BayCValley 2008 E
I-880 Alignment	High capital cost	BayCValley 2008 E
I-880 EB-7	High capital cost	Altamont Corrido
I-880/UP Warm Springs	Add'l ROW required/displacement of residents/businesses/non-profits	Altamont Corrido
I-880/UP Warm Springs	Environmental (water, biology [wildlife, plants, birds])	Altamont Corrido
LAP1A Viaduct from At-Grade or Elevated LAUS	Visual impact/scenic resources	Preliminary Palmd
Lathrop, Adjacent to UP Fresno to Modesto TM-1a	Environmental (water, biology [wildlife, plants, birds])	Altamont Corrido
Lathrop, Adjacent to UP Fresno to Modesto TM-1a	High capital cost	Altamont Corrido
LAUS to east of I-605 via UPRR via Redondo Junction above-grade A3.2	Incompatible with existing/proposed transportation	Los Angeles to San
LAUS to east of I-605 via UPRR via Redondo Junction above-grade A3.2	Add'l ROW required/displacement of residents/businesses/non-profits	Los Angeles to San
LAUS to east of I-605 via UPRR via Sixth Street A3.1	Incompatible with existing/proposed transportation	Los Angeles to San
LAUS to east of I-605 via UPRR via Sixth Street A3.1	Add'l ROW required/displacement of residents/businesses/non-profits	Los Angeles to San
LAUS to I-605 via land adjacent to the UPRR via Redondo Junction A4.2	Incompatible with existing/proposed transportation	Los Angeles to San
LAUS to I-605 via land adjacent to the UPRR via Redondo Junction A4.2	Add'l ROW required/displacement of residents/businesses/non-profits	Los Angeles to San
LAUS to I-605 via land adjacent to the UPRR via Sixth Street A4.1	Incompatible with existing/proposed transportation	Los Angeles to San

Alignment	Reason for Elimination	Secondary Source
LAUS to I-605 via land adjacent to the UPRR via Sixth Street A4.1	Add'l ROW required/displacement of residents/businesses/non-profits	Los Angeles to San
LAUS to March Air Reserve Base I-215/I-15 long tunnel	New, difficult or intrusive tunnel construction required	Staff Report for Fi
Metrolink CMF to SR2 In Trench	Inability to maintain operating speeds	Supplemental Pal
Metrolink CMF to SR2 In Trench	Incompatible with existing/proposed transportation	Supplemental Pal
Metrolink CMF to SR2 In Trench	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Pal
Metrolink CMF to SR2 Pacoima Wash PWS	Impracticable/redundant construction	Supplemental Pal
Metrolink CMF to SR2 Pacoima Wash PWS	Seismic concerns	Supplemental Pal
Metrolink CMF to SR2 Pacoima Wash PWS	Construction and maintenance and freeway impact	Supplemental Pal
Metrolink CMF to SR2 Pacoima Wash PWS	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Pal
Metrolink CMF to SR2 Pacoima Wash PWS	Visual impact/scenic resources	Supplemental Pal
Metrolink CMF to SR2 Pacoima Wash PWS	Noise/vibration	Supplemental Pal
Metrolink CMF to SR2 Pacoima Wash PWS	High capital cost	Supplemental Pal
Metrolink CMF to SR2 San Fernando Road in trench	Parkland resources	Supplemental Pal
Metrolink CMF to SR2 San Fernando Road in trench	Add'l ROW required/displacement of residents/businesses/non-profits	Supplemental Pal
Metrolink CMF to SR2 San Fernando Road in trench	Incompatible with existing neighborhoods/planned development	Supplemental Pal
Mira Mesa to San Diego I-15 to Coast via SR-52	Add'l ROW required/displacement of residents/businesses/non-profits	Staff Report for Fi
Mira Mesa to San Diego I-15 to Coast via SR-52	Incompatible with existing neighborhoods/planned development	Staff Report for Fi
Mira Mesa to San Diego I-15/SR-163 to Santa Fe	Incompatible with existing neighborhoods/planned development	Staff Report for Fi
Mira Mesa to San Diego I-15/SR-163 to Santa Fe	Urban environment issues	Staff Report for Fi
Mira Mesa to San Diego I-15/SR-163 to Santa Fe	Community impacts & concerns/cultural impacts	Staff Report for Fi
Monterey Highway East of Caltrain/UPRR	Environmental (water, biology [wildlife, plants, birds])	Preliminary Alt AA
Monterey Highway East of Caltrain/UPRR	Extensive reconstruction/relocation	Preliminary Alt AA
Monterey Highway East of Caltrain/UPRR	Incompatible with existing/proposed transportation	Preliminary Alt AA
Monterey Highway East of Caltrain/UPRR	Construction challenges and/or lengthy schedule	Preliminary Alt AA
Monterey Highway Subsection SR 87/85	Aerial alignment over freeways	Millpond Mobile H
Monterey Highway Subsection SR 87/85	Extensive reconstruction/relocation	Millpond Mobile H
Monterey Highway Subsection SR 87/85	Incompatible with existing/proposed transportation	Millpond Mobile H
Morgan Hill/Caltrain/Pacheco Pass	Add'l ROW required/displacement of residents/businesses/non-profits	BayCValley 2008 E
Morgan Hill/Caltrain/Pacheco Pass	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 E
Morgan Hill/Caltrain/Pacheco Pass	Will not follow existing transportation corridors/ROWs	BayCValley 2008 E
Mulford Line	Add'l ROW required/displacement of residents/businesses/non-profits	BayCValley 2008 E
Mulford Line	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 E
Mulford Line	High capital cost	BayCValley 2008 E
Mulford Line	Incompatible with existing/proposed transportation	BayCValley 2008 E
Mulford Line	Local citizenry and elected official opposition	BayCValley 2008 E
Mulford Line	Parkland resources	BayCValley 2008 E
Mulford Line	Visual impact/scenic resources	BayCValley 2008 E
Murrieta/Temecula to Qualcomm Stadium Terminus via I-15 A5	Connectivity issues	Los Angeles to San
Murrieta/Temecula to SDIA via I-15 to Mira Mesa and LOSSAN Carroll Cyn A2.1	Impact on endangered species/bisection of wilderness lands	Los Angeles to San
Murrieta/Temecula to SDIA via I-15 to Mira Mesa and LOSSAN Rose Cyn A2.3	Impact on endangered species/bisection of wilderness lands	Los Angeles to San
Murrieta/Temecula to SDIA via SR 56 and LOSSAN A1	Environmental (water, biology [wildlife, plants, birds])	Los Angeles to San
Murrieta/Temecula to SDIA via SR I-15 and I-8 A4	New, difficult or intrusive tunnel construction required	Los Angeles to San
Murrieta/Temecula to SDIA via SR I-15 and I-8 A4	Viaduct height excessive and/or incompatible with surrounding area	Los Angeles to San
Over BNSF Main Line/One Block South of Amtrak Station/South of UPRR D2-S	Impracticable/redundant construction	Preliminary Fresn
Over BNSF Main Line/One Block South of Amtrak Station/South of UPRR D2-S	Incompatible with existing neighborhoods/planned development	Preliminary Fresn
Riverside/I-215 through Riverside via Chicago Ave A2.1	Encroachment on UPRR parcels or cooperation w/UPRR required	Los Angeles to San
Riverside/I-215 through Riverside via Chicago Ave A2.1	Aerial crossings of other RR required	Los Angeles to San
Riverside/I-215 through Riverside via Iowa Ae A2.2	Encroachment on UPRR parcels or cooperation w/UPRR required	Los Angeles to San
Riverside/I-215 through Riverside via Iowa Ae A2.2	Aerial crossings of other RR required	Los Angeles to San
Riverside/I-s15 through Riverside via UC Riverside A2.3	Encroachment on UPRR parcels or cooperation w/UPRR required	Los Angeles to San
Riverside/I-s15 through Riverside via UC Riverside A2.3	Aerial crossings of other RR required	Los Angeles to San
San Bernardino/I-215 through Riverside via Iowa Ave A1.2	Extensive aerial guideway along freeway(s)	Los Angeles to San
San Bernardino/I-215 through Riverside via Iowa Ave A1.2	Visual impact/scenic resources	Los Angeles to San
San Bernardino/I-215 through Riverside via UC Riverside A1.3	Incompatible with existing/proposed transportation	Los Angeles to San
San Bernardino/I-215 through Riverside via UC Riverside A1.3	Incompatible with UC Riverside Master Plan	Los Angeles to San

Alignment	Reason for Elimination	Secondary Source
San Bernardino/I-215 through Riverside via UC Riverside A1.3	Visual impact/scenic resources	Los Angeles to San
San Bernardino/I-215 through Riverside via UC Riverside A1.3	Community impacts & concerns/cultural impacts	Los Angeles to San
San Bernardino/I-215 through Riverside via UC Riverside A1.3	Impact to aquatic resources	Los Angeles to San
San Joaquin Valley Henry Miller to Ave 22	Add'l ROW required/displacement of residents/businesses/non-profits	Executive Summa
San Joaquin Valley Henry Miller to Ave 22	Construction challenges and/or lengthy schedule	Executive Summa
San Joaquin Valley Henry Miller to Ave 22	Environmental (water, biology [wildlife, plants, birds])	Executive Summa
San Joaquin Valley Henry Miller to SR 152	Construction challenges and/or lengthy schedule	Executive Summa
San Joaquin Valley Henry Miller to SR 152	Environmental (water, biology [wildlife, plants, birds])	Executive Summa
San Joaquin Valley Henry Miller to SR 152	Excessive bridge height/length	Executive Summa
San Joaquin Valley Henry Miller to SR 152	New, difficult or intrusive tunnel construction required	Executive Summa
San Joaquin Valley Henry Miller to SR 152	Add'l ROW required/displacement of residents/businesses/non-profits	Executive Summa
San Joaquin Valley South of GEA	Incompatible with existing neighborhoods/planned development	Executive Summa
San Joaquin Valley South of GEA	Add'l ROW required/displacement of residents/businesses/non-profits	Executive Summa
San Joaquin Valley South of GEA	EPA and/or other govt officials/agencies rejected and refused	Executive Summa
San Joaquin Valley South of GEA	Environmental (water, biology [wildlife, plants, birds])	Executive Summa
San Joaquin Valley South of GEA	Impact on endangered species/bisection of wilderness lands	Executive Summa
San Joaquin Valley SR 140	Add'l ROW required/displacement of residents/businesses/non-profits	Executive Summa
San Joaquin Valley SR 140	Environmental (water, biology [wildlife, plants, birds])	Executive Summa
San Joaquin Valley SR 140	EPA and/or other govt officials/agencies rejected and refused	Executive Summa
San Joaquin Valley SR 140	Incompatible with existing neighborhoods/planned development	Executive Summa
San Joaquin Valley SR 140	Incompatible with existing/proposed transportation	Executive Summa
San Jose Subsection approach downtown aerial	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Alterr
San Jose Subsection approach downtown aerial	Incompatible with existing neighborhoods/planned development	Preliminary Alterr
San Jose Subsection approach downtown aerial	Visual impact/scenic resources	Preliminary Alterr
San Jose Subsection approach downtown tunnel	Construction challenges and/or lengthy schedule	Preliminary Alterr
Sand Canyon River Option	Environmental (water, biology [wildlife, plants, birds])	Board Meeting Ag
Sand Canyon River Option	Visual impact/scenic resources	Board Meeting Ag
Sand Canyon River Option	Add'l ROW required/displacement of residents/businesses/non-profits	Board Meeting Ag
SJ Station Approach Subsection-So. Of Caltrain Tracks	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Alt AA
SJ Station Approach Subsection-So. Of Caltrain Tracks	Community impacts & concerns/cultural impacts	Preliminary Alt AA
SJ Station Approach Subsection-So. Of Caltrain Tracks	Historically and/or culturally significant properties impacted	Preliminary Alt AA
SJ Station Approach Subsection-So. Of Caltrain Tracks	Environmental (water, biology [wildlife, plants, birds])	Preliminary Alt AA
SJ Station Approach Subsection-So. Of Caltrain Tracks	Noise/vibration	Preliminary Alt AA
SJ Station Approach Subsection-So. Of Caltrain Tracks	Parkland resources	Preliminary Alt AA
SJ Station Approach Subsection-So. Of Caltrain Tracks	Visual impact/scenic resources	Preliminary Alt AA
South of Pleasanton/d.t. Livermore	Construction challenges and/or lengthy schedule	Altamont Corrido
South of Pleasanton/d.t. Livermore	Environmental (water, biology [wildlife, plants, birds])	Altamont Corrido
SR-138	Seismic concerns	Staff Report for Fi
SR-84/I-580/UPRR	Environmental (water, biology [wildlife, plants, birds])	Brdmtg0806_bayl
SR-84/I-580/UPRR	Impact to agricultural/farm lands	Brdmtg0806_bayl
SR-84/Isabel Ave.,Railroad Ave., east of d.t. Livermore	Environmental (water, biology [wildlife, plants, birds])	Altamont Corrido
SR-84/Isabel Ave.,Railroad Ave., east of d.t. Livermore	High constructability/ROW risks due to cooperative agreement with UP	Altamont Corrido
SR-84/South of Livermore	Environmental (water, biology [wildlife, plants, birds])	Brdmtg0806_bayl
SR-84/South of Livermore	Impact on endangered species/bisection of wilderness lands	Brdmtg0806_bayl
SR-84/South of Livermore	Impact to agricultural/farm lands	Brdmtg0806_bayl
Through BNSF yard/Adjacent to Amtrak Station/North of UPRR D1-N	Encroachment on UPRR parcels or cooperation w/UPRR required	Preliminary Fresn
Through BNSF yard/Adjacent to Amtrak Station/North of UPRR D1-N	Impracticable/redundant construction	Preliminary Fresn
Through BNSF yard/Adjacent to Amtrak Station/North of UPRR D1-N	Incompatible with existing neighborhoods/planned development	Preliminary Fresn
Tunnel Under Fremont Central Park	Seismic concerns	BayCValley 2008 I
TV-2c	High capital cost	Altamont Corrido
UP Centreville/Niles Junction/Niles Tunnel EBF-1	Impact on endangered species/bisection of wilderness lands	Altamont Corrido
UP Centreville/Niles Junction/Niles Tunnel EBF-1	Add'l ROW required/displacement of residents/businesses/non-profits	Altamont Corrido
UP Centreville/Niles Junction/Niles Tunnel EBF-1	Environmental (water, biology [wildlife, plants, birds])	Altamont Corrido
UP Niles/Niles Tunnel EBUC-1	Connectivity issues	Altamont Corrido
UP Niles/Niles Tunnel EBUC-1	Incompatible with existing neighborhoods/planned development	Altamont Corrido

Alignment	Reason for Elimination	Secondary Source
UP Niles/Niles Tunnel EBUC-1	Add'l ROW required/displacement of residents/businesses/non-profits	Altamont Corrido
UP Niles/Niles Tunnel EBUC-1	Environmental (water, biology [wildlife, plants, birds])	Altamont Corrido
UP Niles/Niles Tunnel EBUC-1	Visual impact/scenic resources	Altamont Corrido
UP San Joaquin River, Stockton TS-2	Impracticable/redundant construction	Altamont Corrido
UP San Joaquin River, Stockton TS-2	Environmental (water, biology [wildlife, plants, birds])	Altamont Corrido
UP San Joaquin River, Stockton TS-2	High capital cost	Altamont Corrido
UPRR East/Mixed At-Grade & Elevated/UPRR B11	Incompatible with carried forward design	Preliminary Fresn
UPRR from east of I-605 to Ontario International Airport A7	Incompatible with existing/proposed transportation	Los Angeles to Sa
UPRR to BNSF/Separate East Side Alignment C6	Extensive reconstruction/relocation	Preliminary Fresn
UPRR to BNSF/Separate East Side Alignment C6	Impact to agricultural/farm lands	Preliminary Fresn
UPRR to BNSF/Separate West Side Alignment C5	Extensive reconstruction/relocation	Preliminary Fresn
UPRR to BNSF/Separate West Side Alignment C5	Impact to agricultural/farm lands	Preliminary Fresn
UPRR to BNSF/Shared ROW C4	Extensive reconstruction/relocation	Preliminary Fresn
UPRR to BNSF/Shared ROW C4	Impact to agricultural/farm lands	Preliminary Fresn
UPRR West/Mixed At-Grade & Elevated/UPRR B10	Incompatible with carried forward design	Preliminary Fresn
US-101	Add'l ROW required/displacement of residents/businesses/non-profits	BayCValley 2008 E
US-101	Construction and maintenance and freeway impact	BayCValley 2008 E
US-101	New, difficult or intrusive tunnel construction required	BayCValley 2008 E
US-101	Visual impact/scenic resources	BayCValley 2008 E
Visalia 198 East Station Alignment CVSA	Incompatible with carried forward design	Preliminary Fresn
Warm Springs to San Jose	Add'l ROW required/displacement of residents/businesses/non-profits	BayCValley 2008 E
Warm Springs to San Jose	Incompatible with existing/proposed transportation	BayCValley 2008 E
Warm Springs to San Jose	New, difficult or intrusive tunnel construction required	BayCValley 2008 E
Wasco East Bypass, Through Shafter (at-grade) CTT2C	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Fresn
Wasco East Bypass, Through Shafter (at-grade) CTT2C	Barrier to communities and/or land use/open spaces	Preliminary Fresn
Wasco East Bypass, Through Shafter (at-grade) CTT2C	High capital cost	Preliminary Fresn
Wasco East Bypass, Through Shafter (at-grade) CTT2C	Incompatible with existing/proposed transportation	Preliminary Fresn
Wasco/Shafter Through Town (at-grade in Wasco, elevated in Shafter) CTT2F	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Fresn
Wasco/Shafter Through Town (at-grade in Wasco, elevated in Shafter) CTT2F	Barrier to communities and/or land use/open spaces	Preliminary Fresn
Wasco/Shafter Through Town (at-grade in Wasco, elevated in Shafter) CTT2F	High capital cost	Preliminary Fresn
Wasco/Shafter Through Town (at-grade in Wasco, elevated in Shafter) CTT2F	Incompatible with existing/proposed transportation	Preliminary Fresn
Wasco/Shafter Through Town (at-grade) CTT2A	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Fresn
Wasco/Shafter Through Town (at-grade) CTT2A	Barrier to communities and/or land use/open spaces	Preliminary Fresn
Wasco/Shafter Through Town (at-grade) CTT2A	High capital cost	Preliminary Fresn
Wasco/Shafter Through Town (at-grade) CTT2A	Incompatible with existing/proposed transportation	Preliminary Fresn
Wasco/Shafter Through Town (elevated in Wasco, at-grade in Shafter) CTT2E	Add'l ROW required/displacement of residents/businesses/non-profits	Preliminary Fresn
Wasco/Shafter Through Town (elevated in Wasco, at-grade in Shafter) CTT2E	Barrier to communities and/or land use/open spaces	Preliminary Fresn
Wasco/Shafter Through Town (elevated in Wasco, at-grade in Shafter) CTT2E	High capital cost	Preliminary Fresn
Wasco/Shafter Through Town (elevated in Wasco, at-grade in Shafter) CTT2E	Incompatible with existing/proposed transportation	Preliminary Fresn
Waso/Shafter/7th Standard Road East Bypass CTT2G	Impact to agricultural/farm lands	Preliminary Fresn
Waso/Shafter/7th Standard Road East Bypass CTT2G	Incompatible with existing neighborhoods/planned development	Preliminary Fresn
West of R-99	Environmental (water, biology [wildlife, plants, birds])	BayCValley 2008 E
West of R-99	Impact to agricultural/farm lands	BayCValley 2008 E
West of R-99	Will not follow existing transportation corridors/ROWs	BayCValley 2008 E
WPRR/Hayward/I-880	Construction challenges and/or lengthy schedule	BayCValley 2008 E
WPRR/Hayward/I-880	Incompatible with existing/proposed transportation	BayCValley 2008 E
WPRR/Hayward/I-880	Visual impact/scenic resources	BayCValley 2008 E
WPRR/Tunnel/Mulford	High capital cost	BayCValley 2008 E
WPRR/Tunnel/Mulford	Incompatible with existing neighborhoods/planned development	BayCValley 2008 E
WPRR/Tunnel/Mulford	Seismic concerns	BayCValley 2008 E
WPRR/Tunnel/Mulford	Tunnel ROW issues	BayCValley 2008 E
WPRR/Tunnel/Mulford	Will not follow existing transportation corridors/ROWs	BayCValley 2008 E

SHPOA

Shadow Hills Property Owners Association

Dedicated To Preserving Rural Community

S.A.F.E Coalition

May 14, 2015

Mark A. McLoughlin, Director of Environmental Services
ATTN: PALMDALE TO BURBANK PROJECT SECTION
California High-Speed Rail Authority 700 North Alameda St. Room 3-532
Los Angeles, CA 90012

California High Speed Rail Authority Board
Chairman Dan Richard and Honorable Board Members
c/o Mr. Mark McLoughlin
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Sacramento, CA 95814

Federal Railroad Administration
Joseph C. Szabo, Administrator
c/o Mr. David Valenstein
MS-20, W38-303
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Surface Transportation Board
Chairman Elliot and Honorable Board Members
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Mr. Horace Greczmiel
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911 Wilshire Boulevard
Los Angeles, CA 90053-2325

Re: Elimination of High Speed Rail/Palmdale to Burbank Project Section E-2 Alternative Route

Dear Addressees:

Over the past several months we have provided hundreds of credible, substantive technical letters and comments concerning the Angeles National Forest routes and by reference the proposed E-2 route which crosses the Big Tujunga Flood Plain at an elevated/bridge configuration and which ravages the hillsides which comprise the visual and practical hearts of both the Lake View Terrace and Shadow Hills residential communities. We have not received a reply to those letters nor any indication that they have been read and considered. The courtesy of a reply would be appreciated. We will not take the time to repeat those comments since they are already part of the public

record. However, we would like to take this opportunity to focus strictly on what you have referred to as Route E-2 which crosses over the Tujunga Wash in an above ground manner that would forever alter the character of multiple northeast San Fernando Valley communities and the reasons we believe that it should be eliminated from consideration immediately and not included in the EIR/EIS process. Nearly a dozen community leaders were frustrated to the point of disgust at a meeting held with CHSRA project management personnel in their offices on a work day in downtown Los Angeles on Thursday, April 30, 2014, by their stubborn refusal to remove E2 from further consideration and their apathy, cavalier attitude and insensitivity in stating so many of our concerns would simply be studied in the NEPA/EIS process. We felt all of the meetings, all of the time, all of the comments and all of the evidence of infeasibility provided to CHSRA has been ignored and not given the professional review and consideration it deserves; that a conclusion has been reached and that CHSRA is working backwards. While a 3-5 year NEPA/EIS process may be a high paying and intellectually challenging venture for the CHSRA team we met with, for us, it represents an unnecessary and terribly damaging and troubling "cloud" over every aspect of our communities' and residents' existence for the foreseeable.

CHSRA Chairman Dan Richard was provided an extensive, personalized tour of the Big Tujunga Flood Plain area several months ago and is keenly aware of many of the unmitigable impacts described below. There is absolutely no way such a sophisticated Governor's appointee and senior project manager would conclude that E-2 is feasible or should remain in the SAA Report or be considered as an EIR/EIS option. We insist that Mr. Richard personally and immediately review the matter of E-2's continuing existence.

1. Cumulative Impacts Forever Alter the Character of the Community and Environment and Preclude Use of the E-2 Route. Having trains travel at speeds up to 220 miles per hour out of tunnels across the Big Tujunga Wash and into and out of Shadow Hills and Lake View Terrace changes the character of the community much like the windmills in the Palm Springs area. All the EIR/EIS studies in the world will not change the fact that a train in that area will forever adversely effect the character of the community. Therefore, the E-2 route should not be part of the EIR/EIS analysis. We believe that many of the substantive objections we've raised render E-2 infeasible on their own and that, collectively, they create an obvious conclusion that E-2 is infeasible.

   CalTrans data reveals that approximately 190,000 vehicles travel the 210 freeway between Sunland Boulevard and Osborne Street each day. About

80,000 residents of the communities of Lake View Terrace, Sunland/Tujunga and Shadow Hills share the view of the Big Tujunga Flood Plain every day. Year round and especially on busy weekends and holidays tens of thousands of people recreate in the contiguous areas of Hansen Dam, Big Tujunga Wash Flood Plain, Angeles National Forest and the intricate network of equestrian, hiking, jogging and biking trails. Combined, the view, aesthetics and tranquility provided by this shared open space and natural resource will be ruined for more than a quarter of a million people.

Please note the recently presented draft EIR for the 710 freeway extension project located just a few miles from our area rejected the 4-mile above ground light rail alternative for reasons related to "changing/altering the character of surrounding communities". We believe that is further evidence that the more damaging E-2 alternative must be eliminated from further consideration. It is not necessary to subject communities along the E-2 route to the tortuous EIR/EIS process when the conclusion of infeasibility is obvious.

2. The 210 Freeway Crossing is Not A Precedent for the E-2 Route. CHSRA cannot rely on the 210 freeway crossing the Big Tujunga Wash as a precedent for the E-2 Route. That structure was planned, authorized and, for the most part built, prior to the enactment of the National Environmental Quality Act (NEPA) the California Environmental Quality Act (CEQA) and the Clean Water Act. When built, the freeway crossing was not subject to the environmental rules and laws currently in existence. In fact, NEPA was enacted partly in response to ever expanding freeway systems.

3. The Foothill Blvd. Bridges and Foothill Blvd. Cannot be Relied Upon As a Precedent for the E-2 Route. The Foothill Bridges and Foothill Blvd. which traverse the Big Tujunga Wash in a path almost parallel to the 210 freeway cannot be used as a precedent for the building of the E-2 Route through the Big Tujunga Wash. Foothill Blvd. and the original Foothill Blvd. bridges predated the 210 freeway by decades and, like the freeway, were not subject to the environmental rules and laws currently in existence.

4. 1969/1978 Floods Are Not a Precedent for the E-2 Route. In the 1969 and 1978 floods both of the Foothill Blvd. Bridges over the Big Tujunga Wash were destroyed and had to be re-built (one in each flood event). The re-building of those bridges did not have to comply with the current

environmental laws for numerous reasons including the fact that it was repairing an existing structure as opposed to new construction. You should note that this massive flood event caused boulders the size of Volkswagens to careen down the channel. This was in addition to the caskets from the Verdugo Hills Cemetery. The flood waters and the rocks/boulders in the next flood will seriously damage the structures which will support the overhead CHSRA train on the E-2 Route (See Attached newspaper article and photographs).

5. Future Flood Events on the E-2 Route Make that Route Infeasible. Future flood events could be just as damaging, if not more so, to the proposed E-2 Route. The Hansen Dam gates are rusted shut which means that water will back up into the flood plain during the next flood event. There will be additional problems caused by the construction on the Angeles Golf Course and the club house. The golf course was allegedly built to withstand a 100 year flood, but within 8 months after completion, in a relatively minor rain event, portions of the golf course washed away, never to be rebuilt because the jurisdictional waters of the United States changed. The golf course NEVER had a 404 Permit because the ACOE denied such a permit. Much more damage would have occurred if the golf course had not used large bulldozers to try to dam up the flood waters during the flood event. That "solution" will not come close to working in a major 1969/1978 type flood event. The golf course and many of its structures including the club house may be washed down stream and forcefully impact the above ground supports for the CHSRA train. Mother Nature and Father Time remain undefeated.

6. Effect of Noise Coming Into and Out of Tunnels on People Precludes the Use of the E-2 Route. The noise associated with the trains crossing the Big Tujunga Wash and entering and exiting the tunnels between Lake View Terrace and Shadow Hills will not be able to be mitigated and will completely disrupt both communities. The noise will reverberate through that area due to the mountains/cliffs on either side of the tunnels that create a "bowl effect" and "natural amphitheater." We know from decades of experience with the 210 Freeway that atmospheric conditions already affect sound in ways that are unpredictable, immitigable and, often, unbearable. CHSRA states that trains will not travel between midnight and 5 a.m. which CSHR asserts is the most sensitive sleep time. Commercial airlines at nearby Burbank Airport, for which the western end of Shadow Hills lies in the flight path, restrict their use of the airport to between 10 p.m. and 7 p.m. Even that is intrusive. CHSRA required hours of operation is an assault on people's sensibilities and will

constitute an on-going public nuisance. This precludes the use of the E-2 Route.

7. The Effect of Noise on Horses Precludes the Use of the E-2 Route. As noted by Dr. Robertson at the community meeting attended by over 2,000 residents, as well as CHSRA staff and consultants on January 13, 2015, horses are flight/fear animals and the Hansen Dam area is used extensively by equestrians. The sound from the construction and operations of the CHSRA will adversely effect the health of those animals and their riders and cause accidents on trails, as well as at home in stables and corrals, for which CHSRA will be liable. This precludes the use of the E-2 Route. At our January 13, 2015 event at All Nations Church, attended by multiple CHSRA management and consultants, Dr. David Robertson provided expert commentary about the effect of the noise and vibration on horses. A video of Dr. Robertson's expert testimony may be viewed at www.dontrailroad.us/videos/ .

8. Effect of Noise on Endangered and Threatened Birds Precludes the Use of the E-2 Route. CHSRA contends that noise from the high speed train coming into and out of the tunnels and traveling at high speeds above ground in the wide open, natural amphitheater created by the Big Tujunga Wash between Lake View Terrace and Shadow Hills will be reduced by the holes/slots or other mitigation techniques in the tunnels. We have already provided extensive commentary and professional opinion about the impact of train-associated noise and vibration on humans, on communities and on equines. However, such intermittent noise will also have an adverse effect on birds. The Tujunga Wash is the home to endangered and threatened species of birds such as the California Gnatcatcher, the Cactus Wren and the Least Bells Vireo. The effect on these birds in general and during the nesting season will likely be so adverse as to preclude this E-2 Route. I suggest that you Google "effect of noise on birds." There are numerous "desk top" reports on the subject. Please note that there are various types of noise including constant noise and intermittent noise and there will be different types of noise during the construction and the operational phases. In addition to the year round bird populations, there are migratory birds which will be adversely affected by this noise. Because of these consequences, this E-2 Route must be removed from the SAA and not included in the EIR/EIS. In addition to the noise destroying the birds, it will also destroy the critical habitat of such endangered and threatened species.

9. The Effect of Noise on Fish Precedes the Use of the E-2 Route. In addition to the effect on birds the noise cause by the entering and exiting of the tunnel will have an effect on the protected fish such as the Santa Ana Sucker. Fish are sensitive to sound and the effect of the noise on these protected fish species will cause adverse effects which cannot be negotiated. If you've ever been to a fish store or aquarium you will see signs asking patrons not to tap on the glass. It distresses the fish and sometimes ends in deadly consequences. Fish are very fragile and unnatural sounds affect their heart rates and can interrupt their reproductive cycle. Please Google "effect of noise on fish." This too should preclude the E-2 route from the EIR/EIS. In addition to the noise caused by the operation of the train, the construction of the train and drilling its pillars into the wash will cause noise and vibration which will destroy the endangered fish and its habitat.

10. Earthquake Faults As disclosed in the Army Corps of Engineers Hansen Dam Master Plan Precludes the Use of the E-2. In the latest maps CHSRA did not show the earthquake fault which exists in an east/west direction at the southern edge of the Big Tujunga Wash. This thrust fault is identified in the Army Corp of Engineer's Hansen Dam Master Plan which is readily available online, but ignored for reasons known only to CHSRA. Also, please review the existing, but inadequate State of California earthquake maps online and the State of California Department of Conservation 2010 fault activity map of California. CHSRA must be careful not to traverse that fault line. It appears to be a thrust fault because it separates the pristine water of the Big Tujunga Wash from the high nitrate water to the south which is related to the use of septic tanks. Co-mingling those two water sources may promote the contamination of the Los Angeles City drinking water. The LADWP has stopped pumping the high nitrate water and puncturing that fault would preclude the use of the E-2 Route.

11. The Elevation of the Train Crossing Wentworth in Shadow Hills Precludes the Use of the E-2 Route. The elevation of the train in the E-2 Route as it crosses Wentworth is at grade. In order to "fix" the problem CHSRA needs to change the elevation of Wentworth and to build a bridge over the high speed rail which must be at the current Wentworth Street grade. Since fire trucks and other larger vehicles must still traverse Wentworth, the grade of the bridge cannot exceed 15% (fire truck minimum) which means that the top of the bridge would likely exceed the height of the top of the cliff and require ramp in excess of 300 feet in each direction. Additionally the CHSRA tunnel, which will have to be at grade over Wentworth, has insufficient space between the top of the tunnel and the surface of the top of the cliff to properly construct the tunnel based on

consistent representations from CHSRA project management personnel that tunnels will be located 60-80 feet below surface levels. We have conducted scientific studies of the elevation of Wentworth and the elevation of the bluff at the point of crossing the Big Tujunga Wash and found there is roughly 100 feet from grade level at Wentworth to the top of the cliff. There is simply not enough room to safely build the tunnel into the hills that give Shadow Hills its name. This is depicted in the attached graphic. There is insufficient room between the tunnel entrance and the top of the bluff for CHSRA to thread the needle for the E-2 Route. It is unfathomable to us that CHSRA initial studies have not already concluded that the tunnel opening plan for the Wentworth/Shadow Hills cliff is infeasible.

Wentworth is the only street with quick and easy access to the numerous homes of Rancho Verdes Estates and it is imperative that safety vehicles have complete and unimpeded access at all times. Because there is a tunnel portal proposed along this route, a large staging area would be required during the multi-year construction phase. There simply is not enough space to set up a staging area because there is a bluff on one side and a sheer drop into the Wash on the other. Construction at this location would be impossible.

Finally, there is a stream flowing 365 days a year just a few yards off of and parallel to the length of Wentworth Street from Mary Bell Avenue, past Wheatland and past the entrance to Rancho Verdugo Estates. This stream flows from the San Gabriel Mountains unimpeded all the way to Hansen Dam where its waters continue above and underground to the San Fernando Groundwater Basin. The staging area for the proposed tunnels into Shadow Hills would NOT be able to avoid this stream. It is simply too close to Wentworth Street.

All of these items preclude the use of the E-2 Route since it is IMPOSSIBLE to properly construct the tunnel at that point.

12. Earth Movement in Shadow Hills. There is earth movement in the Shadow Hills area which will be exacerbated by tunneling through Shadow Hills. Shadow Hills has several surface reflected ruptures running east/west near Mary Bell Avenue. Running CHSRA underground through that area will only expose the nearby residential structures to destruction. The homes on top of the bluff have pylons that penetrate deep into the ground. Drilling a tunnel, whether it is 20', 30' or 40' in diameter, would strike these pylons and cause the structures to lose their integrity.

13. No Governmental Permits Will Be Issiued for the E-2 Route. There are numerous government permits including 404 and 408 permits which will be required to cross the Big Tujunga Wash. To our knowledge the Army Corps of Engineers has not issued any such permits in that area since the enactment of such legislation and we see no legal reason for them to do so at this time. It is fairly easy to ask the Army Corps of Engineers whether, or under what conditions, it will allow CHSRA to put a bridge across with all of the pillars into the Big Tujunga Wash. CHSRA can ask that now and disclose it publicly, before it goes through the expense of an EIR/EIS and subjects residents to needless fear and anxiety. It is clear from the current maps that the ACOE will NOT allow CHSRA to set one foot on to the ACOE owned property in the Big Tujunga Wash. Every proposed route meticulously avoids the ACOE property. The ACOE would not issue permits over property that they own so why would they give permits to CHSRA to trample identical habitats? The E-2 Route must be eliminated since none of the required permits will be issued.

14. "If You Touch It, You Own It" Precludes the Use of the E-2 Route. A CHSRA official once stated, "If you touch it, you own it." If CHSRA puts the train over the wash with the structures into the wash needed to support the train, then CHSRA will own the Big Tujunga Wash and all that goes with it. This is not the type of responsibility CHSRA can undertake. If something goes wrong, and it always does (Big Bertha), CHSRA will not only be financially liable but also could subject the entire project to being shut down. The risk reward ratio is not worth it. You can study this in an EIR/EIS forever but in the end... "If you touch it, you own it."

15. Traveling Through the Mitigation Bank Precludes the Use of the E-2 Route. CHSRA intends to run the train through an existing mitigation bank that is located in the Big Tujunga Wash. CHSRA will have significant regulatory impediments to damaging such a mitigation bank. When all of the regulatory hurdles are added up, traversing the Big Tujunga Wash above ground makes this alternative too costly and infeasible and precludes the use of the E-2 Route.

16. The E-2 Route is NOT Feasible and must be ELIMINATED NOW. CHSRA can only select for further study, alternatives which are feasible. As demonstrated in this letter, the E-2 Route is not feasible and must be eliminated at this point from further study. Existing environmental legislation related to CEQA and NEPA states clearly that infeasible routes should not and need not be included in EIR/EIS studies. The failure to eliminate the E-2 Route at this point constitutes a waste of

everybody's time, tax payers' money, and squanders the few precious and dwindling resources of CHSRA. It would also present a legally and technically indefensible alternative within the NEPA/EIS environmental study and subject the entire NEPA/EIS document and its conclusions to certain, future legal challenge.

In conclusion, you know the E-2 Route cannot work, so stop it now.

