



# Memorandum

**TO:** HONORABLE MAYOR  
AND CITY COUNCIL

**FROM:** John Ristow

**SUBJECT:** SAN JOSÉ DIRIDON STATION  
INTEGRATED CONCEPT PLAN

**DATE:** November 22, 2019

Approved

*D. D. Syl*

Date

*11/22/19*

**COUNCIL DISTRICTS: 3 & 6**

## **RECOMMENDATION**

Accept staff recommendation of the Concept Layout for the San José Diridon Station, advance the project to the next phase of development, and commit to work to develop a design for the southern rail corridor that results in noise, vibration, and visual conditions that are no worse and ideally better than today, even with higher future train volumes.

## **OUTCOME**

A preliminary spatial layout for an expanded and redesigned Diridon Station.

## **BACKGROUND**

When BART, commuter rail, high-speed rail, light rail, and supporting bus services converge, Diridon Station will support more high-capacity transit connections than any other place in the Bay Area. In order to plan for the substantial growth of Diridon Station, the City of San José, the Peninsula Corridor Joint Powers Board (PCJPB), Santa Clara Valley Transportation Authority (VTA), and the California High-Speed Rail Authority (the “Partner Agencies”) formed a public agency partnership via a Cooperative Agreement in July 2018.

The Partner Agencies have been working together with a consultant team led by Arcadis Design & Consultancy and Benthem Crouwel Architects (“Team ABC”) since September 2018 to develop a spatial vision for a new and expanded station. In that time, the Partner Agencies developed three different spatial layouts for the station, which are described in the attached Layout Development Report.

After considerable evaluation and interaction with the community, Team ABC and the Partner Agencies have developed a fourth spatial layout that optimizes transit and passenger needs, while

supporting future development potential. Staff now requests that the Mayor and City Council accept this recommended Concept Layout with the following three major decisions:

- **Decision #1: Elevated Station Platforms.** Elevating the tracks and platforms will allow for street-level east/west connections through the station area, which will reconnect and knit back together neighborhoods on either side of the tracks and facilitate connections for people walking, bicycling, and driving.
- **Decision #2: Two Station Entrances.** The Partner Agencies recommend two station entrance locations. One entrance at Santa Clara Street will be close to BART, light rail, bus, and other connecting modes and allow for quick transfers. The other near San Fernando Street will allow for easy connections to the bike network, creeks, existing neighborhoods, and future office and housing development.
- **Decision #3: Existing Track Approaches into the Future Station.** The Partner Agencies recommend track approaches in the existing northern and southern corridors.

The Concept Layout is preliminary and subject to further station design development and rail operations analysis. The next phase of work will refine many elements of the Layout, particularly access modes.

## **ANALYSIS**

The Concept Layout reflects overall community preferences for elevated platforms, major station entrances near Santa Clara Street as well as easy access to the south via San Fernando Street, and short transfer times between transit modes, including BART. The layout prioritizes access to the station for pedestrians, bicyclists, and transit patrons, while also siting vehicle parking and pick-up and drop-off zones adjacent to the core station area. It creates the opportunity for grade-separated light rail through the station area, as well as space for bus stops and a future airport connection. These elements will continue to be studied and refined in the next phases of the process.

With respect to Decision 3, the Partner Agencies asked Team ABC to develop a track alignment south of the station that would include a rail viaduct structure over the I-280/87 interchange to accommodate a portion of the anticipated growth in train traffic. While constructible and operationally viable, the Partner Agencies determined that this option would expand visual and noise impacts over a larger area, potentially affecting many more people. Moreover, much of the existing and future additional rail service would remain in the existing corridor.

Remaining within the existing southern rail corridor, potential future train service will require up to four tracks, given the long-term future plans from all rail operators. The Partner Agencies believe community concerns relating to safety, noise, vibration, and visual impacts, among others, would be better addressed through tangible improvements to the existing southern

corridor rather than by creating an additional new rail corridor and thereby adding impacts to a larger area. Table 1 below summarizes the Partner Agencies' evaluation of the benefits and tradeoffs associated with accommodating projected 2040 train volumes on a new I-280 viaduct structure as compared with an upgraded existing corridor.

**Table 1 – Summary of Benefits and Trade-Offs  
Existing Rail Alignment vs. the Addition of the I-280 Rail Viaduct**

<b>Area of Concern</b>	<b>Existing Rail Alignment in 2040</b>	<b>Existing Rail Alignment Plus I-280 Rail Viaduct Addition in 2040</b>
<b>Train volumes</b>	Overall increase	Overall increase
<b>Neighborhoods affected</b>	Same as today	Same as today plus additional neighborhoods
<b>Infrastructure footprint</b>	Modest increase	Significantly greater footprint
<b>Noise and vibration</b>	Increase expected	Increase expected to affect more areas and more people
<b>Visual impact</b>	Modest	Significant visual changes to areas around structures
<b>Environmental effects</b>	Some	Significantly greater, especially along Guadalupe River
<b>Maintenance implications</b>	Modest	Much higher

Pages five and six of the attached joint Partner Agency memorandum include a number of tangible improvements that the Partner Agencies will pursue in the next phases of planning to the southern track approach into the station in close consultation with the affected communities, including:

- Grade separations keeping people and vehicles away from train traffic while maintaining good local connectivity and access;
- Sound and vibration dampening treatments for tracks;
- Aesthetic and functional treatments like sound walls with added landscaping (“green walls”) or other attractive, maintainable coverings;
- Optimize design to minimize the need to demolish existing buildings and/or acquire land; and
- Fuller Park as a permanent, city-owned park with high-quality landscaping and other amenities to be determined through a community-based process.

In addition, the Partner Agencies will work to develop appropriate metrics that will enable tracking and monitoring of these goals and conditions over time.

The goal of these improvements is to improve the quality of life in the neighborhoods adjacent to the tracks, including Gregory, Gardner, and North Willow Glen, even as the corridor accommodates increasing volumes of train traffic.

At the November 15, 2019 Diridon Joint Policy Advisory Board meeting, Board members Davis and Peralez requested that the December 3, 2019 City Council presentation include more information about specific elements, including:

- Anticipated train service/volumes along the rail corridor
- More detail regarding the I-280 viaduct alternative, including the implications of putting all trains on the viaduct and for Tamien Station
- Estimated property impacts along the rail corridor, including at Fuller Park

Staff is organizing the requested information, which will be posted along with the other presentation materials in advance of the City Council meeting.

## **CONCLUSION**

The Partner Agencies believe that this Concept Layout combines the station elements with the most promise to meet the project objectives and should be advanced to the next stage of project development, analysis, and definition.

## **EVALUATION AND FOLLOW-UP**

The Partner Agencies will continue to provide periodic updates to the Transportation and Environment Committee and/or City Council at key milestones in the Concept Plan's development.

## **CLIMATE SMART SAN JOSE**

The recommendation in this memo aligns with one or more Climate Smart San José energy, water, or mobility goals.

## **PUBLIC OUTREACH**

The Partner Agencies have conducted five community meetings, including a Spanish-language meeting, three presentations to the City's Station Area Advisory Group (SAAG), three pop-up booths at Diridon Station and community events, an online survey, and additional meetings with stakeholder groups and neighborhood associations. In addition, the Partner Agencies have presented and received important feedback from the Diridon Joint Policy Advisory Board



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(JPAB) at five meetings. The community input has informed the Partner Agencies' work throughout the Phase 1 process, which has culminated in a single, optimized layout – the DISC Concept Layout. The Partner Agencies presented staff's recommended layout to the Diridon JPAB on November 15 at 3:00 at VTA's Auditorium, 331 North First Street, San Jose.

Additionally, the project team will present staff's recommended layout to the four Partner Agency policy bodies at the following public meetings:

- San Jose City Council: Tuesday, December 3
- Caltrain Board of Directors: Thursday, December 5
- VTA Board of Directors: Thursday, December 5
- California High-Speed Rail Authority Board of Directors: Tuesday, December 10

More information is available at the project website: [www.diridonsj.org/disc](http://www.diridonsj.org/disc).

### **COORDINATION**

This memorandum has been coordinated with the City Manager's Office and City Attorney's Office.

### **COMMISSION RECOMMENDATION/INPUT**

No commission recommendation or input is associated with this action.

### **CEQA**

Not a Project, File No. PP17-009, Staff Reports, Assessments, Annual Reports, and Informational Memos that involve no approvals of any City action.

/s/  
JOHN RISTOW  
Director of Transportation

For questions, please contact Eric Eidlin, DOT Station Planning Manager, at (408) 795-1638.

Attachment A – Partner Agency Report  
Attachment B – Layout Development Report

## **SUBJECT**

This memo presents the Staff Recommendation of a spatial layout for the San José Diridon Station.

## **BACKGROUND**

When BART, commuter rail, high-speed rail, light rail, and supporting bus services converge, Diridon Station will support more high-capacity transit connections than any other place in the Bay Area. In order to plan for the substantial growth of Diridon Station, the City of San José, the Peninsula Corridor Joint Powers Board (PCJPB), Santa Clara Valley Transportation Authority (VTA), and the California High-Speed Rail Authority (the “Partner Agencies”) formed a public agency partnership via a Cooperative Agreement in July 2018. The Partner Agencies hired a consultant team led by Arcadis and Benthem Crouwel Architects (“Team ABC”) to aid in preparing of the Diridon Integrated Station Concept Plan (“Concept Plan”).

The eventual outcome of the Concept Plan process will be a project description for the future intermodal hub and an organizational framework for carrying the project forward toward implementation. Over the past year, the Partner Agencies worked to develop the spatial layout for the future station that included completing supporting analyses. Staff is presenting a recommended spatial layout to the Diridon Joint Policy Advisory Board for input and advice. Staff is recommending that the policy boards and/or executive management of the four Partner Agencies accept the Concept Layout for further development in coordination with the related Partner Agency planning processes and projects.

The Concept Layout is preliminary and subject to further station design development and rail operations analysis. This memo summarizes the Layout Development Report prepared by the Partner Agencies that describes the process for developing the staff-recommended Concept Layout. For the Layout Development Report and additional background information, please refer to the project website: [www.diridonsj.org/disc](http://www.diridonsj.org/disc).

## **INTEGRATED CONCEPT PLAN TOPICS**

The Concept Plan spatial layout planning process thus far addresses the following topics:

- Alignment and vertical profile of the heavy rail tracks at the station, as well as track approaches into the station from the north and the south.
- Location of passenger rail concourse(s) and heavy rail passenger platforms.
- Integration of all high-capacity modes at the station, including commuter and intercity rail, BART, light rail, local bus, and a future airport connector.
- Pedestrian and bicycle access to and through the station, as well as facilities for emerging modes of “micro-mobility” such as e-scooters.
- Facilities for other access modes and private vehicles, including long-distance bus, private shuttles, taxi, transportation network companies (TNC), kiss-and-ride, and park-and-ride.

- Urban integration (i.e., the connection between the station, track infrastructure, and surrounding neighborhoods and potential for amenities, such as plazas and community gathering space).

## **SUMMARY OF THE PROCESS**

Team ABC began work on the Concept Plan with a series of interviews with the Partner Agencies. In these interviews, ABC learned about the existing context, history related to the Diridon Station area (including many years of public involvement), and each agency's project goals, design criteria, and operational requirements. This information set an important foundation in the concept planning process. Based on work, the Partner Agencies developed eight key objectives:

- A Multi-Modal, Integrated, and Human-centered Station
- The Station as Catalyst for the Urban Environment
- The Station as a Destination
- A Futureproof, Flexible, Adaptive, and Innovative Station
- Organizational Partnership
- Internal & External Stakeholder engagement
- Funding Objectives and Risk Management

Subsequently, Team ABC facilitated a series of interdisciplinary, interactive workshops with technical experts from each Partner Agency. The workshops occurred on a monthly basis. During this process, Team ABC and the Partner Agencies developed an iterative series of work products - going from a wide range of ideas for each of the station elements to ultimately the staff-recommended layout. Along the way there were many potential combinations of station elements, three possible layouts, and a fourth layout that was based on optimizing the design to maximize benefits and reduce impacts to the community and developable land based on the feedback received from engaged stakeholders and the public.

An important component of this process focused on the Big Moves of the station layout: a) vertical configurations for the heavy rail corridor and station platforms; b) the location of the future station concourse; and c) the track approaches from the north and the south into the future station. These three Big Moves have been the focus because they are the least flexible and the way in which these heavy infrastructure elements are configured will have profound effects on urban integration. These moves create an infrastructure solution to support the next 100 years of rail service.

### *Community Engagement*

Concurrent with the workshops led by Team ABC, the Partner Agencies conducted four rounds of public outreach to share information and gather community input for consideration as part of the technical process. Community engagement is of utmost importance to the Partner Agencies to ensure that the future station realizes the ambitions of the community members and station

users while also meeting regional and statewide transportation goals. The outreach rounds corresponded to major milestones in the process. The purpose of each outreach round was as follows:

1. **Introduce** the project and gather feedback on the initial vision for the station and key objectives for the process.
2. **Present and obtain feedback** on preliminary concepts related to the vertical position of the platforms and station location as well as a draft evaluation framework for assessing design options under development.
3. **Present and obtain feedback** on three possible layouts for the station.
4. **Further explore** the Big Moves and present a fourth possible, optimized layout.

The Partner Agencies have conducted five community meetings, including a Spanish-language meeting, three presentations to the City's Station Area Advisory Group (SAAG), three pop-up booths at Diridon Station and community events, an online survey, and additional meetings with stakeholder groups and neighborhood associations. In addition, the Partner Agencies have presented and received important feedback from the JPAB at four meetings.

Based on this outreach, the top priority voiced by community members is designing the station to foster easy, convenient, well-timed connections between modes, particularly a short, direct, and intuitive connection between the BART platforms and the platforms for the other heavy rail services. Other general themes that are important to the community relate to:

- Identity as a local and regional destination
- Station access, both easy connections within the station as well as getting to the station from around San Jose
- Transit service improvements
- Street, pedestrian, and bicycle connectivity
- Activity center oriented near Santa Clara Street
- Create neighborhood quality of life
- Vibrant indoor and outdoor public spaces
- Effects on the historic depot building
- Concerns around the use of the existing southern corridor
- Potential for future transit-oriented development
- Parking and traffic
- Environmental sustainability
- Social equity
- Fiscal responsibility

These themes and the specific community input informed the Partner Agencies' work throughout the concept design process and have been reflected in the staff-recommended Concept Layout. The following section describes the Concept Layout that staff is recommending for advancement. For additional information about the community engagement process and the themes from input received, please refer to Chapter 6 of the Layout Development Report.

## **THE CONCEPT LAYOUT**

Stakeholder and community input and ongoing technical work led to the creation of an optimized fourth layout that attempted to take some of the best features of each of the other layouts and respond to much of the feedback received. The recommended Concept Layout creates two concourses – one facing Santa Clara Street and one facing San Fernando Street. The platforms and tracks are elevated, and it utilizes the existing northern and southern track alignments.

### **Decision #1: Elevated Station Platforms**

The Partner Agencies included an elevated station concept in the Concept Layout. Elevating the tracks and platforms brings significant benefits in the station area in terms of urban integration and allows pedestrians, cyclists, and vehicles to pass underneath the tracks at street-level. This will knit together the neighborhoods to the east and west of the tracks. It also creates a significant amount of street-level space that can be used to house station facilities as well as storefronts and workspace to enliven the street in the station area. Elevating the tracks may present construction and phasing challenges and also requires complex trackwork both north and south of the station to reconnect to the rail network. While complicated, the Partner Agencies believe elevating the station will be worth the benefits derived from connecting neighborhoods, improving the streetscapes around the station, and improving safety through new grade separations. The Layout Development Report offers further details regarding the technical analysis and conclusions for the vertical configuration of tracks and platforms.

### **Decision #2: Station Entrances at Santa Clara Street and San Fernando Street**

The Partner Agencies recommend two main concourses with four station entrance locations in the Concept Layout. One concourse is oriented toward Santa Clara Street with entrances both on the east and west sides of the station, and one concourse is oriented toward San Fernando Street with entrances both on the east and west sides of the station. It is estimated that more than 60 percent of passengers will use the northern entrance, while as many as 40 percent will use the southern entrance. The northern station hall will create a center of gravity that would promote pedestrian activity and reinforce Santa Clara Street's role as the main route to and through downtown San José. The southern station hall will allow for easy connections to the bike network and creeks and trails. This layout places BART, light rail, and VTA buses close to each other near the core of the station, which allows for efficient transfers between modes. Finally, both station halls are envisioned to feature iconic design and outdoor public space to provide increased visibility, intuitive wayfinding, and a dynamic public realm. The Layout Development Report offers further details regarding the technical analysis and preliminary conclusions for station entrances, plazas, and intermodal hub elements.

