



## City Council Agenda Item Staff Report

CITY OF SAN BRUNO

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**DATE:** August 25, 2020

**TO:** Honorable Mayor and Members of the City Council

**FROM:** Jovan D. Grogan, City Manager

**PREPARED BY:** Jimmy Tan, Public Works Director  
Hae Won Ritchie, Deputy Public Works Director/City Engineer

**SUBJECT:** Receive Update on Planning Study for the South Linden Avenue and Scott Street Caltrain Grade Separation Project and Provide Direction on the Preferred Alternative for the Railroad Tracks and Type of Pedestrian/Bicycle Crossing at Scott Street

### **BACKGROUND:**

The City of San Bruno has been considering a grade separation at the Scott Street Caltrain crossing as far back as 2005 as part of the San Bruno Avenue grade separation project. The Scott Street grade separation was removed from the San Bruno Avenue project but in 2013 the City of San Bruno partnered with the City of South San Francisco and applied to the San Mateo County Transportation Authority (TA) for funding for a Planning Study for a joint project to separate the grades of Scott Street in San Bruno and South Linden Avenue in South San Francisco. Currently, both South Linden Avenue and Scott Street are the only remaining at-grade crossings in their respective cities and represent an important opportunity to increase safety, spur redevelopment and accommodate economic opportunity in the area.

The railroad crossings at South Linden Avenue and Scott Street are a relatively short distance from each other, approximately 1,850 feet apart (Attachment 1). Due to their proximity, the grade separations at South Linden and Scott Street must be evaluated together and both crossings be completed as one package because one grade separation will impact the other.

A grade separation at Scott Street is essential to improve safety and decrease expected future traffic delays due to growth in vehicle traffic, greater frequency of Caltrain service, and the eventual addition of the high-speed rail service. In addition, the project would aid in the success of the transit-oriented development and related improvements within the transit corridors area, as identified in the San Bruno Transit Corridors Plan.

The Project Study funding was approved and on April 20, 2016 a Memorandum of Understanding was signed by the two cities, the TA, and the Peninsula Corridor Joint Powers Board (JPB). All of the parties that signed the MOU enabling the preparation of the Project Study Report have recognized the importance of exploring grade separations as a

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means of reducing the impacts of increased train service on traffic and safety at the South Linden Avenue and Scott Street railroad crossings. The Project Development Team (PDT) was formed in January 2018 and consists of representatives from both sponsor cities, Caltrain, and a team of consultants including AECOM, APEX Strategies, and CDM Smith. The City of San Bruno, City of South San Francisco, Caltrain and the consultants have been working collaboratively to complete the development of the Project Study Report.

The PDT has been preparing technical evaluations and gathering community feedback for the various options for grade separating at Scott Street and South Linden Avenue. A community meeting was held in August 2018 and was lightly attended. Staff gave the City Council an update on the project in October 2018 after which the City Council directed staff to improve the public outreach process, to conduct evaluations of all options and to prepare a traffic study.

Between October 2018 and August 2019, the PDT worked to follow the City Council's direction. The PDT completed a traffic study, refine grade separation options, and greatly increased its public outreach efforts, including going door-to-door in the area around the Scott Street crossing.

A second community meeting focusing on Scott Street with San Bruno residents was held on August 28, 2019 and was well attended. The three possible options that were available for the Scott Street railroad crossing were presented at the community meeting:

- Option A – no grade separation at Scott Street (leave crossing as-is),
- Option B – grade separation at Scott Street for pedestrians and bicycles but closed to motor vehicles, and
- Option C – grade separation at Scott Street for pedestrian, bicycles, and motor vehicles.

On November 26, 2019, the project status, traffic information, and the feedback received from the community were presented to City Council. Due to the negative impacts of residential property acquisition related to providing full grade separation, the City Council summarily rejected and eliminated Option C. Option A was eliminated because doing nothing would result in increased crossing safety risks and traffic delays caused by the increased train traffic resulting from the JPB's adoption and future implementation of the moderate growth service scenario examined in the Caltrain Business Plan and future high-speed rail service. City Council directed staff to proceed with Option B, to close Scott Street to motor vehicles and provide grade separation for pedestrians and bicyclists. Option B could be designed in such a way as to not require procurement of residential properties and would provide enhanced safety for pedestrians and bicyclists crossing the railroad tracks.