Very truly yours,

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MRCA
Fond Land Preservation Foundation Board of Directors
Dan Weikel - LA Times
Full SHPOA Board
Dana Bartholomew, Daily News
SAFE Members
Darrell Clarke, Sierra Club

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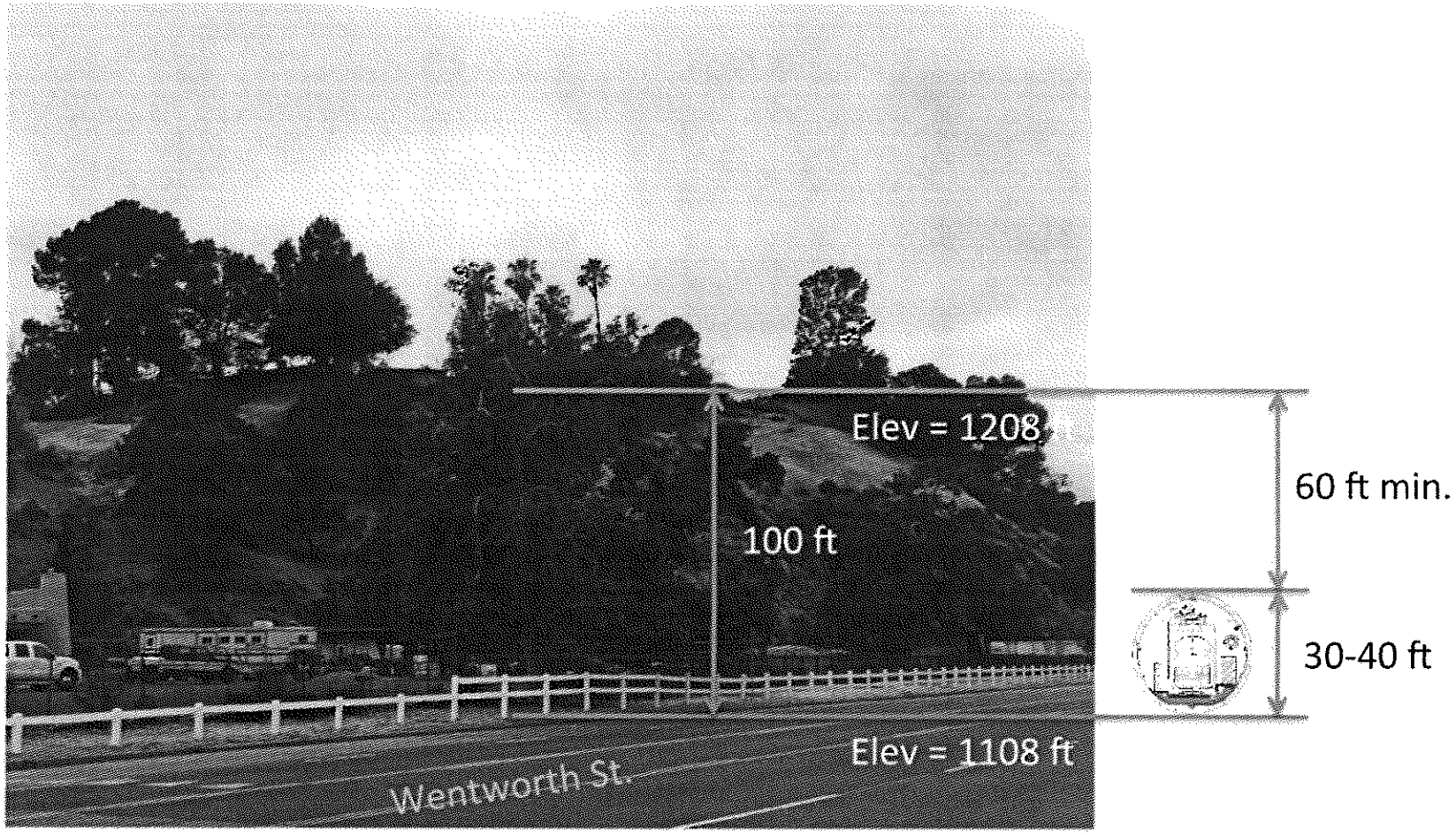
Shadow Hills Tunnel Portal
Limited Space: Unsafe and Infeasible



Investigation of Cemetery

Verdugo Hills Firm's Legal and Financial Status Under Inquiry

BY KEN LUBAS
Times Staff Writer

The collapse of the Verdugo Hills Cemetery which sent corpses and caskets tumbling into residential streets and yards in Tujunga continues as a nightmare for residents and disaster workers.

Investigation has brought to light a history of grotesque occurrences involving the four-acre cemetery at Paraen Ave. and Parsons Trail, many of which have been secluded in a state attorney general's investigation which is focused on financial irregularities involving a trust fund for the cemetery's upkeep.

The investigation began after Los Angeles County called an end to its contract with the cemetery for burial of paupers because of "deplorable conditions" at the site.

The cemetery's license expired in December, but the corporation has changed its name and is seeking exemption from state regulations as a religious cemetery, according to the attorney general's office.

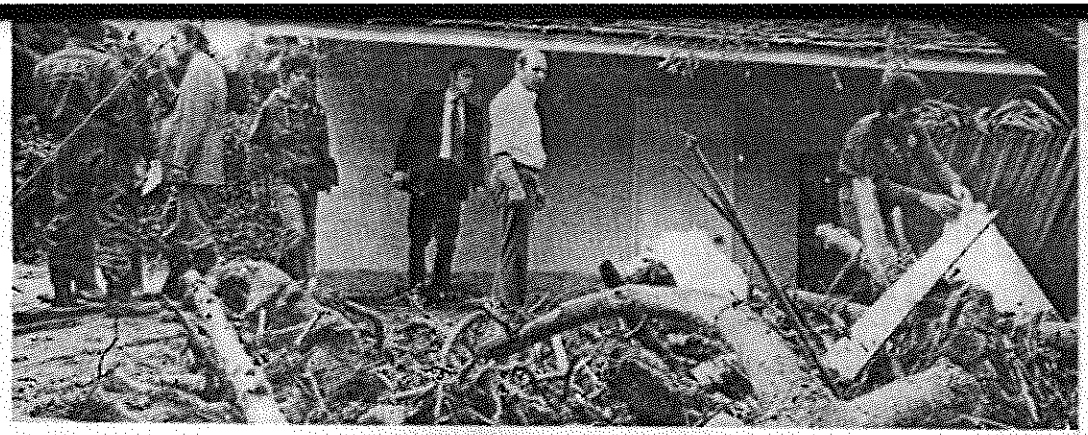
In the wake of the storm, authorities have recovered parts of more than 12 corpses and said Wednesday there may be twice that number still hidden in the debris.

County Coroner Thomas Noguchi voiced frustration Wednesday over his inability to secure information from owners of the cemetery on the number of graves disturbed.

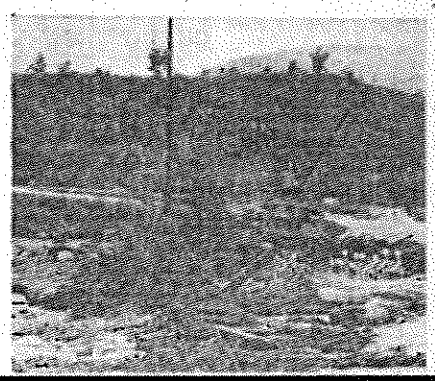
He also spoke with concern about the potential health hazard posed by any unrecovered corpse of an individual who died of a communicable disease.

He said he has no information as yet on deaths involving disease.

The only corpses found by [illegible]



HALLOWED GROUND—County Coroner Thomas T. Noguchi (left, in suit) talks to two staff members while another employe (far right) covers one of four bodies washed by flood waters from Verdugo Hills Cemetery into yard of home at 10633 Paraen Ave., Tujunga. Plastic in front of door covers another body.
Times photos by Ken Lubas and Joel P. Lagunas



Governments Mobilize Forces to Help Flood Victims Recover

Progress damage in the flood ravaged foothills is being compared to emptying the Pacific Ocean with a teacup.

That analogy came from one of 200 flood victims at Chaparral Ele[illegible] [illegible] shelter.

The body was buried at the city Department of Public Works by a homeowner who said little remains from work that even though the department is unable to go onto private property to retrieve debris, it would like to maintain control on

Los Angeles Times
San Fernando Valley

flooded with mud and debris warned over possible health dangers posed by collapse of a portion of a cemetery which sent corpses and shattered caskets into streets and yards.

Another worry concern about rattlesnakes washed from hills and told of a neighbor's dog that died from snakebite.

Neither the county Department of Health Services nor the Department of Animal Regulation was represented to answer questions.

The meeting was chaired by

The Foothills Paper
[illegible] hours ago · Edited

12 days and 36 years ago, flood waters flowed down Parsons Trail into Tujunga. Besides buildings being destroyed, the waters unearthed a dozen bodies and carried them as far down as Foothill Blvd. Think about that tomorrow when the rains hit again. These photo are copyright of The Foothills paper and may not be used with written permission of the owner.

Share

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2 shares

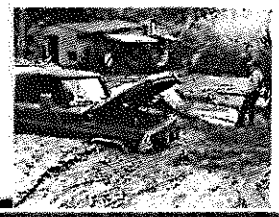
Jeff Deyoe So you're predicting that bodies and/or skeletons will be uncovered this weekend?
3 hours ago · Edited

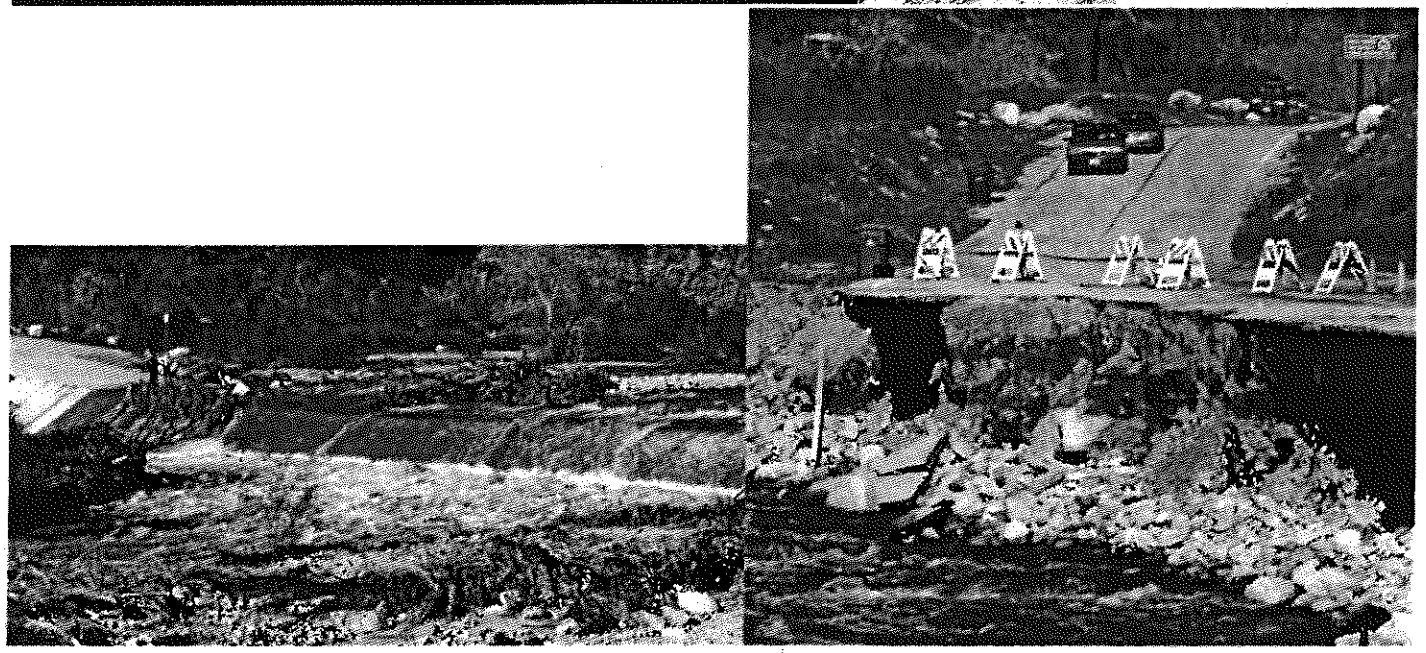
The Foothills Paper replied · 3 Replies about an hour ago

Beth Perez How can this be copyright by you when it is clearly a los angeleles times paper
2 · 2 hours ago

The Foothills Paper When we re-created the photo story from segments in our archives.
2 hours ago

Hojgan Ayers the statement should say "...may





SAVE ANGELES FOREST FOR EVERYONE

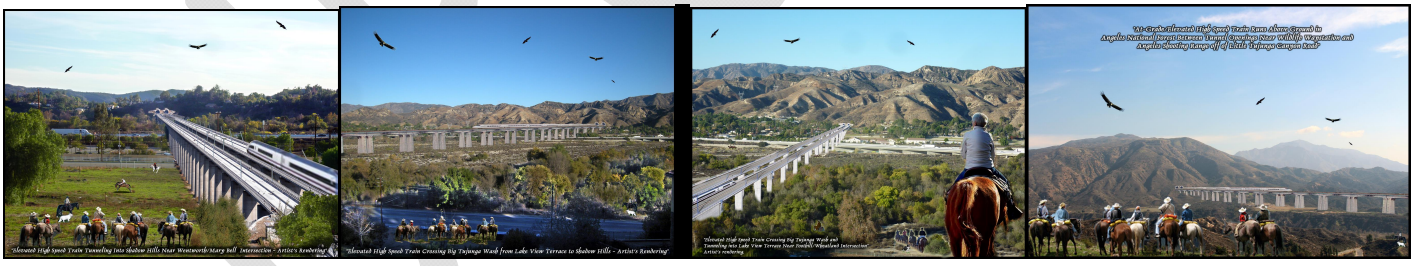
Don't Railroad Our Communities!

December 22, 2014

SUBJECT: IMMEDIATE ELIMINATION OF EAST CORRIDOR ALTERNATIVES FROM PALMDALE TO BURBANK PROJECT SECTION AND REVISION/IMPROVEMENT OF SR 14 ALTERNATIVES

Dear Chairman Richard, Board Members, CEO Jeff Morales and Southern California Regional Coordinator Michelle Boehm:

(Copies to: Congressman Schiff, Congressman Cardenas, Congresswoman Chu, Senator Liu, Assemblywoman Lopez, Assemblyman Wilk, Senator Hertzberg, Supervisor Antonovich, Supervisor Kuehl, Councilman Fuentes, Councilwoman Martinez, Councilman Krekorian, Mayor Garcetti, Burbank Mayor Gordon, U.S. Department of Agriculture, U.S. Forest Service, Army Corps of Engineers, Federal Aviation Administration, U.S. Department of Homeland Security, U.S. Environmental Protection Agency, California Department of Transportation, Sierra Club – Los Angeles Chapter, Hillside Federation, San Gabriel Mountains Forever)



[Pictured: the decimation of our residential Foothill communities and equestrian lifestyle as proposed by HSR's East Corridor alternatives. From left to right: bridge/tunnel entering Shadow Hills; bridge spanning Big Tujunga Wash; bridge/tunnel entering Lake View Terrace; bridge/tunnel entering San Gabriel Mountains/Angeles National Forest.]

ACTION REQUESTED

The Foothill communities of Shadow Hills, Lake View Terrace, Kagel Canyon, La Tuna Canyon, Sunland/Tujunga and Sun Valley have had enough. It's now the holiday season and our lives have been disrupted non-stop since mid-August when the non-specific, "new study alternative/yellow banana" for the Palmdale to Burbank segment was introduced and again recently when the updated SR 14 Corridor and three, new East Corridor alternatives were introduced. The new East Corridor alternatives were not in Prop 1A (voter-approved ballot measure) and violate the legislation by stretching the "definition" of what constitutes a clear, well-defined transportation and utility corridor. The East Corridor alternatives also have not been the subject of many years of planning and millions of dollars of research as were the SR 14 alternatives. Thus, we conclude the Authority is acting with far too much haste, and far too little regard, for the impacts created upon communities by their alternatives. The Authority continues to communicate these new alternatives very poorly, and is forcing decisions in a compressed time period. Thus, our claims of being "attacked, blindsided and thrown under the train," as conveyed at the Authority's September board meeting in Palmdale, continue to be warranted.

Local residents have taken days off of work and away from family responsibilities; community organizations have suspended normal activities; individuals have curtailed community-serving volunteer activities; real estate transactions and investments have been slowed or canceled; and we all have lived in a state of shock and anxiety getting educated on the project and fearing for the next steps of the High Speed Rail Authority. We are frustrated and angered to have this issue continuing to threaten our communities and residents during the holiday period.

Thus, after much research, much discussion and much analysis, the communities referenced above request communication, by the end of 2014, from the High Speed Rail Authority committing to the **elimination** of all three of the recently announced "East Corridor" alternatives (E1, E2 and E3 which replaced the "yellow banana") within the Palmdale to Burbank project section from any further project and EIR/EIS consideration.

Further, as we have studied and traveled the SR 14 and East Corridors, and attended meetings in Santa Clarita, Sylmar, Burbank, San Fernando and Shadow Hills, we have found serious flaws in the plans as far north as the Palmdale and the San Gabriel Mountains National Monument and Angeles National Forest, and as far south as San Fernando Road and Burbank Airport, which preclude them from further consideration. These include: the intrusion into the new National Monument and Angeles National Forest; the present design of the at-grade and elevated rail sections along San Fernando Road which devastate communities such as Sun Valley, Pacoima, San Fernando and Burbank; and the tunneled approaches to Burbank Airport which encounter a myriad of serious issues related to a Superfund site, the 5 Freeway, the Burbank Western Channel and Burbank Airport (involving Federal agencies such as the U.S. Department of Agriculture, U.S. Forest Service, U.S. Environmental Protection Agency, U.S. Department of Homeland Security, Federal Aviation Administration, U.S. Department of Homeland Security and the Army Corps of Engineers). Among

the most significant, unavoidable and unfathomable impacts of these highly tunneled approaches are the more than one million diesel truck trips (on inadequate road/bridge infrastructure) that would be created as part of the dirt excavation and equipment transport process.

We've worked closely with these communities on local quality of life matters such as redistricting, landfill closures, clean up of the trash/recycling industry and diesel truck traffic in the past few years. Together, we are referred to as "communities of interest" and we stick together and work together. Residents and businesses throughout the San Fernando Road corridor, and throughout the Northeast San Fernando Valley, are overburdened with industrial infrastructure and cannot bear further environmental and quality of life degradation. To date, the negatives far outweigh the positives for the High Speed Rail proposals we have reviewed.

Thus, we do not support or endorse ANY of the proposed HSR routes from Palmdale to Burbank at this time, a position we are confident our elected officials will agree with and support. One of the goals of HSR is to unify California and to bring our communities closer together, but the presentation of these alternate routes and the manner in which HSR has conducted itself with affected communities has achieved the opposite effect: dividing communities and pitting them against one another as they are forced to fight to protect their interests. We refuse to be put in the position where any of our communities must choose the lesser of potential evils, or to be pitted against one another. We respect our neighbors too much to simply adopt a NIMBY attitude. We insist that HSR engineers go back to the drawing board and do better work. HSR has a duty to explore feasible alternatives, not disastrous or illegal alternatives that explore loopholes or exceed the limits of protective legislation such as that which created our National Monument, National Forests and CEQA/NEPA.

At the same time, we insist that HSR commit greater resources to communicating with impacted communities by retaining consultants possessing experience in and who are sensitive to our Southern California communities. Frankly, we've met too many HSR consultants from outside the United States and California who have no feel for this market from a social or political perspective. How else could routes E1, E2 and E3 ever have seen the light of day? It's time HSR view voter approval and public funding as less of a mandate to meet deadlines and more of a responsibility to do the job right, regardless of the time it takes.

In addition, we call upon the Authority to retain independent, locally-attuned financial and real estate counsel, at the Authority's cost, to assess and to refund the short and long-term damages (financial, real estate, psychological and reputation) incurred by property owners in our Foothill communities resulting from the Authority's negligent handling of the introduction of the East Corridor alternatives. This process began in mid-August and the damages compound every day the flawed alternatives, developed solely by HSR engineers and consultants, devoid of local community input, are in existence. We repeat, eliminate the East Corridor alternatives immediately, without further delay.

BACKGROUND

The selection of, first, the undefined "yellow banana," followed by the three East Corridor options, have been unequivocal disasters for our communities and a waste of time and public funds by the High Speed Rail Authority. After being blindsided by the undefined, non-specific, approximately 400-square mile "yellow banana" in mid-August, 2014, many residents, who took uncompensated time off of work, testified at the Board's September meeting in Palmdale trying to enlighten the Board about the magnitude of HSR's mistake. More than 1,000 individuals/organizations provided more than 6,000 comments about the Palmdale to Burbank project section during the EIR/EIS scoping period, with the vast majority of those comments critical of the "yellow banana" alternative. We've yet to see any HSR responses to those comments…yet HSR moved forward, with no ongoing community input, to create the fatally-flawed East Corridor alternatives E1, E2 and E3. Since August 2014, despite voluminous communications to the Authority Board, we've received nothing more than a single form letter from the Authority with apologies for its tardiness. And, as evidenced by the flaws in the new East Corridor alternatives, we have received nothing more than lip service from local HSR staff and consultants.

Shortly after the Board's September meeting in Palmdale, President Obama, with overwhelming public and political support throughout Southern California, designated the San Gabriel Mountains National Monument. Instead of acquiescing to and respecting the will of the people for preservation of the environmentally sensitive lands protected by the National Monument and the Angeles National Forest, HSR plowed further ahead to seek declaratory relief from CEQA, issued RFQs for and selected contractors in the Palmdale to Burbank project section, created the new East Corridor to explore tunneling, at-grade and elevated rail routes through these protected lands, researched "Special Use Permits" through the new National Monument, and pursued "Cooperation Agreements" with entities such as the U.S. Forest Service.

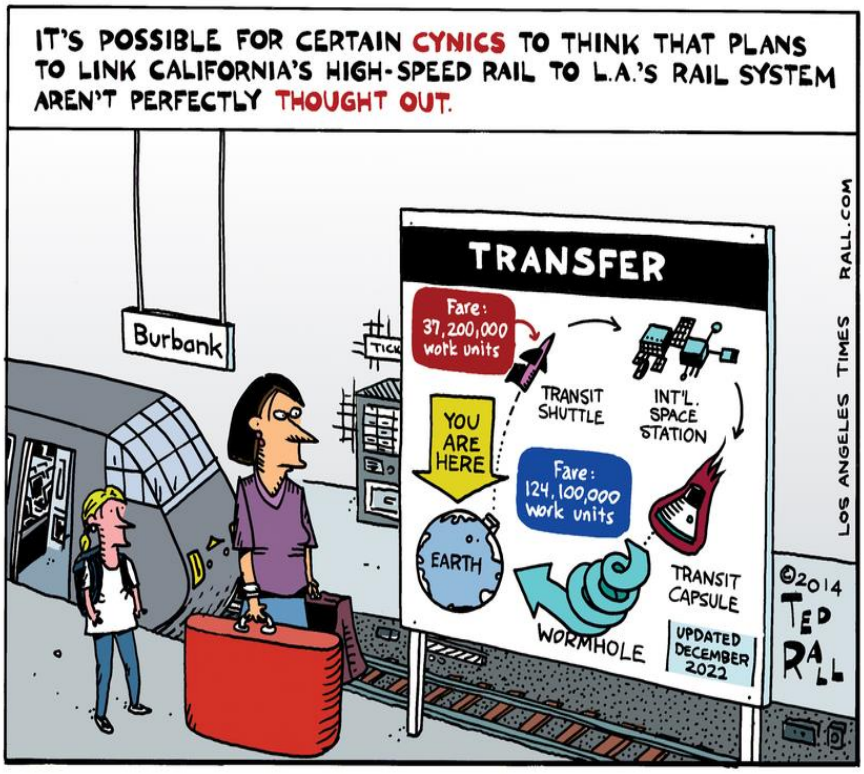
HSR staff and a myriad of consultants, elected officials and community leaders witnessed our communities' shock and outrage at the December 3rd HSR meeting held in Shadow Hills which was attended by more than 300 angry and emotional residents. Many of our residents and leaders attended multiple open house meetings to become further informed and to make sure HSR staff and consultants heard our voices. The meetings were poorly planned and executed: there was no community input into or review of the final product or revised SR 14 and new East Corridor alternatives prior to their release on December 2; although elected officials were briefed the week of November 17, 2014, the information was embargoed from community leaders and the public for two weeks, including the Thanksgiving holiday, until the start of HSR meetings on December 2; community leaders were rebuffed after offering several times to provide input to the newest round of alternatives prior to their release; and then the meetings were structured in a manner that *intentionally* stifled public comment and discussion. Legitimate and thoughtful questions posed from the community to the HSR representatives were met by scripted answers such as, "We don't know;" "It's only conceptual at this time;" or "It's a process." There was no recording of the meeting or full capture of the hundreds of questions posted. The meetings should have allowed both public comment *and* station-to-

station information gathering. As an aide to our County Supervisor suggested, the meetings were like "Chamber mixers."

As a sad commentary, we, the impacted communities, had to travel to Santa Clarita on Tuesday, December 2, for our FIRST introduction to the East Corridor alternatives on a stormy, rainy evening in a distant community. By then, elected officials had been briefed two weeks earlier, materials conveying the new alternatives had been printed, the Santa Clarita audience witnessed the new alternatives, and HSR's website was carrying the new information…all before our impacted Foothills communities knew anything.

As we discussed with the HSR project manager for this section, Michelle Boehm, and HSR's outreach consultant, Genoveva Arrellano, we reject being part of an iterative process controlled and manipulated by HSR, when the only path to success is a *cooperative* process in which community input is sought after and respected in a transparent manner. We are glad the Authority has agreed to our recent recommendation to create Community Advisory Committees to change the communications dynamic. We encourage HSR to move quickly in that direction and we will participate earnestly if our present requests are honored.

Apparently, the Los Angeles Times shares our concern, frustration and bewilderment with the HSR process:



OUR POSITION ON PALMDALE TO BURBANK PROJECT SECTION EAST CORRIDOR ALTERNATIVES

It is very apparent that HSR has the "cart ahead of the horse" at this juncture in this region…pun intended…from both an engineering/design and communications standpoint, and is struggling to develop the right strategy to build and communicate within densely populated communities. It was shocking to us that HSR, with its vast array of financial, engineering, technical and political/communications resources, could propose the flawed Corridors E1, E2 and E3.

For starters, each of the East Corridor alternatives violates the premise and spirit of the **San Gabriel Mountains National Monument and Angeles National Forest**, and we challenge whether the routes legally adhere to the definition of "existing transportation and utility corridors" as required by the enabling legislation and Proposition 1A, as approved narrowly by California voters. The East Corridor alternatives tunnel directly under the heart of the residential, equestrian communities of Shadow Hills, La Tuna Canyon, Lake View Terrace, Kagel Canyon, Sun Valley and Burbank. These alternatives create damage of varying degrees to nearby Sunland/Tujunga, Pacoima and San Fernando, affecting equestrians and recreation enthusiasts from throughout LA County who use the Northeast San Fernando Valley for their equestrian and varied recreation pursuits. The overall reputation, quality of life and historic equestrian culture of our Foothill communities would be decimated by the construction of multiple, gaping tunnel openings and an elevated rail line over our flood plain, equestrian trail network and recreation/open space areas. In addition, the local equestrian-related economy (which exceeds $100 million in value annually, not including equestrian real estate nor indirect economic benefits) consisting of horse sales, boarding, feeding, shoeing/trim, trucks, trailers, veterinarians and insurance would be devastated. This economic loss does not include the permanent property value and other non-equestrian-related sales tax loss that the State and local government agencies would lose due to HSR's use of eminent domain and devaluation of "survivor" properties.

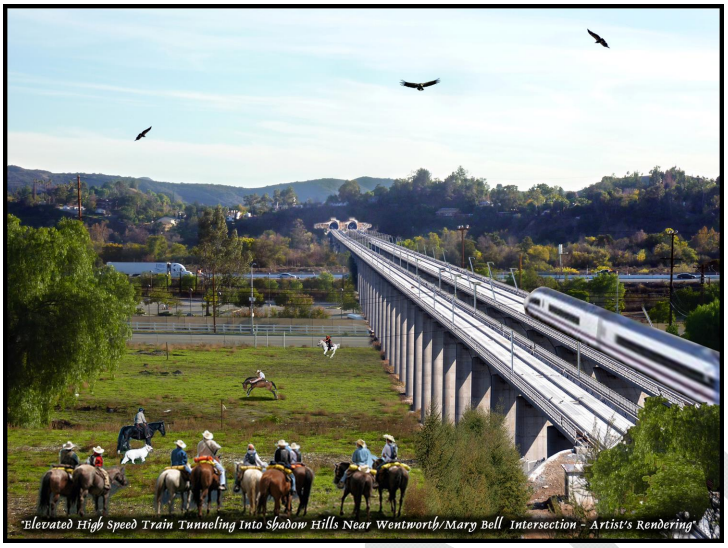
We have projected the severe damage created by HSR's East Corridor proposal, however preliminary or conceptual HSR intended, in its construction and operational phases. This comprehensive analysis, similar to but far less costly than an EIR/EIS, should lead you to eliminate the East Corridor alternatives immediately from further consideration.

We also believe HSR has a fiduciary responsibility to the State and its taxpayers to operate efficiently per the legislation. Already, the introduction and study of far-fetched and flawed alternatives such as E1, E2 and E3 represents a waste of time and *taxpayer* monies. Including these infeasible alternatives in the EIR/EIS will compound the wastefulness as well as raise serious legal issues related to NEPA and CEQA.

We have organized our analysis so that the most heavily impacted communities/open space areas are discussed:

- Shadow Hills/La Tuna Canyon/Sun Valley
- Lake View Terrace
- Kagel Canyon
- Big Tujunga Wash/Hansen Dam Recreation Area
- San Gabriel Mountains National Monument and Angeles National Forest

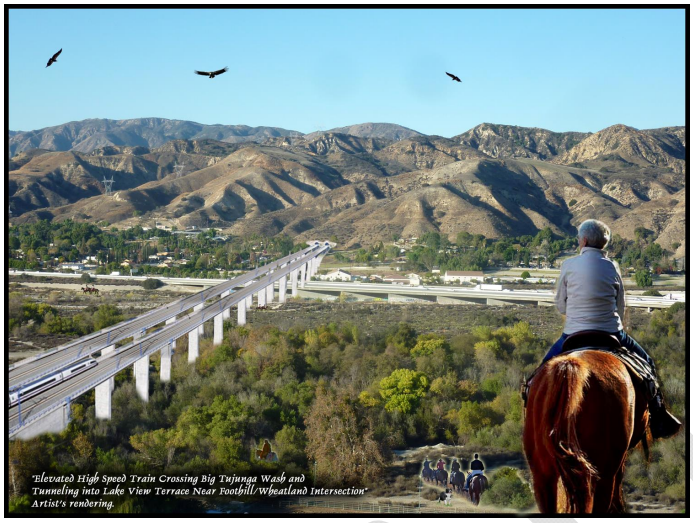
1. Shadow Hills/La Tuna Canyon/Sun Valley (33,000+ households; 80,000+ people; 2,500+ horses)



- *Significant, Unavoidable Construction Impacts from E2 and E3*
  - Creates a myriad of environmental impacts to our National Monument and National Forest.
  - Scars, savages and permanently defaces the "hills" which gave **Shadow Hills** its name and character by tunneling right into the most visible and public "face" of the community, thus, earning the moniker "Shadow Holes."
  - Visible to hundreds of thousands of residents and 210 Freeway travelers daily.
  - Tunnel construction beneath these communities, or operation of the rail line above grade, and resulting truck traffic, creates noise, fuel emissions, vibration, visual/aesthetic and safety impacts for residents, motorists, schools (e.g. Vinedale Elementary School and Stonehurst Elementary School), churches (e.g. All Nations Church, Mountain View Baptist Church, Sun Valley Community Church), horses and wildlife.
  - Dust would be unhealthful for residents, horses and wildlife (e.g. several cases of Valley Fever resulted in the deaths of animals locally during home construction very near routes E2 and E3).
  - Eminent domain would threaten both historic homes and seniors in the community.
  - Inadequate bridges and winding, country road infrastructure would not support the hundreds of daily truck trips required for dirt excavation and delivery of construction materials, especially if inert landfills in Sun Valley are used to landfill the excavated dirt. Road widening is not desired and would change the area's rural character.
  - Air quality impacts from construction-related dust and truck emissions would be unprecedented.
  - Road closures would disrupt residential and business thoroughfare as well as the critical equestrian crossings and trail activity along Wentworth Street in Shadow Hills that link up to trail systems in the Big Tujunga Wash and Hansen Dam Recreation Area.

    - Burbank will be severely impacted by the at-grade portion of E1 and the tunnels resulting from E2 and E3.
- *Significant, Unavoidable Operations Impacts from E2 and E3*
    - Creates a myriad of environmental impacts to our National Monument and National Forest.
    - Creates perpetual noise, vibration, visual/aesthetic and safety impacts at each of the tunnel openings along Wentworth Street in Shadow Hills, and from across the Big Tujunga Wash all the way to Lake View Terrace. Since we live with Freeway noise already, which emanates from the same location, we know the sound of the high speed train cannot be mitigated.
    - The hills, mountains, flood plain and canyons are a natural conduit for sound, acting at times like an echo chamber or natural amphitheater.
    - Creates surface noise and sub-sonic vibration affecting humans, horses and wildlife throughout residential areas, ranches and stables located above active tunnels.
    - Burbank will be severely impacted by the at-grade portion of E1 and the tunnels resulting from E2 and E3.
    - Creates a new threat of terrorism and tunnel disasters for residents and equestrians.

2. Lake View Terrace (4,500 households; 12,000+ residents; 2,000+ horses)



- *Significant, Unavoidable Construction Impacts from E2 and E3*
    - Creates a myriad of environmental impacts to our National Monument and National Forest.
    - Decimates the grand view and presence of the south-facing San Gabriel Mountains in the heart of **Lake View Terrace** by tunneling right into the most visible and public "face" of the community, thus, earning the moniker "Lake View Tunnels."
    - Construction of the tunnels beneath Lake View Terrace, and resulting truck traffic, creates noise, fuel emissions, vibration, visual/aesthetic and safety impacts for residents, horses and wildlife.
    - Visible to hundreds of thousands of residents and 210 Freeway travelers daily.
    - Dust would be unhealthful for residents, horses and wildlife.
    - Eminent domain would threaten both historic homes and seniors in the community.
    - Inadequate road and bridge infrastructure would not support the hundreds of daily truck trips required for dirt excavation and delivery of construction materials. Road widening is not desired and would change the area's rural character.
    - If inert landfills in Sun Valley are used to landfill the excavated dirt, this would create additional truck traffic through Shadow Hills which is adjacent to Sun Valley.
    - Air quality impacts from construction-related dust and truck emissions would be unprecedented.
    - Road closures would disrupt residential and business thoroughfare as well as the critical equestrian crossings along Foothill Boulevard that link up to trail systems in the Big Tujunga Wash.

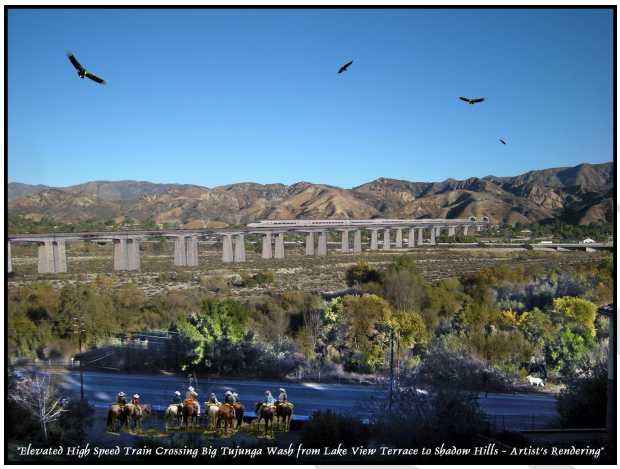
- *Significant, Unavoidable Operations Impacts from E2 and E3*
    - Creates a myriad of environmental impacts to our National Monument and National Forest.
    - Creates perpetual noise and vibration at each of the tunnel openings along Foothill Boulevard, and from across the Big Tujunga Wash all the way to Shadow Hills. Since we live with Freeway noise already, which emanates from the same location, we know the sound of the high speed train cannot be mitigated.
    - The hills, mountains, canyons and flood plain are a natural conduit for sound, acting at times like an echo chamber or natural amphitheater.
    - Creates surface noise and sub-sonic vibration affecting humans, horses and wildlife throughout residential areas, ranches and stables located above active tunnels.
    - Creates new threat of terrorism and tunnel disasters for residents and equestrians.

3. Kagel Canyon (300+ households; 1,000+ residents; 750+ horses)

- *Significant, Unavoidable Construction Impacts from E1*
  - Creates a myriad of environmental impacts to our National Monument and National Forest.
  - Construction of the at-grade portion of E1 creates noise, vibration and dust impacts for residents, horses and wildlife.
  - Construction of the tunnel openings near both the Angeles Shooting Range (to the south) and the Wildlife Waystation (to the north), and resulting truck traffic, would create noise, fuel emissions, vibration, visual/aesthetic, dust and safety impacts for residents, horses and wildlife, as well as disrupt equestrian trail uses and other recreational uses.
  - Since **Kagel Canyon** residents live with gunshot noise already, which emanates from the same shooting range location as the proposed tunnel opening, we know the sound of the high speed train cannot be mitigated.
  - Disrupts/destroys the Upper Marek Equestrian Trail system, the predominant loop connecting Kagel Canyon, Little Tujunga Canyon and Lake View Terrace. The trail system is utilized by more than 1,000 horses and riders in the immediate vicinity.
  - Construction of the tunnels beneath Kagel Canyon creates noise, vibration, visual/aesthetic and safety impacts for residents, horses and wildlife.
  - Dust would be unhealthful for residents, horses and wildlife.
  - Tunneling under Kagel Canyon would threaten water wells, potentially draining the underground aquifer which provides water to Kagel Canyon residents and the greater Angeles National Forest region as well.
  - Tunneling under Kagel Canyon could damage septic systems, potentially causing groundwater pollution.
  - Existing roads such as Little Tujunga Canyon Road are not equipped to handle the hundreds of dirt truck trips daily and residents strongly oppose upgrading the roads for construction purposes as that would change the rural character and use of the roads.