### **Decision #3: Existing Track Approaches into the Future Station**

The Partner Agencies recommend maintaining the track approaches that generally stay within the existing northern and southern corridors. This will leverage existing rail corridor infrastructure, minimize overall community impact, and minimize the need to acquire significant land. However, in making this recommendation, the Partner Agencies want to maintain the quality of life in the neighborhoods along the tracks. Specifically, the Partner Agencies commit to work to develop a design that results in noise, vibration, and visual conditions that are no worse and

ideally better than today, even with higher future train volumes. The Layout Development Report provides additional technical analysis that underpins this recommendation.

#### Northern Track Approach

Layout configurations explored early in the concept plan process showed significant property impacts to land intended for transit-oriented development north of Santa Clara Street. In response, the Partner Agencies asked Team ABC to develop an alignment north of the station that would support expanded future rail service while minimizing the need to acquire land. In order to accomplish these goals, ABC shifted the station platforms to the south and developed a northern track approach that impacts less property. The resulting alignment supports related Partner Agency planning projects, including the Caltrain Business Plan and implementation of the Diridon Station Area Plan (DSAP).

#### Southern Track Approach

Early in the Concept Plan process, the Partner Agencies asked Team ABC to develop a track alignment south of the station that would include a rail viaduct structure over the I-280/87 interchange. Team ABC designed a viaduct option determined to be constructible and operationally viable. However, upon further study, it became clear that this option would not address as many issues as the Partner Agencies and community hoped and would actually create new concerns. First, the viaduct would create a second rail corridor in the Gardner area without reducing the overall volume of train traffic along the existing rail corridor. This would spread visual and noise impacts over a larger area and affect many more people. It would also introduce substantial track infrastructure to previously unaffected neighborhoods, particularly those on the east side of SR-87. Second, the I-280 viaduct infrastructure would have a sizable footprint, decrease the amount of developable land available within the station area, and would affect the Guadalupe River corridor.

The Partner Agencies believe that community concerns relating to safety, noise, vibration, and visual impacts, among others, would be better addressed through tangible improvements to the existing southern corridor rather than by creating an additional new rail corridor that would be expensive to build and maintain. With these tangible improvements, the Partner Agencies believe that with proper design and investment the rail corridor can coexist with the communities along the corridor, including Gregory, Gardner, and North Willow Glen, and accommodate increasing train traffic without having a negative impact on the quality of life in those neighborhoods. To this end, the Partner Agencies recommend working on and evaluating the following strategies, plans and associated measurements, in close consultation with the affected communities, in the next phases of planning:

- Grade separations keeping people and vehicles away from train traffic while maintaining good local connectivity and access;
- Sound and vibration dampening treatments for tracks;
- Aesthetic and functional treatments like sound walls with added landscaping (“green walls”) or other attractive, maintainable coverings;

- Optimize design to minimize the need to demolish existing buildings and/or acquire land; and
- Fuller Park as a permanent, city-owned park with high-quality landscaping and other amenities to be determined through a community-based process.

In addition, the Partner Agencies will work to develop appropriate metrics that will enable tracking and monitoring of these goals and conditions over time.

## **DECISION SUMMARY**

In summary, the Concept Layout reflects overall community preferences for elevated platforms, major station entrances near Santa Clara Street as well as easy access to the south via San Fernando Street, and short transfer times between transit modes (including BART). It also creates the opportunity for grade-separated light rail through the station area and conveniently located bus stops. The layout prioritizes pedestrian, bicyclist, light rail, and local bus access, while accommodating intercity bus and vehicle drop-off and pick-up zones adjacent to the core station area. These elements will continue to be studied and refined in the next phases of the process. The layout places entrances in visible locations to support an iconic station design and “natural” wayfinding, and also includes space for a future airport connection. The Concept Layout optimizes future transit needs, while supporting future development potential. The Partner Agencies believe that this Concept Layout combines the station elements with the most promise to meet the project objectives and should be advanced to the next stage of analysis and definition.

## **NEXT STEPS OF THE CONCEPT PLAN**

A key focus of this phase of work was to organize the necessary elements for an iconic, integrated intermodal transit center into a spatial layout. The Partner Agencies first had to organize the elements physically to understand potential impacts to the functionality of the station. This is a foundation for the Partner Agencies to now build on. The next step to advance the Concept Layout is to continue planning, analysis of rail operations, and conceptual design work on the rail corridor and station facilities to better understand and refine the benefits and tradeoffs of each component of the layout. Some elements, including but not limited to, the bus and VTA light rail layouts, may evolve during the continued planning and design process. The Partner Agencies recognize that the development of the future Diridon Station is a long-term, multi-year program.

Over the next year, a critical planning focus will be on studying the best options to organize the Partner Agencies and technical expert teams, building a viable financial plan, developing environmental strategies, and designing an implementation path to build and govern the future station. The conceptual design work will result in updated conceptual engineering drawings to define the Concept Layout, capital cost estimates, conceptual construction sequencing passenger flow analysis, and refined station footprint. There are many critical decisions ahead and the next course of work will focus on how to take the spatial vision of the Concept Layout forward through project development sufficient for environmental evaluation, and eventually implementation.

In addition to the technical work on the layout, the Partner Agencies plan to continue community and stakeholder engagement. The design and implementation strategy work will be conducted in close coordination with interdependent project efforts happening around the station area, including the Diridon Station Area Plan (DSAP) and Google’s proposed “Downtown West” mixed-use development project.

The Partner Agencies continue to be committed to the partnership set forth by the Cooperative Agreement.

### **ADDITIONAL INFORMATION**

Additional information on the Concept Plan, including the Layout Development Report and Frequently Asked Questions, can be found on the project website at [www.diridonsj.org](http://www.diridonsj.org).





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# Section I

## I. INTRODUCTION

**SAN JOSÉ DIRIDON STATION IS LOCATED AT** the western edge of downtown San José, which is the nation's 10th largest city, with a population of more than 1 million. San José is a thriving community that continues to experience significant growth, densification, and urbanization, contributing to its vibrancy and regional, national, and international significance. Within San José and the region, Diridon Station serves as a key transportation hub, connecting several modes and services.

Just as the city is transforming, so, too, is San José's transit network. Between 2025 and 2040, the existing transit network will be expanded to include two new passenger rail services – Bay Area Rapid Transit (BART) and California High-Speed Rail – and will be enhanced by the electrification and modernization of Caltrain. These new services will blend with existing bus and rail services, which include Caltrain, Capitol Corridor, Altamont Corridor Express (ACE), Amtrak, and Santa Clara Valley Transportation Authority (VTA) bus and Light Rail. In addition, substantial public and private development in downtown San José will bring thousands of new workers, residents, and visitors to the area. This is likely to make Diridon

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*Within San José and the region, Diridon Station serves as a key transportation hub, connecting several modes and services.*

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Station one of the busiest intermodal stations in California, with a projected 100,000-plus daily passengers by 2040.<sup>1</sup>

Recognizing the station's potential, four Partner Agencies, VTA, City of San José, Caltrain, and the California High-Speed Rail Authority (CHSRA), have joined together in a cooperative partnership to develop the Diridon Integrated Station Concept Plan (the Concept Plan). The Concept Plan will broadly identify the future spatial layout of the station, the intermodal hub, integration with the surrounding community, and an organizational framework to deliver the vision. The project scope includes not only the redevelopment of the station and upgrading of transit infrastructure, but also focuses on transit-oriented

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<sup>1</sup> Projections were forecasted using the 2019 VTA Travel Demand Model for San José Diridon Station and includes the following modes: CHSRA, Caltrain, BART, Light Rail Transit, Bus, Amtrak, and ACE.



### *The four Partner Agencies*

development and establishing the station as a destination for transportation, retail, housing, employment, and entertainment. The transformation of Diridon Station into a world-class multimodal transit hub will establish the station as a major gateway to Silicon Valley.

## **1.1 Project Purpose**

To support economic development, vibrancy, and future growth in San José, the four Partner Agencies are making valuable investments in transportation enhancements and expansion of Diridon Station. As part of this investment, the Partner Agencies initiated development of the Concept Plan to establish a unified vision for combining transportation and land use components into a single station project. The Partner Agencies will work together to realize this vision by moving the project forward over the course of several phases. The purpose of this report – the Layout Development Report – is to summarize the collaborative and iterative design process employed during Phase 1.

## **1.2 Project Overview**

To create a transformative spatial layout for San José Diridon Station, the Partner Agencies engaged an internationally acclaimed design team of engineers, architects, and city planners from Arcadis and Bentham Crouwel Architects (the Study Team) to assist with development of the Concept Plan.

The technical design component of the Concept Plan will establish (1) the transportation infrastructure to provide capacity for future, expanded transit services, (2) an optimal physical rela-

tionship between transportation modes, and (3) a balanced relationship between the station and surrounding neighborhoods. This will frame the vision for what the station will become over time. The Concept Plan will focus on the functionality of the station, rather than its architectural appearance. Later phases of work will include detailed design and engineering, as well as environmental review. The general study area for the track alignment of the Concept Plan is Taylor Street in the north to Tamien Station in the south.

The Study Team guided the Partner Agencies through an intensive design process that began by identifying the elements of the intermodal hub. Subsequently, the Study Team and the Partner Agencies together combined these elements to create a multitude of potential layouts. The Partner Agencies thoroughly vetted the layouts to assess the benefits and tradeoffs of each. This process led to refinement of the layouts to create a layout that holds the most promise in fulfilling the Concept Plan's key objectives. The development of a spatial layout for Diridon Station was, and continues to be, an iterative process.

Table 1 includes terminology commonly used throughout this report and other project documentation. Appendix A contains a full list of terminology and acronyms used in this report.



## San José Diridon Integrated Station Concept Plan

Table 1: Project Terminology

Project Terminology	
<b>Elements</b>	The building blocks of the station and the surrounding intermodal hub used to create layouts. Together, all of the elements are commonly referred to as the “Kit of Parts.”
<b>Heavy Rail Options</b>	A combination of alternatives for the four heavy rail components, which are commonly referred to as “Big Moves”: 1) Vertical Platform Position 2) Horizontal Platform Position 3) North Track Alignment 4) South Track Alignment
<b>Layout</b>	A combination of all elements that create a conceptual design of the station and intermodal hub.
<b>Evaluation</b>	A comprehensive review process based on a variety of criteria to assist in narrowing down the number of possible layouts.
<b>Concept Layout</b>	A comprehensive review process based on a variety of criteria to reduce the number of possible layouts.

### 1.3 Existing Conditions

San José Diridon Station serves as a major transit hub for Santa Clara County and Silicon Valley, with an approximated 17,000 daily passengers. Diridon Station is located directly across from the SAP Center, a major sports and entertainment venue, and faces east toward downtown San José. The urban context surrounding the station is highly varied. The eastern side of the station is primarily dominated by surface parking lots and low-intensity light industrial uses. The western side of the station, by contrast, is home to several small-scale pedestrian-oriented neighborhoods, including Cahill Park. However, the railroad tracks and other infrastructure hinder east-west non-vehicular movement. The existing layout of the Diridon Station and surrounding relevant points of interest are illustrated on Figures 1 and 2.

The current focal point of Diridon Station is the historic depot building. Constructed in 1935 and restored in 1994 after sustaining significant damage from the 1989 Loma Prieta Earthquake, the depot runs parallel to the tracks and connects to

a narrow underground concourse that provides access to the platforms. Figure 2 shows the location of the station in relation to downtown and nearby points of interest.

Currently, the station is served by a multitude of rail and bus services. The station includes nine heavy rail tracks, which primarily run at grade along a north-south axis and are primarily used by diesel commuter and freight trains. The station has nine platform faces, all of which are 8 inch-

### Diridon Station Facts



Opened in 1935



Major transit hub for the Bay area



17,000 daily passengers

es above the top of the rails and vary in length from 740 feet to 1,255 feet. Diridon Station and the rail corridor are owned by the Peninsula Corridor Joint Powers Board (PCJPB), which operates the Caltrain commuter rail service along the existing alignment of the heavy rail tracks to the north and south, and through Diridon Station. The light rail (or LRT) tracks, which are owned and operated by VTA, run parallel to the heavy rail tracks along the western edge of the station and shift to the east underneath the station, running toward downtown.

A semi-circular driveway in front of the station allows for pick-up and drop-off of passengers using taxis, transportation network companies (TNCs), company shuttles, and private vehicles. The current configuration of the driveway limits the num-

ber of vehicles to roughly eight. The VTA bus stop is also near the current station building, and intercity buses utilize curb space in front of the station. The parking lot to the east of the station, which is generally full, has a total of 581 parking spaces. During workdays, this parking lot is primarily used by passengers, while during evenings and weekends, it is used by SAP Center customers. Bicyclists can reach the station via several bicycle routes, including a route from downtown across West San Fernando Street and via the Guadalupe Trail from the south, east, and north. There are three locations for bicycle parking at the station, with a total of 16 rack spaces near the entrance, 48 keyed lockers inside the station, and eight electronic lockers west of the station.

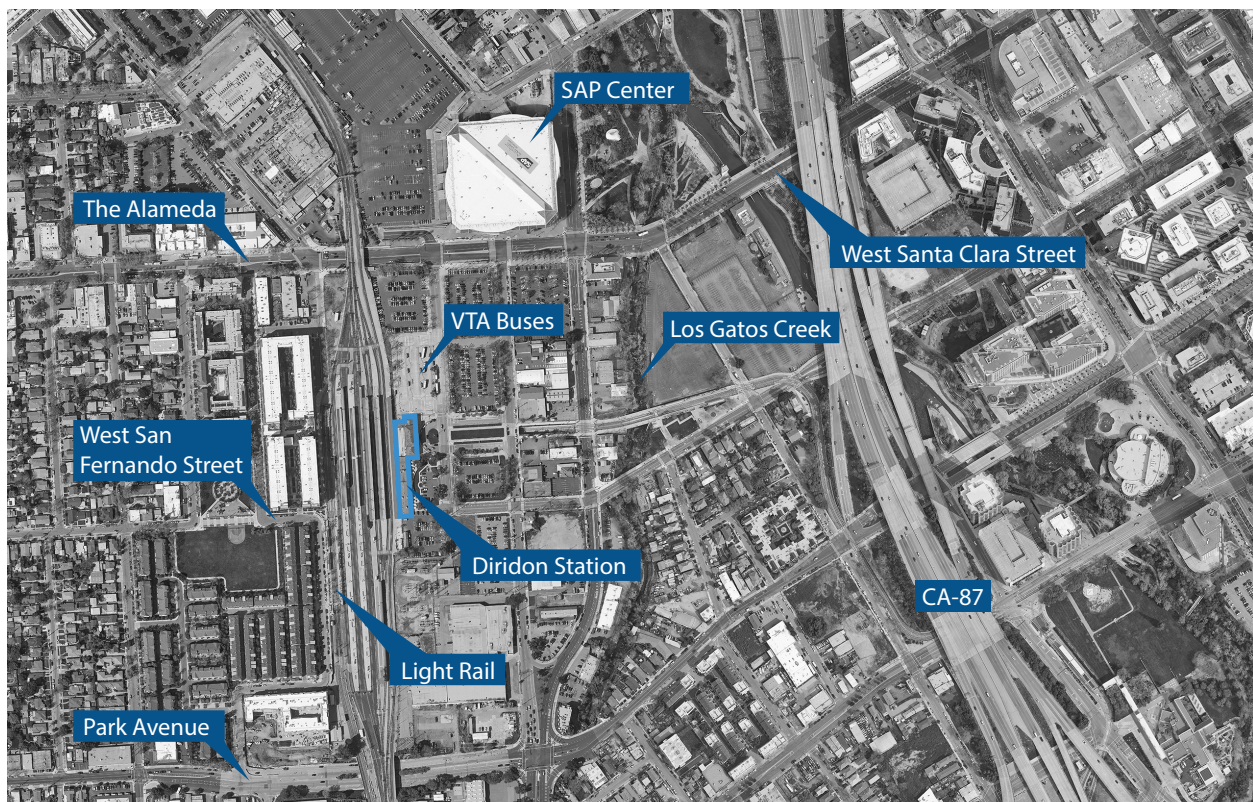


Figure 1: Existing Conditions at Diridon Station





Figure 2: Existing Conditions at Diridon and Surrounding Area

### I.4 Report Outline

The remainder of the Layout Development Report includes the following sections:

**Section 2: Study Process** – A chronology of how station components were identified, combined, and evaluated to develop spatial layouts and ultimately, a Partner Agency recommended layout — the Concept Layout.

**Section 3: Layout Descriptions** – A detailed description of the three layouts and justifications for the placement of each element.

**Section 4: Layout Evaluation Methodology** – An overview of the evaluation framework developed by the Partner Agencies.

