STAFF REPORT

City Council
Meeting Date: **10/10/2017**
Staff Report Number: **17-238-CC**

Regular Business: **Identify a preferred alternative for the Ravenswood Avenue Railroad Crossing**

Recommendation

Staff recommends that the City Council identify a Ravenswood Avenue Railroad Crossing (Project) preferred alternative based on the options outlined in the Analysis section below in order to finalize the Project Study Report and finish the 15% design plans to be eligible for future grant opportunities. The options for Council consideration are as follows:

- Option 1: Alternative A: Ravenswood Avenue Underpass
- Option 2: Alternative C: Hybrid with Three Grade Separated Crossings

Policy Issues

The Project is prioritized in the 2017 City Council Work Plan (item No. 51) that was approved February 7, 2017. The Project is consistent with the City's Rail Policy and with the 2016 General Plan goals to increase mobility options to reduce traffic congestion and greenhouse gas emissions; increase safety; improve Menlo Park's overall health, wellness, and quality of life through transportation enhancements; support local and regional transit that is efficient, frequent, convenient and safe; provide a range of transportation choices for the Menlo Park community; and to promote the safe use of bicycles as a commute alternative and for recreation.

Background

The existing railroad crossings along the Caltrain corridor cause traffic delays, congestion and impede traffic flow for all modes of travel at all times of the day and days of the week, creating an unreliable travel time in the east-west directions of travel. The high volumes of all modes of traffic using the local roadways at each of these railroad crossings and the frequency and speeds of the trains also create many safety concerns, especially at Ravenswood Avenue where the highest volumes of vehicles and bicycles are experienced. In the most recent three year period of collision records available, 20 collisions had been reported at or adjacent to the four Caltrain corridor crossings including one fatality involving a pedestrian in 2013 and one fatality involving a vehicle in 2015. The 2015 fatality prompted the City to install the improvements at the Ravenswood Avenue/Alma Street intersection that are currently in place. Future Caltrain rail traffic projections show increased train frequencies and increased gate down times for at-grade crossings that will further exacerbate the current traffic and safety concerns.

The Project is evaluating the engineering feasibility of replacing the existing at-grade railroad crossings of the Caltrain tracks by building grade separations of the roadways from the tracks at Ravenswood Avenue, Oak Grove Avenue, and Glenwood Avenue, with priority on Ravenswood Avenue. This study is building upon previous studies and is focused on the two alternative types that were previously determined to be the

most feasible, an Underpass (roadway lowered under rail tracks) and a Hybrid (roadway lowered and rail tracks elevated).

Key dates for the Project include:

- SMCTA awarded and programmed $750,00 Measure A Grade Separation Program funds for the Project in November 2013;
- The Project was included in the Fiscal Year 2015-16 Capital Improvement Plan (CIP);
- City Council provided direction to proceed with study of Underpass and Hybrid alternatives in May 2015;
- Request for Proposals (RFP) was issued in December 2015 and a consultant was selected in February 2016 after proposal review and interview process;
- City Council approved award of the contract to AECOM in March 2016 and the Project began;
- Community Meeting #1 was held in May 2016 to introduce the Project and gather information and community feedback;
- Presentation was given to the Chamber of Commerce, Business and Transportation Issues Committee in September 2016;
- Meetings were held with representatives from the Police Department and Fire District in September 2016;
- Community Meeting #2 was held in October 2016 to present three alternatives (A, B, and C) and gather more community feedback;
- The Project was presented to the Bicycle Commission, Transportation Commission and Planning Commission in November and December 2016;
- A Study Session was held at the February 7, 2017, City Council meeting and City Council directed staff to return with additional information;
- A public Rail Information Meeting was held to present the status of the Project in March 2017;
- A Study Session was held at the April 4, 2017, City Council meeting and City Council provided direction to staff to narrow the options to Alternative A, Ravenswood Avenue Underpass, and Alternative C, Hybrid with three grade separation crossings, as described below. Alternative B (Hybrid with two grade separated crossings) was eliminated from further consideration at this meeting;
- Community Meeting #3 was held in June 2017 to present the remaining alternatives (A and C) and construction impacts and obtain community preferences;
- One-on-one meetings were held with various key stakeholders including Fire District, Police Department, property owners and business owners; and
- The Project was presented to the Planning Commission and Complete Streets Commission in September 2017, and each commission was asked to recommend a preferred alternative to City Council.

