

## 2. PREFERRED PLAN - GENERAL DESCRIPTION

## 2.1 Land Uses

This section presents the overall land use structure for the Preferred Plan. The Land Use Diagram and classifications provide guidance for the location and type of land uses proposed by the Plan, which are further refined by urban design direction presented in the following section.

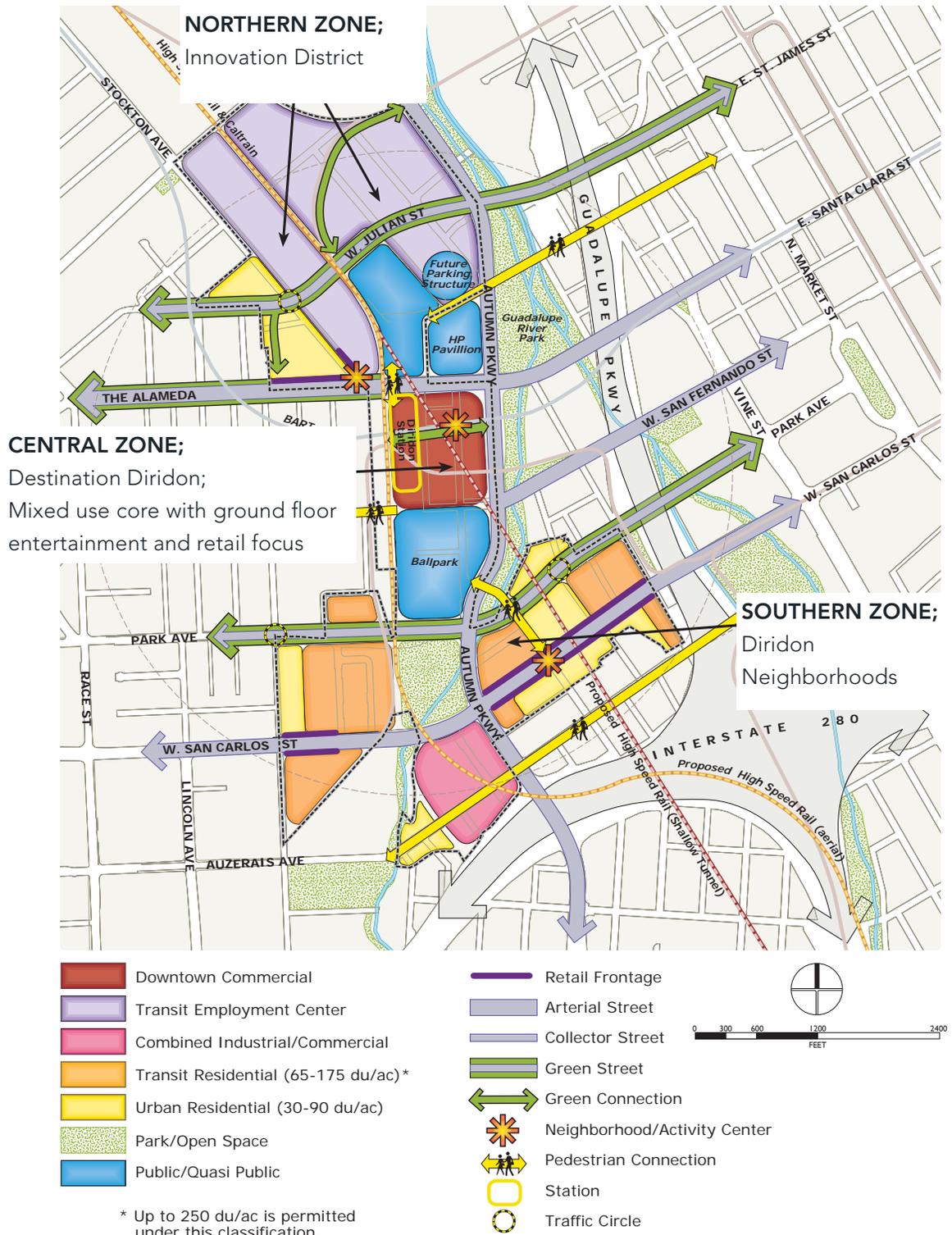
### LAND USE DIAGRAM

The Preferred Plan establishes a mix of vibrant uses and districts that build off of the synergy and activity of HP Pavilion, the proposed Ballpark, and an expanded Diridon Station. Employment, retail, and entertainment uses are focused at the Diridon Station core to support transit activity and establish the area as a region-wide destination. Residential and supportive commercial uses are located in the urban neighborhoods section of the Plan and are within an easy walk to the Station core. The neighborhood components are located strategically in order to minimize impacts from transportation infrastructure and to strengthen existing neighborhoods. Figure 2-1-1 illustrates the Land Use Structure for the planning area.

At the center of the Station Area, a high-intensity, entertainment-oriented mixed-use core surrounds and encompasses the Station. Retail and entertainment uses activate the ground level and are oriented along a linear pedestrian connection between HP Pavilion and the proposed Ballpark, as well as around a new public plaza adjacent to the Station. Hotel and office uses are located on upper floors and provide additional day and evening activity within the Central Zone. A mix of active retail and office uses could also be extended into the Station itself, increasing the opportunity for development in the immediate Station area.

North of the ballpark, the focus of the Preferred Plan is a high-intensity business district in an urban format. Opportunities for innovative office, research and development, and incubator space for product and business development are focused in this area.

FIGURE 2-1-1: DIRIDON STATION LAND USE PLAN



Ancillary uses might include some hotel, retail, and industrial space as support for the area. West of Stockton Avenue, the uses are compatible with and build off of the mixed-use neighborhood character of The Alameda and existing high density residential uses along Stockton Avenue. The mix of uses includes retail at the ground level, focused along The Alameda, and residential uses primarily along the west side of Stockton Avenue.

To the south of the proposed Ballpark, a mixed-use hotel and office oriented district establishes a new activity center at Autumn Parkway and West San Carlos Street with easy access to the proposed Ballpark and I-280. Development is oriented to key open spaces like the proposed eight-acre park at Park Avenue and Autumn Parkway and Los Gatos Creek. Mixed-use residential and commercial development extends along West San Carlos Street, providing a walkable environment with key neighborhood services for the Delmas Park neighborhood to the east and new Transit Residential development to the west. South of West San Carlos Street, between the Caltrain corridor and Autumn Parkway, intensified commercial development is proposed, including office and employment uses. This area will also be able to capitalize on its proximity to both the Station and I-280.

Several zones in the planning area are designated for required retail frontage along a main arterial. These areas include the West San Carlos Street corridor east of Autumn Parkway and west of the VTA light rail corridor, and development along The Alameda. The Central Zone will also have a required retail frontage along the pedestrian district and public plaza.

Since its opening some two decades ago as the home of the San José Sharks, the HP Arena has consistently ranked among the 10 busiest indoor facilities for non-sporting entertainment events. Preserving the extraordinary success of Downtown's "anchor tenant" appears paramount and is reflected in the Land Use Plan. Although densities will increase, and parking ratios will drop

over time, it is imperative that Diridon's development occurs in a coordinated fashion with its transportation infrastructure to ensure adequate parking supply for the Arena and avoid traffic problems in each phase of development.

### LAND USE CLASSIFICATIONS

The land use designations below define the uses and urban form of future development in the Diridon Station Area Plan area. These land use designations are not specific to this Master Plan but are proposed designations within the Envision San José 2040 General Plan and are proposed elsewhere in the City. In addition to being consistent with the given land use designation below, new development should also be consistent with the Urban Design guidelines and other policies set forth in this Plan. Urban design guidelines for the Diridon Station Area are provided in Section 2.2 of this Plan.

#### *Urban Residential (30-95 du/ac)*

Sites with this designation are intended for relatively high density urban residential development in 1) the Delmas Park Neighborhood between Park Avenue to the north and Columbus Avenue to the south; 2) the area northwest of the intersection of Stockton Avenue and The Alameda; and 3) in select locations west of the Union Pacific railroad tracks, providing a transition to lower density residential uses. A mix of residential densities and housing types is encouraged under this designation, with a density range of 30 to 90 dwelling units per acre. Emphasis on contextually appropriate design and densities will ensure compatibility with existing residential uses. The City may reduce allowable density adjacent to low density residential uses for design compatibility. Development along the street edge should have individual entries to maintain the pedestrian orientation of the neighborhood. Predominant building heights should range from three or four stories adjacent to lower density residential development to six stories near higher

intensity development.

The Urban Residential designation also allows commercial uses to be mixed with residential uses in a vertical or horizontal arrangement. The Commercial uses are intended to provide shops and services to nearby residents, employees and transit riders. The commercial spaces could take the form of live/work units or flex space that could be used initially as living space but could be converted to commercial or live work space over time. The commercial uses in this land use designation should be focused along West San Carlos Street and along or adjacent to The Alameda. The minimum combined FAR for both commercial and residential uses is 1.0 with a maximum combined FAR of 4.0.

#### ***Transit Residential (65-250 du/ac)***

This classification is intended for transit integrated residential and residential mixed use development within walking distance of the Station and along key transportation corridors like West San Carlos Street. While the proposed Envision San Jose 2040 General Plan land use designation allows between 50 to 250 dwelling units to the acre, the sites designated Transit Residential in the Diridon Master Plan have a minimum residential density of 65 dwelling units to the acre to facilitate the development of residential densities that are supportive of the planned High Speed Rail and BART systems and the existing Caltrain system. Furthermore, while the upward density maximum is 250 dwelling units to the acre, the densities on Transit Residential properties are not anticipated to exceed a density of 175 dwelling units to the acre given the FAA airport approach zone height limits and the urban design guidelines of this Plan. The commercial mixed use portions of the properties designated Transit Residential should be focused as retail frontage along West San Carlos Street as identified in the Land Use Diagram. Hotels are a permitted use under this Land Use Designation.

All development within the Transit Residential Designation is

required to be pedestrian oriented with emphasis on activating the ground level; pedestrian entries and windows should be located along the sidewalk and buildings should include architectural elements (like awnings, changes in materials, articulated building façade, etc.) that add visual interest. Average building heights should be between four and six stories, with up to ten stories where heights and neighborhood compatibility allow.

### ***Downtown Commercial***

The Mixed Use Station Area is designated with a Downtown Commercial General Plan designation. The Mixed Use Area is defined by the rail corridor to the west, Santa Clara Street to the north, Autumn Parkway to the east, and West San Fernando Street to the south. Consistent with the Downtown Commercial designation, the Mixed Use Area is intended to be a vibrant mix of retail, entertainment, office, and hotel development, with retail and entertainment uses located at the ground level and high-intensity hotel or office development above. Residential uses are not allowed. Emphasis in the Mixed Use Areas is placed on creating a walkable, pedestrian environment with active uses at the street edge. Parking should be structured and wrapped by active uses.

In order to intensify development adjacent to the station, the minimum FAR is 2.0; however development adjacent to the station should generally be built at higher FARs. Given the FAA Airport Height restrictions it is anticipated that development will not exceed an FAR of 6.0. Nevertheless, as Airport operations and technology change, height restrictions could become less restrictive, allowing development to be developed at higher FARs; the maximum FAR permitted in this Downtown Commercial designation is 15.0.

### ***Transit Employment Center***

The properties along the east side of Stockton Avenue, between the Alameda and Lenzen Avenue, and north of the HP Pavilion

are designated Transit Employment Center to provide lands for dense Driving Industry type uses within walking distance of the Diridon Station. The lands designated Transit Employment are located in the Innovation Area of Diridon. The Driving Industry type businesses envisioned in this area include high technology and green tech type businesses that would place a premium on being adjacent to the Diridon Station and the high level of transit access it provides and will provide. Per the proposed Envision San Jose 2040 General Plan the uses allowed in this land use designation include office uses and industrial-type uses including research and development, manufacturing, assembly, and testing. Retail shops and services are also permitted in the first two floors of buildings. Given the proximity of transit, uses that have a high number of employees relative to building square footage are anticipated, with uses that have few employees likely to locate in other less transit accessible areas in the city. Regardless of use, new development should orient buildings towards public streets and include features to provide an enhanced pedestrian environment.

### ***Combined Industrial/Commercial***

This designation is applied to the portion of the Diridon Station area generally south of West San Carlos Street and west of Bird Avenue. This area is envisioned as a location for Driving Industry types of uses as well as neighborhood and downtown serving commercial uses along Bird Avenue.

As proposed by the Envision San Jose 2040 General Plan, this category allows a significant amount of flexibility for the development of a varied mixture of compatible commercial and industrial uses. Given the desire for flexibility the allowed FAR varies from 0.25 to 12.0; however, given the FAA airport height limitations and the urban design guidelines of this Plan, the FAR will not likely exceed 8.0 to 10.0.

### ***Required Retail Frontage***

Retail plays a role in defining key pedestrian streets and neighborhood centers by providing restaurants and services to residents and workers in the area. The Required Retail Frontage aims to ensure that retail and commercial uses are available within residential areas to reduce the need for driving in the planning area. The street frontages with required frontage at the ground level are shown in Figure 2-1-1.

#### ***Open Space, Parklands, and Habitat***

Park and recreation areas are essential for new and existing neighborhoods within the Diridon Station Area. An eight-acre recreational park is proposed between Park Avenue and West San Carlos Street along Montgomery Street/Bird Avenue. Additional park space is proposed throughout new residential and mixed-use development and includes open space, parks, recreation areas, public plazas, and development of public facilities such as restrooms, playgrounds, educational and visitor's centers, or parking areas that serve these facilities. This classification also includes open space and habitat area along Los Gatos Creek within the planning area. It must be noted, however, that the portion of Los Gatos Creek between Santa Clara Street and Park Avenue, and shown as Park/Open Space on Figure 2-1-1, falls outside of planning area. If Autumn Street is not relocated between Santa Clara Street and Park Avenue, as shown on Figure 2-1-1, and sufficient land remains for private development, the properties on the east side of Autumn Street could be redeveloped with new development, consistent with the Envision San José 2040 General Plan, or, if outside of the needed trail right of way, the existing buildings could remain.

#### ***Public/Quasi Public***

Uses permitted within this classification include government, civic, cultural, educational, and public services such as the HP Pavilion

## 2.2 Urban Design and place making

### INTRODUCTION

It became clear to the design team early in the design process that the project study area could naturally be broken down into three primary sub-areas, each of which has very different characteristics and opportunities for development potential. These three sub-areas are illustrated in Figure 2-2-1 and can geographically be described as;

- NORTHERN ZONE– all land in sub-areas A, B and C to the north of Santa Clara Street
- CENTRAL ZONE– all land in sub-areas G and H, between Santa Clara Street and Park Avenue, centered on the new and expanded station and including the new baseball stadium
- SOUTHERN ZONE the three predominantly residential/ mixed-use districts south of Park Avenue in sub-areas D, E and F

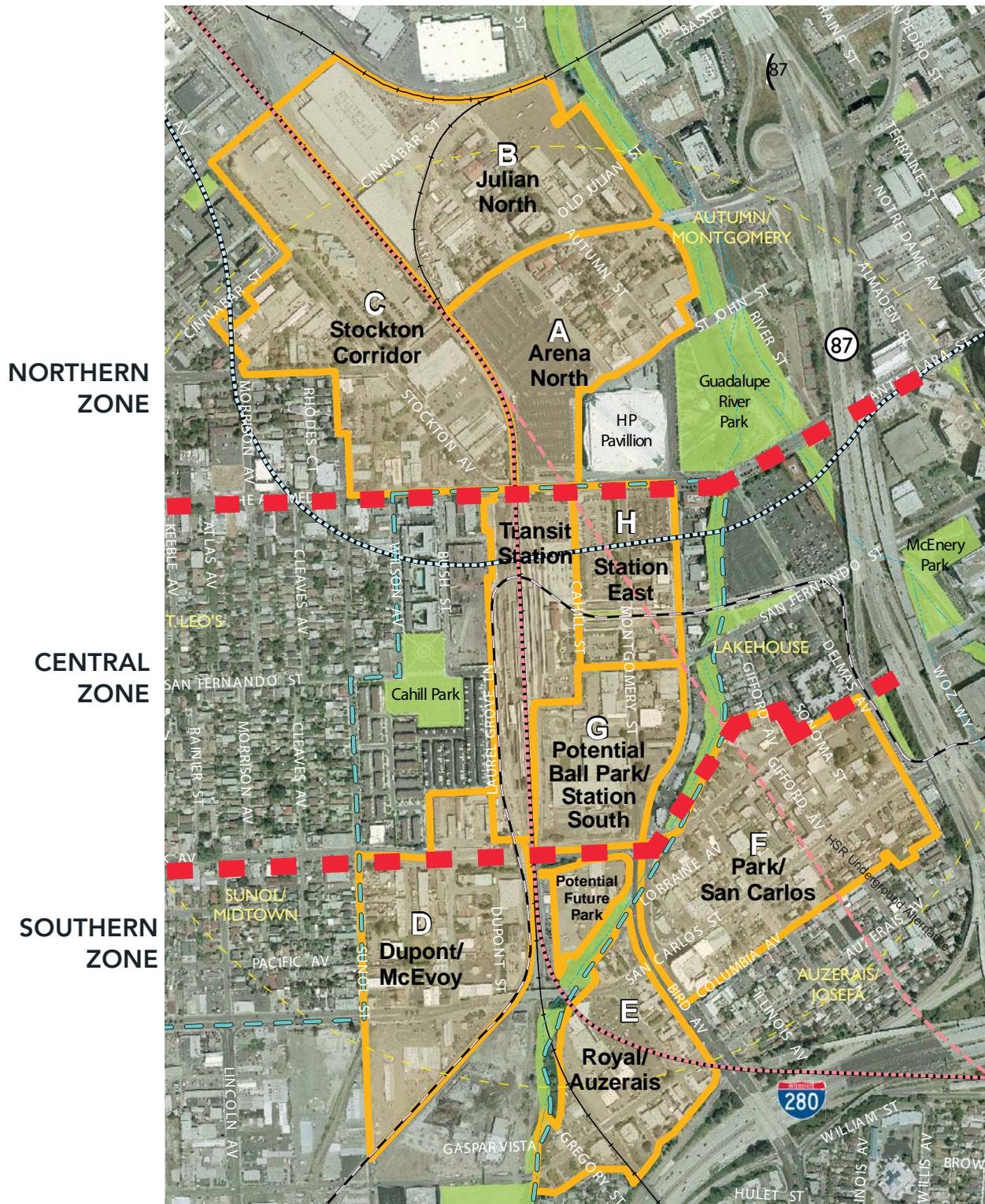
### IDENTITY

Furthermore, it also became apparent during the evolution of the three project alternatives and their eventual refinement into a single scheme that the character of each of these three zones could be arranged around three overarching themes, due partly to the existing uses to remain in place as well as the constraints and opportunities for new development;

- NORTHERN ZONE– the innovation zone
- CENTRAL ZONE– the commerce and entertainment zone
- SOUTHERN ZONE– the urban neighborhoods zone

In addition, the new and existing developments in each of these three zones could be arranged around east-west spines creating

FIGURE 2-2-1: PRIMARY ZONES



three main street axes, each lending an unique characteristic to the plan, as illustrated in Figure 2-2-2.

- NORTHERN ZONE– Julian Street for business and freeway access
- CENTRAL ZONE– The Alameda and Santa Clara Street for retail, commercial and entertainment access and direct connection to downtown
- SOUTHERN ZONE– San Carlos Street for access to the various neighborhoods and concentration of neighborhood serving retail

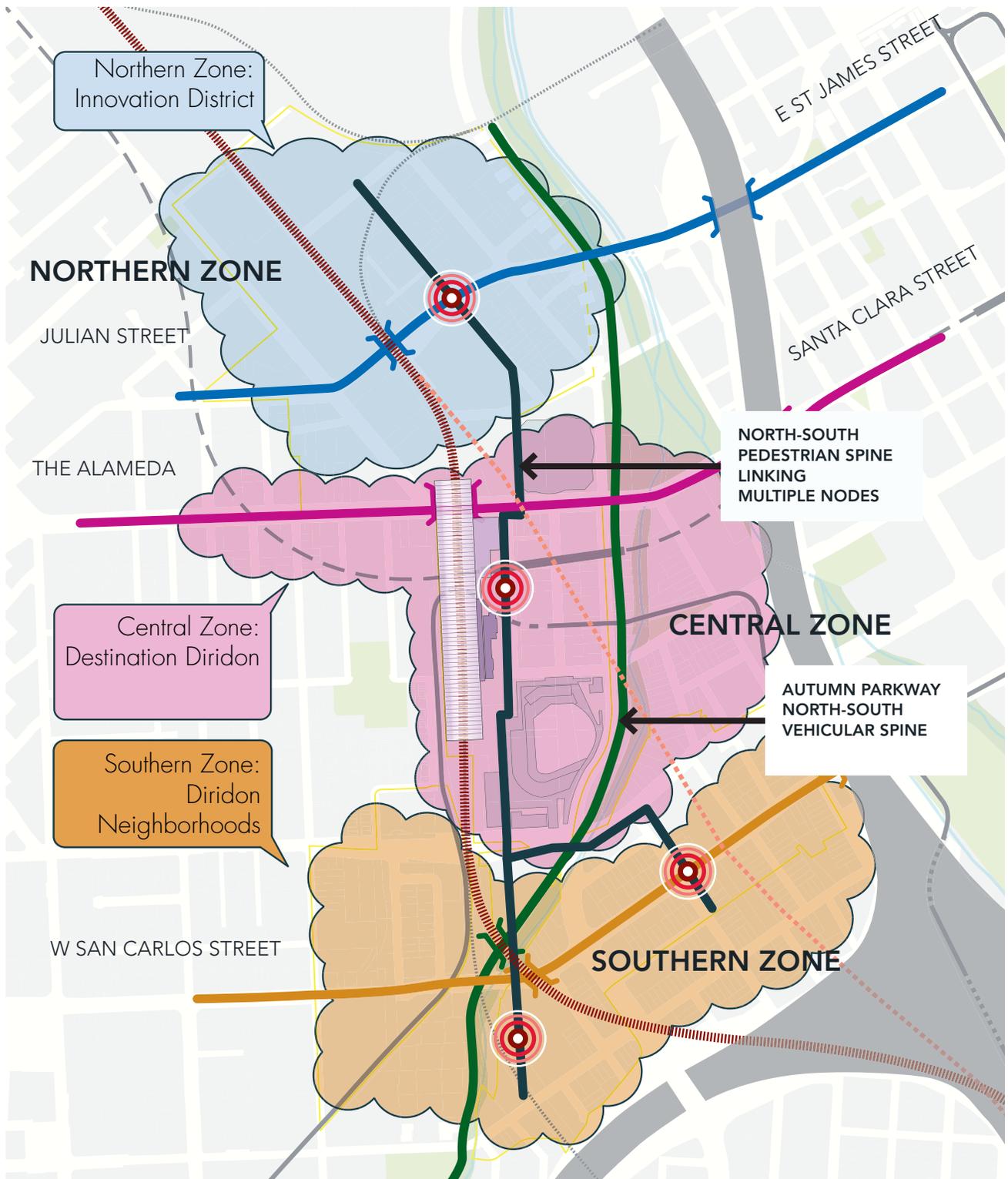
## CONNECTIVITY

During the outreach process in the early information gathering phase of the project, many stakeholders expressed a strong desire to see stronger east-west connections to help overcome the physical presence of the freeway and railroad overpasses which cut north-south through the area. The intensification of development along each of the three primary spines described above will give them a pivotal presence in each district and will also help to extend the connectivity to the neighborhoods beyond the study area, especially the residential communities to the west and downtown to the east.

In addition to these east-west connections, it is important to identify strong north-south connections to help tie the three districts together and facilitate ease of movement between them. These are illustrated in figure 2-2-2.

The Autumn Parkway Project, when complete, will provide one of these north-south routes by connecting Autumn Parkway all the way from Coleman Avenue in the north (providing convenient airport access) to Bird Avenue in the south (providing convenient freeway access).

FIGURE 2-2-2: IDENTITY ZONES



The north-south connectivity which Autumn Parkway will provide is intended primarily for vehicles. In addition to this, there are opportunities to provide separate connections and routes for bikes and pedestrians. The most obvious of these is the riverside trail within Guadalupe Parkway. However, with the completion of the Los Gatos Creek Master plan and creek-side trail between Santa Clara Street and Park Avenue, along with improvements to the intersection of Park Avenue and Bird Avenue, the trail network is significantly enhanced. This will provide pedestrian and bike connections right through the project study area and beyond, linking to a much wider trail network which extends to the San Francisco Bay in the north into the Santa Cruz mountains in the south.

A second north-south primarily pedestrian spine has also been identified which passes through the heart of the study area and could connect some portions of the route that already exist and place a pedestrian emphasis on this connectivity. This could become a key 'urban' spine over time. The route extends from the Guadalupe Parkway in the north, along the Julian Street 'green finger' and then travels north-south alongside the western edge of the HP Pavilion. After crossing Santa Clara Street, the route could pass through the plaza in front of the new station; follow the new sidewalk south of the station and then pass either alongside or within the ground floor of the new baseball stadium. A conveniently located pedestrian crosswalk on Park Avenue would then connect into the new community park, which affords access to the Los Gatos Creek trail and continues to the south beyond the study area. Wayfinding features should be incorporated into this pedestrian corridor to enhance its identity.

Due to the nature of the existing pieces of this route, it probably

won't be a direct straight line, but it is important to establish the route as a continuous one and for City staff to be vigilant in ensuring that new sections are added into the route as the various parcels along the way come up for redevelopment. The route could also be a catalyst for an Art Program to enhance the pedestrian experience.

### THE PREFERRED PLAN – A 'TEST FIT'

A project of this magnitude (some 250 acres of land) with the majority of the land currently in multiple small private ownerships is inevitably going to be realized gradually and evolve over the next 25 to 30 years.

It is important to recognize that the preferred plan layout which is described in detail in this chapter is more of a 'test-fit' than a prescribed plan. There are many ways in which the study area could be laid out and developed around the various fixed elements such as the station, track alignments, the HP Pavilion and the baseball stadium and still be consistent with the goals and ambition of the master plan.

The 'test-fit' plan is illustrated in Figures 2-2-3 and 2-2-4.

One of the primary objectives of this study is to determine the maximum possible build-out which could be achieved over time within the known constraints and opportunities. This is necessary for environmental analysis and clearance in the EIR phase of this project. This environmental clearance will define the maximum acceptable levels of development, and their associated environmental impacts, within which individual projects can be planned.

