# Should TransForm Support the High Speed Train Bond?

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This matrix is a summary of the TransForm HST Working Group's evaluation.

- The first column outlines the criteria that were developed by the working group and through suverys of our working group.
- The second column compares the impact of building versus not building the HST I California. We considered whether building HST would result in better outcomes than no HST (signified by Green), the same or uncertain outcomes (in Yellow), or worse conditions (Red) for each of the critieria.

The "Major Differences" column outlines the major differences that the Working Group identified between the Altamont and Pacheco alignments.

The color in the HST vs. No HST considered two factors. First, it evaluated HST vs. No HST broadly, since the vast majority of the system stays constant no matter which alignment is chosen into the Bay Area. Then, it considered the differences between the Pacheco and Altamont alignments, noted those, and reflected on whether that difference was powerful enough to change the color in any way. (The only place that this did affect the color was in "impacts on sensitive habitat").

***NOTE: This attachment is rather general, and reflects the working group's evaluation. For a more detailed matrix see the next table. Both were updated to reflect changes from AB 3034.***

| Criteria | HST vs No HST | Major Differences between Altamont/Pacheco alignments |
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| **Land Use Impacts and Benefits** | **Green**<br><br>HST land use policies will promote city center development, since downtown stations have been selected. The authority has TOD policies in place, and has hired Professor Betty Deakin and others to work on transit area design. | Pacheco alignment could have encouraged sprawl near Los Banos, though Proposition 1A would now ban a station there. Pacheco would encourage long-distance commuting from south of Gilroy, Altamont may encourage it from the Stockton and Modesto areas. |
| **Greenhouse Gas (GHG) & Air Quality Benefits** | **Green**<br><br>Reduce 6 million metric tons of CO2 in 2030, with some local air quality benefits as well. The Authority has set a goal of using 100% clean renewable energy. | While the models show similar outcomes for both alignments, some members of the working group believe the models/scenarios are flawed and that Altamont would have higher ridership, and therefore higher GHG benefits. |

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| **Impacts on Sensitive Habitat** | **Green (with some yellow)**<br><br>No consensus from the working group:<br><br>Compared to the alternatives of highway and airport expansion HST is green. But some concluded that since there have not been Project level EIRs there are not specific plans for mitigation so it is hard to evaluate. That is why there is "some" yellow. | | Habitat impacts associated with the Altamont alignment are in the South Bay wetlands where impacts can more easily be mitigated (lots of impacted lands for purchase). The Pacheco alignment would impact some wetlands, though there is now a commitment to purchase 10,000 acres of conservation easements.<br><br>The Altamont avoids major parks, while Pacheco impacts the Pacheco State Park, and the Grasslands Ecological Area, which are of state and national importance. |
| **Impacts on General Fund** | **Yellow**<br><br>Either through paying off HST bond or other bonds (prisons, dams, etc.), the General Fund is going to be impacted. It is not a great way to go, but it may as well be for transit. See the more detailed matrix for additional explanation. | | No difference<br><br>The cost of these alternatives would be very similar. |
| **Benefits to Local Transit** | **Sharing Rail Right of Way with Other Commuter Lines** | **Green**<br><br>Would help systems like Metrolink, and Caltrain, and fund Great stations like Transbay Transit Center | --Altamont alignment would provide a massive upgrade for the east-west connection<br>--Altamont provides an alternative to BART-San Jose<br>--Pacheco benefits Caltrain line, but local transit benefits are not as great as those of Altamont. |
| | **Connecting with local transit** | **Green**<br>With downtown stations the HST will meet with local transit providers. | --Altamont has a greater potential to attract Bay Area commuters who would otherwise be in their cars. |

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| **Accountability of CHSRA** | ***One member of the working group put this criterion forward. The group didn't rate it on the green/yellow/red scale, but did discuss it.***<br><br>-- He felt that political calculations, strength of South Bay representatives, and potentially some real estate interests led to selection of Pacheco, not the merits of the alignment.<br>-- Others said that the HST bond funding can't be spent until full financing is secured this means private investment. The private sector won't get involved unless the planning has been competent, and the alignment will work. |

**TransForm's Detailed Evaluation of California High-Speed Train Bond**

This table provided important detail to inform TransForm's HST working group. It looks at the differing impact of the two potential entries into the Bay Area, as well as comparing these alternatives to the impacts of not building the train.