Analysis

Alternatives

The current alternatives are described briefly below. Exhibits of each are included as Attachments A and B.

Alternative A: Ravenswood Avenue Underpass

Under this alternative, the rail tracks would remain at the existing elevation and Ravenswood Avenue would be lowered approximately 22 feet below existing elevation to run under the railroad tracks. Existing at-grade crossings at Oak Grove, Glenwood and Encinal Avenues would remain as existing with no changes.

Alternative C: Hybrid with Three Grade Separated Crossings

Under this alternative, grade separations would be constructed at Ravenswood, Oak Grove and Glenwood Avenues and the railroad profile elevation would be generally flat. The rail tracks would be raised

approximately 10 feet at Ravenswood and Oak Grove Avenues and approximately 5 feet at Glenwood Avenue. Ravenswood Avenue would be lowered approximately 12 feet, Oak Grove Avenue approximately 11 feet and Glenwood Avenue approximately 15 feet at the railroad tracks. A maximum rail elevation of approximately 10 feet from existing grade would occur from Ravenswood Avenue to Oak Grove Avenue including the station area.

Community Meeting #3 Summary

Following the April 2017 City Council meeting, the Project team hosted the third community meeting on June 7, 2017. Community members were able to review the proposed alternatives in greater detail including videos of flyover simulations for both Alternative A and C, hear about traffic impacts and mitigations, construction staging and impacts, see a potential railroad "shoofly" or temporary track alignment and layout, voice their preferences on a preferred alternative (A or C), and provide their input regarding the construction constraints and impacts. Exhibits from the previous community meetings were posted around the meeting room and a virtual reality station was set up for attendees to see the alternatives in more detail.

There were approximately 55 community members in attendance. The key outcomes of the meeting included:

- Over 85% of the community members expressed support for Alternative C, communicating the desire to grade separate more crossings and maintain greater east-west connectivity for all travel modes.
- The community members that expressed support for Alternative A communicated the desire to focus on the highest volume location and lowest cost option.
- Some community members expressed an interest in reconsidering a trench or tunnel alternative.
- Some community members expressed an interest in reconsidering a viaduct or fully raised track alternative.

A full summary of the meeting including all comments received, a copy of the presentation and the exhibits are posted on the City's project web page at www.menlopark.org/ravenswood. The City Council received an informational update on the project following the Community meeting at its June 20, 2017 meeting.

Commission Recommendations

The Project team presented Alternatives A and C to the Planning Commission on September 11, 2017, and to the Complete Streets Commission on September 13, 2017, and requested that each Commission make a recommendation to City Council on a preferred alternative.

Planning Commission

Planning Commission made a motion to recommend Alternative A as the preferred alternative with 4 voting in favor, 2 voting against and 1 absent. The motion additionally stated that they recommend that City Council be open to consider other options, that the Project team provide additional analysis for cost implications of other options such as the viaduct and that the Project team provide photos of the berm experience. Reasons for supporting Alternative A included:

- The visual impacts and "dividing" impacts of a wall or berm with Alternative C
- Cut-through traffic on Alma Street will be eliminated with Alternative A
- Alternative A will improve north/south bike connectivity on Alma Street
- Alternative A has a shorter construction time which means shorter period of disruption

Other items of discussion included:
- Additional renderings of the wall or berm in other locations of the City
- Other options were desirable to some, including trench/tunnel and viaduct
- Cost estimates for other options including trench/tunnel and viaduct were requested

Complete Streets Commission

Complete Streets Commission made a motion to recommend Alternative C as the preferred alternative with 6 voting in favor, 3 voting against and 1 absent. Reasons for supporting Alternative C included:
- More grade separations are preferred
- Alternative C gives more direct access to the library from the intersection of Ravenswood Avenue and Alma Street
- Alternative C is more consistent with future expansion of rail operations
- Alternative C provides an overall solution rather than an interim solution

Other items of discussion included:
- Grade separating at Encinal Avenue either for all modes or for bicycle/pedestrian only is desirable
- Bicycle and pedestrian access at all crossings should be as robust as possible
- Breezeways throughout the wall/berm in Alternative C are essential
- Other options were desirable to some, including trench/tunnel and viaduct

Emergency Response Feedback

Meetings with emergency responders, including the Menlo Park Fire Protection District and City Police Department representatives were held throughout the project to gather input on the alternatives and to obtain feedback on a preferred alternative. Both Fire District and Police Department representatives prefer Alternative C, which provides additional safety improvements by grade separating more crossings, improves cross-town traffic circulation by eliminating more train gate controls and delays, and provides improved access to area hospitals, located west of the railroad tracks. Ongoing coordination will be needed as any alternative progresses to coordinate on specific property access requirements for emergency response and throughout any construction efforts that may proceed in the future.