FIGURE 2-2-3: TEST-FIT PLAN - SPACES AND PLACES

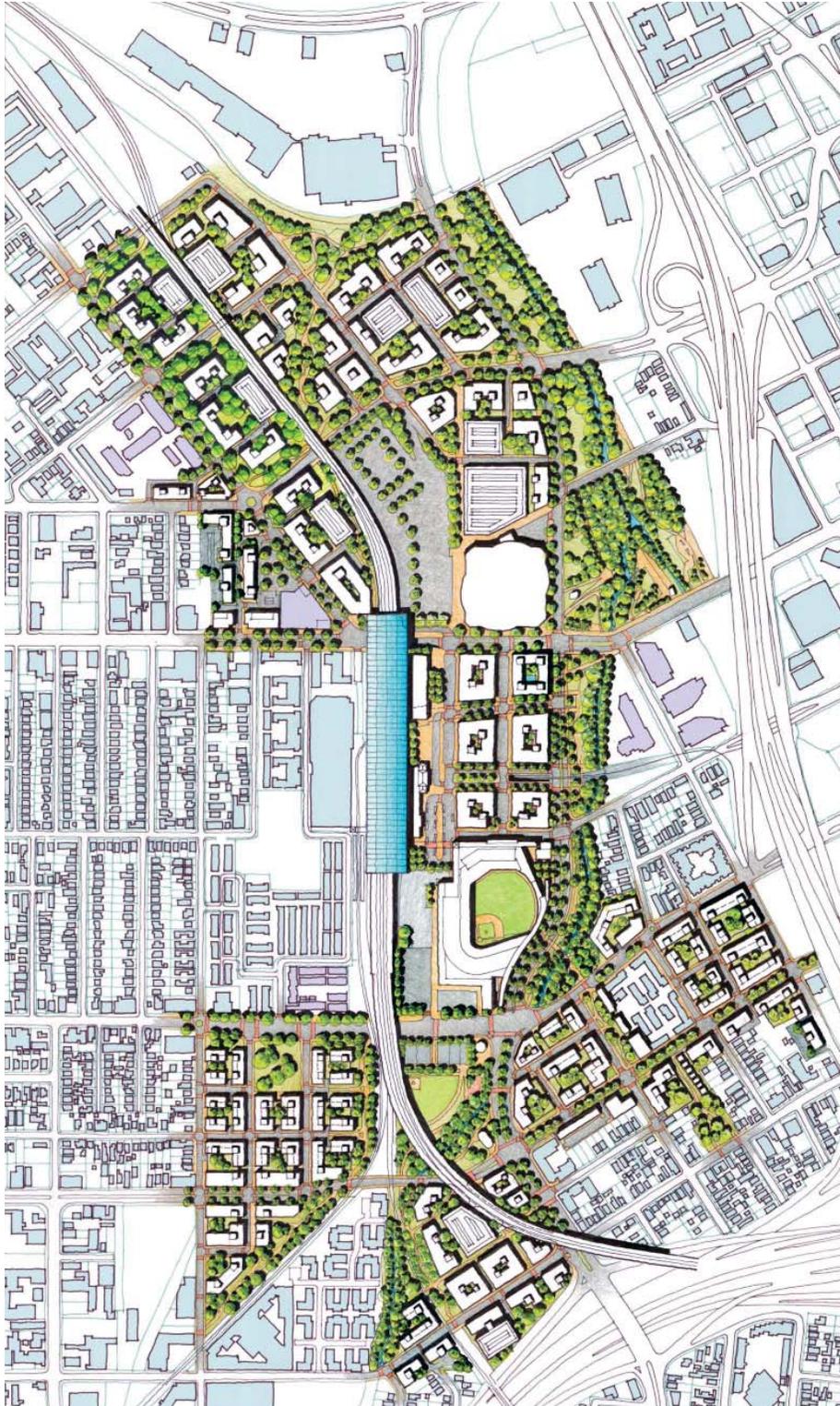
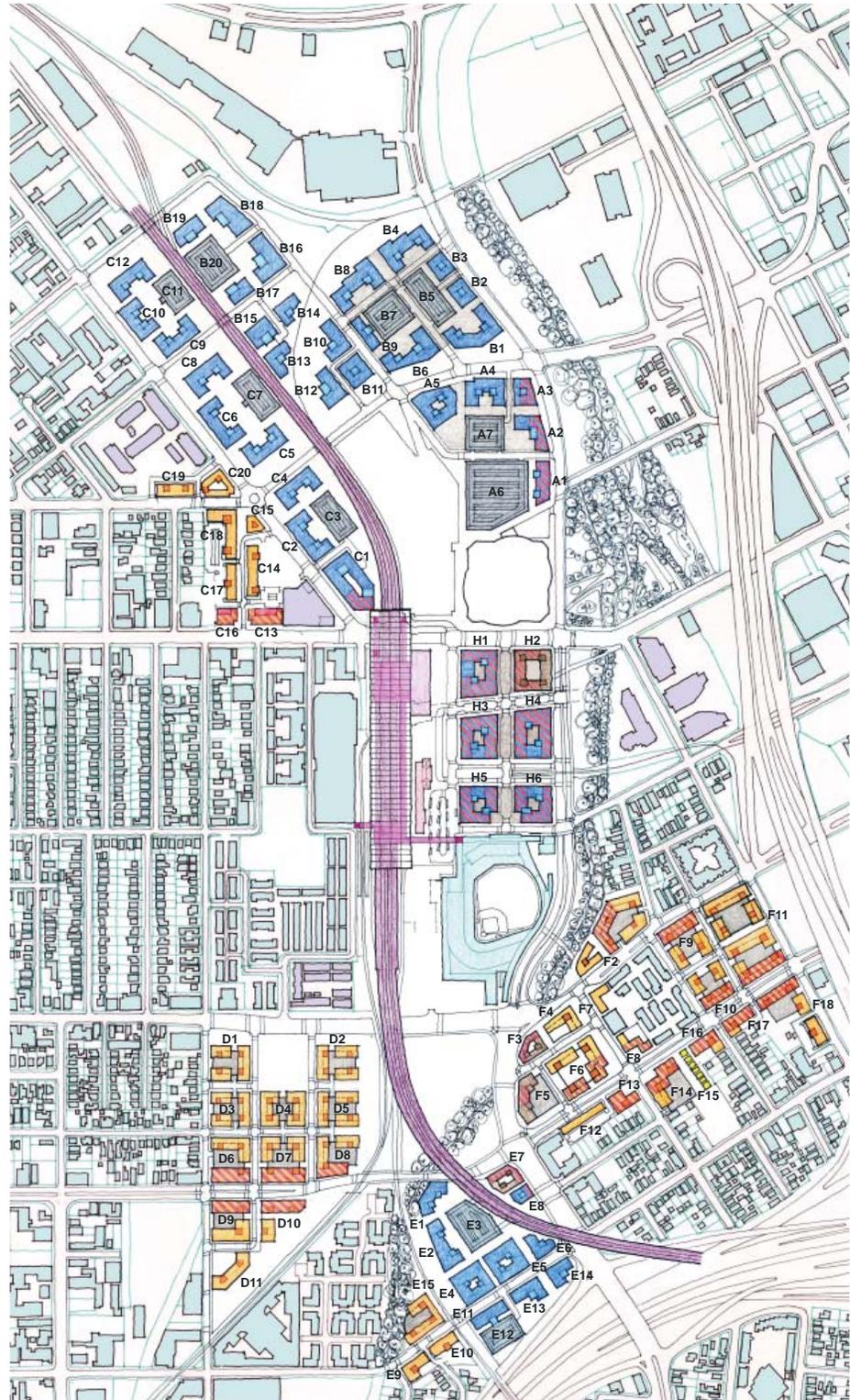


FIGURE 2-2-4: TEST-FIT PLAN - BUILDINGS AND USES

- COMMERCIAL/R+D
- RETAIL
- RETAIL with COMMERCIAL ABOVE
- MEDIUM DENSITY RESIDENTIAL
- HIGHER DENSITY RESIDENTIAL
- RETAIL with RESIDENTIAL ABOVE
- HIGH SPEED RAIL TRACKS
- STATION TERMINAL
- CONCOURSE & PLATFORMS
- BALLPARK
- HOTEL
- RETAIL with HOTEL ABOVE
- STRUCTURED PARKING
- PODIUM or UNDERGROUND PARKING
- EXISTING PROPERTIES TO REMAIN
- ENTITLED FUTURE DEVELOPMENTS



It will require vigilance from City staff to best determine how each individual project, as it comes forward, fits within and advances the vision of this Station Area Plan and how the plan may need to be updated and adjusted to accommodate the impacts of individual projects as they are implemented, while maintaining maximum flexibility for future proposals.

## THE 'TEST-FIT' PREFERRED PLAN – DETAILED DESCRIPTION

### NORTHERN ZONE – THE INNOVATION ZONE

In this zone, the new high speed rail tracks are elevated and follow the alignment of the existing at-grade heavy rail tracks. The Autumn Parkway project is assumed to be complete, connecting Coleman Avenue to Santa Clara Street and overlooking Guadalupe Parkway to the east. The more intermittently-used at-grade heavy rail tracks remain operational, one which skirts the northern boundary of the study area and a second one which cuts through the area, curving away to the east as it travels north of Julian Street.

The northern zone of the 'test-fit' plan is illustrated in Figures 2-2-5 and 2-2-6.

The HP Pavilion and its adjacent surface parking lot will remain in place, with regular patron access from both Santa Clara Street and Julian Street, and service access from Autumn Parkway. The new plan also indicates a new 900+ space parking structure immediately to the north of the HP Pavilion (block A6 on Figure 2-2-6) which will be built and operated by HP Pavilion management. The exact size, shape and location of this structure is yet to be finalized with City staff, and this may ultimately affect the layout of roads and development blocks in the immediate area. A coordinated operations plan for this facility will be developed with City of San José staff.

FIGURE 2-2-5: TEST-FIT PLAN - SPACES AND PLACES - NORTHERN ZONE

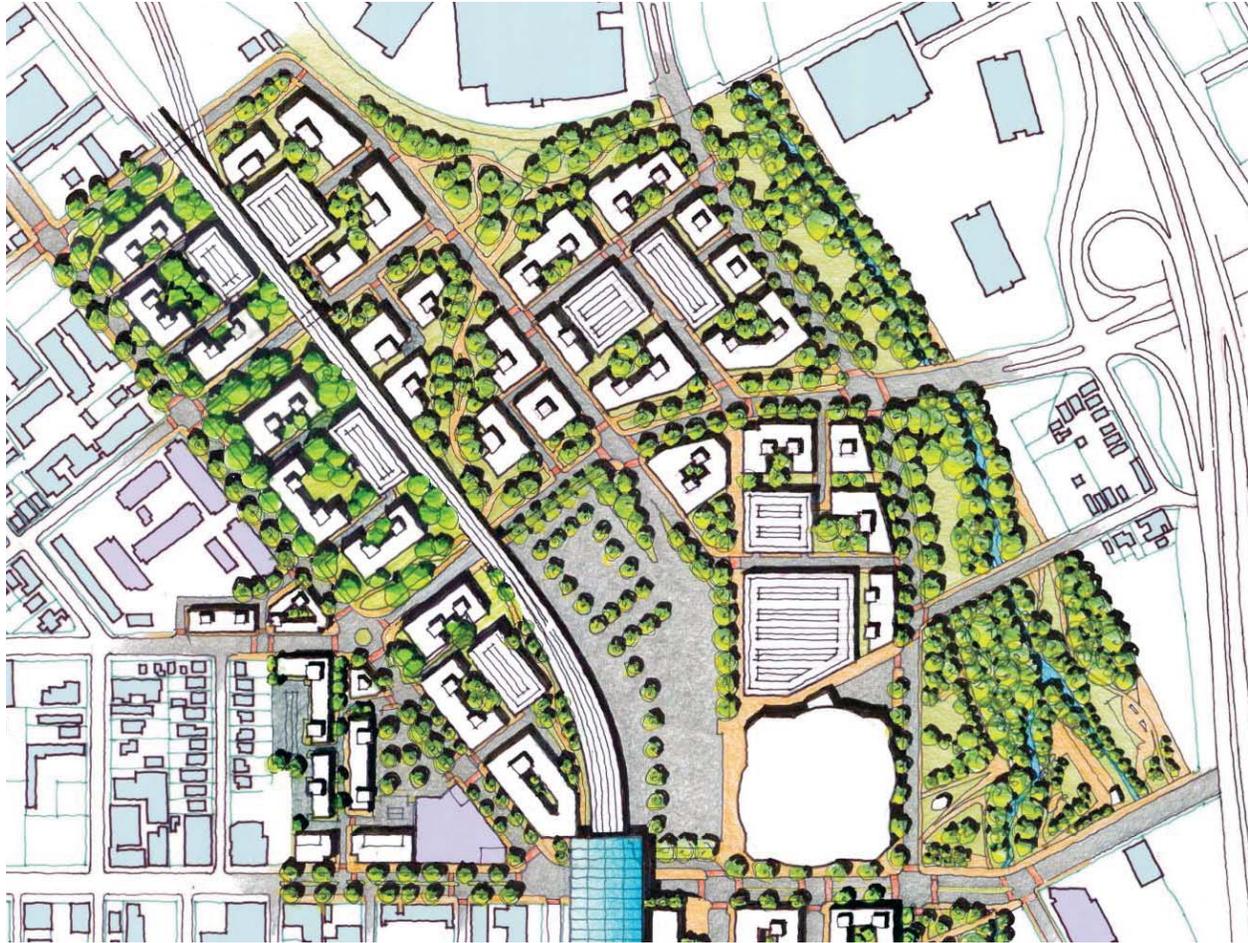
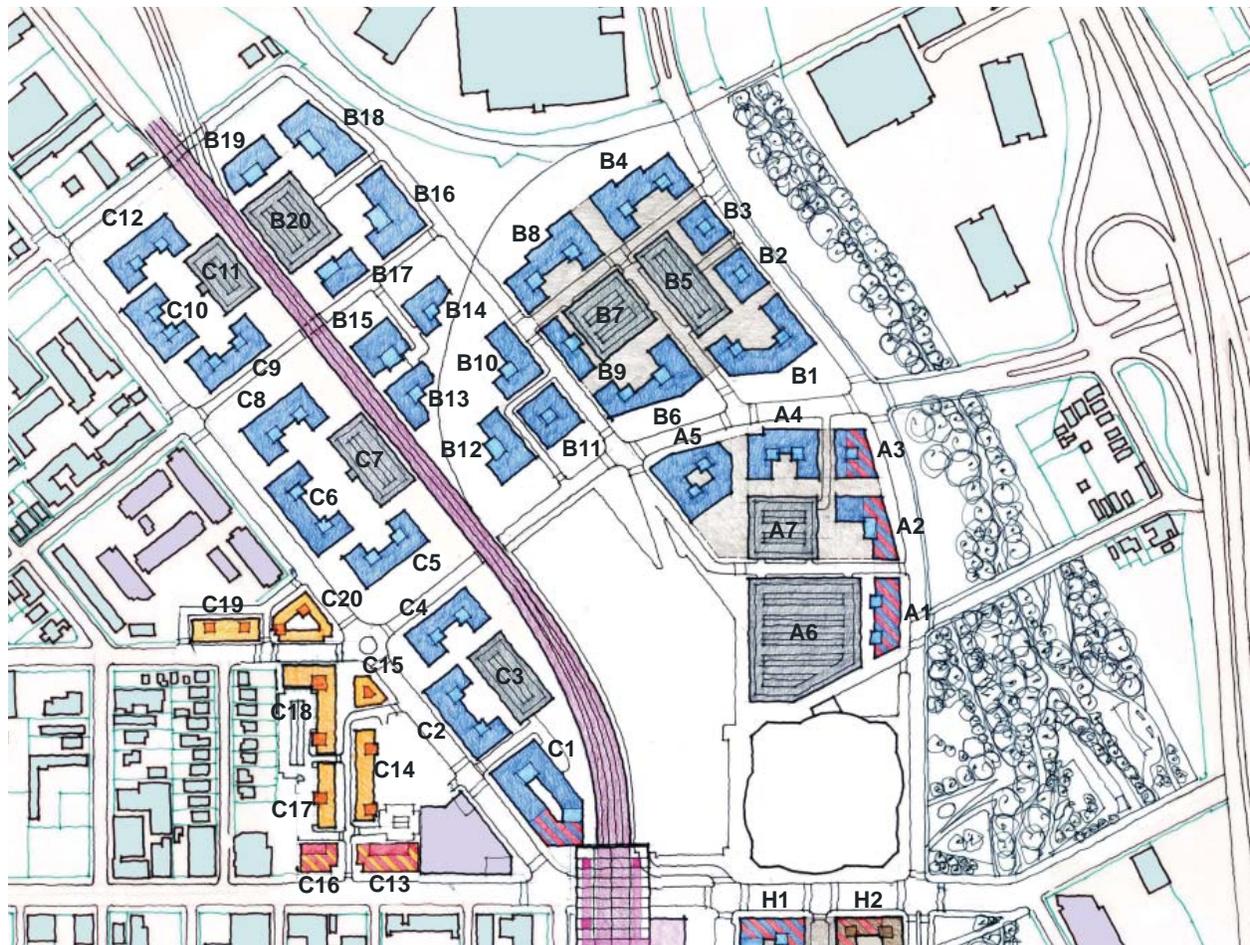


FIGURE 2-2-6: TEST-FIT PLAN - BUILDINGS AND USES - NORTHERN ZONE



For legend refer to figure 2-2-4

This northern zone of the study area is the closest zone to the airport and therefore subject to the most stringent building height restrictions (Height constraints are described in more detail in section 3.1 of this report). Generally buildings in this zone will be restricted to 5 to 7 stories high.

The primary urban design and place making proposals for the northern zone are:

- A series of 'green fingers' which reach out from Guadalupe Parkway and penetrate the new district. One of these follows the route of the existing heavy rail tracks referred to above, creating linear pedestrian parks alongside the tracks, and a second one follows Julian Street between Autumn Parkway and Stockton Avenue and continues southward to connect to The Alameda with a new mid-block paseo
- Intensification of new commercial and research + development facilities to significantly increase the employment base in this district. The target sectors for new development in this area will be innovative office environments, product research and development, emerging 'green' businesses and incubator space for high-tech start-up companies, to help promote this district as a high-profile hotbed of innovation
- Infill residential uses to the west of Stockton Avenue to complement the existing neighborhood character while increasing overall density
- Ground floor street-facing retail in all new buildings fronting onto The Alameda, with residential units above
- Modest setbacks to the buildings around The Alameda/ Stockton Avenue intersection to create a small new urban plaza to mark the 'arrival' point into this neighborhood from the east. This plaza could also become an important part of the station arrival sequence if pedestrian entrances to the station concourse were accessible from within the plaza or

surrounding buildings

- Shared parking structures associated with groups of buildings and shielded from view by the arrangement of the buildings
- Shared parking structures located close to the elevated high speed rail tracks and used as a 'buffer zone' between the tracks and the occupied buildings.
- Improved north-south pedestrian and bike connections along the new spine which extends the existing path along the western side of the HP Pavilion
- New commercial buildings lining the western side of Autumn Parkway overlooking and enjoying views of Guadalupe Parkway
- Two new underpasses below the rail road tracks at Lenzen Avenue and Cinnabar Street to improve east-west connectivity north of Julian Street for vehicles, bikes and pedestrians. Both of these are treated as 'green fingers' which connect to the network of 'green fingers' to the east of the tracks

## **CENTRAL ZONE - THE COMMERCE AND ENTERTAINMENT ZONE**

This zone includes the new high speed rail terminal at the northern end and the new baseball stadium at the southern end, with new commercial development between them. The 1400 ft. long high speed rail platforms and the canopies or enclosure above them occupy most of the western edge of the zone, overlooking the residential area to the west. In this central zone the high speed rail tracks and platform are located directly above the existing at-grade heavy rail/Caltrain alignment.

This zone will also include the proposed realignment of Autumn Parkway project, creating a continuous eastern edge overlooking the newly restored Los Gatos Creek and trail, which is assumed to

FIGURE 2-2-7: TEST-FIT PLAN - SPACES AND PLACES - CENTRAL ZONE

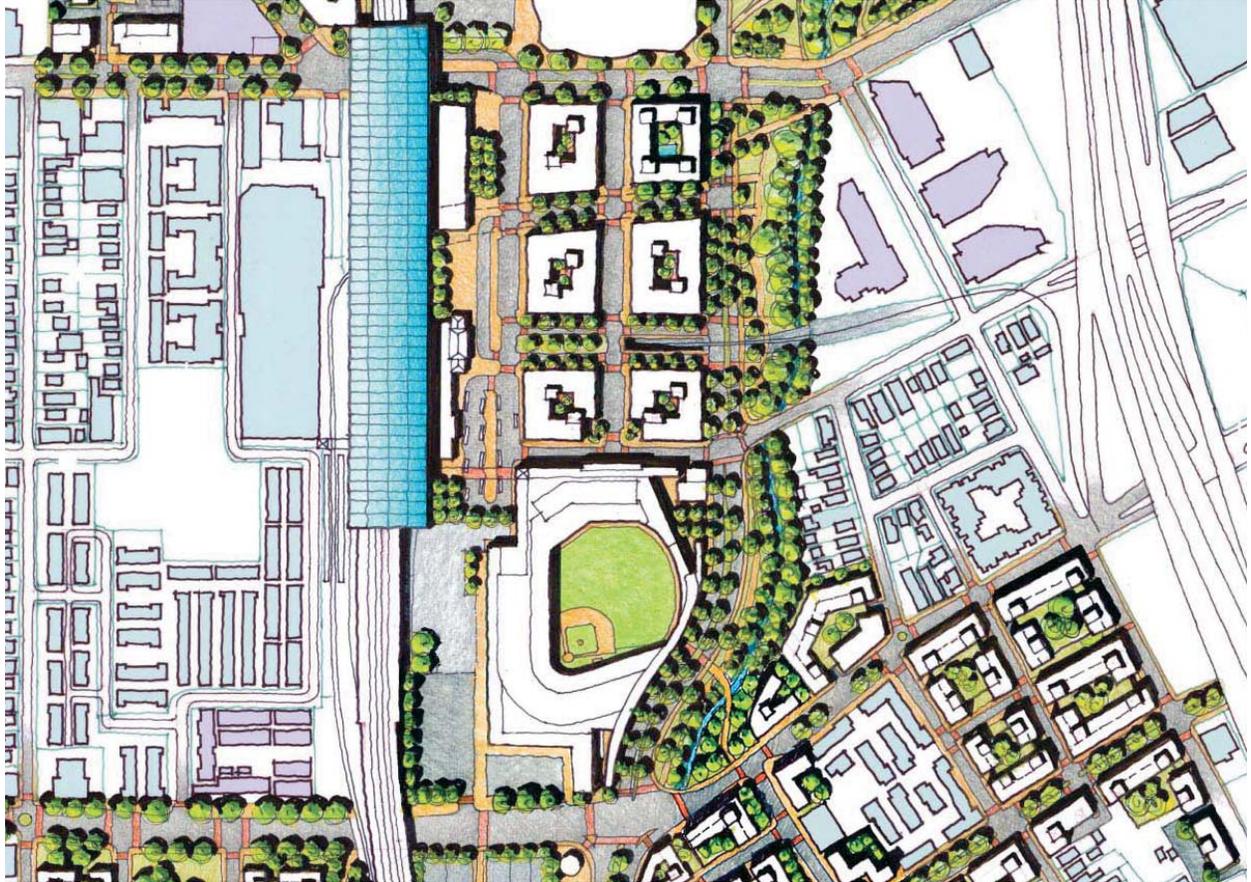


FIGURE 2-2-8: TEST-FIT PLAN - BUILDINGS AND USES - CENTRAL ZONE



For legend refer to figure 2-2-4

be complete in time for the implementation of this project.

The central zone of the 'test-fit' plan is illustrated in Figures 2-2-7 and 2-2-8.

The emphasis in the central zone is a high intensity mixed-use business core with ground floor street-facing retail, sports and entertainment uses to take advantage of the proximity to the HP Pavilion to the north, the ballpark stadium to the south, the high speed rail terminal to the west and the direct connection to the existing downtown to the east.

Building height in this zone is generally restricted to seven to nine stories due to the airport flight path constraints.

The primary urban design and place making proposals for the central zone are:

- Linear 'airport style' station layout with discrete commuter and high speed rail terminals, visually distinct on the outside but linked internally to create a single passenger-friendly internal circulation system
- Opportunity for an 'iconic' world class work of architecture for the new terminal building in the grand tradition of railway engineering which could be highly visible from multiple approaches to the station
- A new primary civic plaza, view corridor showcasing the terminal structure and creating a new urban gathering place for San José. Illustrative sample concepts for the size, shape and location of this plaza are described in more detail in section 2.4 of this report
- In the case of the elevated high speed rail alignment option, the tracks and station concourse offer more opportunities for making high-level pedestrian connections across the tracks, improving station accessibility and east-west connectivity for

the wider area

- Ground floor retail spaces along Montgomery Street with an emphasis on sports and entertainment tenants with frontages oriented to reinforce the main pedestrian routes between the major draws in the area
- Cahill Street could support more diverse urban retail uses at ground floor level
- A linear east-west 'green connection' located on axis with the historic Diridon station, extending across Autumn Parkway and reinforcing the existing pedestrian and bike routes which follow the light rail line, on to San Fernando Street and into downtown. This connection should include wayfinding features which provide a unifying theme to this route and the north-south pedestrian connections
- A new hotel on one of the major blocks within the core grid to capture overnight business and sports-related travel and with direct connections to the High Speed Rail terminal.

## **SOUTHERN ZONE – THE NEIGHBORHOODS ZONE**

This zone includes three separate sets of rail tracks which diverge as they head south from the station; light rail, heavy rail/Caltrain and high speed rail. In addition, the realigned Autumn Parkway connects up with Bird Avenue to become a major access route from the Diridon Station Area to I-280 and the freeway network.

The southern zone of the 'test-fit' plan is illustrated in Figures 2-2-9 and 2-2-10.

The physical road and rail conditions essentially subdivide this zone into three quite distinct sub-areas:

- The DuPont-McEvoy neighborhood to the west of the light rail tracks which swing south-west as they head toward Winchester and Campbell

FIGURE 2-2-9: TEST-FIT PLAN - SPACES AND PLACES - SOUTHERN ZONE

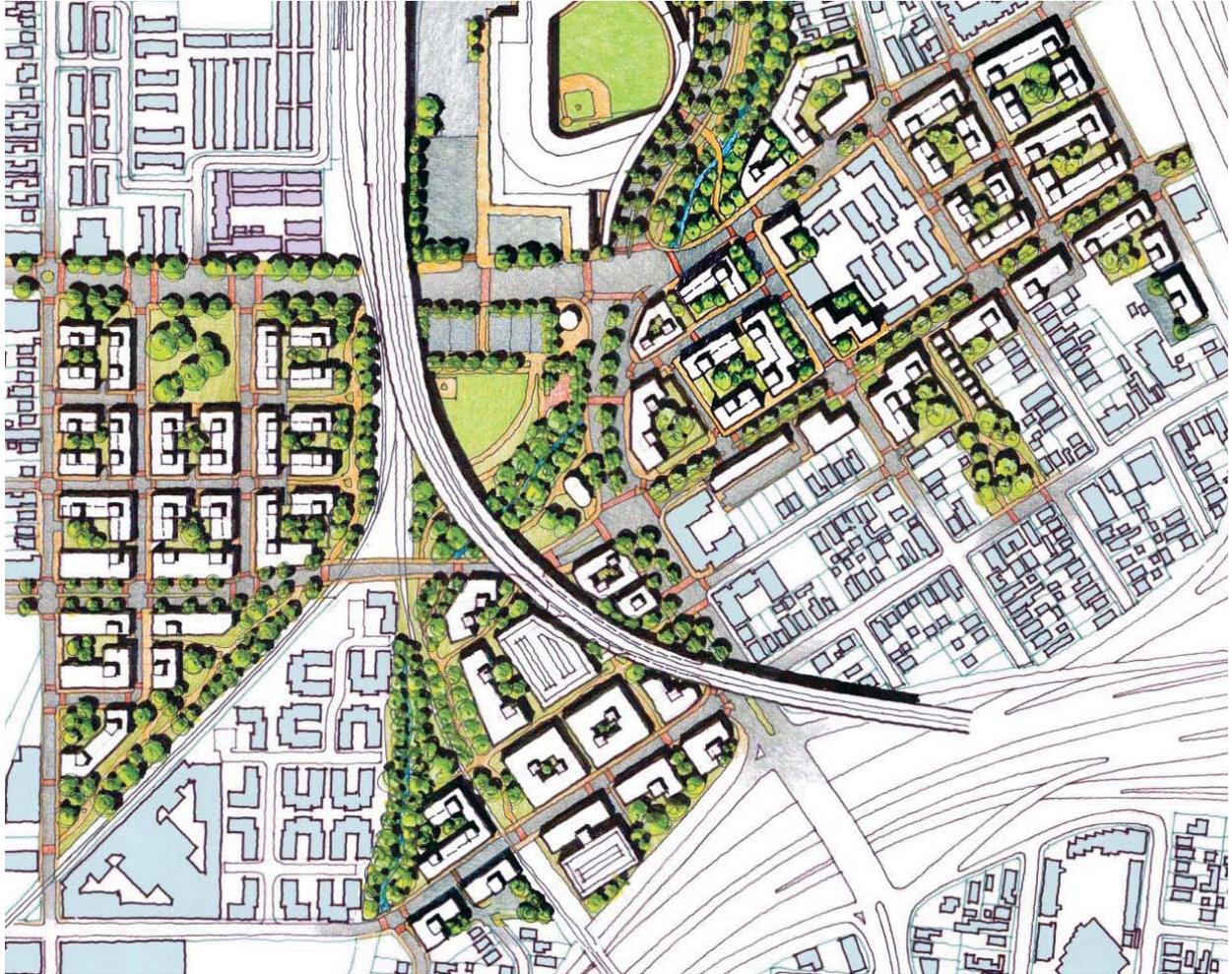


FIGURE 2-2-10: TEST-FIT PLAN - BUILDINGS AND USES - SOUTHERN ZONE



For legend refer to figure 2-2-4

- The Royal-Auzerais neighborhood in the central area with the existing at-grade heavy rail tracks defining its western edge and the new elevated high speed rail tracks rising up and passing through this neighborhood, this structure swings around to the south east and passes over the freeway intersection before dropping down to head south along the Monterey corridor
- The Park-San Carlos neighborhood to the east of Bird Avenue with sensitive residential infill and concentrations of neighborhood-oriented retail which follow the development guidelines in previous SNI guidelines for this area

Each of these three sub areas has quite different existing conditions which influence the nature and character of the new development being proposed.

