

# California Rail News

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## Latest High Speed Business Plan No More Viable Than Past Plans



**CHSRA's 2016 Business Plan**

### NEW BUSINESS PLAN PROPOSES SAN JOSE–WASCO, POPULATION 26,000

**By Michael D. Setty**  
**TRAC Administrative Director**

The California High Speed Rail Authority (CHSRA) keeps producing plans and proposals that are not credible. CHSRA has pivoted and decided that its Initial Operating Segment will be from San Jose to a point north of Bakersfield—i.e., Wasco. This most recent Business Plan contained an interim high-speed rail station in an orchard in Shafter, nearly 20 miles short of Bakersfield. That embarrassing proposal was dropped from the Final Business Plan.

The Plan is unable to show any additional state and federal funding beyond Proposition 1A, Cap & Trade and the current federal ARRA grant. Even these sources are problematic, however. Cap & Trade expires in 2020 and renewal will be controversial. Recent questions from the Court of Appeal suggest the Court may well invalidate the

**(continued on Page Two)**

**TRAC's Principles for High Speed Rail Success**

- (1) Select a route best serving the intercity travel market between Northern and Southern California, with private HSR operator input to ensure that an optimum route is selected.
- (2) Develop a plan that will actually provide travel times of under 3 hours, to be competitive with flying.
- (3) Design 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.
- (4) Abolish CHSRA and roll its duties into those of a new statewide California Rail Commission (CRC) that would have responsibilities for coordinating and helping fund regional and intercity rail passenger services statewide, including high speed rail.

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entire program as an illegal tax.

The Business Plan relies on proposed actions by the Legislature to commit Cap & Trade funds to HSR all the way out to 2050. A proposal to issue \$5 billion in bonds repayable by those funds seems optimistic in the extreme. Even more optimistic, however, is its expectation that the \$40+ billion completion of Phase 1 to Los Angeles and Anaheim can be funded with \$7 billion raised by monetizing the cash flow of the San Jose to Wasco Initial Operating Segment. The Business Plan is a tacit admission that CHSRA cannot build HSR from San Francisco to Anaheim.

As TRAC noted in our comments on the draft 2016 CHSRA Business Plan:

...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 & 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... 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...

...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.

TRAC's submittal to CHSRA included the following California Rail News articles detailing our ideas for how high speed rail can be built:

- 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
- 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.

As the above articles point out and as TRAC has stated repeatedly, for HSR to succeed in California, high-speed rail planning must be taken back to the drawing board to develop a financially feasible plan. TRAC has consistently pointed out ideas that would allow HSR to be far less expensive, making it possible to be successful.

For example, the least complex, simplest access to LAUS is to follow the existing railroad from Santa Clarita to Los Angeles, upgraded to a 110 mph facility alongside Metrolink. If service via Palmdale somehow manages to survive, HSR should operate on a substantially upgraded alignment through Soledad Canyon. If the connection from Bakersfield is via the Tejon Pass, as TRAC recommends, the best alignment is beside I-5, connecting to the existing rail line on

a viaduct or in a tunnel parallel to Magic Mountain Parkway in Santa Clarita.

TRAC has called for the dismantling of CHSRA, and the transfer of its assets and duties to a new California Rail Commission. An essential role would be managing a franchising process for high-speed rail that would give potential bidders the option to propose HSR alignments based on market requirements. At their discretion, bidders would be able to discard any and all of CHSRA's current HSR plans and programs.

Unlike the products of CHSRA's consultants, private sector planning is based on market feasibility and potential profitability, resulting in lower cost alternatives that meet real-world market needs. Private sector HSR can gain wide support from the California public and possibly even Congress!

As a rail passenger advocate, I want to highlight two great service providers to the residents of Northern California: the Capitol Corridor and Altamont Commuter Express (ACE). The Capitol Corridor connects Sacramento with the Bay Area, and ACE connects San Joaquin County to the Livermore-Amador Valley, Fremont and Silicon Valley. Both services benefit many by allowing easy access to areas with much lower ownership and rental housing prices than the Bay Area.

It is much better public policy for commuters to travel by train rather than by car, e.g., “driving until [they] qualify.” As a key advocate for rail passenger service, TRAC continues to emphasize the importance of improving existing rail services. These services can be made substantially faster, attracting an increasingly large ridership. Dollar for dollar, the upgrading of existing services will give the most benefits for taxpayers and commuters. Upgrading existing service can be considerably faster and cheaper than creating new rail lines.

For example, the current 2 hour, 10 minute commute by ACE to San Jose could be reduced almost by half with sufficient investments to expand and speed up service. Despite long travel times, ACE attracts 5,000+ daily riders and many more would be riding with major upgrades.

The same principle applies to the Capitol Corridor and the San Joaquins. Though these are mainly intercity rather than commute trains, speeding up and expanding service will benefit all kinds of trips including commutes.

TRAC continues to advocate for passenger rail improvements that benefit communities and families in the increasing struggle to keep California affordable and a good place to live.

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Ronald Jones, TRAC President  
Michael Setty, TRAC Administrative Director

Signed articles represent the views of their authors, not necessarily those of the above organizations.

**1025 Ninth Street #223  
Sacramento, CA 95814-3516  
Telephone: 916-557-1667  
e-mail: [trainriders2100@gmail.com](mailto:trainriders2100@gmail.com)  
[www.calrailnews.com](http://www.calrailnews.com)**

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# The HSR Decision - Too Soon to Cut Off Funds

**By David Schonbrunn**  
**TRAC Vice-President for Policy**

The HSR Authority dodged yet another bullet with the March release of Sacramento Superior Court Judge Michael Kenny's ruling in the Tos v. CHSRA challenge. That case asked the court to shut off all the money going to the HSR project, asserting it did not comply with the requirements of Proposition 1A, the 2008 HSR bond measure.

The ruling rejected Plaintiffs' argument that the bond measure mandated the overall requirements of the HSR system. The court ruled that the Proposition applied only to HSR bond funds and not to the federal grant or the cap and trade revenues that have been keeping the project alive. As a result, it ruled their claims were premature, because bond funds have not yet been spent on construction.

CHSRA has spent over a billion dollars of public funds so far, but has nothing to show for it. Plaintiffs sought to stop that wasteful flow, because the project is heading in a direction that cannot work. Unfortunately, the courts have proven to be an unwieldy method of protecting public dollars from abuse.

While CHSRA escaped again, its days are numbered. It will be very difficult for CHSRA to meet the requirements needed to qualify for bond funds for construction. After several lawsuits, it is now clear that the courts acknowledge that the bond measure is a "financial straitjacket" --meaning, it has teeth. The court recognized that "Plaintiffs have raised compelling questions about future compliance." The rulings went against the challengers only because they sued too early.