    - If inert landfills in nearby Sun Valley are used to landfill the excavated dirt, this would create additional truck traffic through Lake View Terrace and Shadow Hills en route to Sun Valley.
    - Creates a wide variety of negative impacts during both construction and operations phases to the Sun Valley community at the tunnel opening near Montague Street in Sun Valley, and at-grade operations along San Fernando Road.
    - Burbank will be severely impacted by the at-grade portion of E1 and the tunnels resulting from E2 and E3.
    - Proposed tunneling near or under the Lopez Canyon landfill facility, already a major nuisance to the Kagel Canyon community, puts methane and leachate collection systems at risk and creates the potential for water contamination and hazardous waste discharge.
- *Significant, Unavoidable Operations Impacts from E1*
    - Creates a myriad of environmental impacts to our National Monument and National Forest.
    - Creates perpetual noise and vibration along the approximate 2-mile, at-grade distance from Wildlife Waystation to the Angeles Shooting Range.
    - Creates perpetual noise and vibration at each of the tunnel openings along Little Tujunga Canyon Road.
    - The hills, mountains and canyons are a natural conduit for sound, acting at times like an echo chamber or natural amphitheater.
    - Creates noise and sub-sonic vibration affecting humans, horse and wildlife throughout residential areas located above the active tunnels.
    - Disrupts/destroys the Upper Marek Equestrian Trail system, the predominant loop connecting Kagel Canyon, Little Tujunga Canyon and Lake View Terrace. The trail system is utilized by more than 1,000 horses and riders in the immediate vicinity.
    - Creates a wide variety of negative impacts during both construction and operations phases to the Sun Valley community at the tunnel opening near Montague Street in Sun Valley, and at-grade operations along San Fernando Road.
    - Burbank will be severely impacted by the at-grade portion of E1 and the tunnels resulting from E2 and E3.
    - Creates new threat of terrorism and tunnel disasters for residents, equestrians and U.S. Forest Service.

4. Big Tujunga Wash/Hansen Dam Recreation Area/Scenic Preservation Plan/Rim of the Valley Corridor



- *Significant, Unavoidable Construction Impacts from E2 and E3*
    - Permanently defaces and changes the character of one of the most pristine, expansive and beautiful panoramic views and open space remaining in Los Angeles County.
    - Installation of bridges and pylons puts water supply (federal) and indigenous fish and wildlife at risk. The Big Tujunga Wash is volatile during storm events, as well.
    - Visible to hundreds of thousands of residents and 210 Freeway travelers daily.
    - Bridge construction, and resulting truck traffic, creates noise, vibration, visual/aesthetic and safety impacts for residents, motorists, horses and wildlife.
    - Dust would be unhealthful for residents, horses and wildlife.
    - Inadequate bridges and nearby residential streets would not support the hundreds of daily truck trips required for dirt excavation and delivery of construction materials, especially if inert landfills in neighboring Sun Valley are used to landfill the excavated dirt. Road widening is not desired and would change the area's rural character.
    - Air quality impacts from construction-related dust and truck emissions would be unprecedented.
    - Construction activity would disrupt critical equestrian crossings and trail activity throughout the entire Big Tujunga Wash and Hansen Dam Recreation areas.
    - Creates surface noise and sub-sonic vibration affecting humans, horses and wildlife throughout the Big Tujunga Wash and Hansen Dam Recreation areas, as well as neighboring/adjacent residential areas, ranches and stables.

- *Significant, Unavoidable Operations Impacts from E2 and E3*
    - Ongoing high speed rail operations puts water supply (federal) and indigenous fish and wildlife at permanent risk. The Big Tujunga Wash is volatile during storm events, as well.
    - Perpetual noise, vibration, visual/aesthetic and safety impacts and hazards are created for horses and riders. Existence of electrical impulses and sub-sonic sound impacts horses, wildlife and fish.
    - Permanently defaces and changes the character and visual/aesthetics of one of the most pristine, expansive and beautiful panoramic views and open space remaining in Los Angeles County. This view is enjoyed by hundreds of thousands of nearby residents, equestrians and other users of the open space and motorists on a daily basis.
    - Permanently destroys the "equestrian and trails experience" shared by our Foothill communities and residents/equestrians by tunneling into, out and over Shadow Hills, Lake View Terrace and the San Gabriel Mountains in clear view of our panoramic, expansive open-space recreation area and viewshed.
    - Creates a new threat of terrorism and bridge disasters for residents, equestrians and other users of Big Tujunga Wash and Hansen Dam Recreation area.
    - Per the San Gabriel/Verdugo Mountains Scenic Preservation Specific Plan adopted by the City of Los Angeles in 2004, this area has been designated a scenic byway, and HSR must adhere to its requirements.
    - Could impact the National Park Service Rim of the Valley Corridor plans to provide campgrounds and picnic areas in the mountains and a nature center facility for Hansen Dam.
    - Disrupts and may bisect Rim of the Valley trails that will encircle the "north, east and west edges of the San Fernando/La Crescenta Valley to facilitate the development of an interlocking, connected system of public parks, trails and wildlife habitat preserves within the mountain areas."
    - Disrupts the Rim of the Valley intention that "Foothills along the urban edge and ridges and peaks visible from the Valley should be preserved to enhance both the scenic and wildlife values of the Corridor."

5. San Gabriel Mountains National Monument and Angeles National Forest

- *Significant, Unavoidable Construction and Operations Impacts from E1, E2 and E3*
    - Disrupts equestrian, motorcycle, cyclist, camping and hiking pursuits in the National Monument and National Forest. The newly designated National Monument is within one hour's drive of over 17 million people living in Southern California. The Angeles National Forest provides more than 70% of LA County's Open Space. Each year, more than 3 million people visit the Angeles National Forest to hike, fish, ride horses, camp, ski, picnic and just enjoy the remarkable beauty of the San Gabriel Mountains. These National Forest lands are some of the most heavily visited public lands in the country; this area is vital to the greater metropolitan Los Angeles and Southern California region.
    - Impacts wildlife, natural springs and running streams throughout the National Monument and National Forest. The San Gabriel Mountains offer critical habitat and biological corridors for Nelson's bighorn sheep, California condors, mountain lions, spotted owls and many other endangered, threatened and sensitive species.
    - The San Gabriel Mountains provide Los Angeles with 30% of its drinking water and it would be irresponsible with the current, epic drought conditions to consider damaging this essential water supply by constructing and tunneling high speed rail in its proximity.
    - Creates perpetual noise, vibration, visual/aesthetic and safety impacts throughout the length of construction activity in the National Monument and National Forest, as well as the adjacent Wilderness Area, especially along the approximate 2-mile distance from Wildlife Waystation to the Angeles Shooting Range.
    - The hills, mountains, flood plain and canyons are a natural conduit for sound, acting at times like an echo chamber or natural amphitheater.

CONCLUSION: EAST CORRIDOR ALTERNATIVES ARE CLEARLY INFEASIBLE

1. HSR Creates Significant, Unavoidable Environmental Impacts and Damage

The most damaging impacts in the East Corridor region during construction and operations, such as visual blight, perpetual surface noise, sub-sonic noise, vibration and more than a million truck trips to remove excavated dirt are so obvious and render the East Corridor alternatives so infeasible, we maintain these alternatives should never have seen the light of day. We reject HSR's claim that the Corridor alternatives are merely conceptual or preliminary – they are VERY REAL to us! That is why we hold that HSR, as a public entity, must be responsible for the damage it is inflicting on targeted/identified communities. The communities/areas negatively impacted by the East Corridor alternatives include: San Gabriel Mountains National Monument, Angeles National Forest, Kagel Canyon, Lake View Terrace, Sunland/Tujunga, Shadow Hills, La Tuna Canyon, Sun Valley, Pacoima and Burbank.

2. HSR Faces Strict, Protective, Time-Consuming, Expensive and Potentially Unobtainable Permitting Processes

The processes for accessing Federal lands and waters such as the National Monument, National Forest and Big Tujunga Wash, as well as dealing with a Superfund site near Burbank Airport, increase the infeasibility of the East Corridor alternatives by adding years and tens of millions of dollars to the timing and cost of HSR, with no certainty that the judgments or permit applications would be positive for HSR from entities such as the U.S. Forest Service, Army Corps of Engineers, U.S. Environmental Protection Agency, etc. Adverse rulings by these agencies could also have a very damaging effect on HSR's EIR/EIS, requiring either additional work or recirculation, as well as adding to the likelihood of CEQA/NEPA challenges.

3. The East Corridor Alternatives are the Most Expensive

Every engineer we have consulted within our community and through our professional contacts, every research document we have reviewed, AND every HSR staff person or engineering consultant we have spoken to acknowledges that the East Corridor alternatives, due to their reliance on tunneling and jurisdiction in part by Federal agencies, are far more expensive than either elevated or at-grade routes, and far more expensive than the SR 14 alternatives.

One of our "learned" concepts, unfortunately, is that HSR cannot "tunnel" its way out of the challenges of approaching densely populated regions with a 220 mph high speed train, with dual tracks and dual tunnels. Because some at-grade or elevated rail lines will be needed, HSR faces brutal, no-win trade-offs and potential fatal flaws at many junctures along the route from Palmdale to Burbank.

4. Legal Challenges Await HSR

Residents and businesses throughout the East Corridor are already exploring a variety of legal remedies related to issues such as:

a. Definition of "Existing" Transportation and Utility Corridor, per the enabling legislation
b. Interpretation of HSR's locating East Corridor alternatives in a "Utility Corridor"
c. Violation of National Monument and National Forest guidelines
d. Failure to adhere to CEQA/NEPA processes and procedures
e. Decline of Property Values and other Financial Damages to Property and Business Owners

To conclude, because the E1, E2 and E3 alternatives violate the newly created National Monument, they must be eliminated. Because the alternatives are proposed to be constructed and operated within a National Forest, and very near a protected Wilderness area, they must be eliminated. Because the alternatives are already damaging and would ultimately destroy the character of the Foothill communities, especially Shadow Hills, Lake View Terrace and Kagel Canyon, they must be eliminated. Because the proposed alternatives require study and operation in Federal lands and outside of an existing transportation corridor, as required by the legislation (the alignment near existing utility corridors is a flimsy, far-fetched interpretation of what an "existing transportation and utility corridor" is), they must be eliminated.

From an engineering standpoint, we demand the East Corridor alternatives be eliminated from further consideration and/or inclusion in the upcoming EIR/EIS. In addition, we recommend strongly that the SR 14 alternatives, particularly where they travel along San Fernando Road, are seriously flawed, infeasible and need major improvements. From a communications standpoint, we call for HSR to change its way of working with communities to one of partnership and collaboration, rather than one of embargoed information and force-fed alternatives developed by engineers lacking local sensitivity combined with local community input.

Our communities deserve to be freed from further entanglement in HSR's flawed approach to densely populated communities. We have suffered enough. We want our peace of mind, quality of life, lifestyle and financial integrity restored. *We are determined to preserve the horse as our preferred high speed mode of transportation.*

To do that, we are prepared to wage an ongoing battle in our communities, politically and in the press. We are prepared to do whatever it takes, including taking legal action, to remove this threat prior to commencement of the project EIR/EIS and to be remedied for the damages incurred. We are communicating vigorously with all of our elected officials, as well as relevant government agencies to ensure there is widespread knowledge of this issue and of our demand for elimination of the East Corridor alternatives from further consideration. We are in close consultation with legal counsel and continue to monitor every move HSR makes in our area. Already, residents and businesses have pledged significant funds to our legal defense fund. We demand your prompt action.

Sincerely,

The S.A.F.E. Coalition – "Don't Railroad Our Communities"

Dave DePinto and Bill Eick; President and Board Member
On Behalf of the Shadow Hills Property Owners Association

Fritz Bronner and Vikki Brink; Lake View Terrace Residents; ETI Members; Horse Boarding Facility Owners
Members, Foothill Trails District Neighborhood Council

William Slocum, Kelly Decker and Katharine Paull; President, Vice President and Corresponding Secretary
On Behalf of Kagel Canyon Civic Association

Nancy Woodruff; Vice President, La Tuna Canyon Community Association
Vice President, Foothill Trails District Neighborhood Council

Mark Seigel and Cindy Cleghorn; Sunland/Tujunga Residents and Business Owner
President and Vice President, Sunland/Tujunga Neighborhood Council

Brad Bleichner and Alan Gettelman
On Behalf of Rancho Verdugo Estates Homeowners Association

S. H. P. O. A.

Shadow Hills Property Owners Association
P.O. Box 345 • Sunland, California 91040

Sent Via Email: palmdale_burbank@hsr.ca.gov

April 11, 2016

Mark A. McLoughlin, Director of
Environmental Services
ATTN: PALMDALE TO BURBANK PROJECT SECTION
California High-Speed Rail Authority 700
North Alameda St. Room 3-532
Los Angeles, CA 90012

California High Speed Rail Authority Board
Chairman Dan Richard and Honorable Board Members
c/o Mr. Mark McLoughlin
1770 "L" Street, Ste. 800
Sacramento, CA 95814

Federal Railroad Administration
Joseph C. Szabo, Administrator
c/o Mr. David Valenstein
MS-20, W38-303
1200 New Jersey Ave, SE
Washington, DC 20590

Surface Transportation Board
Chairman Elliot and Honorable Board Members
395 E. Street, SW
Washington, DC 20423

Mr. Horace Greczmiel
Associate Director for NEPA Oversight
Council on Environmental Quality
Executive Office of the President
722 Jackson Place N.W.
Washington, DC 20503

Re: *California High Speed Rail*
4/16 Supplemental Alternatives Analysis

Dear Environmental Services, California High Speed Rail Authority Board, Federal Railroad Administration, Surface Transportation Board, and Mr. Horace Greczmiel:

We are submitting this document on behalf of the Shadow Hills Property Owners

Association. Given the short amount of time since release of the SAA Report, we may provide further comments and input, as well as include additional communities' comments, input and endorsement/signature as time permits.

Our Association, along with many neighboring communities and a unanimous consensus of local elected officials in the northeast San Fernando Valley, objects to the Refined E-2 route being carried forward for detailed study in the project-level environmental document. We do not believe CHSRA is adhering to its own and NEPA/CEQA's requirement for a "reasonable range" of feasible alternatives. With the change in focus by CHSRA to a northern California IOS, the added time CHSRA has for southern California studies, and the removal of the urgency to complete the southern California IOS by 2022, **now is the ideal time for CHSRA to immediately remove damaging above ground elements such as E-2 from further consideration, to add new route alternatives for consideration and to explore a non-Burbank station alternative as the most transparent means of addressing the reasonable range criteria**.

We object to CHSRA continuing to ignore the political and public will in our communities for **complete** removal of above ground high speed trains near residential areas, that divide communities, or threaten sensitive environmental areas during both construction and operations. It is factually incorrect and disingenuous for CHSRA to refer to its public outreach work, on pages 10 and 11, in section 1.4.2 Community on page 19, in section 1.5.6 Stakeholder and Community Engagement on pages 27-39, as "intensive" or "comprehensive" when there has been exactly ***zero*** such outreach or meetings for ten months, since the June 2015 CHSRA board meeting in downtown Los Angeles. In addition, our oft-repeated request to be connected to a board member responsible for or familiar with our region for detailed dialogue has been met with no answers from either the Governor's Office or the Authority.

We find the tone of many sections of the SAA Report to be presumptuous by misstating the certainty of many project elements. For example, in both the Introduction and Executive Summary sections of the SAA Report, CHSRA uses the misleading and incorrect term "will" for project elements such as potential stations and a link to Las Vegas when terms like "planned" or "would" or "potential" or "hypothetical" are more truthful and accurate when discussing project elements that are in environmental review phase, unfunded or lacking in approval from any government jurisdiction. Such exaggerations and overstatements create misunderstanding, unnecessary threat and pose financial risk to property owners.

We do not believe it has been possible for the SAA Report to consider the findings of the up-front, environmental studies approved unanimously at the Board's June 2015 meeting. As we have documented extensively, first of all, the studies of water, seismic, tunneling and equine were not done independently or collaboratively. Second, two of

the studies were released in the same time period in which briefings on the SAA Report were being conducted by CHSRA – findings from the studies could NOT have been incorporated into the SAA Report. Third, there was no public review of the independent, third party studies, other than our 11-page critique of the Mineta Equine Study (which we again call upon CHSRA to withdraw from the record due to the obvious conflict of interest in selecting Mineta for the work, given the presence on the Mineta Board of Trustees of at least 5 current or former CHSRA employees, board members and contractors). Fourth, the final independent, third-party study related to seismic was never done according to Chairman Richard at the San Fernando Valley COG meeting.

The California High Speed Rail Authority's (CHSRA) April 2016 Supplemental Alternative Analysis (4/16 SAA), which proposes the Refined E-2 Alignment (Refined E-2) from Palmdale to Burbank, is fatally flawed and, Refined E-2 like route E-3, should be completely eliminated from consideration. We believe CHSRA is abusing its discretion as we continue to find issues, flaws, inadequacies and shortcomings with CHSRA's presentations. It was our grassroots group which pointed out on January 13, 2015, the water resource risks in the San Gabriel Mountains, of which CHSRA was not aware. Then, in fall 2015, we hosted CHSRA staff and consultants on a tour of the Big Tujunga Mitigation Area, and wrote exhaustively for many months, convincing CHSRA of the fatal flaws and show stoppers inherent in constructing and operating the high speed train project in or near the sensitive environmental areas such as Big Tujunga Wash Mitigation Area, Haines Canyon Creek and the Tujunga Mitigation Ponds. We find the Authority's response of moving the Refined E-2 route several hundred yards west of the "political" boundary of the Big Tujunga Mitigation Area to be inconsequential from an overall environmental and impacts standpoint. The E-2 Route remains offensive and injurious in countless environmental categories as well as its cumulative impacts.

We will provide analysis herein, which we believe CHSRA ought to be able to conduct on its own with the vast resources at its disposal, to outline very clear and compelling reasons for the elimination of route E-2, including contradictions in CHSRA's analysis whereby reasons for eliminating Revised E3 are not equally applied to Refined E-2.

1. Overburden. The 4/16 SAA states that "reducing overburden is a key factor in providing overall constructability and cost" (4/16 SAA pg 70 section 2.6.3). In attempting to refine the E-3 route CHSRA was able to reduce the E-3 overburden from 3,000 feet to 2,750 feet. As CHSRA states on page 71 section 2.6.3 "...deep tunnel construction would have posed a higher risk to feasibility." This was one of the main reasons for eliminating the E-3 route.

   CHSRA makes the unsubstantiated statement that a 2,750 foot overburden is still greater than the Refined E-2 route (pg 70 section 2.6.3.). However, nowhere

in the 4/16 SAA or the 6/15 SAA is there a chart or graph showing the E-2 overburden. The only reference to overburden is located on in Table A-3 page A-28 of the 4/16 SAA, which states that the "constructability" for Refined E-2 is the same as the "constructability" for the prior iterations of E-2. In prior portions of Table A-1 and A-2, "constructability" refers to "overburden". Thus pursuant to the 4/16 SAA, the "overburden" for Refined E-2 is the same as the overburden for prior E-2(a) and E-2(b). I was able to locate a document prepared by CAHRA and entitled Project Elements, a copy of which is attached hereto as Exhibit 1. Page 18 of such Exhibit 1 is a graph which shows the E-2 overburdened. While not giving an exact number, the graph shows two points where the overburden is equal to or greater than 2,750 feet. Thus since the overburden is a key factor which disqualifies E-3, such substantially identical overburden must also disqualify Refined E-2. This may also disqualify E-1, but those figures were not detailed in the 4/16 SAA.

2. Operational Capability and Travel Time. CHSRA states that it was concerned about the original E-3 "operational capability and travel time which were of particular concern in the Burbank Station Area ... [because of the] relatively tight curves into and out of the station platform, reducing maximum travel speeds, and thus increasing overall travel time." (Page 70 Section 2.6.3) CHSRA stated that it had modified such entry for E-3. That detail was not shown, so it is difficult to compare to the Refined E-2 route entering Burbank, but if the more gently curved E-3 route to Burbank is not enough to keep it from being eliminated, then it should not be enough to retain the Refined E-2 route. It should also be noted that the difference in travel time between the baseline in Route E-1(a) and Refined E-2 is +17 seconds. (See Table A-3 page A-28) Thus, not only does Refined E-2 have other disqualifying factors, it has an insignificant time difference.

3. Contaminated Soils and Ground Water in Vicinity of Burbank. One of the reasons for eliminating E-3 was the "known presence of contaminated soils and ground water in the vicinity" of the Burbank Station. (Page 70 Section 2.6.3) It is well known that substantial portions of the Burbank site area are designated a superfund site due to toxic solvents deposited into the soil. This has contaminated not only the ground, but hexavalent chromium (C6) has contaminated portions of the water supply (think Erin Brockovich). This tunneling through contaminated superfund site soil/water is detailed in Table A-3 pages A-37 - A-38. Routes E-3 and Refined E-2 must both enter Burbank through the same contaminated/superfund site soil/water with the same

predictable disqualifying results. The Refined E-2 alternative should be withdrawn for the same Contaminated Soil and Ground Water issues which disqualified E-3.

4. Environmental Resources. The Refined E-2 Route's impacts on Environmental Resources compared with E-2(a) and E-2(b) routes are almost identical and in the case of Critical Habitats for the federally endangered Santa Ana Sucker and the Southern Willow Flycatcher the Refined E-2 Alignment disrupts an even greater number of critical habitat acres, (4/16 SAA Report Pages 63 - 64 Table 2.5.51) As it crosses by the Big Tujunga Wash, the Refined E-2 Route is just as environmentally disruptive as was the prior E-2 routes and more disruptive than the E-3 routes.

5. Mitigation Bank. The County of Los Angeles owns approximately 206 acres as a Mitigation Bank in the Big Tujunga Wash to off set other activities of the Department of Public Works. The former E-2 routes went through this Mitigation Bank above ground. The Refined E-2 route is moved several hundred yards to the west so that it no longer goes through the County owned Mitigation Bank, but instead goes through the ACOE property. **That property has the identical environmental characteristics as the Mitigation Bank property and will yield identically adverse environmental impacts.** The mere movement a few hundred yards west is no reason for the Authority to be touting that change as any kind of environmental improvement. It is simply a geographic or political convenience for the Authority and has no benefits to our precious Big Tujunga Wash. The Haines Canyon Creek with its endangered Santa Ana Sucker and irreplaceable habitat does not stop at the property line. It continues into the ACOE property. Moving the above ground train 200 or so yards down stream is akin to rearranging the environmental deck chairs on the Titanic. Further details on environmental issues can be found in the Hansen Dam Master Plan prepared by the ACOE which is available online and the existence of which has been provided to the CHSRA on numerous occasions.

6. Disingenuous Argument by Chairman Richard. On several occasions, including at the San Fernando Valley Council of Governments meeting and most recently on the Channel 4 news broadcast at 9:00am on 4/10/16, Chairman Richard has attempted to justify the Refined E-2 Alignment above ground through the Big Tujunga Wash by pointing to and attempting to equate the electrical transmission lines which cross the Big Tujunga Wash with the proposed CHSRA viaduct. In fact, Mr. Richard referred to a solitary power line structure as

evidence of "stuff" (that was his word) that would somehow justify this pristine eco-system as a proper location for the massive high speed train impacts.

These two cannot be equated. The high tension power lines have one tower in the middle of the 2 mile wide Big Tujunga Wash, which tower is in an area that does not contain wetlands. On the other hand, the CHSRA viaduct appears to require structures every twenty five to one hundred yards as depicted on the photograph from the April 6, 2016 Los Angeles Times attached hereto as Exhibit 2. These CHSRA structures will destroy the wetlands which they encounter. The 5+ year construction phase alone, given the intrusion of boring equipment, trucks, materials, supplies, road closures, trail closures and displacements, would cause irreparable damage. To equate the one electrical transmission line tower with the multiple structures needed to support the two trains is disingenuous and makes even the casual observer question the efficacy of all other CHSRA statements. It should be noted that the City of Los Angeles is spending millions to restore the Los Angeles River at the same time as the CHSRA is spending billions to destroy it. The Big Tujunga Wash is the Los Angeles River before cement. The Los Angeles Department of Water and Power "owns" the water rights for Haines Canyon Creek and it is a contributor to the City's water supply in these dire drought conditions.

7. Non-Burbank Route. Jeff Morales, Rail Authority Chief Executive, stated on Monday April 4, 2016 that higher costs were driven by the assumption that a rail station would be built in Burbank rather than Sylmar. Also, apparently the Parsons Brinckerhoff cost estimate and the state's previous business plans never said that a future San Fernando Valley station would be in Burbank or Sylmar. (Los Angeles Times article dated 4/6/16 California Section) In fact, the ballot initiative did not even mention Burbank as a station. A non-Burbank station alternative should not only be considered as one of the feasible environment alternatives, such a route would reduce project costs by millions if not billions of dollars. CHSRA's claim that Burbank is needed for connectivity purposes is pandering to a political audience and is redundant to present and project rail options at the Burbank Airport. Further, at an Assembly Budget Sub-Committee oversight meeting on Wednesday, April 6th, Mr. Richard touted the "enormous development" opportunities in station communities. Neither the residents of Burbank, the City of Burbank, or we, as neighboring residents, would favor such "enormous development" and the stress that would put on existing infrastructure and communities.

Inserting Burbank as a station not only increases the costs, but also requires some of the most troublesome route alternatives. CHSRA should take the time to study alternatives which do not have a Burbank station. In analyzing cost estimates, CHSRA does not include a Burbank station because the non-inclusion of Burbank makes the cost estimate look cheaper. Now would be the time to create a non-Burbank alternate so that the cost estimate presented to the public isn't just a fiction.

8. Conclusion. We have only had about 4 days to read and analyze the 4/16 SAA. It deserves an even greater in-depth analysis, but it is clear that Refined E-2, like E-3, must be withdrawn from consideration. The failure to do so constitutes an abuse of discretion.

Very truly yours,

William E. Eick,
Attorney at law
Chairman, Land Use Committee
Shadow Hills Property Owners Assn.

David J. DePinto
President, Shadow Hills Property Owners Assn.

c.c. Members of the California State Assembly
Members of the California State Senate
Los Angeles County Supervisors and Staff
Los Angeles City Council Members and Staff
Mayor of the City of Los Angeles
SAFE Coalition
Burbank City Council Members
San Fernando City Council Members
Santa Clarita City Council Members
Governor Jerry Brown
Lieutenant Governor Gavin Newsom

Misc.SHPOA.CHSRA.1.5

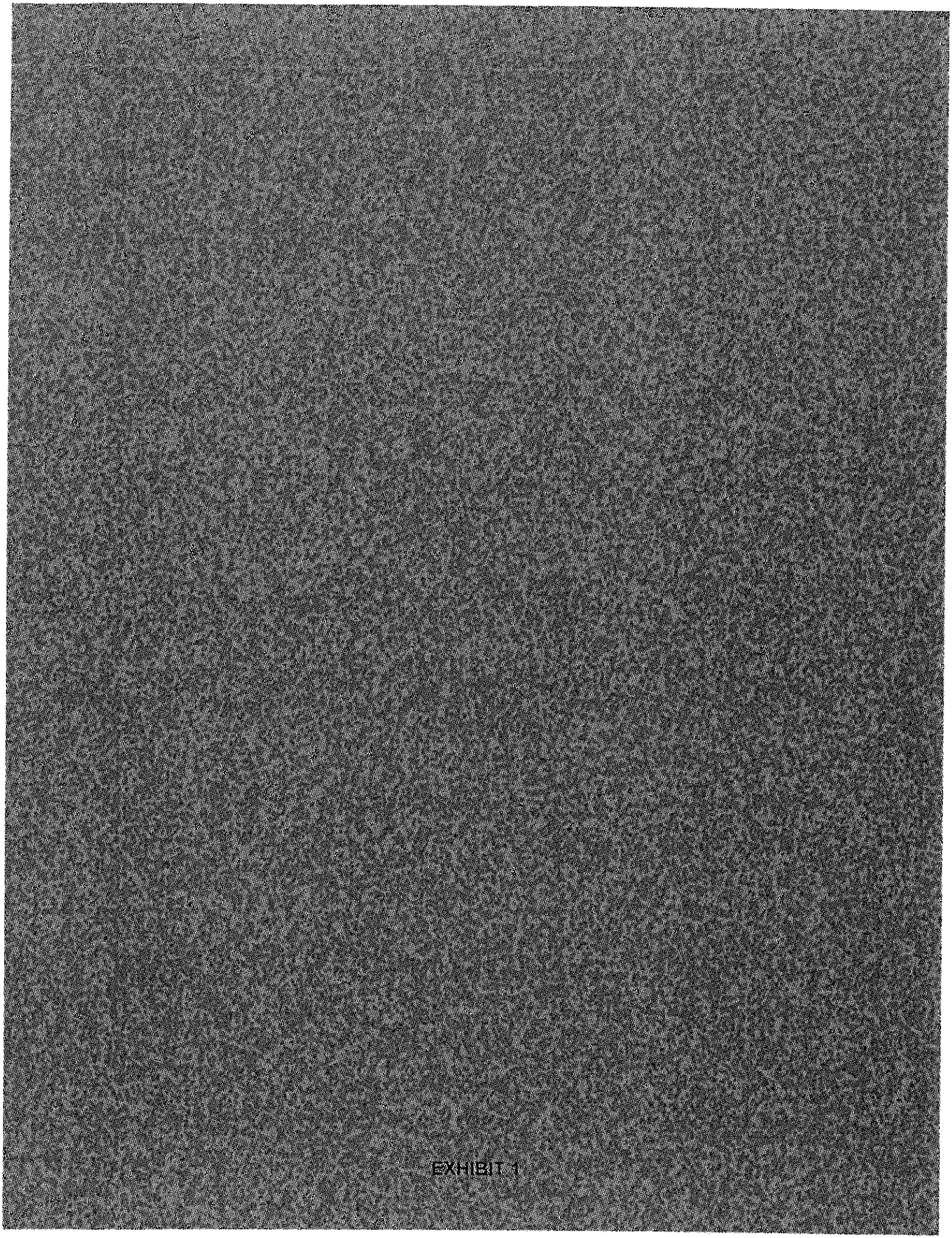


EXHIBIT 1

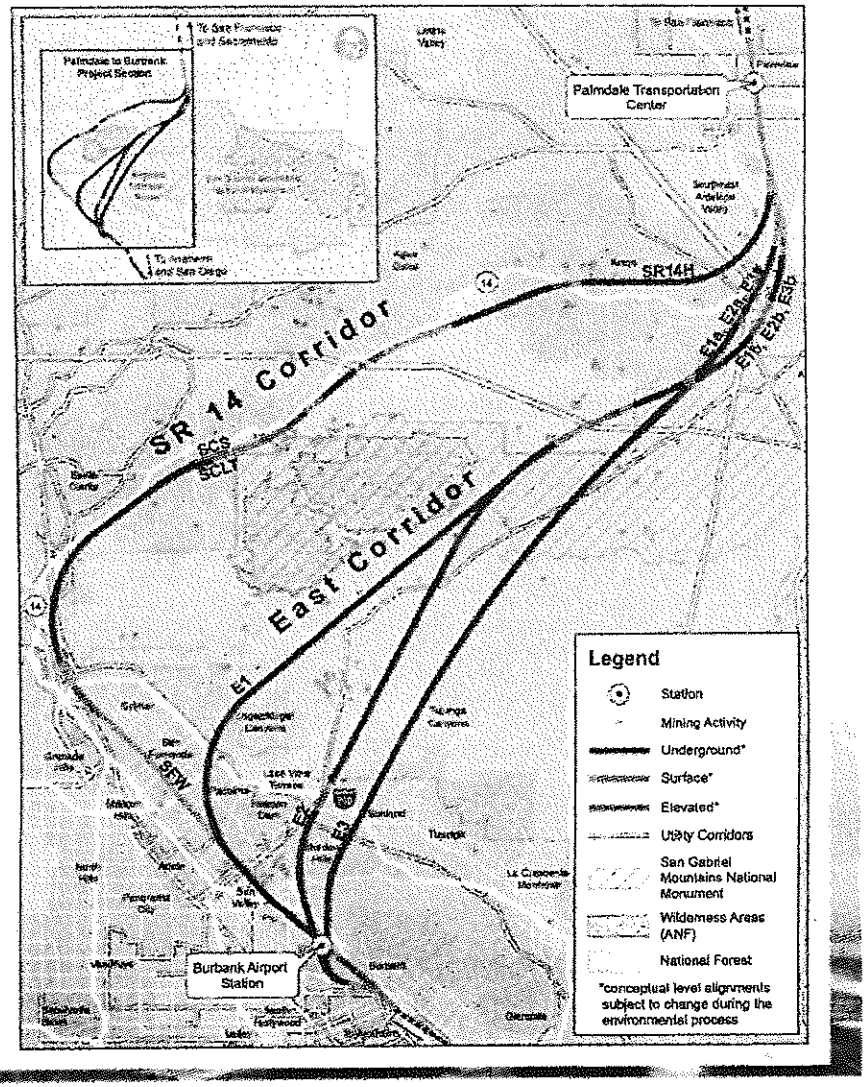
CALIFORNIA
High-Speed Rail Authority

PROJECT ELEMENTS

CALIFORNIA High-Speed Rail Authority

Palmdale to Burbank Route Concepts

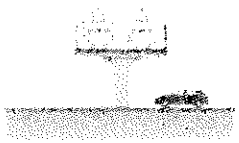
- Two Corridors:
  - SR 14 Corridor
  - East Corridor
- Two Stations:
  - Palmdale (Antelope Valley)
  - Burbank (San Fernando Valley)
- Multiple Alignment Options
  - Refinement Process Ongoing



CALIFORNIA
High-Speed Rail Authority

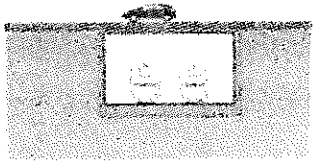
EXAMPLES: VERTICAL PROFILES

ELEVATED

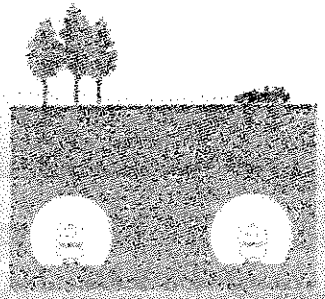


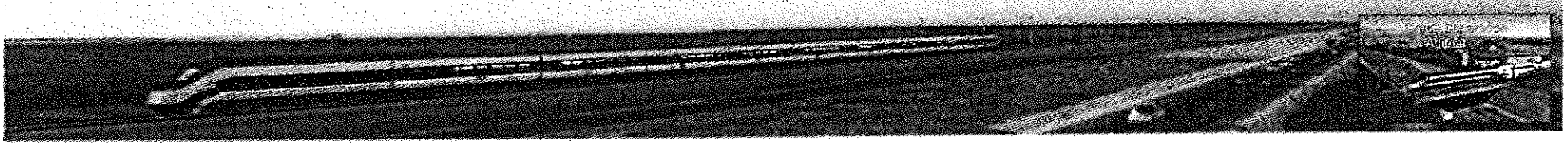
SURFACE

TRENCH/CUT & COVER



HSR DEEP TUNNEL

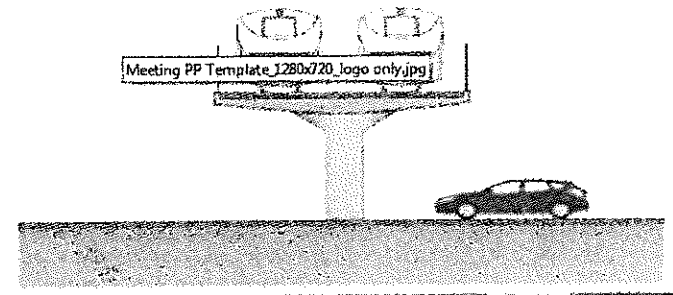


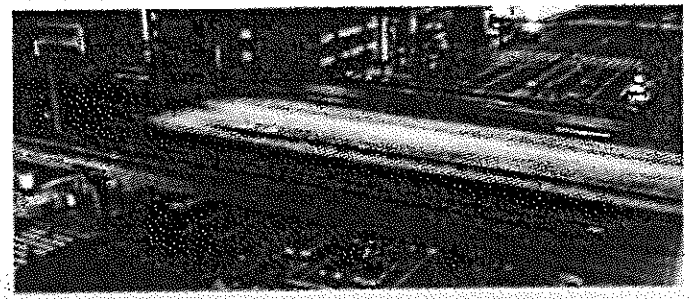


CALIFORNIA
High-Speed Rail Authority

EXAMPLE: ELEVATED

- **PROS:**
  - Narrower Width
  - Usable Space Below Structure
  - Rider Views
  - Constructability
- **CONS:**
  - Visual Impact
  - Noise Impact