The northern portion of the central sub-section, immediately south of the new baseball stadium, is the proposed location for a new 8 acre community park, with a portion of Los Gatos Creek and creek side trail running through the south east side of the park. This community park is intended to give existing and future residents a new place for large community gatherings as well as a broad range of outdoor activities, both programmed and non-programmed. Feedback received at the community workshop #3 suggested that further public outreach should be undertaken at an appropriate time to help determine the most appropriate combination of amenities within the park and to develop programs which will have the broad support of the community.

The primary urban design and place making proposals for each of the three southern sub-zones are;

***South-west zone – DuPont/McEvoy***

- Green fingers reaching out from the large community

park along Park Avenue to provide strong bike and pedestrian connections between the sub-areas and into the neighborhoods beyond

- A new residential neighborhood of medium-to-high density replacing the existing mix of low density and/or vacant residential and light industrial properties, arranged in a new street grid which restores the typical urban grain of the surrounding areas
- Concentration of new street-facing ground floor retail/commercial activity along both sides of San Carlos Street, with residential units above, to help strengthen this as a neighborhood retail corridor
- Lower buildings in the northern and western portions of this sub-area (6 stories) to respect the scale and grain of the surrounding residential community, rising to taller buildings further south (8 to 10 stories) overlooking the 'green finger' alongside the light rail line and more remote from the existing lower-scale properties
- A new urban square within the neighborhood, surrounded on three sides by new streets and residential developments to create a sense of enclosure to this 'outdoor room', but open on the fourth side to Park Avenue to increase its visibility to passers-by and residents of the surrounding neighborhoods, in accordance with SNI Guidelines
- All of the new residential and mixed-use blocks are planned around a two-level parking podium to provide adequate on-site parking supply for residents and visitors. All of the residential blocks are several stories higher than the podium which they surround (and mostly hide) and it is assumed that these groups of buildings could be designed such that the top deck of the parking podium is a raised landscaped plaza into which the residential units above look down and which is shared by the residents within each block for private recreational uses. Refer to section 4.1 of this report for an indication of proposed parking spaces in each block

***South-central zone – Royal/Auzerais***

- Large new community park on the existing fire department training site (assumed to have been relocated elsewhere within the City) as described above
- New medium density residential development on the western side of the heavy rail/Caltrain tracks, facing onto Auzerais Avenue and overlooking Los Gatos Creek
- Concentration of office/commercial/research + development uses in the central section surrounding and beneath the elevated high speed rail tracks. These are arranged in a ring of outward-looking buildings with a shared parking structure in the center, shielded from sight by the new development
- Access to the parking structure and service access to the individual buildings is from a road located directly below the elevated high speed rail tracks, to help activate this space. CHSRA have indicated a desire to see active uses in the spaces below the elevated tracks. The range of permissible uses is currently being determined
- A new hotel on the north east corner of the sub-zone, overlooking the new community park and readily accessible from the freeway network

***South-east zone – Park/San Carlos***

This sub-zone is much more of a mix of new and existing uses than any of the other districts described above. The area currently enjoys a varied mix of older, newer, smaller and larger properties and this preferred plan attempts to complement this by inserting pockets of higher density residential development where appropriate (and where identified by previous SNI studies) while still respecting the overall scale and urban grain of the neighborhood

- Concentration of ground floor street-facing retail along San Carlos Avenue, the east-west spine of the district, to reinforce

this as a neighborhood retail corridor

- Extension of Joséfa Street in the north to connect bikes and pedestrians to the Los Gatos Creek and trail and down into the neighborhood. This linkage is treated as another 'green finger' reaching into the heart of the neighborhood. This terminates in a new 'town square' at the intersection of Joséfa Street and San Carlos Avenue which becomes a new focus for the district
- Concentration of new open space around the northern end of Joséfa Street with a new public park overlooking and connected to the Los Gatos Creek and trail
- Two new hotels on the western edge of the sub-area overlooking the new large community park and readily accessible from the freeway network
- The new residential and mixed-use blocks are planned around a two-level parking podium to provide adequate on-site parking supply for residents and visitors. All of the residential blocks are several stories higher than the podium which they surround (and mostly hide) and it is assumed that these groups of buildings could be designed such that the top deck of the parking podium is a raised landscaped plaza into which the residential units above look down and which is shared by the residents within each block for private recreational uses. Refer to section 4.1 of this report for an indication of proposed parking spaces in each block
- Heights and densities of new development and distribution of new public open space generally in accordance with the 2002 Delmas Park SNI plan (amended 2007)
- Incorporation of retail/restaurant business opportunities under the elevated high speed rail viaduct between Bird Ave and San Carlos Ave is highly desired. Pedestrian or walking corridors can be incorporated here to encourage an "edgy-hip" ambience with facades incorporated into the high speed rail right of way. Similar use of overhead track space has successfully occurred in larger Asian and European cities.

## 2.3 Landscape and open space

### VISION

The Diridon Station Study area, underserved and underutilized in terms of planned open space, will soon be transformed by new neighborhoods and land uses. Key to the plan is an exceptional park system that will provide amenities for existing and new communities alike and link the life of the residents and visitors of the City of San José with their larger ecological context. Inspired by people and place, the open space system will help integrate social and ecological factors to support a livable and sustainable urban environment.

### EXISTING FRAMEWORK

The existing neighborhood that falls within the Diridon Station Area Plan is underserved in terms of a planned open space network. Particularly missing is a continuous recreational multi-use trail connecting Los Gatos Creek to the Guadalupe River Trail system. In addition, a public gathering place of ample size is missing. The area west of the existing railway lines and north of the Alameda is also not well connected to Downtown for pedestrians and cyclists.

### STRATEGY

Various landscape and open space amenities are described in this section of the report within the context of the sub-areas in which they are located. These proposals should also be viewed as manifestations of the larger landscape and open space vision. Figure 2-3-1 illustrates the landscape strategy for the Diridon Station Area and beyond. It shows that the range of ideas can be viewed as part of a hierarchy of open spaces, working from the City-wide context down to individual components at the local level. This hierarchy can be described as five levels of open spaces which contribute to the environment and character of the station area plan, described in turn below.

FIGURE 2-3-1: LANDSCAPING STRATEGY AND HIERARCHY



Numbers refer to hierarchy of spaces described in 'Strategy' section of text

## **1. THE GUADALUPE PARKWAY AND THE LOS GATOS CREEK MASTER PLAN**

The completion of the Los Gatos Creek improvements between Santa Clara Street and Park Avenue will be the final section of a much larger trail and open space network which connects San José with surrounding communities and countryside, from the San Francisco Bay to the Santa Cruz mountains. This trail and park system passes through the heart of the Diridon Station area and will provide improved recreational opportunities and enhance north-south pedestrian and bike connections to the whole of San José, including residents and visitors to the Diridon area. The design of these areas will meet the established standards of these existing Master Plans.

## **2. COMMUNITY PARK**

The large 8-acre community park in the south-central zone will provide new and existing residents with a place for community gathering as well as a broad range of outdoor recreation activities. The activities and programs available within this park will also appeal to a wider audience beyond the immediate boundaries of the Diridon Station Area. The park should be designed with zones for both passive and active programs and specific park features may include the following (the exact program should be developed through a process of detailed community input):

- Day-lighting of Los Gatos creek as a natural amenity
- Amphitheater
- Perimeter walking path circuit
- Iconic picnic pavilion, visible from the street
- Children's play areas
- Restrooms
- Open and multi-use lawn, capable of accommodating soccer or baseball
- Playcourt zone for basketball, tennis, etc.

### 3. 'GREEN FINGERS'

Overlaid onto the Guadalupe Parkway, Los Gatos Creek and Community Park is the network of “green fingers” which are intended to reach out and connect the larger public open spaces with the various neighborhoods within the plan area and to provide pleasant pedestrian and bicycle connections between the districts.

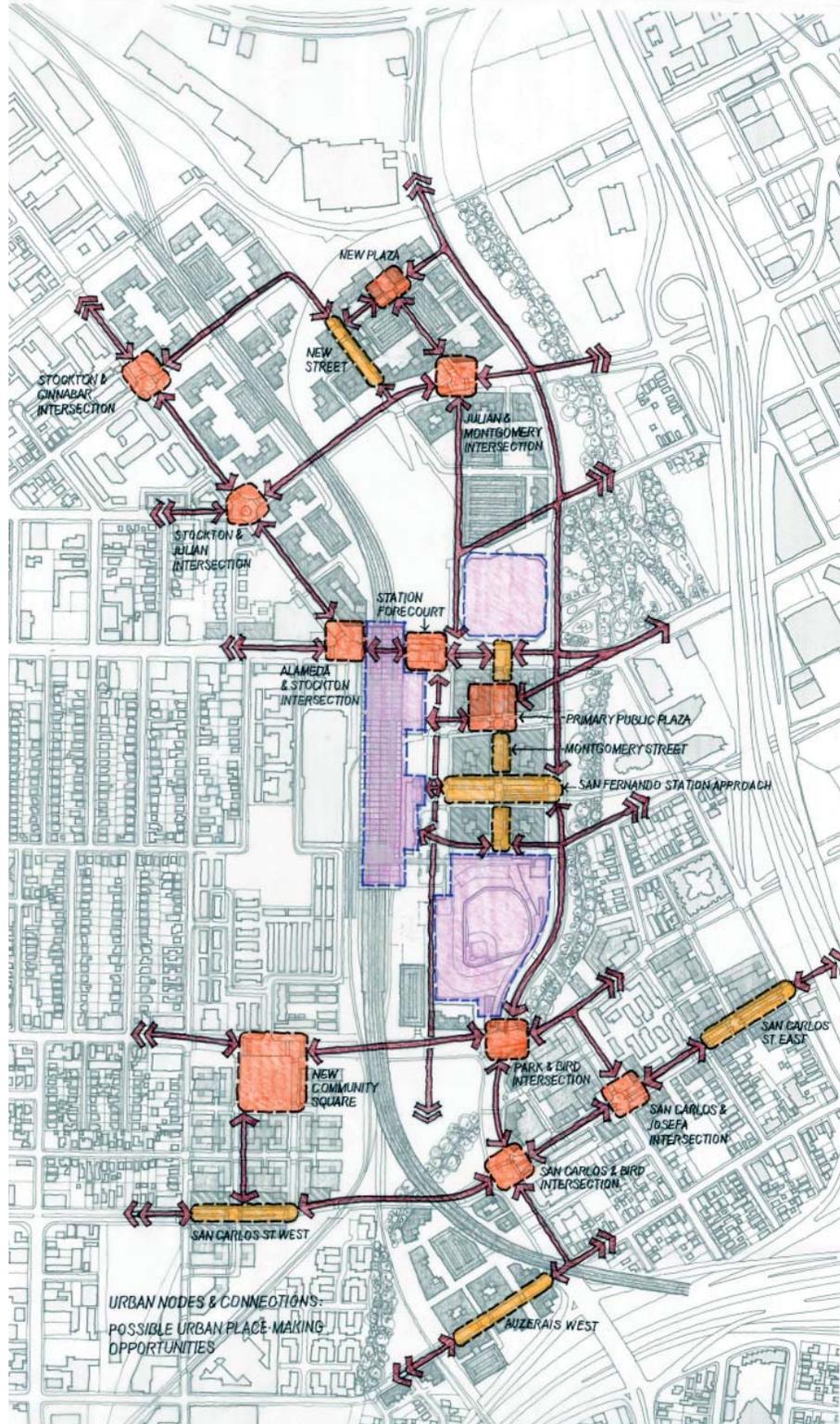
The green fingers are envisaged as wide linear parks (minimum 40' wide) with generous landscaping and a continuous, integrated bicycle and pedestrian pathway system, punctuated by active and passive programmed spaces. The green fingers will be designed for continuity and each could have a unique character expressed through program, plantings, furnishings and paving. An integrated system of shade canopies and seatwalls will support user comfort.

Some of the green fingers contain roads. These will be of sufficient width to allow separation of pedestrian and bike paths from the roads within a wide (minimum 30-40' wide) landscaped zone to one side of the road.

Passive and active program elements and features along the green fingers may include:

- Quiet seating in contemplative garden spaces
- Interpretive elements and signage
- Social seating and picnic areas
- Game tables (chess/checkers)
- Children’s play areas
- Sport courts (basketball, volleyball, tennis)
- Fitness circuit
- Drinking fountains
- Wayfinding and themed signage program

FIGURE 2-3-2: OPEN SPACE NETWORK AND STREET CONNECTIONS



#### 4. CIVIC PLAZA

A new civic plaza will be associated with the new high speed rail terminal and large enough to allow the visual impact of the terminal to be fully appreciated. The space will have a civic as well as a commercial focus. It will be quite different than any other public open space in San José and will demonstrate the City's commitment to creating a new gathering place with a predominantly urban focus, befitting the presence of high speed rail.

The plaza will accommodate high volumes of movement in different directions and provide a transition from the station area to the city. This is where the city welcomes the resident or visitor. Easy orientation will be essential; orientation to other transportation modes, pick-up areas, information points, destinations and a visible connection to downtown.

The plaza will be highly visible to street frontage on at least one side of the plaza

Key features of the plaza include:

- Central, large multi-use space open for flexible set ups and large public gatherings
- Built-in audio/visual infrastructure for events
- Restrooms
- Smaller, quieter, subzones with trees, shade, and seating
- Integrated bike and pedestrian circulation through the plaza, connecting with adjacent through bike and pedestrian routes

Alternative plaza configurations are described in section 2.4 of this report. It is important that the new plaza be visible, at least partly, from Santa Clara Street, San José's primary civic thoroughfare, so that people who are moving through the area on foot, bike and car are aware of the presence of the plaza and are suitably intrigued to want to investigate and explore, either at that time or at a later date.

The land uses and block layout of the central core capitalize on the presence of the HP Pavilion and the proposed Baseball Stadium either side of the central zone to create a lively and constantly active sports-related entertainment zone in-between these two 'anchors' and around the new station terminal. The urban plaza, which is intended to be used as an outdoor room with a well programmed range of activities, will be centrally located within this entertainment zone and readily accessible by patrons of all kinds, regardless of where they are coming from.

## 5. NEIGHBORHOOD SQUARES

At the local level, a network of smaller squares and plazas are distributed throughout the project area creating a focal point within each of the different neighborhoods. Figure 2.3.2 illustrates a network of possible nodes, mostly centered on significant intersections which could become memorable places, throughout the study area. These have been located at a frequency which makes walking from one space to the next quick and easy, so that the entire study area benefits from improved pedestrian connectivity through an awareness of an evenly distributed and enjoyable collection of outdoor urban spaces. Equally important will be the connections between each of these spaces. The routes which connect these spaces to each other and to the surrounding neighborhoods should be obvious, pedestrian friendly and enjoyable environments in their own right.

Neighborhood squares would include places for community gathering, children's play, and multi-use lawn, and ample shade. They could typically be located at new or existing intersections and could be defined by the buildings around the edges being 'set-back' on one or more corners. This would create room for activity areas, outdoor dining, playgrounds, passive areas, landscaping, trees and shade.

## EAST-WEST CONNECTIONS

Figures 2-3-3 and 2-3-4 illustrate how the existing east-west connector streets could be differentiated in terms of their mode share emphasis. Julian Street, The Alameda/Santa Clara, Park Avenue and San Carlos Street all serve important roles as primary cross-routes for vehicular movement. As a companion to these, St. John Street, San Fernando Street and Auzerais Avenue could receive streetscape improvements which de-emphasize vehicular travel and promote these cross-route as primary pedestrian and bicycle corridors.

FIGURE 2-3-3: EXISTING EAST WEST CONNECTIONS - VEHICULAR EMPHASIS

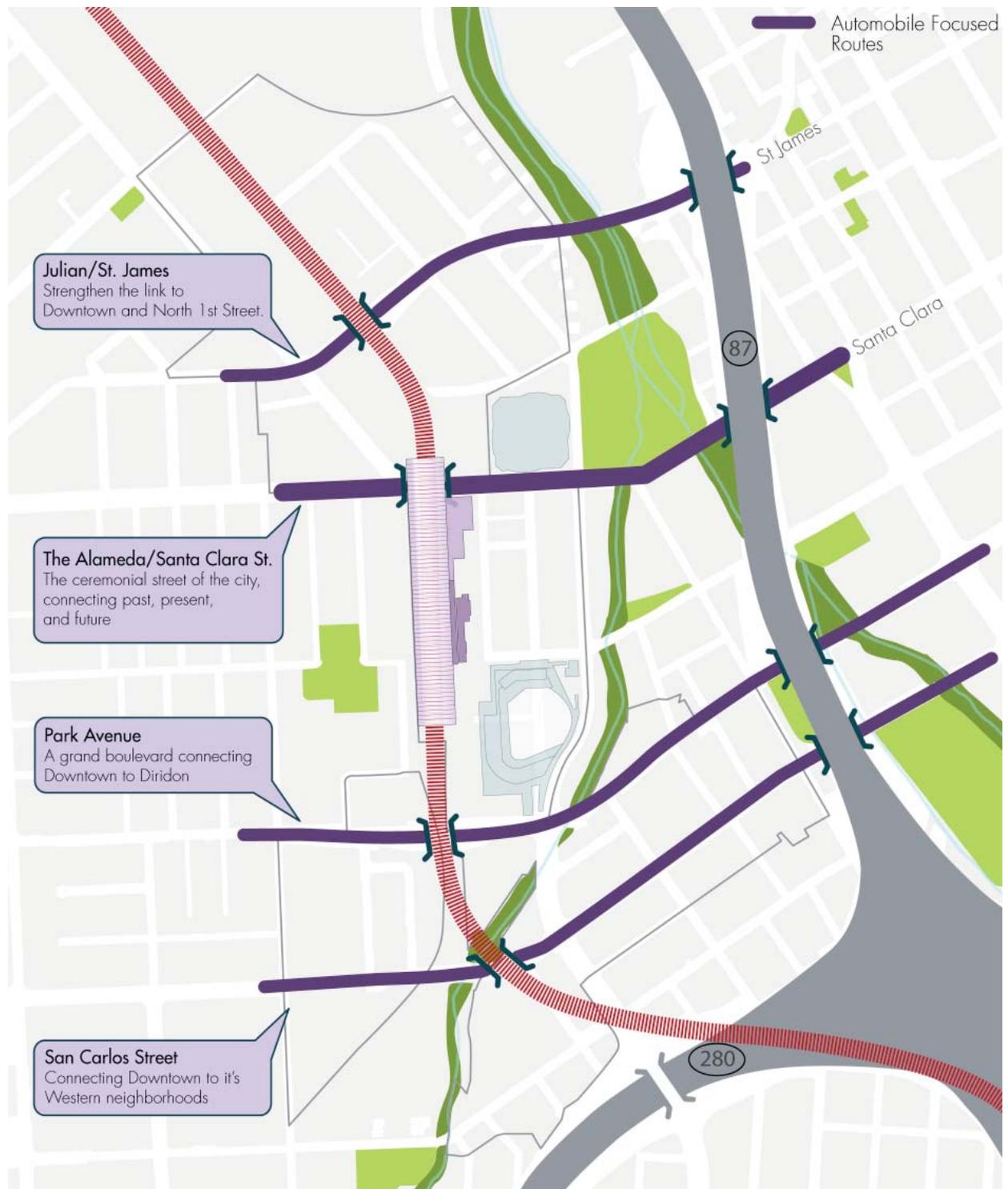


FIGURE 2-3-4: EXISTING EAST WEST CONNECTIONS - PEDESTRIAN AND BICYCLE EMPHASIS

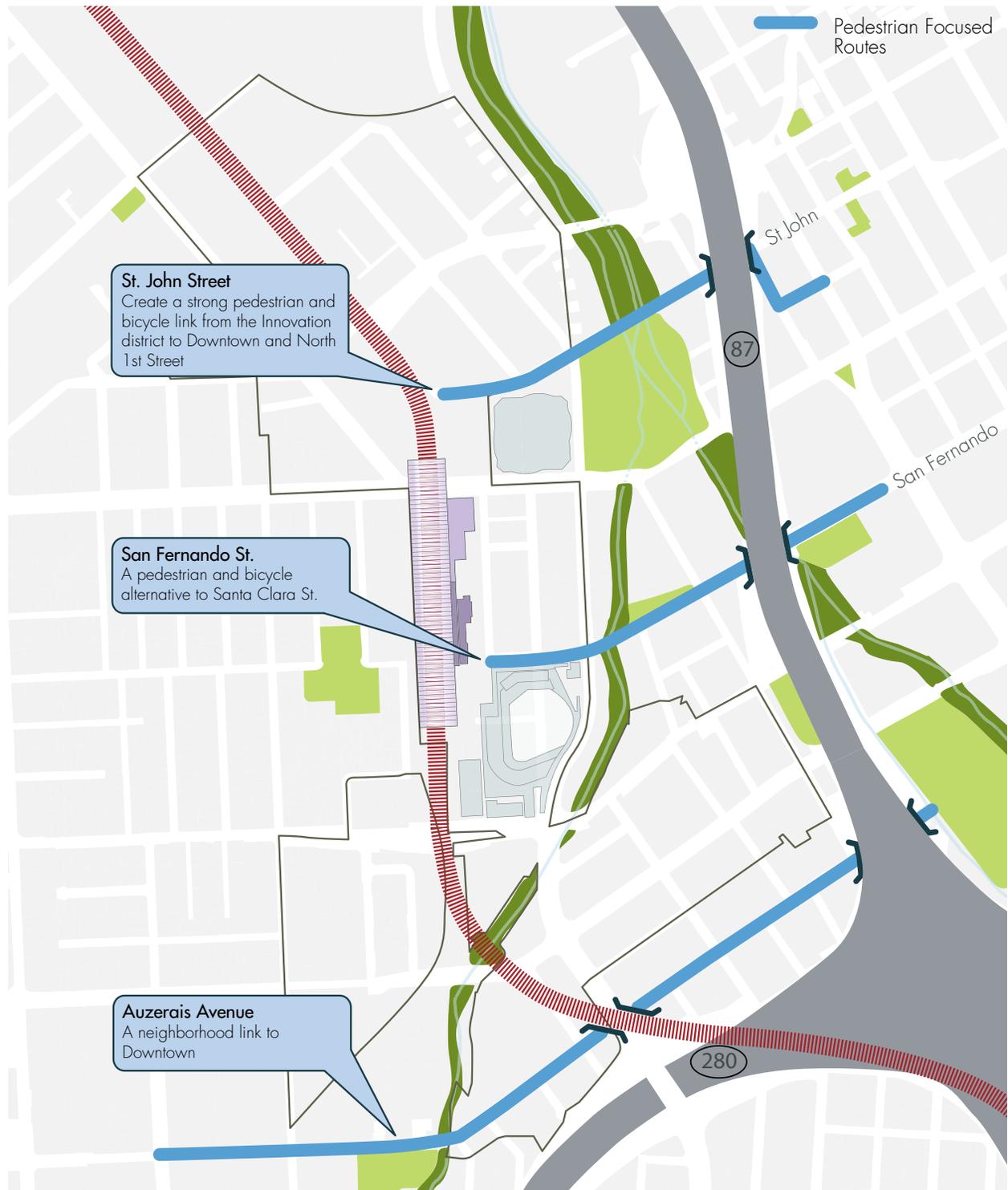
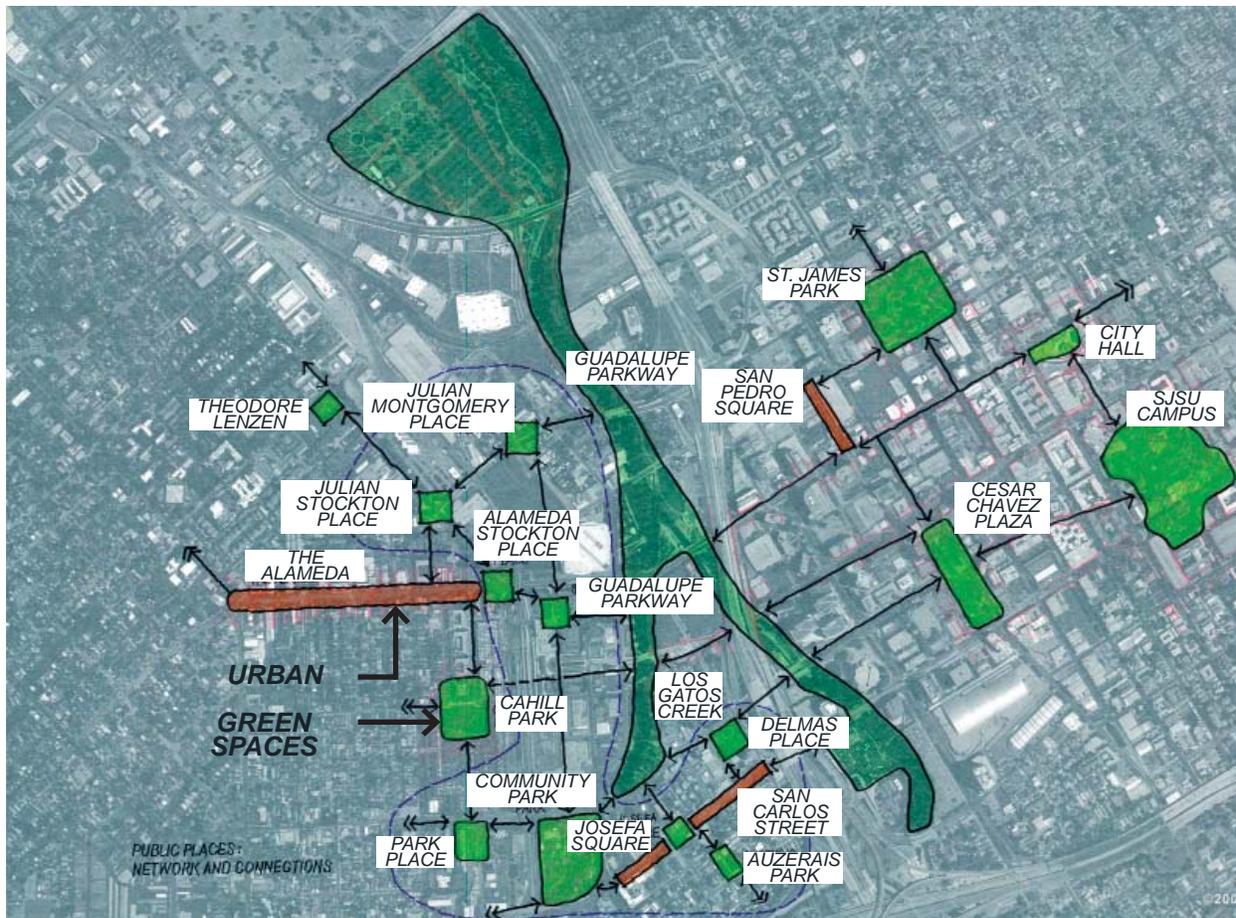


FIGURE 2-3-5: WIDER CONTEXT OPEN SPACE NETWORK AND CONNECTIONS



### THE WIDER CONTEXT

Figure 2-3-5 illustrates how the network of public open spaces within the project area relates to the network of existing parks and plazas in the surrounding neighborhoods. Emphasizing the connections between these places will become an important aspect of integrating the study area into its wider context and in helping to overcome community concerns about east-west connectivity by promoting a well-connected city-wide grid of great outdoor spaces, many of which happen to be in the Diridon Station Area.

## 2.4 Primary public plaza concepts

The new terminal building represents an opportunity for the City of San José to create an iconic gateway which becomes a memorable mental image of San José. The station could be considered the “new cathedral” of the City: It is a landmark of symbolic importance for a 21st century transportation-based society. It is a place where people come, go, and meet. A central and generously-sized public plaza that could serve as the station’s natural extension underlines its civic role and ensures its functionality.