CHSRA has not applied for bond funds for construction, despite two years having passed since the so-called start of construction! That's

because the project doesn't meet the tests. To receive bond money, CHSRA will have to complete the environmental review for all the sections of the San Jose to Bakersfield segment. And it will need to demonstrate full funding for that segment.

While the 2016 Draft Business Plan appears to demonstrate the needed full funding, 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, 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.

It will also take several acts of the Legislature: 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 bond funds and all the projected cap and trade funds, the HSR project cannot proceed, once the federal grant is spent.

Legislators will be bitterly disappointed to find that bond funding for local projects in the north and south, which swayed many to vote to fund HSR, cannot be released for construction. These projects, known as the Bookends, 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, they have to be part of a fully funded and environmentally cleared segment that will result in infrastructure that is HSR-ready and whose operations are self-supporting financially. The Bookends can't pass these tests.

*David Schonbrunn is part of the Tos legal team and President of TRANSDEF.*

## NEW LEGISLATION PROVIDES MAJOR IMPROVEMENTS TO HSR OVERSIGHT

**By Michael D. Setty**  
**TRAC Administrative Director**

In a highly unusual bi-partisan move, Republican Jim Patterson's bill to improve legislative oversight of the California High Speed Rail Authority (CHSRA) passed the full Assembly on a unanimous vote on May 12th, and now goes to the California State Senate.

Assmby Bill 2847 would implement recommendations from the Legislative Analyst's office to increase oversight of high-speed rail. Specifically, AB 2847:

1. Requires the Rail Authority to provide more detailed information about the cost, scope, and schedule of each project segment to make it easier to track changes in the project.

2. Requires business plans to include financing and other non-capital costs associated with the planned system and construction of the various segments.

AB 2847 comes in the turmoil following the Obama Administration's amendments to its grant agreement with CHSRA, extending the anticipated completion date of the initial 119-mile segment in the Central Valley from 2018 to 2022. Construction is currently underway around Fresno with new overpasses, utility relocations and demolition of buildings in the right-of-way.

Assemblyman Patterson commented on the contract change: "4 years? It just shows that something deep inside this project has gone terribly wrong. The time is coming where we're going to have to call a halt."

In an article in Politico, CHSRA CEO Jeff Morales is quoted as saying "Early on, there was a vision, but no clear sense of how to implement that vision. We have that now, and we're moving ahead aggressively."

## Coast Observations

**BART IS PURCHASING HUNDREDS OF NEW CARS** to replace its decades-old fleet. However, only a few days after its arrival, the first of the new cars ignobly crashed during a test run. BART staff is investigating... **IF YOU WANT TO TAKE THE TRAIN TO GO SURFING**, the Los Angeles Metro has approved taking surfboards on the new Exposition Line extension to Santa Monica when service begins in May 2016--please don't block the aisles, Gidget & Moondoggie... **MEANWHILE, HIGH PRICED MANAGEMENT CONSULTANTS DISCOVER THE OBVIOUS**, that clear, easy-to-understand transit information displays makes using transit easier and reassures passengers (<http://mobilitylab.org/2016/04/25/transitscreen-info-smart-decisions/>)... **AND THEN, CAN YOU SLEEP ON A BUS?** Will I-5 potholes wake you up? Can you keep tonight's dinner down? For \$48 each way, Sleepbus will transport you nightly on a 6.5 hour ride from San Francisco's Caltrain station leaving at 11:30 p.m., arriving at 6:00 a.m. at the Santa Monica Pier. Like rail sleepers of old, the bus operators will kindly let you sleep in as late at 7:30 a.m... There also were almost no "click thrus" when this was reported on TRAC's Facebook page... **AS WE REPORTED IN THE PREVIOUS CRN, AUTO EVANGELIST RANDAL O'TOOLE** believes driverless cars will save us and investment in new rail and transit is not needed. Well, we usually don't bother to say "we told you so," but in this case... on April 8th the San Francisco Chronicle reported that the consensus of experts was that "Experts caution that self-driving cars aren't ready for roads"...the article detailed that while many useful 'driver assist' technologies are now available, driverless cars are unlikely to be ubiquitous for many decades (if ever)... **BART ELECTRICAL GREMLINS DISAPPEAR AS QUICKLY AS THEY APPEARED** between the Pittsburg/Bay Point and North Concord stations in mid-March to mid-April, on top shutting off a new substation near the Transbay Tube in case it was the cause. The electrical gremlins plagued "C" cars that have not undergone heavy rebuilding, unlike the much older A and B cars that had 1970's-era thyristors replaced...BART had to run shuttle trains of A and B cars... **LOS ANGELES METRO** officials were pleasantly suprised when ridership on its new Gold Line light rail extension to Azuza exceeded expecations. The Azuza line has been criticized because the area is a relatively low density part of LA County, and local residents are much less transit-dependent than other areas... **SACRAMENTO AREA TRANSPORTATION OFFICIALS** have come up with a new, more expensive \$195 million streetcar plan for West Sacramento and Sacramento's downtown area that would allow full LRT to serve River Cats Stadium across the Tower Bridge. Local advocates question whether available funds are better spent on improving the existing LRT network, including new low floor LRVs to replace the 1987-vintage fleet... **SACRAMENTO COUNTY** is also mulling a proposed Nov. 2016 sales tax that would fund the streetcar, airport LRT and two huge freeway expansion projects, among other things while existing Regional Transit service continues to hemorrhage ridership...



# TEJON OR TEHACHAPI ? WHAT HISTORY TELLS US - EVEN TODAY

**By Greg Thompson**  
**TRAC Board Secretary**

The California High Speed Rail Authority's decision to build between Bakersfield and Los Angeles by way of Tehachapi Pass rather than the more direct Tejon Pass is a case of deja vu in California's transportation corridor development history. Slightly more than one hundred years ago, in 1911 the newly formed California Highway Commission faced a similar decision when choosing a route for the new state highway that was to link Los Angeles with the southern San Joaquin Valley.

Should the road follow the railroad, which was built over Tehachapi Pass 35 years earlier? Although only 99 miles separate Los Angeles and Bakersfield as the crow flies, Southern Pacific Company's rail route via Tehachapi Pass required 169 miles. Or, should the new state highway cross Tejon Pass with a road only 125 miles long?

Real estate interests lobbied for Tehachapi Pass. Professional engineers of the nascent road bureaucracy, however, favored the more direct route, because they viewed their constituents as future highway users rather than land owners and their politicians.

The Tehachapi Pass choice would force drivers and commercial interests to endure hours of extra travel time and cost for decades to come. The Highway Commission sided with its staff.

In its most controversial decision of that era, the Highway Commission adopted the principle that route decisions should favor the shortest practical

path between large population centers, thus elevating interests of transportation users over those of real estate speculators. That principle dictated the choice of Tejon Pass and the construction of what became known as the Ridge Route, a new 125-mile state highway between Los Angeles and Bakersfield, which opened as a gravel road in 1915.