The purpose of this staff report and presentation is to provide the City Council an update on the work performed by the PDT between November 2019 and July 2020 and to seek direction from the City Council regarding selecting the preferred project alternative for the train tracks and pedestrian/bicycle crossing at Scott Street.

## DISCUSSION:

Since November 2019, the PDT further developed the alternatives for the South Linden Avenue and Scott Street Grade Separation Project based on the direction received to close Scott Street to vehicular traffic and provide for a pedestrian/bicycle crossing. The alternatives and type of pedestrian/bicycle crossings were presented to the communities for feedback on June 22. The alternatives, the feedback, and staff's recommendation are provided below.

### The Alternatives

As mentioned in the Background section, the South Linden Avenue and Scott Street rail crossings are in close proximity to each other, approximately 1,850 feet (Attachment 1). Thus, both crossings are studied and must be completed together.

The project's boundary conditions are Colma Creek to the north in South San Francisco and I-380 freeway and the San Bruno Avenue grade separated crossing to the south in San Bruno. The creek, freeway and San Bruno Avenue crossing structures cannot be easily altered so they restrict the range at which the tracks can be raised or lowered at the South Linden Avenue and Scott Street crossings. Scott Street is only about 1,000 feet from I-380 freeway overcrossing. This further narrows the range that the railroad can be raised or lowered at this location. South Linden Avenue is approximately halfway between Colma Creek and I-380 freeway so the railroad tracks have a wider range of grade changes possible at this location.

Due to the interconnectedness of the Scott Street and South Linden Avenue crossings, some context is provided for the South Linden Avenue crossing alternatives. All alternatives have some level of property impacts near South Linden Avenue in South San Francisco. However, the project will include a full grade separation at South Linden Avenue due to the traffic volumes.

There is a total of eight unique alternatives for the configuration of track and other modes of travel for Scott Street and South Linden Avenue. These are listed below and can also be found on the attached Alternatives Summary Table (Attachment 2)

- Alternative 1 partially raises the tracks, partially lowers the road at South Linden Avenue, and provides a pedestrian/bicycle overcrossing at Scott Street
- Alternative 2 partially lowers the tracks, partially raises the road overcrossing at South Linden Avenue, and provides a pedestrian/bicycle overcrossing at Scott Street
- Alternative 3 keeps the tracks at grade, lowers the road at South Linden Avenue, and provides a pedestrian/bicycle overcrossing at Scott Street
- Alternative 4 keeps the tracks at grade, raises the road at South Linden, and provides a pedestrian/bicycle overcrossing at Scott Street
- Alternative 5 partially raises the tracks, partially lowers the road at South Linden Avenue, and provides a pedestrian/bicycle undercrossing at Scott Street
- Alternative 6 partially lowers the tracks, partially raises the road overcrossing at South Linden Avenue, and provides a pedestrian/bicycle undercrossing at Scott Street

- Alternative 7 keeps the tracks at grade, lowers the road at South Linden Avenue, and provides a pedestrian/bicycle undercrossing at Scott Street
- Alternative 8 keeps the tracks at grade, raises the road at South Linden, and provides a pedestrian/bicycle undercrossing at Scott Street

With regard to South Linden Avenue, the alternatives with the least amount of property impacts in South San Francisco and projected lowest cost for the project are Alternatives 1 and 5. Property impacts in South San Francisco increases with each alternative with Alternatives 4 and 8 having the most extensive impacts. The alternatives with the expected lowest total project costs are Alternatives 1 and 5 with higher costs for Alternatives 2, 3, 6 and 7 and the highest total project costs mostly likely being Alternatives 4 and 8. Cost estimates have not been fully developed yet and will be further developed as part of the preparation of the Project Study Report.

Caltrain views grade separations as city-driven projects and thus encourages cities to identify grade separation solutions that acceptable to the community members as long as Caltrain requirements and standards are met. When looking at generic grade separation alternatives, with all other considerations equal, Caltrain prefers alternatives that reduce impacts to railroad operations. This often translates to train tracks being raised. Raised train tracks can reduce the need for utilities relocations and facilitate better drainage and can reduce the potential for flooding. Raised tracks are also preferred in regard to safety and security as elevated structures better prohibit public access to the right-of-way in an electrified environment. However, because each grade separation project is unique, Caltrain actively works with cities throughout project development to support the cities' grade separation preferences.