A public plaza that serves as a gathering and celebratory space for the central core area is a critical component of the plan. The new primary public plaza is the place where the City welcomes its visitors and residents. It needs to accommodate high volumes of movement in different directions and a wide variety of activities and functions. As described in the Section 3.2, Public Open Space, additional public spaces will be integrated throughout the core area to complement the primary plaza: adjacent to the new terminal building; on the mezzanine level above the terminal; on circulation roadways such as Cahill and Santa Clara Street; BART station portals; spaces adjacent to the historical Caltrain depot; terminal foyer entrances areas; and at drop-off areas or multi-use streets such as Montgomery within the area. It is imperative that the creation of a public plaza in the core area of the development be balanced with the shared goals of the City and the two local transit agencies who currently own the property in the core area, to 1) create a highly functional, mixed use development with densities necessary to support the planned high levels of public transportation in this area and 2) to create a highly active and lively pedestrian environment with excellent connectivity to downtown and transit. The plaza should be designed as a “place as art” where the art is an integral and intentional component of the place.

It is the City’s vision that the primary public plaza should provide:

- A focal point of the central core area that provides sufficient open space for a wide variety of activities
- Pedestrian and bike routes and facilities which would be

visually reinforced

- Orientation and information about destinations, transit connections, and other transportation modes
- A comfortable place for meeting people, waiting, drop-off, and pick-up
- A transition from the station to the city through visual and physical connections to the station, the new district including the HP Pavilion and ballpark stadium, and downtown
- A center of activity during the day and night with distinctive lighting that creates a sense of dynamism at night
- Space for cultural, entertainment, and special events
- Retail, entertainment, and cafés with outdoor seating
- A place where art is integral to the overall experience and creates an iconic identity for the plaza and the station
- Provide opportunities and facilities for small and temporary retailers such as food carts, farmers markets, retailer vendors by providing necessary water and electrical hookups. Food stalls, retail vendors and holiday merchants could tap into the needed infrastructure to enliven the plaza area.
- New buildings surrounding the plaza should provide shade and protection from rain through the inclusion of arcades, awnings, canopies etc.

A new plaza which has the new high speed rail terminal as an integral part of its surrounding fabric would be quite different than any other public open space in San José and would demonstrate the City's commitment to creating a new gathering place with a predominantly urban focus, befitting the presence of high speed rail. In order to showcase and support the new terminal structure, public access and entry spaces, the plaza should be located alongside the new building with a direct connection that enables a natural flow of movement and integrated activates. Resulting from a study of several plaza options, the team identified three example plaza concepts that can serve as an illustrative view of various plaza designs. The examples provided are only to be considered illustrative examples and the final determination of size, location, orientation and number of open spaces will be made during the

master development process to be conducted for the terminal and Central Core area. As part of the master development process, actual alternatives will be developed to ensure the plaza design works in conjunction with the scope, scale, architecture and economics of the overall core area plan. In addition, the plaza's size, location, design and overall feasibility would be affected by the financial feasibility of the overall master development plan for the core area.

In any of the following illustrative concepts, the City should consider adding and/or improving pedestrian connectivity with direct and convenient crosswalks across the realigned Autumn Parkway to encourage maximum connectivity between the plaza and the Los Gatos Creek Park.

### **CENTRAL SQUARE PLAZA: ILLUSTRATIVE CONCEPT**

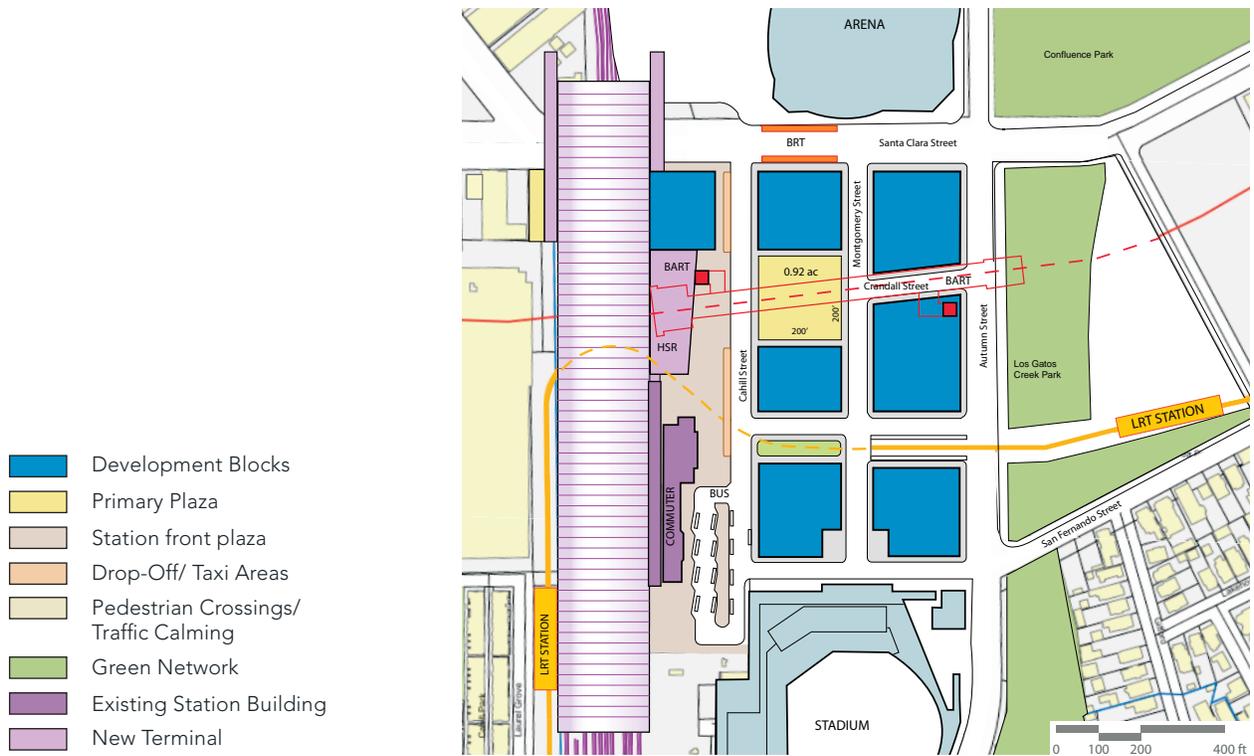
In this concept the proposed central square plaza is located on the east side of the new terminal between Cahill and Montgomery Street. Both the new station entrance areas and plaza are centered on the axis of a new east-west street connecting Montgomery with Autumn Street, which follows the alignment of the planned BART underground station. The square plaza and new street allow for a visual and physical connection between the new station and Los Gatos Creek Park. The plaza forms the center of the district and bundles pedestrian movement in all directions. The square measures 200 feet on each side (0.92 acres) which equals the size of a typical walkable city block. The building blocks to the north and south front onto the plaza, allowing for ground floor uses to utilize and activate the plaza. The new station building leaves sufficient space for potential development on its north side, facing Santa Clara Street. Cahill Street remains the main access road to the station. With the plaza surrounded by streets on two sides and buildings on the other two sides, this concept emphasizes north-south vehicular circulation within the district and pedestrian movement in all directions. The urban character of the square plaza



*Main square in front of the HSR Station in Busan, South Korea*

underlined by its symmetrical shape and a clear spatial definition through the buildings on all four sides. The block shapes and sizes allow for a high level of development flexibility.

FIGURE 2-4-1: CENTRAL SQUARE PLAZA - ILLUSTRATIVE PLAN



**Central Square Plaza: Advantages**

- Urban character
- Edges defined by buildings
- Simple and recognizable form that provides a focus to the new station building
- Central location forms the “heart” of the district
- Regular shaped building blocks surrounding the plaza
- Ground floor uses can connect to the plaza on two sides
- Visual connection between station and Los Gatos Creek Park, subject to the limitations of the BART portal locations and sizes

**Central Square Plaza: Limitations**

- Limited visibility from Santa Clara Street
- Relatively small size and symmetrical shape of the plaza is more difficult to use for different events
- The lack of an east-west street connection along plaza creates large north-south oriented block
- Eastern BART entrances can not be located on the square
- The east-west vehicular circulation is interrupted by the square plaza and may cause unnecessary traffic volumes on the other area roadways
- Given the size of this plaza a major public artwork may conflict with other activities, thus creating some limitations for the siting a major public artwork.
- Limited service access locations for event set-up and facilitation



*Central Plaza in front of the central station in Milan, Italy*

**TRIANGULAR PLAZA: ILLUSTRATIVE CONCEPT**

This public space layout responds to the diagonal direction of the planned BART underground station by placing a similarly oriented east-west street on the south side of the plaza while maintaining an building edge parallel to Santa Clara Street on its north side. The triangular-shaped plaza makes a strong urban statement through its clear east-west orientation and serves as a generous connection between the station and Los Gatos Creek Park. It measures about 1.27 acres, with a maximum length of 150' and 90' on its short ends and an overall length of two blocks (approximately 480'). The new station building forms the visual terminus on the plaza's west side. The plaza is bisected by Montgomery Street, which can be designed to allow for limited access or temporary closure in order to facilitate a direct pedestrian connection between the plaza and the HP Pavilion during large events. The two distinct zones of the plaza allow for different programming and events. Ground floor uses in the building blocks fronting on the plaza can activate it and draw on pedestrian movement towards the creek and the HP Pavilion. The plaza layout, combined with a potential new bus



Exchange Square in Manchester, UK, is a triangular-shaped plaza

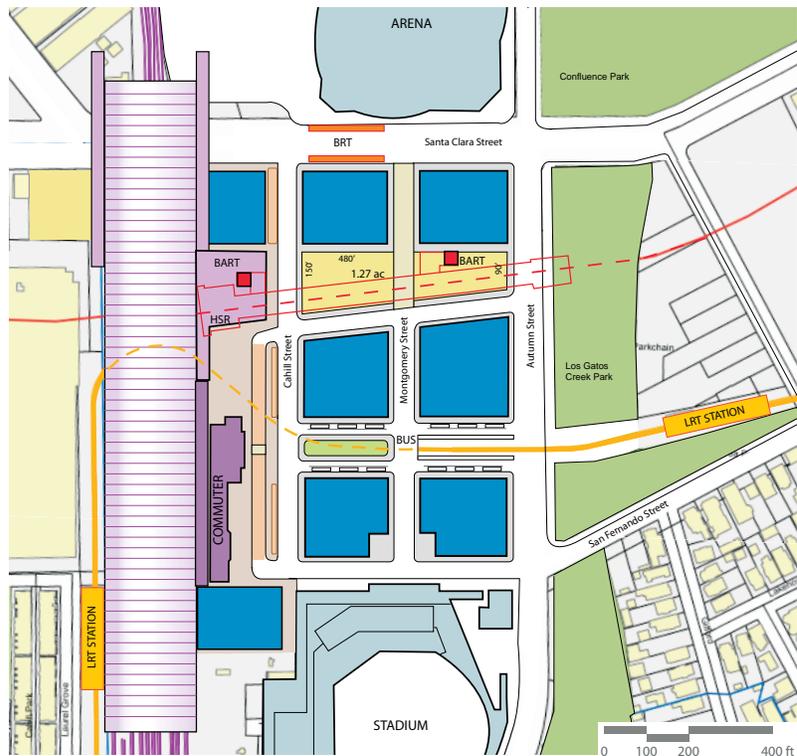


Schouwburgplein in Rotterdam, The Netherlands, is lined with buildings and streets that are limited access or include traffic calming features

- Development Blocks
- Primary Plaza
- Station front plaza
- Drop-Off/ Taxi Areas
- Pedestrian Crossings/ Traffic Calming
- Green Network
- Existing Station Building
- New Terminal

terminal on Crandall Street, structures the district in east-west direction and ensures easy orientation and pedestrian movement towards downtown. Both open spaces, the new corridor open plaza and the bus terminal, intersect with Montgomery Street as the main connector between the arena and the stadium, thus contributing to overall connectivity. The eastern BART entrances can be integrated in the plaza, making them visible and easily accessible.

FIGURE 2-4-2: TRIANGULAR PLAZA - ILLUSTRATIVE PLAN



**Triangular Plaza : Advantages**

- Unique and memorable shape
- Distinctive visual and physical connection between the station and Los Gatos Creek Park/ downtown, subject to the limitations of the BART portal locations and sizes
- High visibility and presence within the district and from Autumn Street/ Los Gatos Creek Park

- Buildings front onto the plaza and provide opportunities for pedestrian-oriented ground floor uses
- Combined with a potential new bus terminal on Crandall Street, the plaza structures the district in east-west direction and improves overall connectivity
- The two different environments created by the two open spaces (the plaza and the bus terminal) relate individually to the old and new station buildings and contribute to their distinction
- The additional east-west street south of the plaza helps distribute vehicular traffic to the station
- Curb lines along the plaza's south side can provide for additional drop-off/ waiting areas
- The long shape of the plaza allows for different zones and programming
- The northern portion of Montgomery Street can be designed for limited access or temporary closure
- The eastern BART entrances can be located on the plaza
- Development opportunity north of the new terminal building
- Multiple service access locations for event set-up and facilitation



*The planned esplanade in Liège, Belgium, will connect the new HSR Station to the river*

**Triangular Plaza : Limitations**

- Plaza is framed by buildings on three sides only
- Linear shape may reduce the spatial cohesiveness of the plaza, particularly if Montgomery Street remains open for traffic
- Size and orientation of the plaza may make it difficult to activate all areas at all times
- Pedestrian-oriented ground floor uses are only directly connected to the plaza along its northern edge



*A limited access road at the main square in Delft, The Netherlands, makes the street part of the plaza*

**LINEAR PLAZA : ILLUSTRATIVE CONCEPT**

Similar to the triangular corridor space, this concept also stresses east-west connectivity by placing a linear plaza between the new station building and Los Gatos Creek Park. The plaza has a simple rectangular shape with the new station building serving



The main plaza in front of the central station in Antwerp, Belgium



Pedestrian crossings in front of the central station in Frankfurt, Germany

as its western endpoint and the park as its eastern endpoint. The plaza stretches over two blocks and measures about 1.07 acres with a length of 120' on its short side. By locating the plaza at the center of the district and closer to the existing station building, the plaza bundles pedestrian movement from and to both buildings. The blocks between the plaza and Santa Clara Street are larger than in the other two alternatives and offer greater flexibility for development. However, building on top of the planned BART underground station increases structural complexity and requires thorough planning and construction coordination. Buildings and active ground floor uses frame the plaza along its entire length on the north and south side, which helps activate the plaza. The eastern BART entrance can be integrated in the plaza with an optional second entrance further to the north in Montgomery Street. The two long center blocks require vehicular circulation to

FIGURE 2-4-3: LINEAR PLAZA - ILLUSTRATIVE PLAN



primarily move in north-south direction. The main east-west street in the district will be Crandall Street.

### ***Linear Plaza : Advantages***

- Simple and recognizable shape in central location of the district
- Emphasis on east-west pedestrian connectivity and north-south vehicular circulation
- Plaza bundles movement from the old and new station
- Large blocks on the north side of the plaza
- Plaza lined with active ground floor uses on two facing sides
- The plaza serves as an extension of the open space network
- Narrow plaza width responds to the human scale while the plaza's length allows for different zones and programming
- Eastern BART entrance can be incorporated in the plaza
- Desirable for public artworks for the extension into Los Gatos Park

### ***Linear Plaza : Limitations***

- Due to its linear shape, the plaza's character may be perceived as a connecting space rather than an intimate urban place
- Depending on the height of the surrounding buildings, the space could feel 'canyon-like'
- Streets may interrupt the cohesiveness of the plaza; textured pavement can help provide pedestrian crossings and visual continuity
- Following the rigidity of the street grid, the plaza requires design features that add interest
- Large blocks limit vehicular connectivity
- Montgomery Street cannot be easily closed during events
- The BRT station is not well connected to the plaza
- Of the three illustrative concepts shown, this plaza configuration is the least visible from Santa Clara Street
- Limited service access locations for event set-up and facilitation



*Plaza del Pilar in Zaragoza, Spain, is a linear public space*



*Linear plaza in the city center of Bristol, UK*

## 2.5 Station concept and layout

### INTRODUCTION

San José Diridon Station will be the best connected transportation hub on the West Coast with the convergence of virtually every mode of public transportation. Activity will increase dramatically with the addition of high speed rail and the extension of Bay Area Rapid Transit (BART) to Diridon station, combined with significant growth by current intercity rail, commuter rail, light rail and bus operators. These new services and growth in demand will create the need for a significant expansion of the existing station. New development will also drive ridership growth, as described in the Station Area Plan. The station expansion will serve as a centerpiece of the station area and is an opportunity to build a iconic gateway to San José and Silicon Valley.

This section presents the preferred alternative for the Diridon Station Expansion Plan. The preferred alternative was selected based on the evaluation against the Station Planning Goals described in the Diridon Station Area Plan Alternative Analysis Report.

The preferred alternative was developed assuming an elevated high speed rail alignment. This layout could be modified to accommodate an underground high speed rail alignment. The necessary modifications to the plan with underground high speed rail are described in the sections below.

A new station building would be constructed north of the existing historic rail depot. The historic depot would remain in operation as part of the passenger rail facility. A future extension of BART would be accommodated below ground and would be directly connected to the new station building with a wide underground concourse that could support commuter-retail opportunities.

The Diridon Station Expansion Plan is intended to provide a framework for future planning and design efforts for the station. The

plan presented in this section represents a general arrangement and master plan for the facility. It identifies an approximate building space program based on information currently available, and locates the major building and transportation program elements on a station site plan. This plan is the result of an extensive planning process completed in coordination with the land use planning effort, and represents the configuration preferred by the City of San José and other project partners. Additional effort is required to determine the ultimate architectural and detailed design. No new fixed facilities envisioned in this plan should preclude the expansion of future high speed rail platform or tracks.

### PHYSICAL SPACE PROGRAMMING

In order to develop future space requirements for the station, a two-step approach was taken: First, design capacity for the station was identified based on available ridership forecasts. Second, the ridership capacity was used to estimate physical space requirements.

### RIDERSHIP PROJECTIONS

Transit ridership projections for the horizon year 2030 were collected from all operators that provide service to Diridon Station. The projections provide an overview of the expected ridership demand from each of the transit operators and the station facility needs that will be required for that level of ridership.

Figure 2-5-1 summarizes the existing and future design ridership used for the space programming analysis. It should be noted that a comprehensive ridership forecasts have not been completed. It is recommended that ridership forecasts be updated with a consistent set of assumptions regarding transit service and station area land use as part of future station planning and design efforts.

FIGURE 2-5-1: EXISTING AND FUTURE RIDERSHIP

	2009 Weekday			Future (2030-2035) Weekday		
	Daily			Daily		
	Trains	Passengers		Trains	Daily Passengers	
		Boarding	Alighting		Boarding	Alighting
ACE	6	300	300	12	1,800	1,800
Amtrak Capitol Corridor	14	225	225	32	460	460
Amtrak Coast Starlight	2	n/a	n/a	N/A	100	100
BART	<i>No existing service</i>			N/A	10,510	10,510
Caltrain	96	3,000	3,000	172	10,125	10,125
High Speed Rail	<i>No existing service</i>			228	12,300	12,300
VTA Light Rail	n/a	485	485	N/A	1,150	1,150
<b>Total</b>		<b>4,010</b>	<b>4,010</b>		<b>36,445</b>	<b>36,445</b>

**SOURCES**

- VTA, Diridon/Arena Station Profile (2009) based on 2003 data
- Capital Corridor, Monthly Station Ridership Activity (FY 2008-2009)
- Caltrain, Average Weekday Ridership Counts (2009)
- VTA, Average Weekday Ridership Counts (October 2008, March 2009)
- Capital Corridor Satisfaction Study (June 2009)
- VTA, Light Rail Platform Intercept Survey (2008)
- Caltrain, Onboard Survey Results (October 2007)
- Stacy Cocke PCJPB, "Caltrain Ridership Forecasts (personal communication, January 2010)
- CHSRA, Station Area Parking Guidance Technical Memorandum, July 2010

## PHYSICAL SPACE PROGRAM

The ridership projections were used to develop a building space program. This process was described in greater detail in the Diridon Station Area Plan Alternative Analysis Report. The expanded station campus will be comprised of several major components including:

- Rail Tracks and Platforms. VTA Light Rail, conventional diesel and electrified heavy rail, High Speed Rail
- Station Concourse. Includes passenger circulation, processing and back-of-house support areas. Station concourse requirements have been estimated for both high speed and conventional rail services
- Diridon/Arena BART Station. The physical program and design of the future underground BART station is assumed to be fixed based on the Silicon Valley Rapid Transit (SVRT) Project's 65% Engineering Plans. The exceptions are the station portals, which could be redesigned if necessary to optimize the overall Diridon Station configuration
- Surface Transportation. Includes accommodations for buses, shuttles, taxis, and private vehicle pick-up and drop-off activity at the station
- Parking. Includes station/operator employee parking, short-term and long-term public parking
- Other Features. Includes public art, plazas, pedestrian circulation, retail and other joint development

## STATION BUILDING PROGRAM

Figure 2-5-2 summarizes the building space program needs for both high speed and commuter services. Area for rail platforms would be in addition to the values shown.

FIGURE 2-5-2: SPACE PROGRAM NEEDS

<b>Program Element</b>	<b>Area (ft<sup>2</sup>)</b>
<i>Commuter Rail Services</i>	
Public Concourse Zone	29,500
Controlled Concourse	6,500
Station Support Areas	16,200
<i>Commuter Rail Services Total</i>	<i>52,200</i>
<i>High Speed Rail Services</i>	
Public Concourse Zone	24,100
Controlled Concourse to High Speed Rail Platforms	5,200
Station Support Areas	16,100
Station Platforms	27,600
<i>High Speed Rail Services</i>	<i>73,000</i>

## PREFERRED STATION ALTERNATIVE

### DESCRIPTION

The Diridon Station Area Plan Alternatives Analysis Report described three different station arrangements. The preferred station alternative is the Alternative A “Linear” scheme, modified to accommodate elevated High Speed Rail platforms and tracks. Figures 2-5-3 to 2-5-7 illustrate the general arrangement each level of the Station Expansion Plan.

The preferred station arrangement balances the multiple functions of the station, including:

- A high volume **commuter facility** that is integrated into surrounding urban fabric;
- An **intermodal passenger hub** providing seamless transfers between multiple modes of transportation; and
- A **long-distance train station** serving passengers who may be frequent, infrequent or first time users of the station.

This concept arranges the station program components linearly east Cahill Street between W. Santa Clara Street and the PG&E substation south of W. San Fernando Street. A new station building would be located near the corner of Cahill Street and W. Santa Clara Street. The new station building presents a major design opportunity and would serve as the gateway to San José for arriving passengers. It would provide a new street-level grand entrance, a large concourse for passenger circulation and waiting, ticketing and passenger support functions as well as station support and back-of-house areas. In addition, the new station building would accommodate street and station-oriented retail and could have the potential for additional joint development.

The existing historic depot building would remain in its current location and would continue to be used for passenger rail functions. It is envisioned that the SP baggage building be reconfigured and be used primarily for passenger circulation, with the station support facilities relocated to the new station building. Vertical circulation from the depot to the existing pedestrian tunnel would also be improved to meet ADA requirements.

The station would include two rail platform levels. Conventional heavy rail platforms would be located at-grade and configured as currently being constructed in the South Terminal Improvement Project. High speed rail tracks and platforms would be elevated approximately 60 feet above existing grade. An intermediate mezzanine level would provide access to the rail platforms above and below, as well as bridge across the rail tracks and W. Santa Clara Street to provide new station access opportunities. The mezzanine level would also provide a pedestrian link across the tracks generally aligned with San Fernando Street to improve connectivity between the east and west side of the tracks.

A plaza and portico would be located between with two station buildings, providing pedestrian connections as well as public art and landscaping opportunities. BART would be located below the north end of the plaza and the new station building, with the ability to have station portals in the plaza as well as directly into the new building.

Two options have been identified for the bus transit center. The "Bus Plaza" option would locate the bus transit center at the southern end of the station site at the intersection of Cahill Street and W. San Fernando Street. The "Transit Mall" option would locate the bus transit center on Crandall Street between Cahill Street and Autumn Parkway. These options are further described in the following section.

### *Underground High Speed Rail Option*

If the underground high speed rail alignment is selected, the general arrangement of the station and street level circulation would be the same as described above, with the following exceptions:

1. A below-grade pedestrian connection would be required to connect the new station building to the high speed rail platforms. This connection would be parallel and adjacent to the BART station concourse.
2. Elevated high speed rail platforms and canopies would not be required.
3. The floor area of the mezzanine level could be reduced in size. The additional connection points to and across the conventional heavy rail tracks would remain as part of the expansion plan.