The decision favoring highway directness over real estate interests gradually rendered railroad transportation obsolete between northern and southern California. Even though it remained unpaved until 1919, the original gravel Ridge Route afforded faster travel times than the railroad between Los Angeles and Bakersfield. The fastest passenger trains required over 7 hours to travel the 169-mile rail route from Los Angeles to Bakersfield. Freight trains required more than 16 hours.

Even when they stopped for a leisurely lunch, primitive intercity buses (called interurban jitneys) using the still-unpaved Ridge Route beat the train. In 1916 the Automobile Club of Southern California observed that travel between Los Angeles and the San Joaquin Valley had increased

greatly because of the new gravel road and predicted that the road link would bring the southern San Joaquin Valley into the social and economic sphere of Los Angeles. The Club called the Ridge Route the magnum opus of southern California road construction.

During the roughly 100 years since the original Ridge Route was built, both the highway and railroad benefitted from improvements, but the magnitude of highway improvements dwarfed those for the railroad. In 1929 for example, the California Division of Highways began construction of a new, 3-lane Ridge Route that shortened the route by 14 miles, increased the minimum curve radius from 100 feet to 1000 feet, and lowered the summit by about 700 feet.

The new Ridge Route, part of U.S. 99, opened in 1933. It allowed motorists to drive the now shorter distance between Los Angeles and Bakersfield at the legal speed limit of 40 mph without having to slow for curves. By 1941 the fastest passenger train traveled between Los Angeles and Bakersfield in 5 hours (the best time ever achieved), but buses did it in 3 hours, and many motorists did it in 2 hours. Signal improvements, more sidings, and curve reductions shortened

**The Santa Fe bought land in Tejon Pass but ultimately rejected the project, not because it was infeasible, but because the private railroad felt that it could not compete with the aggressive government-financed road building program then underway throughout the state. That, together with rapidly growing auto ownership and use in California, made the Tejon Pass investment too risky.**

travel times on the railroad, but such improvements came nowhere near to compensating for the 58-mile distance handicap that the railroad suffered relative to the highway between Los Angeles and Bakersfield.

By the mid-1930s, U.S. 99 operated over the Ridge Route and connected at the northern end of the San Joaquin Valley to a higher speed

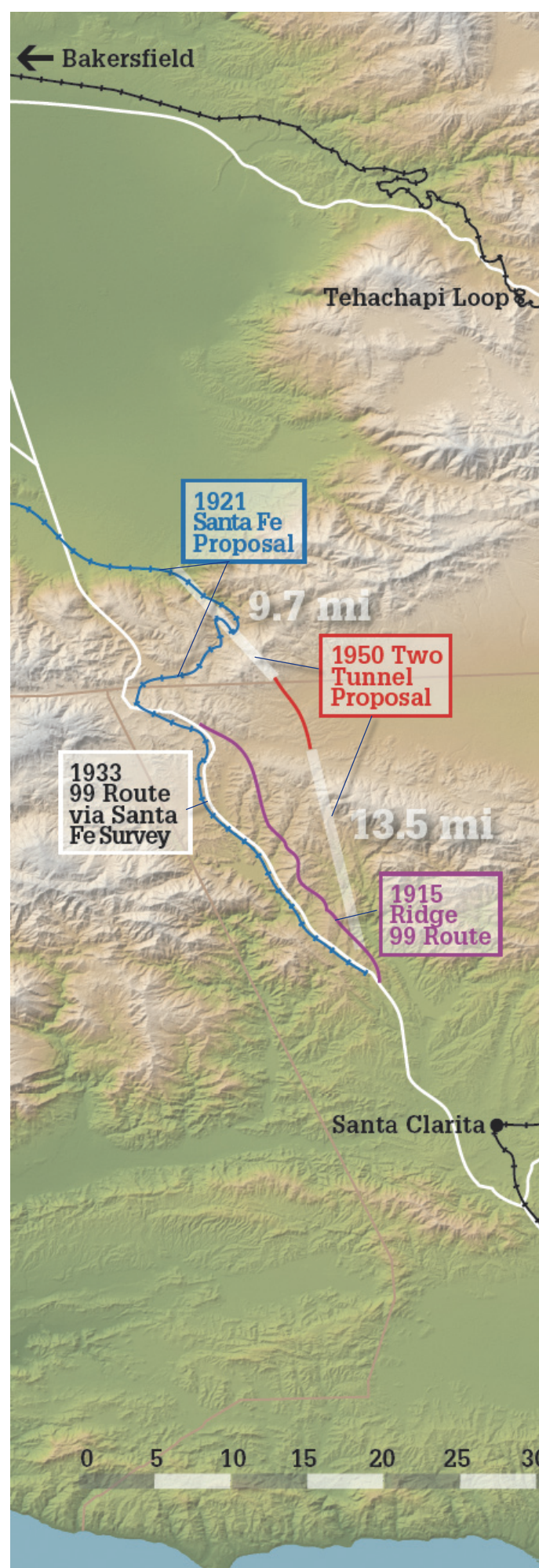
multi-lane road over Altamont Pass. It was the shortest route (411 miles) and the route of choice for motorists driving between Los Angeles and the San Francisco. In 1937 Southern Pacific's Vice President of Passenger Traffic Felix McGinnis commented, "I think practically all travelers on the highway claim they do it in 10 [hours between Los Angeles and San Francisco], some of them do it in less."

The fastest passenger train over Southern Pacific's San Joaquin Valley Line (484 miles) did it in 14 hours. Southern Pacific's Coast Line (470 miles) was the better rail choice, although it still was much longer than the highway. This is because it skirted mountain ranges (some running out-of-direction) for its entire length. Just north of San Luis Obispo, it crossed the Santa Lucia Mountains via the difficult Cuesta Grade. In 1937 the new streamlined Daylight did it in 9 hours and 45 minutes on the Coast Line, the fastest rail time ever achieved between Los Angeles and San Francisco (and hours faster than the rail time achieved today).

For rail to become competitive with automobiles in the busy travel market between Los Angeles and San Francisco,

it needed a much shorter route than either Southern Pacific's Coast or San Joaquin Lines afforded. In short, it needed a direct link between Bakersfield and Los Angeles via Tejon Pass. Unfortunately, after having invested in the Tehachapi Pass route in the 1870s, Southern Pacific was loath to build a new line years later. Why, then did it choose Tehachapi Pass in the first place?

