

Tremendous Potential for NorCal Rail: San Joaquins, ACE & Dumbarton Rail

Effective July 1, 2015, Caltrans handed over to the San Joaquin Joint Powers Authority (JPA) the oversight of Amtrak's San Joaquins. The JPA hired the San Joaquin Regional Rail Commission (SJRRRC), operator of the Altamont Commuter Express (ACE), to operate the service. Now that the management of both ACE and the San Joaquins is under the same roof, there are unprecedented opportunities for major economies and passenger benefits that were not possible with separate operations.

ACE Planning

The \$1 billion+ ACEforward plan is proposed as the first major improvement project, focusing on new ACE services to Stanislaus and Merced Counties via a new exclusive passenger track along the Union Pacific mainline that parallels State Highway 99. In TRAC's view, the potential ridership gains that can be achieved by upgrading existing services are so extraordinary that they should come first.

TRAC believes ACE's first priority should be to speed up existing slow service over the Altamont Pass. We continue to enthusiastically support the intent of the now-sidelined Altamont Corridor Rail Project* to create a modern new regional rail service. A fundable project can be developed by identifying incremental improvements that each benefit the traveling public at an early date. These improvements (see below) over time will add up to a faster, more direct, primarily passenger-only route, especially between Tracy and Fremont. They should be accompanied by the judicious addition of additional service, converting ACE from a peak-hour-only commuter rail line to an all-day, 7-days per week regional rail service. Service to Silicon Valley for San Joaquin Valley passengers can be accomplished by shifting San Joaquin trains to the ACE route between Stockton and Fremont. (see below.)

The Altamont Corridor is central to shifting substantial numbers of commuters to transit, benefiting not only area residents, but the entire state's GHG emissions. It is a perfect candidate for Transit and Intercity Rail Capital Program funds from cap and

trade. Paralleling one of the most congested highways in Northern California, improving Altamont Corridor rail service would improve mobility for residents that would otherwise be stuck in traffic.

A New San Joaquin Service Delivery Plan

For the San Joaquins, improvement means more frequency between Stockton and the Bay Area, as well as increasing connections between Stockton and the Sacramento region. Increasing service to/from the San Francisco Bay Area from the current four to six daily round trips should be first priority. The two existing San Joaquin round trips serving Sacramento perform poorly and provide minimal service. These trips should be rerouted to Emeryville and Oakland instead. This would plug crucial gaps in the existing timetable, such as the lack of a late morning arrival and mid-afternoon departure. This change would significantly increase San Joaquin patronage, which is much stronger from the Bay Area than Sacramento.

ACE should purchase several Diesel Multiple Units (DMUs) to provide Stockton-Sacramento shuttle service, perhaps as an add-on to the trainsets recently ordered by TEX Rail (a new commuter line running from downtown Fort Worth to the Dallas-Fort Worth Airport). This DMU design has been modified for use in the United States and now meets Federal Railroad Administration (FRA) crash standards. Shared operation is thus feasible and acceptable on the Union



Figure 1. Conceptual illustration of lightweight European DMU ordered by TEX Rail, Fort Worth, TX. Now that this and similar FRA-approved DMUs are available in the U.S., exciting new service possibilities have emerged.

Pacific and Burlington Northern Santa Fe freight routes currently used by the San Joaquins and ACE trains. This DMU design is relatively fuel efficient, obtaining about triple the 0.4-0.5 mpg of locomotive-hauled trains.

DMUs could also provide economical new frequencies on the ACE route, with costs much lower than locomotive-hauled trains (e.g., a savings of at least \$12.00 per train-mile according to a study of potential DMU service in Santa Cruz County). DMUs are well-suited for when demand doesn't justify long locomotive-hauled trains, as well as providing new weekend service at an affordable price. While in the short term, this would end one-seat rides to and from Sacramento, the utility of the increased frequency (going from two to six daily round trips) would more than compensate for that inconvenience.

Capital funding needs for the DMU option are modest. A second platform and track at Stockton's Cabral station would be needed, as would capacity improvements on the UP line between Stockton and Sacramento. For DMU service, only minor changes would be required at the Lodi and downtown Sacramento stations. Required changes are expected to cost less than \$200 million. Potential new stations transfer stations to Sacramento's light rail system could also be added incrementally. The potential for passenger-only track should also be pursued where cost-effective.

