



**DATE:** April 10, 2023

**TO:** Council Transportation Committee

**FROM:** Ria Hutabarat Lo, Mountain View Transportation Manager  
Angela Obeso, Sunnyvale Principal Transportation Engineer  
Damian Skinner, Assistant Public Works Director

**VIA:** Dawn S. Cameron, Public Works Director

**SUBJECT:** **Bernardo Avenue Undercrossing**

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**RECOMMENDATION**

Recommend that the City Council select the eastern alignment alternative as the preferred alignment for the Bernardo Avenue Undercrossing Project.

**BACKGROUND**

The Bernardo Avenue Undercrossing project aims to construct a pedestrian and bicycle crossing to connect North Bernardo Avenue and South Bernardo Avenue beneath the Caltrain railroad tracks and Central Expressway (see Figure 1).



**Figure 1: Project Location**

The project will provide a direct, safe active transportation connection between Mountain View and Sunnyvale housing, jobs, and schools south of the Caltrain line, and numerous jobs and housing units in the East Whisman, Peery Park, and Mary Avenue areas. In addition to local access, the project also represents an across-barrier connection that fills a regional bicycle network gap involving four jurisdictions: the City of Sunnyvale, the City of Mountain View, Caltrain, and the County of Santa Clara. For this reason, the project has been included in the Valley Transportation Authority's (VTA's) long-range plan—the Valley Transportation Plan 2040 (VTP 2040), Envision Silicon Valley Bike Superhighway Corridors map, and VTA 2016 Measure B projects list.

In 2004, the City of Sunnyvale completed an initial feasibility study on Bernardo Avenue Undercrossing between Evelyn Avenue and the south side of Central Expressway. On [July 11, 2017](#), the Sunnyvale City Council awarded a contract to WMH Corporation to provide preliminary design and environmental clearance. The City of Mountain View subsequently entered into a cost-sharing agreement with Sunnyvale for the preliminary design and environmental clearance phase, which was authorized by the Mountain View City Council on [December 12, 2017](#) and Sunnyvale City Council on [February 6, 2018](#). Under the cost-sharing agreement, the undercrossing was extended to the north side of Central Expressway.

In preparation for the final design and construction phases of the project, both cities have been pursuing grant funding as follows:

- In 2017, the City of Sunnyvale received a One Bay Area Grant, Cycle 2 (OBAG 2) grant award of \$500,000 for the final design phase of the project.
- In 2020, the cities of Sunnyvale and Mountain View and VTA jointly submitted a grant application for the Measure B Bicycle and Pedestrian Program. The project was awarded \$2.25 million for final design with an additional \$750,000 available to be requested in a future funding cycle, for a total of \$3 million. An additional \$15 million was requested and awarded but not yet allocated for the construction phase of the project.
- In 2022, the City of Mountain View applied for Federal earmark funds, and, on July 1, 2022, the City of Mountain View received correspondence from Congresswoman Eshoo that the Appropriations Committee approved the inclusion of \$2.5 million for final design of the Bernardo Avenue Undercrossing.

In total, \$21 million in Measure B, OBAG 2, and Federal earmark funds have been awarded for the project, with \$6 million for final design and \$15 million for construction. It is anticipated that the project will cost in the range of \$40 million to \$60 million for final design and construction.

On [February 6, 2020](#), the Caltrain/Peninsula Corridor Joint Powers Board (Caltrain/JPB) approved the Rail Corridor Use Policy (RCUP). This policy is intended to guide the use of Caltrain/JPB property and support delivery of Caltrain's long-term service vision. As a nonrailroad use, the Bernardo Avenue Undercrossing project was required to be reviewed by Caltrain staff and Caltrain's board. The project was the first project to be presented to Caltrain after adoption of the RCUP. On [June 3, 2021](#), Caltrain/JPB approved a Use Variance for the project, allowing it to move forward through Caltrain's review processes, with the following conditions:

- The project will be designed and constructed to account for, and minimally disrupt, all current and future rail infrastructure, assets, and facilities in the area.
- The project will be designed and constructed so as to minimally interrupt Caltrain operations and freight operations during and after construction.
- The proposed project will be designed to be compatible with the potential future grade separation project at Mary Avenue.
- The project design will comply with all current and future railroad standards, including engineering, operations, and maintenance.
- The project will be designed to not impede the railroad's ability to maintain its infrastructure and right-of-way in the area during and after construction.
- The JPB will be responsible for delivering the project from the 35% design stage through the final design and the construction of the proposed project.
- Future agreements will provide clear roles and responsibilities for all parties for all stages of the proposed project.