The three alternatives for railroad track movement evaluated at Scott Street are as follows:

<b>Railroad Track Movement</b>	<b>Related Alternatives</b>
Tracks are raised 2.5 feet above existing top of rail	Alternatives 1 and 5
Tracks are lowered 6 feet below existing top of rail	Alternatives 2 and 6
Tracks remain at grade	Alternatives 3, 4, 7 and 8

As mentioned earlier in the Discussion section, Scott Street is relatively close to the I-380 freeway and San Bruno Avenue rail crossing. Because impacts to existing freeway and crossing structures would be cost prohibitive and train tracks need long vertical curves to achieve a change in slope, the range at which the tracks at Scott Street can be raised or lowered is limited. From the perspective of the City of San Bruno, the railroad track elevations for Alternatives 1, 3, 4, 5, 7 and 8 are similar. This reduces the choices to Alternatives 1, 2, 5 and 6. The railroad track elevation difference at Scott Street between Alternatives 1 and 2 (and 5 and 6) is approximately 8.5 feet.

Regardless of which train track alternative is selected, the City of San Bruno has an opportunity to provide a pedestrian/bicycle overcrossing or undercrossing. Neither the overcrossing nor undercrossing will require the procurement of residential properties. At this time, cost estimates are not available; however, they will be prepared as part of the Project Study Final Report. Several factors can affect the cost of over and undercrossings. The

overcrossing itself is generally believed to be more expensive due to the need to construct a structure and longer ramps. However, there could potentially be cost savings if costly relocation of underground utilities could be avoided, making this alternative potentially less expensive. Further investigation is needed to determine if utility relocations are required. It is possible that even for an overcrossing, some utility relocation may be needed, increasing the cost to construct an overcrossing. Utility relocations are likely unavoidable with an undercrossing. The significance of the cost depends on the number, type and size of utilities.

### Community Engagement

The PDT prepared to receive feedback and comments from the communities of San Bruno and South San Francisco on the available alternatives. There are four alternatives at South Linden Avenue for a fully grade separated crossing in South San Francisco and two types of crossings available (over or under) at Scott Street for a pedestrian/bicycle crossing in San Bruno.

The third community engagement meeting was originally scheduled for March 23, 2020. Approximately one week prior to the meeting, a shelter-in-place order was issued to reduce the spread of the novel coronavirus 2019 (referred to as SARS-CoV-2 and COVID-19). As the shelter-in-place orders were extended in April and May 2020, and with the acceptance of transitioning public meetings online, the third community meeting was rescheduled to occur virtually in June 2020.

San Bruno sent over 2,470 meeting information mailers; called and emailed those on the project contact list; posted meeting details on NextDoor, the project website, and the City's events calendar; and provided meeting information to the Bicycle/Pedestrian Advisory Committee and Traffic Safety and Parking Committee.

The third community meeting focused on receiving feedback and comments on the four alternatives for the grade separation in South San Francisco and the treatment of the Scott Street pedestrian/bicycle crossing. Two virtual sessions were hosted by the PDT. On June 22, 2020, a formal presentation was provided followed by a question and answer and feedback session. On June 24, 2020, an opportunity was provided to allow for follow-up questions and comments. Attendees of the second session were encouraged to watch the recording of the June 22<sup>nd</sup> presentation in advance of the session. The meetings were attended by 21 and 18 attendees on June 22<sup>nd</sup> and June 24<sup>th</sup>, respectively.

The following feedback and comments were received:

- Attendees disliked a pedestrian/bicycle undercrossing due to concerns of homeless encampments, reduced visibility of pedestrians and bicyclists using an undercrossing, and stormwater flooding issues.
- An attendee expressed a desire to keep the at-grade crossing with no grade separation.
- An attendee asked if a pedestrian/bicycle crossing was needed at all.