In TRAC's view, this approach is far more cost-effective than the current proposal for adding "mid-route" San Joaquins starting at Merced or Fresno. It is important to note the example of "mid-route" Capitol Corridor trains operating only between Sacramento and Oakland. These trips tend to be poorly patronized compared to trains operating over the entire route between Sacramento and San Jose, with less than 100 riders on most trips.

Achieving Synergy Between The Services

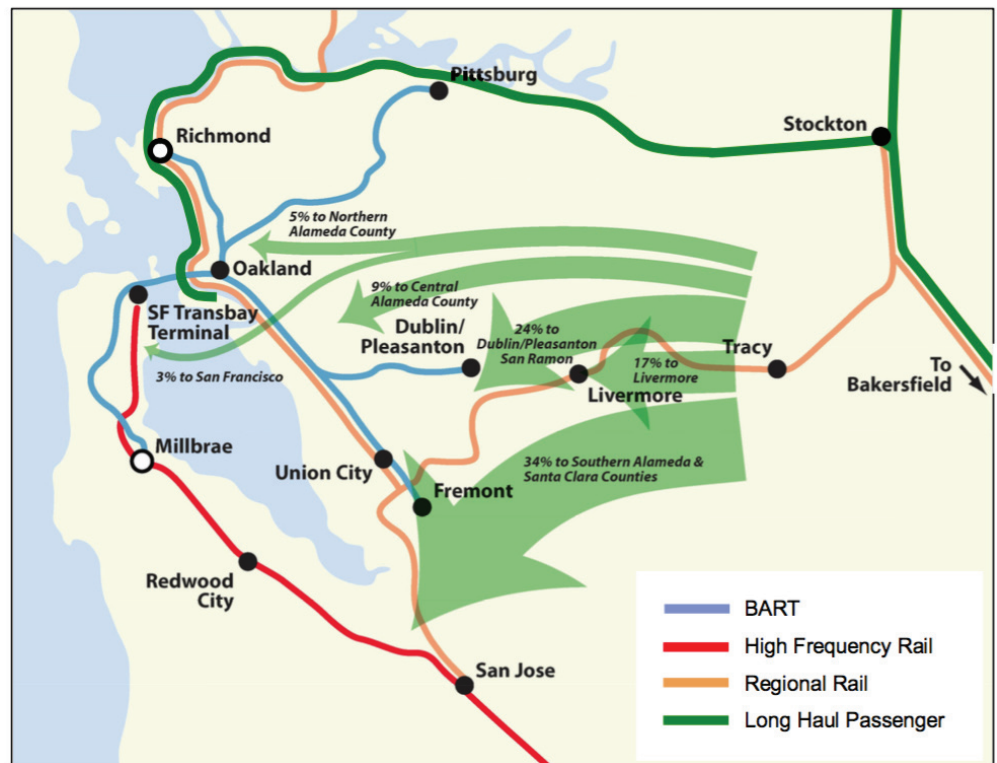
TRAC sees tremendous potential for synergy between ACE and the San Joaquins. Combining their capital programs will allow the creation over time of an East-West Altamont route that is both much faster and much more reliable for both services, since it would be largely independent of freight traffic. Figure 2 shows

how the ACE route is far better matched to projected travel demand than the San Joaquin's current route.

Putting the trains from both services on the same tracks will substantially expand the availability of service. This would effectively convert ACE to an all-day transit provider, a long-time goal. The resulting convenient schedule would attract large numbers of passengers away from their cars, thereby aiding the State's climate program.

If track capacity can be arranged, these synergies could be achieved in the near-term. San Joaquin trains from Bakersfield could pull into the Stockton ACE platform, then change directions to head west to the Tri-Valley and East Bay. Using a 5-minute stop in Stockton and existing schedule times (including those of the Capitol Corridor), it would take only 14 minutes more to go from Modesto to Oakland (9%) via the ACE route (when extended north from Fremont). Connecting service between Stockton and Martinez could be provided by buses or additional DMU service.

Travel times will become faster than the current San Joaquin schedule as the improvements proposed below are brought into service. Connecting to the Capitol Corridor in Fremont (Centerville) opens the San Joaquin to the rich job market in Fremont and the Silicon Valley, achieving many of the goals of ACEforward at a fraction of the cost.