On [December 2, 2020](#), a joint Sunnyvale/Mountain View Bicycle Pedestrian Advisory Committee (BPAC) meeting was held. The project team presented one eastern alignment and six variations of a western alignment. These alignments had various features, including:

- Stairs in addition to ramps;
- Intermediate bicycle-only ramp connecting to/from eastbound Central Expressway;
- Tunnel openings in landscaped areas such as the median along Central Expressway;
- Direct access to the private property at 280 North Bernardo Avenue; and
- Ramp connection on North Bernardo Avenue just north of Central Expressway.

BPAC members provided feedback and highlighted the importance of various features, including:

- Improving directness of nonmotorized travel such as through pedestrian stairs, bike channels along stairways, pedestrian crossings at all approaches, and minimizing undercrossing distance;
- Improving light and visibility through median openings, open areas, and lighting;
- Designing for wide access ramps or tunnels, smooth transitions at crossings and ramp access points, and no sharp corners or turns within the undercrossing;
- Considering bike access to the eastbound expressway bike shoulder;
- Integrating with a future pedestrian/bike trail on the north side of Evelyn Avenue; and
- Providing protected crossing movements, regular landings to reduce speeds, and no bollards.

BPAC members also requested pedestrian-level visualizations and diagrams to explain the flow of pedestrians and cyclists from all directions.

## **ANALYSIS**

The Sunnyvale project team has been coordinating with City of Mountain View, VTA, County of Santa Clara, and Caltrain/JPB staff to review and receive feedback on the preliminary designs, and to gain clarity on Caltrain/JPB construction and design standards postelectrification. Feedback received from public agencies and the joint BPAC meeting was reviewed, evaluated, and incorporated into the designs in order to refine two alternatives. As shown in Figures 1 and 2 and in Attachment 1, these alternatives include a western alignment alternative and an eastern alignment alternative.