The answer is that the small, dusty

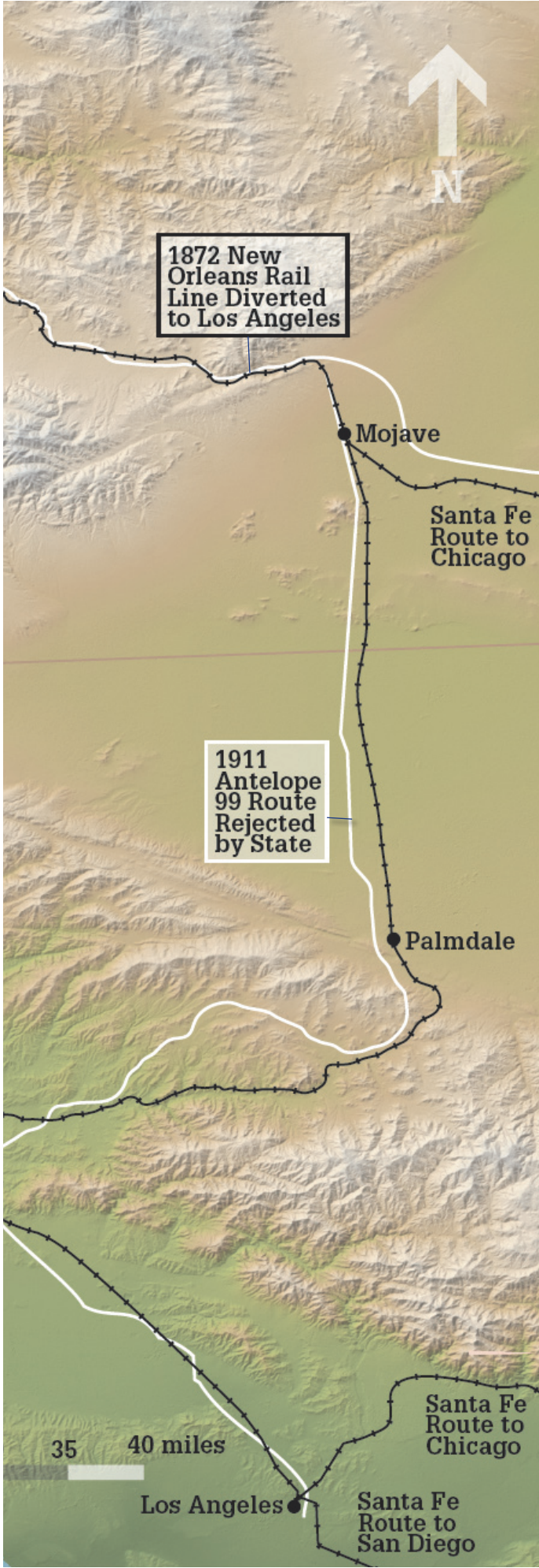


pueblo of Los Angeles was not where Southern Pacific was headed when it built the line south through the San Joaquin Valley in the early 1870s. Its destination was the great southern city of New Orleans. The most feasible route from northern California to New Orleans took the railroad over Tehachapi Pass and then over Cajon Pass and down through the Imperial Valley to Yuma.



# THE OLD RIDGE ROUTE BEAT PASSENGER TRAINS IN 1920'S

In 1872 after this route was set, business leaders in Los Angeles raised a subsidy to give to the Southern Pacific if it detoured its route to serve Los Angeles, and the railroad complied. Rather than heading east for Cajon Pass from what is now Palmdale as originally planned, the railroad took an abrupt dog leg to the west, descending through Soledad Canyon to what is now Santa Clarita. There the line took a very sharp curve, changing



direction from west to the southeast again. It then followed the southeasterly trajectory through the San Fernando Valley to Los Angeles and beyond, eventually to New Orleans.

There actually was a serious proposal to build a direct rail line from Los Angeles to Bakersfield via Tejon Pass in the early 1920s, and it came not from the Southern Pacific but from its arch enemy, the

Atchison, Topeka & Santa Fe Railway, better known as the Santa Fe. The Santa Fe entered California from the east at Needles, and at Barstow its mainline split into two. The southern mainline ran south through Cajon Pass into southern California (not shown on map).

The northern mainline continued west to Mojave, where it gained use of Southern Pacific tracks to descend Tehachapi Pass to Bakersfield. At Bakersfield the northern mainline continued on Santa Fe's own rails, running north through the San Joaquin Valley to Stockton and the Bay Area. Thus, while the Santa Fe served both southern and northern California, it lacked a direct line connecting these two regions. The distance from Los Angeles to Bakersfield on rails that Santa Fe trains could use was 284 miles, almost three times longer than the direct distance of 99 miles.

In 1921 Santa Fe management considered aggressively competing with Southern Pacific for intra-California freight and passenger traffic. To do so it would connect its northern and southern California rail systems by building a direct line between Los Angeles and Bakersfield over Tejon Pass. It surveyed several alignments, all about 125 miles long, with grades from 2 to over 3 percent. One alignment with a ruling grade of 2 to 2.2 percent was actually shorter than the 3 percent alignment because of more tunneling. The longest tunnel, 3 miles, took the line from Castaic Canyon to Piru Canyon. A one-mile tunnel took the line under Tejon summit.

The Santa Fe bought land in Tejon Pass but ultimately rejected the project, not because it was infeasible, but because the private railroad felt that it could not compete with the aggressive government-financed road building program then underway throughout the state. That, together with rapidly growing auto ownership and use in California, made the Tejon Pass investment too risky.

Santa Fe management saw its mainline between California and Chicago as a better bet for improvement and thereafter it invested all of the resources that it could muster into building that route into what is today one of the premier freight railroads in the U.S.

Meanwhile, the California Highway Commission used Santa Fe's 2.2 percent alignment over Tejon Pass, sans tunnels, to build the new high-speed Ridge Route, which opened to traffic in 1933.

The new higher-speed Ridge Route prompted the Santa Fe to once again enter the LA-San Francisco passenger market. In 1935 it applied to the California Railroad Commission for authorization to operate buses from Los Angeles to Bakersfield, connecting there with new light-weight, high-speed, diesel-powered streamlined trains to Oakland, connecting to San Francisco by bus over the San Francisco-Oakland Bay Bridge. The total LA to San Francisco running time was to be about 9.5 hours, and Santa Fe would provide two of these services each day.

In addition, the Santa Fe proposal called for the creation of a new West Coast bus system, called Santa Fe Trailways, which

would compete with Pacific Greyhound Lines. To succeed, the new bus system needed permits from the California Railroad Commission to carry intra-state passengers, even on highways where Pacific Greyhound buses already operated. The Southern Pacific Company and Pacific Greyhound Lines, in which Southern Pacific held a one-third share, protested both applications and bottled them up for over two years of regulatory proceedings in the most contested case in California's regulatory history. In April 1938 Santa Fe finally won, and it began the bus-train services and the Trailways services shortly thereafter.

Called the Golden Gates, the Santa Fe's new train service consisted of two sets of Budd-built stainless steel cars powered by EMD E-units. Each set made one round trip per day between Oakland and Bakersfield. (At the same time the Santa Fe placed into service two almost identical train sets between Los Angeles and San Diego. Called the San Diegos, each of those train sets made two round trips per day.) The Golden Gates and their bus connections over the Bay Bridge carried passengers from San Francisco to Bakersfield in six hours flat.