FIGURE 2-5-3: UNDERGROUND LEVEL PLAN

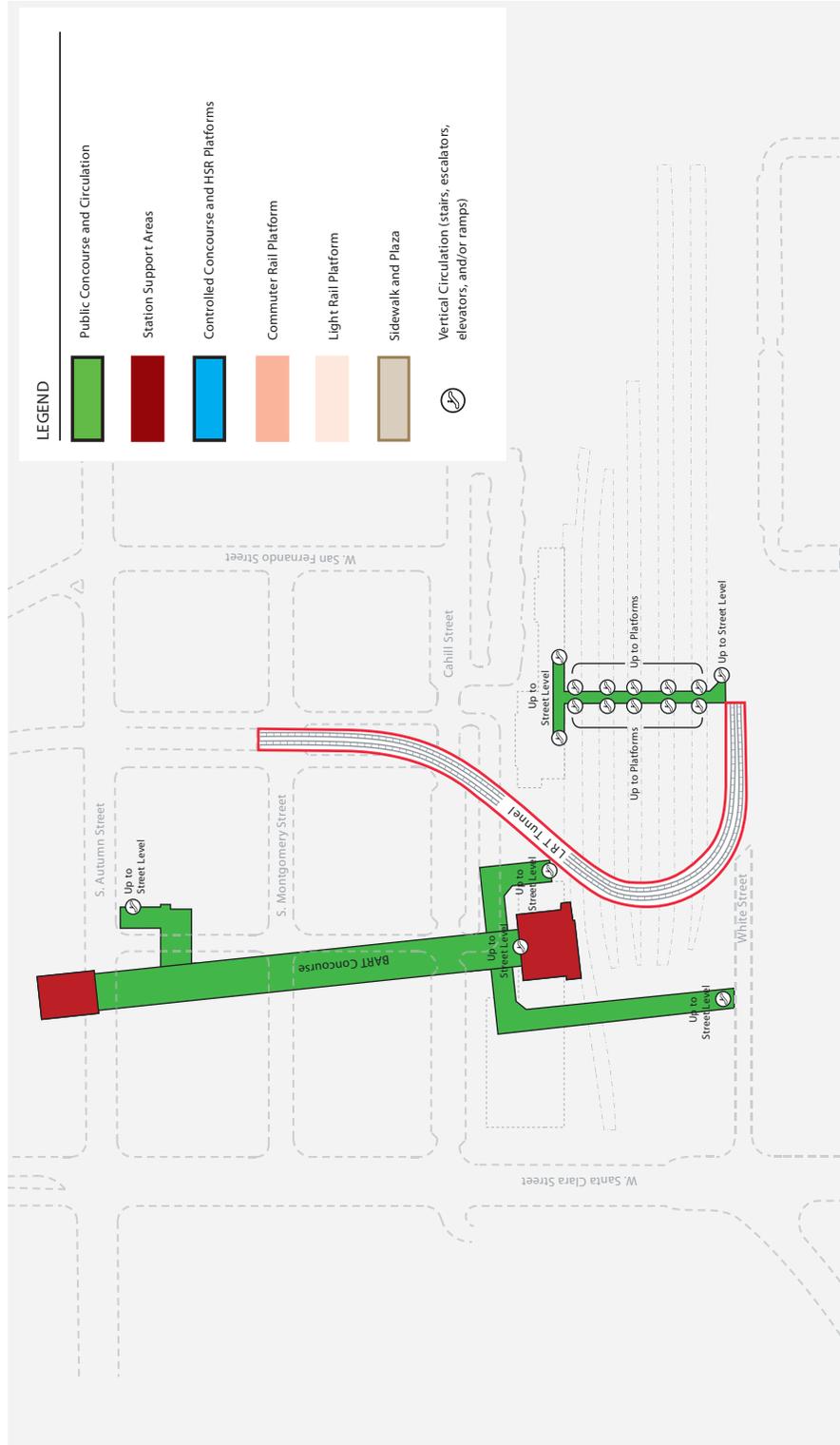


FIGURE 2-5-4: STATION STREET LEVEL PLAN

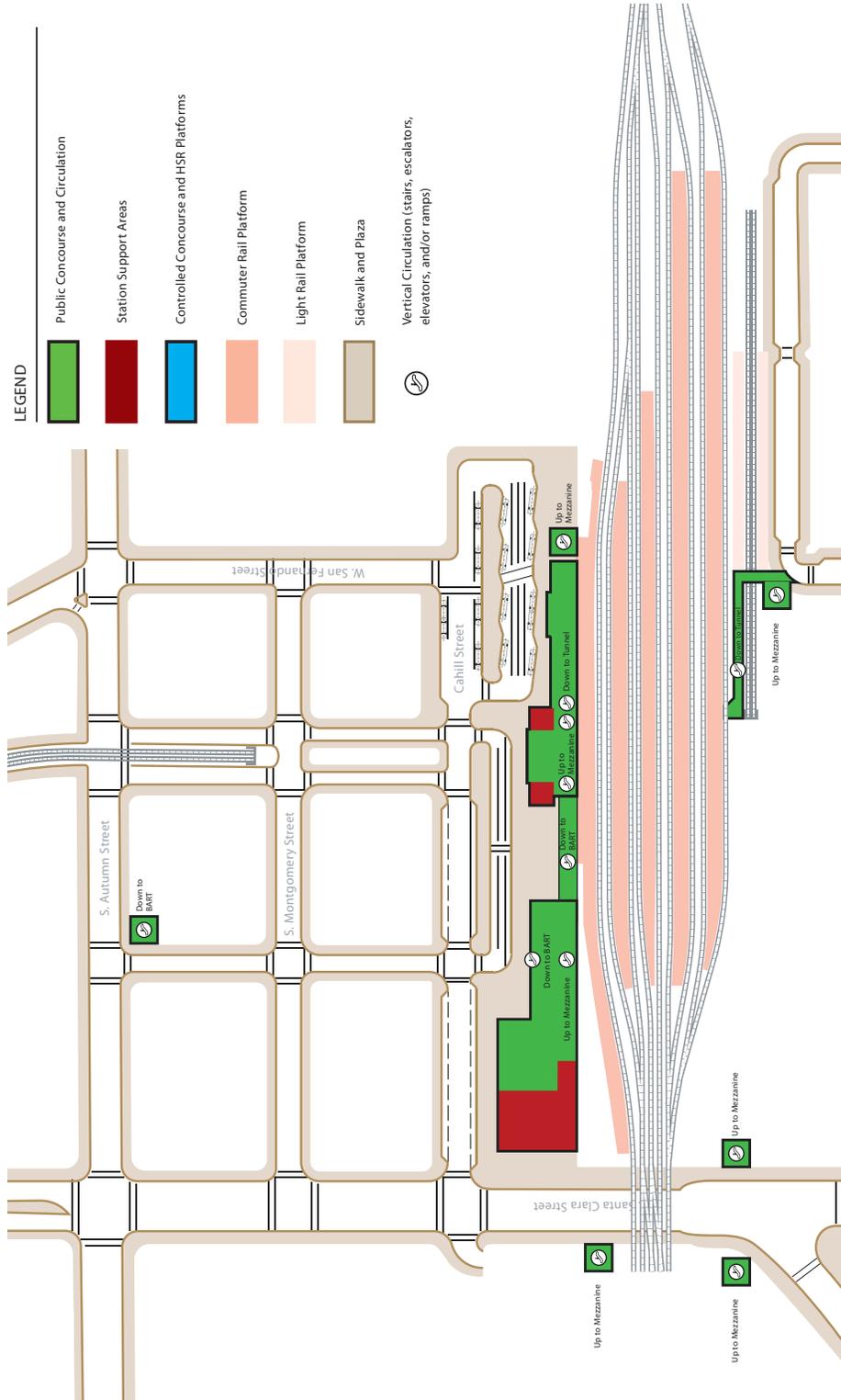


FIGURE 2-5-5: STATION STREET LEVEL ALTERNATIVE PLAN

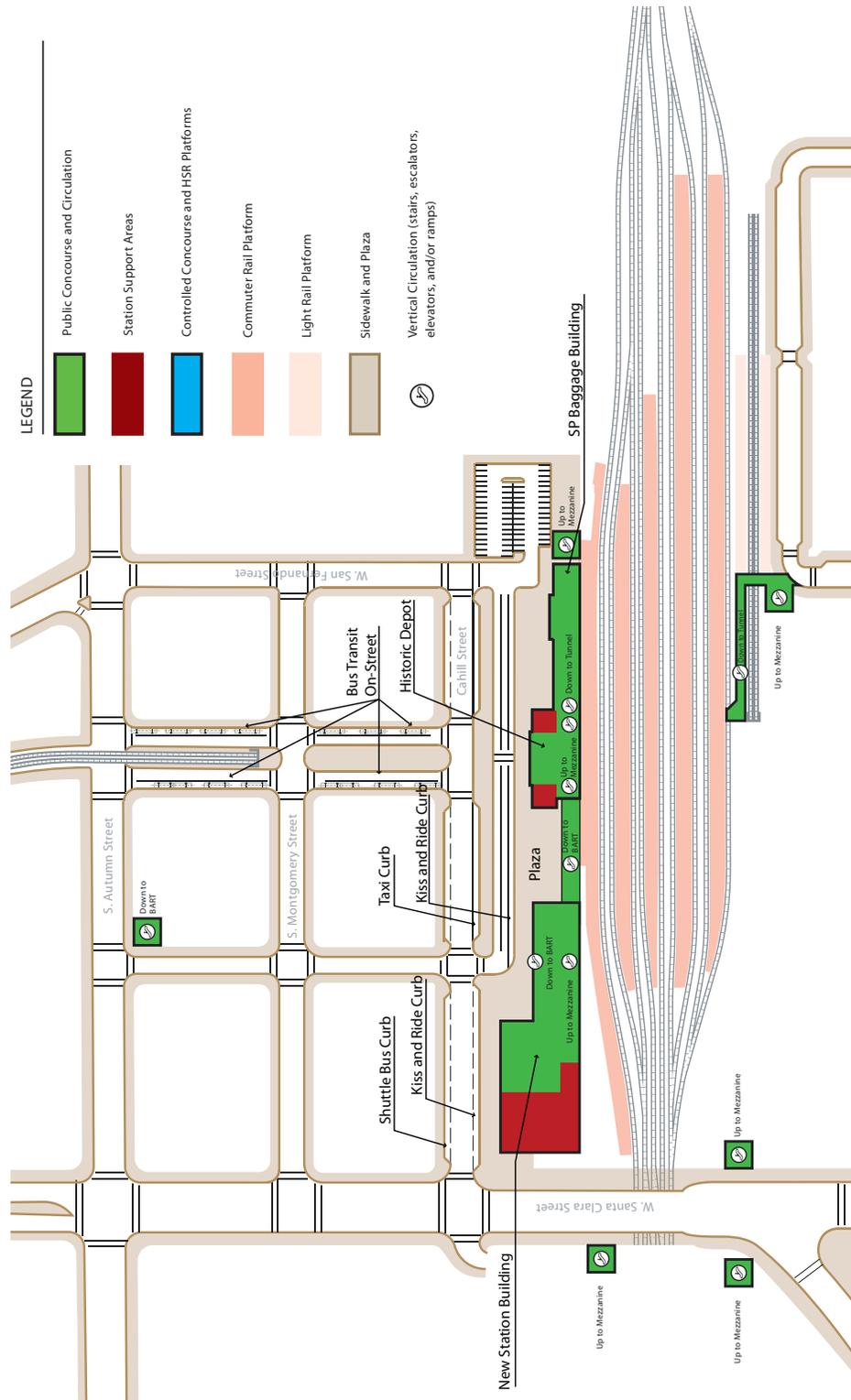


FIGURE 2-5-6: STATION MEZZANINE LEVEL PLAN

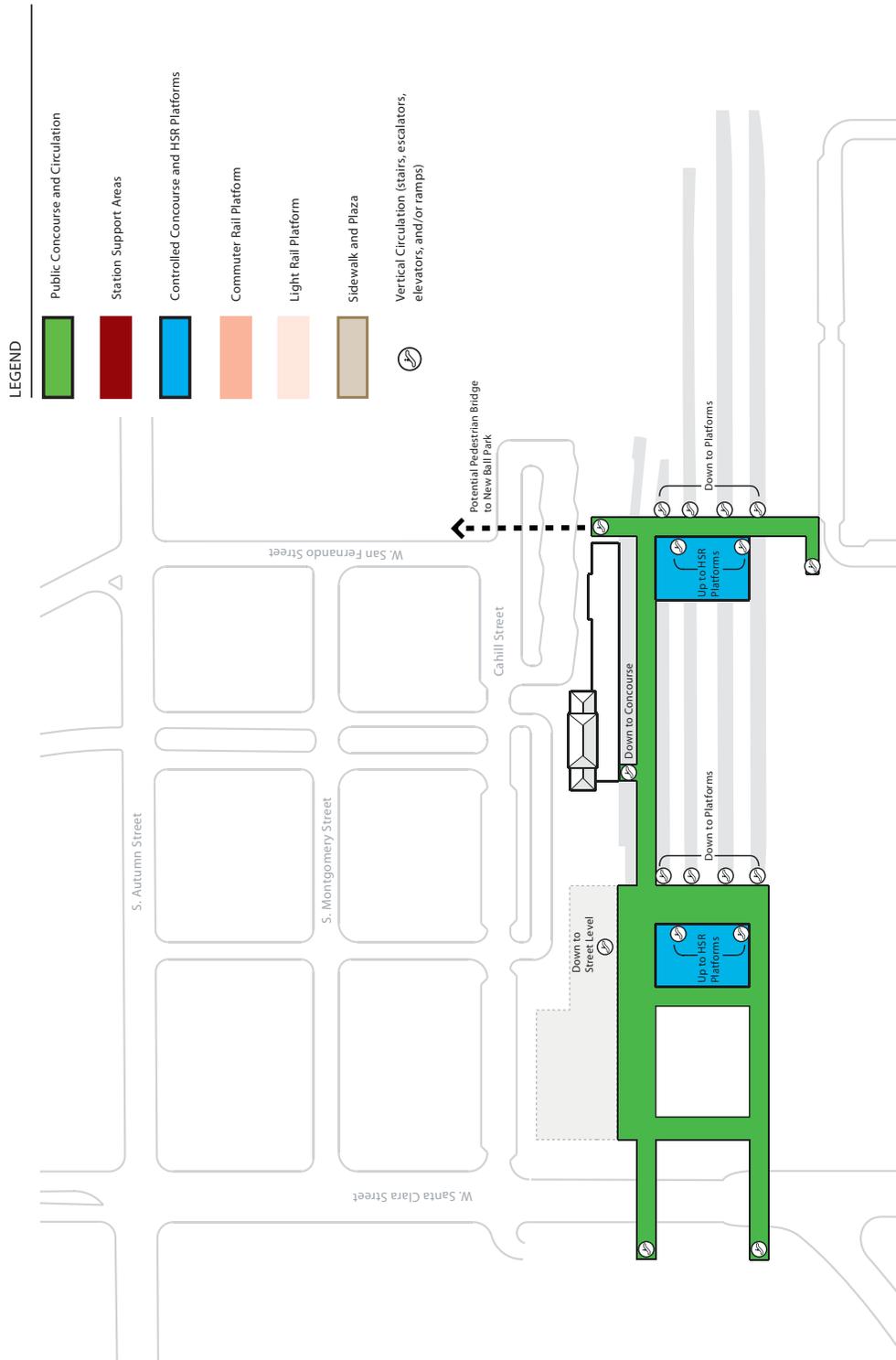


FIGURE 2-5-7: HIGH SPEED PLATFORM LEVEL PLAN

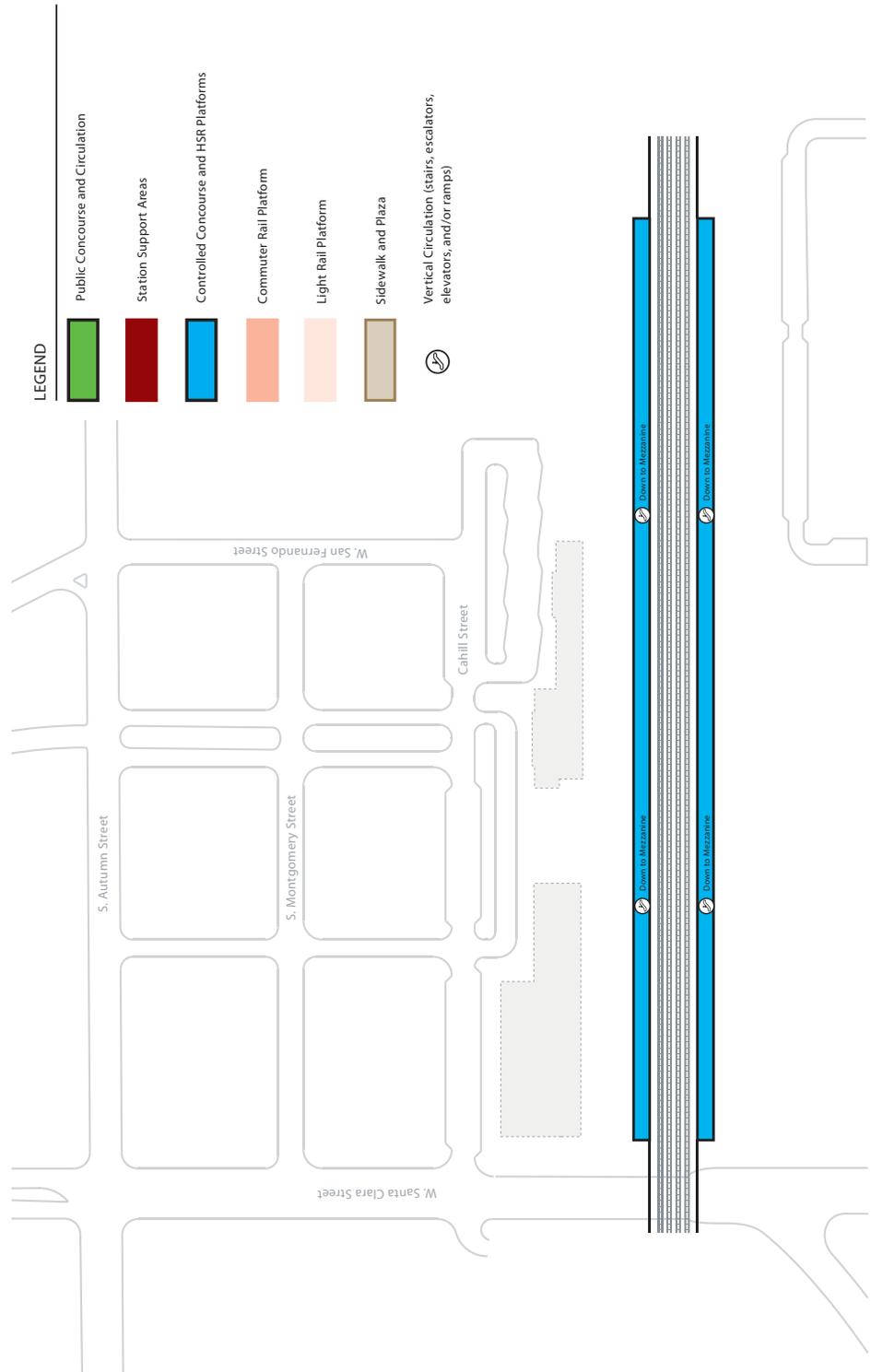
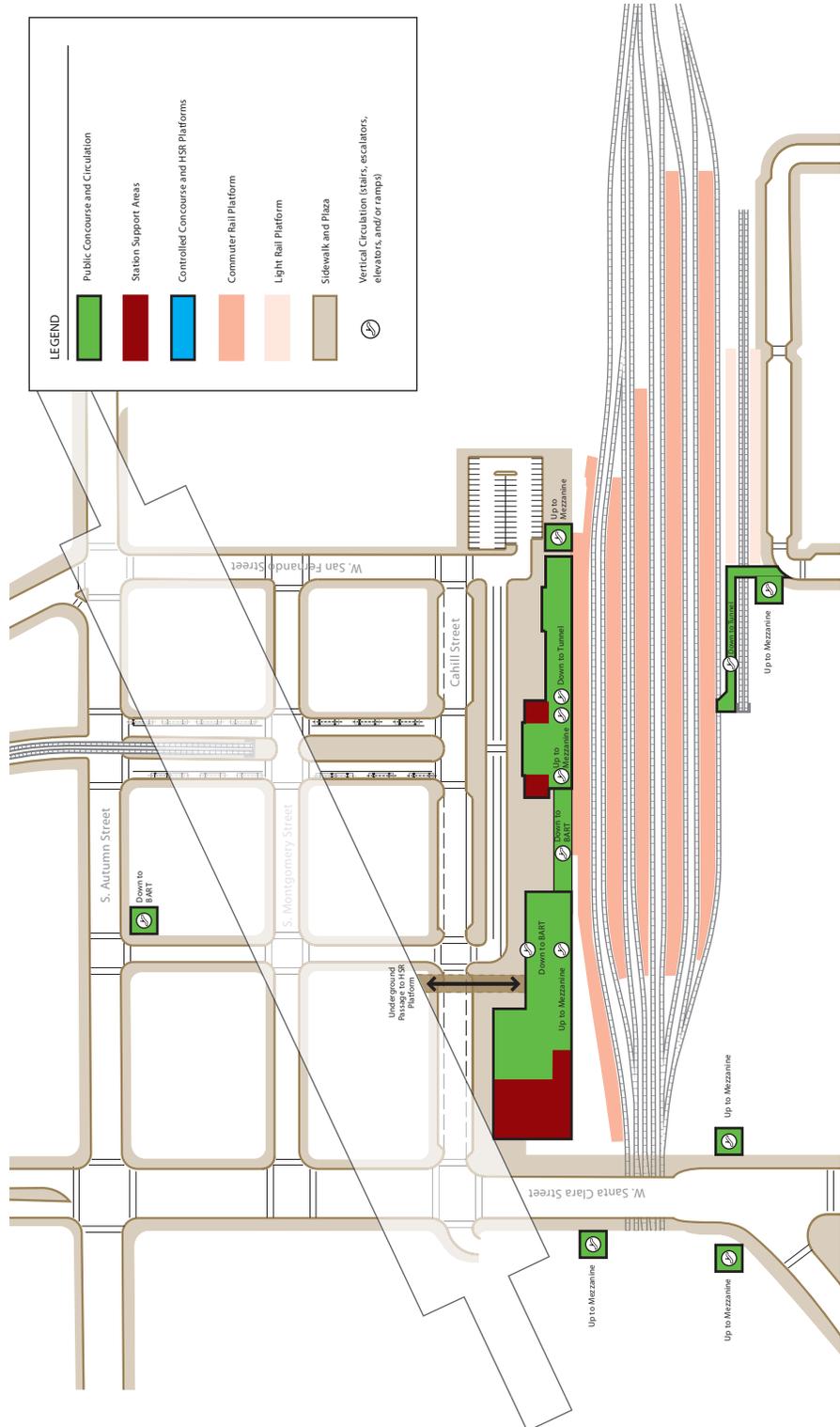


FIGURE 2-5-8: UNDERGROUND HIGH SPEED PLATFORM



## ACCESS AND EXTERNAL CIRCULATION

As a commuter facility, the station should have multiple access points to the surrounding transportation network. Priority should be placed on access by pedestrians, bicycles and public transportation. The new station building will provide a new grand entrance to the station from the east. Further, the station mezzanine level will create the opportunity to bridge across W. Santa Clara Street and provide new entrances on both sides of the rail tracks. Modifications to baggage building would also create a new entrance at the southern end of the station campus adjacent to the proposed baseball stadium and will be designed to accommodate heavy surges in demand associated with stadium events.

As an intercity train station, it must be legible to unfamiliar users, with a clearly defined entry and orientation points. The linear arrangement of the new station and the historic depot would create two distinct entry points that could be branded for different rail services. Similar to airport terminals, this arrangement would aid wayfinding and distribute passenger demand. The new station building will be highly visible from W. Santa Clara Street and adjacent areas and is intended to be the “front door” for High Speed Rail and intercity rail passengers in addition to serving commuters. The historic depot and SP baggage building could be branded primarily as the commuter rail facility and for through access to communities east and west of the station.

While this branding strategy would be beneficial for unfamiliar users, once inside the station it would provide seamless connections between services. There will be multiple access points for all operators as described in the Internal Circulation section.

Vehicular access would be provided primarily from Cahill Street. A kiss and ride curb would be located in front of the new station building and the historic depot. Additional curb frontage on Cahill

Street would accommodate private shuttle buses and taxis. Private vehicles would be able to recirculate to the kiss and ride curb via Cahill Streets or other local streets to the east, as described in the Station Area Plan.

## **TRANSIT CENTER OPTIONS**

Diridon Station will continue to be a major transfer station between bus and rail, with approximately 10 bus lines stopping or terminating at Diridon Station. It is necessary to accommodate bus activity in a way that provides for efficient bus operations, while also facilitating passenger transfers and complimenting the local land use and urban design objectives. The transit center must also be able to remain in operation in the event of the temporary closure of W. San Fernando Street between Autumn Parkway and Cahill Street, which is likely to occur during baseball games and other events at the proposed ballpark. As previously shown in Figures 2-5-4 and 2-5-5, two transit center options have been developed.

### ***Bus Plaza Option (Figure 2-5-4)***

The Bus Plaza option would create a partially off-street bus transit facility at the southern end of Cahill Street at W. San Fernando Street. Buses would circulate in both directions on Cahill Street and around a center island located west of Cahill Street in front of the SP baggage building. Bus access to the transit center would be via W. San Fernando Street and Cahill Street. In the event of the closure of W. San Fernando Street, buses accessing from the east and south would be rerouted to Crandall Street (if left turns are permitted to and from Autumn Parkway) or via W. Santa Clara Street and Cahill Street.

### ***Transit Mall Option (Figure 2-5-5)***

The Transit Mall option would create an on-street transit facility on Crandall Street between Cahill Street and Autumn Parkway.

Crandall Street, currently a one-block long one-way couplet would be extended to Autumn Parkway and left turns would be permitted for buses to and from Autumn Parkway. The Transit Mall would be located in front of the historic depot on the pedestrian corridor linking to the San Fernando VTA Light Rail Station, W. San Fernando Street and the Guadalupe River Trail.

### INTERNAL CIRCULATION

The Diridon Station Expansion Plan has been developed to optimize circulation for arriving, departing and transferring passengers by creating multiple convenient internal links, while also providing visual connections and creating intuitive circulation paths for unfamiliar users.

Diridon Station is envisioned as a two level train station with commuter rail operating at grade and high speed rail operating above the commuter rail tracks. Light rail operations will remain in their current location along the west side of Diridon Station. An intermediate mezzanine level would serve multiple functions including:

- Provide access to the High Speed Rail platforms;
- Provide circulation in the north-south direction between the new station building and the southern end of the high speed rail platforms, potentially with moving sidewalks;
- Provide supplemental access (in addition to the existing pedestrian tunnel) to the conventional rail platforms;
- Facilitate direct transfers between the conventional and high speed rail services;
- Accommodate station program, such as waiting areas and secure high speed rail platform access control
- Provide convenient link from underground BART public concourse to a new station basement concourse; and
- Provide public circulation routes that bridge across the rail tracks and W. Santa Clara Street, allowing for new station

entrances and improved connectivity.

Commuter rail passengers accessing the station could enter through one of the multiple entrance points including the new station building, the historic depot, or the baggage building. They would then proceed to the platforms using either the existing tunnel or the new mezzanine connections. Ticket Vending Machines and Clipper stations could be located throughout the facility along major pedestrian paths. The historic depot could be branded for Caltrain and/or Amtrak services, serving as a point of orientation and accommodating staffed information and ticketing functions.

High speed rail passengers who are not regular users would typically enter through the new station building which would house ticketing and other passenger support functions. Regular users familiar with the facility and not requiring support functions could use any of the other entrances. Passengers would then proceed up to the mezzanine level which would house additional waiting areas, platform access control and security checkpoints, and vertical circulation up to the platforms.

Based on the analysis completed to date by the California High Speed Rail Authority, it is assumed that the northern end of the high speed rail platforms would be located immediately south of W. Santa Clara Street. Given the distance from the new station building to the southern end of the platforms, it would be desirable to provide a direct north-south circulation corridor. This would be located on the mezzanine level west of the historic depot. This corridor could be designed like a pedestrian bridge and be equipped with moving sidewalks. This connection presents an opportunity to provide passengers with unique views of the west side of the historic depot, downtown San José and the high speed rail platforms above.

Another major north-south pedestrian link within the station would be provided at ground level. This would connect between the new station building and the historic depot through the new plaza and

extend through the SP baggage building.

### STATION MASSING

This station concept literally embraces the transportation functions, providing the passengers with a unique view of and relationship with the trains and buses. The concept creates a grand roof and terminal that wraps the new elevated platforms, allowing for many places for great views of the transportation facilities. It also forms a unique experience for the passengers as they pass through the new dynamic terminal. Together the two station buildings bookend a shared open space. The historic depot and SP baggage building remain central and functional components of the station, creating a unique opportunity to celebrate both the historic and new architecture.

The massing ideas shown in Figures 2-5-8 and 2-5-9 begin to highlight many of the site- and context-related issues that will be evident as the process goes forward. They are intended to be conceptual representations, not specific building designs.