| **Criteria** | **High-Speed Train: Altamont** | **High-Speed Train: Pacheco** | **Impacts of Not Building a High-Speed Train** |
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| **Impacts on sensitive habitat** | (looking at Altamont to San Jose and San Francisco with Dumbarton crossing)<br><br>*Impacts:*<br>423 acres of prime farmland<br>318 acres of directly impacted floodplains<br>40 acres of water bodies<br>44 acres of wetlands<br>56 special status plants<br>49 special status wildlife<br>20 parklands/protected spaces | (looking at preferred alignment – termini of San Jose and San Francisco)<br><br>*Impacts (and % increase/decrease compared to Altamont):*<br>663 acres of prime farmland (+57%)<br>521 acres of directly impacted floodplains (+64%)<br>4 acres of water bodies (-90%)<br>16 acres of wetlands (-69%)<br>58 special status plants (+3%)<br>53 special status wildlife (+8%)<br>16 parklands/protected spaces (+20%) | Highway and airport expansion --the primary alternatives to meeting the state's growing travel demand—would have significant impacts on sensitive habitat.<br><br>There are currently master plans for expansion of SR 99, which runs north-south through the Central Valley. Every major airport across the state has an expansion plan drafted or in the process of development. Smaller airports such as Ontario and Palmdale are in the process of planning for expansion to accommodate greater volumes of air traffic.<br><br>It's not clear which projects could be displaced or replaced by a High-Speed Train system, but we've put together some examples of the kinds of projects that might be made redundant by HST. Their impacts illustrate of the kinds of impacts we'd see from alternatives to HST.<br><br>Examples:<br><br>LAX South Airfield Project would result in |

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| | | | unmitigatable impacts of 92 acres of grassland and 36 acres of habitat for special species.[1] (This is just one segment of the $11 billion Master Plan.)<br><br>Oakland Airport's Master Plan identifies 327 acres of wetlands with potential impacts from its expansion options.[2]<br><br>The "Campus Parkway"—a new 4.5 mile 4-lane expressway in Merced that will provide a north-south alternative to congestion on SR 99—is illustrative of the kind of freeway expansion that we will continue to see without efficient alternatives. On this 4.5 mile project impacts include loss of 83 acres of active farmland, habitat impacts for kit fox, burrowing owl, special status raptors, bats, and other birds, and special status fish.[3] |
| **Greenhouse gas and air quality impacts** | Specific GHG analysis was only done for the initial Pacheco preferred alternative. But depending on which Altamont route was chosen the reductions would likely be ±3% of the 12 billion pounds CO2 per / year ) by 2030 compared to no HST.<br><br>Bay Area's Air Basin would see high benefits in local air quality from lower CO, PM 2.5, PM 10, $NO_x$, and | Reduction of 12 billion pounds, or slightly less than 6 million metric tons $CO_2$/ year by 2030.<br><br>Bay Area's Air Basin would see high benefits in local air quality from lower CO, PM 2.5, PM 10, $NO_x$, and TOGs compared to no HST. | 12 billion more tons $CO_2$/year more than with HST, by 2030. This number is likely conservative because of other elements that might make HST's GHG emission reductions even greater (e.g., more sustainable land use patterns).<br><br>This number does not assume additional airport or highway expansion beyond the baseline. These kinds of expansions, especially increase in air traffic, would lead to |

[1] *South Airfield Improvement Project DEIR.* Los Angeles International Airport. March 2005. Summary. Pg. I-16. (http://www.laxmasterplan.org/pub_specPlan.pfm)
[2] *Oakland International Airport Master Plan.* March 2006. Chapter 6. pg 83 (http://www.oaklandairport.com/masterplan_oak/support_documents.shtml)
[3] *FEIS Campus Parkway.* 2006. County of Merced and Caltrans. Table S-2. (http://www.dot.ca.gov/dist6/environmental/envdocs/d10/)

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| | TOGs compared to no HST. | | a projection of even greater GHG emissions reductions from HST. |
| **Stations should be in City Centers** | 23 stations in city centers or airports.<br><br>Difference from Pacheco: downtown station in the Tri Valley (and possibility of one in Tracy or Southern Alameda County)<br><br>Same land use policies for station areas as Pacheco Alignment | Same 23 stations in city centers or airports as Altamont<br><br>Difference from Altamont: downtown station in Gilroy<br><br>Same land use policies for station areas as Altamont Alignment | |
| **Overall (urban) Land Use Impacts/** | The development of a high-speed train linking California's major cities to each other could help retain existing downtowns as the primary economic centers of California and provide mobility for the state's growing population.<br><br>The Altamont alignment would tie in two additional Northern cities of Stockton and Modesto during phase 1, which would be advantageous in terms of connecting these cities with southern Central Valley and LA.<br><br>In terms of connecting Stockton and Modesto to the Bay Area, Highway 580 has quickly become one of the most congested corridors as Bay Area housing gets exported eastward to San | Same overall statewide benefits as described for Altamont.<br><br>In this corridor additional distant housing may be promoted in San Benito or Monterey counties, with commuters using the Gilroy station, and to a smaller extent there might be additional growth spurred near Merced. There is likely to be some additional housing along the corridor between Gilroy and San Jose as result of the HST system. Prop 1A would prohibit any future station in this area. | The majority of job growth over the past few decades has taken place outside of city centers.<br><br>The Central Valley has an interest in focusing future growth in their existing downtowns. This is being outlined within their Blueprint process. However, it's hard to bring economic activity into downtowns without a catalyst.<br><br>Mature downtowns like Los Angeles or San Francisco face a different challenge—increasing jobs and business activities may be limited by access into these cities when traffic keeps people from accessing (or choosing to locate) downtown. Lack of access improvements to city centers would continue the centrifugal force that has brought most the new economic acitivity away from the city centers. |

