



**CALIFORNIA  
HIGH-SPEED RAIL  
AUTHORITY**

DATE: October 28, 2010  
TO: Chairman Pringle and Board Members  
FROM: Roelof van Ark, Chief Executive Officer  
RE: Agenda Item #4 – Addition of Redwood City Trench Option

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**Background**

Staff presented a Supplemental Alternative Analysis Report for the San Francisco to San Jose Section at the August 8<sup>th</sup> meeting. The Supplemental Alternatives Analysis presented three stitched together design options for the corridor between San Francisco and San Jose. The goal of the analysis was to identify three design options that would inform the project description for the EIR/EIS and would be carried forward into more detailed engineering and environmental analysis. In several locations on the corridor, staff recommended to pursue a single design option for particular sub-sections.

At Redwood City (Subsection 4C in the Supplemental AA), connections to the Dumbarton spur and the Port of Redwood City and a variety of environmental and roadway restrictions led to recommendation of a single aerial alternative. These constraints identified through meetings between the Authority's design team and Redwood City staff were presented in the Preliminary Alternatives Analysis (page 4-36, Note 4C-1). The major design objectives based on the constraints were to (1) avoid conflicts with Cordilleras Creek and (2) avoid changing the elevation of Whipple Avenue, which would result in potential impacts to El Camino Real. Based on the constraints, a trench solution was deemed infeasible for the following reasons:

In order to avoid conflicts with the creek, the transition to a trench could not occur until just south of creek, causing conflicts with Whipple Avenue;

The vertical curve necessary to transition to a trench could not be achieved without impacting Cordilleras Creek; and

Holding the elevation of Whipple Avenue resulted in impacts to the creek.

**Discussion**

Subsequent to the release of the SAAR, staff has met with Redwood City staff to discuss the design options through the city. In these discussions, Redwood City staff have offered to modify their constraints discussed above so that the Authority's staff and consultants can evaluate the feasibility of a trench design option. The re-introduction of the trench design option with revised constraints would be seen favorably by the community.

In addition to the trench option, staff will continue to evaluate the aerial solution through Redwood City as outlined in the SAAR.

**Staff Recommendation**

Staff recommends a below grade trench alternative at Redwood City, between approximately Howard Avenue to just south of Woodside Road, be carried forward into the detailed environmental analysis along with the aerial design option. The aerial option would continue to be associated with design option "A" and the trench option would be associated with design options "B" and "B1."

**Attachments**

Letter from Redwood City dated September 16, 2010

Mayor Jeff Ira  
Vice Mayor Alicia C. Aguirre

Council Members  
Ian Bain  
Jeffrey Gee  
Rosanne Foust  
Barbara Pierce  
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September 16, 2010

Robert Doty  
Director, Peninsula Rail Program  
California High-Speed Rail Authority  
925 L Street, Suite 1425  
Sacramento, CA 95814

Dear Mr. Doty,

Redwood City hereby formally requests that the California High Speed Rail Authority (CHSRA) study additional alignments for Redwood City in its design process, including the EIR process. A study of additional alignments as outlined below is not only reasonable, it is necessary for our community in order to maintain the practical and realistic viewpoint we have so far consistently displayed in our dealings with the CHSRA.

In the CHSRA's *Supplemental Alternatives Analysis Report for the San Francisco to San Jose Section* dated August 2010, only one option (aerial alignment) is shown for Redwood City in Design Options A, B, and B1. In addition to an aerial alignment, Redwood City requests that the CHSRA study and carry forward alignments that are predominantly below grade, including a combination of open and covered trenches, in Redwood City Design Options B and B1. It is our understanding that a transition from an aerial to a below-grade alignment between San Carlos and Redwood City was previously not considered on the basis of slope, but that now, given the revised maximum slope allowance of 2%, a below-grade alignment in Redwood City is indeed technically feasible. We feel therefore that the CHSRA is in effect obligated to provide an analysis of this option. Also, for the purposes of further study and analysis of a trench option in Redwood City, please reconsider the vertical profile feasibility, both with and without the assumptions relating to clearance constraints at Cordilleras Creek and Whipple Avenue (as described in Note 4C-1 on page 4-36 of the Preliminary Alternatives Analysis Report), including how the constraints may or may not impact a transition to a below-grade alignment after (south of) Cordilleras Creek.

More information is needed for our community and policy makers, so we are also asking that the CHSRA further identify and compare the differences between aerial and below-grade designs in terms of issues, concerns, technical considerations, relevant limitations, benefits, community integrity, and costs, beyond the preliminary information already provided by the CHSRA. Socio-economic factors must be considered with respect to Redwood City's population, in addition to physical impacts and the physical environment. The cost analysis should contain a comparison of both the expenses and benefits of each option, including the following: construction impacts, community benefits and impacts, business development, and long-term land use opportunities such as the potential reclamation of land in the corridor

that could be utilized for a variety of land uses (e.g. revenue-generating uses, public space, and other uses).

We also believe it is crucial to see visual representations (e.g. sketches, renderings, schematics, or other graphical representations) that contain sufficient detail and engineering input to provide a realistic concept of each alignment. The purpose of each representation is to enable the community to understand and visualize each option in terms of height (including all overhead lines and poles, and catenary wires), width, support columns, and all other visual aspects. If story poles or other physical representations are being considered, we would like to know how and when they will be implemented so that installation can be coordinated. We also anticipate that the EIR will provide further details about sound levels, wind effects, and vibration to ensure that all components of each option are well understood.

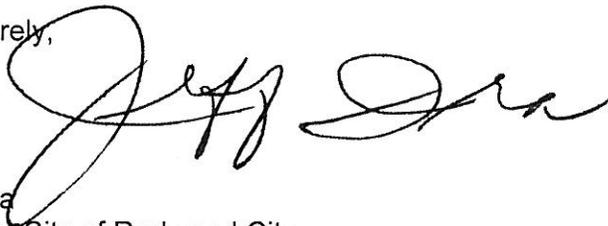
We further ask that the CHSRA consider and evaluate innovative alternatives for providing transit service for commuters during the construction period, in order to limit the construction right-of-way impacts, reduce construction costs (e.g. eliminate the need for a rail bypass during construction), shorten the construction time period, and enhance construction safety. As part of this alternatives analysis, please consider options for temporarily suspending Caltrain service and providing an alternative transit mode.

Redwood City remains willing to work with the CHSRA to find the best solution for our community, local businesses, and transit users. We are engaging the services of a consulting firm to examine the implications of various alignments and of a downtown station, in order to:

1. understand and help visualize the scale of the high-speed train infrastructure within Redwood City's downtown context,
2. outline the implications – in the form of pros and cons – for the trench and aerial structure options for the Redwood City segment, and
3. analyze the potential economic and land use impacts of a high-speed rail station to determine whether Redwood City should consider hosting a downtown station.

We look forward to receiving your response on all requests listed above, and we offer our assistance to further define any of these items to ensure that the high-speed train serves its intended purpose, from all perspectives.

Sincerely,



Jeff Ira  
Mayor, City of Redwood City

- c: Board of Directors, California High-Speed Rail Authority  
Michael Scanlon, Executive Director/CEO, Peninsula Corridor Joint Powers Board  
Peninsula Corridor Joint Powers Board of Directors  
City Council  
Peter Ingram, City Manager  
Pamela Thompson, City Attorney  
Silvia Vonderlinden, City Clerk  
Chu Chang, Director of Building, Infrastructure, and Transportation Department