Source: BART I-580 Phase 1 Study, 2002

Figure 2. Projected Central Valley to Bay Area commute patterns in 2020 (from Technical Memorandum, Altamont Corridor Preliminary Description, May 2009)

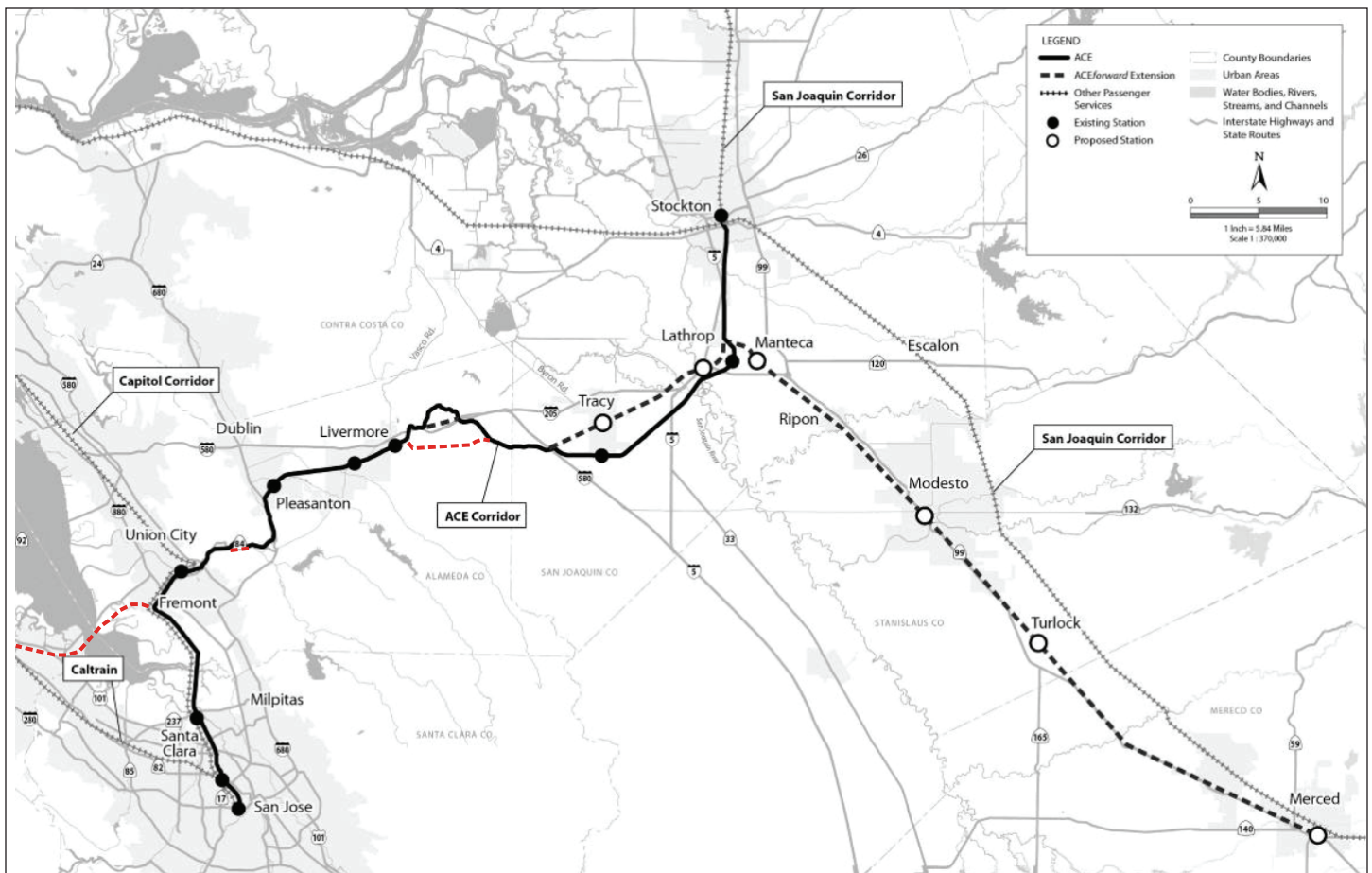


Figure 3. The Altamont and Niles Canyon route is a high priority for cap & trade funds from the Transit and Intercity Rail Capital Program, whether or not Stanislaus and Merced voters approve new taxes. (Base map: ACEforward)

TRAC recognizes that sharing track creates accounting complexities, including the different track charges for commute vs. intercity service. While we are unable to advise here, we believe practical solutions exist.

Union Pacific might well prefer providing Bay Area access from the south, as that route is less congested. In the long-term, connecting the southern end of the San Joaquin Corridor to a transfer station in Lathrop, thus bypassing Stockton by Bay Area-bound San Joaquins, might produce travel-time savings worth considering (Lathrop-Stockton services would be provided by extending the Sacramento DMUs).