- An attendee suggested the terminus of the crossing be moved north to align with an intersection or moved completely to Tanforan Avenue.
- An attendee requested confirmation that residential properties would not be acquired or surrounding properties lowered or raised as a result of the railroad construction.
- An attendee desired soundwalls with a pedestrian/bicycle overcrossing.

The general preference was for an overcrossing primarily because an undercrossing was undesirable. However, there are some concerns with overcrossings, as follows.

- Visual impact of the overcrossing, the overcrossing must have a much larger clearance from the train tracks than an undercrossing.
- The horizontal distance of the ramps needed to meet ADA could result in a nearly quarter mile crossing over the tracks.

The presentation accompanying this staff report will provide the following:

- Project status and background,
- Summary of Caltrain's Business Plan and train traffic growth projections,
- Discussion of the eight project alternatives and the types of pedestrian/bicycle crossings available at Scott Street, including discussion of advantages and disadvantages of under/overcrossings (Attachment 3) and photo simulations (Attachment 4) of the under/overcrossing options from three vantage points, and
- Report on the feedback and comments received from the public, and
- **Staff's recommendation is for selection of and further development of designs for Alternative 5, which is to partially raise the railroad tracks and provides a pedestrian/bicycle undercrossing at Scott Street.**

Staff will request that the City Council provide direction regarding the preferred Alternative design for the railroad tracks and the type of crossing preferred for pedestrians and bicyclists at Scott Street.

#### **FISCAL IMPACT:**

There is no fiscal impact associated with receiving this update.

#### **ALTERNATIVES:**

No additional alternatives, other than the options outlined above.

#### **RECOMMENDATION:**

Receive update on Planning Study for the South Linden Avenue and Scott Street Caltrain Grade Separation Project and provide direction on the preferred Alternative for the railroad tracks and type of pedestrian/bicycle crossing at Scott Street.

**DISTRIBUTION:**

1. None

**ATTACHMENTS:**

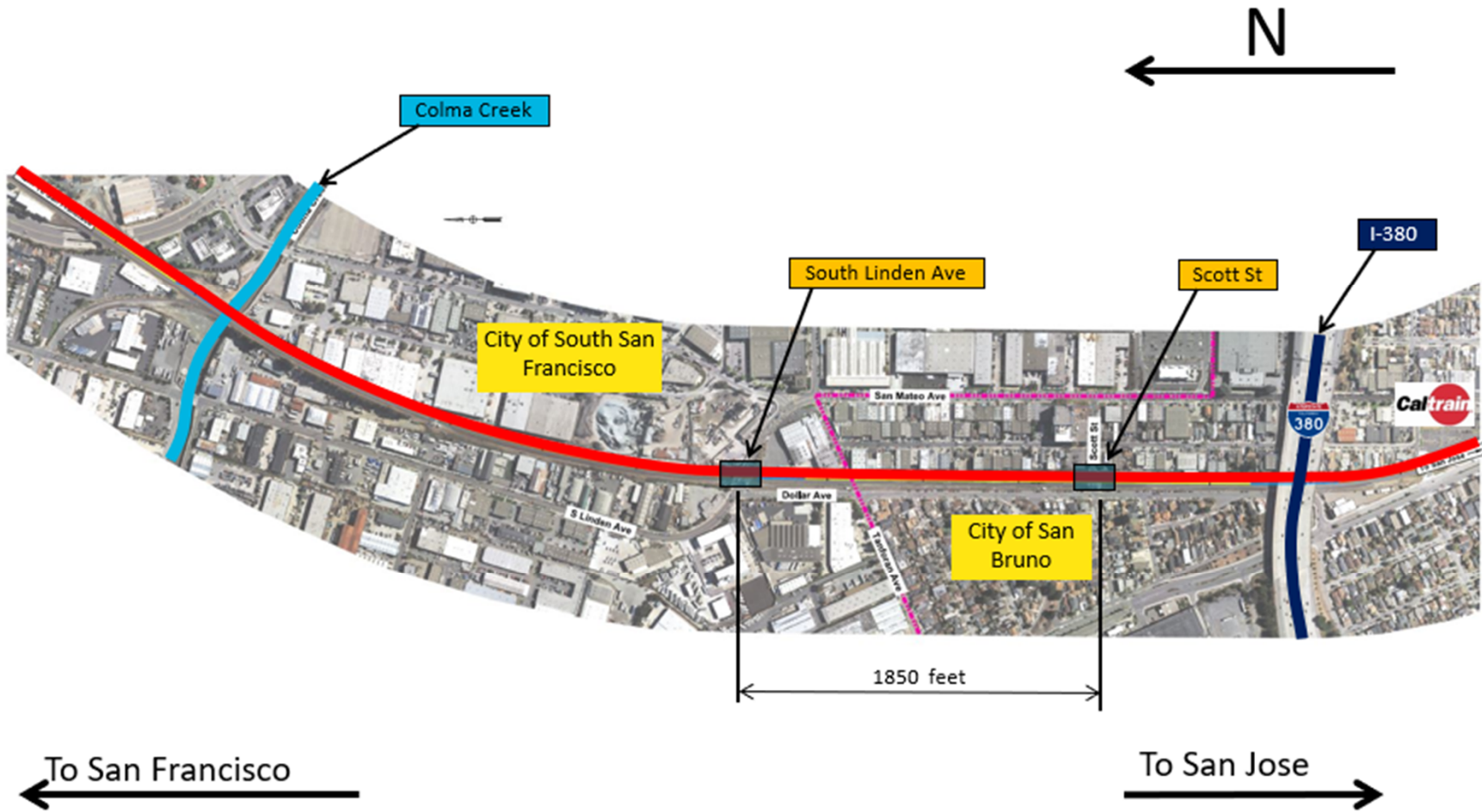
1. Project Location Map
2. Summary Table of Eight Alternatives for Scott Street
3. Advantages and Disadvantages of Pedestrian/Bicycle Crossing Options at Scott Street
4. Conceptual Renderings of Overcrossing and Undercrossing at Scott Street