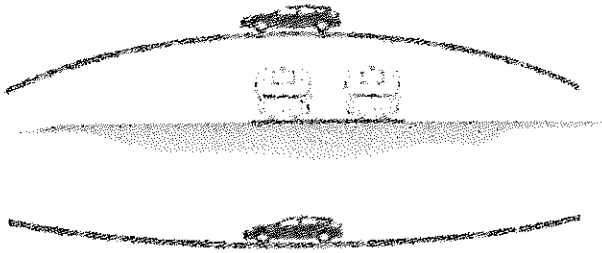




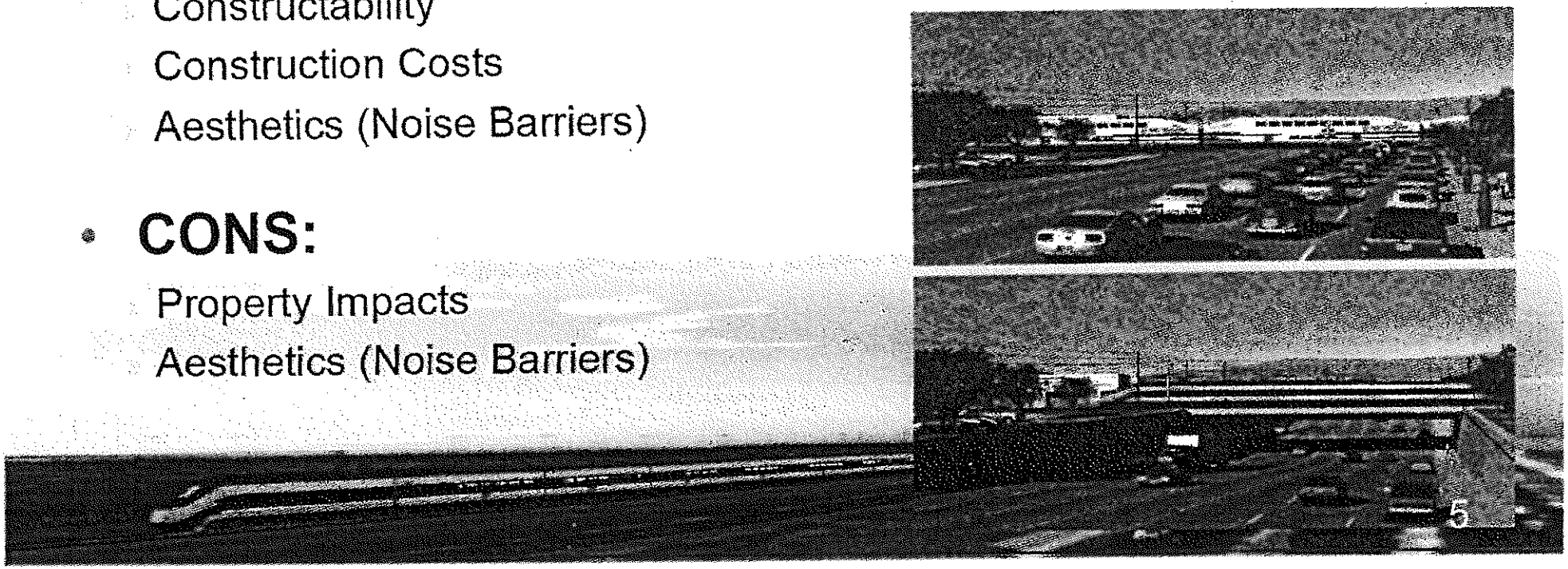
CALIFORNIA High-Speed Rail Authority

EXAMPLE: SURFACE

- **PROS:**
  - Less Visual Impacts (Vs. Aerial)
  - Rider Views
  - Constructability
  - Construction Costs
  - Aesthetics (Noise Barriers)

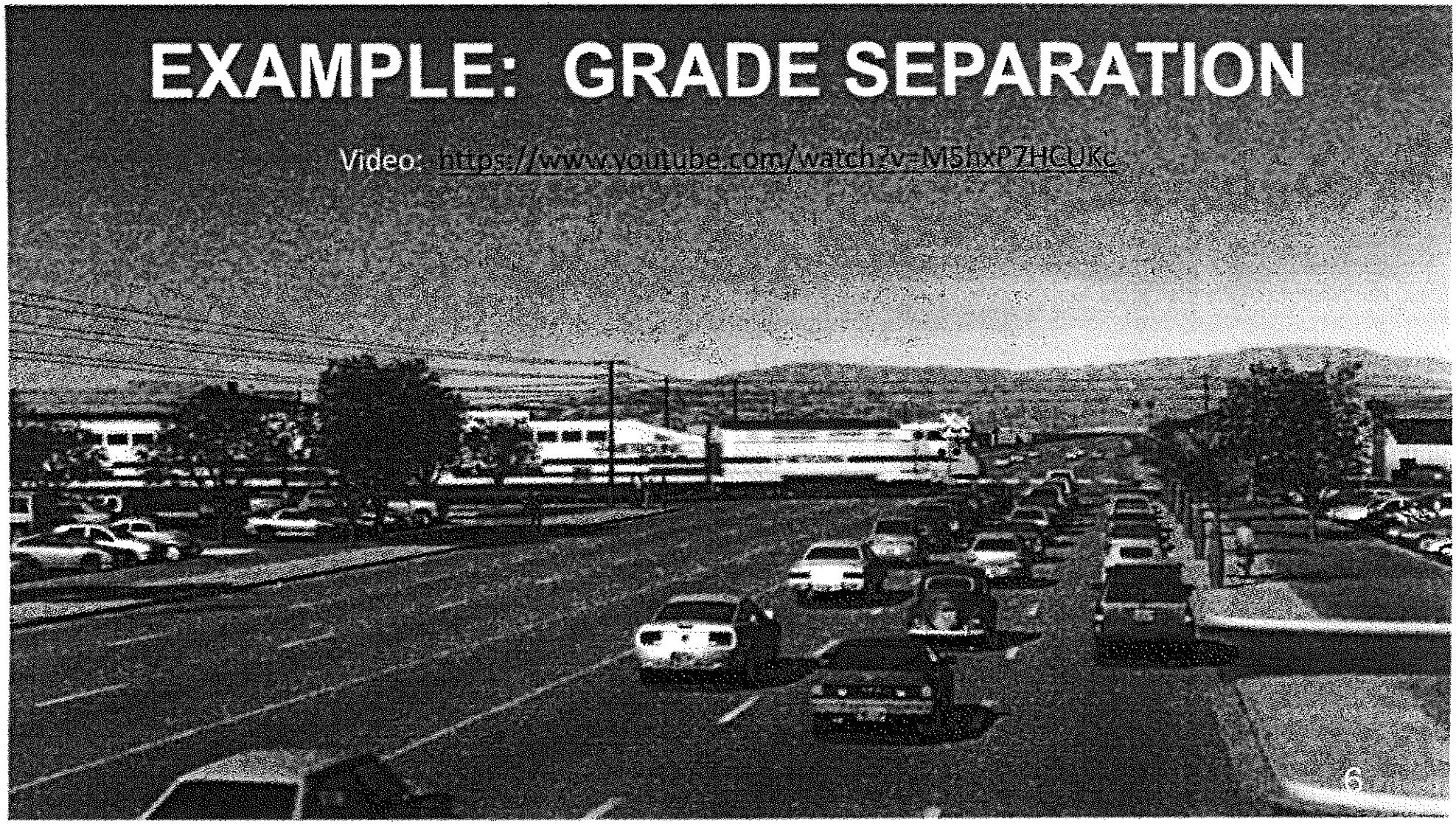


- **CONS:**
  - Property Impacts
  - Aesthetics (Noise Barriers)



EXAMPLE: GRADE SEPARATION

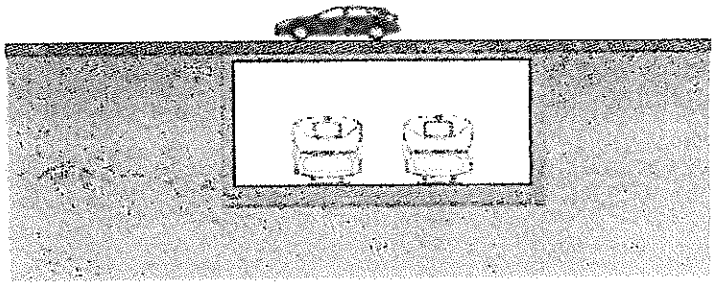
Video: https://www.youtube.com/watch?v=M5hxP7HCJKc

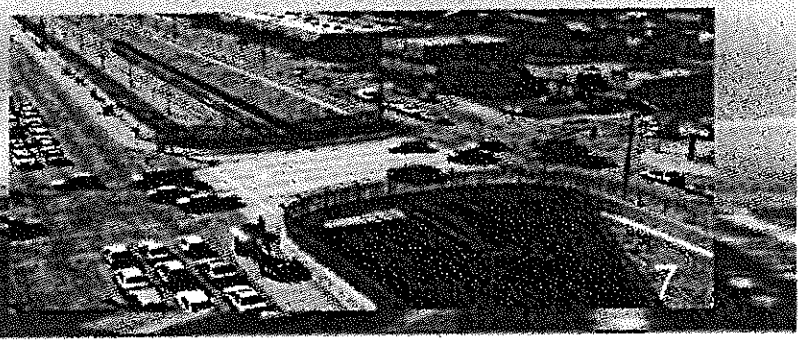


CALIFORNIA High-Speed Rail Authority

EXAMPLE: TRENCH / CUT & COVER

- **PROS:**
  - Limited Visual Impact
  - Options for Connectivity across Trench
- **CONS:**
  - Potential Impacts to Waterways and Utilities
  - Right of Way for Construction
  - Limited Rider Views
  - Cost

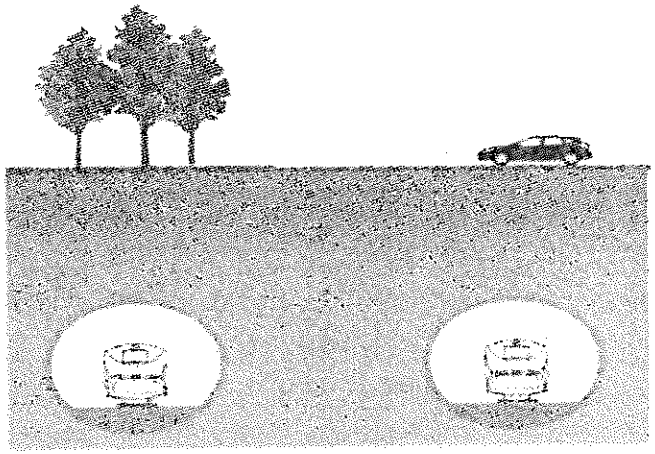




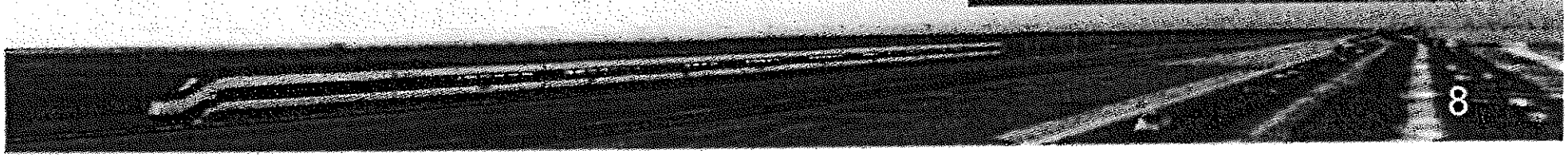
CALIFORNIA High-Speed Rail Authority

EXAMPLE: HSR DEEP TUNNEL

- **PROS:**
  - Least Visual and Noise Impacts
  - Reduced Surface Disruption

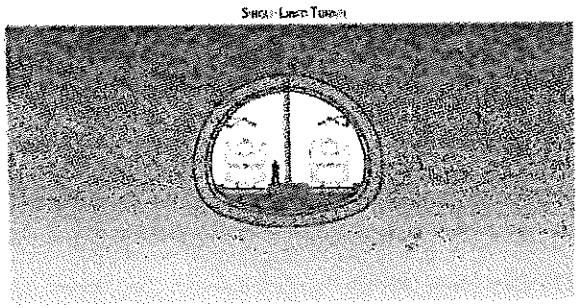


- **CONS:**
  - Cost
  - Fire & Life Safety
  - Limited Rider Views

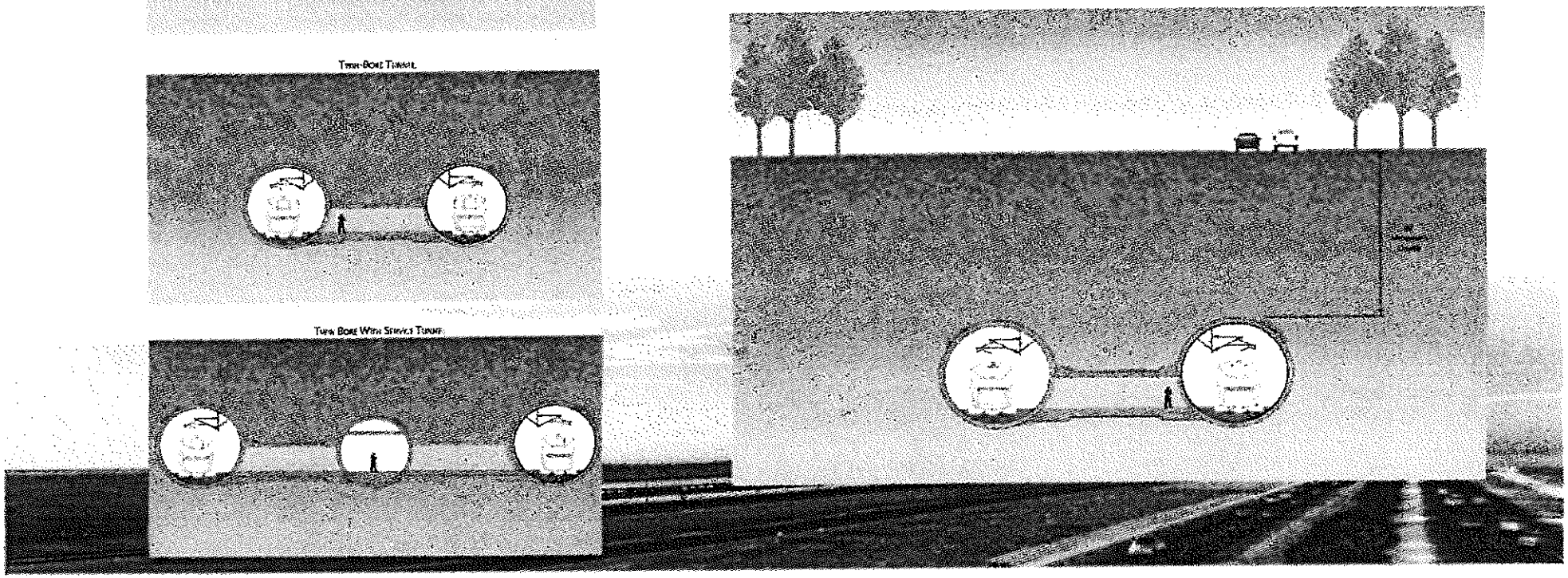


CALIFORNIA
High-Speed Rail Authority

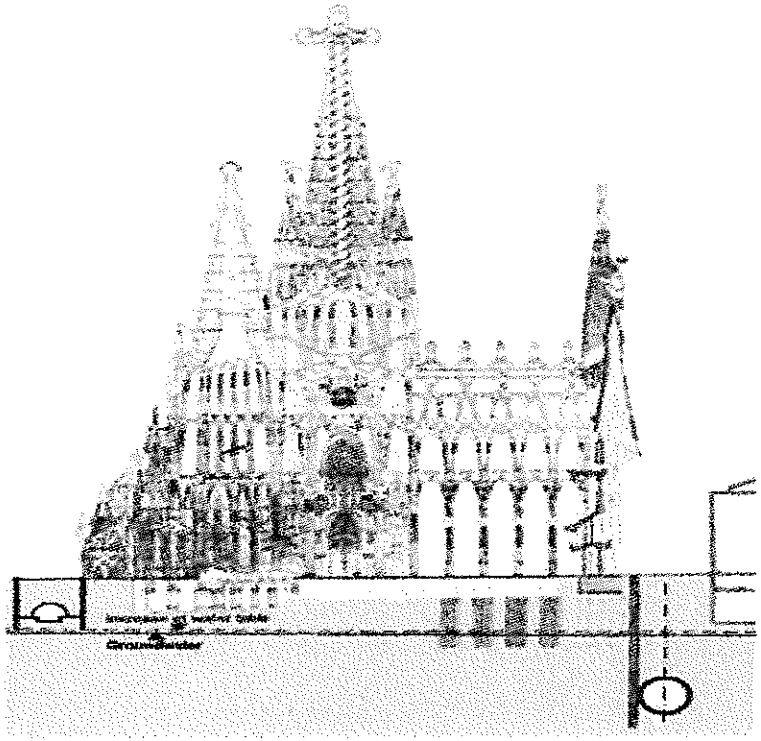
EXAMPLE: TUNNEL SCALES

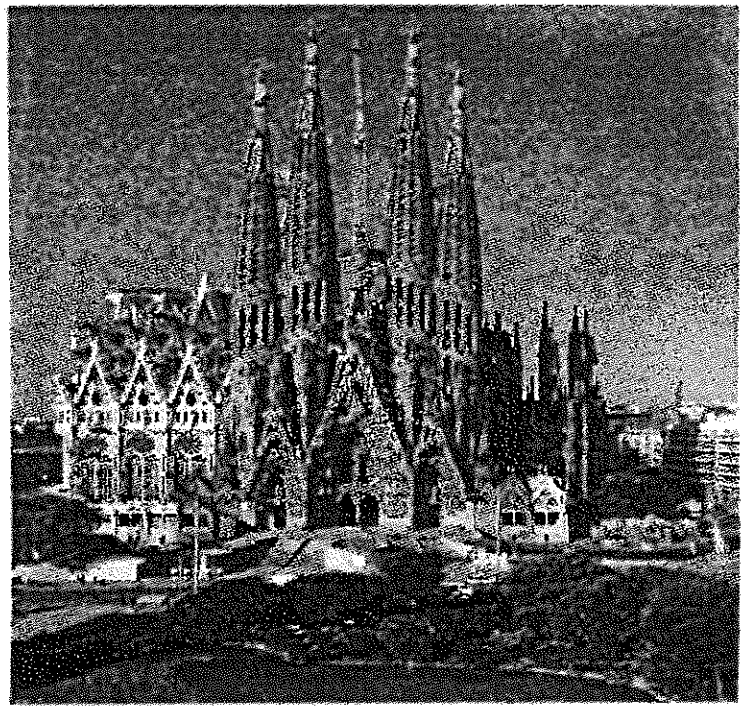


- **Depth:** Approx. 60 ft. min.
- **Width:** Approx. 120 ft.
- **Diameter:** Approx. 30-40 ft.



TUNNEL EXAMPLE - SPAIN



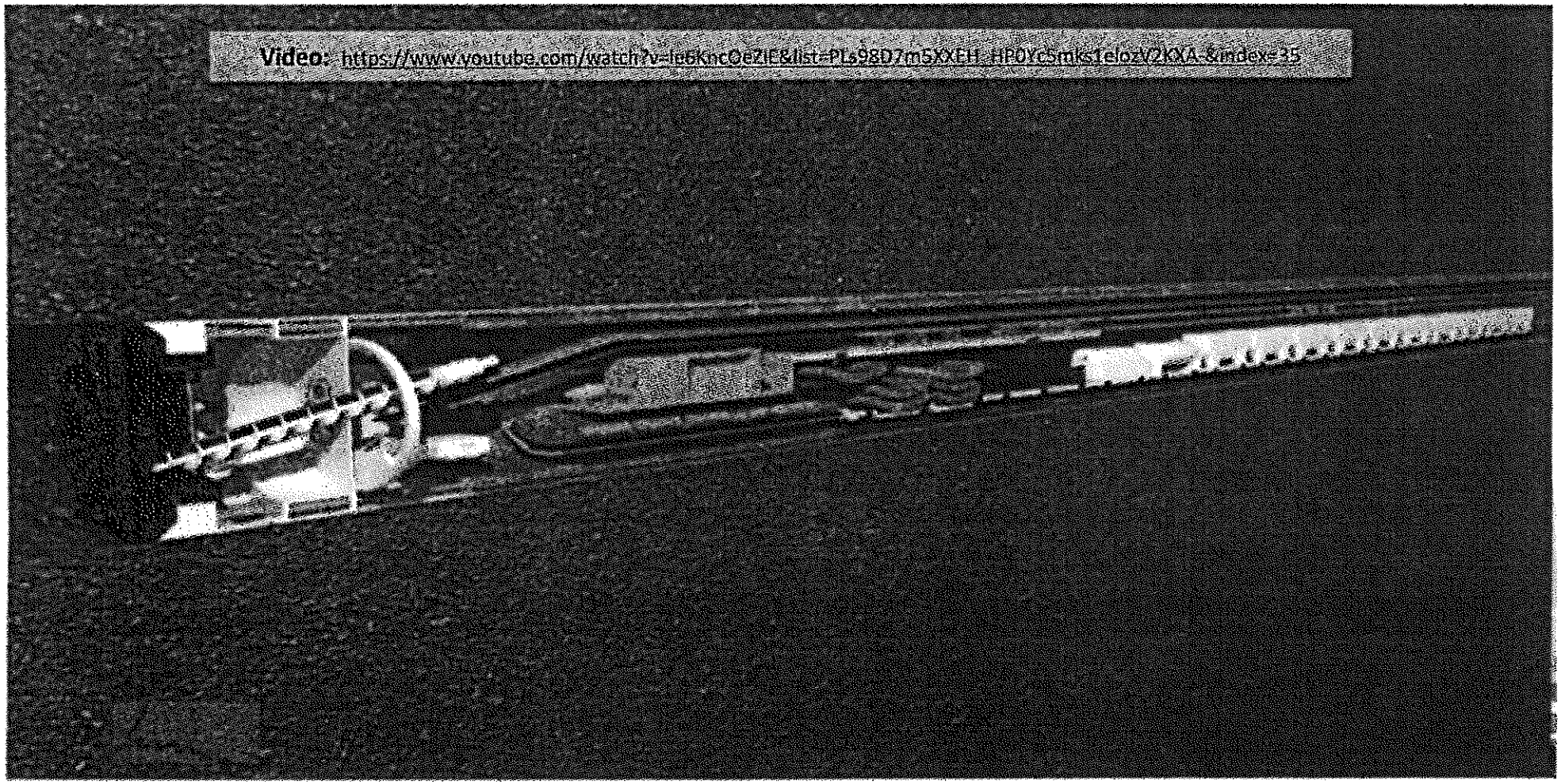


Architect: Gaudi

Tunnel underneath the Sagrada Familia Cathedral in Barcelona, Spain

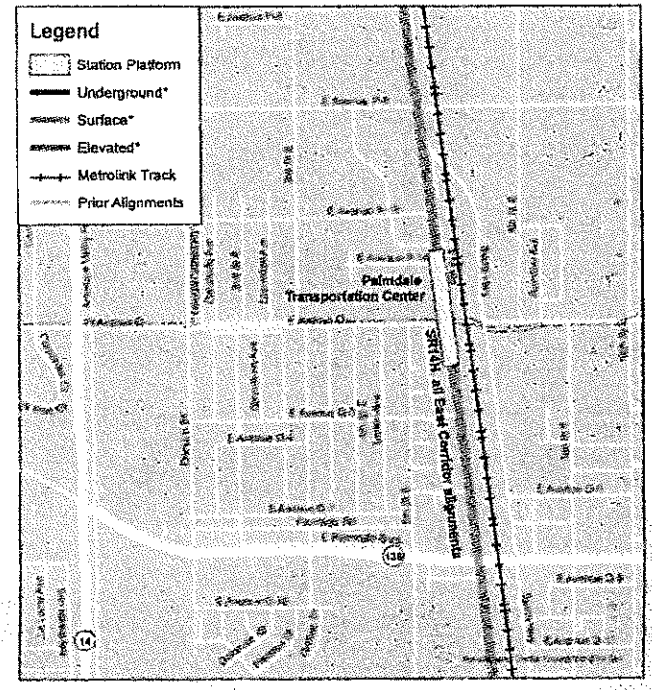
CALIFORNIA
High-Speed Rail Authority

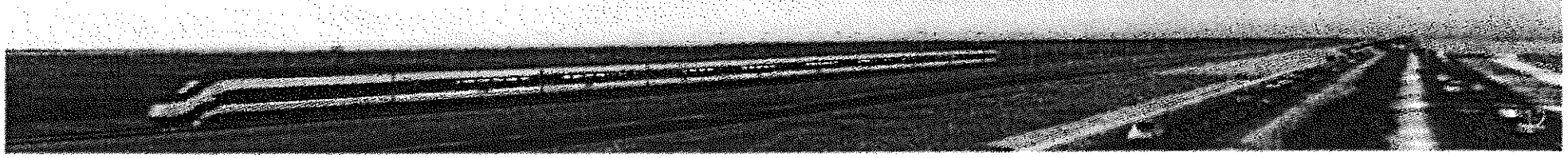
TUNNEL BORING MACHINE



CALIFORNIA
High-Speed Rail Authority

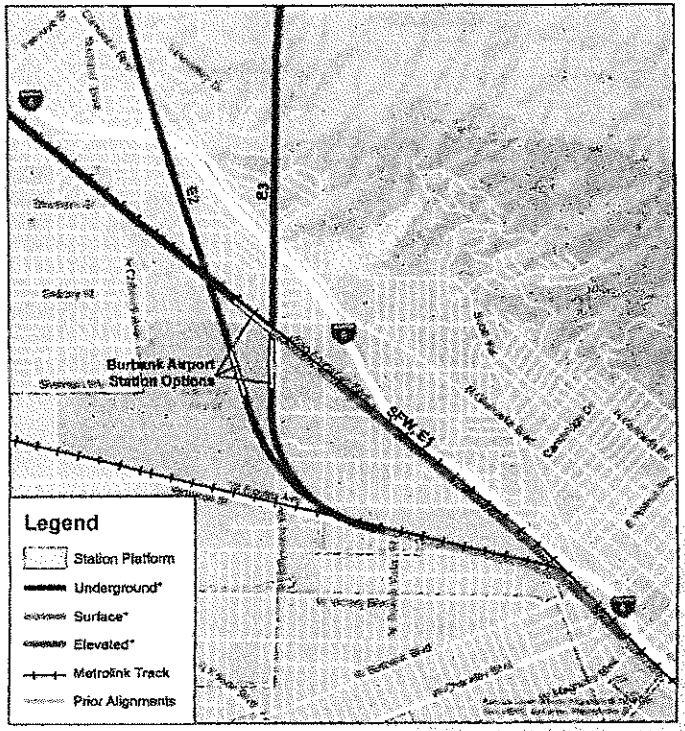
Palmdale Transportation Center Station
Creating Multi-Modal Hubs & Great Public Spaces

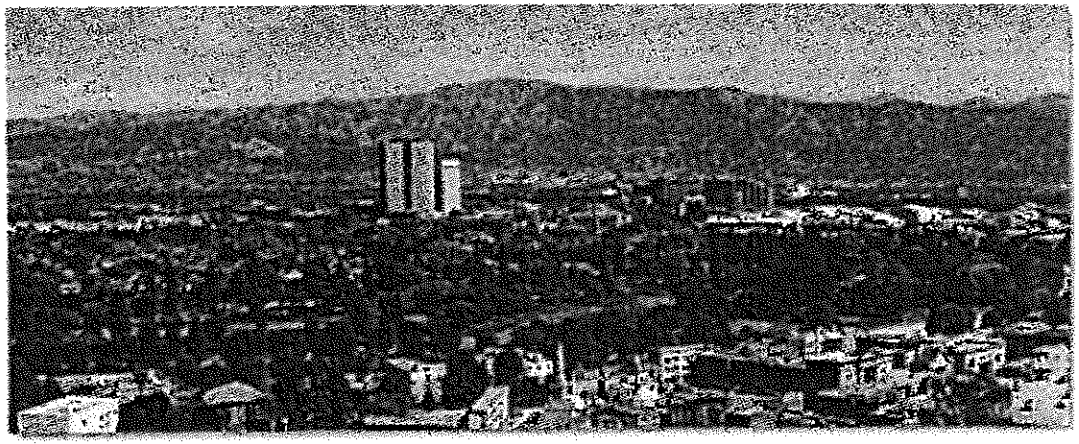




CALIFORNIA
High-Speed Rail Authority

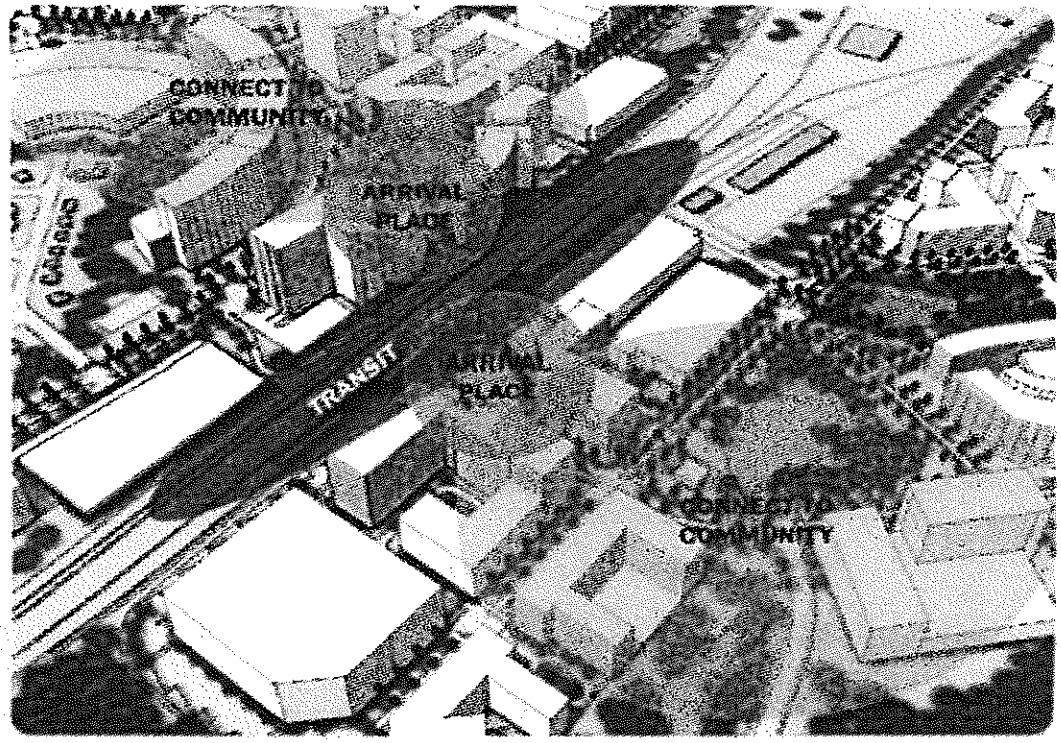
Burbank Airport Station
Creating Multi-Modal Hubs & Great Public Spaces

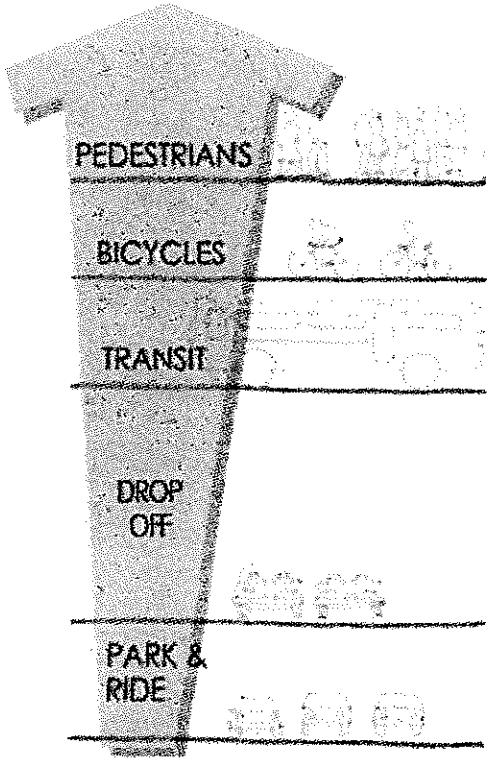


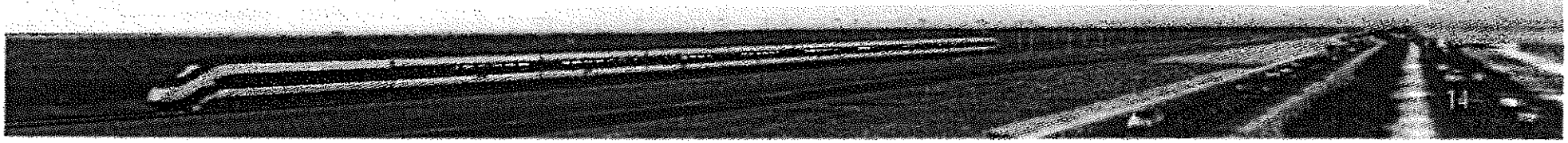


CALIFORNIA
High-Speed Rail Authority

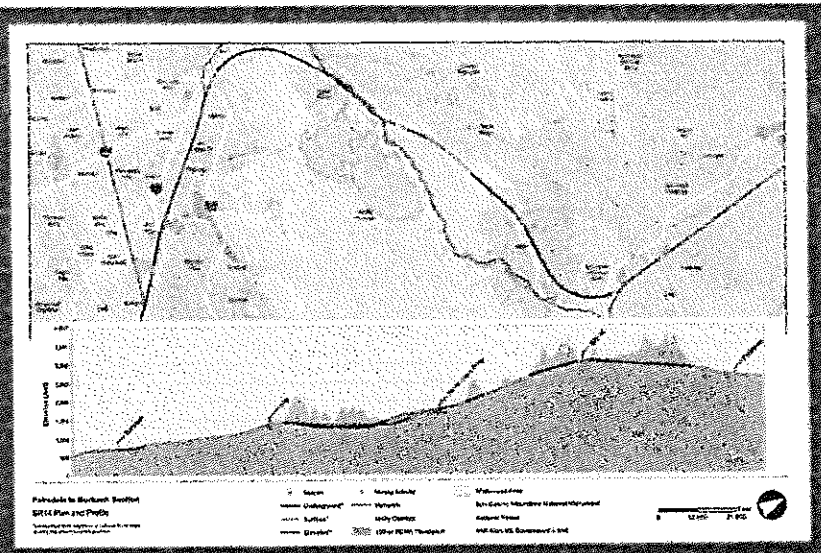
Station Access



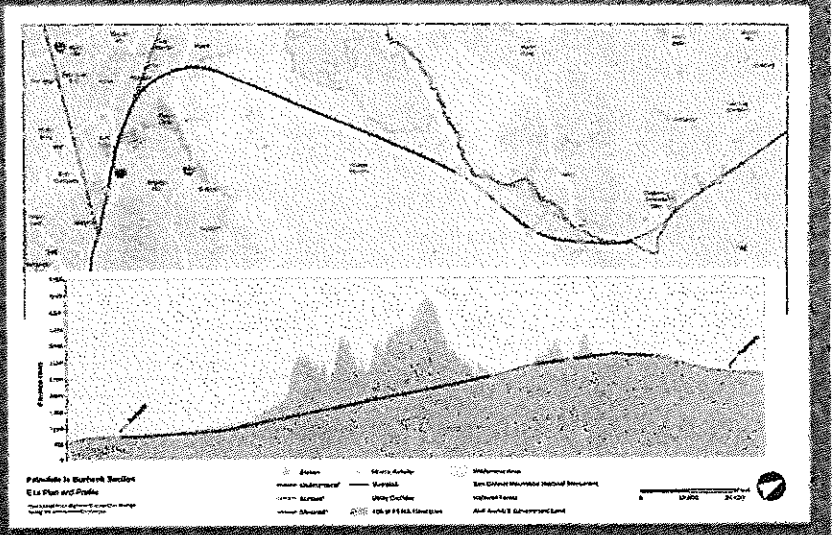




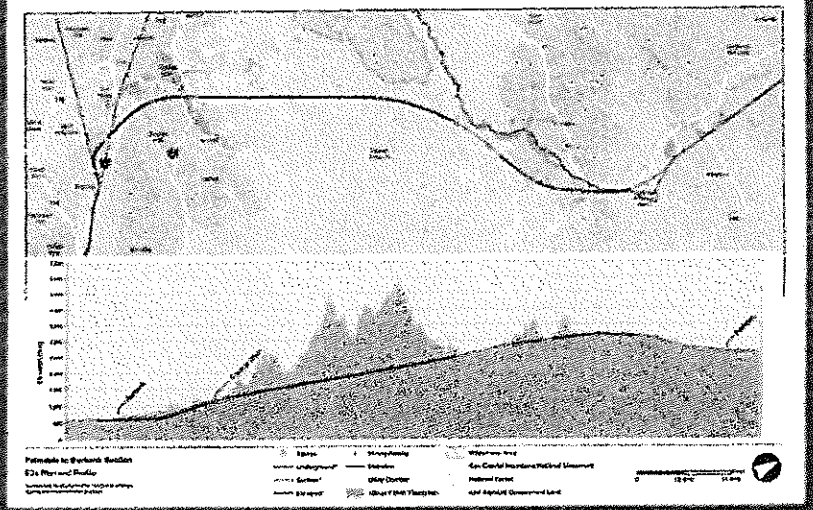
SR 14
Plan & Profile



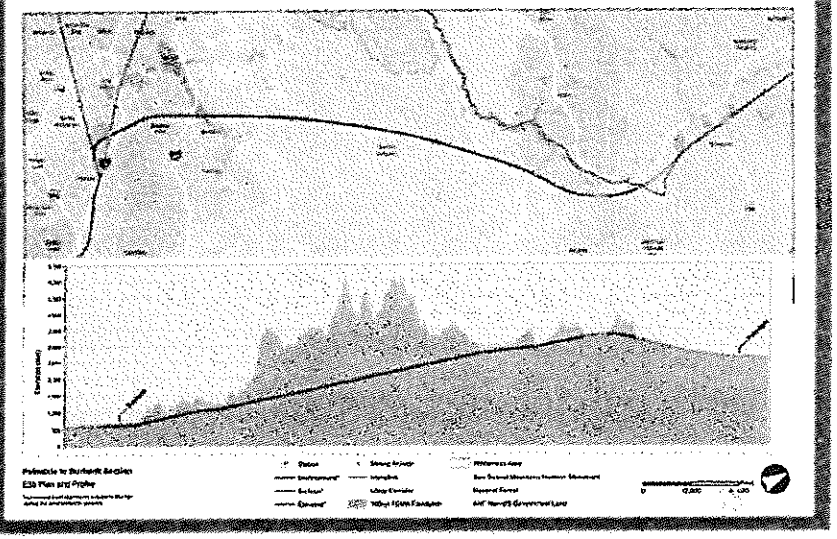
E1a
Plan & Profile



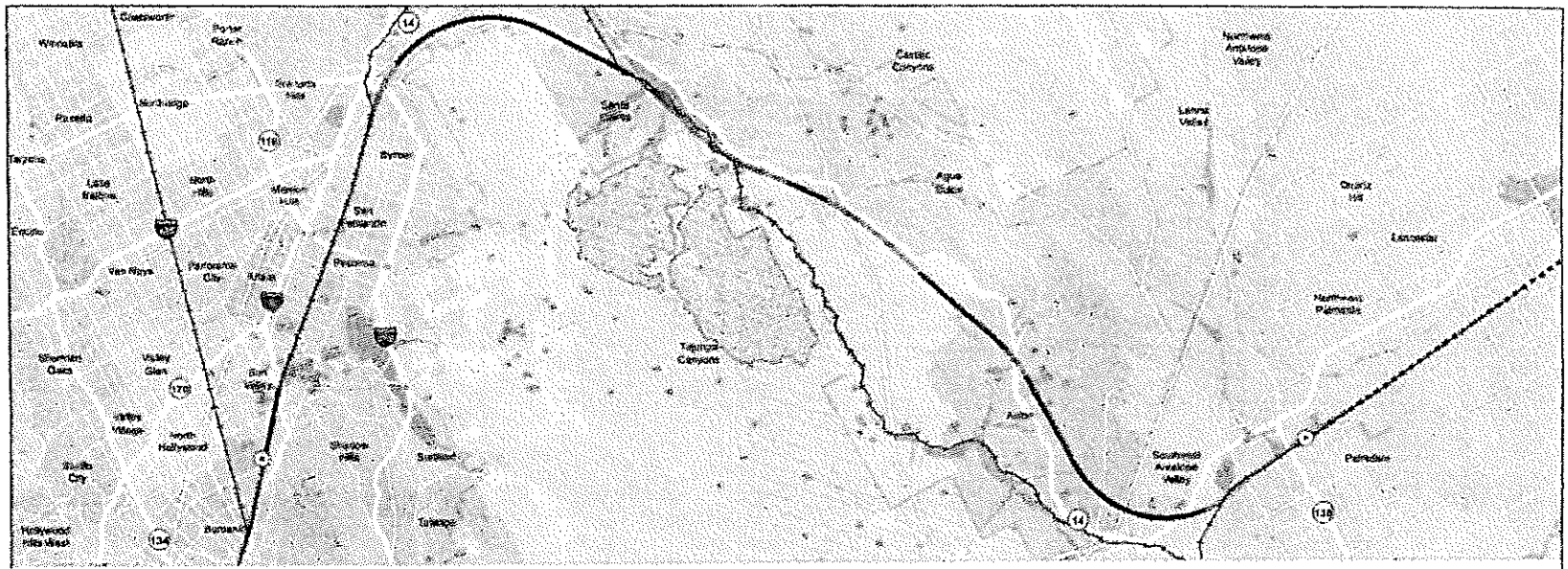
E2a
Plan & Profile



E3b
Plan & Profile



SR 14
Plan & Profile



Palmdale to Burbank Section

SR14 Plan and Profile

*conceptual level alignments subject to change during the environmental process

Station
Underground*
Surface*
Elevated*
Mining Activity
Metrolink
Utility Corridor
100-yr FEMA Floodplain
Wilderness Area
San Gabriel Mountains National Monument
National Forest
ANF Non-US Government Land

Feet
0 12,000 24,000

EXHIBIT 2

Senate takes close look at bullet train

[Train, from B1]
is facing far higher risks than they had expected.