**Section 5: Joint Evaluation Ratings** – A comprehensive evaluation of the three layouts using the evaluation framework.

**Section 6: Summary Outreach** – A summary of the four rounds of outreach completed during Phase 1.

**Section 7: Layout Optimization and Advancement** – A detailed description of the Concept Layout.

**Section 8: Next Steps** – Overview of Phase 2 activities.





## Section 2

### 2. STUDY PROCESS

**THE STUDY PROCESS FOR THE CONCEPT PLAN** includes a comprehensive and iterative series of meetings and workshops. All of the tasks completed in Phase 1 have contributed to the Concept Layout, which is the layout that the Partner Agencies recommended for advancement. Figure 3 summarizes the five primary milestones of the study process and the documentation that has been produced throughout Phase 1. Each study process milestone is described in more detail in the following sections.

At the commencement of Phase 1, the Partner Agencies and Study Team participated in several kickoff workshops, meetings, and individual interviews to establish the key objectives and design and engineering requirements for the project (outlined in the Ambitions and Requirements Report). The project objectives and requirements served as the foundation for the development of layouts.

After establishing the project ambitions and requirements, the Study Team and Partner Agencies began the technical study process. The Partner Agencies and Study Team used the ambitions and requirements to create layouts and evaluate each layout's ability to achieve the project objectives. The Partner Agencies began by identifying

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*The Concept Layout is the layout that the Partner Agencies recommended for advancement.*

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the elements (defined in Table 1) to use in drafting layouts. Next, the Study Team combined different options for each element to create a diverse set of layouts. This activity helped to illustrate a multitude of potential layouts for the future station and intermodal hub.

The layouts were then vetted through three separate processes – first through the assessment of heavy rail performance, then through screening the benefits and tradeoffs of draft layouts, and finally through a qualitative evaluation. These evaluations allowed the Study Team and Partner Agencies to continually refine the number of possible layouts and establish the Concept Layout, which is recommended to be advanced for Diridon Station. The reports listed at the top of Figure 3 – the Ambitions and Requirements Report, the Heavy Rail Assessment Report, and the Sce-

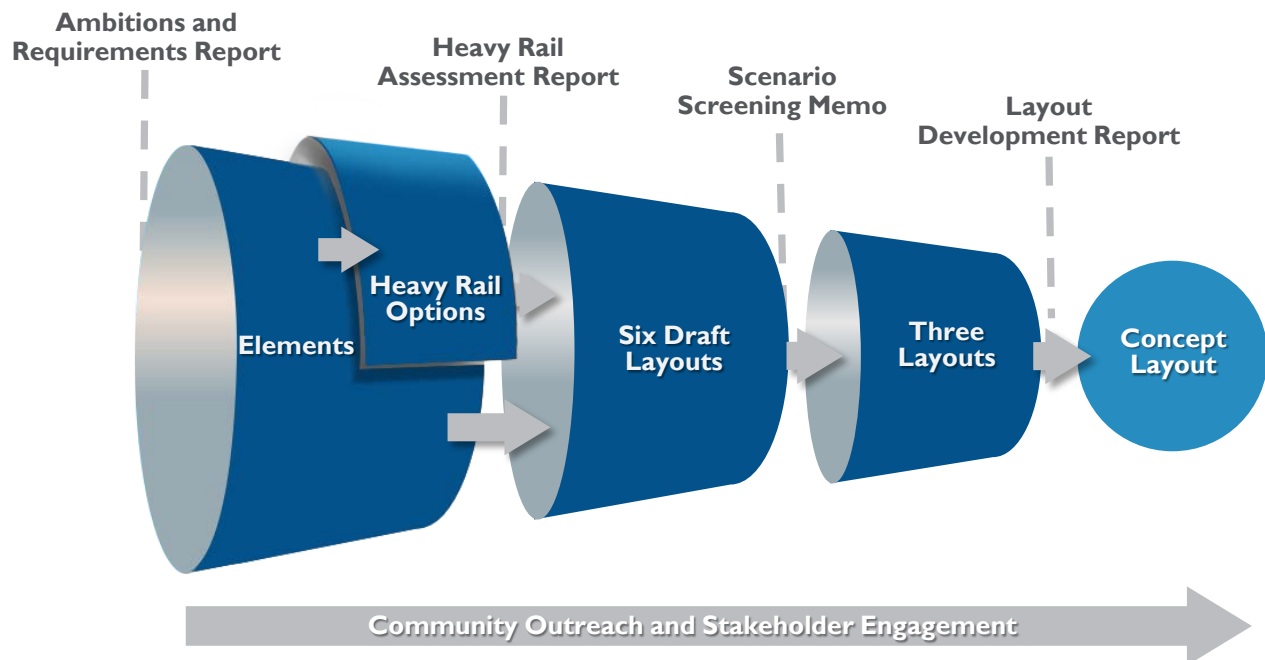


Figure 3: The Concept Plan Study Process for Phase One

nario Screening Memo<sup>2</sup> – contain detailed summaries and results of the first three milestones of the study process. This report, the Layout Development Report, provides the details of the three possible layouts and the optimization process that led to the development of the Concept Layout.

### 2.1 Ambitions and Requirements

Through a variety of collaborative workshops, interviews, meetings, and coordination with the Partner Agencies, an Ambitions and Requirements Report was developed to establish a foundation for the study process and to guide the development of the possible spatial layouts for San José Diridon Station. The Ambitions and Requirements Report established the key objectives, or ambitions, for the spatial layouts and the Client Requirement Specifications (CRS), which include mandatory design and engineering requirements and the Partner Agencies' priorities for the station and intermodal hub.

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*The Partner Agencies established five key objectives as “guiding principles” for the design and engineering aspects of the station and intermodal hub.*

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To guide the development of the spatial layouts for San José Diridon Station and the intermodal hub, the Partner Agencies established five key objectives as “guiding principles” for the design and engineering aspects of the station and intermodal hub. These key objectives also guided the development of the evaluation framework (discussed in Section 4).

<sup>2</sup> The term “scenario” is synonymous with “layout.”

The five key objectives consist of the following:

-  **A Multimodal, Integrated, and Human-Centered Station**
-  **The Station as Catalyst for the Urban Environment**
-  **The Station as a Destination**
-  **A Compelling Vision for the Future of Diridon Area**
-  **A Future-proof, Flexible, Adaptive, and Innovative Station**

Throughout the study process, the CRS components were (1) verified to confirm that the Partner Agencies' requirements were met and (2) validated to check that the priorities met the Partner Agencies' expectations. The Partner Agencies, recognizing that it was not possible to incorporate all priorities, worked together with the Study Team to compromise, consider tradeoffs, and move forward with the ideas that hold the most promise in meeting the objectives. The Study Team has used the key objectives and requirements to assess, screen, and evaluate potential layouts.

## 2.2 Elements

As previously noted, elements are the building blocks used to create the layouts. Elements were defined based on their roles in supporting the station's operability, functionality, accessibility, and connectivity as well as the environment, historical features, and urban space. Elements can be combined to make up what is commonly referred to as the "Kit of Parts." Table 2 presents the full list of elements and heavy rail options, which are described in Section 2.3.

## 2.3 Heavy Rail Options

Following the identification of the elements, the Study Team and Partner Agencies identified and analyzed several options for heavy rail. A heavy rail option is the combination of the following components:

- **Vertical Platform Position** – The heavy rail tracks could either be at grade (surface level) or elevated.
- **Horizontal Platform Position** – The platforms could be shifted north toward West Santa Clara Street or south to West San Fernando Street or remain adjacent to Stover Street, which is the current general location of the platforms.
- **North Track Alignment** – The heavy rail tracks in the north could either remain along the current alignment or be realigned to a position that is farther north than the existing corridor.

*Table 2: Elements and Heavy Rail Options*

Elements (or "Kit of Parts")	
<ul style="list-style-type: none"> <li>• Heavy Rail</li> <li>• Light Rail</li> <li>• Station Building</li> <li>• Pedestrians</li> <li>• Bikes</li> <li>• VTA Bus</li> <li>• Intercity Bus</li> </ul>	<ul style="list-style-type: none"> <li>• Taxis, TNCs, Autonomous Vehicles (AVs), Company Shuttles, Pick Up/Drop Off</li> <li>• Car Parking</li> <li>• BART</li> <li>• Airport Connector</li> <li>• Buildings</li> </ul>
Heavy Rail Options (or "Big Moves")	
<ul style="list-style-type: none"> <li>• Vertical Platform Position</li> <li>• Horizontal Platform Position</li> <li>• North Track Alignment</li> <li>• South Track Alignment</li> </ul>	

- **South Track Alignment** – The heavy rail tracks in the south could either remain along the current alignment or follow the current alignment with the addition of an I-280 elevated alignment, which would be located just south of I-280.

These four components are commonly referred to as “Big Moves,” which indicates that heavy rail is the least flexible of all of the elements. Further, heavy rail serves as the foundational element for all layouts – the placement of rail infrastructure must be identified before the placement of any other elements. For this reason, heavy rail options were assessed before the other elements.

The Partner Agencies and Study Team developed and assessed a wide variety of options for the heavy rail element to use as the base for the layouts. For all heavy rail options, the Study Team and Partner Agencies established a minimum requirement of at least 10 tracks and 5 island platforms at the station. The additional tracks would result in the overall expansion of the existing heavy rail corridor.

Additionally, all options considered were required to meet the service specifications and schedule developed by Caltrain and CHSRA through the Caltrain Business Plan process, as well as a

variety of critical rail design and engineering requirements from both agencies. Through assessment, the Partner Agencies chose the four heavy rail option combinations listed in Table 3 to use in layout development. These options were chosen to show the diverse range of possibilities for heavy rail. While the Partner Agencies used these as a basis for the layouts presented in this report, they acknowledged the feasibility of other heavy rail options and recognized those options could be pursued in the future, if needed due to unforeseen circumstances. However, the Partner Agencies consider all heavy rail options outside the option included in the Concept Layout to currently be dormant (and not being advanced at this time). A detailed overview of the heavy rail assessment process is documented in the Heavy Rail Assessment Report.

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*The four heavy rail components are commonly referred to as “Big Moves,” which indicates that heavy rail is the least flexible of all of the elements.*

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**Table 3: Heavy Rail Options**

Option	Vertical Platform Position	Horizontal Platform Position	North Track Alignment	South Track Alignment
<b>Option 1</b>	Platforms At Grade	Central (West San Fernando Street)	Modify Existing Corridor	Modify Existing Alignment
<b>Option 2</b>	Platforms Elevated	Central (West San Fernando Street)	New Northern Corridor	Modify Existing Alignment
<b>Option 3</b>	Platforms At Grade	North (West Santa Clara Street)	New Northern Corridor	New Southern Alignment with Existing Alignment
<b>Option 4</b>	Platforms Elevated	North (West Santa Clara Street)	New Northern Corridor	Modify Existing Alignment

## 2.4 Six Draft Layouts

The Partner Agencies then developed six draft layouts using the four heavy rail options defined in Table 3 followed by determining the placement of the remaining elements. The six draft layouts were then screened based on operational impacts, constructability, urban environment, transit integration, development opportunities, and the environment. This screening process led to the identification of the benefits and challenges for the layouts in each of these categories and allowed the Study Team and Partner Agencies to advance three layouts. The details and results of the process to evaluate these six layout combinations are documented in the Scenario Screening Memo.

## 2.5 Three Layouts

After advancing three of the draft layouts, the Study Team and Partner Agencies further refined the layouts by mixing and matching the placement of the elements. The purpose of this process was to show the spectrum of possibilities for the layouts, while creating a layout that best achieves the key objectives. This was iterative and completed through a series of evaluations, workshops, and meetings. This process resulted in the development of the following three layouts, which are described in detail in Section 3:

- Layout At Grade, West San Fernando Street
- Layout Elevated, West Santa Clara Street
- Layout Elevated, Stover Street

Appendix C contains illustrations showing the changes made to the three draft layouts to produce these three layouts.

## 2.6 Concept Layout

The final milestone in the study process is the establishment of the Partner Agency recommended layout for Diridon Station and the intermodal

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*The final milestone in the study process is the establishment of the Partner Agency recommended layout for Diridon Station and the intermodal hub.*

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hub. Section 7 of this report provides a detailed description of the Partner Agency recommended Concept Layout. This layout is the culmination of an intensive, thorough process, which has included numerous months of challenging and dynamic Partner Agency meetings, workshops, multilayered assessments of the elements and layouts, ongoing technical and data-driven analysis, and several rounds of public and stakeholder coordination. The Concept Layout will be further refined in future phases to better understand the benefits and tradeoffs of the design.

## 2.7 Community Outreach and Stakeholder Engagement

An integral component of Phase 1 was the implementation of a community outreach strategy that encourages active participation from a broad cross-section of the San José community. The strategy aims to:

- Inform and educate the public about the project and the decision-making process
- Gather feedback for the Partner Agencies to consider during preparation for the Concept Plan
- Foster a sense of pride and collective ownership in the vision established by the Concept Plan

The Partner Agencies completed four rounds of outreach, including community meetings, an on-line survey, presentations to the Diridon JPAB, the City's Station Area Advisory Group (SAAG), informational pop-up events at Diridon Station, and discussions with neighborhood and other stakeholder groups. Additionally, the Partner Agencies continue ongoing engagement with key stakeholders, including local community organizations and agencies, transit operators, and adjacent property owners.

A full list of completed activities can be found on the project website: <https://www.diridonsj.org/disc>. A detailed summary of the feedback received from the community is included in Section 6.

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*The Partner Agencies completed four rounds of outreach, including community meetings, an online survey, presentations to the Diridon JPAB, the City's Station Area Advisory Group (SAAG), informational pop-up events at Diridon Station, and discussions with neighborhood and other stakeholder groups.*

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## Section 3

### 3. LAYOUT DESCRIPTIONS

**THIS SECTION DESCRIBES THE PROPOSED** location of the elements listed in Table 2 for the three layouts advanced by the Partner Agencies during the study process: At Grade West San Fernando Street, Elevated West Santa Clara Street, and Elevated Stover Street (see Appendix B for drawings of these layouts). These layouts are named after the vertical platform position (at grade or elevated) and the location of the platforms and station concourse (street name). These three layouts have been adapted and refined from three of the draft layouts (described in the Scenario Screening Memo). They are the result of a series of optimization decisions made by the Partner Agencies during several engineering meetings and design workshops; the refinements made to each layout are described in the footnotes of Sections 3.1, 3.2, and 3.3. Appendix C contains visuals that illustrate the changes made to produce the three new layouts. The benefits and challenges of the layouts are described in detail in Section 5 – Joint Evaluation Ratings.

Figure 4 illustrates the components of the intermodal hub at Diridon Station and the relationship between the station and the intermodal hub. This information is beneficial in understanding the design of the three proposed layouts. The in-

termodal hub is defined as a destination where passengers can access several modes of travel and other amenities, such as retail, employment, and housing, among other uses. The transportation services and primary amenities to be included in the future Diridon intermodal hub are listed on Figure 4<sup>3</sup>. The station is one component – and typically the focal point – of the intermodal hub and consists of the station building, the station hall, the concourse, and the heavy rail platforms.

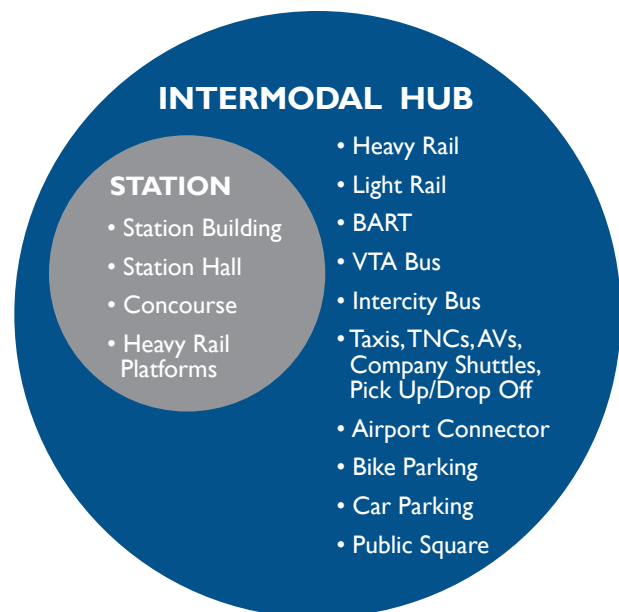


Figure 4: Intermodal Hub Diagram

<sup>3</sup> This list is not exhaustive of all possible components and amenities for Diridon's intermodal hub. "Car parking" includes only the placement of parking at the station. All other parking-related work will be addressed in other planning efforts.

While preliminary work has been completed on the topics of constructability, phasing, cost estimates (overview included in Section 3.5), design requirements, and future land use development for the three layouts, detailed information on these subjects is not included in this report; rather, this information is documented in the Layout Development Technical Report.