**DATE PREPARED:**

August 19, 2020


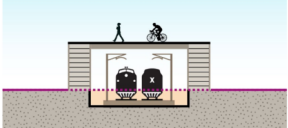
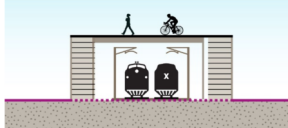
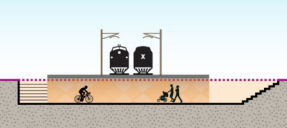
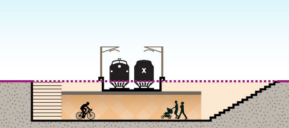
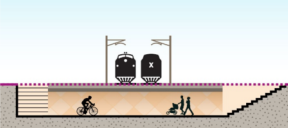
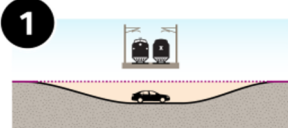
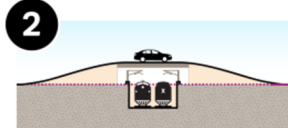
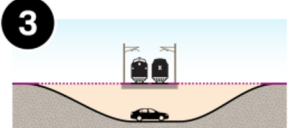
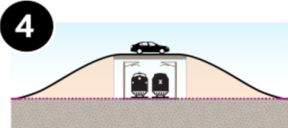
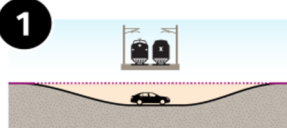
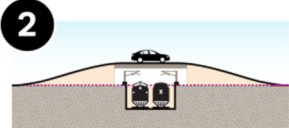
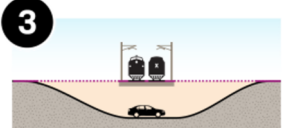
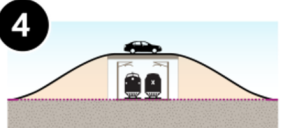