Sen. Ben Allen (D-Santa Monica) wondered how politicians can respond to tough questions by constituents, a reality many elected leaders say they are encountering more frequently.

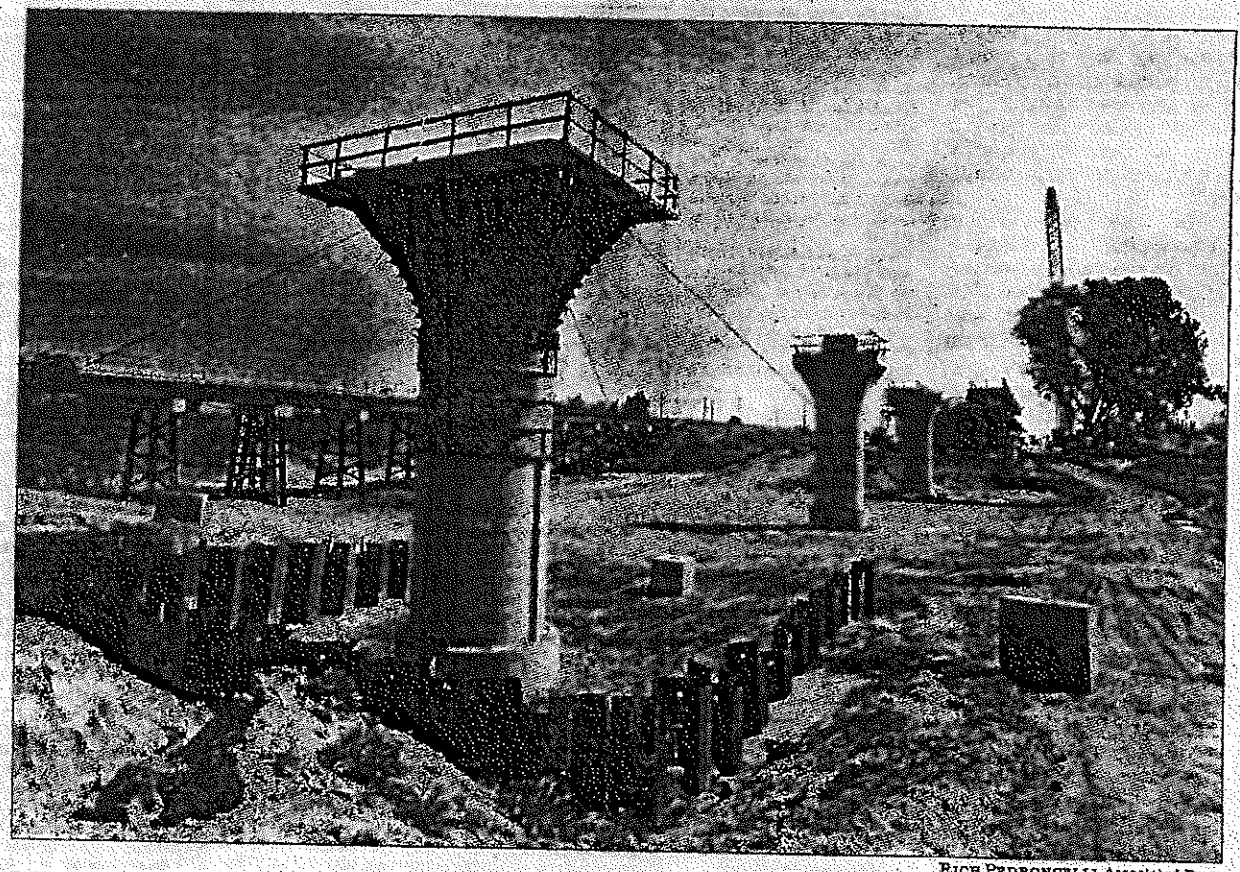
"We have the lieutenant governor talking down the project, and he may be the next governor," Allen said.

Many of their concerns revolve around the use of greenhouse gas fees to finance about half of the initial segment.

Under the revised business plan, the state would have to extend the greenhouse program until 2050 and give the rail authority permission to borrow against future income from the fees. Representatives of the state Legislative Analyst's Office warned that many uncertainties exist about that funding, including its potential to diminish.

Sen. Lois Wolk (D-Davis) raised concerns about the fees, asking how much it would cost the state to borrow against them in the future. "Who backs the funding ... if something happens," she said.

Allen and other senators raised a broad range of concerns, including many based on Times reports that the authority is facing more than 300 change orders in the first construction contract and on a story last year disclosing that consultants had warned of large cost increases.



RICH PEDRONCELLI Associated Press

THE SUPPORTS for a 1,600-foot viaduct to carry high-speed trains across the Fresno River are seen under construction near Madera. State senators are raising concerns about the project's financing.

The rail authority is facing more than 300 pending change orders on just the first construction contract, including a potentially massive $100-million claim by a team led by Sylmar-based Tutor Perini.

Rail authority Chairman Dan Richard deflected questions about those risks. He said the authority has previously disclosed that it could face change orders and emphasized that the agency does not necessarily have to pay them.

Richard acknowledged that the state's failure to deliver parcels on time to Tutor Perini could give the contractor "the right to charge for delays."

Sen. Richard Roth (D-Riverside) asked about the authority's responses to an October 2015 Times story saying that the agency decided not to adopt higher cost estimates projected by its lead contractor, Parsons Brinckerhoff.

Rail authority Chief Executive Jeff Morales told Roth that The Times had mischaracterized the cost estimate, but Roth cut him off, saying, "Part of the problem is that it wasn't released in the first place. People are free to characterize a document that they get. That's the way it works."

The Times had asked the state to release the report, in the form of a highly detailed PowerPoint, under the Public Records Act. The rail authority refused the request, declaring it was not in the public interest to release it. The Times later obtained the report from an individual close to the project and gave the state three months to provide detailed responses to questions.

Morales said Monday that higher costs were driven by an assumption that a rail station would be built in Burbank instead of Sylmar. He said the difference required additional miles of track and elevated structures, accounting for the higher costs.

The Parsons Brinckerhoff cost estimate, as well as the state's previous business plans, never said that a future San Fernando Valley station would be in Burbank or Sylmar.

In the October story, The Times also reported that a second major contractor, URS, said in a 2013 progress report that it expected a $1-billion cost increase in the Central Valley and that it had been ordered by the rail authority to use lower cost estimates.

Richard said Monday that URS' assertion was not correct, but that he could not discuss details because they were part of a legal dispute with the company.

ralph.vartabedian
@latimes.com

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Alan
Last Name :	& Angela Scott
Stakeholder Comments/Issues :	Attached is my comments regarding this specific plan. Please ensure they are included in the record. Alan Scott
Notes :	
Attachments :	Scott_Biz_Plan_041816.pdf (108 kb)

Alan Scott
1318 Whitmore Street
Hanford, CA 93230-2848
Email: a_scott1318@comcast.net

April 18, 2016

CAHSR 2016 Business Plan Comments – Email Submission

California High-Speed Rail Authority
Attn: Draft 2016 Business Plan
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

Re: Submission of Comments for the 2016 California High Speed Rail Business Plan

"If government were a product, selling it would be illegal." P. J. O'Rourke

Gentlemen:

Please enter this letter for the record, as my negative comments regarding the 2016 California High Speed Rail Business Plan that quite frankly this plan is totally devoid of any solid substance and adherence to California law.

Please note the comment from Mr. P. J. O'Rourke, which in the realm of this underfunded and undermanaged project that has never even met any of the requirement of Proposition 1A with respect to the submission of a qualified reliable effective business plan. Hence, we have here positive proof of Mr. O'Rourke's statement.

To begin, without question, this cut and paste 2016 plan, that has been clearly noted by so many experts does lack substance, stability, fiscal planning, and is riddled with erroneous grandiose assumptions taken from all other business plans. Primarily, the Authority has taken unacceptable risks by failing to clearly outline their failings, the their land use difficulties, their lost confidential legal documents by the Real Estate division, their absolutely zero over sight by the Risk Management program with no plan in place to control legal / financial private citizens confidential information. The majority of these concerns have been known concerns for years with the Authority.

I have provided links that clearly demonstrate the failings and the issues regarding this project that without question has proven beyond a shadow of a doubt has been ill managed and without question leading to the final conclusion that this project is totally out of control.

To being with, the abusive misuse of political machinations and shenanigans are without question the key reasons for all the massive adjustments made without proper notification. Furthermore, because of this almost everything the Authority produces justifies this comment. When one attends HSR meetings or events, it is clear this project swings with the breezed simply because the lack of validated supporting justification creates the perceptions of clandestine attacks to the public sector local governments and to the private sector, which includes individual landowners.

Furthermore, nowhere in this business plan do they address the complete details of the required funding plan for this political major disaster that has been poorly managed always along party lines receiving tons of self-praising when in actual fact there is nothing to praise at all. It clearly has a very disturbing aura about it where the desires of a few have captured this project completely away from the actual law. It is perfectly clear, that the Governor and special selected agencies and selected individuals have clearly 'high-jacked' this project and changed it so it does not even comport the legally bound the tenants of the voter approved legislation placed into law November 2008. Additionally, it is very apparent that a combination of political paybacks to very select groups as a thank you for their support is a key reason this broken project has life.

Therefore, with that said, we now come to one of the key issues, the massive circuitous routing that defies anyone reasonable comprehension. According to the Reason Foundation, there are now estimating this current SFO to LA a travel time at least 4-hours.

This begs the question, where did Proposition 1A's "REQUIREMENT" of 2-hours and 40-minutes travel time disappear too??? Could it be a result of not following the letter of the law?

Why is this project only being built in segments that will clearly NEVER offer one ounce of useful utility? Furthermore, there is absolutely not even ounce evidence that this project will even produce one actual cent of profit that could be posted to the accounting register! Without question, it has been confirmed this is now a fully subsidized project and the Authority and the Board have known it for some time now; however, through their abusive use of convoluted communications they believe they are in total compliance with the law. I (WE) THINK NOT!

"The basis of effective government is public confidence."
President John F. Kennedy

As President Kennedy stated so eloquently, the government confidence is totally lost and misplaced in this multibillion-dollar disaster within the public sector. Their favorite terms such

as ‘robust, transformative, innovative, etc.’ are just useless words ‘containing zero substance of fact’. Once again through their haphazard management they, ironically, again do not comport to the actual voter passed initiative of 2008 (requires repeating). Additionally, they continue to demonstrate that they are the ones whose actions are totally contributing to all the negativity-beginning years ago with no changes today. Could the real issue be the absolutely abysmal progress is a direct result of questionable management. One can make a complying case that the Authority is actually fueling the concerns that are troubling the voters across our state.

One of the best examples of this is in their almost 6-years quest they have clearly stated to me often and I have heard the same answer given to others the Authority will have no difficulty traversing the Tehachapi and San Gabriel Mountain ranges. They continually made it clear (to me and many others) that speeds of 220 Mph were never an issue through these two geographic nightmares where massive engineering complexities are require resolution. However, once again known serious engineering construction outcomes typically get this response from the engineering and managerial staff – ‘this is not an engineering issue’.

“It is dangerous to be right when the government is wrong.”
Voltaire

In December 2015, the Authority CEO noted to a reporter that there just might be a re-routing change for consideration. I believe one can call this code for something like ‘this is an engineering nightmare beyond our scope of expertise. What is more damaging is they have presented and represented that they had credible construction plans to prove without any question that traversing the Tehachapi or San Gabriel Mountain ranges successfully and most important safely. This known action HAS cost how much money to a state that has one of the worst financial balance sheets in the country. Amazing beyond belief that their leadership knowing knew this but chose ignore it demonstrated that costly incompetence is a serious issue but the real question is since they knew it why did they chose to ignore it?

Where is the definitive analysis regarding the installation of a power sources for this “ALL ELECTRIC TRANSPORTATION” disaster?

Where is the comprehensive data, required by the Business Plan rules for the remaining sections of this disaster?

Where is the substantive validated ridership chart(s)? Currently, they are still operating off at least 3+ year old data, which was wrong then is completely useless today regardless how one couches it!

Why the maps are dated 2, 3, 4, or 5 years back and those old maps are stamped with a current date but a match shows they are older presentations being submitted to the public? Where are

the current maps clearly annotating all updated data that would be a wonderful source of usage for the business, landowner, and county / city governments? This is one area where there is a major gap in credibility of the entire engineering team. One too many times at HSR public events, these questions never achieve a qualified answered. Better yet, the response is simple and not responsive, to wit – "They are coming out soon!" My definition of soon and the Authority / the Board are, without question are seriously divergent from the definition and not usable for anyone, regardless of their abundant false assurances over the years.

"Nothing is so permanent as a temporary government program." Milton Friedman

Why are cities and counties being told, "You are an important member of our team and we value your strong support?" However, they are being told in almost each instance at last minute they hear the following message being delivered at their scheduled meetings - "The goal posts have moved and you're out or words to that affect."

"My reading of history convinces me that most bad government results from too much government." (This comment was made over 200 years ago and he had it right then.) President Thomas Jefferson

Prime example, County and City of Merced City. The CAHSRA regional manager informed them in March that a change is coming and they are now part of the process until 2029. Surprise!!! However, from news articles and relationship feedback, I believe there are a number of cities and counties in this exact same situation. Hence, the Authority and the Board have now taken away two huge components they so vehemently touted meeting after meeting as their top critical issue "integrity and transparency".

Since this project was high-jacked in late 2008 or 2009, this state's has taken this largest infrastructure project in the United States of America by "raid type management" to pop in and pop out leaving game changing announcements without any warning or better yet pending correction action.

However, this is not even a surprise to those of us who are extremely familiar with the questionable motives of the HSR environment was it appears they were never working diligently with local governments utilizing true transparency.

I believe Gomer Pyle said it best "Surprise surprise surprise!!!

Moreover, this is clearly not a new discovery of their massive communication disconnects between HSR staff and the public. The examples are significant and have been presented to the proper authorities numerous times with only one resolution – "NO RESOLUTION OR TIMELY COMPETENT" responses back to those requiring answers. These are archived on their main web site for viewing.

"Government's first duty is to protect the people, not run their lives."
President Ronald Reagan

There is one glaring case of a serious "CONFIDENTIALITY" breech to a landowner where sensitive information was ACTUALLY lost twice. Nevertheless, attempts to resolve this massive MISHANDLING of the CONFIDENTIAL LEGAL DOCUMENTS and the resulting investigation reads like a 'Key Stone Cop' episode. The troubling aspect of this specific high-level security disaster gets even worse when the Authority and the Board Chairman (and a few other board members) continuously remind everyone at almost every board meeting, "That we take these matters very seriously and we'll look into it (words to that effect)!" Moreover, just how is that working?

The above clearly ties into the multiple request for external audits of the Authority and the Board and always strictly, along one party lines the vote to audit is CRUSHED immediately. Thus, the presumption / perception there is something to hide because lately the concerns are exponentially increasing. It is abundantly clear that "smoke filled rooms are still alive and well in Sacramento"!

"The happiness of society is the end of government." President John Adams

We now hear from individuals within the Authority staff that there is another adjustment to alignment crossing the Kings River intersecting at State Highway 43 – Fresno / Kings County boarder. The 'word on the street coming from inside CAHSRA' and it appears this current alignment will be moving 1-mile to the east of the current convoluted alignment now scheduled for this area.

"We have the best government that money can buy." Mark Twain

The statement from Mark Twain clearly supports my next issues.

I would direct your attention to Professor Epps, University of California, Berkeley, in March 2013 when he made a most compelling and enlightening presentation based on solid industry knowledge at a Senate Transportation Hearing where this expert addressed a number of significant items:

1. Anticipate cost overruns at 2, 3, 4, even 6 times the estimated costs are a very real and pressing issue that must be considered. This has been proven factual by the cost increases in CP 1, CP 2/3, and CP 4. At the time of his presentation, he noted there were always cost overruns with mega-projects. We now know that the new Bay Bridge came in at a record 6.5+ times the original cost and this mismanaged project is still in serious jeopardy due lack of competent oversight. We also have the new Transbay Terminal at

2+ times the original cost and who knows where this one will end up on the balance sheet?

2. Another example is in May 2014 after a board meeting in Fresno, the very next day after the meeting, the Authority announced a cost increase of 1-BILLION DOLLARS. The irony of this is the day before they approved their 2014 Business Plan and that information should have been included and more important it must have been know. One does not overnight develop a costing change of $1,000,000,000 dollars and not present this compelling information during the regular board meeting. Curiosity now kicks in and we surmise that is this the first time they have 'fudged' balance sheet information or it is an ongoing event to ensure no one attempts to shut down because of massive errors. However, this announcement came without any major press involvement. This last statement clearly demonstrates there is a pervasive subterfuge competent that now seems to have permeated the Authority to assist in masking negative failings – which, as we now know now, are numerous and again growing daily.

3. Experts testified by presenting quantifiable validated data clearly demonstrating that the entire project is not feasible at any level. However, due to serious adherence to a specific political party requirement, there was never an admonition or any overriding vote against anything the authority requested regardless of the venue. Repeatedly, these valid challenges never delayed or changed the final outcome. All legislation or policy changes for the project are have never ever met with one total opposition vote. They pass regardless of all the known negatives.

http://scvnews.com/2016/04/13/wilk-bill-aiming-to-improve-state-accountability-fails-to-pass-review/

After nearly 5-years of active attendance at numerous HSR meetings / functions across the state, not once has a presentation to the public ever produce substance consistent support with any in place Business Plan. This is extremely disconcerting and very suspect and to my knowledge, no one item present in any HSR forum HAS EVER BEEN DENIED. Therefore, based on that specific information, there should be much more solid progress in construction (which there is not), less public concerns (which there is not in fact it is increasing rapidly). As of right now CAHSRA in California is dead in its tracks because of miserable oversight by politically appointed individuals in the wrong jobs wasting billions of taxpayer's monies.

Furthermore, when the opposition challenges these approvals with substantive facts, they are typically called upon to end their presentation and in many situations, they are aggressively shutdown as they are going against the party line members of panel. Therefore, the panel or committee does not welcome quantifiable data be shared with the California voters. This bully approach to NOT accept industry validated support clearly demonstrates there is an awkward

disconnect bring brought to the forefront of this question or better yet the perception that regardless of the validated inputs, if it goes against what a political leadership group desires, you are out. Without question all environments in this arena have never create a "NO" vote as they now stand at 100% approvals for a 100% contrived disaster. This brings in this question "Is this just a rubber stamp environment just to appease a powerful politician regardless of the presented negatives?"

However, in the private sector this would have deleted as soon as the failures were known thus eliminating to create one result a dramatic reduction financial negatives. Frankly, the truth be known, this is just how this project is being managed as if there is a bottomless pit of taxpayers monies at the ready.

"No government ever voluntarily reduces itself in size. Government programs, once launched, never disappear. Actually, a government bureau is the nearest thing to eternal life we'll ever see on this earth!" President Ronald Reagan

President Reagan was absolutely correct when he made this profound statement and my next concern actually proves the about without reservation.

Perfect example of this type of consistent abusive activity – September 2011, Sacramento HSR Board meeting, Mr. Pringle, the Chairperson, was presented empirical evidence based on industry leading experts that traversing the Tehachapi's and San Gabriel Mountains was impossible with the proposed "steel on steel" construction of HSR. The presenter provided validated data to support his dramatic presentation that we now know was absolutely accurate.

This total disregarded, again after numerous others since time have clearly demonstrated that current engineering could not traverse the gradient due to excessive angles of the terrain. What is sad, at numerous HSR presentations, I asked this specific question – "What are your speeds along the route even in the turn areas, and approaching a station, exiting a tunnel, etc… and the answer was always the same, 220 Mph!"

Furthermore, I postulated addition follow up questions – "With a very circuitous routing please show me the proof that your system can maintain full speeds along the entire routing without any slowdowns, etc.!" Again, no information forth coming to either prove or disapprove their calculations. Well, the industry experts finally won this round and in December 2015 a new routing was established – San Jose to Shafter (not to insult Shafter but the largest infrastructure project has a terminus point 20 miles from any major city, really you say!) So finally, the statement a "train to nowhere" has become a reality. Now this prove positive that the managerial team and board oversight actually has no clue on what they are doing and yes they are still not in compliance with the Business Plan of 2016, 2014, and 2012.

Notwithstanding, the CAHSR track will not connect to the 4 billion dollar travesty known as the Transbay Terminal is 1.3 miles from this billion dollar travesty. Once again a clear demonstration that (pardon the expression) 'piss poor planning does in this environment equals piss poor results'. Therefore, the other questionable statement from the Authority that they will link to the 4-billion dollar terminal is false. Seriously!

Another NEWSFLASH regarding this disastrous project in downtown San Francisco – this new rat hole of a budget drain that seems to be without competent continuous oversight, I provide this example further demonstrating that this state does not know how to manage mega-projects. I refer to the Transbay executive who lives in Colorado and has accumulated nearly $50,000 in travel reimbursement because of the Colorado address. Furthermore, another senior level executive approved these expenditures. Are you kidding me! Therefore, are we to believe in the State of California we cannot find an executive living here to perform this work quite frankly boggles my mind.

Now lets us address the new, actually very old 2.5-mile Bay Bridge section. Started out at 1.2 billion dollars, escalated when the Director of CalTrans, Mr. Jeff Morales increased the cost to 2.5 billion dollars in the early 2000's. Today the cost is over 6.5 times the original estimate and due to the failure of competent oversight and adherence of solid construction, standards. Additionally, there are numerous safety violations requiring serious taxpayer obligations for shoddy state oversight and management.

So putting these two recent examples in the mix, we now know that state run agencies / authorities have a seriously flawed track record in cost controls regarding mega-projects. Thus, a very valid postulation can now be made that the current cost of $64,000,000,000 is incorrect. Using expert examples this project is destined to achieve final (IF NOT STOPPED) the cost overruns are somewhere in the range of $250,000,000,000 to $500,000,000,000.

The continuous bouncing around almost daily with obstacles that demonstrate solid dysfunctions in this environment. We are hearing far less than 30% design plans provided to the awarded contractors. The unintended consequences surrounding this out of control monster are beyond comprehension and belief.

Furthermore, the fact that the empirical evidence indicates the Authority is so far from an acceptable project that it will never achieve independent utility anywhere at any time. The continued use of estimates in ridership, costs, travel times, etc…are invalid because of the high-jacking of this project via extremely questionable political shenanigans and or machinations. This action is the very reason after 8-years progress there is actually nothing of significant or substances to report on in any region. I know that the HSR PR machine with provide machinated convoluted statements justifying their misguided mismanaged actions.

The missed deadlines, self-induced failures by staff and the board, land acquisitions are non-existent in the grand scheme of this disaster (just poll those working with the acquisition and real estate teams) and see how that is a major issue due incompetence and poor preparation. The latest major failure is the untimely communication with cities & counties where it seems like overnight the Authority has pulled out for whatever reason. The Environment Justice requirements utilized by the Authority borders on malfeasance from any reasonable perspective as the obligation to exercise prudent management of both federal and state taxpayer's monies is without question a travesty at the highest levels.

In closing, the key issue again is this Business Plan does not comport to the Proposition 1A requirements. Without question, this is at least the 3rd or 4th time they have violated this requirement. I have seen some of the submissions and it is abundantly clear that all those submissions come to the same conclusion with more definitive facts. Additionally, one glaring element that is missing and it is there is actual the proof this project will require massive subsidies that have never been factored into any HSR budget, ever. Not only has the Governor noted that all systems run on subsidies, which against the law for this project as passed by the voters in November 2008. Therefore, what the people of California are receiving from their elected & non-elected officials is a financial nightmare created by incompetence through political driven decisions ONLY. Furthermore, there is not one identified funding plan for completion of parts of this political disaster on the books with only ARRA funds and very few CA dollars. California is broke and this project without question will ensure the generational repayments will never end because of desire for a "Legacy" for a certain individual. Reminder, the Business Plan policy requires this to be addressed and it is not. Therefore, you cannot approve this plan nor can you proceed further until you are in total compliance with the laws governing this project.

Yours,

Alan Scott

Attachments – supporting links

Supportive links:

http://www.latimes.com/opinion/editorials/la-ed-0417-high-speed-rail-20160418-story.html

http://www.bloomberg.com/news/articles/2016-04-15/derailed-bullet-train-shut-second-day-after-southern-japan-quake

http://hanfordsentinel.com/news/opinion/todays_opinions/put-a-bullet-in-the-bullet-train/article_4eaa70d0-9273-504c-85d4-02ad8144c613.html

http://www.sacbee.com/news/politics-government/capitol-alert/article71694367.html

http://www.masstransitmag.com/news/12194208/ca-its-unclear-what-would-be-condemned-in-oc-for-bullet-train

http://beforeitsnews.com/tea-party/2016/04/californias-high-speed-rail-authority-wins-dishonor-of-the-california-golden-fleece-award-2569950.html

http://scvnews.com/2016/04/13/bill-aiming-to-fund-water-infrastructure-projects-instead-of-high-speed-rail-fails-in-party-line-vote/

http://patch.com/california/lakeelsinore-wildomar/lake-elsinore-lawmaker-rejection-bill-pay-road-repairs-shameful

http://blog.independent.org/2016/04/13/californias-high-speed-rail-authority-wins-dishonor-of-the-california-golden-fleece-award/

http://www.signalscv.com/section/36/article/150991/

http://www.coreoo.eu/bullet-train-officials-hear-more-discontent-about-possible-socal-routesp://www.latimes.com/local/california/la-me-rail-meeting-20160413-story.html

http://www.foxandhoundsdaily.com/2016/04/a-bid-for-transparency-turns-murky/

http://www.ocregister.com/articles/anaheim-711856-train-authority.html

http://www.courthousenews.com/2016/04/12/public-balks-at-latest-calif-bullet-train-plan.htm

http://sf.streetsblog.org/2016/04/12/facades-shakeups-and-loans-transbay-is-officially-off-track/

http://www.scpr.org/news/2016/04/12/59514/bullet-train-officials-hear-more-discontent-about/

https://sfbay.ca/2016/04/11/sf-floats-260-million-loan-for-transbay-terminal/

http://www.pe.com/articles/transportation-799590-california-infrastructure.html

http://www.cahsrblog.com/2016/04/chsra-abandons-plans-for-tunnel-to-la-union-station/?utm_source=twitterfeed&utm_medium=twitter

http://hanfordsentinel.com/news/opinion/todays_opinions/put-a-bullet-in-the-bullet-train/article_4eaa70d0-9273-504c-85d4-02ad8144c613.html

http://hanfordsentinel.com/high-speed-rail-is-still-off-track/article_2d62c612-66f1-5b08-b328-48518e58d857.html

http://www.ocregister.com/articles/beef-711408-state-billion.html

http://hanfordsentinel.com/videos/former-owners-watch-house-on-ponderosa-street-demolished/youtube_5bccf69b-c548-517e-849d-bd43799e41c9.html

http://www.dailynews.com/government-and-politics/20160409/assembly-candidates-square-off-over-northeast-san-fernando-valley-bullet-train-and-more

http://www.latimes.com/local/california/la-me-bullet-train-reports-20160409-story.html

http://www.foxandhoundsdaily.com/2016/04/lao-numbers-on-cap-n-trade-sure-make-it-feel-like-a-tax/

https://www.youtube.com/watch?v=OyB6UUaf6bY&nohtml5=False

https://www.youtube.com/watch?v=t9KEffvGG34&feature=em-uploademail

https://www.youtube.com/watch?v=-jYy0F2cevM&feature=em-uploademail

https://www.youtube.com/watch?v=QiHX1IGyXZY&feature=em-uploademail

https://www.youtube.com/watch?v=3Xuz0BvdLes&feature=em-uploademail

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http://www.kogo.com/articles/california-news-489209/ca-lawmakers-to-highspeed-rail-authority-14569298/

http://www.masstransitmag.com/news/12190430/senators-share-their-doubts-about-bullet-train-financing-with-rail-officials

http://www.mercedsunstar.com/news/local/article70276812.html

http://www.capoliticalreview.com/capoliticalnewsandviews/senators-ask-tough-questions-about-high-speed-rail/

http://article.wn.com/view/2016/04/05/Senator_Gaines_Responds_To_Todays_High_Speed_Rail_Oversight_/

https://www.facebook.com/649997221772229/photos/a.654725444632740.1073741828.649997221772229/815101885261761/?type=3

http://www.foxandhoundsdaily.com/2016/04/legislative-consistency-not-with-minimum-wage-high-speed-rail-and-taxes/

http://www.foxandhoundsdaily.com/2016/04/high-speed-rail-around-the-world-requires-government-subsidies/

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Amy
Last Name :	Buckmaster
Stakeholder Comments/Issues :	To whom it may concern, On behalf of Amy Buckmaster, President and CEO of Redwood City - San Mateo County Chamber of Commerce, please find attached comments on the updated 2016 HSR Business Plan. Sincerely, Carolina Webster -- Carolina Webster Vice President *Chamber* Redwood City-San Mateo County Office: 650-364-1722 | Fax: 650-364-1729 *Learn more about our Chamber at: * [image: http://www.redwoodcitychamber.com/index.php] <http://redwoodcitychamber.com/> *Stay connected with us on: ** <https://www.facebook.com/rcsmcchamber> <https://twitter.com/rcsmcchamber>*
Notes :	
Attachments :	RC Chamber Comments on HSR Business Plan 041816.pdf (617 kb)

CHAMBER
REDWOOD CITY
SAN MATEO COUNTY

April 18, 2016

SUBMITTED VIA EMAIL
2016businessplancomments@hsr.ca.gov

Dan Richard, Chair
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

Re: Draft 2016 Business Plan

Dear Chair Richard and Members of the CHSRA Board:

The Redwood City/San Mateo Chamber of Commerce offers the following comments on the updated 2016 High Speed Rail Business Plan. The Chamber has been a longtime supporter of High Speed Rail, and we understand that a strong business plan is the foundation for moving forward with this important project for the future of transportation in California. We have been following the project especially closely over the past few months as the revised plan calls for accelerated implementation in the Bay Area.

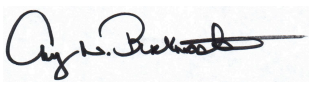
The Redwood City/San Mateo County Chamber is among the largest in Northern California, with approximately 1,000 members within and between San Francisco and San Jose. We have expressed ongoing support for high-speed rail for more than a decade, pre-dating Proposition 1A. We understand that a growing state and a thriving Silicon Valley require continued investment in our transportation infrastructure. High-speed rail represents a new way to connect people and places, with the potential to enhance mobility throughout California while reducing the environmental impacts of statewide travel. This investment in our infrastructure lays the groundwork for a strong California economy in the long-term, while creating significant, quality jobs during construction.

As much as the Chamber supports high-speed rail (HSR), employers and residents on the Peninsula feel an urgent need to address the capacity challenges of Caltrain, our regional commuter rail system. We are fully supportive of the "blended approach" to rail service on the corridor and urge you to work closely with Caltrain at every stage of planning and implementation of HSR. The last version of the HSR business plan embraced this approach, and it is important that this commitment continue in spirit and in detail in the new business plan.

In addition to encouraging close inter-agency cooperation, the Chamber urges CHSRA to fulfill its commitment to help fund modernization of the Caltrain system in a way that will lay the foundation for HSR. We expect that you will continue to look for opportunities to use a portion of Proposition 1A funds, and other funds as they become available, to advance the implementation of the Caltrain project in advance of the anticipated operation of HSR on the Peninsula. Such commitment and allocation is consistent with the "blended system" approach embraced for the Bay Area in the previous and current business plans.

The Chamber places an extremely high priority on Caltrain modernization in the near term, followed by a statewide high-speed rail system. We encourage you to adopt a revised business plan that achieves these goals.

Sincerely,



Amy Buckmaster
CEO

Cc: Senator Jerry Hill
Assemblyman Kevin Mullin
Assemblyman Rich Gordon
Jeff Morales, CHSRA
Jim Hartnett, SamTrans/Caltrain

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Adam
Last Name :	Gray
Stakeholder Comments/Issues :	Hello - Attached is a PDF comment letter from Assemblymember Adam Gray. Please confirm receipt of this letter. Thank you. Marva Diaz Office of Assemblymember Adam Gray 916.319.2021
Notes :	
Attachments :	Comment Letter on CHSRA 2016 Business Plan_v2.pdf (331 kb)

STATE CAPITOL
P.O. BOX 942849
SACRAMENTO, CA 94249-0021
(916) 319-2021
FAX (916) 319-2121

Assembly
California Legislature

ADAM C. GRAY
ASSEMBLYMEMBER, TWENTY-FIRST DISTRICT

April 18, 2016

Mr. Dan Richard
Chairperson, California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

RE: Comments on the 2016 CHSRA Business Plan

Dear Chairperson Richard and Board Members,

The Draft 2016 Business Plan switching the Initial Operating Segment between Merced and the San Fernando Valley to one connecting the Silicon Valley to Fresno and the South San Joaquin Valley represents a dramatic policy change for the high-speed rail (HSR) project. This new plan is not what The Budget Act of 2012 outlined, as amended by SB 1029 to enable HSR construction to begin, nor does it seem consistent with Senate Bill 862 (2014), which provided the substantial ongoing Cap & Trade funding required for the HSR rail project to be viable.