If the Santa Fe had had its own direct railroad route from Bakersfield to Los Angeles, its fleet-footed passenger trains would have continued into Los Angeles, for a total elapsed time from San Francisco of about 8.5 hours. A 1950 effort to build a pair of tunnels just east of the Grapevine route for an even faster rail route was promoted by shippers and Occidental College economics professor Dr. Cecil Dunn.

Alas, the railroads were no longer interested in competing against public funding for highways. The Santa Fe buses continued on in somewhat longer time, but they were not a hit with the traveling public.

At long last the opportunity is at hand to erase the rail handicap: The state has decided to connect Los Angeles and Bakersfield with HSR. 100 years later, the choice is once again whether to build a railroad over Tehachapi Pass or Tejon Pass. Only, this time around, the California High-Speed Rail Authority has reversed the principle adopted at the height of the progressive era by the California Highway Commission: CHSRA has elevated the interests of real estate developers over users.

The railroads of the past were unable to compete with the automobile in the Los Angeles to Bakersfield market, due to the overly long route. Informed by this history, TRAC readers can expect that CHSRA's preferred route will prevent it from competing, too. It is time to demonstrate a working knowledge of this history, and unite around rail over the Tejon Pass.

*Dr. Greg Thompson, PhD is a member of the TRAC Board of Directors and Board Secretary. He is Professor Emeritus, Urban and Regional Planning at Florida State University, and also authored the book, The Passenger Train in the Motor Age: California's Rail and Bus Industries, 1910-1941.*



# The Capitol Corridor's Progressive Vision Plan

## EXPANDED, FASTER SERVICE AND NEW ALIGNMENTS TO REDUCE TRAVEL TIMES

**By Gordon Osmundson**

In 2014, the Capitol Corridor Joint Powers Board (CCJPB) issued "Capitol Corridor - 2014 Vision Plan Final Report," available online at <http://www.capitolcorridor.org/downloads/CCJPAVisionPlanFinal.pdf>.

The plan lists the Capitol Corridor's short-term, medium-term and long-term objectives, the latter covering the next 40–50 years. The long-term vision focuses on more frequent, electrified 150 mph service linking Salinas, San Jose, Oakland, Martinez, Sacramento, Roseville and Auburn using tilt train technology. No recommendations are made for extensions to Reno, Monterey or points north in the Sacramento Valley.

Service to Reno was discussed but dismissed as somehow not being politically feasible, but this has long been a subject of discussion among rail advocates and we think that it should be further pursued.

I find it strange that there is no mention of service to the Monterey Peninsula. The original concept for the Capitol Corridor was that it would link the historic California capitols of Monterey, Benicia and Sacramento, hence the name. Monterey/Carmel are major tourist destinations and have also long been discussed as needing passenger rail service.

The Capitol Corridor currently doesn't run south of San Jose. Watsonville, Salinas and other parts of the Monterey Bay area have become bedroom communities for Silicon Valley, increasing congestion on Highway 101. The sponsors of the proposed Salinas service preferred a Capitol Corridor extension over Caltrain, though their reasoning is not explained.

### Short & Medium Term Objectives

The short-term objectives call for increasing service between Oakland and San Jose to 11 daily round trips from the current 7, and extending 2 of those round trips to Salinas. Four new round trips would be provided between Sacramento and Roseville, with one of these trips providing a 2nd Auburn round trip.

In the medium term, there would be 6 trains daily to Salinas, 15 trains between Oakland and San Jose, current service levels between Oakland and Sacramento, and up to 10 round trips to Roseville with no additional service to Auburn. A 2nd track is projected between Union City and Santa Clara and a 3rd track between Sacramento and Roseville to support these service levels.

### Long-Term Vision

The Vision Plan discusses increasing train speeds in the long term, but not in the short or medium term. This strikes me as short sighted. Currently most of the route is rated as Class 4, allowing up to 79 mph. FRA Class 6, with a top speed of 110 mph, would save about 2 minutes for every 10 miles of route.

The federal government is requiring a nationwide conversion of almost all mainline operations, including the Capitol Corridor, to positive train control (PTC) by December 31, 2018. PTC would allow maximum speeds to be increased to 110 mph on straight portions of the corridor. The current locomotives are already geared for this speed so all that is needed is enhanced grade crossing protection and higher maintenance standards to FRA

Class 6, something that could be done in the short term. This should be considered..

The long-term vision incorporates a number of bold plans for faster trains and realigning major portions of the route to speed up service. In addition to PTC and 110 mph service, it also discusses a conversion to electric multiple unit (EMU) train sets, tilting train technology, and speeds up to 150 mph. Why exactly 150 mph is not stated, nor is the service frequency given at which point the expense of electrification is justified.

A major advantage of electrification is that energy otherwise wasted in braking can be recovered and reused, resulting in significant energy savings. This is also increasingly possible with advances in hybrid technology, but this was not discussed. Hybrid technology has many of the advantages of electrification—at a fraction of the cost. Energy dissipated in braking is stored on-board and then used to boost the train's acceleration. This option should definitely be explored.

Some of the bolder proposals involve route changes, so let's take a brief look at some of these proposals.

### South Bay

South of the Oakland Coliseum to San Jose three possible alternatives on existing right-of-way are described but none are selected as the preferred route. The current route, which was selected to avoid

Channel and rejoin the UP just north of I-580 in Emeryville.

A new station where the BART Transbay route passes over the Capitol Corridor in West Oakland is identified as a major enhancement, linking directly with BART to San Francisco, SFO and all other BART destinations. This would greatly increase business for the Capitol Corridor.

Alternatively, an underground line beneath the Mandela Parkway would pass under BART at the east end of West Oakland Station and so could provide a West Oakland BART/Capitol Corridor connection.

Recently, construction of a second Transbay Tube to relieve increasing BART demand has been proposed by SPUR and other organizations. Most proposals include four tracks to accommodate both BART and standard gauge trains. While TRAC is leery that a massively expensive project like this would crowd out other transit improvements for decades, Capitol Corridor should be thinking about how it could use such a new tunnel to tie-in with Caltrain and other rail services.

### Oakland-Richmond

The Vision Plan proposes separate passenger and freight tracks between Oakland and Richmond on the existing alignment, requiring additional right-of-way in some locations. Not mentioned is that there is already a third track in

many places, including needed crossovers and most signals. A couple of miles of an old switching lead through Berkeley would need to be rebuilt and ungraded to put this track in service.

### Richmond-Martinez

Between Richmond and Martinez, several alternatives for increasing speeds by reducing curves and possibly shortening the line are discussed. One option would shift Capitol Corridor trains to the BNSF right-of-way through Hercules, paralleling Highway 4 to a point about 4 miles west of Martinez. There a new 2.7 mile tunnel would link it to the existing Union Pacific line west of the Martinez Amtrak station. This alignment would shorten the route by several miles and avoid the low-speed curves alongside San Pablo Bay.