3.1 Layout Development Inputs

The three layouts presented in the subsequent section show a wide variety of possibilities for the future Diridon Station and intermodal hub. The Partner Agencies and Study Team developed these layouts using several design principles that reflect the Concept Plan’s key objectives, and ambitions and requirements.

As noted previously, the layouts were developed by choosing the heavy rail options first, followed by the placement of the remaining elements. The purpose of this sequence is because heavy rail operations must, first and foremost, be feasible and functional in the layout.

*The access hierarchy guided the placement of the elements to provide for an optimal passenger experience first for passengers using non-motorized travel, followed by those using motorized travel.*

One of the fundamental principles used to create the layouts is the access hierarchy, depicted in Figure 5. The access hierarchy, which was defined by the Partner Agencies in the CRS, guided the placement of the elements to provide for an optimal passenger experience first for passengers using non-motorized travel, followed by those using motorized travel. An intermodal hub that adheres to the defined hierarchy will result in a human-centered station and hub that provides an optimal passenger experience.

Another important input used to inform the devel-

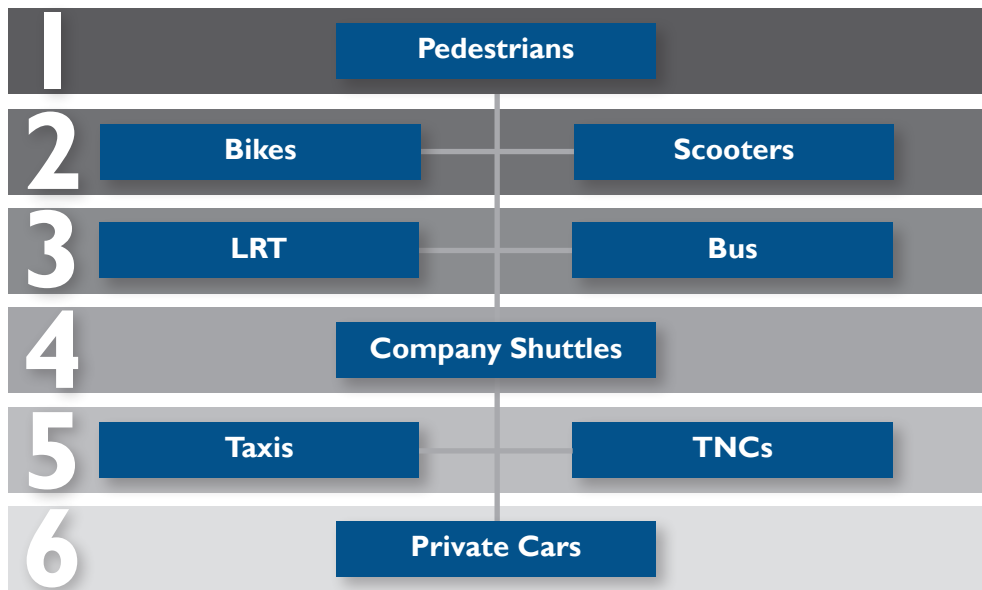


Figure 5: The Concept Plan Access Hierarchy



opment of the layouts is the preliminary ridership transfers calculated using the 2019 VTA Travel Demand Model for San José Diridon Station. According to the model, Diridon Station is forecasted to have more than 100,000 total daily passengers. The number of forecasted daily passengers by mode and the transfers between modes is illustrated on Figure 6<sup>4</sup>. These forecasts are important in not only the position of the platforms, but also to design for efficient passenger transfers. The demand model will be refined and further detailed as the design and planning process progresses.

### 3.2 Layout At Grade West San Fernando Street

Layout At Grade West San Fernando Street, illustrated on Figures 7 and 8 and summarized in Table 4, proposes an at grade station, which would require the least amount of right-of-way acquisition compared to the other layouts. While the northern and southern track alignment follows the existing corridor, the width of the corridor would be expanded due to the addition of heavy rail tracks.

Placing the station and heavy rail tracks at grade in the station would prevent the creation of at grade east-west street connections, given the physical constraints of the transit infrastructure. As a result, the construction of new underpasses or over-

#### Heavy Rail Options

- Vertical platform position: *At Grade*
- Horizontal platform/station position: *West San Fernando Street*
- North track alignment: *Existing corridor*
- South track alignment: *Existing corridor*

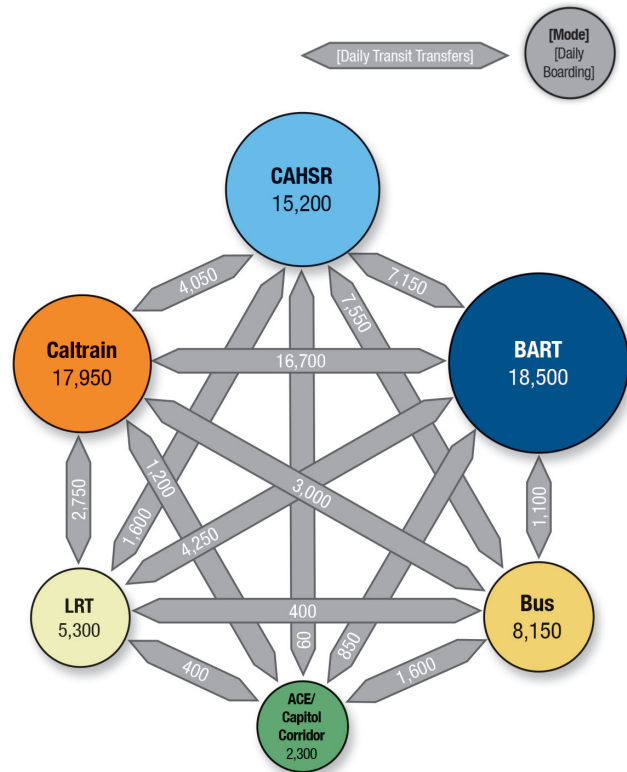


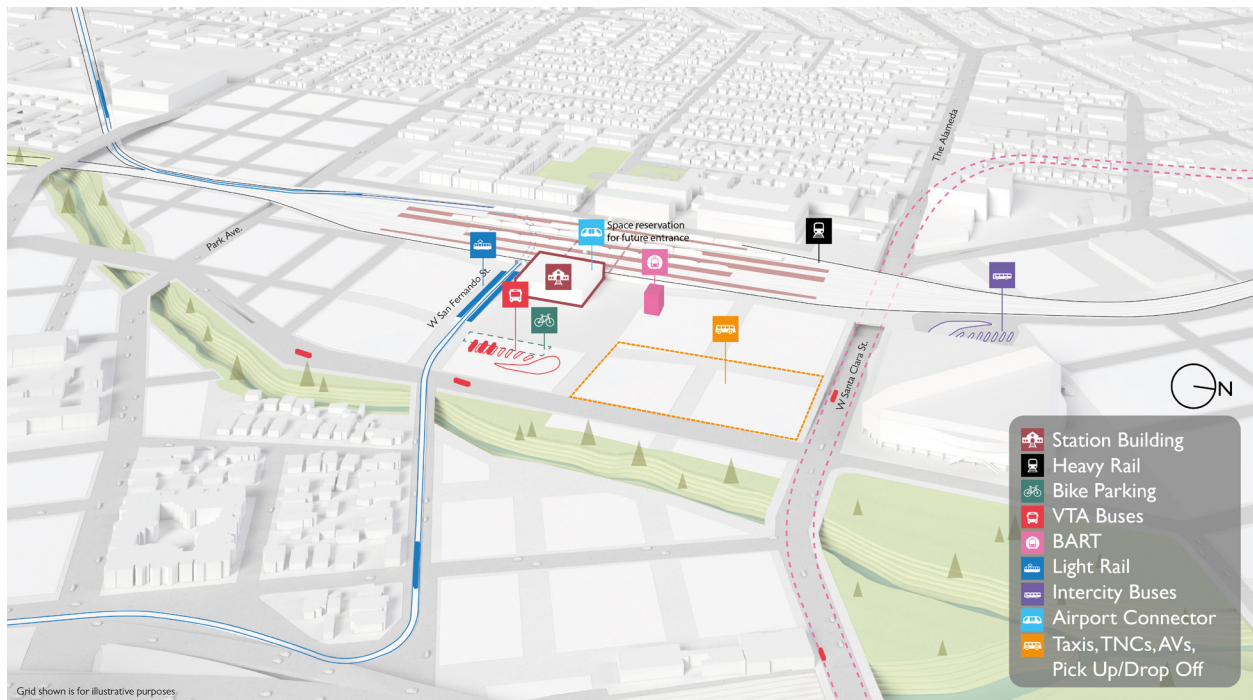
Figure 6: 2040 Preliminary Projected Ridership Transfers

passes would be required for east-west travel for both motorized and non-motorized traffic.

The entrance to the station hall would be located below grade and would provide access to the concourse. The light rail platforms, which would use a new optimized alignment in the station area, bike parking, and pick-up and drop-off areas for taxis, TNCs, company shuttles, and private vehicles are proposed to be recessed. Both the VTA and intercity bus stops would be located at grade – VTA buses would be located adjacent to Autumn Street and the intercity bus would be located between the heavy rail tracks and the SAP Center. Overhead development above the heavy rail tracks (but excluding the platforms) and the elements within the intermodal hub is possible in this layout.

<sup>4</sup> Daily transit transfer estimates show sum of passenger flows in a single direction; estimates of daily boardings indicate total boardings for all transit and non-transit modes.

## San José Diridon Integrated Station Concept Plan



**Figure 7: Proposed Intermodal Hub – At Grade West San Fernando Street Layout**



**Figure 8: Proposed Rail Corridor – At Grade West San Fernando Street Layout**

Table 4: Elements Overview – At Grade West San Fernando Street

Elements Overview — At Grade West San Fernando Street		
	<b>Heavy Rail</b>	The heavy rail corridor would be at grade, which reflects the current vertical position of the tracks at the station. A total of 10 tracks and 5 island platforms (4 electrified and 1 non-electrified) are proposed, which would widen the station to the east. There is also an opportunity to include an additional dedicated freight track to the east side of the rail corridor. Maximum possible train speeds through the station are projected to be 25 miles per hour (mph).
	<b>Light Rail</b>	On the east side of the station, the light rail tracks would veer from the existing alignment and follow West San Fernando Street toward downtown San José. The light rail tracks would cross the station from east to west, allowing for a platform on the east side of the station below surface level.
	<b>Station</b>	The station would be located at West San Fernando Street, with station access and the public square one level underground. A recessed public square would be located directly in front of the station entrance on the east side of the building. A concourse underneath the tracks would be needed to access to the platforms. This layout would not accommodate the creation of a major western station entrance, as there is minimal space between the heavy rail tracks and White Street.
	<b>Pedestrians</b>	Since both the rail corridor and the station building are located at grade, pedestrians traveling east to west and vice versa would do so through underpasses.
	<b>Bikes</b>	Bike parking would be underground, beneath the at grade VTA bus platforms, which would make it easily accessible from the public square. Additionally, a new southern bike route along the tracks could provide bicyclists an alternate route to Bird Avenue.
	<b>VTA Bus*</b>	VTA bus platforms would be located at grade to the east of the public square and would be accessible from Autumn Street.
	<b>Intercity Bus**</b>	Pick up and drop off for intercity buses would be located adjacent to the heavy rail tracks, north of West Santa Clara Street between the heavy rail tracks and the SAP Center.
	<b>Taxis, TNCs, AVs, Company Shuttles, Pick Up/ Drop Off**</b>	The pick up and drop off area for taxis TNCs, AVs, company shuttles, and private vehicles would be in an underground facility west of Autumn Street. This area could possibly connect directly to the station hall.
	<b>Car Parking</b>	The location of vehicle parking is flexible and will be studied further before determining placement. It is proposed that the parking areas would be accessible via a tunnel located beneath Autumn Street. This location would be accessible from both Bird Avenue and San Carlos Street.
	<b>BART**</b>	The BART station entrance would be located just north of the station hall. The entrance would be connected to the BART platforms via an underground tunnel approximately 800 feet long. To improve accessibility, moving walkways could be constructed in the tunnel.
	<b>Airport Connector</b>	This layout could accommodate a future addition of an airport connector, which, for the purposes of the Concept Plan, is assumed to be located underground.
	<b>Buildings</b>	The Pacific Gas and Electric Company (PG&E) substation and the historic depot building would be relocated. Caltrain's Centralized Equipment Maintenance and Operations Facility (CEMOF) would remain in its current location. Overall, this layout will affect the least number of buildings and plots as compared to the other two layouts.

\* Previously proposed to be located on Cahill Street.

\*\* Previously proposed to be located inside a building near West Santa Clara Street.

### 3.3 Layout Elevated West Santa Clara Street

Layout Elevated West Santa Clara Street, illustrated on Figures 9 and 10 and summarized in Table 5, proposes an elevated station, approximately 25 feet high, with a new track alignment in both the northern and southern corridors. This layout includes a new northern corridor to accommodate the shift of the platforms north around West Santa Clara Street and to maximize train speeds north of the station. The southern I-280 alignment was developed to minimize community impacts, while accommodating operational requirements. The I-280 alignment would include the construction of a viaduct with two heavy rail tracks that is parallel to I-280, north of the Gardner neighborhood.

Elevating the tracks would provide space for various uses (e.g., bike parking, retail, small business studios, and mechanical and electrical systems) beneath the tracks and would allow for at-grade east-west connections for pedestrians, bicyclists, and motorists along West Santa Clara Street and West San Fernando Street. At-grade connections (as opposed to tunnels or underpasses) create clear lines of sight, which enhance the access and safety of all modes.

For this layout, the station building would be located at grade just south of West Santa Clara Street, which is the most northern proposed station location relative to the other layouts. The location of the concourse would allow for a western entrance to the station from The Alameda. The public square, light rail platforms, and the BART station entrance would be located at grade and adjacent to the station building. For this layout, development above the heavy rail tracks (but excluding the platforms) and the elements within the intermodal hub is possible. As in downtown San José, there are height restrictions<sup>5</sup> related to the airport. Consequently, development above the elevated tracks would result in a more limited building volume than elsewhere in the station area.

#### Heavy Rail Options

- Vertical platform position: *Elevated*
- Horizontal platform/station position: *West Santa Clara Street*
- North track alignment: *Northern corridor*
- South track alignment: *I-280 and Existing*

<sup>5</sup> The Federal Aviation Administration has established height restrictions for San José airport operations.

















Figure 9: Proposed Intermodal Hub – Elevated West Santa Clara Street



Figure 10: Proposed Rail Corridor – Elevated West Santa Clara Street

## San José Diridon Integrated Station Concept Plan

Table 5: Elements Overview – Elevated West Santa Clara Street

Elements Overview — Elevated West Santa Clara Street		
	<b>Heavy Rail</b>	The heavy rail tracks would be elevated approximately 25 feet above grade. A total of 11 tracks (including a dedicated freight track) and 5 island platforms (4 electrified and 1 non-electrified) are proposed, which would widen the station to the east. Maximum possible train speeds through the station are projected to be 35 mph (in some cases up to 50 mph).
	<b>Light Rail*</b>	A new light rail track would enter the station area from the east on West Santa Clara Street. The tracks would cross the station from east to west, with a 300-foot platform positioned on the east side of the track at grade level. Beyond the station, the tracks would slope up and follow the elevated heavy rail footprint to the south. Given the position of the east-west crossing, there would be enough room to slope the light rail tracks upward on the same level as the heavy rail tracks to provide a grade-separated crossing at West San Fernando Street.
	<b>Station</b>	The station would be located just south of West Santa Clara Street, a highly activated corridor. The concourse would be at grade (underneath the tracks and platforms) connecting West Santa Clara Street to The Alameda. The proposed northern shift of the station hall would allow for a major western entrance to the station from The Alameda.
	<b>Pedestrians</b>	The east-west street connections would be at grade, and the intermodal hub would be restricted to pedestrian, bicycle, scooter and bus traffic, minimizing conflicts with motorized traffic. This layout would place the station so that the public square is within line of sight for pedestrians traveling to and from downtown San José.
	<b>Bikes</b>	Bicyclists would access the station from either West Santa Clara or West San Fernando Streets. Bike parking would be at grade under the tracks, just south of the station hall, but would only be accessible from the south by crossing the light rail tracks. In this layout, taxis and TNCs would be positioned on Autumn Street – with VTA buses on West Santa Clara Street – forcing cyclists to cross wide streets to travel east or north.
	<b>VTA Bus**</b>	The VTA bus stops would be located along designated curbs on West Santa Clara Street (a total of three per direction) and on Autumn Street (one positioned eastward), meant for buses traveling from the southwest toward downtown and vice versa.
	<b>Intercity Bus</b>	Intercity buses would be located at grade at designated curbs along Autumn Street between West Santa Clara Street and Park Avenue.
	<b>Taxis, TNCs, AVs, Company Shuttles, Pick Up/ Drop Off</b>	Like intercity buses, taxis, TNCs, AVs, and shuttles would access the intermodal hub at designated at grade curbs along Autumn Street between West Santa Clara Street and Park Avenue.
	<b>Car Parking</b>	The location of vehicle parking is flexible and will be studied further before determining placement. It is proposed that the parking areas would be accessible via a tunnel located beneath Autumn Street. This location would be accessible from both Bird Avenue and San Carlos Street.
	<b>BART</b>	The BART station would be located directly beneath the station hall; the BART platforms would be directly accessible from the station hall.
	<b>Airport Connector</b>	This layout could accommodate a future addition of an airport connector, which, for the purposes of the Concept Plan, is assumed to be located underground.
	<b>Buildings</b>	The PG&E substation, the historic depot building, and CEMOF would be relocated in this layout. Additionally, several buildings to both the north and south would potentially be affected.