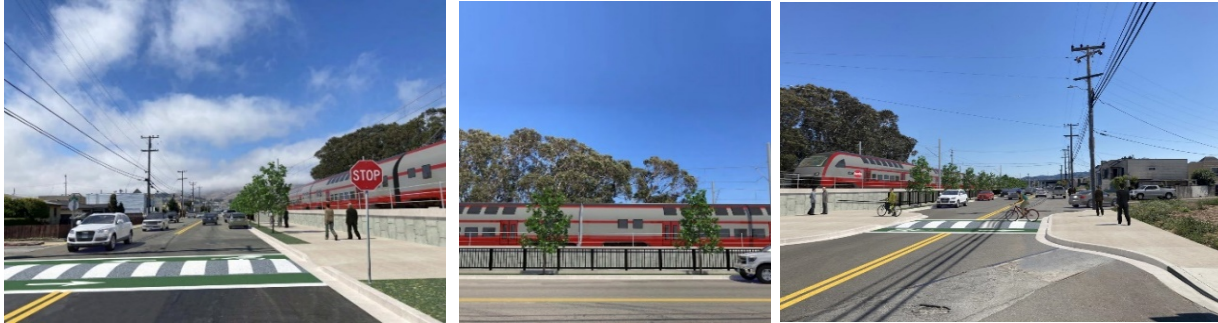
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# ATTACHMENT 1 – Project Location Map




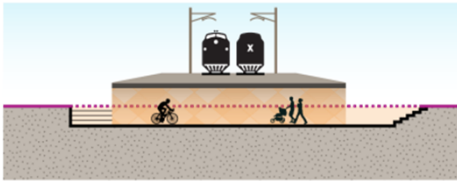
**SUMMARY TABLE OF EIGHT GRADE SEPARATION ALTERNATIVES AT SCOTT STREET  
SOUTH LINDEN AVENUE AND SCOTT STREET GRADE SEPARATION PLANNING STUDY PROJECT**

City of San Bruno, City Council Meeting on August 25, 2020

SCOTT STREET PED/BIKE <b>OVERCROSSING</b>					SCOTT STREET PED/BIKE <b>UNDERCROSSING</b>				
Railroad Tracks Alternatives 1-4	Alternative 1: Rail Partially Elevated	Alternative 2: Rail Partially Lowered	Alternative 3: Rail Remains At-Grade	Alternative 4: Rail Remains At-Grade	Railroad Tracks Alternatives 5-8	Alternative 5: Rail Partially Elevated	Alternative 6: Rail Partially Lowered	Alternative 7: Rail Remains At-Grade	Alternative 8: Rail Remains At-Grade
<b>Scott Street Concept</b>	 Scott Street Rail Partially Elevated/ Ped/Bike Overcrossing (tracks raised 2.5 ft)	 Scott Street Rail Partially Lowered/ Ped/Bike Overcrossing (tracks lowered 6 ft)	 Scott Street Rail at-grade/ Ped/Bike Overcrossing		<b>Scott Street Concept</b>	 Scott Street Rail Partially Elevated/ Ped/Bike Undercrossing (tracks raised 2.5 ft)	 Scott Street Rail Partially Lowered/ Ped/Bike Undercrossing (tracks lowered 6 ft)	 Scott Street Rail at-grade/ Ped/Bike Undercrossing	
<b>Elevation of Structure Elevation at Eye Level (5.5 ft tall person)</b>	33.5 feet above grade 38.5 feet above grade	25 feet above grade 30 feet above grade	31 feet above grade 36 feet above grade		<b>Floor Elevation of Undercrossing</b>	14 feet below grade	22.5 below grade	16.5 feet below grade	
<b>Related So. Linden Concept</b>	 1 South Linden Avenue Rail Partially Elevated/ Roadway Partially Lowered	 2 South Linden Avenue Rail Partially Lowered/ Roadway Partially Elevated	 3 South Linden Avenue Rail at-grade/ Roadway Lowered	 4 South Linden Avenue Rail at-grade/ Roadway Elevated	<b>Related So. Linden Concept</b>	 1 South Linden Avenue Rail Partially Elevated/ Roadway Partially Lowered	 2 South Linden Avenue Rail Partially Lowered/ Roadway Partially Elevated	 3 South Linden Avenue Rail at-grade/ Roadway Lowered	 4 South Linden Avenue Rail at-grade/ Roadway Elevated
<b>Scott Street Rendering</b>					<b>Scott Street Rendering</b>				
<b>Advantages of Overcrossing</b>	<ul style="list-style-type: none"> <li>- Easier to construct than an undercrossing</li> <li>- Less disruption to railroad operations during construction</li> <li>- Potentially Less costly</li> <li>- Community expressed preference for overcrossing due to concerns around undercrossings</li> </ul>				<b>Advantages of Undercrossing</b>	<ul style="list-style-type: none"> <li>- Easier for pedestrians to cross (shorter ramps)</li> <li>- Low visual impact</li> </ul>			
<b>Disadvantages of Overcrossing</b>	<ul style="list-style-type: none"> <li>- More difficult to cross (longer ramps)</li> <li>- Greater visual impact overall</li> </ul>				<b>Disadvantages of Undercrossing</b>	<ul style="list-style-type: none"> <li>- More difficult to construct than an overcrossing</li> <li>- Greater impact to railroad operations during construction</li> <li>- Potentially more costly</li> <li>- More maintenance for stormwater</li> </ul>			
<b>Staff Comments</b>	Alternative for railroad track preferred but overcrossing expected to have substantial visual impacts.	Not recommended, tracks at San Bruno are lowered by 6 ft at a significant cost, for a minor benefit in overcrossing height.	Not recommended, similar to Alternatives 1 and 5, but with more property impacts at So. Linden Ave	Not recommended, similar to Alternatives 1 and 5, but with more property impacts at So. Linden Ave	<b>Staff Comments</b>	<b>Staff Recommended Alternative</b> with Ped/Bike Undercrossing due to shortest crossing distance and low visual impact above ground	Not recommended; undercrossing deep	Not recommended, similar to Alternatives 1 and 5, but with more property impacts at So. Linden Ave	Not recommended, similar to Alternatives 1 and 5, but with more property impacts at So. Linden Ave