To link the two lines in Hercules, a 1.2 mile tunnel is proposed, but no location is specified. Surface connections in Pinole or in San Pablo between the two routes should have been discussed as alternatives to an expensive tunnel, similar to how a connecting track was recently completed in Richmond. It allows BNSF intermodal trains from the Port of Oakland to use the UP main line, avoiding a slow, circuitous route through downtown Richmond.

Another option calls for a new line over the Carquinez Strait adjacent to the Carquinez Bridge, then north in the median of I-80 through Vallejo, rejoining the existing rail line in Fairfield. The line could use the existing Vallejo branch to Napa Junction, then proceed east through American Canyon to Fairfield. Both of these proposals are deemed unlikely due to high costs and impacts.

### Martinez-Suisun/Fairfield

Crossing the Carquinez Strait is the primary issue between Martinez and Fairfield. The current 1930 railroad bridge includes a lift span that often delays rail traffic. The long-term vision calls

(continued on Page Seven)

Capitol Corridor Travel Times, Existing & Vision Plan			
	Current Schedule	The Vision	
Oakland–Sacramento	1:53	1:11 to 1:15	0:59 to 1:03
Oakland–San Jose	1:15	0:39 to 0:52	0:33 to 0:59
Sacramento–San Jose	3:06	1:50 to 2:06	1:32 to 1:46

possible conflicts with industrial switching in Hayward and Fremont, is several miles longer due to the use of the Centerville line (here called the Niles Cutoff) to link the Newark and Coast Subdivisions.

The first alternative is similar to the existing route but uses parts the old Western Pacific south of Oakland Coliseum to Niles, where a new cutoff would link it to the Centerville line, eliminating two miles and a 15 mph curve at Niles Junction. Instead of that, the existing line could easily be used as far south as Union City, where the two lines cross.

The other two alternatives are the two existing lines; the Coast Subdivision via Newark (the Coast Alignment) or the Niles/Warm Springs Subdivisions via Union City and Milpitas (the Inland Alignment). The Coast Subdivision is the shortest, while the latter would better serve the more populous areas near the hills, particularly in Milpitas and Fremont.

### Oakland

The Vision Plan address the issues of the Jack London Square street trackage and the lack of a direct connection between BART and the Capitol Corridor in West Oakland. Current street-running in Jack London Square is a safety issue and slows down service. A tunnel may not possible, due to clearance issues with the adjacent road tunnels to Alameda. The Plan considers several options, including closing Embarcadero through Jack London Square, and a new line above 5th Street adjacent to I-880.

A much more expensive solution would be a deep bore tunnel and new station passing under downtown Oakland with a new station connecting directly to BART at BART's 19th street station. This option would start east of the Lake Merritt



# Capitol Corridor

(continued from Page Six)

for replacing this bridge with a new higher level span. This writer, however, developed an alternative for a new bridge just east of Port Costa, shortening the route by 3 miles. This could be combined with shifting to the BNSF through Hercules to shorten the line still further (see August 2013 issue of the California Rail News).

## Suisun/Fairfield-Sacramento

Separating passenger and freight trains has gained interest from rail planners. Separate trackage would eliminate passenger train delays caused by conflicts with freights. This would also reduce maintenance costs by keeping heavy freight trains off FRA Class 5 and 6 tracks needed only by passenger trains.

Many years ago, the SP planned to build a line south from Sacramento to avoid a major river crossing, tying into its "Moccoco" line near Brentwood, it was built as far south as Walnut Grove but never completed. The long-term Capitol Corridor Vision plan calls for a similar freight-only line, but one that would follow the old Sacramento Northern line from Pittsburg to Sacramento, with a new high level bridge between Mallard and Chip islands. This new line would tie into the existing line east of Davis.

## Future Schedules

Current schedules average about 40 mph despite top speeds of 79 mph. The table below compares existing and proposed travel times. Limited stop express trains would cut current travel times nearly in half, while all-stop local service time would be cut by about a third.

In the short and medium term, the Vision Plan calls for building out the existing system with no technological or routing changes, save an extension to Salinas. But the long-term plans are truly visionary, calling for high speeds, shorter routes, electrification and a direct link to San Francisco via a BART connection in West Oakland.

While TRAC differs with some points in the Vision Plan and suggests a number of approaches that need to be considered, this is the kind of thinking that will bring the Capitol Corridor up to its full potential.

*Gordon Osmundson is a TRAC board member and Treasurer, and an avid railroad photographer. His writing and photography have appeared in Trains and other rail-related publications.*

# HSR in the Southland - Will TBMs Get Stuck?

by Susan MacAdams

## TRAC Board Member

It currently takes nearly two hours on Metrolink's Antelope Valley line to travel the 63 miles from downtown Los Angeles to Palmdale. If trains could average 120 mph, the travel time could be reduced to a mere 30 minutes. In 2010, LA Metro, Metrolink, Caltrans and CHSRA agreed to improve the line to accommodate HSR.

## Next Stop, Las Vegas?

Instead of clearing the way for HSR, Metro, Metrolink and Caltrans have built obstacles that make HSR impossible in this corridor. These include bike paths, new Metrolink platforms, grade crossings, a long railroad bridge in Burbank with insufficient design for high-speed rail, as well as a new 3-track rail bridge, when the HSR agreements called for 4 tracks.

In 2010, tunneling directly from Burbank to Palmdale was discarded as technically infeasible and far too costly. But the tunnel alternative re-surfaced in 2014 on CHSRA maps. At first impression, local residents and politicians liked the idea since it seemingly avoided major impacts on neighborhoods. Unlike in 2010 though, CHSRA is now disregarding the many “fatal flaws” of this design. See the details at [calrailnews.com/southland](http://calrailnews.com/southland).

Apparently, potential large-scale developments near Burbank HSR station and in the High Desert Corridor outside Palmdale are driving this train. The tunnel was praised as a direct link from Burbank to Las Vegas through Palmdale. Discussions were held between the various authorities to connect the high-speed train from Burbank to Las Vegas but the public was not informed.

## With Too Many Fatal Flaws, It's A Show Stopper

Full grade separation of the San Fernando Valley rail corridor, built in 1874, was promised in Proposition 1A. Changing HSR from a surface route to long tunnels would break that promise and not ease congestion or improve safety in the San Fernando Valley.

Area geology is highly variable, unsuitable and unsafe for tunneling. For example, the staging area for tunnel-

boring machines (TBMs) in Burbank is an ancient, underground riverbed. The TBM will encounter huge boulders, soft sand and occasional tar and oil deposits. Not good for TBMs.

Under the San Gabriel Mountains, fault zones have shifted for millennia, crushing subsurface rocks and turning them at wildly varying angles. Geology can change quickly in a few feet, ranging from hard rocks to sand to mixed gravel. The tunnels would disturb aquifers that supply 15% of Los Angeles' drinking water plus nearby methane pockets. Tunneling could contaminate the water and release the methane. Tunneling through active earthquake faults might also create sinkholes or craters.