\* Previously proposed to connect to the existing alignment.

\*\* Previously proposed to be located at grade (beneath a building) west of Autumn Street.



### 3.4 Layout Elevated Stover Street

Layout Elevated Stover Street, illustrated on Figures 11 and 12 and summarized in Table 6, proposes elevated heavy rail platforms, a new northern corridor, and the existing southern heavy rail corridor. As in the other layouts, the additional heavy rail tracks will expand the existing width of the corridor.

The elevated tracks would create space at grade for bike parking, layover spaces for VTA buses, and space for other uses (e.g., retail, small business studios, and mechanical and electrical systems). The VTA bus platforms would be located at grade between the station building and West Santa Clara Street. In this layout, Autumn Street is proposed to be restricted to VTA bus-only traffic and shifted to the east toward Los Gatos Creek. This could create additional space within the intermodal hub for development. Further, the section of Autumn Street adjacent to the SAP Center would be removed, as it will no longer be necessary given that motorized through traffic would pass through the area via the tunnel beneath Autumn Street.

For this layout, the station and public square would be the central focal point of the intermodal

#### Heavy Rail Options

- Vertical platform position: *Elevated*
- Horizontal platform/station position: *Stover Street*
- North track alignment: *Northern corridor*
- South track alignment: *Existing*

hub, located at grade at Stover Street between West Santa Clara Street and West San Fernando Street. This position would create a clear line of sight along West Santa Clara Street east toward downtown from the station building entrance. The light rail tracks in the intermodal hub would be shifted slightly to the north and raised to be at grade and would then connect to the existing alignment in the east. The concourse would be designed in an oblique (or diagonal) fashion, which would allow for a major western entrance to the station. For this layout, development above the heavy rail tracks (but excluding the platforms) and the elements within the intermodal hub is possible. However, due to height restrictions<sup>6</sup> in the area, development above the elevated tracks would result in a more limited building volume.

<sup>6</sup> The Federal Aviation Administration has established height restrictions for San José airport operations.

## San José Diridon Integrated Station Concept Plan




**Figure 11: Proposed Intermodal Hub – Elevated Stover Street**



**Figure 12: Proposed Rail Corridor – Elevated Stover Street**

Table 6: Elements Overview – Elevated Stover Street

Elements Overview — Elevated Stover Street		
	<b>Heavy Rail</b>	For this layout, the heavy rail tracks would be elevated approximately 25 feet above grade. A total of 10 tracks and 5 island platforms (4 electrified and 1 non-electrified) are proposed, which would widen the station to the east. There is also an opportunity to include an additional dedicated freight track to the east side of the rail corridor. Maximum possible train speeds through the station are projected to be 35 mph.
	<b>Light Rail</b>	From the east, the light rail tracks would veer north from West San Fernando Street. Light rail vehicles would be located at grade in the intermodal hub, just east of the heavy rail tracks. To the west, the light rail tracks would head south, descending underground to cross West San Fernando Street for a second time. To the south of West San Fernando Street, the light rail tracks would slope upward to cross Park Avenue on the same level as the heavy rail.
	<b>Station</b>	The station building would be located at grade on Stover Street. The proposed station building location positions it as the central connection to VTA buses, BART, and light rail. The station concourse and platforms would be located at grade beneath the elevated heavy rail tracks. The concourse position would be oblique (or diagonal), allowing for a major western entrance from The Alameda.
	<b>Pedestrians</b>	The east-west street connections would be at grade, and the intermodal hub would be restricted to pedestrian, bicycle, scooter and bus traffic, minimizing conflicts with motorized traffic.
	<b>Bikes</b>	Bike parking would be located at grade beneath the elevated heavy rail tracks. Bicyclists would access the parking area from the east or west side of the tracks, as well as from the public square. In this layout, there would be an opportunity to provide an additional bike route south of the tracks.
	<b>VTA Bus</b>	The VTA bus stops and layover spaces would be located at grade between the station building and West Santa Clara Street.
	<b>Intercity Bus</b>	Intercity buses would access the intermodal hub via a flyover (or an elevated platform/overpass) located to the east of the tracks above the station hall. The flyover would be accessible from Julian Street to the north, and San Carlos Street and Bird Avenue to the south.
	<b>Taxis, TNCs, AVs, Company Shuttles, Pick Up/ Drop Off</b>	Like intercity buses, taxis, TNCs, AVs, and shuttles would access the station via the flyover located to the east of the tracks above the station hall.
	<b>Car Parking</b>	The location of vehicle parking is flexible and will be studied further before determining placement. It is proposed that the parking areas would be accessible via a tunnel located beneath Autumn Street. This location would be accessible from both Bird Avenue and San Carlos Street.
	<b>BART</b>	The location of the station hall would provide direct access to the BART platforms via an escalator.
	<b>Airport Connector</b>	This layout could accommodate a future addition of an airport connector, which, for the purposes of the Concept Plan, is assumed to be located underground.
	<b>Buildings</b>	The PG&E substation, the historic depot building, and CEMOF would be relocated in this layout. Additionally, some buildings north of the intermodal hub could be affected.

### 3.5 Cost Estimates

The Study Team developed preliminary high-level cost estimates for the three proposed layouts. The estimates were not used in the formal evaluation process, but rather were used to understand the cost differences for major elements between the layouts. Further, the Partner Agencies recognize that these are initial cost estimates and are subject to change as the project continues and design refinements are made. Additional details regarding the initial cost estimates, including the elements excluded from the estimates, are included in the Layout Development Technical Report.

The initial cost estimates are based on the current track and station designs and include only costs directly associated with the station. Costs include, but are not limited to, costs for the station building, tracks, concourses, underpasses, bus facilities, and light rail facilities. Temporary estimates have been included for some of the elements

*The initial cost estimates are based on the current track and station designs and include only costs directly associated with the station.*

pending further design. Other items are excluded from the initial cost estimates due to insufficient detail at this phase of the study; such items will be developed in more detail in subsequent phases.

Figure 13 presents a comparison of relative costs for 10 elements among the three layouts (cost estimates for the Concept Layout are included in the Layout Development Technical Report). The majority of the costs for the three layouts are re-

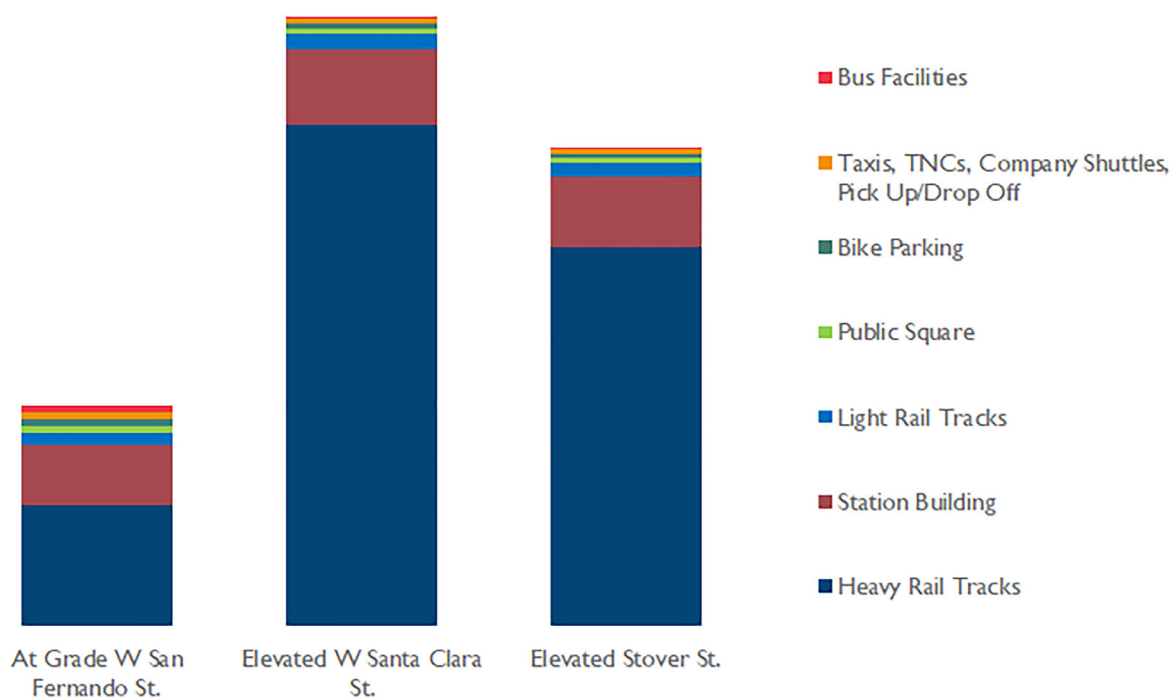


Figure 13: Preliminary Cost Estimates

lated to the heavy rail tracks. The heavy rail tracks in the Elevated West Santa Clara Street and Elevated Stover Street layouts are proposed to be elevated, rather than remain at grade, and therefore constitute a larger portion of the overall costs. Further, the proposed I-280 southern track alignment in the Elevated Santa Clara Street layout makes it the most expensive layout of the three. While overall estimated costs for the At Grade West San Fernando Street layout are relatively lower, the cost for underpasses and overpasses is higher than for the other two layouts, given that the heavy rail tracks would remain at grade.

Given the cost estimates are preliminary and may

vary as the design and planning process progresses, the Study Team also produced cost estimate ranges for the three layouts. These ranges are illustrated on Figure 14 and show the low- and high-end cost estimates for the layouts, relative to each other. The purpose of Figure 14 is to demonstrate that the cost estimates illustrated in Figure 13 are not stagnant and subject to vary based on several factors. For example, although the cost estimate for the At Grade West San Fernando Street layout is shown to be less expensive than the other layouts in Figure 13, the high-end cost estimate for this layout shows that it could potentially end up being more expensive than the others.

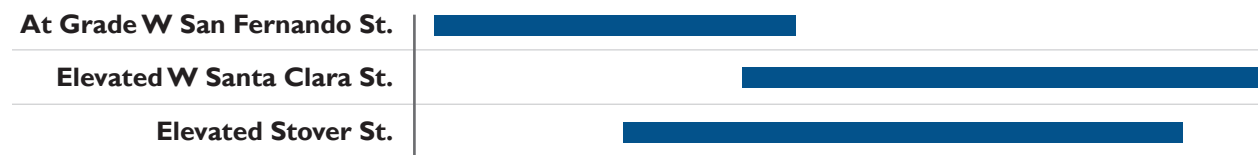


Figure 14: Relative Cost Estimate Ranges





## Section 4

### 4. LAYOUT EVALUATION METHODOLOGY

**FOLLOWING ESTABLISHMENT OF THE AMBITIONS AND REQUIREMENTS**, the Partner Agencies developed an evaluation framework to evaluate the layouts at a high level. The purpose of the evaluation process was to provide the Partner Agencies with a comprehensive understanding of each layout from a variety of contexts, to understand the interrelation of the placement of the elements (i.e., mixing elements between the layouts), to compare the layouts, and to assess the benefits and trade-offs of key design decisions.

Development of the evaluation framework was an iterative process that involved extensive collaboration among the Partner Agencies and input from the community, which led to refinement of certain criteria to allow for a meaningful evaluation of the layouts. The evaluation process was an important tool to achieve consensus among the Partner Agencies on identification of the Concept Layout.

#### 4.1 Evaluation Criteria

The evaluation framework is organized into criteria, sub-criteria, and evaluation factors. Table 7 provides an overview of the seven criteria and corresponding sub-criteria (29 total). Each of the seven evaluation criteria relates to one or more of the key objectives of the Concept Plan.

The purpose of the sub-criteria is to allow for specific evaluations of different aspects of the same element (e.g., northern versus southern corridor). A question, or measure, is listed for each sub-criterion and specifies which aspect or aspects of the sub-criterion are being evaluated (e.g., efficiency, safety, accessibility). Several evaluation factors are listed for each sub-criterion to define the intent of that sub-criterion. The Partner Agencies considered the evaluation factors to assign a qualitative rating for each sub-criterion.

It is important to note that the evaluation framework does not account for all of the objectives, priorities, and considerations driving development of the Concept Plan. Rather, it is intended to

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*Development of the evaluation framework was an iterative process that involved extensive collaboration among the Partner Agencies and input from the community.*

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highlight the differing factors among the layouts. For example, the design and engineering requirements listed in the CRS were assessed in parallel to the evaluation of each layout and therefore are not included in the evaluation framework.






Additionally, the evaluation framework does not include criteria for capital costs, effect on existing infrastructure (e.g., PG&E substation, historic depot building, CEMOF), constructability, or phasing. Although these are important considerations, they are excluded from the framework so that

the vision for the Concept Plan is not artificially constrained by parameters that are still largely in development. The Layout Development Technical Report provides additional information on the initial work completed on these topics. Further, the BART Operations sub-criterion (within Future-Proofing and Operational Efficiency) is included in the evaluation framework but assigned a rating of “Not Applicable” for all layouts, based on the assumption that BART can functionally operate trains in all layouts.

## San José Diridon Integrated Station Concept Plan

Table 7: The Concept Plan Evaluation Framework



Key Objectives	Criteria	Sub-criteria	Measure(s)
 <b>A Multimodal, Integrated, and Human-centered Station</b>   <b>A Futureproof, Flexible, Adaptive, and Innovative Station</b>	<b>1. Future-Proofing and Operational Efficiency –</b> The station and supporting facilities in the area should meet the current and future capacity needs and requirements for transit operators/providers serving the station, while improving operational efficiencies.	1.1 Electrified Operations	How well does the layout facilitate efficient electrified passenger operations?
		1.2 Light Rail Operations	How well does the layout facilitate efficient LRT operations?
		1.3 Bus Operations	How well does the layout facilitate efficient operations for VTA and inter-city buses?
		1.4 Diesel Operations	How well does the layout maintain efficient service for diesel and freight operators through Diridon Station?
		1.5 BART Operations	How well does the layout facilitate BART operations?
 <b>A Multimodal, Integrated, and Human-centered Station</b>	<b>2. Multimodal Integration –</b> The station should work well for the passenger using human-centered design to provide a seamless travel experience.	2.1 Transfer Efficiency	How efficient are transfers between transit services?
		2.2 High-quality Passenger Experience	How well does the station design provide a high-quality passenger experience?
		2.3 Airport Connector	How efficient is the connection between the station and the airport connector?
 <b>A Multimodal, Integrated, and Human-centered Station</b>	<b>3. Access –</b> The station should be safe and easy to get to from all parts of the city with efficient multi-modal circulation.	3.1 Access Hierarchy	How well does the layout comply with the defined access hierarchy?
		3.2 Pedestrians	How well does the layout enable pedestrian access and flow?
		3.3 Bikes and Scooters	How well does the layout enable access and flows for bicycles and scooters?
		3.4 VTA Buses	How well does the layout enable access and flows for VTA buses?
		3.5 Light Rail	How well does the layout enable access and flows for LRT?
		3.6 Intercity Buses	How well does the layout enable access and flows for intercity buses?
		3.7 Shuttles, Taxis/ TNCs, Private Cars, & Airport Connector	How well does the layout enable access and flows for shuttles, taxis/TNCs, private cars, and airport connector?