Property and Business Owner Outreach

Meetings have been on-going with potentially impacted business and property owners. Feedback received from these stakeholders has been generally consistent with that received at the Community Meeting. Stakeholders associated with properties with potentially minor effects from the project generally prefer Alternative C. Stakeholders associated with properties with potentially major effects from the project on Oak Grove and Glenwood Avenues generally prefer Alternative A.

Alternatives Comparison Matrix

Community feedback received to date was used to create an alternatives comparison matrix to assess the benefits and impacts of each Alternative, as can be seen in Attachment C. Important factors highlighted in the matrix include:
- Reduction in potential rail/vehicle conflicts;
- Improvement in east/west connectivity;
- Improvement in east/west pedestrian and bicycle access;
- Reduction in potential horn and gate noise;
- Maintaining the Alma Street/Ravenswood Avenue connection;
- Minimizing visual impacts;

- Minimizing property and driveway impacts;
- Minimizing disruption during construction; and
- Improving traffic pattern predictability.

Alternative A provides more moderate benefits with more moderate impacts, while Alternative C provides greater benefits with greater impacts for most of the comparison factors.

Next Steps

City Council is being asked to select a preferred alternative at the October 10, 2017, meeting. Once the City Council has selected a preferred alternative, the Project team will complete the 15% design plans and the project report. Upon completion, City staff will then explore funding opportunities to advance the project to the environmental study and design phase. Based upon typical planning level estimates, the environmental study and design phase could take approximately 3-5 years depending upon funding availability, followed by securing funding for construction and approximately 3-5 years of construction. Depending upon availability of funding sources, this schedule could be expedited.

Key remaining milestones are summarized below:

Key Project Milestones	
Preferred Alternative Selection by City Council	October 10, 2017
Project Completion (i.e., 15% design, project report)	December 2017
Staff to begin applying for environmental/design funding	December 2017

Impact on City Resources

The Project was included in the CIP for FY 2015-16, with a total budget in the amount of $750,000. Through the Measure A Grade Separation Program, the SMCTA will reimburse the City up to $750,000 for the Project. Including contingency and staff time, the total approved budget is $825,000. Staff resources are available to complete the existing scope.

Environmental Review

The results of this phase of the Project will identify required environmental reviews and studies required to advance the Project. Environmental reviews and studies will be completed as part of the next phase of work, not as part of this scope.

Public Notice

Public Notification was achieved by posting the agenda, with the agenda items being listed, at least 72 hours prior to the meeting. Additional public notification was achieved by sending citywide postcards in early September 2017, including in the City Council Weekly Digest on October 6, 2017, posting Citywide on NextDoor and sending an email to the Public Works project interest list.

Attachments

A. Alternative A exhibits
B. Alternative C exhibits
C. Alternatives Comparison Matrix

Report prepared by:
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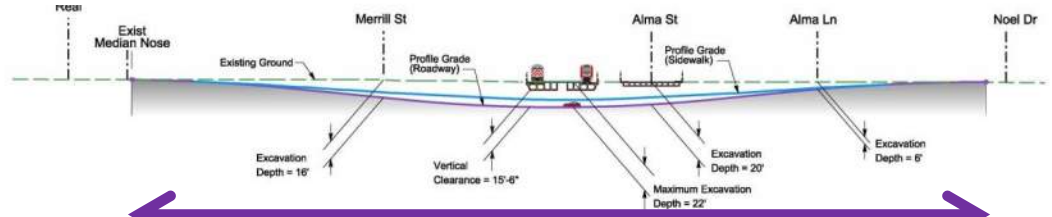
Report reviewed by:
Nicole H. Nagaya, Assistant Public Works Director

ALTERNATIVE A: UNDERPASS
(RAVENSWOOD ONLY)