Given this history, I am concerned about how this plan for the largest infrastructure project in the state was changed so dramatically without any consultation with or input from the Legislature or even the Authority's rail partners in the Northern California Unified Service group which had previous commitments from the Authority.

California High-Speed Rail Authority's (CHSRA) commitment to include Merced in the Initial Operating Segment was critical for passing Proposition 1A in 2008. The Northern San Joaquin Valley, Sacramento and portions of the Bay Area were strongly in favor of the Altamont Pass route to connect the San Joaquin Valley to the Bay Area. Merced was promised by CHSRA to be part of an initial test-track between Merced and Bakersfield. The promise of early implementation to Merced and conventional improvements in the Altamont Pass were essential for getting the Northern San Joaquin Valley and Sacramento to accept CHSRA's selection of the Pacheco Pass.

Since this new plan does not reach Bakersfield but ends outside of Shafter that would have no independent utility, I would recommend that you consider stopping at Fresno or the Kings/Tulare Station and instead complete the segment to Merced as part of the initial operating segment as originally promised and agreed upon.

A key to receiving a positive vote from the Legislature in 2012 to approve the initial construction was the "Blended Service" concept that was front and center for the 2012 Business Plan. This was also key in 2014 for approval of Cap & Trade funding for HSR. In your 2016 Draft Business Plan there is very little discussion of "Blended Service" for the connectivity provided by what was previously referred to as the "Northern California Unified Service" which included near-term connectivity improvements to the San Joaquin and Altamont Corridor Express (ACE) Corridors.

The final version of this plan should reflect the promise of the 2012 and 2014 CHSRA Business Plans for commitments to improvements to the San Joaquin, ACE, and Capitol Corridor rail services which are important connecting services for the Northern San Joaquin Valley, Sacramento and parts of the Bay Area not served by Phase 1 HSR.

The Final 2016 CHSRA Business Plan should include financial commitments to these services as have been made for the Anaheim to Burbank improvements. These systems could have a substantial near-term impact on existing commuter traffic and Green House Gas emissions with a commitment of ongoing Transit and Intercity Rail Program (TIRCP) funding of $1 billion dollars each.

SB 1029 in 2012 included an appropriation of $53.9 million for planning work in the Merced to Sacramento Corridor. I believe the legislative intent behind the inclusion of the Merced to Sacramento planning funding in SB 1029 was to do the planning needed to support near-term passenger rail improvements. Despite the support and high level of interest from the region, there has been no progress in the planning for improved early investment for connecting rail service between Merced and Sacramento. This money which is already appropriated should be released to be utilized for that corridor.

My specific requests for the Northern California Unified Service that I would like addressed in the Final 2016 CHSRA Business Plan include state investments along these three corridors that would be developed through active rail corridor planning efforts which they have been involved in over recent years. These requests are as follows:

1. Release of the remaining bulk of $53.9 million for planning work in the Merced to Sacramento Corridor to the regional rail partners.

2. Include the section from the Central Valley Wye connection to the Merced Station in the Initial Operating Segment as you have the connections to Bakersfield and San Francisco. This will provide the Phase I connection to these three vital systems and will improve Northern California high speed rail ridership prospects.

3. $1.0 billion in in non-HSR funds for connectivity improvements for San Joaquin Rail Service between Fresno and Sacramento.

4. $1.0 billion in in non-HSR funds for connectivity improvements, for the ACE Service between Merced and San Jose through the Altamont Pass.

5. Additionally, $1.0 billion in non-HSR funds for connectivity improvements along the Capital Corridor between San Jose and Sacramento would significantly reduce traffic on the I-80 commuter route.

I appreciate the opportunity to share my concerns with the Authority and would like to see the issues raised here addressed in the Final 2016 CHSRA Business Plan.

Sincerely,

Adam C. Gray
21st Assembly District
San Joaquin Valley Caucus, Chair

cc: Honorable Edmund G. Brown Jr., Governor of California
Honorable Kevin de Leon, Senate President pro Tempore
Honorable Anthony Rendon, Speaker of the State Assembly
Honorable Jim Beall, Chair, Senate Transportation and Housing Committee
Honorable Jim Frazier, Chair, Assembly Committee on Transportation
Brian Kelly, Secretary, California State Transportation Agency

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Ryan
Last Name :	Heller
Stakeholder Comments/Issues :	Please find attached the Letter from the Merced Downtown Neighborhood Association Ryan Ryan R. Heller Office of Adam C. Gray Assembly Member, 21st District Office: 209.726.5465 Mobile: 818.683.2034 From: Croasdale, Grethel [mailto:GCroasdale@co.merced.ca.us] Sent: Monday, April 18, 2016 1:05 PM To: '2016businessplancomments@hsr.ca.gov' Cc: Pedrozo, John; 'Ben Duran'; pedrozojoshua@gmail.com; Toni Dossetti (dossettit@aol.com); mrawling@gvhc.org; Heller, Ryan; Carrigan, Steve (CarriganS@cityofmerced.org); Darryl Davis (ddavis7@ucmerced.edu); chris.vitelli@mccd.edu; Spriggs, Bill; Matthew Wainwright; Daniel Martinez; Picciano, Shannon; Farley, Louise Subject: FW: County of Merced and City of Merced Comments on California High -Speed Rail Authority Draft 2016 Business Plan Good afternoon, Please find attached written comments from the Merced County Passenger Rail Committee, National Association for the Advancement of Colored People (NAACP) Merced County Branch #1047, and concerned citizens in respects to the CHSRA 2016 IOS Proposal. Attentively, Grethel Croasdale Assistant Supervisor John Pedrozo County of Merced, District 1 2222 M Street Merced, California 95340 Office Phone: 209.385.7366 Fax: 209.726.7977 gcroasdale@co.merced.ca.us<mailto:gcroasdale@co.merced.ca.us>
Notes :	
Attachments :	Biz_Plan_DNA.pdf (102 kb)

DNA
DOWNTOWN NEIGHBORHOOD ASSOCIATION

April 18, 2016

Mr. Dan Richard
Chair, California High Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

Dear Chairman Richard:

Last year, residents of the downtown area of Merced have created an advocacy organization, which we're calling the Downtown Neighborhood Association (DNA). Many of our members have lived in downtown Merced for many years and are committed to finally creating and sustaining a vibrant, desirable and safe downtown residential area. Our members believe that the fortunes of the downtown business district are inextricably tied to the success of the downtown residential neighborhoods, i.e., we cannot fully realize the potential of the downtown business community if we continue to allow the downtown residential areas to deteriorate. We intend to continue our longstanding, unequivocal support for the California High Speed Rail project. However, Merced's omission from the IOS in the Authority's Proposed 2016 Business plan leaves us with grave concerns.

We believe that the presence of the University of California at Merced will inexorably shape the future of our community and our Valley. Based upon the investments made in this community- by siting of the nation's first research university built in the 21st century here and the continued development and upgrading of Highway 99 (and other transportation infrastructure)- it is the intention of the State to expand access to the fastest growing region of California. If Merced is left out of the initial operating segment, then potential students and future entrepreneurs, their families, and recent graduates will not be able to efficiently travel between the Silicon Valley and Merced, and would therefore be limited in their ability to contribute to the Central Valley's burgeoning knowledge economy. This transportation element is necessary to support and sustain their academic and economic growth.

Merced is a focal point for growth in California and a central hub of many current and planned transportation systems. It is in the mutual best interest of Merced and the Authority to develop the station and plan for the station area. Taken along with the presence of the University and its planned Downtown Campus / Administrative Center, placement of a High-Speed Rail station in downtown Merced will have a transformative effect on our business district and our neighborhoods. To be done well, development of these assets should be conjoined and thoughtfully coordinated. The Merced community,

including the Downtown Neighborhood Association, has begun the long and complex process of assembling a plan for the proposed station area.

It is our understanding that the draft Business Plan pushes merced's planned station from 2022 to 2029, if not significantly later. Introducing such a considerable delay to the construction of *our* station renders this planning process moot- since the economic and demographic conditions will undoubtedly undergo major change during that time period. The development of the station and the station area will be more costly in the future, as more growth occurs in the proposed area and costs associated with labor and land acquisition continue to increase.

For all of these reasons, we are asking you to include Merced in the initial operating segment and build the Merced Station in 2022 as planned. We intend to speak with one voice for those who live in the oldest, most historic neighborhoods of Merced, closest to the downtown business district.

We appreciate the challenge before you and look forward to working with you to build a project that reflects the diverse interests of our State.

Sincerely,

Ryan Heller
Managing Director
The Merced Downtown Neighborhood Association

2016 Business Plan RECORD DETAIL

Submission Date :	3/17/2016
Submission Method :	Letter
First Name :	Mac
Last Name :	Taylor
Stakeholder Comments/Issues :	
Notes :	
Attachments :	HSR-Draft-Business-Plan-Review-031716.pdf (319 kb)

Review of High-Speed Rail Draft 2016 Business Plan

MAC TAYLOR • LEGISLATIVE ANALYST • MARCH 17, 2016

Summary

On February 18, 2016, the California High-Speed Rail Authority (HSRA) released a draft of its 2016 business plan, as required by state law. The plan provides updated information on the project and proposes changes to the project's construction plan. Specifically, the plan (1) changes the initial operating segment (IOS) of the project from the south (Central Valley to San Fernando Valley) to the north (Central Valley to Silicon Valley), (2) updates the capital cost and schedule for Phase I of the system (San Francisco to Anaheim), (3) identifies full funding for the proposed IOS North, and (4) assumes additional funding will become available for the remainder of Phase I of the system.

Given the significant cost of the planned high-speed rail project and the level of investment that the state has thus far made on the project, it will be important for the Legislature to ensure that the final version of the authority's business plan is aligned with its priorities. In this report, we identify three major issues that merit legislative consideration. First, there are several uncertainties regarding the funding plan for Phase I, such as uncertainty regarding the future availability of cap-and-trade auction revenues to fund the project as planned. Second, the Legislature will want to ensure that the change in the scope of the IOS meets its priorities. To the extent that the Legislature concurs with the proposed IOS North, it will want to consider whether the IOS has stand-alone value. Third, in order for the Legislature to maintain oversight of the project, it needs detailed information about the cost, scope, and schedule of each segment HSRA is planning to construct in order to easily track changes over time.

INTRODUCTION

The California High-Speed Rail Authority (HSRA)—an independent authority consisting of a nine-member board appointed by the Legislature and Governor—is responsible for planning and constructing an intercity high-speed train system that would link the state's major population centers. Under existing state law, HSRA is required to prepare a business plan every even year that provides certain key information about the planned high-speed rail system. On February 18, 2016, HSRA released a draft of its 2016 business plan. The authority must adopt a final business plan by May 1 following public review and comment on the draft plan. In this report, we (1) provide background information on the planned high-speed rail system, (2) describe the major changes proposed in the draft 2016 business plan to the project, and (3) identify issues for legislative consideration.

BACKGROUND

Overview of the Planned High-Speed Rail System

Project Initiated in 1996. Chapter 796 of 1996 (SB 1420, Kopp) established the HSRA to plan and construct an intercity high-speed train system that would link the state's major population centers. In November 2008, voters approved Proposition 1A, which specified certain criteria and conditions that the high-speed rail system must ultimately achieve. (As we discuss below, Proposition 1A also authorized the state to sell bonds to partially fund the system.) For example, the measure requires electric trains capable of operating speeds of at least 200 miles an hour and specifies maximum travel times along specific routes, such as nonstop travel from San Francisco to Los Angeles being no more than two hours and forty minutes. Proposition 1A also requires that the system operate without requiring a subsidy. The planned project would be the first high-speed rail system in the U.S. and one of the state's largest public works projects.

Construction of Project Divided in Two Phases. The HSRA plans to construct the high-speed rail system in two phases, as shown in Figure 1. Phase I of the system would provide service for about 500 miles from San Francisco to Anaheim. Phase II of the system would connect the system to Sacramento in the north and San Diego in the south. In 2014, HSRA estimated that Phase I of the system would be completed in 2028 and cost about $68 billion. The authority has not provided estimates of the cost or schedule for Phase II.

The HSRA plans to build Phase I of the system in segments as funding becomes available. As discussed below, the authority has been planning since 2012 for the first segment to connect the Central Valley to the Los Angeles region. Initial work on Phase I also includes certain early improvements to the "bookends" of the system. These are projects on commuter rail lines in the Bay Area and Southern California that will facilitate high-speed rail and also provide benefits to existing commuter rail systems.

First Operable Segment Planned to Go South. Since 2012, HSRA has reported that the first operation of high-speed rail in the state will be after the construction of an initial operating segment (IOS) of Phase I, which would connect Merced to the San Fernando Valley (commonly referred to as the "IOS South"). The HSRA selected the IOS South partly because the authority estimated it could

Figure 1

Planned High-Speed Rail System

meet the requirement of Proposition 1A to operate without requiring a subsidy due to potentially high levels of ridership to and from the densely populated Los Angeles region. The authority's plan was to build the IOS South in smaller construction segments, but not operate high-speed trains on the system until the entire IOS South was completed. In 2014, HSRA reported that the IOS South would cost about $31 billion and be completed by 2022.

Initial Construction Began in the Central Valley. Construction of the IOS South began on a segment—commonly referred to as the initial construction segment (ICS)—extending 130 miles from Madera (about 30 miles south of the proposed northern terminus of IOS South in Merced) to an area north of Bakersfield. The HSRA initially estimated that the ICS would be completed by 2017 and cost $5.9 billion.

Funding Provided for the Project. The HSRA has received partial funding to plan and construct the high-speed rail system. Specifically, through 2015-16, HSRA will have received an estimated $8.1 billion to build the system. The specific funding sources provided for the project are:

- ***Proposition 1A Bonds.*** This measure authorized the state to sell $9.95 billion in bonds, with $9 billion of this amount for the high-speed rail project. These bond funds cannot be used for more than 50 percent of the construction cost of a segment of the system. The Legislature has appropriated $3.7 billion of the bond funds authorized for high-speed rail, most of which remains unspent. About $1.1 billion of the funding appropriated is for the bookend projects on commuter rail lines, as discussed above.

- ***Federal Funds.*** The HSRA has received $3.5 billion in federal funds. This amount includes $2.6 billion in federal stimulus funds, which are available for expenditure only through September 30, 2017. As of November 2015, HSRA had spent $670 million of these funds. The remaining $928 million in federal funds are subject to a funding agreement with the Federal Railroad Administration. According to HSRA staff, the terms of the agreement can potentially be changed in the future to align with the project's needs. At this time, HSRA has not spent any of the $928 million in federal funds.

- ***Cap-and-Trade Auction Revenue.*** In 2014, the state began providing cap-and-trade auction proceeds to HSRA for the high-speed rail project. Cap-and-trade auction proceeds are revenue generated by the state from the sale of emission allowances as part of the state's efforts to reduce greenhouse gas (GHG) emissions. The Legislature authorized the state's cap-and-trade program as one of several programs to reduce GHG emissions to 1990 levels by 2020. In 2014-15, HSRA received $250 million in cap-and-trade auction revenues. As part of the 2014-15 budget, the Legislature also adopted budget trailer legislation to continuously appropriate, beginning in 2015-16, 25 percent of annual cap-and-trade auction revenue for the planning and capital costs for Phase I of the high-speed rail project. In 2015-16, this amount is estimated to be $600 million. The Governor's budget estimates that HSRA will receive $500 million in auction revenues in 2016-17. In addition, state law currently provides that an additional $400 million in cap-and-trade revenues that were previously loaned to the General Fund will be provided to HSRA. The Governor's budget assumes that $100 million of this will be provided in 2016-17 and $300 million in 2017-18.

HSRA Statutorily Required to Prepare Business Plan

State law requires HSRA to prepare a business plan every even year that provides certain key information about the planned high-speed rail system. Specifically, the authority must adopt a final business plan by May 1 every even year, and a draft of the plan is required at least 60 days prior for public review and comment. Under current law, the biennial business plan must include the following:

- ***Construction Plan.*** The business plan must include a description of the type of train service HSRA is developing, the timing and order for building various segments of the system, estimated schedules for completing environmental clearance, and estimated capital costs of constructing the system.
- ***Funding Information.*** The plan is also required to include information on the funding HSRA anticipates receiving to construct the system from various sources, such as state bond funds and federal funds.
- ***Risks to Completing the System.*** The plan also must include information on the risks faced by the project, such as risks related to financing, ridership, and construction.

On April 30, 2014, HSRA adopted a final 2014 business plan. Our above description regarding the planned high-speed rail project reflects the final 2014 business plan. As we discuss in the following section, the authority recently released a draft 2016 business plan.

MAJOR FEATURES OF DRAFT 2016 BUSINESS PLAN

As required by state law, HSRA released a draft business plan for public review and comment on February 18, 2016. Specifically, the draft 2016 business plan provides updated information on the project and proposes changes to the project's construction plan. The major features of the draft plan are summarized in Figure 2 and discussed below.

Changes IOS From South to North

Silicon Valley to Central Valley IOS. The draft 2016 business plan changes the direction

Figure 2

Major Features of Draft 2016 High-Speed Rail Business Plan

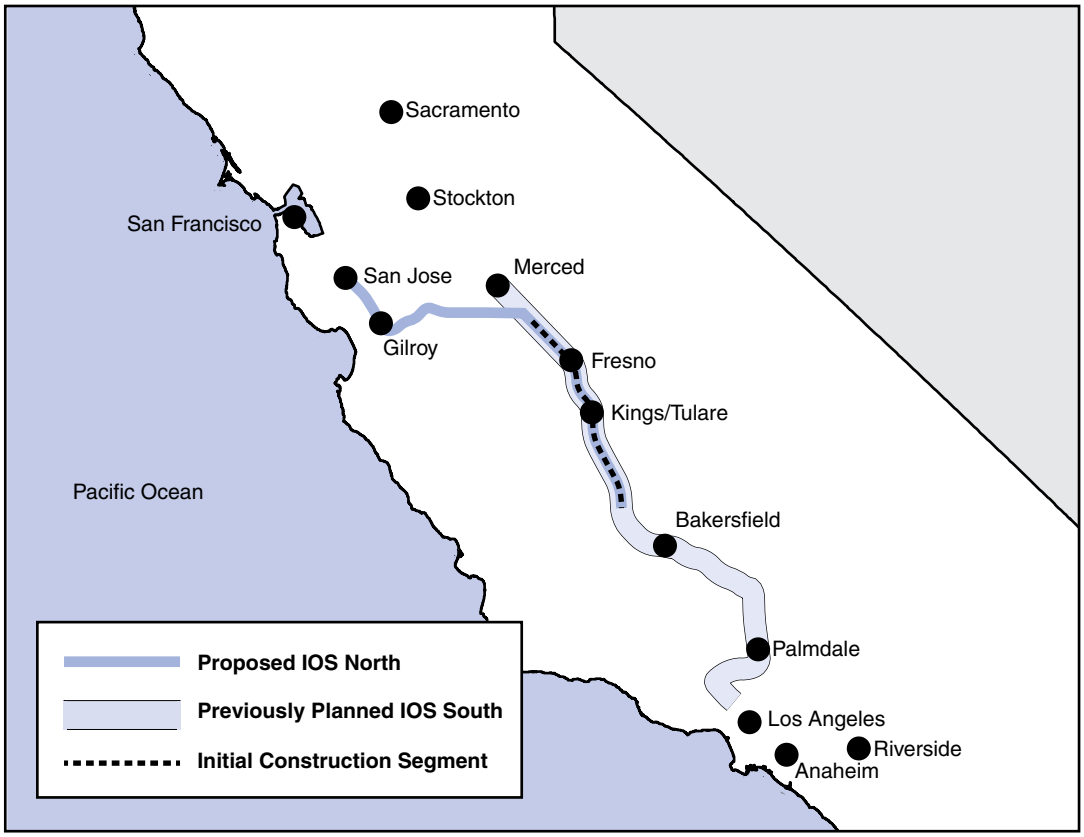
- ✓ ***Changes Initial Operating Segment (IOS) From South to North.*** The plan changes direction of the IOS from south to north. Specifically, the IOS would extend from the Central Valley to the Silicon Valley, rather than from the Central Valley to the San Fernando Valley in Southern California.
- ✓ ***Updates Capital Cost and Schedule for Phase I.*** The plan estimates the capital cost of Phase I at $64 billion, about $4 billion less than identified in the prior business plan.
- ✓ ***Identifies Full Funding for Proposed IOS North.*** The plan identifies sources to fully fund the proposed IOS North (Silicon Valley to Central Valley).
- ✓ ***Assumes Additional Funding Will Become Available for Remainder of Phase I.*** The plan discusses potential sources that might be available to partially fund the remainder of Phase I, but does not include a full funding plan.

of the IOS from south to north, as shown in Figure 3. Under the draft plan, the IOS would extend 239 miles from the Central Valley to the Silicon Valley (referred to in this report as the "IOS North"), rather than from the Central Valley to the San Fernando Valley. Under the plan, HSRA would connect the ICS that is currently under construction in the Central Valley to San Jose. Specifically, the IOS North would connect Diridon Station in downtown San Jose to an agricultural area north of the city of Shafter in the Central Valley. Because the southern terminus of the line would be roughly 50 miles south of the last station, HSRA plans to build an interim station at the southern terminus north of Shafter. The draft plan estimates that in 2025, the first year of operation, the IOS North would carry between 2.2 million and 4.1 million passengers.

Estimated Capital Cost of Proposed IOS. A primary reason for the change in the IOS is because of insufficient funding to complete the planned IOS South. As we discuss below, the draft business plan identifies funding sources to complete the proposed IOS North, which is estimated to cost less than the IOS South. Specifically, HSRA estimates that the IOS North would have capital costs of $20.7 billion, including $7.3 billion for the ICS and $13.4 billion to extend from Madera (the northern terminus of the ICS) to San Jose. This is about $10 billion less than the estimated cost of the IOS South. In addition, HSRA would incur financing costs for the IOS North. The HSRA also indicates that the

Figure 3

Proposed Initial Operating Segment (IOS)



Silicon Valley to Central Valley segment has fewer engineering challenges and could therefore be built more quickly than the more technically complex connection into the Los Angeles region.

Updates Capital Cost and Schedule for Phase I

The 2016 draft business plan includes an updated capital cost of Phase I of the system (San Francisco to Anaheim) of an estimated $64 billion, which is about $4 billion less than the cost provided in the 2014 business plan. As shown in Figure 4, this includes the cost of the proposed IOS North and costs to complete the other segments of Phase I. These costs reflect estimated capital costs for the project and do not include certain other costs associated with building the system, such as financing and administrative costs. The plan assumes Phase I would be complete by 2029.

Identifies Full Funding for Proposed IOS North

The draft business plan identifies sources to fully fund the proposed IOS North (Silicon Valley to Central Valley). These sources include:

- $6.8 billion from Proposition 1A, including $4.2 billion that has not yet been appropriated by the Legislature.
- $3.2 billion in federal funds already appropriated to HSRA.
- $17.8 billion in cap-and-trade auction revenues through 2050. This amount includes (1) $5.3 billion through 2024 that would support pay-as-you-go expenditures on the project and (2) $12.5 billion from 2025 through 2050 to support financing. Specifically, the $12.5 billion would be securitized to generate $5.2 billion in financing proceeds. While not specified in the plan, the remaining $7.3 billion would presumably support financing costs.
- $338 million from various sources, such as Proposition 1A and federal funds, that are allocated to project planning.

Of the above $28 billion, (1) $20.7 billion would support the estimated capital costs of the IOS North and (2) $176 million would support a reserve for the project. According to the business plan, the remaining $7.3 billion appears related to financing costs.

Assumes Additional Funding Will Become Available for Remainder of Phase I

While the draft plan identifies funding sources to complete the proposed IOS North of Phase I, as well as meet certain costs for the bookends of the system, the plan does not identify specific funding to support the construction of the remainder of Phase I. This would mean that the state would need to identify additional funding sources in the future

Figure 4

Phase I Capital Cost—2016 Draft Business Plan[a]

(In Billions)

Segment	
IOS North—Silicon Valley to Central Valley	
North of Shafter to Madera (ICS)	$7.3
Madera to San Jose	13.4
Subtotal	($20.7)
Remainder of Phase I	
IOS North extension to San Francisco and Bakersfield	$2.9
Other Phase I segments	40.6
Subtotal	($43.5)
Total	**$64.2**

[a] Estimated dollar amounts are in year of expenditure.

IOS = initial operating segment and ICS = initial construction segment.

to pay for the $43.5 billion in construction costs for other segments of Phase I, in addition to any financing costs that might be required. The draft business plan assumes that this additional funding would be available in order to begin construction on the remainder of Phase I in 2018, so that the entire Phase I system would be completed and operational by 2029. While the plan discusses potential sources that might be able to partially fund additional portions of Phase I, as we discuss below, it does not include a full funding plan.

Seek Federal Funds to Connect IOS to San Francisco and Bakersfield. As part of the plan to complete Phase I, HSRA plans to extend the proposed IOS from San Jose to San Francisco and from the southern terminus into Bakersfield. The HSRA estimates these extensions would require an additional $2.9 billion in funding—$2 billion to extend the line into Bakersfield and $900 million for improvements to facilitate service into San Francisco. The $900 million for the San Jose to San Francisco section represents only a portion of the total cost of that segment. The business plan indicates that HSRA will request funding from the federal government for the extension of the IOS into San Francisco and Bakersfield.

Use Operating Revenues to Partially Fund Other Segments of Phase I. Assuming the IOS North is constructed as well as the extension of the IOS described above, HSRA estimates that the other segments of the Phase I system will cost $40.6 billion to construct. In addition, HSRA will have administrative costs, and could potentially have financing costs related to the completion of Phase I that are not required to be included in the business plan. The draft business plan estimates that the IOS North will generate an operating surplus after it is completed. The plan assumes that this net operating revenue could be securitized, meaning the state could essentially sell the right to these ongoing revenues in order to generate a one-time up front payment to the state. Specifically, the business plan estimates that the state could generate $3.2 billion from such securitization. The HSRA also estimates that if the IOS were extended to Bakersfield and San Francisco, that would allow for an additional $4.2 billion in financing, for a total of $7.4 billion. These leveraged funds would then be available to fund construction of a portion of the remainder of Phase I. The HSRA has not identified where the remaining funding would come from in order to complete Phase I of the system.

ISSUES FOR LEGISLATIVE CONSIDERATION

Given the significant cost of the planned high-speed rail project and the level of investment that the state has thus far made on the project, it will be important for the Legislature to ensure that the final version of the authority's business plan is aligned with its priorities. Below, we identify three major issues that merit legislative consideration: (1) uncertainties regarding the funding plan for Phase I, (2) the scope of the IOS, and (3) adequate oversight of the project.

Uncertainties Regarding Funding Plan for Phase I

In order to ensure that Phase I of the high-speed rail system is completed as planned, it is essential that HSRA develops a comprehensive and credible funding plan for the project. While the 2016 draft business plan identifies sources to fully fund the proposed IOS North, there is some uncertainty regarding the future availability of cap-and-trade auction revenues to fund the project.

In addition, the business plan lacks a complete funding plan for the remainder of Phase I. We discuss each of these issues in more detail below.

Availability of Future Cap-and-Trade Revenue to Complete IOS Could Potentially Require Certain Legislative Actions. As discussed above, about half of the funding identified in the draft business plan for the proposed IOS is from cap-and-trade auction revenues after 2020. While the administration indicates it plans to continue the cap-and-trade program beyond 2020, current law does not appear to authorize the program's continuation beyond 2020. This means that without legislative action, the cap-and-trade funds HSRA plans to use to build the IOS would likely not be available. At a minimum, these funds are subject to considerable legal uncertainty. The Legislature will want to consider whether to approve the state's cap-and-trade program beyond 2020 on the merits of that program as a policy tool to achieve its GHG emission reduction goals. To the extent that the program is authorized beyond 2020, these revenues could be available for the high-speed rail project, as well as other uses.

If the legal uncertainty around the continuation of cap-and-trade is resolved, in the short-run HSRA's estimate of $500 million annually from cap-and-trade auction revenues (based on the 25 percent continuous appropriation) appears reasonable. However, in order to help facilitate the long-run securitization of future cap-and-trade revenues as assumed in the plan, the Legislature would need to take steps to ensure the availability of an adequate amount of revenues to support such financing. For example, the Legislature could specify that the first call on annual cap-and-trade revenues would be for the repayment of high-speed rail financing. Such changes in the allocation of cap-and-trade auction revenues could impact the level of funding available for other programs intended to reduce GHG emissions.

No Complete Funding Plan for Remainder of Phase I. As mentioned above, HSRA estimates that the capital costs to complete the remainder of Phase I after the IOS North are $43.5 billion. There would also be an unidentified amount of administrative costs as well as potentially significant financing costs. While the draft business plan discusses the possibility of securitizing the net operating revenues once the proposed IOS North is complete to support part of the costs to complete Phase I, it is unclear whether the system will actually generate an operating surplus. Moreover, the plan estimates that the amount of funding that could be generated would fall significantly short of the level needed to complete Phase I and does not identify how this shortfall would be met.

Scope of IOS

Weigh Trade-Offs of Proposed IOS Scope Change. The Legislature will want to ensure that the change in the scope of the IOS meets its priorities. While the previously planned IOS South would have connected a more populous region of the state and had higher projected ridership, it is not possible to be completed as scheduled due to insufficient funding. To the extent that the Legislature wants to ensure the continued development of a high-speed rail system, the proposed IOS North has some merit. Since the proposed IOS North has construction costs of about $10 billion less than the initially planned IOS South, it is much more likely that a full funding package to complete the segment could be achieved. In addition, the proposed IOS North would have less risk than trying to complete the more technically complex line into Southern California.

Ensure IOS Has Stand-Alone Value. If the Legislature concurs with the business plan's changed scope of the IOS, it will want to consider whether the IOS has stand-alone value—meaning that the entire IOS is usable and that it connects

major metropolitan regions of the state. If the remaining parts of Phase I were not built due to a lack of available funds, the state would still have a usable asset.

In evaluating the stand-alone value of the IOS North, the Legislature will want to consider whether the southern terminus of the proposed IOS makes sense. As mentioned above, under the plan, the IOS North would have its southern terminus at an agricultural area north of the small city of Shafter, which is about 50 miles south of the last planned station on the IOS. In order to make the southernmost portion of the IOS usable, HSRA plans to build a temporary station or platform at this location. However, doing so would require additional environmental clearance as a station at this location was not previously evaluated by HSRA. Even with a temporary station or platform, ending the IOS in an unpopulated agricultural area does not appear to be an effective approach. This is because this location would not have the types of facilities and nearby businesses, such as transit connections, rental car facilities, and shops necessary to meet the needs of train passengers. To address these concerns, the Legislature could direct HSRA to limit work beyond the last permanent station (Kings/Tulare) near Hanford. This could free up some funding to support other aspects of the system, such as the IOS North or the bookend projects that make improvements to existing commuter rail lines. Alternatively, the Legislature could make it a priority to identify the additional $2 billion necessary to extend the IOS to Bakersfield.

Adequate Legislative Oversight

Given the state's significant investment in the high-speed rail project, it will be important for the Legislature to maintain oversight of the project to help ensure it is completed as planned and within budget. In order to facilitate such oversight, the Legislature needs certain information to hold the HSRA accountable. Specifically, the Legislature needs detailed information about the cost, scope, and schedule of each segment HSRA is planning to construct. However, the information provided by HSRA in the business plan and other documents can be difficult to compare over time. For example, since beginning work on the ICS, the scope, cost, and schedule of the project has changed, making it difficult to determine how well HSRA is adhering to the budget for that segment. Specifically, the length of the ICS was reduced to 118 miles from 130 miles. The projected cost of the ICS assumed in the draft 2016 business plan is $7.3 billion, compared to the initially planned $5.9 billion cost. However, based on the information provided by HSRA, it is difficult to determine the extent to which the change in costs is related to the changes in scope or other factors.

The Legislature may want to consider defining specific segments of the system and requiring future business plans and other legislative reports to provide information on the cost and schedule of these fixed scopes of work. This would make it easier to track changes over time and understand the reasons for cost changes. In addition, state law requires HSRA to identify the capital costs related to the planned system, but not other costs. The Legislature will want to consider requiring future business plans to include all costs associated with the planned system and construction of the various segments, such as financing and administrative costs.

LAO Publications

This brief was prepared by Jessica Peters and reviewed by Anthony Simbol. The Legislative Analyst's Office (LAO) is a nonpartisan office that provides fiscal and policy information and advice to the Legislature.

To request publications call (916) 445-4656. This brief and others, as well as an e-mail subscription service, are available on the LAO's website at www.lao.ca.gov. The LAO is located at 925 L Street, Suite 1000, Sacramento, CA 95814.

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Mike
Last Name :	McKeever
Stakeholder Comments/Issues :	Please find attached a comment letter on the Draft 2016 Business Plan from SACOG's CEO.
Notes :	
Attachments :	CHSRAcommentletterSACOG.pdf (31 kb)

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Attachment A

April 18, 2016

Mr. Dan Richard
Chairperson, California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento CA 95814

RE: California High Speed Rail (CHSRA) Draft 2016 Business Plan

Dear Chair Richard:

SACOG has been an active participant on a number of working groups in Northern California that are coordinating passenger rail services along the Capitol Corridor, San Joaquin and Ace rail corridors. Among these groups is the newly formed MPO Mega-Region Partnership and the well-established Central Valley Rail Working Group (CVWRG).

SACOG and its rail coalition partners have identified a number of concerns with the draft plan. Among the concerns is the fact that the draft business plan greatly delays closing the gap between Northern and Southern California. The 2012 Revised Business Plan stated the closing of this gap was "the state's highest priority for intercity rail". For many years the promise of the early high speed rail (HSR) connection and improvements to conventional inter-city rail, commonly called the "blended service concept" have been essential for support from the Sacramento region. Not only does the draft plan leave in doubt any real funding for connections between Sacramento to Merced, the draft plan also does not provide funds to support improved connections between Sacramento and San Jose.

The draft business plan includes a commitment to invest $2.1 billion between Burbank and Anaheim. But previously, the CHSRA was also committed to providing funding support for investments in "conventional" services which would connect to the Initial Operating Segment (IOS) of high speed rail. While staff recognizes there are investment needs in the Burbank to Anaheim corridor, the draft plan does not propose near-term blended service investment priorities that will benefit Sacramento, the Northern San Joaquin, or portions of the Bay Area. In order to fulfil the commitment for blended service there is a strong case for significant inter-city rail funding to connect Sacramento to both Fresno and San Jose.

SACOG and its rail coalition partners request that the CHSRA fulfill the promise in the prior business plan to fund the blended service needs in Northern California and to extend HSR to Merced. Three intercity rail corridors in Northern California offer significant promise to increase ridership for the IOS of HSR. Investing in these

corridors also offer significant promise for better connections across the Northern California Mega-region.

Specific investments along these three corridors would be developed through active rail corridor planning efforts SACOG and its coalition partners have been involved in over recent years:

- $1.0 billion in connectively improvements for San Joaquin Rail Service between Fresno and Sacramento

- $1.0 billion in connectivity improvements, for the Altamont Corridor Express (ACE) Service between Merced and San Jose through the Altamont Pass

- $1.0 billion in connectively improvements along the Capital Corridor between San Jose and Sacramento

- Include an amount to be determined for the Central Valley Wye connection to the Merced Station that will improve Northern California high speed rail ridership prospects.

The CHSRA 2016 Business Plan should include an enforceable commitment for investing in near-term conventional rail connectively improvements between Sacramento, the Bay Area and Northern San Joaquin Valley. It is important for the CHSRA to specify where this funding will come from and that it will be a priority to have improved "conventional" intercity rail service. Intercity rail investments along the San Jose to Sacramento and Fresno to Sacramento corridors can become important "feeder" services to the Phase 1 HSR system.

A final recommendation from SACOG and its rail coalition partners is that the CHSRA fulfill the earlier commitment for funds to support rail planning coordination in Northern California. As such, the Authority should release the $53.9 million of Proposition 1A Funding authorized by the Budget Act of 2012 for planning work along the Merced to Sacramento Corridor. These funds are needed to enable the planning/environmental/engineering work needed to provide improved passenger rail service between the future Phase 1 HSR service and Sacramento and to provide the foundation for full Phase 2 HSR implementation. The CVRWG believes the legislative intent behind the inclusion of the Merced to Sacramento planning funding in SB 1029 was to do the planning needed to support near-term passenger rail improvements. Despite the support and high level of interest from the region, there has been no progress in the planning for improved early investment for connecting rail service between Merced and Sacramento.

The CHSRA has received important support from SACOG and its rail coalition partners for many years. Support from our regions helped pass Proposition 1A and members of the legislature have provided key votes in 2012 and 2014 to advance high speed rail implementation activities. This support has come despite the fact that Sacramento is a late year Phase 2 corridor and the Pacheco Pass route selected by CHSRA between the Bay Area and San Joaquin Valley does not serve the corridor between Merced and Sacramento as effectively as the Altamont Pass route would have.