Key Objectives	Criteria	Sub-criteria	Measure(s)
 <p><b>The Station as a Catalyst for the Urban Environment</b></p>  <p><b>The Station as a Destination</b></p>	<b>4. Urban Integration –</b> The station project should connect the urban fabric and improve physical and social connectivity in the surrounding area.	4.1 East-West Connection	How well does the layout facilitate high-quality connections across the rail corridor?
		4.2 North-South Connection	How well does the layout facilitate high-quality north-south connections?
		4.3 Station Location and Visibility	How visible and recognizable is the station?
		4.4 Public Spaces and Active Street Life	How well does the layout create high-quality public spaces and facilitate active street life?
 <p><b>The Station as a Catalyst for the Urban Environment</b></p>  <p><b>The Station as a Destination</b></p>	<b>5. Development Potential –</b> The station design should optimize opportunity for high-density Transit-Oriented Development.	5.1 Floor Area & Development – Northern Corridor	How well does the layout accommodate development adjacent to the station and tracks in the northern corridor?
		5.2 Floor Area & Development – Station Area	How well does the layout accommodate development adjacent to the station and tracks in the station area?
		5.3 Floor Area & Development – Southern Corridor	How well does the layout accommodate development adjacent to the station and tracks in the southern corridor?
		5.4 Space Efficiency	How well does the layout create development opportunities along the rail corridor?
		5.5 Urban Density	How effectively does the layout contribute to density around the station?
 <p><b>The Station as a Catalyst for the Urban Environment</b></p>  <p><b>A Compelling Vision for the Future of the Diridon Area</b></p>	<b>6. Community –</b> The station and infrastructure should be sensitive to the surrounding communities.	6.1 Construction Effects	How well does the layout minimize the effects of construction on residential buildings and community resources?
		6.2 Long-term Effects – Northern Corridor*	How well does the layout minimize negative and maximize positive direct effects on residential and commercial buildings and community resources in the <b>northern corridor</b> ?
		6.3 Long-term Effects – Station Area**	How well does the layout minimize negative and maximize positive direct effects on residential and commercial buildings and community resources in the <b>station area</b> ?
		6.4 Long-term Effects – Southern Corridor***	How well does the layout minimize negative and maximize positive direct effects on residential and commercial buildings and community resources in the <b>southern corridor</b> ?

\*The 'Northern Corridor' is defined as the area from West Santa Clara Street to the CEMOF.

\*\*The 'Station Area' is defined as the area between West Santa Clara Street and West San Fernando Street.

\*\*\*The 'Southern Corridor' is defined as the area between West San Fernando Street and I-280.

Key Objectives	Criteria	Sub-criteria	Measure(s)
 <p><b>The Station as a Catalyst for the Urban Environment</b></p>  <p><b>A Compelling Vision for the Future of the Diridon Area</b></p>	<p><b>7. Local Environment – The station and infrastructure should be sensitive to the local natural environment.</b></p>	<p>7.1 Natural Environment Effects</p>	<p>How well does the layout minimize and mitigate environmental effects?</p>

### 4.2 Ratings

Ratings were assigned using a qualitative categorical scale that ranges from “Negative” to “Positive.” The Partner Agencies and Study Team determined that all of the criteria are equally important and are therefore not weighted in the evaluation framework. To visualize the ratings, a color scale was developed to show the range between “Negative” (lighter) and “Positive” (darker) ratings. A “Not Applicable” category was included in case a sub-criterion was not relevant to the layout rating. Additionally, a “No Consensus” category was included for use in the joint evaluations should the Partner Agencies not reach agreement for a rating.

The Partner Agencies conducted their evaluations by one of two methods: (1) comparing one layout relative to the others, or (2) assessing the layout’s potential to achieve the overall goals. The categories on the rating scale are as follows:

**Positive** – A sub-criterion is classified as “Positive” when most or all of the evaluation factors are improved in the layout.

**Somewhat Positive** – A sub-criterion is classified as “Somewhat Positive” when more evaluation factors are improved than worsened in the layout.

**Somewhat Negative** – A sub-criterion is classified as “Somewhat Negative” when more evaluation factors are worsened than improved in the layout.

**Negative** – A sub-criterion is classified as “Negative” when most or all of the evaluation factors are worsened or adversely affected.

**Not Applicable** – A sub-criterion is classified as “Not Applicable” when it is not distinctly relevant to the layout or the outcome for the sub-criterion is consistent among the layouts.

**No Consensus** – A sub-criterion is classified as “No Consensus” if the Partner Agencies could not agree on a rating during the joint evaluation.



## Section 5

### 5. JOINT EVALUATION RATINGS

**THE PARTNER AGENCIES USED THE EVALUATION FRAMEWORK** to both individually and jointly assess how the layouts perform compared to each other. As discussed in Section 4, the framework is qualitative, with each layout being evaluated based on a set of seven criteria and the sub-criteria within each. The joint evaluation of the layouts is summarized in Section 5.2.

The evaluations were completed in a series of steps. First, the Partner Agencies determined an evaluation rating within their own organization. Then, during a workshop, the Partner Agencies completed a joint evaluation. For this activity, the Partner Agencies split into small groups and discussed their respective agency's evaluations and the justifications for the ratings provided. Given

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*Given the qualitative nature of the evaluation, the dialogue among the Partner Agencies was important in sharing the perspectives and considerations of each Partner Agency and for the four agencies to arrive at a consensus.*

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the qualitative nature of the evaluation, the dialogue among the Partner Agencies was important in sharing the perspectives and considerations of each Partner Agency and for the four agencies to arrive at a consensus. The technical experts and project staff from each agency who participated in the evaluation shared the joint ratings for approval within their agencies.

The first joint evaluation was completed for three draft layouts, which led to refinement and the development of the three layouts described in Section 3. The Partner Agencies then completed another round of evaluations, both individually and jointly, of these three layouts, which contributed to the development of the Concept Layout, described in Section 7.

#### 5.1 Rating Visual

Figure 9 illustrates the joint evaluation completed by the Partner Agencies for the three layouts described in Section 3. Figure 15 represents the five categories on the rating scale that are described in Section 4 along with a “No Consensus” option. The scale ranges from “Negative,” represented by the lightest color, to “Positive,” represented by the darkest color. Gray indicates that a sub-criterion is “Not Applicable” to the layout rating, and dark gray indicates that “No Consensus” was reached to assign a joint rating.

## San José Diridon Integrated Station Concept Plan

Criteria	Sub-Criteria	At Grade W. San Fernando St.	Elevated W. Santa Clara St.	Elevated Stover St.	
<b>1. Future-Proofing &amp; Operational Efficiency</b>	Electrified Operations				 Positive  Somewhat Positive  Somewhat Negative  Negative  Not Applicable  No Consensus
	Light Rail Operations				
	Bus Operations				
	Diesel Operations				
	BART				
<b>2. Multimodal Integration</b>	Transfer Efficiency				
	Passenger Experience				
	Airport Connector				
<b>3. Access</b>	Access Hierarchy				
	Pedestrians				
	Bikes & Scooters				
	Light Rail				
	VTA Buses				
	Intercity Buses				
	Shuttles, Taxis/TNCs, Private Cars & Airport Connector				
<b>4. Urban Integration</b>	East-West Connection				
	North-South Connection				
	Station Location & Visibility				
	Public Spaces & Active Street Life				
<b>5. Development Potential</b>	Floor Area & Development — Northern Corridor				
	Floor Area & Development — Station Area				
	Floor Area & Development — Southern Corridor				
	Space Efficiency				
	Urban Density				
<b>6. Community</b>	Construction Effects				
	Long-term Effects — Northern Corridor				
	Long-term Effects — Station Area				
	Long-term Effects — Southern Corridor				
<b>7. Local Environment</b>	Natural Environmental Effects				

Figure 15: Partner Agencies' Joint Evaluation Rating



## 5.2 Evaluation Justifications

The qualitative nature of the evaluation resulted in different interpretations of the same criteria among the Partner Agencies. Therefore, the Partner Agencies discussed the reasons for their ratings as part of the joint evaluation. This process allowed the Partner Agencies to review the layouts based on different perspectives and to consider aspects of the layouts not previously considered. As previously noted, the Partner Agencies conducted the joint evaluations either by (1) comparing one layout relative to the others, or (2) assessing the layout's potential to achieve the overall goals. The following sections detail the justifications for the Partner Agency evaluations of the seven criteria in the Concept Plan evaluation framework.

### 5.2.1 Future-Proofing & Operational Efficiency

The Future-Proofing & Operational Efficiency criterion includes five sub-criteria: electrified operations, light rail operations, bus operations, diesel operations, and BART operations. The evaluation factors for these sub-criteria are primarily aimed at evaluating how a layout affects future capacity and operations. Specific evaluation factors include train speeds, bus stop design, and maintenance of connections to other rail lines, among others.

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*The seven evaluation criteria are Future-Proofing & Operational Efficiency, Multimodal Integration, Access, Urban Integration, Development Potential, Community, and Local Environment.*

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**At Grade West San Fernando Street** received two somewhat positive ratings (light rail operations and diesel operations). Operationally, the proposed light rail alignment would eliminate the right curve through the tunnel, resulting in shorter travel times and less maintenance. The Partner Agencies noted that diesel operations are acceptable, although not preferable, given speeds for all trains are projected to be lower in this layout. This layout received two somewhat negative ratings (electrified operations and bus operations). Electrified operations are acceptable, but the Partner Agencies prefer the other two layouts for this sub-criterion, as maximum possible speeds are projected to be lower for this layout. For bus operations, the Partner Agencies indicated they do not prefer the location, particularly given the distance from West Santa Clara Street.

Among the layouts, **Elevated West Santa Clara Street** rated the highest on the qualitative rating scale during the joint evaluation. It received three positive ratings (electrified operations, light rail operations, and diesel operations). The Partner Agencies noted that this layout would work optimally for electrified operations, as each service would have a dedicated zone within the station and separate, dedicated tracks would be added between Diridon and Tamien Stations. However, the addition of two heavy rail tracks along the southern I-280 alignment would create additional capacity, but this may not be necessitated without some certainty in future ridership demand. The agencies also noted that light rail operations would work well, and that diesel operations would perform best (because of additional tracks) in this layout. This layout received one somewhat positive rating (bus operations), with positive consensus on location and operations.

**Elevated Stover Street** received the second highest rating, with one positive rating (bus oper-

ations). The Partner Agencies indicated the location of the VTA bus stops adjacent to West Santa Clara Street is the preferred location among the three layouts, because operations would be centralized. However, they recognized this location may conflict with proposed location of the BART headhouse. This layout received three somewhat positive ratings (electrified operations, light rail operations, and diesel operations). This layout would work well for electrified operations, but not as well as compared to the West Santa Clara Street layout, as this layout proposes two fewer heavy rail tracks along the southern alignment. Diesel operations are acceptable but not preferable, as these trains would need to cross the busy main line south of Diridon Station at grade, which would limit capacity. As for light rail operations, the proposed alignment is functional, but the Partner Agencies prefer a new alignment along Santa Clara.

The Partner Agencies assigned the BART Operations sub-criterion as “Not Applicable,” since, as previously noted, it is assumed that BART trains can functionally operate in all three layouts.

### 5.2.2 Multimodal Integration

The Multimodal Integration criterion includes three sub-criteria: transfer efficiency, passenger experience, and airport connector. The evaluation factors for these sub-criteria are aimed at assessing the effect of a layout on passenger travel times and distances between modes and destinations within the intermodal hub, among others. The airport connector sub-criterion received the same rating in all three layouts, as it is assumed all layouts can accommodate the mode, but few details are known at this phase.

**At Grade West San Fernando Street** received a somewhat positive rating (airport connector) and two negative ratings (transfer efficiency and passenger experience). The Partner Agencies noted

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*It is assumed that BART trains can functionally operate in all three layouts.*

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the long walking distance between the station concourse and the BART platforms, intercity buses, and the pick up and drop off area made for a least desirable passenger experience.

**Elevated West Santa Clara Street** received the second highest rating, with one positive rating (transfer efficiency). Like Elevated Stover Street, this layout centralizes the rail modes, making for an efficient transfer process for passengers. It received two somewhat positive ratings (passenger experience and airport connector). The Partner Agencies cited the need for switchback stairs and elevators to travel from the below grade BART platforms up to grade, making wayfinding more difficult for the BART to rail passenger transfer. These issues would likely inhibit an optimal passenger experience.

Among the layouts, **Elevated Stover Street** was rated the highest during the joint evaluation. It received two positive ratings (transfer efficiency and passenger experience), as it would bring heavy rail, light rail, and BART together in a centralized location. This proposed configuration would minimize transfer times and create a convenient passenger experience.

This layout, like the other two, received one somewhat positive rating (airport connector), with the Partner Agencies agreeing that the airport connector fits within all three layouts without issues.

### 5.2.3 Access

The Access criterion includes seven sub-crite-

ria: access hierarchy; pedestrians; bikes and scooters; light rail; VTA buses; intercity buses; and shuttles, taxis/TNCs, private cars, and airport connector. The evaluation factors for these sub-criteria are aimed at assessing a layout's compliance with the defined access hierarchy, as well as the ease and directness of the flows of the above modes to and from the intermodal hub.

**At Grade West San Fernando Street** received one positive rating (light rail), in this case because this layout shortens the existing curve. However, it received four somewhat negative ratings (access hierarchy, pedestrians, bikes and scooters, and VTA buses). In terms of access hierarchy, the Partner Agencies noted the distance to BART as well as an overemphasis on private cars, which ranks last on the access hierarchy. The Partner Agencies also indicated that they did not favor the proposed underpass, a lack of a west entrance, and the separation of VTA bus lines 522 and 22. The two negative ratings (intercity buses and shuttles, taxis/TNCs, private cars, and airport connector) are a result of the distance of intercity buses from the station as well as the limited access and poor visibility for taxis and other modes.

**Elevated West Santa Clara Street** received the second highest rating, with one positive rating (light rail). The Partner Agencies noted the positive user experience, given that the light rail alignment runs straight to downtown. This layout received two somewhat positive ratings (access hierarchy and VTA buses), with the Partner Agencies identifying the benefits of the curb spaces for VTA buses while still noting opportunity for improvement. This layout received four somewhat negative ratings (pedestrians; bikes and scooters; intercity buses; and taxis, TNCs, company shuttles, private cars, and airport connector), attributable to the poor pedestrian crossings on Autumn Street and the proposed location of the intercity buses and the other pick up and drop off modes.

Among the layouts, **Elevated Stover Street** was identified as the most desirable layout in terms of access during the joint evaluation. It achieved a positive rating in five of the seven sub-criteria (access hierarchy, pedestrians, bikes and scooters, light rail, and VTA buses). The Partner Agencies noted that this layout best adheres to the defined access hierarchy among the three layouts, particularly for pedestrians and scooters. Additionally, it has no intersections between pedestrians and vehicles, which minimizes conflict points while maximizing safety. It also received positive ratings because of its west entrance, access to light rail and VTA buses, and direct walking route to downtown San José with limited crossings. This layout received two somewhat positive ratings for the elevated pick up and drop off area for intercity buses and, taxis, TNCs, company shuttles, and private cars. The Partner Agencies assigned this rating for these sub-criteria based on the justification that, while the elevated flyover would provide direct access to the station for these modes, the elevated flyover would have limited points of access from the street.

#### 5.2.4 Urban Integration

The Urban Integration criterion includes four sub-criteria: east-west connection, north-south connection, station location and visibility, and public spaces and active street life. The evaluation factors for these sub-criteria are aimed at evaluating pedestrian connectivity to/from and through the intermodal hub, the location of the station and centrality to other destinations, and the creation of public spaces and a vibrant intermodal hub.

**At Grade West San Fernando Street** received three somewhat negative ratings (north-south connection, station location and visibility, and public spaces and active street life). The Partner Agencies noted that this layout provides the least

improvement for the north-south connection as well as poor visibility of the station hall. The lack of a west entrance and distance to BART were also identified as negatives. The station location did not appeal to the Partner Agencies due to the minimal amount of urban activity on West San Fernando Street. The Partner Agencies gave this layout one negative rating (east-west connection), noting a lack of safety because of inadequate line of sight and poor ease of movement because of pedestrian underpasses.

**Elevated West Santa Clara Street** received the second highest rating, with one positive rating (east-west connection). The Partner Agencies noted the benefits of the clear line of sight and even grade for pedestrians/bicyclists. This layout received three somewhat positive ratings (north-south connection, station location and visibility, and public spaces and active street life) given the location of the station on West Santa Clara Street, which is highly activated. However, the Partner Agencies noted that for station location and visibility, a Stover Street location is more desirable.

Among the layouts, **Elevated Stover Street** was identified as the preferred layout in terms of urban integration during the joint evaluation, receiving positive ratings in all four categories. The Partner Agencies identified the benefits of the clear line of sight, even grade for pedestrians/bicyclists, connection to the potential bike path over I-280, location of both BART and the station, and viability of a high-quality public square.

### 5.2.5 Development Potential

The Development Potential criterion includes five sub-criteria: floor area and development – northern corridor, floor area and development – station area, floor area and development – southern corridor, space efficiency, and urban density. The evaluation factors for the first three sub-criteria are the same and are aimed at evaluating the po-

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*Among the layouts, **Elevated Stover Street** was identified as the preferred layout in terms of urban integration during the joint evaluation, receiving positive ratings in all four categories.*

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tential for transit-oriented development for a given layout. The evaluation factors for the remaining two sub-criteria are used to assess the opportunity the layout provides to maximize space at the station as well as urban density. It is assumed that development is possible both above heavy rail (excluding the platforms) and within the intermodal hub above all elements that are proposed to be located at grade.