Perhaps the 2016 CHSRA Business Plan, with its new focus on San Jose-Wasco, is a recognition these problems can't be solved and too many people know about them.

## A Better Plan

The tunneling plan is so flawed, it does not merit the expense of an EIR. The “blended” option with four tracks on the existing rail right-of-way is the best approach: two tracks for Metrolink, two for HSR. All significant street crossings would be grade-separated.

The Metrolink Antelope Valley line goes through four short tunnels, which were built in 1874 with mules, gunpowder and pick axes. All survived the 1994 Northridge quake. During the reconstruction of the collapsed I-5/Highway 14 interchange, Metrolink's ridership grew 25 times larger, almost overnight.

Unlike the long tunnels, short tunnels **can** be built for HSR. Metrolink's current route to Palmdale, through Soledad Canyon, would be an engineering challenge, but be less damaging to neighborhoods than tunnels along the SR-14 and/or under the National Forest. It should be noted that CHSRA had disregarded the latter route previously, because of its proximity to the National Forest.

*Susan MacAdams was formerly the HSR Planning Manager for LA Metro. A collection of her comment letters and related documents is available at [calrailnews.com/southland](http://calrailnews.com/southland).*

# SACRAMENTO'S 'ZOMBIE' STREETCARS REFUSE TO DIE, THREATENS LIGHT RAIL & BUS SYSTEM

## COMMENTARY

### By Greg Thompson

In a February 10, 2016 New York Times article titled "How to Build a Streetcar That Works" urban analyst Yonah Freemark said ...In most American cities with streetcars, success has been limited by faulty design. Forced to share lanes with automobiles, the streetcars get held up in traffic. Unable to maneuver out of their tracks, unlike nimbler buses, they get stuck behind stopped cars or delivery trucks... ... The faster and more dependable a streetcar line, the more time it will save riders, and the more likely people will choose it rather than polluting, expensive and congestion-producing options like personal automobiles or Uber.

In 2015 residents living adjacent to the proposed streetcar from West Sacramento to Midtown understandably voted down a measure to fund the streetcar from property assessments, fearing that rents might increase. The tax levy would have matched funds previously approved by West Sacramento and federal transit grants.

Despite defeat at the polls, Sacramento city leaders have now come back with a more costly, \$195 million streetcar proposal, this time modified so Regional Transit's existing light rail trains could access River Cats games and other events at River Cats Stadium in West Sacramento. While this would improve transit mobility slightly, it comes with a huge price: booting thousands of existing riders out of downtown Sacramento's core area by moving light rail service off K Street to new \$20 million tracks on H Street between 7th and 12th. K Street would be turned over the the streetcar, perhaps carrying hundreds of riders, rather than the thousands currently served on K St, forcing many back to autos.

Most new segments of the Sacramento streetcar would also operate in mixed traffic, at an estimated speed of 5 or 6 mph. While light rail also operates in mixed traffic over some portions of its downtown alignment, this occurs on streets with relatively little traffic. Portions of J and L Streets would have also have streetcars in mixed traffic, contributing to delays and slow speeds.

The Sacramento County Transportation Authority (SCTA) is proposing an additional

0.5% sales tax for the November 2016 ballot. This proposal includes funding for "downtown circulation improvements" that could include light rail track relocations, more operating funds for Regional Transit despite its financial disarray, as well as as dubious projects including the "Capitol Southeast Connector" beltway. The sales tax would also be used to cover the likely \$6-\$9 million annual streetcar subsidy. That funding is needed instead to improve existing bus and light rail service, which are in decline due to underfunding and mismanagement.

The wasteful streetcar proposal needs to be dropped. Indeed, no additional funding should be allocated to Regional Transit until its current management and financial issues are solved. Transit improvements are actually needed, such as renewing the 1987 LRV fleet with low floor cars, more frequent bus service and LRT extensions that serve **real** needs, such as to American River College, reconnecting to Amtrak, and other similar, worthy projects.

*Dr. Greg Thompson is a member of the TRAC Board of Directors and Board Secretary. He is also Transportation Committee Chair for Eye on Sacramento (EOS).*



# SF MAYOR'S RAILYARDS STUDY SIDETRACKS DTX

**By Gerald Cauthen, PE  
Former TRAC President**

The most important Bay Area transit expansion to come along in over half a century is the extension of Caltrain (DTX) into downtown San Francisco. DTX consists of a 1.3 mile long tunnel from the existing 4th and King St. terminal of the 78-mile long Caltrain line to San Francisco's new Transbay Transit Center (TTC) at First and Mission. When completed, the new TTC/DTX connection will cause tens of thousands of Peninsula and San Francisco motorists to shift from car to train.

So, one might ask, "What is City Hall doing to advance the project"? So far as we can determine, nothing. On the contrary, instead of helping, members of Mayor Ed Lee's staff are holding DTX hostage while they sort out the future of Mission Bay, located in southeast San Francisco. This delaying action is embodied in what the Mayor calls the Railyards Alternative and I-280 Boulevard (RAB) Feasibility Study. The RAB Study appears to be a direct response to the demands of influential Mission Bay developers that the full and profitable build-out of Mission Bay take precedence over all other considerations.

Transportation experts in San Francisco, Sacramento, Washington D.C. and elsewhere have long recognized the importance of DTX. When Caltrain finally arrives, it will be in the heart of San Francisco's 340,000 person employment center, within easy walking distance of tens of thousands of transit-oriented housing units. It will connect Caltrain and HSR to four BART lines, six Muni light rail lines and over 40 bus lines, thereby making the new TTC the most significant nexus of public transit systems in western North America. More importantly, it will significantly reduce the need to drive into and through San Francisco.

On November 9, 1999, the San Francisco voters weighed in. Recognizing the value of bringing passenger trains into the heart of the city, they voted overwhelmingly to approve Proposition H. Prop H called on City Government to give DTX its highest fund-raising and implementation priority and that it refrain from "taking any actions that would conflict with the extension."

The TTC will be complete and open for bus service in 2017. Yet if the RAB planners have their way, the space far below the TTC already created for the new train terminal will stand empty and waiting for trains for additional decades (see photo).