Alternative A

Ravenswood Ave



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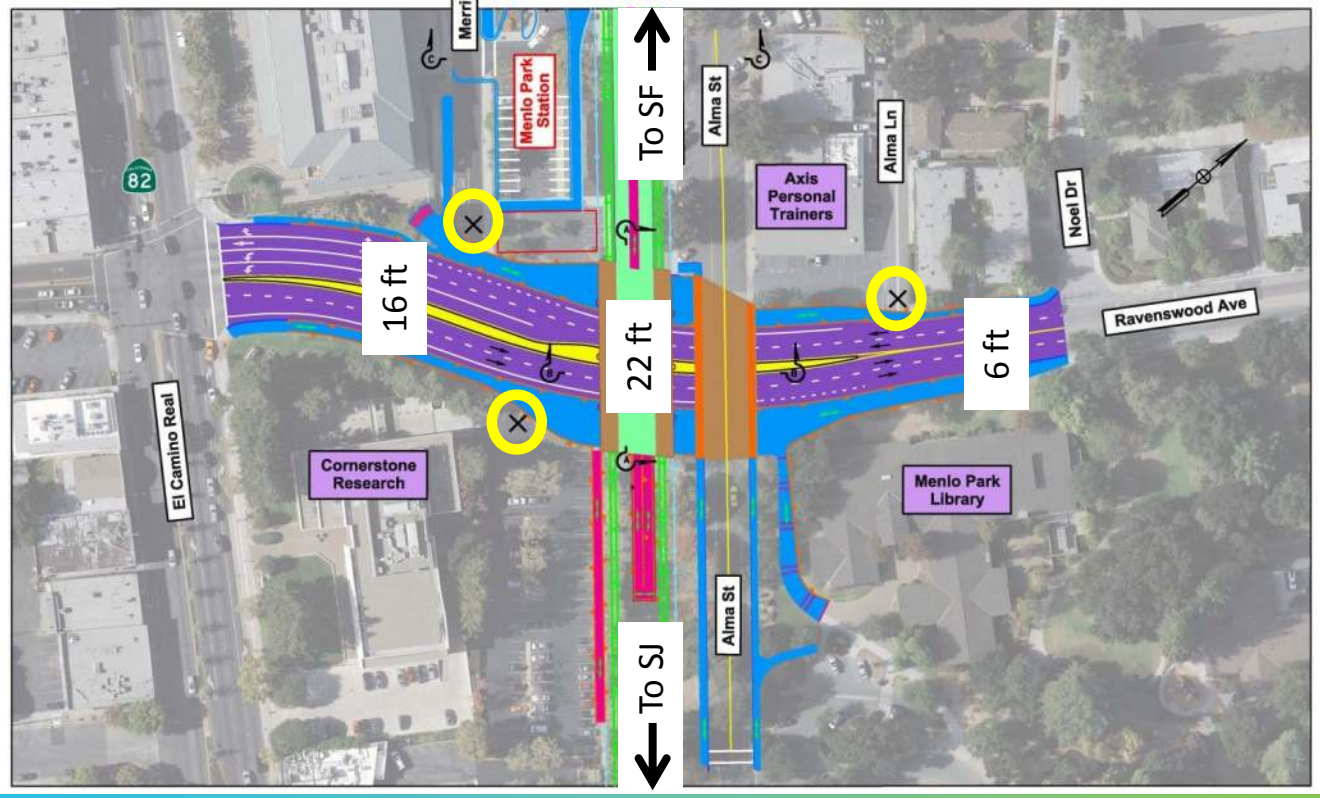


Ravenswood Avenue Railroad Crossing Project

MENLO PARK RAILROAD CROSSING · Caltrain · SAN MATEO COUNTY Transportation Authority · apex STRATEGIES · AECOM

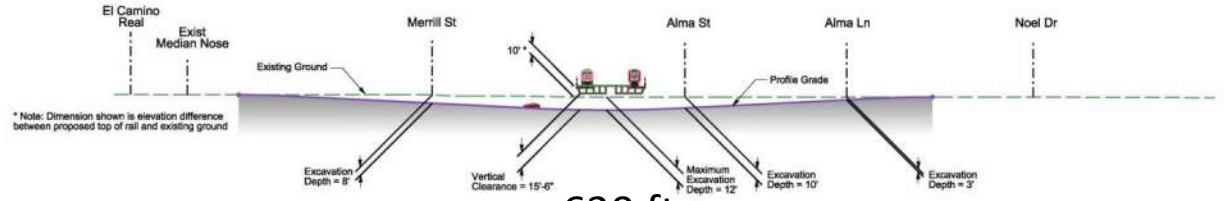
ALTERNATIVE A: UNDERPASS
(RAVENSWOOD ONLY)