SACOG and our Northern California rail coalition partners are hopeful that the final version of the CHSRA business plan can be one that benefits all of Northern California.

Approved by:

Mike McKeever
Chief Executive Officer

MM:mc

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Website
First Name :	Katharine
Last Name :	Paull
Stakeholder Comments/Issues :	The business plan is unrealistic. Ridership will not be sustainable. Commuters will not be able to afford it. It is impossible to determine construction costs. Tunneling under the San Gabriel Mountains could get to 1billion $ per mile. A new route circumventing the mountains between Palmdale and downtown is needed. Funding sources are unknown. Who will pay?
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Jennifer
Last Name :	Bergener
Stakeholder Comments/Issues :	Good morning, Please find attached: CHSRA Business Plan Comment letter from LOSSAN. Thank you, Kameron Altar Executive Assistant LOSSAN Rail Corridor Agency 600 S Main St. Orange, CA 92863 (714) 560-5745
Notes :	
Attachments :	04.18.2016 Letter to Jeff Morales - CHSRA Business Plan Comment Letter.pdf (877 kb)

Los Angeles › San Diego › San Luis Obispo
Rail Corridor Agency

LOSSAN
Since 1989

April 18, 2016

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P.O. Box 14184
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Fax: (714) 560-5734
www.lossan.org

Mr. Jeff Morales
Attn: Draft 2016 Business Plan
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

Dear Mr. Morales:

On behalf of the Los Angeles – San Diego – San Luis Obispo (LOSSAN) Rail Corridor Agency (Agency), thank you for the opportunity to comment on the California High-Speed Rail Authority's (CHSRA) Draft 2016 Business Plan (Plan). We appreciate the significant effort that went into updating the Plan, including the financial plan and project schedule for the high-speed rail (HSR) project.

While we were disappointed to see that the updated Plan prioritizes construction on the northern section of the corridor from the Central Valley to the Silicon Valley rather than to southern California, we are encouraged by the CHSRA's renewed commitment to implementing early investment projects along the LOSSAN rail corridor.

As you know, the LOSSAN rail corridor travels through a six-county coastal region in southern California and includes 41 stations with more than 150 daily passenger trains and more than 70 daily freight trains. It is the second busiest intercity passenger rail corridor in the United States with an annual ridership of more than 2.8 million on Amtrak Pacific Surfliner intercity trains and 5 million on Metrolink and COASTER commuter trains.

Because the revised Plan now anticipates that HSR will not arrive in southern California until 2029, advancing the "bookend" improvements planned along the LOSSAN rail corridor is even more critical. We are pleased that the Plan reiterates the CHSRA's intent to move forward with $500 million in improvements along the LOSSAN rail corridor funded by Proposition 1A. These projects are critical to improving passenger rail service along the LOSSAN rail corridor in advance of the arrival of the HSR system. These projects will improve safety, increase capacity, and enhance the reliability of both freight and passenger rail services, while preparing for future connections to HSR.

Though the estimated completion date for HSR in southern California has been pushed out to 2029, we appreciate that the revised scope adds $2.1 billion in additional investments to enhance capacity, speed and reliability of HSR and connecting commuter and intercity passenger rail services between Los Angeles and Anaheim. Maintaining the vision of a "one-seat ride" from Anaheim and Los Angeles to the Bay Area is critical to the future success of the HSR system.

We also encourage the CHSRA to utilize cap-and-trade proceeds designated for the HSR project to fund improvements in the LOSSAN rail corridor that will benefit both existing Pacific Surfliner and Metrolink services, as well as future HSR service on the shared corridor between Burbank and Anaheim.

The LOSSAN Agency's business plan for fiscal year (FY) 2016-17 and FY 2017-18 supports the planned HSR system as an integral component of the statewide rail network. The LOSSAN rail corridor will provide critical connections to support and complement the HSR system, and integration between HSR and existing passenger rail services must be planned carefully to build upon the existing success of the Pacific Surfliner service. We also encourage the CHSRA to continue planning efforts for phase 2 of the HSR system between Los Angeles and San Diego while moving forward with implementation of phase 1. The Los Angeles to San Diego market is the busiest rail travel market in the state, and should be maximized.

Thank you for your consideration of these comments, and we look forward to a continued partnership with the CHSRA to improve passenger rail service in our region.

Sincerely,

Jennifer L. Bergener
Managing Director

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Elizabeth
Last Name :	Goldstein Alexis
Stakeholder Comments/Issues :	Please accept our comments on the 2016 Draft Business Plan. -- Elizabeth Goldstein Alexis Co-founder Californians Advocating Responsible Rail Design (CARRD) cell (650) 996-8018 www.calhsr.com
Notes :	
Attachments :	CARRD Draft 2016 Business Plan Comments.pdf (568 kb)

Comments provided to the California High Speed Rail Authority "CHSRA" on the Draft 2016 Business Plan
Californians Advocating Responsible Rail Design (CARRD)
April 18, 2016

Process concerns

The changes that are proposed in the 2016 Draft Business Plan include unvetted and undisclosed new alignments, along with a major change in phasing, that were not the result of public meetings and discussions, but rather the unilateral publication of the business plan document. This one-way process suggests CHSRA is still not operating as a partner with communities and other stakeholders. In the San Jose to San Francisco segment, Authority officials have declared the alternatives analysis to be finished before the purpose and need section is completed for the environmental review.[1]

ANALYSIS IN PROGRESS – SUBJECT TO CHANGE

Environmental Milestones Schedule (t

Information through February 2016[1]

Segment	Progress	Complete Purpose & Need Statement		Complete Alternatives Analysis		Board Selection of Preferred Alternative	
	Due Dates	Last Month	Current Month	Last Month	Current Month	Last Month	Current Month
San Francisco to San Jose	Plan Forecast % Complete	Mar-16 Feb-16 65%	Mar-16 Feb-16 65%	Complete Complete 100%	Complete Complete 100%	Jul-16 Jul-16 7%	Jul-16 Jul-16 7%

It is time for real changes

The 2016 Draft Business Plan attempts to satisfy the letter of the law with respect to the safeguards in AB 3034 by suggesting a new initial operating segment, but refuses to consider real changes to the project that could help achieve compliance without gimmicks like making arbitrary and unrealistic changes like a temporary terminus in agricultural lands.

These types of changes would include looking at new routes to connect the Central Valley to the Bay Area and to the Los Angeles basin. They might include joint development of new infrastructure with regional and intercity rail operators.

The plan also ignores the spirit of the bond legislation.

Specific routing decisions may cannibalize and reduce existing state intercity rail and bus services, instead of helping to create a vibrant and useful state intercity rail system.

[1] Page 28, http://www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg_041216_FA_Operations_Report.pdf

The CHSRA proposes to use 25% of Cap and Trade revenues through 2050 to build a segment which will likely require state operating subsidies and will likely have limited impact on carbon emissions, once the GHG impact from the materials used in high speed rail construction are properly accounted for.

While initial lowball capital cost estimates may have created unrealistic expectations for private investment, the CHSRA has chosen to reduce project scope in ways that are harmful to the capacity of existing transit systems (Caltrain and Metrolink) and even possibly safety (no mechanical ventilation in tunnels, long extended grades through the Tehachapis) rather than reconceptualize the project in ways that could get closer to the original vision that voters and legislators endorsed in 2008.

At this point, even if cap and trade money is available for intercity rail projects, it is not at all clear that the current plan makes the best use of those funds, from either a greenhouse gas reduction perspective or to make fast rail transit from Los Angeles to northern California a reality.

It is important that whatever is built with $20 billion of public money should be a significant and important investment in California's transportation network. It is not clear that the current proposed route would be the best use of funds.The Business Plan avoids such questions, but completion risk is perhaps the largest risk of all. From a risk management standpoint, this should be considered.

Critical decisions need to be made soon

What will happen when the 118 miles of civil construction in the Central Valley is finished?

The 2016 Draft Business Plan has contradictory information about what the initial 118 miles of civil construction will be used for. On page 41, the plan says that the initial procurement for rail infrastructure such as track, signaling and power will be for the initial operating segment, suggesting that the Authority will wait until it has completed civil construction to San Jose before any trains use the segment currently being built in the Central Valley. The current budget and procurement strategy for the Central Valley segment includes another contract, CP 5, which would include tracks but not other infrastructure for high speed trains.

In the "Capital Cost Basis of Estimate Report"[2], the Madera Acres to Shafter segment includes the cost of CP 5 - this time described as "a new contract in development and includes trackwork and systems and electrification elements (Traction Power, Overhead Catenary, Communications and Train Control)", which would be contrary to the idea of one systems contract for the initial operating segment.

[2] Page 37

The 118 miles could be used by Amtrak's San Joaquin service until construction is complete to San Jose. They could be used as a standalone electrified rail system, but this would require a transfer station at Madera from Amtrak, which has land use implications not addressed in the plan and would be unlikely to cover its operational costs. There has been discussion of using the tracks for "testing", although it is unclear what type of testing would need to be done. Alternatively, the Authority could wait until it is ready to offer service to San Jose to install track and the systems infrastructure.

The Business Plan should at least clearly lay out the choices and a time frame/ decision-making process for dealing with this issue. There is a real concern that any delays in building towards San Jose may leave $6 billion of capital investment sitting unused but requiring upkeep for many years.

Would the Authority really start building towards San Jose, if it did not have enough money committed to get there?

Under the current plan, the Authority would use its current cap and trade allocation to start letting civil construction contracts as soon as environmental work was complete. There is a strong possibility that access to all the cap and trade funds may not be assured for many years - it will require extension of the program, some kind of guarantee around proceeds and securitization. This leaves the possibility that there could be a rail system that dead ends in Los Banos or Casa de Fruita. How and when will the Authority make the decision to move forward?

A clear discussion of cost reductions and trade offs needs to be included

Many of the cost reductions have implications for travel times and service levels. The sample schedules included in the supporting documents all show journey times well over 3 hours for the fastest San Francisco to Los Angeles service and much lower frequency than previously promised. These may be worthwhile trade offs, but should be clearly discussed in the plan.

The ridership model has flaws that make its forecasts unreliable

The ridership projections showed wide possible ranges. For the initial operating segment from San Jose to Shafter, the range of annual revenues was $273 to $882 million. There are specific weaknesses with the model that make it likely that ridership may even underperform the low end of forecasts.

The model forecasts are heavily reliant on one parameter - the high speed rail "constant". This is a value designed to capture the attractiveness of high speed rail that is not described in attributes like travel time, reliability and cost. In the current high speed rail ridership model, this particular element has a very high weight relative to all observable determinants of demand for high speed trains. In fact, according to Table 7.7 in the "Draft 2016 California High-Speed Rail

Business Plan Ridership and Revenue Risk Analysis", almost 90% of the variance in the model forecasts come just from different plausible values of this input[3].

The method used to select this parameter is crucial. Because there is no high speed rail service today, this constant cannot be directly calibrated. The ridership consultants decided to use an average of the constants for air travel and conventional rail services like Caltrain, Metrolink and Amtrak. Demand for air travel to and from the Central Valley is much lower than would be predicted, even considering the poor service and high costs. Specific adjustments were made for air travel to and from the Central Valley to achieve better model fit with reality. These adjustments would have reflected differences in industry makeup and other factors not included in the model, but which vary between the Central Valley and other parts of the state.

These same adjustments were not carried through to high speed rail constants for travel to and from the Central Valley. If they had been, the ridership forecasts would have been at or lower than the low end of the range.

This model attempted to deal with shortcomings in previous model which predicted that people would drive long distances to take short high speed rail trips. Some of this seems improved, although the model still predicts a very high demand for high speed rail service in markets not directly served by high speed rail. This suggests that the previous issues are not entirely resolved, which is a problem particularly for truncated routes like San Jose to Shafter. This model weakness will show little difference in demand between a station in Bakersfield proper and one 23 miles north of the city.

Phasing

The 2016 Draft Business Plan proposes to build an operating segment first from San Jose to Shafter.

There are several reasons why this may be problematic.

Lack of commercial success

There is a very limited market today for fast travel between San Jose and the Central Valley, as evidenced by the lack of demand for air travel. This is a natural result of economies that are based on very different industries. Even automobile traffic is somewhat limited - the highway between Gilroy and the Central Valley is not even 4 lanes in all places.There is a real risk of very, very low ridership demand for a San Jose to Bakersfield service. In general, other high speed rail systems have started with service on routes with proven demand. There would be many consequences of poor performance.

[3] The first four elements in the table are all the same variable - the high speed rail alternative specific constant- and can be added together.

Difficulty attracting operator without ridership guarantees
Currently, even with the rosy ridership forecasts, operating shortfalls are forecast for the first couple of years of service. The Business Plan notes that:

"The breakeven probability for the Silicon Valley to Central Valley line opening year is 38% but this increases quickly as the system ramps up. It is anticipated that the system begins to cover annual operating costs in Year 2 and recoups the first year loss by Year 3 (in the Medium case). The Authority has ***a number of contracting strategies*** that will allow us to cover any early year losses based on revenues exceeding costs in later years within the contract structure. This will ensure that there will not be a time that the Authority will have to provide a subsidy to an operator."

We are unaware of any contracting strategies that would not either require the operator to assume ridership/revenue risk by assuming they would be later reimbursed for covering initial losses or require the state to guarantee eventual operating profits, which would be a subsidy.

The RFEIs provided by the private sector last fall make it very clear that operators will not take revenue risk for a greenfield project like California's until ridership is proven. Our informal conversations with rail operators indicate they have serious doubts about the ridership potential for this route. We would strongly suggest that the Authority obtain feedback from the private sector on the viability of the contracting strategies (whatever they are) the Authority is considering.

Sprawl induction
If ridership demand proves insufficient to support an intercity rail service, there is a possibility that a way will be found to offer a commuter service to the Bay Area from additional stations along the route, including Madera and Los Banos. Currently, most of the Central Valley residents who do long distance commutes to the Bay Area live in the northern San Joaquin valley, not the residents who live near they proposed rail line. In this case, the high speed service could clearly induce population growth in very environmentally sensitive areas. The current measures that the Authority is taking like station area plans would do little to prevent people from moving to towns like Shafter where they could afford a single family residence.

Impacts on San Joaquin service
It seems very unlikely that there would be sufficient demand for San Joaquin service once high speed rail service started operating, particularly as there are no planned transfer points (other than by bus) between the two services. The San Joaquin rail service currently provides low cost transportation that seamlessly connects to all corners of the state with the Thruway bus service. While the high speed rail service would improve service to the South Bay, it would raise the cost of travel and a much more limited bus connection service is planned. The current plan does little to address this issue.

Capital Costs

The 2016 Draft Business Plan estimates capital costs at $64 billion, which is a significant savings from the previous cost estimate.

The capital costs for the projects are determined by the current cost of construction and the phasing of the project. The capital costs appear to be artificially low and there are significant risks that inflation adjustments/risks are also understated.

- Costs for San Francisco to Central Valley likely to be much higher
- Contingencies are very low - both for stage of design and because the cheapest alternative has been assumed in every case
- The analysis that shows construction contracts are significantly under estimates is highly flawed.
- The project cost should be given as a range, based on different scenarios for when construction would begin for the segments not including in the initial operating route

San Francisco to Central Valley - how did it get so cheap?
The most dramatic cost reductions are for the San Francisco to Central Valley segment, which is surprising given there have been few public meetings on this corridor since the 2014 Business Plan. The cost in 2015$ for San Francisco to Merced dropped from $20.8 billion to just under $13 billion. This is a remarkable feat - and is worth carefully evaluating to see if it is real or illusory.

Transbay Terminal
The plan saves billions by almost eliminating the CHSRA's contribution to the Transbay Terminal. This savings does not come from a much lower cost design. It appears to be a unilateral decision to not contribute to the project. Given that the CHSRA will have ⅔ of the rail capacity of the station, this decision is difficult to understand. Even if there was an agreement with San Francisco, Caltrain and the Transbay Terminal Authority, this would not represent a reduction in cost. It would be better characterized as an additional source of local funding.

The budgeting approach for the Transbay Terminal is inconsistent with new commitments to Southern California, where the price of improvements is included in the capital cost estimate, even though no funding is being offered by the CHSRA itself.

The capital cost estimate should be changed to reflect the current costs of the Transbay project, which have been rising.

Caltrain upgrade costs

Caltrain has agreed to use high-boarding platforms for its trains, in order to allow platform sharing with high speed rail. Caltrain will incur additional costs, both in train procurement and to retrofit stations.

In addition, Caltrain will limit its use of the shared tracks to allow CHSRA to access San Francisco with minimal additional infrastructure. Caltrain's ridership demand is growing rapidly and they will need to find other ways to meet the capacity requirements, given the limitations that will be imposed by track sharing. CHSRA is planning to operate several trains an hour in each direction on the Peninsula without adding passing tracks. Because of the differences in average speeds between Caltrain and CHSRA, there will be a loss of capacity on the tracks. CHSRA's ability to offer competitive travel times will depend on limiting conflicts with Caltrain.

Given the significant number of Caltrain stops and the large number of passengers and bicyclists boarding and disembarking at each station, the lack of level boarding adds 10 minutes to the San Francisco to San Jose travel times. CHSRA, in trying to fit into the Caltrain schedule, will end up being slowed by a similar amount.

In addition, until Caltrain is using level boarding at all stations, there will continue to be random 4 minute delays to board wheelchair passengers that will make it impossible for Caltrain to have the type of schedule adherence that avoids significant signal delays to all train operators, including CHSRA.

For all of these reasons, CHSRA should be providing funds to help increase Caltrain capacity by lengthening platforms and upgrading all stations for level boarding, to increase Caltrain's average speed and schedule adherence. Without these improvements, CHSRA will fail to deliver a service that is fast enough or with the promised high level of reliability.

San Jose Diridon Station

Common boarding heights will allow Caltrain and high speed rail to share platforms at Diridon station. The CHSRA went from a oversized aerial station in the 2014 Business Plan to a barebones contribution that would only fund platform height changes.

There would clearly need to be other changes for Diridon station to be a major multi-modal hub, accommodating thousands of intercity passengers each day. This vision is inconsistent with the new $50 million total cost. The City of San Jose in their comment letter suggests that the total investment will be $1 to $2 billion for the station - even considering the efficiencies from sharing common height platforms with Caltrain.

Santa Clara to Gilroy

Additional significant cost savings came from new plans developed just in the last year which would increase the tracks that would be shared with Caltrain, freight and other train operators, as well as a new alignment through already divided neighborhoods and aerial tracks adjacent to Monterey Highway.

It is extraordinary that CHSRA chose to use unvetted alignments as the basis of cost savings in the San Jose area- particularly as many of the changes would appear to contradict commitments made to limit impacts to communities of concern along the alignment.

There are no visualizations or maps. There are a couple of bare bones sentences to describe the new alignments. Not only does the lack of detail limit the ability to provide feedback on the feasibility of the alignment, but the development of plans without the participation of the impacted localities is surprising, given the previous issues when plans were made this way.

Tunnel savings

Additional savings come from limiting the size of the tunnels and eliminating ventilation structures. It is unclear whether such plans will meet fire and safety requirements. Without additional confirmation that this is feasible, this should not be the project baseline cost.

Other cost savings

The costs for the 54 mile segment through the Pacheco Pass from Gilroy to the Central Valley dropped by almost $3 billion more than ⅓ of the original cost. The explanation is that “value engineering” has been applied to a 2010 design. The design changes have not been made publicly available. This is a project segment that passes through very environmentally sensitive regions like the Grasslands Ecological Area so any changes will need to go through a series of reviews.

Contingencies are too low

The project has both allocated and unallocated contingencies. The allocated contingencies reflect the fact that variances in the costs of specific items and the unallocated contingency reflects a lack of certainty about which items will be part of the project in the first place.

The current level of unallocated contingency (about 4% of project costs) is too low.

The plans are still very preliminary

Outside of the Madera to Shafter construction, plans remain at a very preliminary stage. The “Capital Cost Basis of Estimate Report” (page 17) asserts that 2016 Draft Business Plan is a “Class 3” estimate, as defined by the Association for the Advancement of Cost Engineering. A “Class 3” estimate is used for projects whose design is at the 10 to 40% level. The same document, howeve,r shows the majority of the project is still at the conceptual (5%) design level, which requires a higher contingency.

Table 6. Design Development Stages

Project Segments	Design Development Stage
San Francisco to San Jose	Conceptual*
San Jose to Gilroy	Conceptual
Gilroy to Carlucci Road	Preliminary**
Merced to Wye Legs 1	Preliminary
Wye Legs 1	Conceptual
Carlucci Road to Madera Acres (Wye Leg 2)	Conceptual
Construction Package 1	Final
Construction Package 2-3	Final
Construction Package 4	Preliminary
First Construction Segment to Bakersfield	Conceptual
Bakersfield to Palmdale	Conceptual
Palmdale to Burbank	Conceptual
Burbank to Los Angeles Union Station	Conceptual
Los Angeles Union Station to Anaheim	Conceptual

**Conceptual design is generally in support of Alternative Analysis / Supplemental Alternative Analysis reports and is about 5% complete*

***Preliminary design is generally in support of EIR documents and is about 15% complete*

Contingencies have not decreased as project definition has increased

There was a slight increase in unallocated contingencies for the project in the 2016 cost estimate. This reflects higher than previously budgeted contingencies for the Central Valley segments, which is odd. Typically the unallocated contingency should be reduced as the project moves into the construction phase. This suggests the overall level is too low.

A higher contingency is required to counterbalance the optimism in the project budget

The plan currently assumes that the lowest cost alternative will always be chosen. The Draft 2012 Business Plan had two capital cost estimates. A “high” estimate added up the cost of the most expensive option for the project alternatives under consideration. The “low” estimate added up the costs of the cheapest options for each alternative.

In reality, it is highly unlikely that either scenario is accurate. Sometimes the cheapest option will be chosen and sometimes not.

There are two different ways that this situation can be addressed that is consistent with the Authority’s risk management policies, as well as GAO best practices. Ideally, each alternative can be probability weighted to created a blended estimated cost. This is a best practice and would be especially helpful for the CHSRA, given that the project will be implemented in phases.

Alternatively, an analysis can be done that provides an estimate of the expected additional cost and this could be included as an additional reserve or contingency.

The CHSRA did not use either of these methodologies and simply adopted the low cost as its baseline project budget without increasing the contingency.

There have been multiple examples since then that show this was unjustified. First, a decision was made to route trains through the Central Valley cities of Wasco and Shafter, to avoid oil wells outside of town. This was a more expensive alternative than the cheaper one through farmland assumed in the 2012 and 2014 Business Plans, as well as the Initial Construction Segment budget. The increased cost was a factor in truncating the initial construction south of Wasco, instead of extending to the Bakersfield city limits. The subsequent decision to build towards San Jose now means that the project could have a terminal station more than 20 miles from Bakersfield.

More recently, updates were made to the Palmdale to Burbank routes which include more tunneling. The increase in costs already exceeds the unallocated contingency for that segment in the 2016 Draft Business Plan

Lack of upfront investigative work means cost will rise

In general, the Authority has chosen to defer detailed planning work like geotechnical evaluation and utility investigation. This is a problem from a risk management standpoint. By the time contracts are being issued, it may be too late to mitigate the risk from these decisions by choosing a different alignment. At a minimum, the Authority needs to include a higher contingency to account for the costs associated with the special conditions that will invariably be encountered.

Construction bids in the Central Valley are improperly used to discount the costs of the project

Exhibit 5.1 on page 53 compares bids for the construction contracts in the Central Valley to engineers estimates.

EXHIBIT 5.1 COMPARISON OF ENGINEER'S ESTIMATE AND BID PRICES*

SECTION	ENGINEER'S ESTIMATE	BID AVERAGE	BEST VALUE BID	PERCENT DIFFERENCE (BEST VALUE VS. ESTIMATE)
Construction Package 1	$1.2 - $1.8 billion	$1.25 billion	$985 million	-18/45%
Construction Package 2-3	$1.5 – $2 billion	$1.68 billion	$1.23 billion	-18/38%
Construction Package 4	$400 – $500 million	$442 million	$348 million	-13/30%

*Does not include contingencies or provisional sums.

According to the analysis, bids were much lower than forecast. The Authority has used this information to lower the costs of all construction items. Without more detail, it is difficult to give precise numbers, but the capital cost estimate was lowered by billions of dollars.[4]

The engineer's estimates and the contractors bids are not actually for the same scope of work. Subsequent to the issuance of the engineer's estimates, parts of the work were removed from the fixed bid portion of the contract. Neither the engineer's estimates nor the bids were adjusted so that a comparison could be made. In the case of CP 1, the cost of other work that was originally to be included as part of contractor's bid will exceed $400 million (Highway 99, railroads, PG&E, AT&T, Veterans Boulevard).

In addition, the exceptionally large size of the allocated contingencies suggest that the contract bids were made with knowledge that adjustments to the price through change orders would later be made.

Our analysis suggests that both CP 1 and CP 4 were actually close to the original estimates, while CP 2-3 was under the engineer's estimate.

In any case, it is concerning to see such a misleading analysis used. The Authority should have an analysis that provides more of an apples to apples comparison.

The Capital Cost estimate has an arbitrary and optimistic assumption about when construction will happen

The current plan allocates all cap and trade revenues through 2050 and the remaining Prop 1A funds to complete a segment to San Jose. Construction of the remaining infrastructure would not begin until funding was available. Given that the next $2.9 billion of funding found will be used to stretch the initial segment, it could be many years before sufficient funds are available to begin construction through the Tehachapis. The many, many miles of tunnels will take years to complete, including the initial investigations required for successful tunneling in complex regions. The current plan assumes, however, that funding and serious construction will be underway in only a couple of years. CARRD has done a sensitivity analysis that shows how costs change as the start date varies, inflation assumptions fluctuate and construction costs are more backloaded. The current cost estimate is an artifact of this assumption about construction scheduling, which is not based on any substantial evidence.

[4] The The "Capital Cost Basis of Estimate Report" states that a 12% overhead markup was used (and only 3% profit margin)- as compared to much higher numbers in previous estimates such as http://hsr.ca.gov/docs/programs/fresno-baker-eir/final_ERIS_FresBaker_Tech_Capital_Cost_Estimate.pdf .

Construction start	Current Inflation	Inflation 1% per year higher	Backended costs
As planned		$3.5 billion	$1.7 billion
3 years delayed	$3.4 billion	$8.6 billion	$5.5 billion
6 years delayed'	$7.4 billion	$14.7 billion	$9.8 billion

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Phillip Washington, Gary Gallegos, Anne Mayer, Hasan Ikhrata, Raymond Wolfe, Arthur Leahy
Last Name :	Phillip Washington, Gary Gallegos, Anne Mayer, Hasan Ikhrata, Raymond Wolfe, Arthur Leahy
Stakeholder Comments/Issues :	Dear Sir or Madam, Please find attached a joint comment letter on the Draft 2016 Business Plan from the Los Angeles County Metropolitan Transportation Authority, Riverside County Transportation Commission, San Bernardino Associated Governments, San Diego Association of Governments, Southern California Association of Governments, and Southern California Regional Rail Authority. The signature for Los Angeles County Metro is forthcoming; a placeholder is provided to meet the comment deadline. I will follow up tomorrow. Please call me if you require clarification. Thank you. _____ Philip Law Manager, Transit/Rail SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS 818 West 7th Street, 12th Floor, Los Angeles, CA 90017 T: (213) 236-1841 | F: (213) 236-1963 E: law@scag.ca.gov<mailto:law@scag.ca.gov> Stay Connected [Title: SCAG Website] <http://www.scag.ca.gov/> [Title: Facebook SCAG] <https://www.facebook.com/SCAGmpo> [Title: Twitter SCAG] <http://www.twitter.com/SCAGnews> [Title: LinkedIn SCAG] <http://linkd.in/1DEECWs> Join us for SCAG's 2016 Regional Conference & General Assembly May 5-6 @ the La Quinta Resort & Club in the City of La Quinta. Register online: www.scag.ca.gov/ga2016<http://www.scag.ca.gov/ga2016>.
Notes :	
Attachments :	Draft CHSRA 2016 Business Plan - Joint Letter.pdf (730 kb)

April 18, 2016

California High-Speed Rail Authority
Attn: Draft 2016 Business Plan
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

RE: Draft California High-Speed Rail Authority 2016 Business Plan Comments

Dear Sir or Madam:

On behalf of the undersigned Southern California Regional Transportation Agencies (Agencies), we thank you for the opportunity to provide comments on the Draft California High-Speed Rail Authority (CHSRA) 2016 Business Plan (Plan). Our Agencies support the completion of the high-speed rail (HSR) project and have shared a strong partnership with the CHSRA over the past several years. This partnership is formalized in the Southern California Memorandum of Understanding (MOU) executed by the CHSRA, Los Angeles County Metropolitan Transportation Authority (Metro), City of Anaheim, Riverside County Transportation Commission (RCTC), San Diego Association of Governments (SANDAG), Southern California Association of Governments (SCAG) and Southern California Regional Rail Authority (Metrolink). The MOU projects include those that are on the Phase 1 corridors and on feeder rail corridors.

Recently, this partnership has progressed when the Metro Board of Directors, in October of 2015, approved the accommodation of HSR in the Southern California Regional Interconnector Project (SCRIP) at Los Angeles Union Station and the CHSRA Board, in February of 2016, approved execution of an initial contract with Metro to contribute to the project development costs for the integration of HSR at Los Angeles Union Station. The early completion of SCRIP at Los Angeles Union Station is a vital transportation project for the Southern California region, improving commuter and intercity rail service and allowing for future integration of HSR.

We have reviewed the Plan and listed below are our initial comments for your consideration:

Importance of Connecting to Southern California

1. **Initial Operating Segment** – The Plan identifies a decision that was made by the CHSRA to construct the Initial Operating Segment (IOS) connecting the Central Valley with San Jose by 2025. This is a departure from the 2012 and 2014 Plans that identified the IOS to connect the Central Valley to Burbank in 2022. While we understand the plan's shift to Northern California, we remain concerned that the initial operating service is no longer beginning in the Los Angeles area as originally planned. We request, given the plan's shift to Northern California, that efforts to facilitate investments to connect to Southern California should continue with the full support of the CHSRA such that there is not undue delay in linking Southern California to the statewide system.

2. **Importance of a Direct Southern California Connection** – As you know, currently there is no direct passenger rail connection between the Central Valley and Southern California. That segment of the rail journey between Northern and Southern California is completed by bus between Bakersfield and Los Angeles. Connecting this segment by rail is a key to the passenger rail network integration efforts currently underway by the California State Transportation Agency (CalSTA). HSR is the only practical means of making this Bakersfield to Los Angeles rail connection. Delaying this connection via rail significantly impacts the unification of passenger rail services in California.

Investments in Southern California

3. **Need for Clarification for Southern California Investments** – We request clarification regarding the total CHSRA investment in Southern California, for both the Burbank to Los Angeles to Anaheim corridors and the Southern California MOU, specifically in regard to timeframe, geographic location, and the nature of the investments (capacity improvements, grade separations, etc.). The Plan proposes to invest, together with the Authority's partners, up to $4 billion on a range of improvements in the Burbank to Anaheim corridor. This appears to reflect the $1.6 billion for Burbank to Los Angeles and $2.3 billion for Los Angeles to Anaheim (in 2015 constant dollars) described in the Capital Cost Bases of Estimate Report. However, in Exhibit 2.1 and elsewhere, the Plan references a $2.1 billion (in year of expenditure dollars) investment for Los Angeles to Anaheim. Further, it is unclear if the Plan includes part of the $1 billion MOU commitment in these amounts.

4. **MOU Commitments** – It is of paramount importance that CHSRA take immediate, concrete steps to demonstrate its continued commitment to supporting the Southern California MOU by funding construction of bookend projects with the goal of providing a series of incremental safety and operational investments in local rail corridors to prepare for integrated service and operations. With the exception of funding support towards project development at SCRIP/Union Station, progress has not yet been realized in expending Prop. 1A and other funds towards the MOU projects. We acknowledge that CHSRA identifies certain MOU projects in Exhibit 4.2 of the Plan that can be advanced quickly, including SCRIP, Doran Street grade separation, Rosecrans/Marquardt grade separation, and State College grade separation. Additionally, the Plan should identify and include, at a minimum, the following MOU projects which are ready for HSR funds to advance project development and/or support construction.

    - Brighton to Roxford Double Track in Los Angeles County
    - Orangethorpe Avenue Grade Separation in Orange County
    - Ball Road Grade Separation in Orange County
    - McKinley Street Grade Separation in Riverside County
    - Jurupa Road Grade Separation in Riverside County
    - Lilac to Rancho Double Track in San Bernardino County
    - San Onofre to Pulgas Double Track in San Diego County
    - Eastbrook to Shell Double Track in San Diego County

Further, the Plan needs to identify an investment in MOU projects by 2020, as specified in the MOU, or develop a schedule of funding commitments that is acceptable to all parties.

5. **Need for Additional Funding Commitments** – As we continue to work together on implementing the Southern California MOU, we expect the CHSRA to keep the State's commitment to Southern California by committing additional funding of at least $1.5 billion for SCRIP and Los Angeles Union Station, an additional funding of at least $1.3 billion to the MOU projects (i.e. grade separation, capacity projects, etc.) in Southern California and at least an additional $0.5 billion for new improvements in Los Angeles and Orange Counties that fall within the proposed HSR corridors. We have identified a list of improvements in Los Angeles and Orange Counties that we would like CHSRA to consider, see Attachment A. At a minimum, all new improvements that fall within the proposed HSR corridors should be funded, see below. These new projects should not delay or replace the MOU projects, but should be additional commitments. This list is meant to illustrate the level of investment that is required in the corridor and is not meant to exhaustively represent the extent of required investment:

    - Sierra Highway Grade Separation
    - Palmdale Blvd Grade Separation
    - Avenue S Grade Separation
    - Flower Street Grade Separation
    - Broadway Grade Separation
    - Lakeland Grade Separation
    - Fullerton Junction

    These investments in Southern California will create the necessary initial building blocks for HSR, create tangible mobility and safety benefits to existing rail service and will ensure continued support from Southern California for the HSR program.

Due Diligence in Business Planning

6. **Blended Service** – The concept of blended service addresses operations of HSR trains along electrified tracks that are shared by Metrolink and Amtrak trains between Burbank and Anaheim. Please note that, while we are supportive of the concept of blended service as a means to maximize the value of infrastructure investments, the requirements for implementation still involve additional vetting and there remain significant issues regarding the operation of this shared service, including railroad signaling, maintenance, and agreements. Furthermore, blended service is proposed in several corridors with parallel freight operation. Resolution of agreements with freight railroads on design standards is essential.

7. **Operational Requirements for HSR Service at Union Station (with SCRIP)** – In relation to SCRIP, CHSRA has requested up to 2 platforms and 4 tracks in Los Angeles Union Station. We request that HSR continue to work with its Southern California partners to provide ridership and service forecasts to justify this request. Coordination of service operations through Union Station will be essential to make sure that the design of the facility cost effectively meets the service needs of all operators. Furthermore, in order to consider providing CHSRA with the 2nd platform and corresponding two tracks, a new bridge over the Los Angeles River with dedicated tracks for regional rail and HSR that connects to the existing tracks for Metrolink's San Bernardino Line will be needed in addition to other associated improvements. It is our understanding that CHSRA is environmentally clearing this new bridge in Phase 1 environmental documents.

8. **Ridership and Revenue Forecasts** – By statutory requirements, the Plan shall include a forecast of the expected patronage, service levels and operation and maintenance costs for the Phase 1 corridor. The forecast shall assume high, medium, and low levels of patronage and a realistic operating planning scenario for each level of service. The Plan does not contain the forecasted expected patronage, service levels and realistic operating planning scenario (for each level of service) for the Palmdale to Burbank to Los Angeles to Anaheim Corridors. We request that updates of the Plan include this information.

Regional Equity

9. **Regional Equity in Allocation of Funds from the High Speed Rail Funds Program and Other Programs** – The Agencies are committed to continuing coordination with CHSRA and the California State Transportation Agency to develop a clear implementation plan and process for advancing all MOU projects. However, we feel strongly about our position that the MOU projects should be funded by Prop. 1A and dedicated HSR 25% Cap-and-Trade funds. Funding from sources other than these, such as competitive Cap-and-Trade Transit and Intercity Rail Capital Program or Federal grant programs such as Core Capacity and New Starts, can be used to leverage the MOU funding to accelerate project delivery and increase the number of projects that can be completed. However, these are funds that Southern California would otherwise receive with or without the MOU and could come at the expense of other needed investments.

10. **Clarification of Regional Beneficiaries of Bookend Investments** – Under the Burbank to Anaheim Corridor Improvements on page 62, the Plan indicates that "$1.1 billion in Prop. 1A bond proceeds has been appropriated for and committed to bookend improvements with $600 million for Caltrain electrification and $500 million for improvements in Southern California." The $600 million contribution for Caltrain electrification is located in Northern California not Southern California and should be discussed in another section of the Plan. The Plan should define what the actual proposed improvements are under Prop. 1A for Southern California.

11. **<u>Importance of Maintaining Commitments to Southern California</u>** – The Plan indicates that the Authority's goal is to extend HSR from Bakersfield to San Francisco and it will require approximately $2.9 billion of additional funding. If the Authority's funding is limited, and strategies to secure federal funding are unsuccessful, the Agencies oppose any suggestion or possibility that the Plan investment in Southern California be transferred to Northern California to complete the extension to San Francisco.