FIGURE 2-5-9: STATION MASSING FROM ABOVE

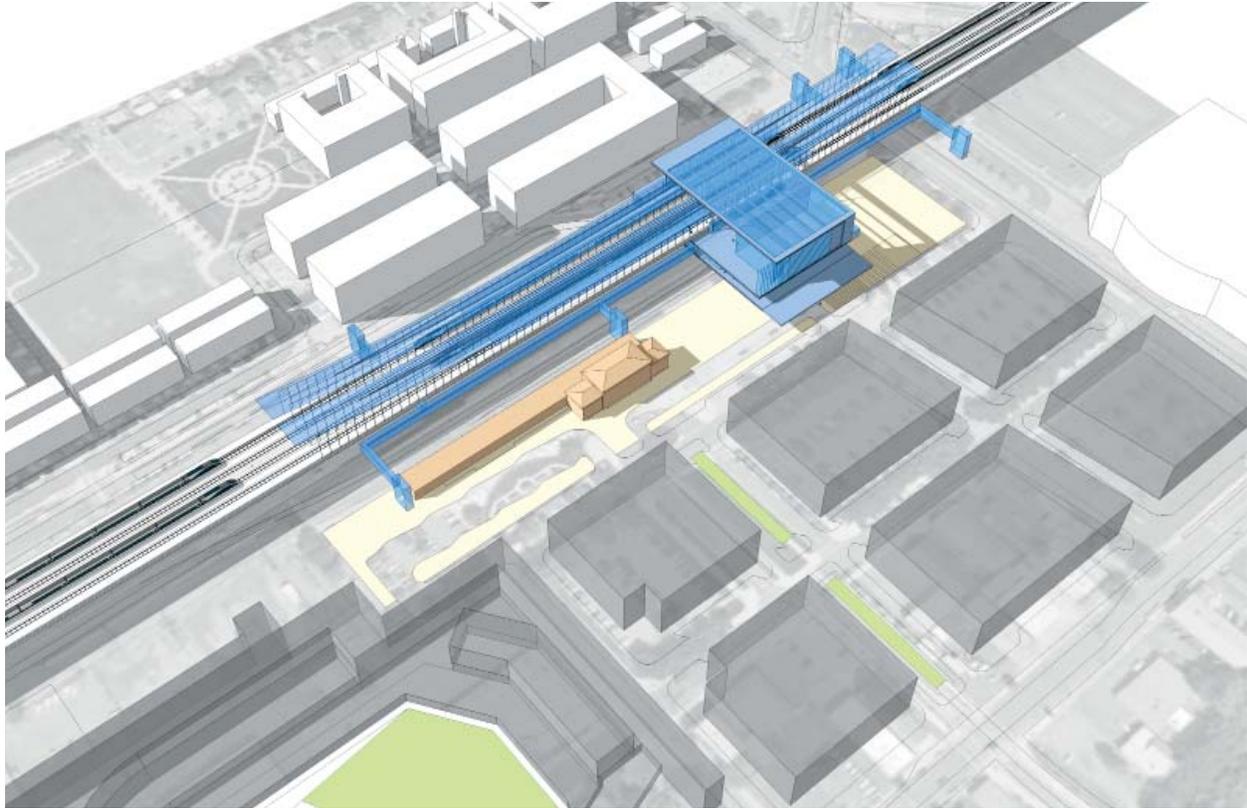
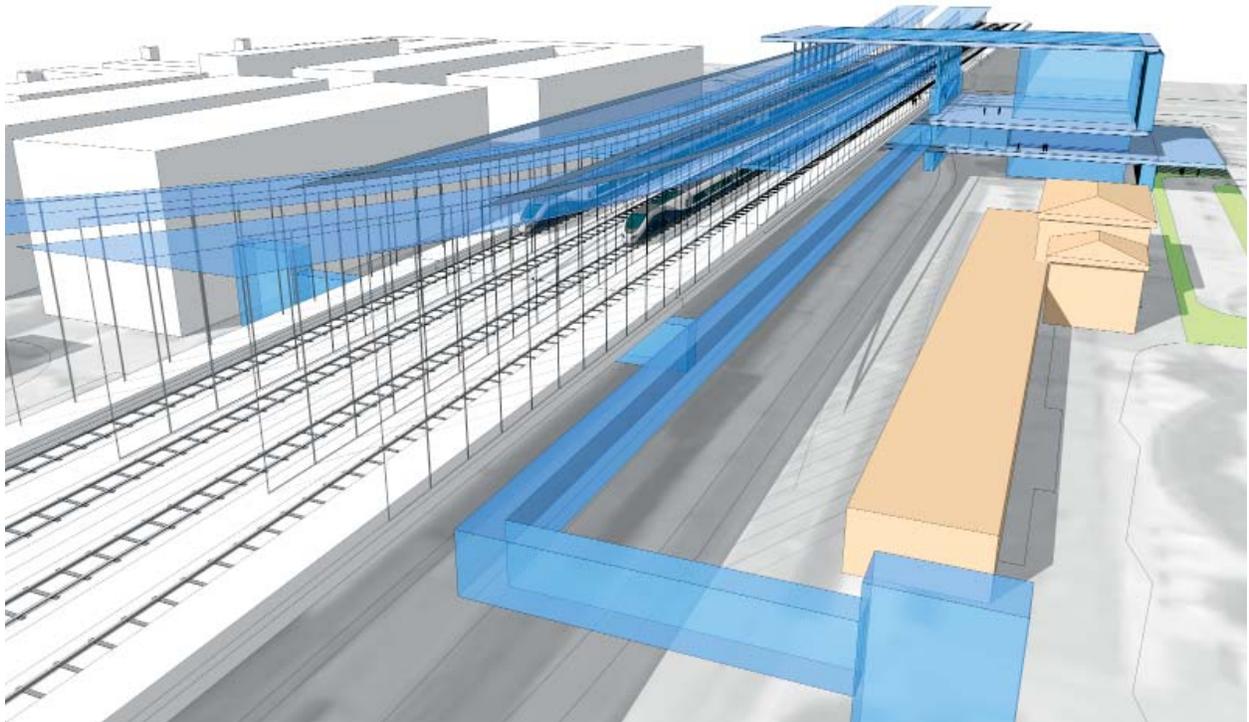


FIGURE 2-5-10: STATION MASSING LOOKING NORTH



## STATION DESIGN - OUTSTANDING ISSUES

Additional planning and design efforts are required to refine and advance the preferred plan for San José Diridon Station. A number of significant issues need to be considered and resolved including:

- Architectural and Engineering design
- Project phasing
- Cost estimates
- Funding plan
- Station ownership, governance and management
- Final environmental clearance
- Design and construction procurement method
- Potential for public private partnerships

## 2.6 Access and circulation

The purpose of this section is to summarize the transportation strategies recommended for the Diridon Station Area Preferred Plan. These strategies were developed to minimize conflicts between travel modes; maximize circulation efficiency; address proposed pedestrian, bicycle, and transit connections; and add or modify street network linkages between the Diridon Station and the surrounding land uses.

First, existing transportation system serving the station and planned improvements are summarized to form baseline conditions from which the improvement strategies were developed. Second, individual transportation improvement strategies are then described in detail.

### EXISTING TRANSPORTATION CONDITIONS

San José Diridon Station is a multimodal transit center located in downtown San José on Cahill Street near the HP Pavilion Arena. Commuter rail service at Diridon Station is provided by Caltrain, Amtrak Capitol Corridor and the Altamont Commuter Express (ACE). Of these, Caltrain passengers comprise most of the station's daily station boardings. Intercity rail service is provided by Amtrak.

Diridon Station has the fourth largest number of boardings of any Caltrain station in the system. On an average weekday, Caltrain ridership at the San José Diridon Station is approximately 5,800 passengers, which equates to an annual ridership of nearly 1.5 million riders. The mode of access used to arrive at the Caltrain Station is summarized in Figure 2-6-1 below.

FIGURE 2-6-1: MODAL ACCESS

<b>MODAL ACCESS FOR CALTRAIN PASSENGERS AT DIRIDON STATION <sup>1</sup></b>	
<b>Mode</b>	<b>Percent</b>
Drive Alone / Carpool	37%
Walk	17%
VTA Light Rail or Bus	20%
Kiss and Ride / Drop Off	12%
Bicycle	5%
DASH shuttle	9%
<i>Total</i>	<i>100%</i>

Notes:  
<sup>1</sup> Fehr & Peers analysis based on boarding and alighting data from Caltrain Onboard Survey (2007)  
 Source: Caltrain Onboard Survey, 2007

## ROADWAY NETWORK

Regional access to the Station Area is provided via I-880, I-280, and SR-87. Roadways that provide local access to the Station Area include Santa Clara Street, The Alameda, Montgomery Street, Autumn Street, Bird Avenue, San Fernando Street, San Carlos Street, Julian Street, Cahill Street, Park Avenue, and Auzerais Avenue.

## PEDESTRIAN FACILITIES

Pedestrian facilities improve safety for pedestrians and can also encourage the use of alternative modes of transportation. These facilities include sidewalks, paths, pedestrian bridges, crosswalks, and pedestrian signals with crosswalks. In California, it is legal for pedestrians to cross any street, except at unmarked locations between immediately adjacent signalized crossings or where crossing is expressly prohibited. Marked crossings reinforce the location and legitimacy of a crossing. In pedestrian-friendly cities, crossing locations are treated as essential links in the pedestrian network.

The City's General Plan encourages pedestrian travel as a viable mode of movement between high-density residential and commercial areas throughout the City and in activity areas such as schools, parks, transit stations, and in urban areas, particularly the Downtown Core Area and neighborhood business districts by providing safe and convenient pedestrian facilities. Most streets in the overall Citywide street network include at least a four-foot wide sidewalk on one or both sides.

Sidewalks and crosswalks are generally present in the vicinity of the station. However, the presence of many pedestrian barriers make walking access to the station challenging. Pedestrians traveling between Downtown San José and Diridon Station can use Santa Clara Street or San Fernando Street. Pedestrians walking along

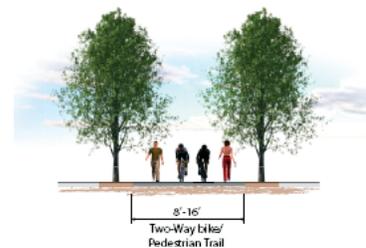
both streets must pass below SR 87. Pedestrians accessing the station from the commercial area and neighborhoods along The Alameda to the west must walk below rail underpasses with narrow sidewalks on The Alameda and Park Avenue. The tunnel within the station provides additional access to the west, linking the station to the VTA LRT station, Laurel Grove Lane, and Cahill Park.

### BICYCLE AND TRAIL FACILITIES

San José extends across the Santa Clara Valley floor and has many exceptional views of the surrounding hillsides. In addition, many creeks and other natural wooded areas cross the valley floor and provide natural linear pathways. These attributes provide the City with many scenic and recreation opportunities. Trails and pathways create outdoor recreational facilities for bicyclists, pedestrians, and other recreational activities. The City's trails and pathways corridors are illustrated on Figure 2-6-8, along with the City's bicycle facilities.

California bicycle standards provide for three distinct types of bikeway facilities, as generally described below and shown on the accompanying illustrations:

- Bike paths (Class I) are paved pathways separated from roadways that are designated for the exclusive use of bicycles and pedestrians. In general, bike paths serve corridors not served by streets and highways or where sufficient right-of-way exists to allow such facilities to be constructed away from the influence of parallel streets and numerous vehicle conflicts. Sample facilities include the Guadalupe River Trail, Los Gatos Creek Trail, and Coleman Avenue Trail, all of which include asphalt or concrete surfaces.
- Bike lanes (Class II) are lanes for bicyclists adjacent to the outer vehicle travel lanes. These lanes have special lane markings, pavement legends, and signage. Bike lanes are



Class I Bike lane section  
Source: Fehr & Peers, 2010



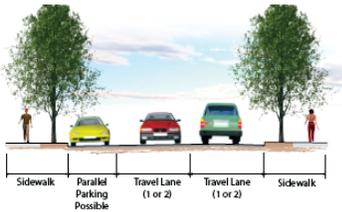
Class I Bike lane section  
Source: Fehr & Peers, 2010



Class II Bike lane section  
Source: Fehr & Peers, 2010



Class II Bike lane  
Source: Fehr & Peers, 2010



Class III Bike lane section  
Source: Fehr & Peers, 2010



Class III Bike lane  
Source: Fehr & Peers, 2010

usually constructed to better accommodate bicyclists through corridors where insufficient room exists for safe bicycling on existing streets. Sample facilities include bike lanes on Curtner Avenue, Leigh Avenue, and San Fernando Street through the Downtown area.

- Bike routes (Class III) in general are located on low traffic volume streets that provide alternate routes for recreational, and in some cases, commuter and school-age cyclists. These facilities are designated Class III and are signed for bike use, but have no separated bike right-of-way or lane striping. Bike routes serve either to: (1) provide continuity to other bicycle facilities, or (2) designate preferred routes through high demand corridors. An example bike route is San Fernando Street between SR 87 and the Diridon Rail Station. On this route, where additional width for bike lanes was not available, the City has installed “sharrow” symbols on the pavement to designate the appropriate travel path for cyclists and increase driver awareness of bicycles.

### Station Area Bicycle Facilities

While several hundred miles of bicycle facilities currently exist in the City of San José, the Diridon Station area has somewhat limited bicycle connectivity. A Class I bike and pedestrian path is located along the Guadalupe River between I-880 and I-280 and passes through the station area. The Los Gatos Creek trail extends south of the station area from San Carlos Street.

San Fernando Street has Class II bicycle lanes for one block between Cahill Street and Montgomery Street and extending east of SR 87. Park Avenue has bicycle lanes between Montgomery Street and Sunol Street.

Class III bicycle routes in shared traffic lanes are designated on San Fernando Street (between Montgomery Street and SR 87),

The Alameda, Montgomery Street and Park Avenue east of Montgomery Street.

### ***Bicycle Parking Facilities***

While bicycles require only about one-tenth the space of a car to park, bikes need secure bike parking facilities to prevent theft, a common occurrence. This can be as simple as an inverted-U rack or as advanced as a staffed bike station at a transit center. Bicyclists riding longer distances (or in hot weather) sometimes need a shower and changing area to clean up and change clothes. These support facilities are critical to building a bike-friendly community. San José has laid strong groundwork a decade ago by enacting new development standards that require bike parking and showers.

Bicycle parking is mostly found within corporate campuses, primarily for employee use. Some on-street bicycle racks are present east of the Station along San Fernando and Santa Clara Streets. Bicycle parking at the station consists of rentable storage lockers and racks provided by Caltrain. There are a total of 48 bicycle lockers and 18 'coat hanger' style bicycle rack spaces at Diridon Station. There are currently no VTA-owned bicycle lockers at Diridon Station, however, several bicycle lockers can also be found at the VTA San Fernando Station.

## TRANSIT

Bus, commuter rail, intercity rail, and light rail services are all provided at Diridon Station. Bus service includes local, express, and shuttle routes. This station serves Santa Clara Valley Transportation Authority (VTA) bus routes, the Highway 17 Express route, Downtown Area Shuttle (DASH), and Monterey-San José Express Route. Light rail transit is provided at this location by VTA on the Mountain View-Winchester line.

### *Bus Ridership*

Bus route 22 is the most heavily utilized line with over 550 daily boardings and alightings at the Diridon Station bus stops on Santa Clara Street. Route 522 is the next busiest line with over 300 daily boardings and alightings at the station. Of the bus routes that stop at the Diridon transit center, Route 64 is the most popular with over 400 daily boardings and alightings. The DASH shuttle is a popular loop route between Diridon Station and Downtown San Jose with over 600 daily boardings.

### *Light Rail Ridership*

The Diridon light rail station is also well utilized. Currently, there are approximately 540 daily boardings and alightings at the station.

## AIRPORT CONNECTIONS

The Norman Y. Mineta San José International Airport is located approximately 3 miles northwest of the station area.

## PLANNED STATION AREA TRANSPORTATION CHANGES

Both transportation and land use changes are expected to occur over the next several years within the Station Area.

### *Planned Transit Improvements*

Future transit services within the Station area include Bay Area Rapid Transit (BART) (extended from Fremont) and California High Speed Rail linking the northern and southern portions of the state. The High Speed Rail alignment is proposed to be elevated over the 280/87 interchange, as shown in Figure 2-6-10. In conjunction with the High Speed Rail project, the planned Caltrain Electrification Program (also known as Caltrain 2025) will convert the Caltrain mainline between San Francisco and San José from the current diesel-electric locomotive power to fully electric power. In addition, future Bus Rapid Transit (BRT) lines are planned for the Santa Clara Street / Alameda and San Carlos Street corridors.

The City of San Jose is also evaluating the feasibility of an automated transit connection between the station area and the Mineta San Jose International Airport. The study will be completed by Fall 2011.

### *Future Station Ridership*

Transit ridership in the Station Area will increase substantially as a result of the transportation and land use changes. As part of the Caltrain 2025 program, Caltrain estimates its ridership demand will more than double over the next 20 years. To accommodate this demand, Caltrain service at the station is anticipated to increase from 5 trains to 10 trains per peak hour (tpph) by 2035. The following table shows potential ranges of forecasted daily passenger boardings at the Station (Figure 2-6-2). The future transit systems are illustrated on Figure 2-6-10.

FIGURE 2-6-2: TRANSIT RIDERSHIP FORECASTS

TABLE 3 RIDERSHIP FORECASTS: DAILY PASSENGER BOARDINGS & ALIGHTINGS (YEAR 2035) <sup>1</sup>					
ACE	Amtrak Capitol Corridor	BART	Caltrain	High Speed Rail	Total
1,800	1,000	10,500-16,200	20,250 <sup>2</sup>	12,700	46,500-52,000
<p>Notes:</p> <p>1 Unless otherwise noted, ridership estimates based on analysis by Arup for this project and Fehr &amp; Peers as part of the Envision San Jose 2040 General Plan.</p> <p>2 Caltrain ridership estimates based on information provided in the Caltrain Electrification Program EA/FEIR (2009) based on 10 trains per peak hour (tpph).</p> <p>Source: Arup, 2010; PCJPB/Caltrain, 2010; Fehr &amp; Peers, 2010.</p>					

### PLANNED PEDESTRIAN NETWORK

The Diridon Station area provides many opportunities to enhance pedestrian travel and better balance the needs of all street users including pedestrians, bicyclists and automobile drivers. Planning efforts are underway to convert some of the one-way street couplets in the downtown area to two-way streets. In addition to improving overall access and reducing vehicle circulation, these conversions will reduce travel speeds, which will in turn improve pedestrian travel and safety, especially at intersections.

### BICYCLE AND TRAIL NETWORK AND FACILITIES

#### *San José Bike Plan 2020*

The City’s Bike Plan 2020, adopted in 2009, provides a foundation for enhancing the bikeways network and increasing the mode share of bicycle travelers. The Bike Plan lays out specific goals to improve bicycle access and connectivity in San José by the year

2020. These goals include:

- Complete 500 miles of bikeways;
- Achieve a five percent bike mode share;
- Reduce bike collision rates by 50 percent;
- Add 5,000 bicycle parking spaces; and
- Achieve Gold-Level Bicycle Friendly Community status

The Bike Plan 2020 envisions completion of the Class II bicycle lane connection between the Station and Downtown on San Fernando Street, a proposed Class I off-street path along the Los Gatos Creek, as well as additional bicycle lanes on several streets in the vicinity of the station. A corridor along Park Avenue connecting to San Fernando is identified as a Primary Bikeway Network Route in the Bike Plan 2020.

### ***City Bicycle Parking Standards***

Consistent with State law and general plan goals and policies, San José recently adopted changes to San José Municipal Code to expand the range of land uses requiring bicycle parking to include most non-residential uses.

### ***Santa Clara County Trails Master Plan***

The Santa Clara County Trails Master Plan was approved by the Santa Clara County Board of Supervisors in 1995. The goal of the plan is to direct the County's trail implementation efforts under a vision to provide a contiguous trail network that connects cities, regional open space resources, and parks. The plan identifies regional trail routes, sub-regional trail routes, connector trail routes, and historic trails. Major regional trail routes identified in the County's Trail Master Plan within the Diridon Station Area include the Los Gatos Creek Trail and the Guadalupe Trail. Both

of these trails are identified in the City's trail network and are an important part of the station area transportation system.

### ***Bikesharing Program***

The Diridon Station area is currently slated for a bicycle sharing demonstration program that will be funded through a grant from the Metropolitan Transportation Commission (MTC). The station will have a number of shared bicycles that will operate as part of a larger system along the Caltrain corridor. The demonstration program is expected to begin in 2012.

## **PLANNED STATION AREA ROADWAY IMPROVEMENTS**

### ***The Alameda: A Plan for the Beautiful Way***

The Alameda is currently a four-lane facility that has been proposed, as part of The Alameda: A Plan for the Beautiful Way study (2010), to be reduced two lanes to provide wider sidewalks and enhance pedestrian amenities. A cross-section of the preferred street configuration is shown in Figure 2-6-3

### ***Autumn Street Parkway and Park Avenue Underpass Narrowing***

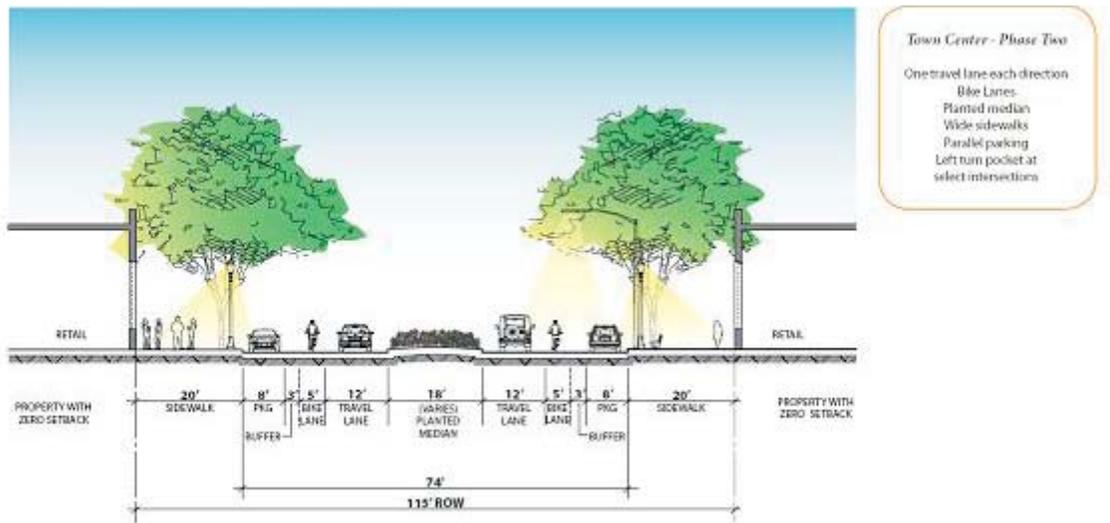
Autumn Street is planned to be extended to connect with Coleman Avenue to the north. Its configuration is planned to change from two or three-one way lanes to two-lanes in each direction from I-280 to Coleman Avenue. The Autumn Street planned alignment is shown on Figure 2-1-1. Park Avenue is planned to be narrowed from four- to two-lanes.

### ***San Carlos Rail Overpass Replacement.***

The San Carlos Street overpass over the rail tracks is currently outdated and provides inadequate sight distance for vehicle

travel. It is planned to be replaced with a new overpass structure in the future.

FIGURE 2-6-3: ALAMEDA THE BEAUTIFUL - TOWN CENTER PHASE TWO



## STATION AREA LAND USE

The proposed station area plan would redevelop several existing land uses around Diridon Station by replacing them with new mixed-use/higher density developments. Table 2-6-4 summarizes the preferred plan land uses for the Diridon Station Area Plan.

FIGURE 2-6-4: LAND USE AREAS

STATION AREA PREFERRED PLAN LAND USE		
Land Use	Units	Totals
Commercial/R&D/Light Industrial	Square feet	4,963,400
Retail/Restaurant	Square feet	424,100
Residential	Dwelling units	2,588
Hotel	Rooms	900
Ballpark	Seats	32,000
Source: Field Paoli, October 2010		

### *Integrating Transportation and Land Use*

Locating different types of land uses close together tends to reduce the distances that residents must travel for errands and allows more use of walking and cycling for such trips. It can reduce commute distances (some residents may obtain jobs in nearby businesses), and employees who work in a mixed-use commercial area are more likely to commute by alternative modes.

Certain combinations of land use are particularly effective at reducing travel, such as incorporating schools, stores, parks and other commonly-used services within residential neighborhoods and employment centers. The Preferred Plan Land Use provides a range of commercial and residential uses. Commercial uses include neighborhood services for surrounding residential areas, and a mix of entertainment, hotels, shopping, restaurants and offices.

## STATION AREA TRANSPORTATION STRATEGIES

The following transportation strategies put special emphasis on increasing access and mobility for transit users, bicyclists, and pedestrians, while balancing the needs of automobile travel. Complementary strategies for the different transportation modes were selected to provide a comprehensive framework that would increase multi-modal access to and around the Station Area.

### Transportation Guiding Policies

A set of guiding transportation policies support the Plan's overall vision of creating a vibrant Station Area that enhances community identity and sense of place. These include:

- Facilitate pedestrian access and safety through pedestrian enhancements, including the provision of crosswalks at all intersections, wider sidewalks, and high quality pedestrian amenities along transit corridors
  - Promote easy access to the station from residential developments
  - Residents who live within 1,200 feet of a rail transit station are significantly more likely to ride transit than those who live from 1,200 feet to 2,500 feet away. For this reason, the more residents that can be accommodated near the station, the less traffic that will be generated by residential development
- Promote easy walking access from the station to commercial developments
  - With an emphasis on retail and restaurant uses in conjunction with the ballpark, wide sidewalks along many streets will be important to accommodate peak walking demands and provide sidewalk seating space
- Encourage improved bicycle and trail connectivity and provide enhanced bicycle parking opportunities within the Station Area
  - Promote bicycle access from surrounding neighborhoods within the Station Area

- o Bicycle parking should be visible and accessible so that traveling to the area by bicycle is a viable option
- o Integrate “green fingers” with the pedestrian and bicycle trail connections - The green fingers not only represent an opportunity to provide green space but also an important connection for walking and bicycling
- Ensure increased transit connectivity within and to/from the Station Area and provide for transit amenities at stops that improve the comfort and convenience for transit riders
- Promote the development of the Station Area’s street and intersection network that supports the proposed intensification of land uses, while providing mobility for all travel modes and users
  - o Incorporate new street connections to improve walking and bicycling access within the station area

### PROPOSED STATION AREA TRANSPORTATION STRATEGIES

The following proposed transportation policies and strategies support the guiding policies.

Strategies are based on key opportunities and constraints in the station area and information gathered through the Diridon Station Area Plan outreach process. Transportation improvements are summarized in Figure 2-6-5 and 2-6-6 and are grouped into four categories: walking, bicycling, transit, and complete streets.

FIGURE 2-6-5: TRANSPORTATION STRATEGIES - WALKING AND BYCYCLING

<b>DIRIDON STATION AREA TRANSPORTATION STRATEGIES</b>	
<b>Improvement Area</b>	<b>Station Area Transportation Strategies</b>
Walking	<ul style="list-style-type: none"> <li>• Promote walking connections from surrounding neighborhoods and employment centers to the Station Area.</li> <li>• Provide enhanced crosswalks on all legs of signalized intersections and at key pedestrian crossing locations. As appropriate, enhanced crosswalks should include pedestrian bulbouts, median refuge islands, or special paving treatments.</li> <li>• Facilitate pedestrian access and safety through pedestrian enhancements, including the installation of wider sidewalks along key pedestrian corridors.</li> <li>• Consider pedestrian signals at high-use uncontrolled crossing locations.</li> <li>• Consider mid-block crosswalks on Stockton Avenue and other locations as appropriate.</li> <li>• Consider pedestrian “scramble” signal phasing locations with high pedestrian volumes.</li> </ul>
Bicycling	<ul style="list-style-type: none"> <li>• Provide bicycle lanes (also known as Class II facilities) on streets with available right-of-way and higher traffic volumes.</li> <li>• Provide a network of bicycle priority streets that provide linkages throughout the Plan area.</li> <li>• With the Station Area as its focus, establish and promote a public bike-sharing program that allows free or low-cost rental of bikes at key generators (e.g., Diridon Station, San Jose State University) to encourage cycling as a primary mode and facilitate use of transit without having to transport a bicycle.</li> <li>• Develop trail connections along Los Gatos Creek, Guadalupe River, and the proposed Caltrain/HP Pavilion Trail connection.</li> <li>• Where appropriate, enhance bikeways network through the use of colored bike lanes, “sharrows” or other specialized treatments.</li> <li>• Explore the opportunity to expand the station’s bicycle parking into a major bicycle parking facility, such as the 4<sup>th</sup> and King Bikestation in San Francisco</li> </ul>

FIGURE 2-6-6: TRANSPORTATION STRATEGIES - TRANSIT AND COMPLETE STREETS

<b>DIRIDON STATION AREA TRANSPORTATION STRATEGIES</b>	
<b>Improvement Area</b>	<b>Station Area Transportation Strategies</b>
Transit	<ul style="list-style-type: none"> <li>• Consider using electric vehicles for the Downtown Area Shuttle (DASH)</li> <li>• Consider implementing an additional shuttle or bus route connecting the Station and Mineta San Jose International Airport (SJC) which will complement existing transit service until such time as the City completes the San Jose Automated Transit Network project.</li> <li>• Enhance bus stops with appropriate amenities (shelters, benches, lighting, real-time passenger information) to improve the overall comfort and safety for transit riders.</li> <li>• Support rail transit operators (including VTA, Caltrain, ACE, Amtrak, and BART) to improve service and amenities that increase daily ridership and reduce potential negative effects on the community.</li> </ul>
Complete Streets	<ul style="list-style-type: none"> <li>• As has been proposed for the Alameda as part of the “Alameda – A Plan for the Beautiful Way” study, consider implementing “road diets” on streets with projected excess vehicle capacity to reduce either the number of travel lanes or the roadway width, and use the available public right-of-way to provide wider sidewalks, bicycle lanes, transit amenities or landscaping.</li> <li>• Consider roundabouts at key locations to improve safety and reduce greenhouse gas emissions. Consider alternative locations for future implementation of roundabouts.</li> <li>• Improve the street grid system by creating new street connections to promote additional travel options.</li> <li>• Provide pedestrian-scale lighting on key streets, crosswalks, and mid-block crossings.</li> <li>• Provide adequate width for all sidewalk uses, including loading and unloading of people from on-street parking, walking traffic, window shopping traffic, bicycle parking and use of street furniture.</li> <li>• Provide continuous sidewalk improvements along major arterial streets. Close gaps between pedestrian connections.</li> <li>• Provide amenities such as pedestrian kiosks, benches, newspaper racks, trash cans, bus shelters, café tables, hanging flower baskets and chairs to increase the number of opportunities for people to socialize and spend leisure time outdoors along public streets.</li> <li>• Provide street trees to separate the pedestrian walkway from the bicycle and/or vehicle travel way, and to add identity and enhance the aesthetics of an area.</li> <li>• Use pervious surfaces, open channels, and vegetated drainage swales at appropriate locations along streets.</li> </ul>

Source: Fehr & Peers, October 2010

Transportation circulation concepts outlined in Figures 2-6-5 and 2-6-6 above are discussed in the following paragraphs.