**At Grade West San Fernando Street** received two somewhat positive ratings (floor area and development – northern corridor and floor area and development – southern corridor), given the proposed (existing) northern and southern heavy rail alignment would not impact parcels that could potentially be developed. The layout received two somewhat negative ratings (floor area and development – station area and urban density) based on the assumption that the placement of the modes would disjoint development within the intermodal hub. The Partner Agencies rated the space efficiency sub-criterion as negative, as the at grade heavy rail tracks would prevent the placement of any uses beneath the tracks.

Among the layouts, **Elevated West Santa Clara Street** received three somewhat positive ratings (floor area and development – station area, space efficiency, and urban density) and two negative

ratings (floor area and development – northern corridor and floor area and development – southern corridor). The Partner Agencies assigned the positive ratings based on the justification that the location of the station on West Santa Clara Street would allow for adequate space for development within the intermodal hub. The negative ratings were assigned, noting the constraints placed on development by the elevated flyover in the northern corridor and the property effects in the south as a result of the I-280 alignment.

**Elevated Stover Street** received two somewhat positive ratings (floor area and development – southern corridor and space efficiency) and three somewhat negative ratings (floor area and development – northern corridor, floor area and development – station area, and urban density). The Partner Agencies noted that the new northern heavy rail alignment could adversely affect developable parcels in the north (though not as severely as in the Elevated West Santa Clara Street layout); whereas, in the southern corridor, the proposed (existing) alignment would not impact developable parcels. Within the station area, the proposed elevated heavy rail tracks would provide opportunity to utilize the space beneath the tracks for station amenities and other uses. However, the proposed elevated flyover and the large footprint of the VTA bus facility in the intermodal hub would displace land otherwise used for development within the station area and limits opportunity for urban density.

### 5.2.6 Community

The Community criterion includes four sub-criteria: construction effects, long-term effects – northern corridor, long-term effects – station area, and long-term effects – southern corridor. The evaluation factors for construction effects are used to assess the potential disruption to the surrounding community throughout the construction

of a given layout. Similar to the Development Potential criteria, the evaluation factors for the last three sub-criteria are the same and are aimed at evaluating the potential lasting effects on the surrounding community for the given layout.

Among the layouts, **At Grade West San Fernando Street** received two somewhat positive ratings (construction effects and long-term effects – northern corridor). Because this layout requires no elevated construction, the Partner Agencies assumed the fewest construction effects or impacts to the surrounding community. The Partner Agencies could not reach a consensus on the long-term effects – station area and long-term effects – southern corridor sub-criteria. The lack of consensus was attributed to the fact that effects could vary greatly with the specific corridors and among neighborhoods.

The Partner Agencies provided three somewhat negative ratings (construction effects, long-term effects – station area, and long-term effects – southern corridor) for the **Elevated West Santa Clara Street** layout. These ratings were assigned based on the justification that this layout would result in the construction of the most elevated structures, the most infrastructure/property impacts within the station area and the southern corridor and could result in the most visual im-

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*The evaluation factors for construction effects are used to assess the potential disruption to the surrounding community throughout the construction of a given layout.*

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pacts for the surrounding community. The Partner Agencies did not consider the potential effects of the I-280 alignment when assigning a rating to the long-term – southern corridor sub-criterion. The Partner Agencies assigned the long-term effects – northern corridor sub-criteria a somewhat positive rating, given the heavy rail tracks would be consolidated and there would be more space for development in the northern corridor.

The **Elevated Stover Street** layout received two somewhat negative ratings (long-term effects – northern corridor and long-term effects station area) and two no consensus ratings (construction effects and long-term effects – southern corridor). The Partner Agencies assigned the somewhat negative ratings based on the effects of the elevated flyover for pick up and drop off modes on the surrounding community in the station area and the property/infrastructure impacts in the northern corridor. The Partner Agencies could not reach consensus for the remaining sub-criteria for reasons of lack of information and differing perspectives on the positive and negative long-term effects.

### 5.2.7 Local Environment

The Local Environment criterion includes one sub-criterion: natural environmental effects. The main purpose of the evaluation factors for this sub-criterion are to assess the effects of a layout on the Los Gatos Creek corridor and the opportunity for habitat restoration after construction of the layout. The Partner Agencies assumed a direct relationship between the number of creek crossings and habitat restoration: that is, the more the tracks cross and cover Los Gatos Creek, the less potential there is for habitat restoration.

Among the layouts, both At Grade West San Fernando Street and Elevated Stover Street received somewhat positive ratings for the natural environmental effects sub-criterion. The Partner Agencies noted that these layouts propose fewer crossings over the Los Gatos Creek, as compared to the Elevated West Santa Clara Street layout, which could result in an increased potential for habitat restoration. The Elevated West Santa Clara Street layout received a somewhat negative rating, primarily because of the additional heavy rail track crossing in the southern corridor and the potential effect the extra crossing poses for habitat restoration.





## Section 6

### 6. SUMMARY OUTREACH

**AN INTEGRAL COMPONENT OF THE PHASE 1 STUDY** process was to inform the community and solicit feedback on the concepts coming out of the technical work. The Partner Agencies and consultant team considered the community input as part of the development, evaluation, and optimization of the layouts. Through this process, the Partner Agencies were able to learn about and address the community's top concerns and priorities for the future station and adjoining public spaces. The outreach strategy, presented in Section 2.7, called for multiple rounds of public outreach aligning with key milestones in the planning process. The Partner Agencies completed four rounds of outreach, which are summarized below:

1. **Introduce** the project and gather feedback on the initial vision for the station and key objectives for the process.
2. **Present and obtain feedback** on preliminary concepts related to the vertical position of the platforms and station location as well as a draft evaluation framework for assessing design options under development.
3. **Present and gather** feedback on the three spatial layouts.
4. **Further explore** the "Big Moves" and present Concept Layout.

To ensure that feedback was gathered from a broad cross-section of the community, the Partner Agencies used a variety of methods to share information, gather feedback, and notify community members of opportunities to participate in the process. The project website serves as the primary repository for all outreach materials, some of which was translated into Spanish and Vietnamese. The Partner Agencies used social media and an email distribution list, maintained by the City of San José, to notify the public of upcoming engagement opportunities. Additionally, elected officials also shared information on the outreach events through their distribution lists.

A variety of different outreach events were held throughout Phase 1, including community meetings, SAAG meetings, information pop-ups, focus groups, neighborhood meetings, among others. A comprehensive list of outreach events and community meeting summaries for Phase 1 are included in Appendix D. In addition to community outreach, the Partner Agencies also presented to and met with the Diridon JPAB, City Council, Board of Directors for Caltrain, VTA, and CHSRA, as well as standing community working groups for the BART and High-Speed Rail projects. These meetings were open to the public and provided additional opportunities to learn about the project and provide comments.

### 6.1 Overview of Outreach Rounds

The first round of outreach included a total of five events between October and February. The objective of the first round was to introduce community members to the project and ask for feedback on the initial high-level vision and key objectives for the future station. Participants were asked to share their aspirations and concerns for the future of Diridon Station, interpret the vision and station objectives, and identify opportunities for improved connections and access at the station.

The second round of outreach involved four engagement activities held in March. During this round, the Partner Agencies presented several heavy rail track options and a draft evaluation framework for use in rating the layouts. The Partner Agencies also conducted some interactive activities during this round of outreach. For example, at a community meeting, participants were asked to consider the needs and desires of different station users by selecting one of 10 possible “personas,” such as a commuter transferring between BART and Caltrain and a family visiting from LA and arriving by High-Speed Rail. Community members found the exercise to be valuable in demonstrating the range of considerations for designing a station that would meet the project objectives and all station user needs.

The third round of outreach took place from May to June and included 10 events, as well as an online survey. The purpose of these events was to present the three layouts, described in Section 3. Participants at these events were able to indicate their urban integration and station access priorities, illustrate their ideas, mix-and-match different elements, and ask the Partner Agencies questions about the layouts. The online survey, which solicited similar to feedback as aforementioned, received nearly 800 responses.

The fourth round of outreach was held in September and included three events. The purpose of this round was to provide an update on the layout optimization process and further explore the “Big Moves” of the station design. The project team presented a fourth spatial layout – the Concept Layout. In addition to the outreach methods used during the other outreach rounds, the Partner Agencies also distributed fliers door-to-door in neighborhoods along the existing southern track alignment and possible new southern I-280 track alignment, which helped draw in new people to participate in the community meeting.

### 6.2 Key Themes

Throughout the four rounds of community outreach, several key themes emerged, which reflect a range of community perspectives and ideas. These themes are generally consistent with the key objectives established by the Partner Agencies. However, conflicting community priorities also emerged through the process. An example included the challenge of accommodating a safe walking and biking environment while also providing sufficient vehicular parking and pick-up/drop-off space. The key themes are listed on the following page.

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*Throughout the four rounds of community outreach, several key themes emerged, which reflect a range of community perspectives and ideas.*

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- 1. Seamless Passenger Experience.** The Station must work well for the passenger, above all. There is desire for short, direct connections between transit services, especially between BART and other modes. It should be easy to navigate and find the services you need with clear wayfinding.
- 2. Local and Regional Destination.** The station should function as a community hub with 24/7 activity. This reflects an underlying desire to make the station area feel safer and more vibrant, with interesting things to do. There is also desire for a world-class hub and regional destination in and of itself – generally meaning that people have reason to go to the station other than to take transit. This could mean having a variety of commercial opportunities, gathering spaces, and activities inside and outside of the station hall.
- 3. Identity.** The station should be a source of pride for San José – reflecting its history, diversity, and innovative spirit through amenities, art, and architecture. It should be highly visible, iconic, and welcoming to all. The station should contribute to an active street life and be part of an interconnected network of safe, well-maintained public spaces.
- 4. Access.** The station should be easy to get to from anywhere in the city. There should be improved station access by foot or bike, as well as passenger drop off near the station entrance for personal and ride-share vehicles. There is desire to maximize the efficiency of bus and light rail service to the station.
- 5. Transit.** The station should be designed to meet future transit needs. The Partner Agencies should also use this opportunity to improve transit serving the station, including more frequent train service, more bus service, and faster light rail service. The Partner Agencies should plan for a direct transit connection between the station and San José International Airport.
- 6. Connectivity.** Currently, the railroad tracks, freeway, major streets, and Los Gatos Creek serve as barriers to movement within the station area. Community members want safe, inviting routes to cross the tracks for pedestrian and bicycles, as well as increased connections within the street and trail network to make it easier to travel between the station, downtown, public spaces, and surrounding neighborhoods.
- 7. Parking and Traffic.** There are concerns about having sufficient parking for station users, especially during construction and until travel patterns adjust to more transit and new forms of travel. There are also concerns about additional traffic on local streets, including from ride-hailing services. Many community members want reduced vehicle parking and car traffic in the immediate station area to create a more pedestrian-friendly environment.
- 8. Neighborhood Quality of Life.** Residents close to the station have expressed concerns about the potential disruption to their neighborhood resulting from construction and increased activity in the area (e.g., noise, traffic, litter, crime, etc.). Some are concerned about effects on their views from new station infrastructure and encourage sensitive design to buffer the station from adjacent neighborhoods.
- 9. Existing Southern Corridor.** Residents of the Gardner and North Willow Glen neighborhoods consistently expressed deep concerns about using the existing southern rail corridor for the planned increases in train volumes.

The major concerns are summarized as follows:

- The Gardner neighborhood has borne the brunt of rail and infrastructure decisions for more than a century.
- The existing at grade crossings are problematic (whistle noise, risk for accidents, limited emergency access, and impacts to traffic when arms are down, etc.).
- Residents fought to get Fuller Park and don't want the rail projects to impact that or any other community resource.
- Residents do not want the rail projects to displace any homes.
- Trains are noisy, and more going through the neighborhood would increase noise.
- The tracks have maintenance issues. Elevated tracks and big, new infrastructure could attract more blight and be an eyesore.

**10. Development Potential.** The Concept Plan should optimize land for transit-oriented development, recognizing the high value of land around the station and the benefits of increasing the number of people who live or work within walking distances. There is interest in the relationship between the station plans and the proposed mixed-use development by Google.

**11. Historic Depot.** Community members frequently ask about what will happen to the historic depot building. There is a general desire to preserve it in some form.

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*There is community interest in optimizing land for transit-oriented development.*

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**12. Environmental Sustainability.** The station should minimize environmental impacts (such as to the creek), support habitat restoration, and use green building methods.

**13. Social Equity.** The Partner Agencies should ensure that the station is accessible and useable for people commuting from other parts of the city and for different types of users. They should also consider ways to maximize affordability of transit service and address the potential for displacement resulting from investments and gentrification.

**14. Fiscal responsibility.** There is concern about the potential cost to taxpayers of the station project, including for long-term operations and maintenance. There is some interest in the decision-making process and a desire for transparency and accountability.

### 6.3 Feedback on Draft Layouts

In addition to the overarching themes, the public also provided feedback specific to the three layouts. The primary feedback received is summarized below. The community's feedback on the Concept Layout is summarized in Section 7.

**1. Transfer Times.** The top priority resulting from community input on the layouts was to design the station to have "a short, intuitive connection between the BART platforms and the platforms for heavy rail services (such as CHSRA, Caltrain, Capitol Corridor, and ACE)." Community members noted that the Elevated West Santa Clara Street layout appeared to have the tightest concentration of transit, but liked that the Elevated Stover Street layout has the shortest travel times between modes overall. There was concern about the potential for complicated, long transfers between modes and rail platforms – vertically and horizontally.

- 2. Elevated Tracks.** Many community members liked the elevated track option due to the possibilities for enhancing pedestrian and bicycle connections across the tracks by eliminating dips and creating new pathways. They also like the idea of using space beneath the tracks.
- 3. Connectivity.** Community members generally found the West San Fernando Street layout to be the “status quo” and problematic with respect to multimodal integration and area connectivity, as it would maintain the at grade tracks and existing street network.
- 4. Visibility.** The West Santa Clara Street and Stover Street station locations were appealing for their proximity to the Arena, connection to downtown, the opportunity for a strong visual presence with an iconic building, and the potential to support more vibrancy along West Santa Clara Street.
- 5. Efficiency.** Community members also liked the West Santa Clara Street and Stover Street layouts for their relatively compact footprints and efficient use of land.
- 6. Access.** Several community members encouraged improvements to the light rail alignment to maximize speed and reduce conflicts

with pedestrians and bicyclists. Some people like the flyover for intercity buses and taxis shown in the Stover Street layout as a way of separating traffic from pedestrians. There is general interest in providing clear walking and biking routes.

- 7. Cost and Feasibility.** The most popular feature of the West San Fernando Street layout was the potential to have the lowest construction cost (this was the most frequently made comment in the online survey with respect to the pros and cons of the three possible layouts). Some participants were concerned about the challenge of completing the more complicated layouts.
- 8. Southern Track Alignment.** There is strong support among residents of the Gardner and North Willow Glen neighborhoods for the construction of a new viaduct along I-280/SR-87 (as shown in the West Santa Clara layout) for the reasons described under Key Theme #9 in Section 6.2. Several community members recognized that a viaduct would create more negative impacts – visual and noise – to additional neighborhoods (including disadvantaged communities such as Washington-Guadalupe).





## Section 7

### 7. LAYOUT OPTIMIZATION AND ADVANCEMENT

**THE PARTNER AGENCIES' EVALUATION PROCESS** was a first step in identifying the preferred placement of the elements within the intermodal hub based on key objectives, design standards, and operations. Following the evaluation, the Partner Agencies began the optimization process to further refine the design of the three previously described layouts and to mix and match elements between the layouts.

The optimization process relied heavily on input from the community, ongoing technical work with the Partner Agencies, as well as collaboration with adjacent planning efforts including the City of San José's Diridon Station Area Plan (DSAP) update, Downtown Transportation Plan (DTP), and corresponding Mixed-Use Development proposal. This process resulted in the development of a fourth layout, the Concept Layout, which

is illustrated on Figures 16 and 17. The Partner Agencies believe the Concept Layout holds the most promise in fulfilling the design objectives and reflects the majority of the community's preferences.

As with the three other layouts, the design process was executed first by placing the heavy rail ("Big Moves") and filling in the other elements around this design. As previously noted, the elements are interdependent – that is, that the placement of one element influences that of all other elements. The heavy rail optimization required the optimization of the other elements within the intermodal hub, which ultimately led to the creation of the Concept Layout. The Partner Agencies recognize that the placement of many of these elements, such as the VTA bus stops and bike parking, is flexible and is subject to further refinement and coordination with other ongoing processes in subsequent phases.