Alternative A

Photo Simulation Looking East along Ravenswood

Alternative C

Ravenswood Ave



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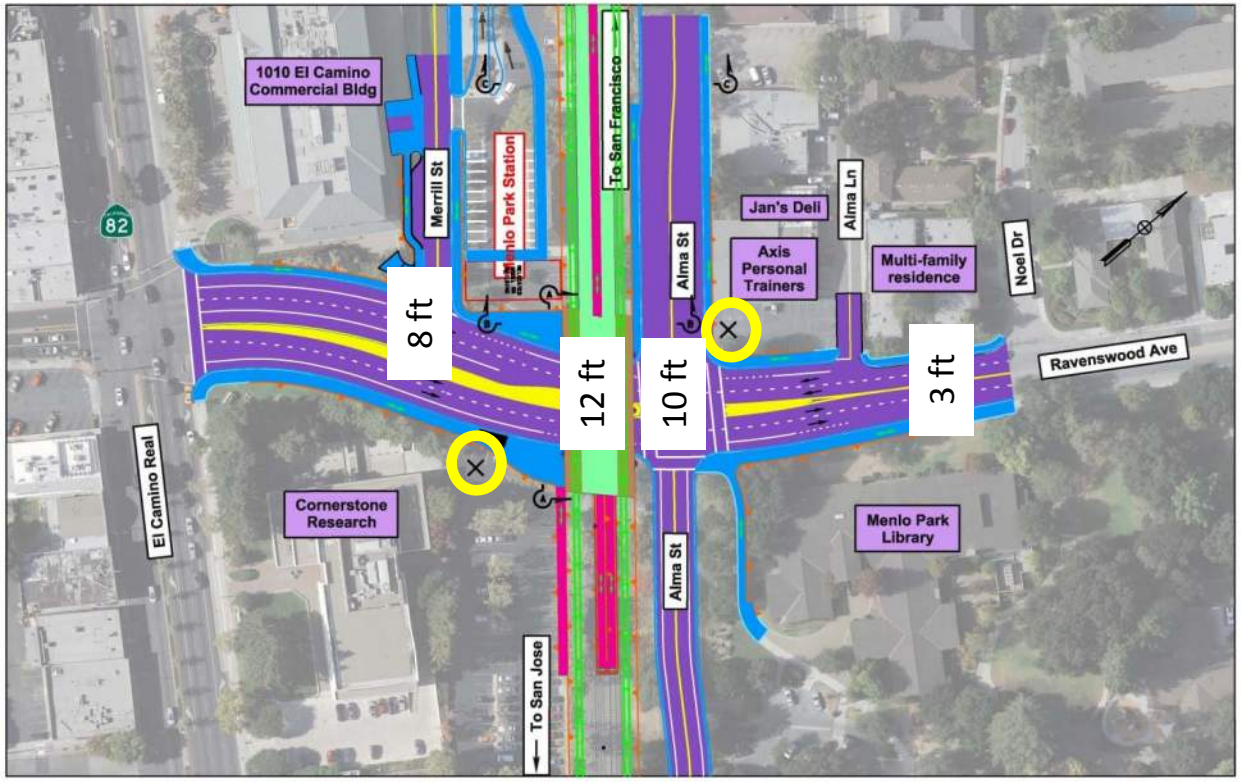
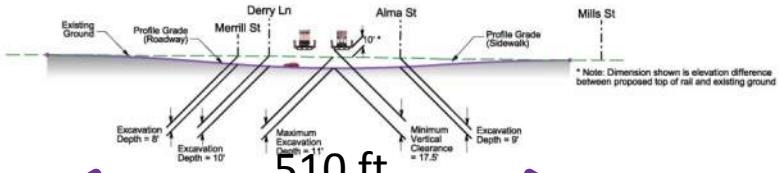