## PROPOSED TRANSPORTATION AND CIRCULATION CONCEPTS

### *Walking Improvements*

Walkability is defined as the ability to travel easily and safely between various origins and destinations without having to rely on automobiles or other motorized travel. The ideal walkable district includes wide sidewalks, a mix of land uses such as residential, employment, and shopping opportunities, a limited number of conflict points with vehicle traffic, and easy access to transit facilities and services.

Making an area walkable requires that pedestrians feel comfortable and secure enough to share the street with transit vehicles and automobiles. Transportation strategies should be used to create streets that ensure and maximize safe and efficient pedestrian-oriented circulation by incorporating wider sidewalks, mid-block pedestrian crossings, pedestrian bulbouts and curb extensions and enhanced crosswalks.

Proposed Station Area walking improvements are shown on Figure 2-6-7.

### *Crosswalks*

Enhanced crosswalks with bulbouts reduce pedestrian crossing distances and help make walking across the street easier and more comfortable. Marking crosswalks with special paving treatments or high visibility striping helps highlight their presence and improves pedestrian visibility.



*Enhanced Crosswalk with Bulb out  
Source: Bike Ped Images, 2010*



*Scramble intersection with diagonal pedestrian crossings*  
Source: Getty Images, 2009

The Station Area plan promotes high quality pedestrian crossings and improved pedestrian conditions at all intersections in the study area, but especially at the intersections that will see the greatest increased in pedestrian activity as a result of planned land use development and improved walking connectivity.

### ***Pedestrian Scramble Intersections***

Many intersections within the Station Area are expected to have extremely high pedestrian volumes. A pedestrian “scramble” is a form of traffic control in which all oncoming traffic is stopped, allowing pedestrians to cross in any direction. Pedestrian scrambles are in major cities all over the world, including San Francisco and Oakland, and are highly useful at promoting pedestrian movement. Because pedestrians can cross in all directions at a pedestrian scramble, diagonal crossing is often permitted. This is usually indicated with diagonal crosswalks which are painted in the roadway, and a sign at the crossing may also indicate that diagonal crossing is allowed.

**High Quality Sidewalks**

Sidewalks are a critical element in the creation of good pedestrian environments. Wide sidewalks in good condition facilitate convenient and comfortable pedestrian access. They also provide space for seating and socializing as well as for landscaping amenities like planters and street trees.



Existing Conditions, Montgomery Street  
Source: Fehr & Peers, 2010

**Enhanced Pedestrian Underpass Connections**

The enhancements of underpasses promote walking connections from surrounding neighborhoods and employment centers to the Station Area. Locations for enhancement are located on Figure 2-6-7. Examples of well-lit enhanced underpasses are shown below.



Existing wide sidewalks on The Alameda  
Source: Fehr & Peers, 2010



The Julian Street underpass is to be improved to include pedestrian ramps  
Source: Fehr & Peers, 2010



Enhanced Underpass, Arizona  
Source: Bike Ped Images, 2010



Enhanced Underpass, Arizona  
Source: Bike Ped Images, 2010

FIGURE 2-6-7: WALKING CONNECTIONS



### ***Bicycle and Trail Connections***

Bicycles are a convenient means of transportation for short trips, especially those less than two miles in length. According to the U.S. Department of Transportation, one-quarter of all trips in the country are under one mile, and about 40 percent of all trips are two miles or shorter.

The City's proposed Envision 2040 General Plan Update calls for the development of a safe, direct, and well-maintained transportation bicycle network that links residences, employment centers, schools, parks and transit facilities. The General Plan's proposed goals include promoting bicycling as a priority mode of transportation for both commuting and recreation.

While bicyclists may legally ride on any city street, many streets do not provide a bicycle-friendly environment. Streets with high volumes or faster traffic speeds can be intimidating to cyclists, especially when no roadway space or bike lanes are provided. Disconnected and incomplete bicycle facilities can strand bicyclists before they reach their destination.

### ***Station Area Bicycle Network***

The Station Area Plan envisions a well-connected network of bicycle priority streets that facilitate easy bicycling access in and around the station area. The proposed bicycle network includes many new Class II bicycle lanes on streets in the station area. It also includes new Class I multi-use trails and Class III bicycle routes. Taken together, they comprise the network of bicycle priority streets that will provide convenient and safe bicycle access to the station and other nearby destinations.

Existing and proposed bicycle priority streets are listed below and identified on Figure 2-6-8.

### ***East-West Bicycle Connections***

To ensure east-west bicycle connectivity, four key connections are proposed. They include:

- **North Railroad Alignment:** This alignment follows the railroad tracks North of Santa Clara Street and connecting over to Autumn Parkway. This route would provide eastbound bicyclists an alternative to riding through the SR 87 / Julian Street interchange. This alignment will also provide a direct trail connection from Diridon Station to the planned development areas north of Julian Avenue
- **Santa Clara Street:** Santa Clara Street is an important bike corridor between the Alameda Business District and Downtown. Bicycle lanes on Santa Clara Street could be buffered or separated from traffic in places to provide a connection that is comfortable for novice as well as experienced bicyclists
- **Park Avenue / San Fernando Street:** Class II bike lanes are proposed on San Fernando Street to the east and west of Montgomery Street. Combined with new bike lanes on Park Avenue, they will enhance the currently existing east-west bicycle route through the Station Area. This route is identified as a Primary Bicycle Route in the City's Bike Plan 2020. On-street parking would need to be removed on Park Avenue and parts of San Fernando Street to accommodate new bike lanes
- **Auzerais Avenue:** Class II bike lanes are also proposed on Auzerais Avenue, which would provide an east-west connection in the south part of the Station Area

### ***North-South Bicycle Connections***

To ensure north-south bicycle connectivity, Class II bike lanes or bicycle boulevards are proposed on three major corridors in the

station area. They include:

- **Gifford Street:** Gifford Street is proposed to be developed as Class III bicycle boulevard that would provide north-south connections between San Fernando Street and Auzerias Street. This street would be an important bicycle connection between the mixed use corridor on San Carlos Avenue and the Central Zone
- **Autumn Street/Bird Avenue:** This connection would provide a direct bicycle commuter connection between the existing bike lanes on Bird Avenue to the south and Coleman Avenue to the north
- **Sunol Street/Stockton Avenue:** Sunol Street provides a direct connection on the west side of the station that would be a link between the east-west routes in the area. It would also connect to proposed bicycle lanes on Julian Avenue, thereby providing a continuous route from the neighborhoods to the west of the station to the planned office uses to the north of the station and to the Guadalupe River trail

### ***Off-Street Bicycle Trail Network***

Existing and proposed trails are also identified in as part of the Station Area Plan. The development of these trails is consistent with San José's Green Vision (2007) goal to create 100 miles of interconnected trails within San José. To promote bicycle and pedestrian connectivity, trail connections, such as trail grade separations and at-grade crossings, are proposed to be developed along Los Gatos Creek, Guadalupe River, and the proposed Caltrain/ HP Pavilion Trail.

Grade separations are categorized into two tiers, with the top tier projects being the ones that would provide a useful connection between separated trail segments.

Tier 1 Grade Separations include:



*Guadalupe River Trail*  
Source: Coyote Valley Plan, 2008

- Montgomery Street / Park Avenue intersection crossing (Los Gatos Creek Trail)
- Caltrain Tracks (Los Gatos Creek Trail)
- Santa Clara Street Crossing (Los Gatos Creek Trail)

Tier 2 Grade Separations include:

- San Fernando Street crossing (Los Gatos Creek Trail)
- VTA Light Rail Track crossing (Los Gatos Creek Trail)
- Julian Street Crossing (Guadalupe River Trail)

### ***On-Street Bicycle Treatments***

Where appropriate, bikeways in the Station Area should be enhanced through the use of colored bike lanes or other treatments that make bicycle movement comfortable and convenient. Goals outlined in the Circulation Element of the City's Bike Plan 2020, provides a foundation for enhancing the bikeways network and increasing the mode share of bicycle travelers. Colored bike lanes, "sharrows", separated bikeways and other treatment could be used to highlight conflict zones and increase the visibility of bicyclists.

Colored Bike Lanes: Using colored pavement in the bike lanes has several benefits: safety, comfort, and promotion. Colored pavement helps visually elevate the prominence of the bike lane on the road, further defining the cyclists' space and helping differentiate this road space from that which motorists feel free to use. The coloring is a constant and bold visual reminder to motorists that the bike lane (and hence, cyclists) are present.

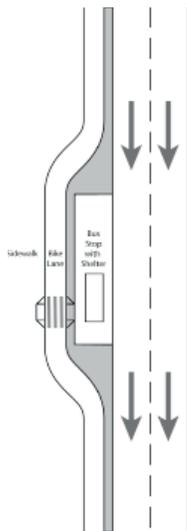


*Colored Bike Lanes*  
Source: Mike Peterson, 2009

Separated Bike Lanes: A separated bike lane, sometimes also described as a "cycletrack" or a buffered bike lane, is any section of

a street reserved solely for bicycle traffic. Separated lanes attempt to provide a safe space for these non-motor vehicles. Bike lanes can be demarcated physically (e.g. with a concrete barrier) or non-physically (e.g. with paint). At bus stops, separated lanes can be located to the right of a stop, thereby reducing potential conflicts between buses and bicycles.

**Bicycle Parking and Bike Sharing Program**



Example of separated bike lane treatment at a bus stop

**Bicycle Boulevard:** A bicycle boulevard is a low-traffic volume street that is designed primarily for bicycle access, though it accommodates motor vehicles as well. They work well in residential areas and on other streets where there is not sufficient room to stripe a Class II bicycle lane. Gifford Street is a proposed as a bicycle boulevard connection in the station area.

**Sharrow Markings:** A “sharrow” is a pavement marking installed on streets that are too narrow for Class I or Class II bike lanes, but has high bicycle traffic volumes. The “sharrow” is intended to indicate where bicyclists should ride to avoid traveling within the door zone of parked cars. It also alerts motorists to share the road with bicyclists and conveys that the street is a preferred bike route.



Separated Bike Lanes  
Source: Streets Blog, 2010



Bicycle boulevard with high visibility bicycle stencilling  
Source: Payyon Chung (flickr.com)



Sharrow  
Source: Streets Wiki, 2010



Washington Bikeshare Program  
Source: Cool Town Studios, 2009



Downtown Berkeley BikeStation  
Source: Cosmic Country (flickr.com)



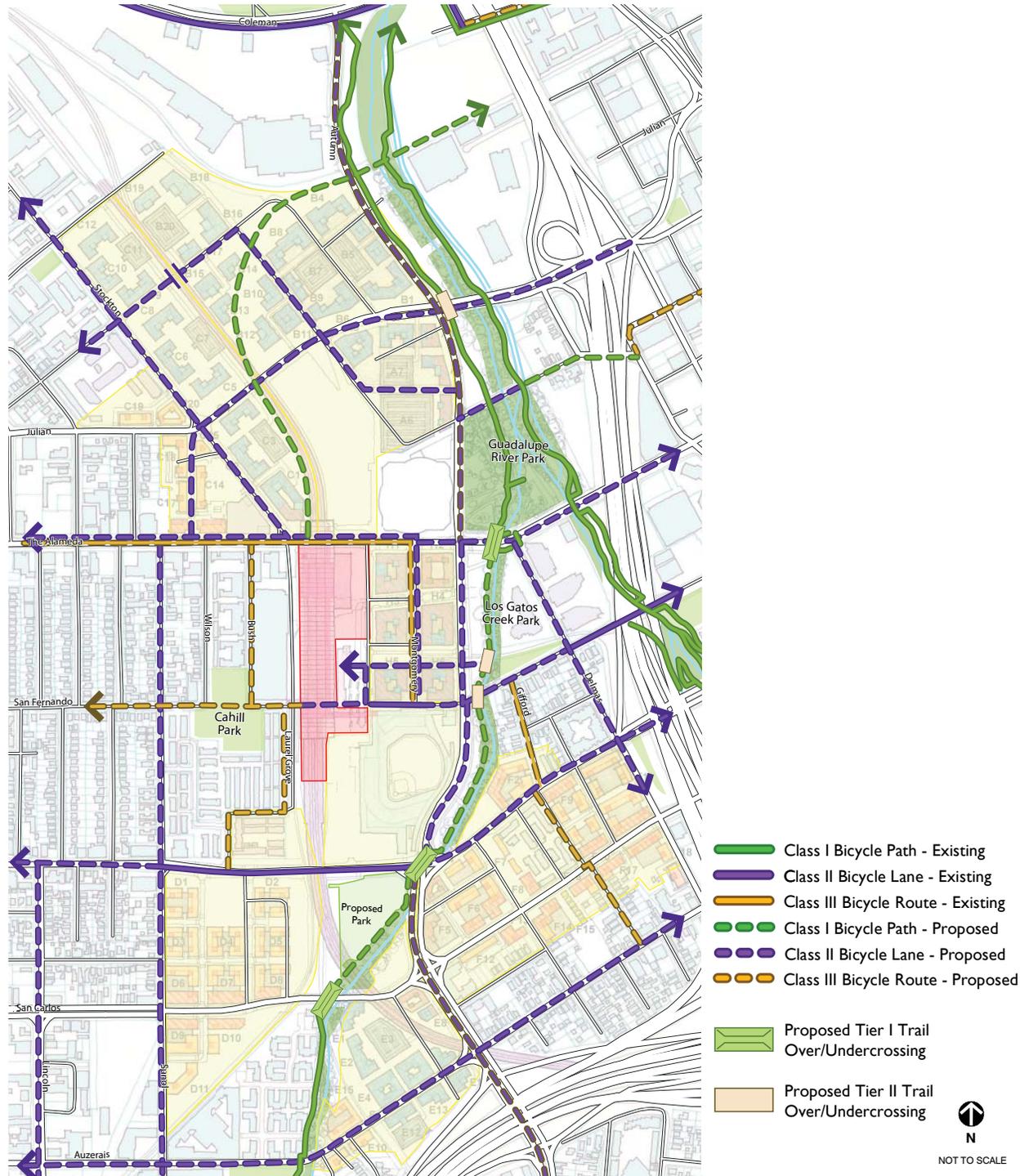
Attended bike parking at San Francisco Giants AT&T Park  
Source: LA Times

### ***Bicycle Parking and Bike Share Program***

To enhance the viability of bicycle travel within the Diridon Station Area it is vital that the Station Area provide sufficient bicycle parking opportunities. Bicycle parking ranges from short-term parking amenities, such as bicycle racks in highly visible and secure locations near building entrances, to long-term parking facilities, such as lockers or cages where bicycles are either locked individually (lockers) or with limited access (cages).

While the Diridon station area is already slated for a public bikesharing demonstration program, a permanent public bike program should be established that allows free or low-cost rental of bikes at key generators (e.g., Diridon Station, San Jose State University) to encourage cycling as a primary mode and facilitate use of transit without having to transport a bicycle. Public bicycle parking should be provided in areas within the Station Area. Bike stations should also be provided at the Ballpark, HP Pavilion, and at Diridon Station. Figure 2-6-9 shows the location of proposed public bicycle parking and bicycle stations locations.

FIGURE 2-6-8: EXISTING AND PROPOSED BICYCLE AND TRAIL FACILITIES



## TRANSIT

Access and connectivity to and from nearby transit facilities is critical to take full advantage of the mixed-use and high density development proposed under the Station Area Plan. Existing and future public transportation services should be enhanced to increase ridership and decrease the use of private automobiles.

### *Bus Stops*

Bus stops within the Station Area should be enhanced with appropriate amenities (shelters, benches, lighting, real-time passenger information) to improve the overall comfort and safety for transit riders. Such amenities enhance comfort and safety for transit riders. Transit stops, identified in Figure 2-6-10, should be enhanced to increase the viability of bus service within the Plan Area and to the surrounding land uses. Installation of transit amenities should be evaluated on a case by case basis to ensure that the amenities are appropriate for a given transit stop and fit within the available right of way.



*Downtown Mountain View  
Source: Fehr & Peers, 2010*

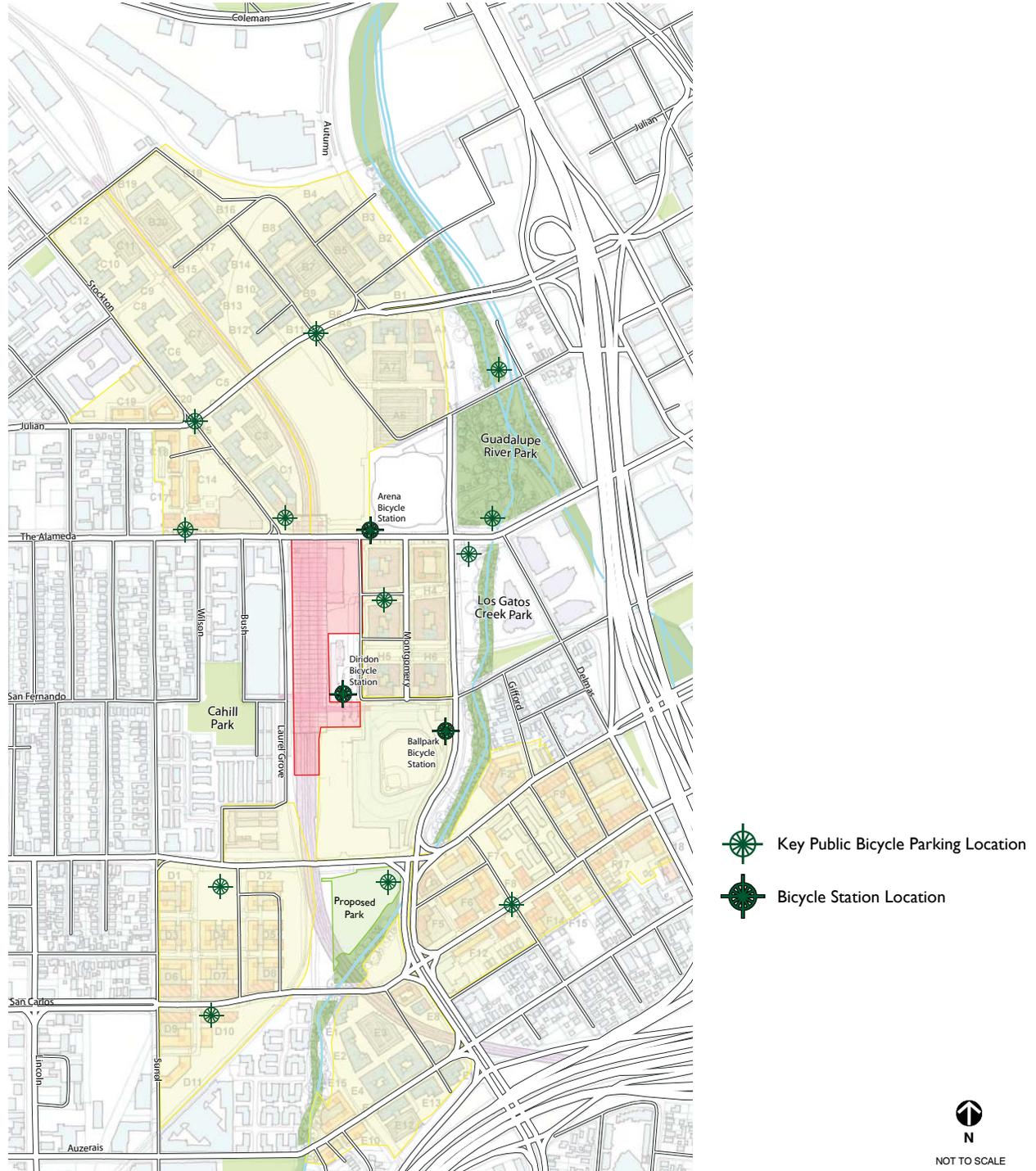


*Real-time Passenger Information at  
Bus Stop*

The addition of real-time passenger information displays for buses and the proposed local shuttle would provide passengers with an added benefit that would improve the waiting experience and help make transit a more effective travel option. This strategy is consistent with the 2007 the Metropolitan Transportation Commission (MTC) Transit Connectivity Plan, which recommends wayfinding, customer information and real time information be installed at key bus stop locations near Diridon Station. These strategies are also consistent with the BART Station Access Guidelines (2003).

In addition, Caltrain is embarking on a program to change the way riders get to and from stations. Caltrain's Comprehensive Access Policy (adopted in 2010) promotes walking access to stations as its highest priority systemwide but acknowledges the need for some level of auto, transit and bike access at a major hub station like San

FIGURE 2-6-9: STATION AREA BICYCLE PARKING CONCENTRATIONS





Jose Diridon. Secondary priority in the Comprehensive Access Policy is transit access, followed by bicycle access and lastly, automobile access. The Access Policy is part of a Caltrain program to evaluate a wide range of improvements to make it easier for riders to walk, take transit or bike to stations – instead of driving.

### ***Connectivity to the Mineta San José International Airport (SJC)***

Though they are less than three miles apart, no direct transit service currently connects the Airport with Diridon Station. The plan proposed a new shuttle service route that directly connects the Station to San José International Airport. Shuttle frequency should provide service three to four times per hour to provide adequate connectivity and to increase the vitality of transit service in the Station Area. It would also provide for better sharing of Diridon station area and airport area parking spaces. This route is identified on Figure 2-6-10

As part of the potential future automated transit network at the Mineta San Jose International Airport, the City is also evaluating the feasibility of a personal rapid transit (PRT) connection to the Diridon Station area – which could eventually replace shuttle service.

## **COMPLETE STREETS**

The term “complete streets” describes a comprehensive approach to the practice of mobility planning. Complete streets principles recognize that transportation corridors have multiple users with different abilities and mode preferences. Transportation corridors are seen as being able to accommodate expected traffic demand yet also provide additional facilities to support travel by other modes. The principles of complete streets should be an integral part of the Station Area Plan to provide for a transportation network that successfully integrates bicyclists, pedestrians, and transit users, along with vehicle drivers.



*Air shuttle bus service*



Single-lane Roundabout  
Source: Alex Gunman, 2009



Columbus Traffic Circle, New York

### **Roundabouts**

A roundabout is a circular intersection with yield control on entry points with islands to direct traffic through the intersection. Roundabouts provide several key safety benefits such as fewer conflict/collision points and slower intersection speeds that improve safety for pedestrians and bicyclists. Roundabouts also provide environmental benefits since less idling time and delay equates to lower emissions and greenhouse gases, as well as reduced fuel consumption.

Roundabouts are typically designed as one-lane or two-lane roundabouts. One-lane roundabouts provide one lane for internal circulation and typically have a diameter between 100 and 150 feet, while two-lane roundabouts with two internal circulation lanes are typically between 150 and 230 feet.

Single-lane roundabouts can work well for most cyclists and pedestrians if properly designed and implemented. Single-lane roundabouts can also make left-turns easier for bicyclists. Multi-lane roundabouts are more difficult for cyclists or pedestrians to traverse.

Roundabouts should be evaluated at key locations within the Station Area. A traffic circle could also be incorporated into a reconfigured intersection of Autumn Street / Park Avenue as a main gateway into the Station Area. Figure 2-6-13 identifies three potential locations for roundabouts.

### **Road Diets**

Roadway narrowing, commonly called a "road diet", has the benefit of providing enhanced access and mobility for pedestrians, bicyclists and transit users, as well as motorists. Road diets should be implemented on streets with projected excess vehicle capacity to reduce either the number of travel lanes or the roadway

width, and use the available public right-of-way to provide wider sidewalks, bicycle lanes, transit amenities, or landscaping.

Evidence from case studies of Northern American cities where road diets were successfully implemented notes that streets have substantially fewer traffic collisions after road diets have been implemented. In many cases roadway capacity is not reduced because road diets enable left-turning vehicles to have a dedicated turn lane rather than having to stop in a through lane before executing a left turn. To be considered good candidates for road diets, roadways should have moderate volumes (typically up to 18,000 daily vehicles), though many cities have successfully implemented road diets on facilities that carried up to 23,000 daily vehicles.

Figure 2-6-11 summarizes the general feasibility of road diets based on average daily traffic volumes and provides local Bay Area examples.

### ***Street Network Connectivity***

Intersection density is the number of intersections in a given area. It corresponds closely to block size (i.e. the greater the intersection density, the smaller the block size). Small blocks make a neighborhood walkable by minimizing walking distances.

A comprehensive national study released in May 2010 concluded that intersection density is the single most important factor for promoting walking activity (Travel and the Built Environment: A Meta-Analysis, by Reid Ewing and Robert Cervero). This study also concluded that intersection density has a large effect on increasing transit use and decreasing vehicle miles traveled. Essentially, areas with greater intersection density have a greater potential for accessibility. The chart below visualizes this characterization of accessibility, by comparing the intersection density of the Diridon Station Area to other locations that are known as successful TODs

FIGURE 2-6-11: ROAD DIET

<b>TRAFFIC VOLUMES AND ROAD DIET FEASIBILITY</b>		
<b>Average Daily Traffic Volume Range</b>	<b>Road Diet Feasibility</b>	<b>Local Bay Area Examples</b>
Less than 12,000 vehicles/day	High Potential (center turn lane/turn pockets beneficial, though not necessary for traffic capacity)	Castro Street, Mountain View, (~9,000 vehicles/day)
12,000 – 18,000 vehicles/day	High Potential (center turn lane/turn pockets likely needed; may require traffic microsimulation analysis to confirm signal timings and turn pocket lengths)	Valencia Street, San Francisco, (~17,000 vehicles/day)
18,000 – 23,000 vehicles/day	Moderate Potential (center turn lane/turn pockets needed; typically requires traffic simulation analysis to confirm feasibility)	Marin Avenue, Berkeley, (~20,000 vehicles/day)
Greater than 23,000	Road diets are generally not considered unless spillover traffic can be accommodated on parallel streets	N/A

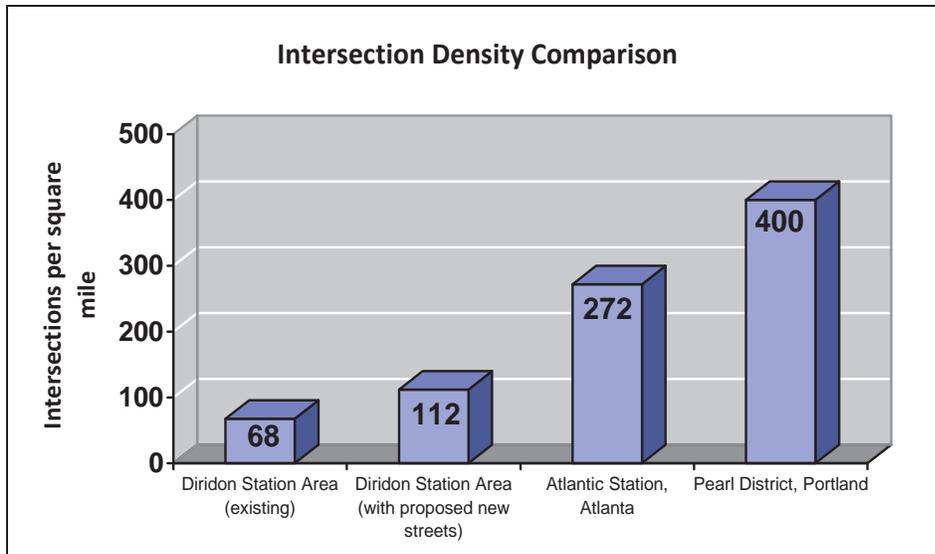
such as the Pearl District northwest of downtown Portland, Oregon and the Atlantic Station in mixed use development in Atlanta, Georgia. Typically, neighborhoods with an intersection density of at least 150-200 intersections per square mile are considered ideal walking neighborhoods.

The layout of streets in the Station Area should be organized as connected network to offer multiple routes to destinations to facilitate vehicular and non-motorized mobility. The existing street grid should be improved by creating new street connections where appropriate. Therefore, the proposed new street connections within the Station Area are critical to achieving the goal of increased walkability. Proposed street connections are identified on Figure 2-6-13.

**Station Area Level of Service Policy**

Intersections within the Downtown Core Area, identified on Figure

FIGURE 2-6-12: INTERSECTION DENSITY COMPARISON



2-6-11, are exempt from the City of San José’s level of service (LOS) criteria and traffic mitigation requirements. Because the majority of the Station Area is located within the Downtown Core, it already qualifies for this exemption. The Station Area Plan also proposes to exempt the additional area within the Station Area but outside of the Downtown Core in order to discourage roadway capacity-enhancing mitigation measures.