Phase 2 of the High-Speed Rail System

12. **<u>Clarification on Phase 2</u>** – In addition to Phase 1 improvements, Prop. 1A calls for completion of the entire 800-mile system, including Phase 2 improvements from Los Angeles to San Diego via the Inland Empire. The Plan acknowledges Phase 2 corridors through maps and planning-level statements, however no time frame is provided for their completion. The following corrections are requested:

    - In Section 7, ridership and other detailed analyses are provided through 2060 for Phase 1 – potentially implying that Phase 2 will be in service after this date. In order to avoid this implication, we request that additional information such as a schedule or range be provided for Phase 2 corridors (e.g., Exhibit 1.4);

    - Clarify on page 86 that Phase 2 planning will not be delayed until the "2025 and beyond" period and will, in fact, be advanced before that date; and

    - Since two statutory requirements, (1) "the proposed chronology for the construction of the statewide high-speed rail system" and (2) "the estimated capital costs for each segment or combination of segments" are listed in the Appendix (after p. 99), Phase 2 schedule and budgets should be discussed in the Business Plan.

13. **<u>Plan for Funds for Phase 2 Development</u>** – Furthermore, we request that the CHSRA develop a plan within the next three months along with the Agencies to allocate the $56 million allocated in SB 1029 for Phase 2.

We support the allocation of funding to elements of the blended corridor concept in Southern California to support the ultimate completion of the HSR project and to ensure timely implementation of Prop. 1A including allocation of connectivity funds. We also support the CHSRA commitments to station area planning to enhance multi-modal connectivity and promote economic development. We look forward to the opportunity to continue working with the CHSRA team in the development of HSR and an integrated rail network.

Sincerely,

PHILLIP A. WASHINGTON
Chief Executive Officer
Los Angeles County
Metropolitan Transportation
Authority (Metro)

ANNE MAYER
Executive Director
Riverside County
Transportation Commission
(RCTC)

RAYMOND WOLFE
Executive Director
San Bernardino Associated
Governments (SANBAG)

GARY L. GALLEGOS
Executive Director
San Diego Association of
Governments (SANDAG)

HASAN IKHRATA
Executive Director
Southern California
Association of Governments
(SCAG)

ARTHUR T. LEAHY
Chief Executive Officer
Southern California Regional Rail
Authority (SCRRA, Metrolink)

Enclosure

CC: Jeff Morales CHSRA

ATTACHMENT A

Los Angeles and Orange Counties
Projects to Support High Speed Rail
Draft

Projects						
Description	**Rough Order of Magnitude Cost**	**Type of Improvement**	**Status**	**In Regional MOU**	**On HSR Corridor**	**Details**
Palmdale to Burbank						
High Desert Connection to HSR	$500,000,000	Capacity	Environmental	√		See Note
CP Brighton to CP Roxford Double Track	$164,000,000	Capacity	PE/Env	√		Double track single track territory.
Via Princessa to Vincent Grade Double Track	$5,000,000	Capacity	Planning	√		Double track single track territory.
Santa Clarita to Via Princessa Double Track	$12,000,000	Capacity	Planning	√		Double track single track territory.
Sierra highway	$80,000,000	Safety	To be developed		√	Grade Separation
Palmdale Blvd.	$80,000,000	Safety	To be developed		√	Grade Separation
Avenue S.	$80,000,000	Safety	To be developed		√	Grade Separation
Palmdale Siding Installation	$7,000,000	Capacity	HST PE/Env	√	√	Capacity and operations impact.
Santa Clarita to Newhall Double Track *(includes 4 grade X-ings & Santa Clarita platform)*	$40,200,000	Capacity	Planning	√		Double track single track territory.
Roxford Street - Grade Separation	$80,000,000	Safety	To be developed	√		Grade Separation
Sheldon Street - Grade Separation	$80,000,000	Safety	To be developed	√		Grade Separation
Van Nuys Boulevard - Grade Separation	$80,000,000	Safety	To be developed	√		Grade Separation
Bledsoe Street - Closure	$5,000,000	Safety	To be developed	√		Road crossing closure
Polk Street - Grade Separation	$80,000,000	Safety	To be developed	√		Grade Separation
Paxton Street - Grade Separation	$80,000,000	Safety	To be developed	√		Grade Separation
Branford Street - Grade Separation	$80,000,000	Safety	To be developed	√		Grade Separation
Arvilla Avenue - Closure	$5,000,000	Safety	To be developed	√		Road crossing closure
Pierce Street - Closure	$5,000,000	Safety	To be developed	√		Road crossing closure
Sunland Boulevard - Grade Separation	$80,000,000	Safety	To be developed	√	√	Grade Separation - In HSR Corridor depending on the option.
Hubbard Avenue - Grade Separation	$80,000,000	Safety	To be developed	√		Grade Separation
Maclay Avenue - Grade Separation	$80,000,000	Safety	To be developed	√		Grade Separation
Jessie Street - Grade Separation	$80,000,000	Safety	To be developed	√		Grade Separation
Osborne Street - Grade Separation	$80,000,000	Safety	To be developed	√		Grade Separation
Penrose Street - Closure	$5,000,000	Safety	To be developed	√		Road crossing closure
Vincent Siding Extension *(to 11,000 ft.)*	$11,200,000	Capacity	To be developed	√		Extension of existing siding.
Brand Boulevard - Grade Separation	$80,000,000	Safety	To be developed	√		Grade Separation
Subtotal - Palmdale to Burbank	**$1,959,400,000**					
Burbank to Los Angeles						
Southern California Regional Interconnector Project (SCRIP)	$2,400,000,000	Capacity	Environmental	√	√	Needed for capacity impacts for HSR and rail growth in southern California
Doran Street - Grade Separation	$89,500,000	Safety	PE/Env	√	√	Grade Separation
Glendale Slide Relocation	$6,000,000	Capacity	HST PE/Env	√	√	Relocate existing UPRR storage. Independent utility if the existing track is relocated.
Grandview Avenue - Grade Separation	$80,000,000	Safety	To be developed	√	√	Grade Separation
Sonora Avenue - Grade Separation	$80,000,000	Safety	To be developed	√	√	Grade Separation
Flower Street - Grade Separation	$80,000,000	Safety	To be developed		√	Grade Separation
Main Street - Grade Separation	$80,000,000	Safety	To be developed	√	√	Grade Separation
Glendale Station Redesign *(coincides with Glendale Slide Relocation)*	$20,000,000	Capacity	HST PE/Env	√	√	Redesign for HSR
Chevy Chase - Grade Separation	$80,000,000	Safety	To be developed	√	√	Grade Separation
Subtotal - Burbank to Los Angeles	**$2,915,500,000**					
Loa Angeles South						
CP Amar to CP Irwin Double Track	$110,000,000	Capacity	Planning	√		
Bridge over L.A. River	$500,000,000	Capacity	Planning		√	
Rosecrans Ave / Marquardt Ave Grade Separation	$137,000,000	Safety	Engineering	√	√	**CPUC Section 190 Rank #1** Grade Separation
Norwalk Blvd / Los Nietos Rd - Grade Separation	$80,000,000	Safety	Designed	√	√	Grade Separation

ATTACHMENT A

Los Angeles and Orange Counties
Projects to Support High Speed Rail
Draft

Projects						
Description	**Rough Order of Magnitude Cost**	**Type of Improvement**	**Status**	**In Regional MOU**	**On HSR Corridor**	**Details**
State College - Grade Separation	$92,000,000	Safety	Engineering	√	√	Grade Separation
Ball Raod - Grade Separation	$95,435,163	Safety	Planning	√	√	Grade Separation
Orangethorpe Avenue - Grade Separation	$105,599,493	Safety	Planning	√	√	Grade Separation
Fullerton Junction and Station Improvements Phase 1	TBD	Capacity	Planning		√	
Broadway - Grade Separation	$80,000,000	Safety	To be developed	√	√	Grade Separation
Lakeland - Grade Separation	$80,000,000	Safety	To be developed		√	Grade Separation
Alondra Boulevard - Grade Separation	$80,000,000	Safety	To be developed	√	√	Grade Separation
Carmenita Road - Grade Separation	$80,000,000	Safety	To be developed	√	√	Grade Separation
Pioneer Boulevard - Grade Separation	$80,000,000	Safety	To be developed	√	√	Grade Separation
Subtotal - Los Angeles South	**$1,520,034,656**					
Other Locations - Feeder System						
X-ing Improvements	$66,000,000	Safety	Planning	√		Grade Crossing Safety Improvements/Future quiet zones
Raymer to Bernson Double Track	$77,000,000	Capacity	Engineering	√		Feeder project for HSR
Lone Hill to CP White Double Track	$70,000,000	Capacity	PE/Env	√		Feeder project for HSR
Subtotal - Other Segments	**$213,000,000**					
Subtotal	**$6,607,934,656**					
Contingency (15%)	**$991,190,198**					
Total	**$7,599,124,854**					
Total Capacity (includes 15% contingency)	**$4,510,760,000**					
Total Safety (includes 15% contingency)	**$3,088,364,854**					

Notes:

1. Cost estimates are preliminary and subject to change with study and engineering.
2. Right-of-way costs are not fully factored.
3. This list is not inclusive of all projects in L.A. County necessary to support high speed rail.
4. The High Desert Corridor Project is still in development. The cost noted is for a portion of the overall costs to be determined.

2016 Business Plan RECORD DETAIL

Submission Date : 4/18/2016

Submission Method : Project Email

First Name : Mike

Last Name : Behen

Stakeholder Comments/Issues : Thank you for the opportunity to provide comments on the above-referenced plan.

The City of Palmdale is disappointed that construction of the Palmdale to Burbank segment and Palmdale high speed rail station has been pushed back in the construction schedule. Nonetheless, the City of Palmdale continues to be a strong supporter of the California High Speed Rail project and firmly believe that the addition of high speed rail; especially, within our region, is an essential component to addressing our complex transportation challenges.

Individual comments/questions:

1. When does the Authority anticipate construction of high speed rail in the Antelope Valley/Palmdale?

2. When does the Authority expect construction to begin on the Palmdale high speed rail station?

3. Please provide details regarding the methodology used to generate the number of parking spaces and station size for the future high speed rail station in Palmdale?

4. Ridership from the XpressWest high speed rail system and the future Palmdale Regional Airport should be included when considering the overall design of the future high speed rail station in Palmdale. How do we ensure that the future station is not under-designed? How will the Authority's environmental document address this question?

5. The City of Palmdale is requesting an opportunity to review and provide input on the traffic assumptions that are being developed as part of the environmental review for the Palmdale to Burbank section of the system. In particular, we would like to clarify the baseline modeling assumptions before traffic modeling is performed.

6. What tactics and strategies is the Authority using to attract private investment to Southern California; more specifically, to the Palmdale to Burbank section?

Additional comments may be forthcoming as information is received.

Sincerely,

Mike Behen
Transportation/GIS Manager
City of Palmdale - Public Works Department (Traffic Division/GISSection)
38250 Sierra Highway
Palmdale, CA 93550
661-267-5337 Fax: 661-267-5233
mbehen@cityofpalmdale.org<mailto:mbehen@cityofpalmdale.org> /
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[cid:407263422@07022013-0dcf]

Notes :

2016 Business Plan RECORD DETAIL

Submission Date : 4/18/2016

Submission Method : Project Email

First Name : Bonnie

Last Name : Corwin

Stakeholder Comments/Issues : Dear Chairman Dan Richard and Board Members:

A couple of months ago I read an article wherein a quote indicated that nothing seemed to make the Northeast San Fernando people happy when it came toworking with us regarding the routes that were in study from Palmdale toBurbank. This was and is an erroneousstatement because our area has asked over, over and over again that at the veryleast that all above ground routes be removed from further study and that an alternativeroute besides the one from Palmdale to Burbank be introduced into the businessplan(s) and the studies. The 2016 Draft Business Plan yet fails us again.

After reading the current business plan, I saw that noaction is taken with regard to these very requests, made on many occasions. I formally oppose the 2016 Draft BusinessPlan. The biggest reason is the fundingis just not there and it seems that you are trying to pull a rabbit out of a hat. The State and ourarea were under the impression that the CHSRA would be transparent in itsactions. This is not the case. TheCHSRA is off “track” when it comes to the original cost of $33 billion. Now there is an estimate of $64 billion. This is absurd because you do not even knowwhat route you are taking. How could youpossibly know how much? You do not know how long it will take tolitigate eminent domain proceedings. Youdo not know if/and how much it will cost for mitigation regarding theenvironmental damage to the proposed routes, especially E2. Financially, there is little if any substance to yourproposed Draft Business Plan for 2016.

So far, no one can say that the 2 minutes and 40 secondsfrom Los Angeles to San Francisco is even possible. According to many meetings that I attendedgiven by the board’s engineers, when you were actually presenting community outreach so long ago, not one route at the time would indicate 2minutes and 40 minutes.

The CHSRA did not continue with its community outreachactivities since the spring of last year. Critical thinking is the judge here. Suddenly, the routes changed from Palmdale to Burbank to San Jose to north of Fresno. Why? Because you lack the funding of the proposed largest infrastructure transportationproject in the United States to date. What has now occurred is that many residents and businesses are in limboawaiting their fate to a route for the California High Speed Train to traverse, while you desperately attempt to have at least something built from San Jose to north of Fresno, believing that private investors will foot the bill. This is atrocious.

I am sure that many are in agreement with these facts and myviews. I could most likely write a 12 page letter here, but there is no need. I respectfully request that youshred the 2016 Business Plan and go back to the drawing board, present valid peerreview studies, eliminate the above-ground routes and create an alternativeroute besides the one from Palmdale to Burbank. As a matter of fact, it makes more sense in so many ways to have a routethat goes directly from Palmdale to Los Angeles Union Station. The voters believed this is what they werevoting for. You know this and we knowthis. Actually critical thinking dictates thatthis project will probably never be completed and so many wasted tax dollarswould have been unnecessarily spent. How can you possibly have a valid business plan when you really do not have valid financial facts or routes?

Sincerely,
Bonnie Corwin
Resident

Tujunga, CA

Notes :

2016 Business Plan RECORD DETAIL

Submission Date :	4/15/2016
Submission Method :	Letter
First Name :	Paul
Last Name :	Jones
Stakeholder Comments/Issues :	
Notes :	
Attachments :	Biz_Plan_041916_Atherton.pdf (675 kb)

Town of Atherton

91 Ashfield Road
Atherton, California 94027

Phone 650-752-0500
Fax 650-688-6528

April 15, 2016

Attention: Draft 2016 Business Plan
California High Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, California 95814

Subject: Comments Regarding the Draft 2016 Business Plan

Dear Chair Richard and Board Members:

This letter is being sent on behalf of the Town of Atherton (Town) and the City Council appointed Rail Committee. The purpose and Charter of the Town of Atherton Rail Committee is to be advocates and spokespersons to articulate and advocate the Town's Rail Related Policy positions as they pertain to all matters related to the California High Speed Rail Project.

The Town is greatly disappointed by your Plan. The Plan leans heavily on your 2014 Business Plan without giving adequate supporting evidence for changes that have been made. While the Plan presents an appealing vision of life after the completion of the High Speed Rail System, the improvements to life in California that the Plan extols require very large expenditures by local governments and private interests. None of these are under the control of the Authority.

The Town has studied your Plan carefully and invites your attention to serious issues with projected ridership, estimated capital costs, funding for the initial operating segment (IOS), travel times and headways, environmental concerns, energy, operating costs, security, private capital, and jobs. Each of these issues is presented briefly below.

Projected Ridership

On page 68, the Plan states, "The above changes and modal enhancements result in Phase 1 ridership increases of approximately 25% depending on the forecast year." It is not difficult to change parameter values in a computer model to produce increases in ridership, but it would be reassuring to know the nature and extent of these changes. On Page ES-1, the Plan states that new stated preference and revealed preference surveys have been conducted. It would be of great interest to know the details of these surveys and their results. Past surveys taken by the Authority's contractor have been found to be much less than objective. The new surveys need to be examined in detail before there can be any confidence in their results.

Because a major portion of the passenger volume is expected to come from the diversion of automobile travelers, it is important to examine this segment of demand in detail. The Plan has not updated automobile travel costs to reflect the 30 percent reduction in gasoline prices during the past year. With the growing worldwide production of crude oil, there is no assurance that

the price of gasoline will increase in the foreseeable future. Particularly with the increased use of electric and hybrid automobiles.

It is also most interesting to look into the cost tradeoffs made by automobile users. Take, for example, the trip between Fresno and San Jose over the IOS. Plan page ES 3-3 lists fares for different trips. The one way fare for the 150 mile trip between Fresno and San Jose is listed as $63 per passenger. From Page ES4-4 of the Plan, the automobile cost would be $0.26 per mile or $39 for the 150 mile trip. Only drivers who place a high value on reduced travel time would be willing to pay 60% more to ride the high speed train. Medium and low income drivers are unlikely to pay such a high premium for a shorter trip time. Furthermore, if the driver had one or two passengers, the cost per passenger trip would be $19.50 or $13.00, making rail travel even less inviting.

On Page 46, the Plan states that the IOS can reduce trip time from Fresno to the Bay Area from about 3 hours to about an hour on high speed rail, suggesting a potential boom in low cost housing in the Fresno area fueled by the Bay Area job market, However, at $63 per one way trip, the high speed rail commuter would pay $126 per day, $2546 per month, or $31,752 per year, hardly affordable for a worker who cannot afford to live in the Bay Area.

The Plan includes an extensive set of shuttle bus services to connect the IOS and Phase 1 with outlying regions. Unfortunately, these shuttles are victims of peak hour highway traffic. For example, a traveler from Sacramento to Los Angeles Union Station (LAU) would take a shuttle bus from Sacramento to Merced, requiring 200 minutes (Page ES A-1) plus 147 minutes on high speed rail from Merced to LAU for a total of 347 minutes (5 hours 47 minutes). This trip time is only marginally shorter than driving time.

Would it not be wise for the Authority to carefully examine the results of its demand analysis to ensure that these issues are properly reflected?

Estimated Capital Costs

On Page 53, the Plan states that the overall project cost estimate has been reduced from $67.6 billion (2014 Business Plan) to $62.1 billion despite adding $2.1 billion to the LAU to Anaheim segment. The reason given for this reduction is the fact that bids for the first four construction packages were below the engineers' estimates. This is a poor justification when none of the four construction packages have been completed, or even nearly so. In addition, the Plan states that the first Construction Package may exceed its bid price. The history of large construction projects, like Boston's Big Dig, the Eastern Span of the Bay Bridge, and the English Channel Tunnel, is a series of huge cost escalations as the projects have moved forward. To reduce the estimated cost of the high speed rail project in light of recent experience is sheer folly.

Questions should also be raised about consistency in the cost estimates. The terrain to be covered is not uniform by any means. There are challenging mountain crossings through the Coast range, the Tehachapi Mountains, and the San Gabriel Mountains. The subsidence in the Central Valley is also a major concern. However, some cost elements should be reasonably uniform over the entire route. Among these are signaling and communications and electrification. Pages 56 and 57 list construction cost estimates for the IOS and Phase 1. Dividing signaling, communication, and electrification estimated costs by the length of each project gives a per mile cost for signaling, communication, and electrification of $6.1 million for

the IOS and $10.0 for Phase 1. This disparity is too great to be brushed aside and should be fully explained.

Funding for the IOS

The funding plan seems to be primarily a search for funding sources, not a distribution and use of available funds. Phrases, such as, "begin generating revenues", "as funds become available", "be in a position to attract private investment", "unlock additional capital", and "we have identified a number of potential funding sources" do not give evidence that the funding for the IOS is available or pledged as required by Proposition 1A/AB3034.

The cost summary on Page 57 of the Plan lists a total cost of the IOS as $18,749 billion in 2015 or $20,679 billion in year of expenditure dollars. The available funds, as summarized on Page 61 of the Plan include $10,578 billion in Cap and Trade funds to be received over the next 33 years. This is hardly secure funding from a program that expires in 2029. The very best face that can be placed on the IOS funding is that it is $5 billion short, with no additional funds in prospect. As a result, Proposition 1A/AB3034 funds cannot be used for the IOS.

It is also appropriate to point out the folly of committing all of the available and potential Cap and Trade funds to the IOS when Cap and Trade is the only potential source of new funds from the State, and the United States Congress has gone on record denying all additional financial support to California's High Speed Rail Project.

Travel Times and Headways

On Page 17, the Plan states that the high speed rail system will meet Proposition 1A requirements "including be designed and built to a standard that achieves travel speed/ travel time criteria and generates sufficient revenue to cover operating costs". This pledge is repeated on Page 29. And yet, there is no information in the Plan nor was there any in the 2014 Business Plan to show that this claim can be met. In fact, on Page 15, the Plan states that high speed rail will provide trip times between LAU and San Francisco's TransBay Transportation Center (TTC) of less than 3 hours, hardly up to the Proposition 1A requirement of 2 hours 40 minutes. The service schedule illustrations in the Service Planning Methodology of the Plan have Phase 1 LAU to TTC travel times of 3 hours 14 minutes, well above the 2 hours 40 minutes required by Proposition 1A. These times include stops at Millbrae, San Jose, and Burbank. Deducting nine minutes to cover braking, loading and unloading, and accelerating at these stations, the travel time is still 3 hours 5 minutes. Even worse, the high speed rail travel times for the IOS list the travel time from San Jose to north of Bakersfield as 128 minutes, an average speed of 119 mph. This long travel time eliminates all possibility of ever satisfying Proposition 1A. Adding to the 128 minutes 30 minutes for travel from San Francisco to San Jose at a maximum speed of 110 mph, the current Plan leaves only 2 minutes to travel from north of Bakersfield to LAU over the Tehachapi and San Gabriel mountains. It is quite clear that the Authority is far from achieving the travel times mandated by Proposition 1A.

Proposition 1A also specifies that the high speed rail system be able to support five minute headways between successive trains traveling in the same direction. There is no evidence in the Plan to suggest that this requirement has even been addressed. When modified, LAU may be able to meet the required headway. San Francisco's TTC is well under construction and decisions have already been made that will preclude meeting the five minute headway requirement. Several years ago, the City reduced the number of rail platforms from twelve to

six. In addition, rail access to TTC will be via a1.3 mile tunnel from TTC to Caltrain's Fourth and King Street Station that must include two sharp turns because of station alignment. This tunnel has yet to be designed. Also, the Blended System allows Caltrain commuter trains to use the TTC via the same tunnel. The management of train movements through this tunnel is bound to be a nightmare.

Studies conducted by Caltrain state that the maximum capacity of Caltrain's two track line is ten trains per hour in each direction, four high speed trains and six Caltrain commuter trains, even with the addition of passing tracks. Attempts to increase the number of trains per hour results in congestion and delay.

The recent Superior Court finding (Tos, et al vs the Authority, Case 34-2011-00113919-CU-WM-GDS) on March 4, 2016 made it quite clear that the Authority cannot spend Proposition 1A bond funds for construction until it can provide sound evidence that the Proposition 1A travel times requirements can be met. The Plan should clearly state how the Authority intends to provide this evidence.

Environmental Concerns

On Page 26, the Plan states that environmental studies have been completed for the Merced to Fresno and the Fresno to Bakersfield sections. It further states that environmental studies for all other sections between San Francisco and Anaheim will be completed by the end of 2017. This is a very large order when one considers that it has taken almost eight years to complete the first two sections. In addition, final alignments have not been established for the Bakersfield to Palmdale and Palmdale to Burbank sections, both posing very difficult mountain crossings with steep grades and many earthquake faults. There has been, and will continue to be, strong opposition in all sections, both urban and rural, that will delay the environmental work. The Authority should adjust these target dates to reflect the full range of problems that need to be overcome.

There is a particular problem on the San Francisco Peninsula. The Blended System requires high speed trains to use the Caltrain tracks between San Francisco and San Jose. Caltrain has been working with the Authority almost from its founding by offering high speed rail the use of its right of way in exchange for financial aid with its electrification project. Caltrain is moving ahead with its electrification project on the basis of its existing track alignment. Caltrain certified an environmental report for its electrification that did not include any high speed rail service. Now, the Plan alludes to a number of changes to the Caltrain alignment to improve the quality of high speed rail service. The least impactful is the installation of quad gates at all of Caltrain's grade crossings to allow high speed and Caltrain trains to operate at speeds up to 110 mph instead of today's limit of 79 mph. Will the Authority pay for the installation of these quad gates? Grade separations are also mentioned in the Plan as are curve reductions and bypass tracks. All of these changes, if actually undertaken, will require substantial changes to Caltrain's electrification infrastructure necessitating a completely new study of environmental concerns. There is no mention in the Plan as to how much the proposed changes to the Caltrain alignment will cost or who will pay for them.

The Peninsula cities are strongly supporting costly changes to the Caltrain alignment. Palo Alto would like to put the tracks in a trench south of California Avenue. Major station modifications are needed in Millbrae to facilitate transfers to and from the San Francisco Airport. The

Peninsula cities have no funds to finance these modifications. Who will cover the cost? We sincerely hope that the Authority's environmental study, which is now underway, will address all of these concerns and devise a solution that all can accept. Much of the opposition to high speed rail that surfaced five years ago can be expected to return. How does the Authority plan to deal with it? Dealing with all of these problems before the end of 2017 seems highly doubtful.

Energy

On Pages 15 and 28, the Plan claims that the high speed rail system will operate on 100% renewable energy. Renewable energy is not dependable. It is generated only when the sun shines or the wind blows. Energy can be stored only in limited amounts and at very high cost in banks of capacitors, or by storing water at high elevations above generating stations. On Page 28, the Plan states that the Authority will contract for 400 to 600 megawatts of energy from the renewable energy industry. It should be clear to the Authority that there is no unified renewable energy industry that both generates and distributes energy. Large renewable installations contract with electric utilities to distribute their energy. The Authority requires dependable energy sources that can supply on demand the energy needed to support its high speed rail operations. All surges or other irregularities in electric demand are accommodated by the utilities, not the renewable energy supplier. At full power, a high speed train will require 21,000 KW of energy at the location at which it operates. The Authority is in negotiations with major electric utilities to provide the needed energy. The utilities cannot guarantee to provide renewable energy. The utilities may charge a premium to say that they are sending only renewable energy but the actual energy supplied will be the mix that they are producing at that moment. For example, a 2 cent per KWH increase to specify all renewable energy would cost the Authority $50 million to $70 million per year. It seems most unlikely that the Authority will pay more than the minimum possible price for energy at each moment in each location. Pressure on the Authority to minimize operating expenses will always be very strong.

Operating Costs

Proposition 1A/AB3034, Article 2, High Speed Train Financing Program, 2704.04 (5) (d) states, "Proceeds of bonds pursuant to this Chapter shall not be used for any operating or maintenance costs of trains or facilities". Article 2704.08 © (J) states, "The planned service by the Authority in the corridor, or usable segment thereof, will not require a local, state, or federal operating subsidy".

Exhibit 7.27 on Page 81 of the Plan shows that for the year 2025, Medium Scenario, the San Jose-North Bakersfield line would have a net cash flow from operations of minus $32 million, an operating deficit. An operating subsidy would be required to make up this deficit. Exhibit 7.28, also on Page 81, shows that for years 2025 and 2026, Low Scenario, operating deficits would be $74 million and $33 million respectively. This clearly violates Proposition 1A/AB3034, preventing the use of bond funds. The Plan should explain how the Authority plans to deal with these violations of Proposition 1A.AB3034, particularly Article 2704.08.

Security

Rail services in the United States do not currently have security controls that can prevent terrorists from attacking trains and their passengers. The recent terrorist attack on a European high speed train has focused attention on this problem. The Plan does not address it. The requirement to install airport type security screens at all high speed rail stations would increase

passenger travel times and system expenses. Now is the time to plan for a security system before construction is well underway. We sincerely hope that the Authority will have the foresight to deal with this important issue.

Private Capital

The Plan is filled with references to private capital assistance in financing the high speed rail system. In fact, no private enterprise has expressed interest in sharing the financial risks inherent in the high speed rail project. Letters to some 30 companies in 2015 produced no interest in investing in the project. An SNCF proposal in 2010 was rejected by the Board because SNCF wanted to control the project. It is very doubtful that any private enterprise would be willing to participate under more restrictive terms.

Private capital cannot be expected until the Authority can clearly demonstrate that it can earn a sufficient return to be of interest. That may never happen. There is no high speed rail system, worldwide, that earns a profit. Those who claim to do so have unburdened important expenses onto the public purse. Private firms can and do successfully operate high speed trains, but only when public agencies accept sufficient infrastructure expenses to make profitable operation possible. If the Authority must cover some of the infrastructure maintenance expenses, the high speed rail system will not be operating at a profit, as measured by Proposition 1A.

Jobs

The Authority has won and held the support of organized labor by promising tens of thousands of construction jobs and thousands of permanent jobs. The construction jobs have yet to materialize in numbers even approaching the promises. The Plan is completely silent on the subject of construction jobs. The Plan does promise 3,500 permanent jobs for Phase 1 operation (Page 32) and distributes them along the length of the Phase 1 route on Page 76.

Of necessity, job promises conflict with efforts to minimize construction and operation costs. One must expect that the Authority will honor its pledge to labor and pay full union scale and benefits for all jobs. Pay rates will, of course, vary from job to job, but considering the full range of skills required to run a high speed rail system, it is not unreasonable to expect that the average employee will receive $100,000 per year in pay and benefits.

Using the Phase 1 regional distribution of jobs from Page 76, it appears likely that the IOS will use 1,600 permanent employees at an annual cost of $160 million per year. Using the medium annual operating costs of $210 million from Page 74, labor would comprise 76 percent of all operating costs. Expanding to Phase 1, annual labor costs for 3,500 permanent employees would be $350 million per year or 48 percent of the medium forecast of operating expenses. This discrepancy clearly needs to be resolved. In either case, wages and benefits would take a very large slice out of revenue. When the cost of energy, roadway and equipment maintenance are taken into account there is little left to provide for long term maintenance replacement and repair. Perhaps the Authority should rethink its job needs and deal honestly with the unions.

We urge that the Authority seriously consider the above comments and replace the fantasy of the 2016 Business Plan with some hard facts.

Cordially,

Paul S. Jones, PE, Ph.D.
Chair, Town of Atherton Rail Committee

cc: Mayor Elizabeth Lewis
Vice Mayor Michael Lempres
Council Member Rick DeGolia
Council Member Bill Widmer
Council Member Cary Wiest
George Rodericks, City Manager
Town of Atherton Rail Committee

Town of [redacted]
91 Ashfield Road
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Draft 2016 Business PlanCalifornia
High Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, CA 95814

2016 Business Plan RECORD DETAIL

Submission Date :	2/19/2016
Submission Method :	Project Email
First Name :	Penny
Last Name :	Ellson
Stakeholder Comments/Issues :	From: Penny Ellson [mailto:pellson@pacbell.net] Sent: Friday, February 19, 2016 12:07 PM To: HSR news@HSR Subject: RE: High-Speed Rail Authority Releases Draft 2016 Business Plan, Solicits Public Comments It's like watching Kabuchi theatre. Your incompetence knows no bounds. Please stop this misguided project.
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	2/19/2016
Submission Method :	Project Email
First Name :	Lee
Last Name :	Ayers
Stakeholder Comments/Issues :	From: Lee Ayres [mailto:lee@treefresno.org] Sent: Friday, February 19, 2016 10:47 AM To: HSR news@HSR; Morales, Jeff@HSR; Richards, Tom@HSR Cc: Richard Moy (richard.moy@comcast.net<mailto:richard.moy@comcast.net>); ROBERT SNOW; John Valentino (jmvalentino@sbcglobal.net<mailto:jmvalentino@sbcglobal.net>); Melvin, John@CALFIRE; Kelaine Ravdin (kelaine@urban-ecos.com<mailto:kelaine@urban-ecos.com>); ashley.swearengin@fresno.gov<mailto:ashley.swearengin@fresno.gov>; Vince Correll (vincecorrell@gmail.com<mailto:vincecorrell@gmail.com>) Subject: RE: High-Speed Rail Authority Releases Draft 2016 Business Plan, Solicits Public Comments Jeff – The revised construction schedule makes a lot of sense. This aligns with Mayor Swearengin's vision to provide new opportunities for our children. Hope you can announce a private investor soon. As discussed when met at the Fresno Fulton Mall ceremonies, we stand ready to help you to plant trees to mitigate construction GHG impacts. Wording observations: the term San Joaquin Valley better represents this part of the State; and the term the Santa Clara Valley better represents the area to be served in the SF Bay Area. Glad to see the recognition for Rod Diridon with the name of the HSR station in San Jose; he has been an effective transportation leader since the 70's. Lee Lee Ayres Tree Fresno 3150 E. Barstow Avenue Fresno, California 93740 559-221-5556 Office 559-285-3906 mobile lee@treefresno.org<mailto:lee@treefresno.org>
Notes :	

2016 Business Plan RECORD DETAIL

Submission Date :	4/18/2016
Submission Method :	Letter
First Name :	Amarpreet Dhaliwal, Bill O'Brien
Last Name :	Amarpreet Dhaliwal, Bill O'Brien
Stakeholder Comments/Issues :	Thank you

Michael Sigala, MCP
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Notes :	
Attachments :	SJV RPC HSR Letter 041816.pdf (263 kb)

SAN JOAQUIN VALLEY REGIONAL PLANNING AGENCIES Policy Council

Mr. Dan Richard
Chairperson, California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento CA 95814

April 18, 2016

Re: California High Speed Rail Authority (CHSRA) Draft 2016 Business Plan

Dear Mr. Richard:

The San Joaquin Valley Regional Policy Council, representing over four million California residents and the metropolitan planning agencies for the eight county region, is submitting this letter in opposition to the California High Speed Rail Authority (CHSRA) Draft 2016 Business Plan. We stand united and opposed to the lack of outreach and coordination efforts between the CHSRA and its public sector partners, the new proposed routes, and the lack of support for the blended service concept. Many of our concerns are similar to those of the Central Valley Rail Working Group, who has been involved in the coordinated planning for passenger rail service between Sacramento and Merced since 2006.

The major changes in the CHSRA Draft 2016 Business Plan came without warning or any discussion with local and regional partners and elected officials who have stood by this project for many years. Support from the San Joaquin Valley, and by its legislative members, helped pass Proposition 1A and provided key votes for CHSRA in 2012 and 2014. The inability of the CHSRA to communicate with its public partners, including the eight counties of the San Joaquin Valley, has created an environment of complete lack of trust and accountability and has severely hampered any possibility to plan and coordinate for this significant public infrastructure project. The lack of a fundamental competency to communicate with its partners is an ongoing and historic issue for the CHSRA that needs to be remedied as soon as possible. As a reminder, the inability of the CHSRA to communicate led to the costly and time-consuming lawsuit by Kings County.

The draft business plan greatly delays closing the gap between Northern and Southern California. The 2012 Revised Business Plan stated the closing of this gap was “the state’s highest priority for intercity rail”. For many years the promise of the early HSR connection at Merced and improvements to conventional intercity rail, commonly called the “blended service concept” have been essential for support from the Northern San Joaquin Valley and Sacramento region. The connectivity of HSR to Merced is vital for successful interregional passenger travel in the north Valley and sustainable growth of educational centers such as the University of California Merced campus.

Equally important to connecting HSR to Merced is the southern proposed connection in Kern County. The proposed route terminus in the Draft Business Plan is 20 miles north of the City of Bakersfield in an almond orchard. The route needs to extend to the City of Bakersfield and serve this critical population and employment center, while reducing unnecessary vehicle travel to an outlying station.

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The draft business plan includes a commitment to invest $2.1 billion between Burbank and Anaheim. But previously, the CHSRA was also committed to providing funding support for investments in "conventional" services, which would connect to the Initial Operating Segment (IOS) of high speed rail. While staff recognizes there are investment needs in the Burbank to Anaheim corridor, the draft plan does not propose "blended service" investment priorities that will benefit the northern San Joaquin Valley region for decades. The CHSRA 2016 Business Plan should include an enforceable commitment for investing in near-term conventional rail connectivity improvements between Sacramento, the Bay Area and Northern San Joaquin Valley as intercity rail service in this area will serve as a "feeder" to the Phase 1 HSR system.

Finally, we request that the CHSRA fulfill the earlier commitment for funds to support rail planning coordination in Northern California. As such, the Authority should release the $53.9 million of Proposition 1A Funding authorized by the Budget Act of 2012 for planning work along the Merced to Sacramento Corridor. These funds are needed to enable the planning, environmental and engineering work needed to provide improved passenger rail service between the future Phase 1 HSR service and Sacramento, and to provide the foundation for full Phase 2 HSR implementation.

In closing, the CHSRA needs to address its lack of communication immediately. We can host an in person meeting with you, and or Jeff Morales, and the Regional Policy Council and at your earliest convenience to discuss this matter. We hope you accept this invitation. The CHSRA Draft 2016 Business Plan, in its current state, does not have our support and does not fulfill the promise made to our region and voters under Proposition 1A. The Business Plan needs to have a greater level of connectivity and funding commitment to existing passenger rail service in the north Valley, and needs to physically connect to the cities of Merced and Bakersfield proper.

Should you have any questions or need additional information, I can be reached at (209) 235-0600. Thank you in advance for your consideration in addressing our concerns.

Sincerely,

Amarpreet Dhaliwal
Mayor, City of San Joaquin
Chair, San Joaquin Valley Regional Policy Council

Bill O'Brien
Supervisor, County of Stanislaus
Vice Chair, San Joaquin Valley Regional Policy Council

CC: San Joaquin Valley Legislative Delegation
San Joaquin Valley Regional Policy Council Members
CHSRA Board Members
Jeff Morales, CHSRA