This is because in recent years San Francisco's City Hall politicians have unaccountably thumbed their noses at the Proposition H mandate to bring Caltrain (and



**Gare du Nord, Paris  
One of the world's great train stations**



**Empty train level in San Francisco's TTC.  
S.F. Mayor Edwin Lee's legacy?**

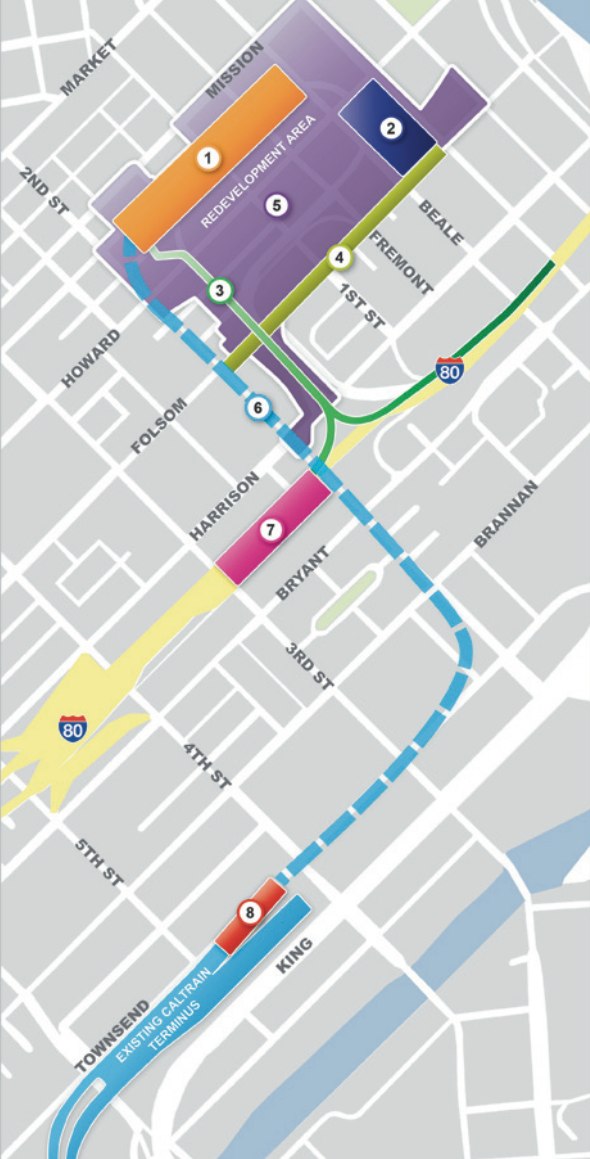
future high-speed rail) into downtown San Francisco. Here are seven destructive elements of Mayor Lee's ongoing RAB Study that are compounding the problem:

## 1. The Risk of Delay

Because of past SF City Hall support, the DTX project is currently first in line for

Bay Area federal New Starts funding. But unfortunately, thanks to Mission Bay "planning", the DTX project is currently stalled while Lee Administration planners stew over grandiose but demonstrably impractical Mission Bay build-out alternatives. (The planners like to say that because Caltrain isn't as yet electrified they aren't holding up the project. This is false; if electrification funding falls through, it would still be possible to access the TTC using hybrid locomotives)

If DTX continues to be locally impeded in this way, it will sooner or later be knocked out of the New Starts running by a "ready-to-go" project in some other city. Current expectations are that, if the Mayor and his inexperienced Mission Bay planners persist, they will delay DTX by at least 25 years and increase the cost of getting Caltrain downtown by at least six billion dollars.



1. Transbay Transit Center
2. Temporary bus terminal
3. New bus ramps
4. Folsom Street
5. Transit Center District & Redevelopment Area
6. Downtown Rail Extension
7. Bus Storage
8. New Fourth & King Caltrain Station

## 2. Trip Times

The Mission Bay planners have repeatedly stated that their proposals would reduce train trip times. How? By how many seconds? And at what cost? The planners don't say.

## 3. Criticisms of TTC/DTX

The Mayor's Mission Bay planners have no experience in engineering design, passenger rail operations or construction cost estimating. Yet in the furtherance of their Mission Bay development goals, they often take gratuitous and usually incorrect public slaps at the TTC/DTX program. Such criticisms are not helpful.

## 4. Traffic Impact of Removing I-280

According to MTC, by 2035, over 250,000 automobiles will be entering San Francisco from the south every day, much of it on I-280. If the entire north end of I-280 is removed as SPUR and the Mayor's planners desire, what happens to all that traffic? How would it affect the Mission District? How would it affect Mission Bay? Again, the planners don't say.

## 5. Traffic Impact of the Arena

It is proposed that an Arena for the Golden

State Warriors be placed east of Third and 16th Streets at the edge of the Bay (not shown on map). This idea is one that has been eagerly promoted by Mayor Lee and other local politicians. Project sponsors boast that the new Arena would play host to no fewer than 225 major events a year. If things go ahead as planned, each of these events would attract thousands of cars to Mission Bay, often during afternoon rush periods. Despite City Hall efforts to obfuscate the fact, this monumental squeeze would create massive new traffic jams and parking agonies in the South-of-Market and Mission Bay districts.

On January 8, 2016 the Mission Bay Alliance filed a lawsuit demanding that the Arena developers properly identify and mitigate the environmental impacts of their facility. Eight days later, the developers elected to put their project on hold for a year in order to give themselves time to deal with the environmental issues they had previously ignored.

## 6. Impact of Eliminating Caltrain's 4th and King Rail Yard

In accordance with the demands of Mission Bay developers that "there be no visible railroad tracks anywhere in Mission Bay", the Mayor's planners say they want to move Caltrain's existing San Francisco rail yard to some as yet undefined site to the south. This reveals an abysmal lack of understanding of passenger rail operations and the value of a train marshalling and storage yard located near the end of a train line. The staffs of Caltrain and the California High-Speed Rail Authority are understandably opposed to this idea. Mission Bay can be developed without the process undermining San Francisco's passenger rail connection to Silicon Valley and beyond.



**S.F. Mayor's Freeway Replacement?**

## 7. Impact of Relocating the 4th and King Station to Third Street

The long-established 4th and King Street Station is well served by three Muni light rail lines and at least 8 bus lines. Moreover it is strategically located to serve the South-of-Market area and Mission Bay District. Moving it a half a mile to an out-of-the-way location on Third Street where it would be less well served by Muni makes no sense.

## Conclusion

DTX is the most important transit-integrating project to come along in the Bay Area since the original BART system was conceived in the 1950's. San Franciscans have been calling for the extension of Caltrain for decades. It's been over 16 years since the voters of San Francisco voted 69.3% for Proposition H.

San Francisco's Mayor and Board of Supervisors should immediately begin conforming to the priorities established in Proposition H. They should be leading the effort to ensure that DTX is funded and built without further delay. If City Hall gets behind DTX, the Caltrain trains could be up and running in the new TTC by 2024.

## What You Can Do

Contact the San Francisco's Mayors office (415 554-6141, mayoredwinlee@sfgov.org) and Board of Supervisors (415 554 5184, board.of.supervisors@sfgov.com). Demand they honor the mandate of the people of San Francisco as expressed in Prop H in 1999 by completing the DTX Project without further delay.

*Gerald Cauthen, PE and Transportation Consultant, is the co-founder of San Francisco Tomorrow, SaveMuni and the Bay Area Transportation Working Group.*