Alternative C

Oak Grove Ave



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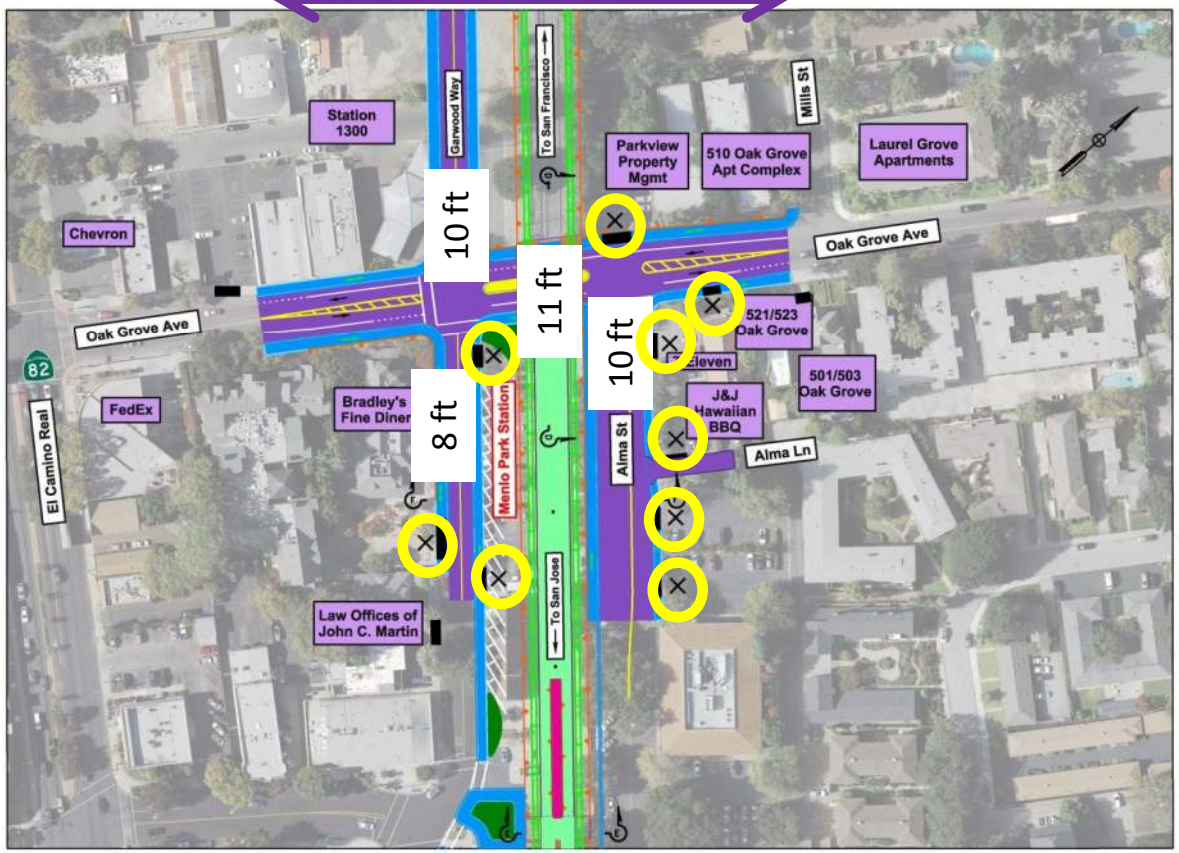
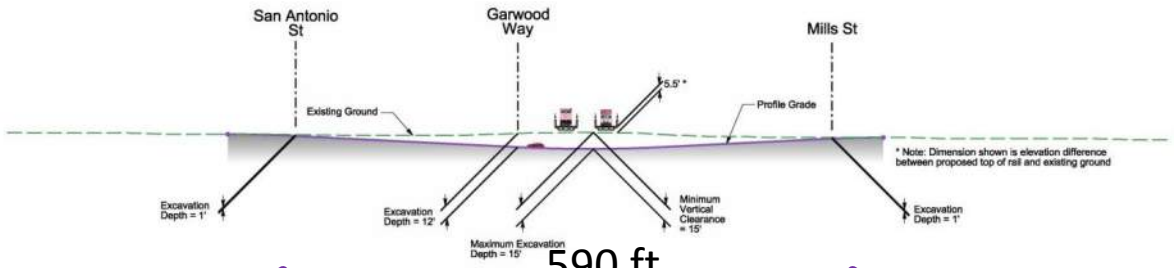