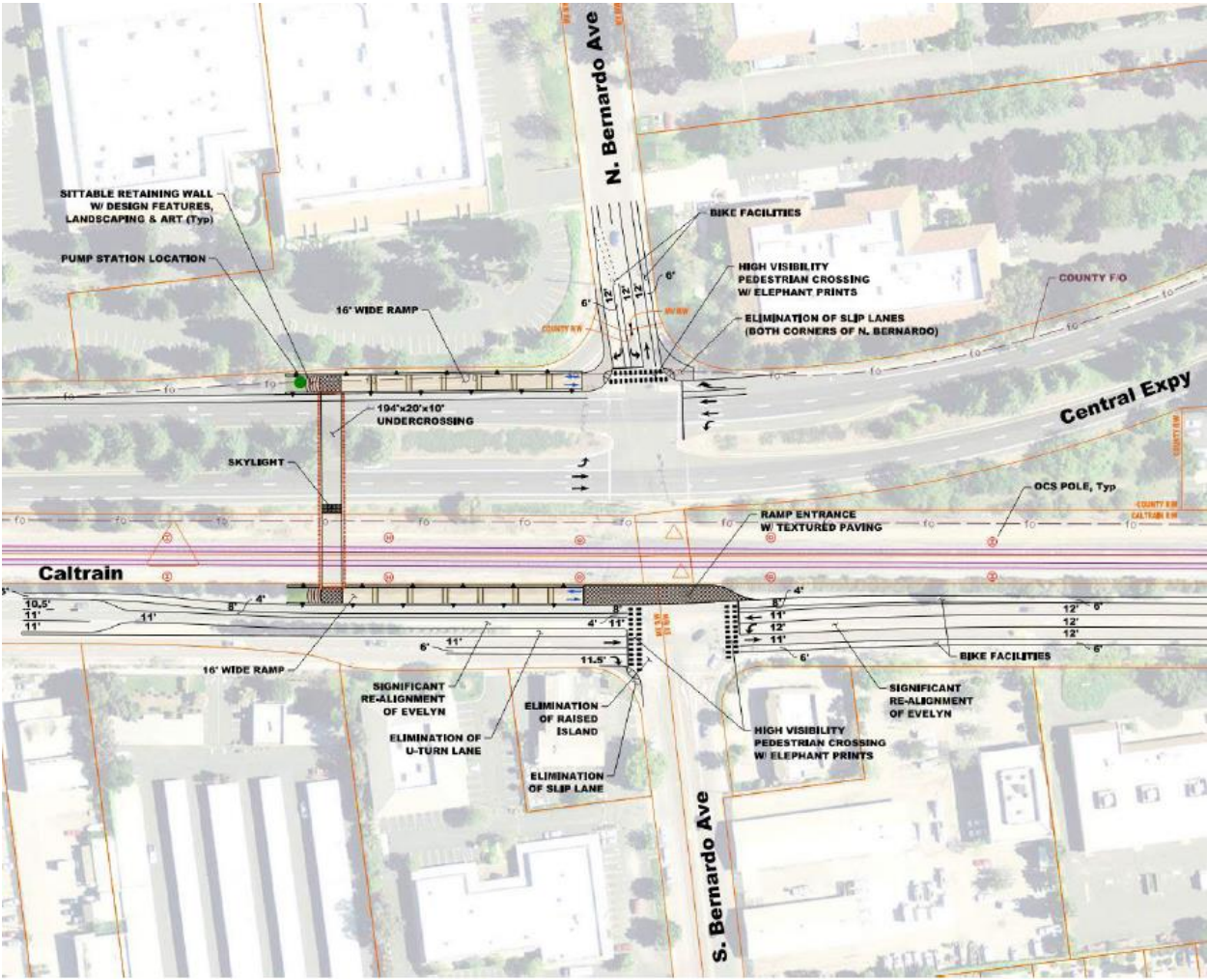


Figure 2: Western Alignment Alternative



- Due to safety and vehicle-flow considerations, the County of Santa Clara did not support having bicyclists and potential pedestrians enter the expressway at a traffic signal without bicycle and pedestrian elements;
- The intermediate ramp would result in a substantial construction cost increase; and
- For the eastern alignment, additional trees and landscaping would need to be removed in the County-owned property to facilitate the intermediate ramp.

For these reasons, the project team refined the alternatives to remove the bicycle-only ramp from both eastern and western alignment options.

Stairway access was another design feature that was initially considered but deemed infeasible because the public rights-of-way available on both sides of the proposed undercrossing are constrained. A ramp would meet connectivity goals while also adhering to the Americans with Disabilities Act (ADA) requirements for a pedestrian facility. On the other hand, providing a ramp as well as stairs would require additional vehicle lane shifting and possibly the acquisition of private property on one or both sides of the undercrossing. Private property acquisition would increase project cost and complexity, so the project team refined the alternatives to remove stairs from the undercrossing alignments.

With the elimination of the stairs, the western alternative was also refined so the ramps would connect directly to the two signalized intersections. The tunnel was shifted westward, which allows both ramps to connect at the intersection, as opposed to having the ramp opening occur north of Central Expressway at North Bernardo Avenue and in the center of the northern shoulder of the South Bernardo Avenue/Evelyn Avenue intersection.

Other minor revisions were made to both alignments to coordinate with the now-existing Caltrain electrification poles and equipment at this location.

### ***Community Feedback***

On February 2, 2023, a joint virtual community meeting was held with members of the public from both Sunnyvale and Mountain View. Outreach for this meeting included website updates, email correspondence to project subscribers (662 Mountain View recipients), social media postings on Twitter and Facebook, and postcard mailers to all Mountain View tenants, owners, and business operators within 750' of the project area (363 recipients).

More than 20 members of the public attended the virtual community meeting. At this meeting, the two refined alternatives shown in Attachment 1 were presented to community members along with some potential design features for consideration. The meeting participants expressed general support for moving the project forward as well as a general preference for the eastern

alignment due to the potential benefits associated with use of the triangular County property. Other feedback received at the meeting and via email after the meeting included the following:

- Preference for more natural light and openings;
- Some desire for an eastbound Central Expressway bicycling connection to avoid crossing expressway lanes;
- Some opposition to an eastbound Central Expressway bicycling connection due to concerns of fast-moving bicycles next to pedestrians;
- Concern about safety and comfort of the undercrossing, including a desire to be able to see from one end to the other of the tunnel, and a desire for security cameras within the tunnel;
- Discussion about using bollards or other features to prevent vehicles from driving onto ramps;
- Interest in having separate bicycle and pedestrian space within the tunnel, similar to the Homer Avenue Undercrossing in Palo Alto; and
- Desire to see more bicycling network and routes to the north of the project.

On [February 22, 2023](#), the Mountain View BPAC considered the Bernardo Avenue Undercrossing alternatives and passed a motion recommending that Council move ahead with the eastern alignment alternative. The BPAC members also requested the following design elements or actions:

- Provide narrower travel lanes and wider bike lanes on Evelyn Avenue approaches;
- Do not use bollards, chicanes, or sharp turns at undercrossing entrances, ramps, or undercrossing tunnels;
- Enhance light by installing a skylight in the expressway median in addition to an opening between the expressway and railroad;
- Implement design elements featured in Palo Alto's Homer Avenue Undercrossing (such as terraced landscaping, street-level visibility, skylights, and separate bicycle and pedestrian paths);
- Consider ways of providing a direct connection between the open portion of the undercrossing and Mary Avenue and/or Mary Manor Mobile Home Park.