Connecting the East Bay to the West Bay by conventional rail could be achieved by rebuilding the Dumbarton Rail Bridge. This would allow Central Valley residents to conveniently access employment centers in the northern Silicon Valley as well as San Francisco.

Extending Caltrain to the heart of downtown San Francisco ("DTX") has also been on the Bay Area's agenda since the early 1990's. DTX plans are complete and environmental approvals have been obtained. This project would benefit Altamont Corridor residents with direct service to downtown San Francisco.

Recently however, S.F. Mayor Ed Lee has proposed

the development of existing Caltrain properties. This would push the DTX aside, causing costs to soar and delaying construction by a decade or more.

Key Projects for Reducing Travel Times

- **Reroute ACE trains to tracks dedicated mainly to passenger service through downtown Tracy** as suggested by ACEforward, stopping at the City's recently completed Multimodal Center. This would reduce line length by 2-3 miles.
- **Build a tunnel near Patterson Pass.** Relocate the rail line to a new passenger-only alignment that generally parallels Patterson Pass Road, from the vicinity of the Altamont Pass Wind Farm Substation to East Livermore. This alignment would also reduce line length by a few miles and allow an immediate upgrade to 110 mph operations. It would be compatible if a future 150 mph line was built, bypassing Livermore and Pleasanton to the south.
- **Build a tunnel in Niles Canyon** through the hill across Alameda Creek from the Golden Gate Railroad Museum (Niles Canyon Railway) site. With relatively modest curve realignments elsewhere, the Sunol-Fremont segment could achieve much higher speeds than allowed by current speed restrictions due to curves, saving several minutes in each direction.

Travel times between Tracy and Fremont could be reduced by 25-30 minutes (approximately 40%!) once all the suggested improvements are constructed. Moving away from sharing track with freight will eliminate the reliability problems that have plagued ACE. An upgraded Altamont corridor with a reopened Dumbarton route would also facilitate 110-mph passenger service to San Francisco and San Mateo County in 90 minutes or less from Stockton.

The Demographics of Travel

More than 90,000 residents of the San Joaquin Valley hold Bay Area jobs according to the U.S. Census. Almost all of these commuters travel in the I-580/Altamont corridor. If Eastern from Eastern Alameda County are added, this figure exceeds 100,000 jobholders, excluding those working in the East Bay.

The 2007 Regional Rail Plan for the San Francisco Bay Area, commissioned and subsequently ignored by MTC, projected 60,000-70,000 daily regional rail riders via Altamont by 2040, including trips that would also use Dumbarton rail. That MTC plan also projected 20,000+ regional rail riders per day across the Dumbarton Corridor between Southern Alameda and San Mateo Counties, mostly on extensions of Altamont Corridor trains.

This estimate did not include potential ridership from Sacramento to San Francisco and the West Bay, operating via Altamont and Dumbarton, and then into San Francisco.

The Many Benefits of Altamont & Dumbarton Rail

In summary, upgrading the Altamont Corridor and restoring service across the Dumbarton would have many benefits. The corridor would:

- Serve both San Joaquin and ACE passengers with a shared, very fast passenger-only corridor.
- Improve speeds and greatly increase ridership.
- Relieve the horrible congestion in the I-580 Corridor. This is a major interregional need.
- Enable a shift to transit by large numbers of passengers, deserving major cap & trade funding.
- Be a cost-conscious program with a new right-of-way and incremental speed improvements over time.
- Restoring Dumbarton Rail would allow a direct connection to San Francisco, San Mateo and northern Santa Clara Counties--with very attractive destinations.
- Dumbarton Rail would take pressure off BART's Transbay Tube, which is at capacity.
- The Caltrain Downtown Extension would allow a direct connection to the heart of downtown S.F., a very important travel destination.
- This system would be extremely flexible--it could provide rail transportation over conventional-gauge rail lines to wherever there was demand.



Figure 4. Example of an Estonian DMU. This Swiss design is the prototype for the TEX Rail cars. (Stadler Bussnang AG)

A PDF of this TRAC Backgrounder is available at our website, <http://www.calrailnews.com>.

Train Riders Association of California
1025 9th Street, Suite 223
Sacramento, CA. 95814

(916) 557-1667

* See Altamont_Corridor_Preliminary_Project_Description at <http://bit.ly/1Nv6BvC> and Altamont_Corridor_Newsletter_10_26_09 <http://bit.ly/1PzWyET>