Alternative C

Glenwood Ave



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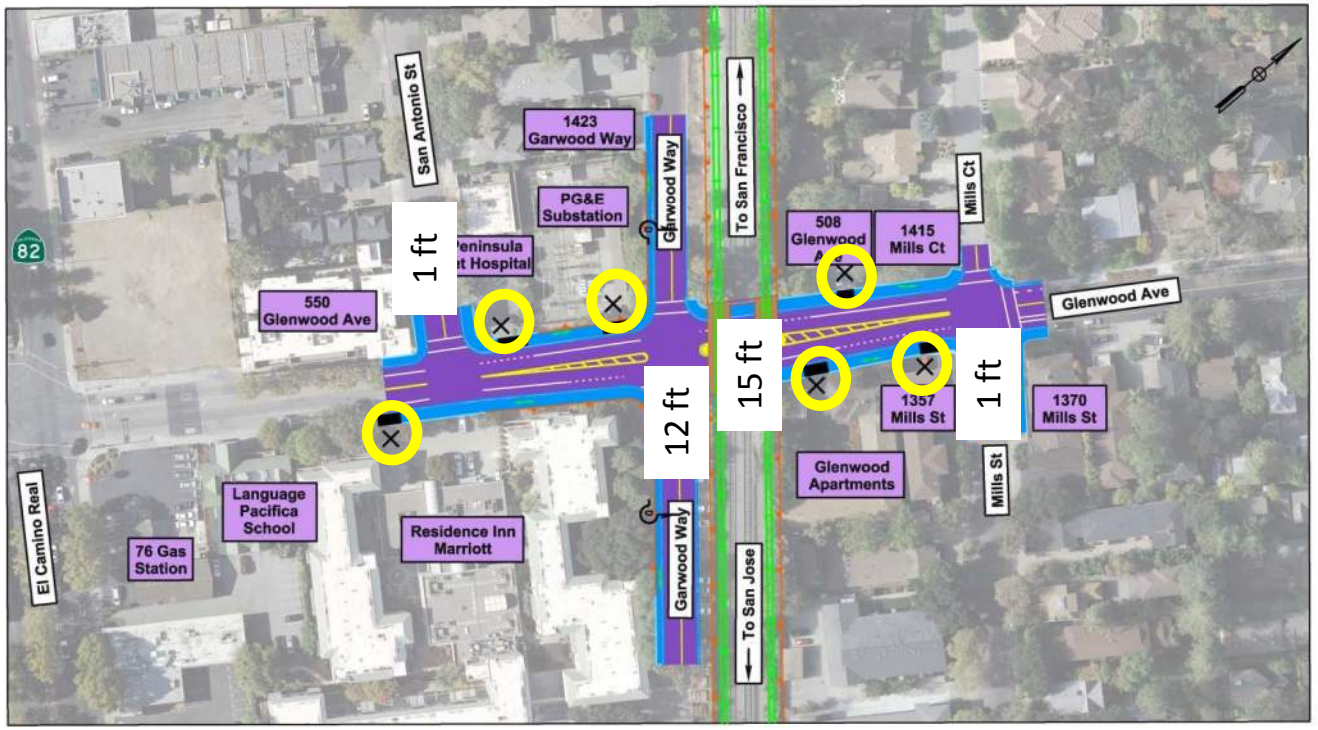


ALTERNATIVE C: HYBRID
(RAVENSWOOD, OAK GROVE, & GLENWOOD)

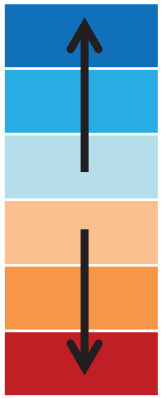
Alternative C

Simulation Looking East along Ravenswood

Alternatives Matrix

	A	C	
Alternatives →			
Reduce Potential Rail/Vehicle Conflict			Three grade separations for Alt C vs. one for Alt A
Improve East/West Connectivity			More grade separations, better east/west mobility across town
Improve East/West Ped/Bike Access			Increased safety and connectivity for Alt C
Reduce Potential Horn & Gate Noise			With elimination of at-grade crossings, horn or gate noise will potentially be reduced
Maintain Alma St/Ravenswood Ave Connection			No direct access to/from Ravenswood from/to Alma St for Alt A
Increase Visual Impacts			Railroad profile remains at current elevation for Alt A
Minimize Property/Driveway Impacts			More impacts to properties with 3 grade separations, Alt C
Minimize Disruption During Construction			Fewer roads and properties impacted during construction for Alt A
Improve Traffic Pattern Predictability			Improved traffic circulation for Alt C
Order of Magnitude Cost	$160-200M*	$310-390M*	Lower overall cost for Alt A

Improvement



Impact

*** Preliminary (Subject to Change)**

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