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| | Joaquin County. The Altamont is unlikely to be expanded to 10 lanes (by Alameda County policy). High-Speed Train service over the Altamont Pass would, therefore, allow additional commuters over the Altamont most likely promoting more distant housing. | | |
| **Provides fast service between Bay Area and Sacramento** | SF to Sacramento in 1.06 hours; San Jose to Sacramento in 1.03 hours[4] | SF to Sacramento in 1.47 hours (additional 41 minutes compared to Altamont); San Jose to Sacramento in 1.18 hours (additional 15 minutess compared to Altamont)[5]<br><br>Pacheco alignment leaves out cities North of Merced during phase 1. | No new service – Existing Capitol Corridor service to Sacramento is over 2 hours from San Francisco and about 3 hours from San Jose. |
| **Provides service between Northern California's 2 largest cities** | No | Yes – 30 mins between SF and San Jose[6] | N/A |
| **Impact on existing sources of transit capital or operating funds and on State's General Fund** | The current financial plan has the state's $10 billion contribution coming from the General Fund, to be matched by federal and private sources, value capture near stations and other financial mechanisms. While the bond would not directly come from any existing source of transit, it would be repaid out of the General Fund. Transit funding has been raided in recent years to help offset deficits in the General Fund that are in part due to repayment of bond debt.<br><br>So the outcome on this principle is really ambiguous and up to subjective interpretation. On the one hand, we don't have high-speed rail and transit funds are already being raided to the maximum, so it could be argued that we might as | | With no state funded alternative proposed at this time it is difficult to compare with HST. Yet as in the section above on "impacts to sensitive habitat", there is tremendous existing demand for additional transportation capacity, and California's population is still growing rapidly. Since HST is so much more efficient than road capacity, and airports are massively expensive to expand, it has been estimated that providing similar air/road |

[4] *Draft Bay Area to Central Valley HST Program EIR/EIS*. 2007. S1.4.3—Travel Times.
[5] *Draft Bay Area to Central Valley HST Program EIR/EIS.* 2007. S1.4.3—Travel Times
[6] "Travel Time Estimates: Bay Area to Central Valley Program EIR/EIS" presentation by CHSRA staff at March 2, 2007 CHSRA Board Meeting.

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| | well have high-speed rail. This view would be buttressed by the economists and politicians who argue that the state is likely to spend up to its safe bond limit of about 7% of its general revenue, and it is really a matter of what we want to spend it on -- prisons, parks, education, dams, highways, trains, etc. -- in other words it is more a matter of figuring out our priorities. On the other hand if as a State we are not going to reach our limit, or reach it soon, then the additional debt obligation from HSR may make it harder to eventually win back regular transit funding such as the gas tax spillover. | | capacity would be 2-3 times the price of HST. While it is likely that some amount of this would be paid by the state, probably more would come from future county sales taxes, discretionary transportation funds, airport fees, and other sources. Some of these sources would be competitive with transit funding. |
| **Potential impacts on, and interactions with, existing transit services/ use of existing tracks** | The HST stations are primarily downtown stations that act as transit hubs. This will have the general benefit of bringing in pulses of morning and evening riders that can then easily use transit to get to other destinations. Like with the SF Transbay terminal it could also provide an infusion of funds to improve the stations.<br><br>The Altamont would create a connection somewhere in the Tri-Valley, depending on the configuration, possibly supporting existing BART service (such as a connection at Union City) or supporting a proposed BART station (such as a connection at Livermore). Once on the west side of the Bay, HST would use Caltrain ROW, with outside tracks for Caltrain only and inside tracks shared between Caltrain and HST. Grade separation, full | Overall statewide benefits would be similar to Altamont. The SF-SJ portion would use existing Caltrain ROW for the entire length and would also require and fund a new Transbay Terminal. | Generally maintains status quo of airport and highway dominance, especially in the Central Valley where there is no strong city or intercity rail to serve as a backbone for a stronger, feeder transit system. |

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| | fencing, and enhanced signaling and communications would support Caltrain.<br><br>Extending these tracks to the new Transbay Terminal would benefit regional connectivity and costs could be shared between Caltrain and HST. | | |