On [March 16, 2023](#), the Sunnyvale BPAC also considered the Bernardo Avenue Undercrossing alternatives and unanimously passed a motion recommending that their City Council move ahead with the eastern alternative. The Sunnyvale BPAC members also requested consideration of the following design elements:

- Avoid the use of bollards in and approaching the undercrossing;
- Enhance perceived security by providing a wide cross section, good lighting, and openings;
- Incorporate art, such as surface treatments that visually separate pedestrians and bicyclists, wall murals, mosaics, ceiling textures, and lighting;
- Reduce the ramp gradient as it approaches the bottom of the ramp;
- Address drainage and surface treatments to ensure the facility is usable in heavy rain;
- Add a traffic signal and wayfinding for eastbound expressway bicyclists; and
- Eliminate slip lanes and pork chops at the intersections approaching the undercrossing.

### ***Relationship with Other Projects***

The City of Sunnyvale has plans to implement a two-way bicycle facility on the north side of Evelyn Avenue, between Mathilda Place and Bernardo Avenue. The City of Mountain View has plans to implement a two-way protected bikeway between the Mountain View Transit Center and State Route 85 and plans to conduct a feasibility study on implementing a similar facility between State Route 85 and Bernardo Avenue. The project does not prevent implementation of the Evelyn Avenue bicycle facilities, and coordination between the project teams will continue as they all move forward.

The City of Mountain View has been awarded grant funding to deliver protected bikeways along Middlefield Road between Bernardo Avenue and Moffett Boulevard. The City's East Whisman Precise Plan calls for buffered bike lanes along Bernardo Avenue between Middlefield Road and Central Expressway.

A proposal for development at 189 North Bernardo Avenue was considered by the Mountain View Environmental Planning Commission on March 22, 2023 and will be considered by the City Council on May 9, 2023. The applicant proposes to retain the existing building at this address and add an additional building and parking garage using a Transfer of Development Rights (TDR) agreement involving the City and the School District. In compliance with the East Whisman Precise Plan, a multi-use path is proposed along the north side of Central Expressway adjacent to the property at 189 Bernardo Avenue. The applicant proposes to utilize bonus floor area in

exchange for a \$1.3 million community benefits contribution. When the project is presented to the City Council, staff plans to recommend that the community benefits contribution be allocated to the Bernardo Avenue Undercrossing project.

***Benefits and Challenges of Each Alternative***

The benefits and challenges related to the western alignment include:

<b>Benefits</b>	<b>Challenges</b>
Longer, continuous tunnel with a shorter total length.	More utility coordination and potential relocations, which increase construction costs.
Straight tunnel which improves visibility and perceptions of safety.	Opportunities for only small natural-light skylights or openings.
Space for the City of Mountain View to request stairways or a wider landing plaza if 280 North Bernardo Avenue is substantially redeveloped sometime in the future.	

The benefits and challenges related to the eastern alignment include:

<b>Benefits</b>	<b>Challenges</b>
Fewer utility coordination needs and potential relocations.	Two shorter tunnel segments with a longer total length.
Opportunity for a larger natural-light opening within the County-owned property.	Visibility challenges relating to the difficulty to see the opposite end of tunnel, which may reduce the perception of safety.
Less potential roadway lane closures during construction, due to ability to use the County-owned property for some phases of work.	
Community support as indicated through selection as the preferred alternative at the joint community meeting, Mountain View BPAC and Sunnyvale BPAC.	

Given the additional benefits and community support for the eastern alignment, staff recommends that the eastern alignment be selected as the preferred alternative.

**FISCAL IMPACT**

Funding for the current preliminary design phase of the project is available under Sunnyvale Project 832910—Bernardo Avenue Undercrossing, which includes approximately \$520,000 from Mountain View’s Bernardo Pedestrian/Bike Undercrossing, Project 18-69. The current action does not impact the existing project budget. As part of the preliminary design and environmental review, cost estimates will be prepared for the full design and construction phases of the project. Additional funding for the final design and construction phases will need to be secured prior to starting final design and advertising for construction.

**ALTERNATIVES**

1. Recommend to City Council the selection of the western alignment as the preferred alignment for the Bernardo Avenue Undercrossing Project.
2. Do not recommend to City Council the selection of a preferred alignment for the Bernardo Avenue Undercrossing Project.
3. Provide other direction.

**NEXT STEPS**

For the purposes of environmental review, a preferred project alignment must be selected by the City Council. The Sunnyvale and Mountain View City Councils are tentatively scheduled to consider this item in late April or early May 2023.

After obtaining support from the two City Councils, the next stage of the current project will include the required environmental review pursuant to the California Environmental Quality Act (CEQA). The appropriate CEQA document will be prepared and presented to City Council at the appropriate time for approval prior to starting final design. Final design and construction will be undertaken by Caltrain/JPB in accordance with the RCUP.

RHL-AO-DS/LL/1/PWK  
947-04-10-23M

Attachment: 1. Project Alternatives

cc: PCE—Gonzales