# ATTACHMENT 3 –

## Advantages and Disadvantages of Ped/Bike Crossing Options

Ped/Bike Crossing	Advantages	Disadvantages
 <p><b>OVERCROSSING</b></p>	<ul style="list-style-type: none"><li>▪ Easier to construct than an undercrossing</li><li>▪ Less disruption to railroad operations during construction</li><li>▪ Potentially less costly</li></ul>	<ul style="list-style-type: none"><li>▪ More difficult to cross (longer ramps)</li><li>▪ Greater visual impact overall</li></ul>
 <p><b>UNDERCROSSING</b></p>	<ul style="list-style-type: none"><li>▪ Easier for pedestrians to cross (shorter ramps)</li><li>▪ Low visual impact</li></ul>	<ul style="list-style-type: none"><li>▪ More difficult to construct than an overcrossing</li><li>▪ Greater impact to railroad operations during construction</li><li>▪ Potentially more costly</li></ul>

ATTACHMENT 4 - CONCEPTUAL RENDERINGS  
ON HERMAN, LOOKING NORTH AT SCOTT  
CURRENT CONDITIONS



ATTACHMENT 4 - CONCEPTUAL RENDERINGS  
ON HERMAN, LOOKING NORTH AT SCOTT  
UNDERCROSSING



ATTACHMENT 4 - CONCEPTUAL RENDERINGS  
ON HERMAN, LOOKING NORTH AT SCOTT  
OVERCROSSING



ATTACHMENT 4 - CONCEPTUAL RENDERINGS  
ON HERMAN, LOOKING EAST AT RAILROAD TRACKS  
CURRENT CONDITIONS



ATTACHMENT 4 - CONCEPTUAL RENDERINGS  
ON HERMAN, LOOKING EAST AT RAILROAD TRACKS  
UNDERCROSSING



ATTACHMENT 4 - CONCEPTUAL RENDERINGS  
ON HERMAN, LOOKING EAST AT RAILROAD TRACKS  
OVERCROSSING



ATTACHMENT 4 - CONCEPTUAL RENDERINGS  
ON HERMAN, LOOKING SOUTH NEAR BAYSHORE CIRCLE  
CURRENT CONDITIONS



ATTACHMENT 4 - CONCEPTUAL RENDERINGS  
ON HERMAN, LOOKING SOUTH NEAR BAYSHORE CIRCLE  
UNDERCROSSING



ATTACHMENT 4 - CONCEPTUAL RENDERINGS  
ON HERMAN, LOOKING SOUTH NEAR BAYSHORE CIRCLE  
OVERCROSSING