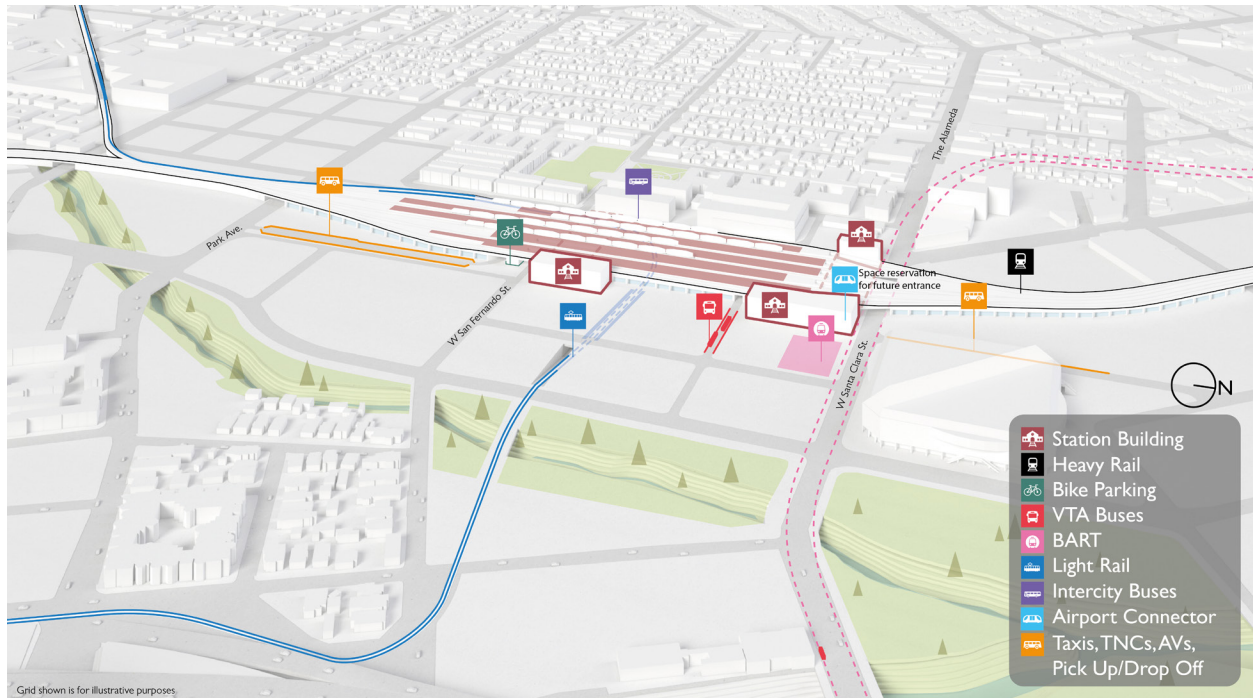


Figure 16: Proposed Intermodal Hub – Concept Layout



Figure 17: Proposed Rail Corridor – Concept Layout

### 7.1 Heavy Rail

As previously noted, the Partner Agencies began the optimization process with the heavy rail element, including the vertical and horizontal placement of the platforms, and the northern and southern track alignment. The primary purpose of optimizing the heavy rail corridor was to balance the operational needs for heavy rail operators with the surrounding development opportunities along the corridor. The optimization process resulted in a configuration in which the proposed tracks are elevated, the general position of the platforms is between West Santa Clara Street and West San Fernando Street, and the northern and southern alignment generally follow the existing corridor. It is important to note that the proposed design for the rail corridor is still preliminary and subject to further development in future phases.

To maximize opportunity for transit-oriented development along the heavy rail corridor, the Partner Agencies proposed to maintain the general alignment of the northern corridor, which requires the platforms to be located south of West Santa Clara Street. The position of the platforms results in limited impacts to the northern heavy rail corridor. To best create an optimal passenger experience at the station with this platform position, two

#### Heavy Rail Options

- Vertical platform position: *Elevated*
- Horizontal platform position: *Between West San Fernando Street & West Santa Clara Street*
- Primary station position: *West Santa Clara Street*
- North track alignment: *Existing*
- South track alignment: *Existing*

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*Elevating the tracks allows for increased visibility and convenient east-west connections for pedestrians, bicyclists, and scooterists – ranked at the top of the access hierarchy.*

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concourses are proposed in this design (further discussed in Section 7.2).

To support future expansion of rail service at the station, an additional track and platform are proposed – for a total of 10 tracks and five platforms. As a result of the additional track and platform and the two concourses, the station footprint would widen to the east rather than the west due to existing structures west of the station. This eastward expansion would have implications for the existing streets and developable plots within and around the intermodal hub. To accommodate this eastward expansion and achieve the objective of creating a human-centered intermodal hub, this layout would require the section of Cahill Street between West Santa Clara and West San Fernando Streets to be restricted to non-motorized travel. The eastward expansion of the station could also have an impact on developable plots between Cahill and Montgomery Streets.

While the Partner Agencies recognized that heavy rail operations are feasible either at grade or elevated, both the Partner Agencies and the community prefer the tracks to be elevated, given the connectivity and urban integration benefits. Elevating the tracks allows for increased visibility and convenient east-west connections for pedestrians and bicyclists – ranked at the top of the

access hierarchy – as these modes would not be required to make grade changes to travel east-west. Additionally, elevating the tracks allows for better integration with surrounding land uses and better connections between neighborhoods, as compared to at grade tracks and platforms, and creates space beneath the tracks for other uses such as bicycle parking, retail, office space, station facilities, etc. As a result of elevating the tracks, CEMOF would need to be relocated.

For the southern heavy rail alignment, the Partner Agencies propose to maintain the existing alignment, rather than add the I-280 alignment due to considerable impacts associated with the creation of a new viaduct. The effects of an I-280 alignment in the southern corridor would require the construction of a large viaduct approximately spanning three miles south of the station and an elevated heavy rail flyover north of the station. This new infrastructure would result in visual and noise impacts south of the station to neighborhoods not previously impacted and decrease the amount of land available for transit-oriented development north of the station. Additionally, the I-280 alignment would divert only a portion of trains from passing through the Gardner neighborhood, as diesel trains (at a minimum) and Caltrain trains would continue to use the existing southern alignment. Further, if CHSRA and Caltrain both utilize the I-280 alignment, the tracks at Tamien Station would need to be elevated.

The Partner Agencies believe that community concerns relating to safety, noise, vibration, and visual impacts, among others would be better addressed through tangible improvements to the existing southern corridor, rather than the creation of a new rail corridor that would be expensive to build and maintain. With these tangible improvements, the Partner Agencies believe that the rail corridor can coexist with the communities along the corridor, including Gregory, Gardner, and North Willow Glen,

and accommodate increasing train traffic without having a negative impact on the quality of life in those neighborhoods. To this end, the Partner Agencies recommend evaluation of the following strategies, plans and associated measurements, in close consultation with the affected communities, in the next phases of planning:

- Grade separations keeping people and vehicles away from train traffic while maintaining good local connectivity and access;
- Sound and vibration dampening treatments for tracks;
- Aesthetic and functional treatments like sound walls with added landscaping (“green walls”) or other attractive, maintainable coverings;
- Optimize design to minimize the need to acquire land; and
- Fuller Park as a permanent, city-owned park with high-quality landscaping and other amenities to be determined through a community-based process.

In addition, the Partner Agencies will work to develop appropriate metrics that will enable tracking and monitoring of these goals and conditions over time.

## 7.2 Station Hall, Concourses, and Public Square

During their evaluation, the Partner Agencies indicated that a station hall and concourse at Stover

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*The dual concourse design creates a short, direct connection with BART and facilitates balanced passenger circulation throughout the station.*

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Street were preferred for urban integration and visibility benefits. However, with the heavy rail platforms positioned between West Santa Clara Street and West San Fernando Street, a concourse located at Stover Street is not preferred due to the adverse effects on the functionality of the station and potential passenger circulation issues. To remedy this, the Partner Agencies proposed creating two concourses: a primary concourse in the north, oriented toward West Santa Clara Street, as well as a southern concourse oriented toward West San Fernando Street.

This design optimization creates a short, direct connection with BART and facilitates balanced passenger circulation throughout the station. The dual concourse design also proposes east and west entrances to both concourses, for a total of four station entrances. While the community expressed interest in a single grand station entrance, they also recognize that two concourses provide multiple access points for passengers. Based on a preliminary passenger flow analysis, approximately 60% of passengers are projected to use the West Santa Clara Street entrance, and the remaining 40% would use the West San Fernando Street entrance. Another preliminary estimate of the area for the four station entrances indicates that the total footprint of the four entrances is equivalent to the size of the station halls proposed in the previous three layouts.

The primary station hall would be located on the east side of the heavy rail platforms oriented at West Santa Clara Street, which creates a center of gravity and would promote pedestrian activity. This location allows for highly visible and easily identifiable station along a highly activated corridor that serves as a direct connection to downtown San José. Additionally, the proposed station entrance is within proximity to the BART and VTA bus service, which will facilitate a convenient experience for the large number of passengers pro-

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*The public square is an important component of the intermodal hub, as it provides a transition area between the surrounding urban area and the station area.*

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jected to transfer between heavy rail, BART, and VTA buses (refer to Figure 6).

The design also proposes public squares directly in front of three of the four station entrances. The public square is an important component of the intermodal hub, as it provides a transition area between the surrounding urban area and the station area. First and foremost, the square creates a space for passengers to orient themselves within the intermodal hub and locate their destination. Additionally, the square provides space for passengers and visitors to congregate and contributes to establishing the station as a destination. Converting the section of Cahill Street within the intermodal hub to a non-motorized street is not only necessary due to the width of the station, but also to create this transition space and a human-centered station for the primary station hall. A smaller station hall and public square to the west of the heavy rail platforms would provide access to the primary concourse for passengers arriving from The Alameda.

The area around West San Fernando Street would serve as another major activity center within the intermodal hub, given its proximity to light rail and the number of passengers projected to access the station from the south. To accommodate these passengers and support this activity center, a second station concourse is proposed. The concourse would be accessible via an entrance



on both the east and west sides of the heavy rail tracks. The eastern entrance would be comparable to the primary station entrance, with a station hall and public square, while the western entrance would not have a public square.

### 7.3 Bike Parking

Given that West San Fernando is projected to be a major connection for bikes to the intermodal hub, the Concept Layout proposes a bike parking facility beneath the heavy rail tracks, south of West San Fernando Street, and would be accessible from both the east and west. This location reflects the rank of bikes in the access hierarchy, providing a convenient, close connection to other modes in the intermodal hub. The Partner Agencies recognize that additional locations for the bike parking facility are feasible (e.g., underground in the intermodal hub or at a more northern location beneath the heavy rail tracks) and will be further analyzed in future phases.

### 7.4 Light Rail

The three layouts described previously in the report propose for the light rail tracks and platforms to be located on the same level as the station hall and concourse. While placing the light rail at grade facilitates an ideal passenger experience, this placement would also dissect the intermodal hub, including West San Fernando Street, the southern concourse, and a primary bike route. For that reason, the Concept Layout proposes for the light rail tracks and platforms to be below grade with an east-west orientation, approximately between Cahill and Montgomery streets.

By placing the light rail tracks and platforms underground, conflict points between light rail and pedestrian and bicyclist traffic in the intermodal hub is significantly minimized. Additionally, this placement accommodates space within the intermodal hub for transit supportive uses, such as

communal gather spaces and development.

South of Diridon Station, the light rail tracks are proposed to be elevated to the north of Sunol Street and follow the heavy rail alignment. Between Park Avenue and West San Fernando Street, the light rail tracks would transition underground to slope beneath West San Fernando Street on the western side of the station. Beneath the station, the alignment would curve to the east and connect to an underground platform in the center of the intermodal hub (approximately between Cahill and Montgomery streets). As the light rail travels east from Diridon Station toward downtown, the light rail surfaces back to grade via the existing tunnel entrance and connects to the existing at grade alignment. This proposed design would facilitate operational improvements, as it would eliminate the existing tight underground curve (improve speeds) and consolidate the existing Diridon light rail stop to the west of the station and the West San Fernando Stop to the east of the station.

### 7.5 VTA Bus

Through the evaluation process, the Partner Agencies indicated that a VTA bus facility along West Santa Clara Street was preferred from an operational perspective. Through the design optimization process and as a result of the placement of the station hall on West Santa Clara Street, a VTA bus facility on West Santa Clara Street was

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*The proposed VTA bus stop area is designed to maximize space efficiency, as it utilizes a first in, first out design, which allows for dynamic bus bays.*

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no longer feasible. Alternatively, the Concept Layout proposes the VTA bus stops to be located south of the primary station hall along a bus-only street to the east of the heavy rail tracks. This location creates a direct passenger connection to the primary station hall.

The bus stops would be oriented to the east and west, which reflects the direction of travel for the bus routes that serve Diridon Station. This design facilitates intuitive wayfinding for passengers navigating to their bus stop. The proposed bus stop area is designed to maximize space efficiency, as it utilizes a first in, first out design, which allows for dynamic bus bays. Dynamic bus bays eliminate the need for a dedicated bay for each route; rather, the buses stop at the first available bay in their direction of travel. This results in a fewer number of bus stops in the intermodal hub – a total of six are proposed – which, in turn, maximizes the space for other uses within the intermodal hub.

VTA buses would access the stops in the east from one block south of West Santa Clara Street and in the west from both White Street and one block south of The Alameda. This results in a minimal detour for the bus routes serving the station. Additionally, a layover space for VTA buses would be located at grade beneath the heavy rail tracks.

### 7.6 Intercity Buses

To reserve space within the intermodal hub for modes higher on the access hierarchy and for transit-oriented development, the intercity buses are proposed to be located to the west of the heavy rail tracks on White Street. Passengers arriving and departing the station via intercity buses would be in proximity to the heavy rail platforms via either western station entrance.

### 7.7 BART

Both the Partner Agencies and the public indicated that a short, direct, and intuitive connection to and from BART was a top priority for the spatial layout. As such, the Concept Layout proposes a direct, at grade connection to the BART station from the primary station hall. The Partner Agencies recognize the potential phasing challenges between the two projects, as BART is projected to be in operation before the station and intermodal hub are constructed. Given the projects would be physically separated, it is assumed there will be no phasing issues.

### 7.8 Curb Space for Pick up/Drop off modes

Dedicated curb space for pick up/drop off modes, including taxis, TNCs, AVs, company shuttles, and private vehicles, would be reserved to the north and south of the station. North of West Santa Clara Street, a two-way street between the heavy rail tracks and the SAP Center would be dedicated for passengers arriving and departing from the primary station hall. Similarly, for passengers arriving and departing from the southern station hall via pick up/drop off, there is dedicated curb space along a one-way loop south of West San Fernando Street. This proposed placement would create a close connection to the station halls, increase the safety for passengers in the intermodal hub by minimizing conflict points, and reserve space within the intermodal hub for other modes and purposes, enhancing the passenger experience.

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*Both the Partner Agencies and the public indicated that a short, direct, and intuitive connection to and from BART was a top priority for the spatial layout.*

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## Section 8

### 8. NEXT STEPS

#### **A KEY FOCUS OF THIS PHASE OF WORK WAS**

to organize the necessary elements for an iconic, integrated intermodal transit center into a spatial layout. The Partner Agencies first had to organize the elements physically to understand potential impacts to the functionality of the station. This is a foundation for the Partner Agencies to now build on. The next step to advance the Concept Layout is to continue planning, analysis of rail operations, and conceptual design work on the rail corridor and station facilities to better understand and refine the benefits and tradeoffs of each component of the layout. Some elements, including but not limited to, the bus and VTA light rail layouts, may evolve during the continued planning and design process. The Partner Agencies recognize that the development of the future Diridon Station is a long-term, multi-year program.

Over the next year, a critical planning focus will be on studying the best options to organize the Partner Agencies and technical expert teams, building a viable financial plan, developing environmental strategies, and designing an implementation path

to build and govern the future station. The conceptual design work will result in updated conceptual engineering drawings to define the Concept Layout, capital cost estimates, conceptual construction sequencing passenger flow analysis, and refined station footprint. There are many critical decisions ahead and the next course of work will focus on how to take the spatial vision of the Concept Layout forward through project development sufficient for environmental evaluation, and eventually implementation.

In addition to the technical work on the layout, the Partner Agencies plan to continue community and stakeholder engagement. The design and implementation strategy work will be conducted in close coordination with interdependent project efforts happening around the station area, including the Diridon Station Area Plan (DSAP) and Google's proposed "Downtown West" mixed-use development project.

The Partner Agencies continue to be committed to the partnership set forth by the Cooperative Agreement.