**Street Lighting**

Pedestrian-scale lighting should be provided on key streets, crosswalks, and mid-block crossings. Pedestrian scale lighting provides better lighting of the pedestrian travel way and also provides an improved sense of security and comfort. This strategy is consistent with the San José Downtown Street and Pedestrian Lighting Master Plan (2003) which establishes guidelines that address future development, including incremental changes to lighting in the “Greater Downtown” area which includes areas within the Station Area Plan but to the east of Diridon Station. The Lighting Master Plan addresses the public right of way through the illumination of pedestrian paths and streets.



*Pedestrian-scale street lighting  
Source: San Francisco Better Streets Plan*



Generous sidewalk with pedestrian and bike-friendly street furniture  
State Street, Santa Barbara  
Source: Fehr & Peers 2010

### **Streetscape Features**

Streetscape features should be provided along key streets within the Station Area. Streetscape features, such as street lights, trees and landscaping, and street furniture can contribute to the unique character of a block or entire neighborhood. Streetscape features such as street lights and trees are consistent with San José's Green Vision (2007) goal to plant 100,000 new trees and replace 100 percent of streetlights with smart, zero emission lighting.

### **Green Street Features**

Impervious surfaces, open channels and swales should be considered at appropriate locations. Permeable pavers can be used in many areas of the streetscape, and add attractive variety to typical paving. Some permeable systems allow storm water to flow between pavers. Others provide a solid surface without gaps. Permeable paving can be used on streets, alleys, and driveways not only to help address storm water issues but also contribute to streetscape aesthetics with unique textures and materials. On alleys, shared streets, and other streets with low traffic volume, permeable paving can be used as a special paving material to reinforce the pedestrian-oriented scale of these streets.



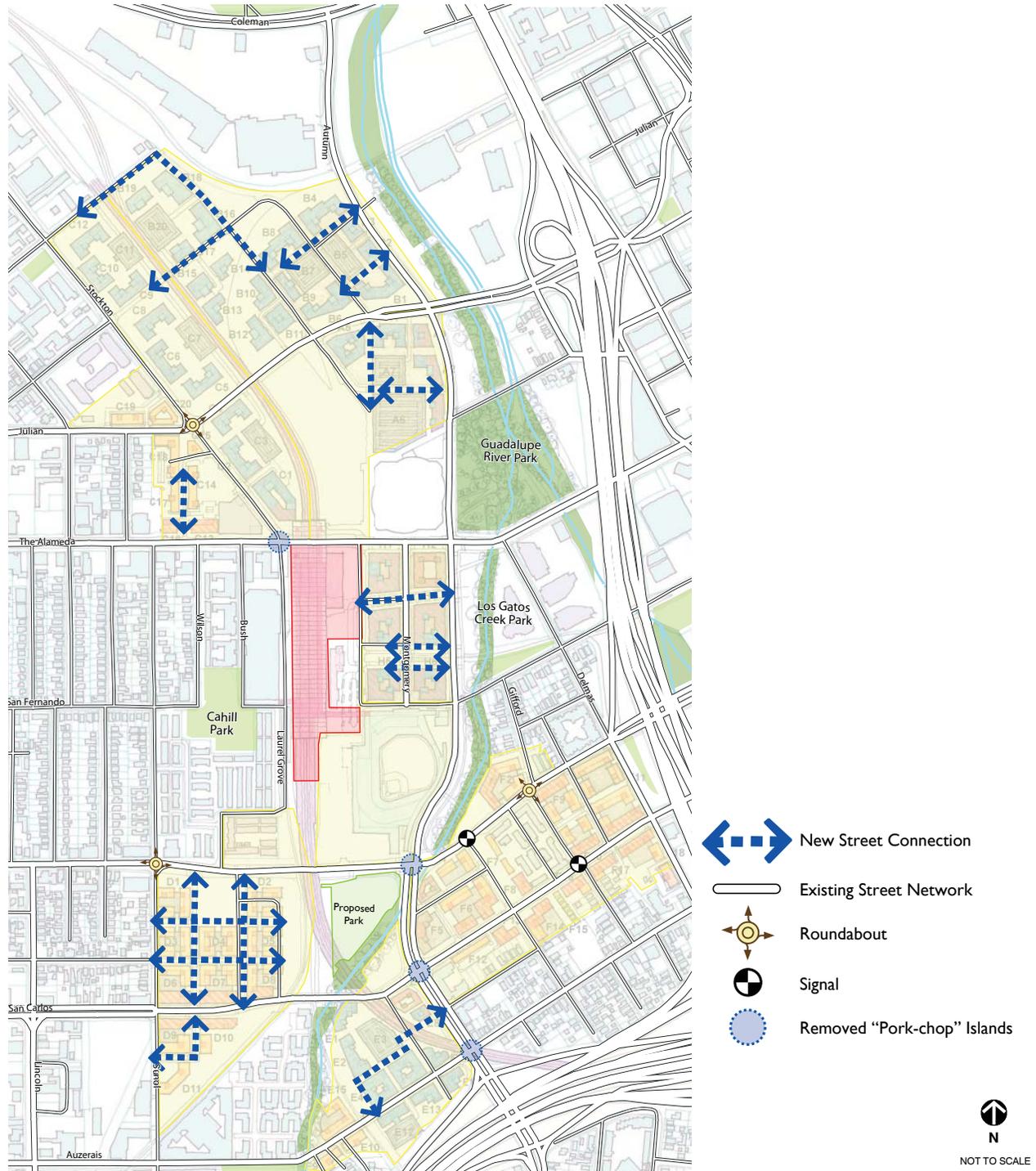
Permeable pavers  
Source: San Francisco Better Streets Plan

Street swales are long narrow landscaped depressions primarily used to collect and convey storm water and improve water quality. They remove sediment and reduce nutrient concentrations within runoff, through natural treatment prior to discharge into storm water management facilities. In addition to providing pollution reduction, swales also reduce runoff volumes and peak flow rates by detaining storm water. Swales add significant landscaping to street corridors and reduce impervious surface. Swales may be appropriate on residential green streets, as shown on the left, as well as on parkways and other landscape streets, and in medians on many street types.



Street swale  
Source: San Francisco Better Streets Plan

FIGURE 2-6-13: PROPOSED NEW STREET CONNECTIONS



## 2.7 Transportation and parking demand management

### Executive Summary

#### PARKING RATIOS

The future parking analysis for the preferred alternative is in conformance with the draft Envision San Jose 2040 General Plan goals and policies for VMT reductions and mode shift changes. Although aggressive, the parking ratios based on this analysis are appropriate for a multi-modal rich environment such as the Diridon Station Area. The preferred alternative includes a unique set of planned developments, including several mixed use developments, concentrated areas of office, commercial, and industrial use as well as pockets of entertainment and hotel uses surrounding the station and a planned ballpark.

The proposed parking ratios in this analysis are projections of future parking ratios to be achieved upon the complete implementation and development of this Plan. These proposed parking ratios will also be used to estimate full development capacity in the Diridon Station Area and will be used for analysis in the Environmental Impact Report (EIR). The proposed parking ratios are not being recommended as revisions to the City's Zoning Code. Parking revisions will be explored and developed as a next step in the planning process for the Diridon Station Area. Given that maximum parking ratios are not proposed, developers could build more parking spaces than would be provided with the proposed parking ratios. If this were to happen, then additional parking would need to be built in lieu of development capacity, potentially resulting in less overall development for the Diridon Station Area than proposed in this Plan.

#### PARKING SUPPLY

All retail and restaurant parking in the downtown will be supplied

off-site by the proposed commercial and mixed use developments. The rationale behind these parking requirements is that office and retail/restaurants have high parking demands at different times of the day and would be able to share the same supply.

Project-based parking supply identified in this section of the report does not include the expansion of the HP Pavilion surface parking lot with a 900+ parking structure. The potential contribution that this additional supply could make toward meeting the cumulative project-based parking demand is discussed further in Section 4.2.

This analysis assumes that only a small portion of high speed rail patrons will be accommodated within ½ mile of the station area, an approach agreed to by the CHSRA. The remainder of the high speed rail patrons would be accommodated in off-street facilities within a three-mile radius of the proposed station. CHSRA, with assistance from city staff, is currently researching and identifying potential locations for remote parking supply.

The development capacity of the Diridon Study Area does not lead to parking supply deficits. When transit (park and ride) is added to the total demand, the projected supply covers the lower end of the demand, but HP Pavilion parking supply would be required to cover the deficit for the higher end of the demand projection range. Parking supply is described in detail in section 4.2 of this report.

## PARKING MANAGEMENT & TDM

Parking supply issues can also be addressed through parking management and transportation demand management tools. A well designed parking management program can more efficiently manage existing parking supply and meet development goals, than simply adding more supply. Parking management tools include supply management approaches that support development goals and maximize the use of existing supply such as parking

trade, shared parking, advanced parking reservation systems and wayfinding and guidance systems. Demand management approaches such as on and off-street pricing, unbundling and cash out provide transparency to the cost of transportation mode choice decision-making.

In addition to parking focused management tools, a companion transportation demand management (TDM) program would encourage the adoption of alternative modes of transportation and support the efficient use of the Station Area's valuable parking resources. These measures include design-based and program-based strategies that aim to balance short-term and long-term demand while encouraging the use of the alternative modes of travel. TDM program strategies could at a minimum include (1): discounted transit passes, carsharing programs, biking facilities (lanes/trails, lockers, bike sharing, bike valet), guaranteed ride home programs, employee shuttles to Diridon station.

*(1) Refer to Figure 2-6-5 and 2-6-6 for a detailed list of Diridon Station Area Transportation Strategies that are recommended to support alternative modes of transportation to the Station Area.*

## Parking Management and TDM

### Parking Management Plan

The overarching goals for developing a station area parking management plan are to: support the City's land use and TOD vision, to support and encourage the use of transit, to maximize the efficient use of parking supply and parking to prioritize customer access, to preserve and enhance economic vitality and quality of life and protect the surrounding neighborhoods and businesses from spillover commuter parking.

The following are recommended parking supply management methods and demand management methods that will achieve the above goals and should be included in the Parking Management Plan.

#### PARKING SUPPLY MANAGEMENT METHODS

The parking supply established in the preferred plan can be supplied with a variety of methods. It is important that there be flexibility in methods between subareas and developers in order to facilitate development in the overall study area. Methods can range from building new parking facilities, or increasing the capacity of existing facilities through re-design or valet services, taking advantage of underutilized supply by leasing or sharing nearby facilities. Wayfinding and parking guidance systems, such as those currently in use by the City of San Jose, make better use of existing systems by helping users find available parking. Parking trade programs also allow a district that is operating under a parking cap to trade "un-built" parking between developments. Additional programs include transit based preferential parking and reservation systems that are currently in practice with BART. Following is a discussion on parking supply management tools recommend for the Diridon Station Area.

### ***Parking Trade Program***

Parking trade programs are a new concept that allows private sector entities to share parking resources to meet their parking requirement. It can also be used to support private commercial development by building shared parking supply in advance and allowing the developments to purchase parking entitlements for their projects as development progresses in the area.

A parking trade program was recently approved for use in Downtown San Diego, California and to allow new developers to work with existing buildings, using unused, existing parking spaces to meet their parking requirement. For example, if an existing development only is using a portion of their parking and has excess parking available, it can issue 1.5 parking credits per publically available parking spaces. If Building A (2) has 500 parking spaces, and only uses 250 spaces it would be allowed to “sell” or “trade” to Building B. This example assumes that the excess supply is oversold as it will be shared with complementary uses in the area. Parking will be shared provided Building A can demonstrate that it has the capacity to handle additional parkers; Building B would now use this as part of its parking requirement. In this example building A is a shared parking facility. Whatever amount of parking it shares with other buildings to help meet their parking requirements should be part of the conditional use permit with parking rights specified for a set period of time in the project entitlements. If the parking supply goes away, the projects will need to entitle an alternate supply.

In the case of the Diridon Study Area, the parking supply will be developed over times as the area develops. The trade program will allow one developer to purchase parking supply rights from another developer who has more parking then their project needs and is required to provide per the zoning ordinance. This

*(2) (Alternatively Building A could be a parking garage in this example that has unentitled/available parking.*

approach allows for the natural push and pull of the development process. Some developments in the core may be better able to take advantage of proximity to the Diridon station and will want to build at higher density. Other developers to the north and south may be more inclined to build at lower density and provide more supply. Overall, the district will be designed to build to the recommended supply.

The amount of parking credits per space required should be based upon an approved parking management study that examines inventory, utilization and turnover. Excess parking can then be used by a new developer to meet their parking requirements. This creates an incentive to share parking and allows accessory parking to be used for other uses. It is based upon the zoning parking credit concept developed in Pasadena, California.

In 1983, the City of Pasadena created the mechanism to finance multi-use public parking structures that included tax increment funds, rent commercial tenants within the garages, zoning parking credit contracts, and net operating income.

The zoning parking credits is a contract between the City of Pasadena and Private Developers and/or Tenants to claim parking spaces for building permits and occupancy permits. It is not an 'in-lieu" program because it required the development and assignment of parking to new development. The "Parking Credit Program" enables businesses to meet their off-street parking requirements and the city issues 1.5 parking credits per space in the public garages. Businesses that buy credits to meet the city's parking requirements do not receive permits to park in the municipal structures.

The parking credit program began in 1987, and by 2001 the city had allocated 2,350 credits. This allows businesses to satisfy the city's parking requirements without providing any additional on-site parking spaces. Because the city reduces the off-street parking requirements in Old Pasadena by 25 percent and issues 1.5 parking

credits per public space, Old Pasadena has fewer parking spaces than the rest of the city does.

### ***Shared Parking Program***

An imbalance in the use of parking supply can be addressed through very efficiently through mechanisms that allow multiple land uses to share parking in one or more facilities. Shared parking takes advantage of the varied peaking characteristics of parking facilities depending on the land use or uses served. Parking dedicated to office land uses, for example, experiences peak usage during the workday. In contrast, parking demand for nearby retail stores typically peaks during weekday evenings and weekends. A shared use arrangement between the owners of each land use type would result in fewer total spaces needed than if each land use had to fully park its peak demand. A shared parking clearinghouse would bring together parking facility owners and managers with complementary parking needs. Negotiations on the terms of shared parking use would take place within this parking facility “marketplace.”

Shared parking is in many ways the catalyst that can help advance other key parking strategies. In particular, shared parking plays a pivotal role by allowing the current un-tapped supply of private parking to be “freed-up” for use by demanding parking patrons. Furthermore, given existing land-use constraints in each of the subareas, shared parking takes advantage of existing resources and provides an opportunity to maximize utilization. It should be noted that shared parking is inextricably linked to reduced parking requirements. Shared parking allows existing resources to be used efficiently, while reduced parking requirements release developers from the obligation of providing excessive parking which will likely go underutilized. Both of these strategies help to support and reinforce one another.

### ***Valet Parking Program***

Valet parking can be used as a method to increase parking supply as part of a regular practice or to handle overflow peak parking events. This is a good solution for individual property owners that need to increase parking supply or for a business district that would like to increase parking access for visitors and shoppers to the district. One approach that could be considered to maximize the use of public parking is universal valet parking which is a service that is offered as a service in Old Town Pasadena. Universal valet allows customers to drop their car off at over 10 kiosk locations and arrange to pick up their car at a different stand in the district. Participating merchants provide discounts for the program.

### ***Wayfinding and Parking Guidance Systems (PGS)***

Directional signage that guides and informs patrons to and from parking areas improves the customer parking experience and creates greater efficiencies in circulation and movement. The city has developed an advanced parking information and guidance system (PGS) that provides real-time information to users. This includes the amount of parking available at any location in the system. The City should integrate the Diridon Study Area's future parking assets into the existing parking advanced parking guidance system to facilitate their optimal use.

### ***Advanced Parking Reservation Systems (APRS)***

Tools that allow customers to make parking reservations in advance, or an on-line reservation system – gives them the flexibility to plan for both their short term (daily) and long term (airport) travel needs. The Bay Area Rapid Transit (BART) System has an internet based advanced parking reservation system (APRS) for several of its most high demand stations. Advanced parking reservations are allowed for limited/designated single day reserved parking spaces and are released if not occupied by 10:00 AM. The reserved spaces

are charged at a premium over the regular daily fee parking which fills between 7:00-8:00AM. The APRS also manages airport/long term parking permits and monthly reserved parking permits for designated areas around the stations. The APRS provides BART the flexibility to manage and provide parking for a large spectrum of user types.(3)

### ***Residential Permit Parking (RPP) Program Expansion***

The City of San Jose has a successful residential parking permit program which consists of 16 zones around the San Jose State University, Arena/Diridon, the Convention Center, Civic Center, and Flea Market. Figure 2-7-1 summarizes the RPP zone enforcement days and hours.

Residential permits are sold for \$30/year or \$30/2-years depending on the zone.. The maximum allowable permits issued per household vary from 3 to 4 permits. Visitor permits are also sold at \$30/year or \$30/2 years and a maximum of 2 permits are issued per household. In addition to residential parking permits, downtown residents can also purchase discounted overnight parking at four garages in the downtown. Residents who purchase the discounted card can park in the garages Monday through Friday from 5:00 p.m. to 8:00 a.m.(4)

The Arena permit parking zone area includes four areas delineated near the Arena/Diridon Station: 1 Garden/Alameda, 2: St. Leo's, 3: Autumn/Montgomery and 4: Parkside. Permits in the Arena zone are enforced at all times. The City of San Jose may consider expanding the boundaries of the Arena Permit Parking Zone over time as development proceeds and conditions change in the area.

(3) <http://www.bart.gov/guide/parking/index.aspx>

(4) [http://www.sanjoseca.gov/transportation/permits\\_parking.htm](http://www.sanjoseca.gov/transportation/permits_parking.htm)

FIGURE 2-7-1: RESIDENTIAL PARKING PERMIT ENFORCEMENT

Permit Parking Zone	Hours	Days
Arena (Autumn/Montgomery, Garden/Alameda, Parkside, St. Leo's)	Need permit at all times	
Berryessa	10:00 a.m. – 6:00 p.m.	Weekends and holidays
Civic Center	9:00 a.m. – 5:00 p.m.	Monday through Friday
Civic Plaza (Horace Mann) (South University Neighborhood)	8:00 a.m. – 6:00 p.m. 8:00 a.m. – 8:00 p.m.	Except Saturdays, Sundays, and Holidays Except Sundays and Holidays
Market-Almaden	Need permit at all times	
University	8:00 a.m. – 8:00 p.m. 8:00 a.m. – 4:00 p.m.	Monday through Thursday* Fridays*

\*enforced September 1<sup>st</sup>-June 1<sup>st</sup>

### Preferential Parking

Preferential parking policies can be used to allocate parking resources. After allocating parking for the primary user (customer or resident), preferential parking policies can be used to create parking for carpools and vanpools. Preferential parking can be developed by providing a “preferential rate” or by proximity to entry ways, etc. or a combination of both. Preferential parking policies can also be used to allocate parking spaces at light rail stations for carpools and vanpoolers. BART provides preferential parking for carsharing spaces and carpools at every station that provides parking. Carpool parking spaces are limited to first-come, first-served and are subject to the daily parking fee station dependent(7). Seattle, Washington requires preferential rates and stall locations for carpools when approving Transportation Management Plans (TMP’s) for new development. Portland, Oregon requires that short-term visitor stalls be located and signed (e.g., “visitor parking only – 3 Hour Maximum”) on the lower levels of above grade parking garages under its “Visitor Parking” approval classification(8).

(5) Permit Parking Zones and enforcement details provided by City of San Jose Residential Parking Permits Office. February 2011.

(6) <http://www.sanjoseca.gov/transportation/forms/rppmaparena.pdf>

(7) <http://www.bart.gov/guide/parking/> (Accessed 2/22/2010)

(8) Title 33, 33.510.263 of the Portland Central City Transportation Management Plan (CCTMP)

## PARKING DEMAND MANAGEMENT METHODS

### *On-Street Pricing*

Establishing a pricing system for on-street parking will be especially important in the area immediately adjacent to the Diridon Station to support alternative transportation access and quick parking turnover. Pricing will vary based on location with higher pricing at the station and lower gradations of pricing moving away from the station to support these access and development goals.

### *Coordinating On and Off-Street Pricing*

Coordinating on and off-street and parking prices is a strategy that will make on-street management efforts like pricing function more smoothly and have a greater impact. Users typically prefer on-street parking over off-street options but in many cities the per hour cost of on-street parking is lower than the cost of an off-street space. Where possible, on-street and off-street prices should be set to encourage long term parking to occur off-street, reserving the more convenient on-street spaces for short term parkers. This encourages commuting employees to use alternative modes while still providing short term parking for customers. Coordinating on and off-street parking prices is challenging for several reasons. While the City can adjust prices on-street and in the garages it owns, it is unable to directly set rates in the private garages that make up the remainder of San Jose's paid off-street supply. Similarly, if there is a large discrepancy between on-street prices and market rate garage prices, it may be politically difficult to raise on-street rates to the point where they match off-street prices.

Aspen, Colorado (1999) is an example of a community that has successfully balanced on-street and off-street parking pricing policies. Aspen changed its parking pricing structure to increase the availability of prime on-street parking (short-term customers) and increase the utilization of its off-street municipal parking structures

(long-term visitors and employees). Funding from parking is used to pay for parking improvements, improve streetscape and encourage the use of alternative modes (Aspen 1999).

In California, the cities of Glendale and Pasadena also recognized the importance of balancing on-street and off-street pricing. In both cases, the cities created on-street parking pricing systems to encourage better use of off-street public parking facilities.

### ***Unbundling Parking***

The City of San Jose can create incentives to unbundle the cost of parking from residences and businesses. Unbundling is separating the cost of parking from the cost of the use (paying separately for use of a building and parking). It may be used to reduce parking in retail, office or residential developments.

#### *Example: FHWA Value Pricing Pilot Program – San Francisco*

*A Value Pricing Pilot Program study sponsored by the FHWA in 2010 in San Francisco studied both unbundling and carsharing at existing developments to test the impact on vehicle ownership and housing choice. Some key findings from the analysis included (9):*

- *The presence of both car sharing and unbundled parking within a building significantly reduced household vehicle ownership rates.*
- *Average vehicle ownership decreased significantly with the presence of car sharing and unbundled parking (0.76) compared to those properties with neither (1.03)*
- *For 22% of respondents, the presence of car sharing impacted their housing choice. This increased to 48% for households without vehicles and was a significant factor in their residential location decision*

(9) [http://ops.fhwa.dot.gov/tolling\\_pricing/value\\_pricing/projects/not\\_involving\\_tolls/autousecostsvariable/ca\\_carshareinnov\\_sf.htm](http://ops.fhwa.dot.gov/tolling_pricing/value_pricing/projects/not_involving_tolls/autousecostsvariable/ca_carshareinnov_sf.htm)

Unbundled parking is the critical first step toward the development of off-street parking pricing and reducing the amount of free parking. Traditional suburban developments generally hide the cost of parking supply in tenant lease rates or common area fees. This perpetuates free parking and masks the true cost of access to those making transportation access decisions. To this end, unbundling parking in leases should be encouraged – if not required - for future development. This reduces the hidden cost of parking and allows tenants and users to make decisions based upon the market price of parking.

*Example: The Los Angeles County Metropolitan Transportation Authority (LACTMA)*

*The Los Angeles County Metropolitan Transportation Authority (LACTMA) has provides congestion management credits for projects that unbundle parking from developments.(10)*

*Example: Kruse Way, Lake Oswego, Oregon*

*Kruse Way, a commercial/office development in Lake Oswego, Oregon began an “unbundling pilot” program by providing a number of key and highly desirable parking stalls near its headquarters building as premier stalls, available for \$100 per month. All other stalls in the headquarters supply were bundled (with no cost to users). All of the unbundled stalls were sold, with a waiting list created for those waiting for stalls.*

A proposed incentive is to reward new development for unbundling parking. If a new development is willing to unbundle parking at a price equal to the full cost of parking construction and development (as determined by an independent study of parking development cost), new development may seek a conditional permit review and request up to a 10 percent reduction in the minimum parking requirements. The development may also unbundle parking below

*(10) Kodama, Willson and Francis, 1996.*

market rate and receive a reduction equivalent (for example, if a parking space costs \$30,000, and a developer charges \$15,000, it would receive a 5 percent reduction in the minimum parking requirement). This can be used for retail, office and residential projects (such as a new townhouse or condominium projects).

*Example: Los Angeles Adaptive Reuse Ordinance (ARO) Study*

*In 1999, the City of Los Angeles passed an Adaptive Reuse ordinance (ARO) which was designed to encourage the conversion of vacant commercial buildings into housing in downtown Los Angeles. The ordinance included a streamlined incentive process and exemption from minimum parking requirements. Donald Shoup and Michael Manville studied 53 ARO buildings that were redeveloped by 2007. They found that ARO developers typically unbundled parking (where most other developers did not) and that the relaxation of the minimum parking requirements allowed the developers to meet the many and varied preferences for consumer housing demand, and gave them the ability to provide more housing.(11)*

**Parking Cash-out**

Parking cash-out allows employees to choose between a parking subsidy (free parking), or the out-of pocket equivalent cost of the parking space. Employees may choose to apply the money towards their parking space or make arrangements to use a lower cost alternative mode and keep the cash. Although parking cash out programs are often lumped under the umbrella of "TDM," they are singled out here because of their direct impact on the parking system. A study on parking cash-out summarized results from eight work sites and estimated a 26 percent reduction in parking demand.(12) In recent years, the definition of cash-out has been expanded to provide a more flexible and broad application.

(11) <http://www.uctc.net/research/briefs/PB-2010-02.pdf>

(12) Shoup, Donald. "Evaluating the Effects of Cashing Out Employer-Paid Parking: Eight Case Studies," *Transport Policy*, Vol. 4, No. 4, October 1997, pp. 201-216.

Within the past ten years, many employers in downtown Portland, downtown San Francisco and downtown Seattle have created effective programs that eliminate free or subsidized parking while providing employees with transit passes.

### NEXT STEPS & CONSIDERATIONS

For a Diridon Area Parking management plan to be effective it must be integrated within the City's larger framework of parking management. Implementing a parking plan that uses the tools discussed will represent an intensification of current management activities and will require the City to expend additional resources. There are a variety of approaches the City can take to implementing and administering the parking management strategies discussed in this section. Regardless of the specific approach adopted, however, the City will need to consider how to address the following issues:

#### *Implementation and Administration*

Developing, implementing, and administering parking management plans across the Diridon Study Area will be a labor intensive process. The City should consider whether to continue with a centralized approach to parking (handled directly through the Public Works Department) or whether they will try a "Parking District" approach where the Diridon Study Area could have more autonomy to manage parking and receive a portion of the revenue generated.

A Parking District is a legal entity established within the boundaries of a city that provide parking impacted commercial neighborhoods with a mechanism to devise and implement parking management solutions to meet their specific needs. The City of San Diego currently has six community parking districts. (13)

(13) <http://www.sandiego.gov/economic-development/business-assistance/small-business/districts.shtml>

The City of Ventura, California has a slightly different approach using a Downtown Parking Advisory Committee (PAC). Ventura's Downtown PAC assists, advises, and make recommendations to the City Council, Planning Commission, and staff on a range of issues related to parking management strategies and programs for their Downtown Parking District Area, including maintenance, operating and capital budgets, hours of operation, parking pricing policies, valet programs, and employee commuter parking policies. PAC members include: one city resident of the district, two business owners, two property owners, one appointed member and one member to represent parking users in general.<sup>(14)</sup>

### ***Education and Outreach***

As parking management tools are implemented in the Diridon Study Area, it is important that the City engage in public outreach to support these initiatives. Such education efforts will not only explain how new programs and technologies work, but will also help the public understand the purpose and benefits of parking management programs that users might initially interpret as restrictive or inconvenient.

### ***Monitoring***

After implementing a parking management program, it is critical that the area under management be monitored so that the program can be adjusted as necessary. Setting up an ongoing monitoring procedure is an important part of a parking management plan and should be incorporated into the cost of implementation. New parking technology makes it easier to monitor parking utilization and turnover, therefore adjusting parking operations. How monitoring will occur, who will be responsible, and how parking management plans will be adjusted are all questions the City must address.

(14) <http://www.cityofventura.net/press-release/ventura-city-council-now-accepting-volunteer-applicants-downtown-parking-advisory-comm>

### ***Enforcement***

Enforcement is key to the success of any parking management plan and as new parking management tools are implemented in San Jose enforcement activities will need to expand and adjust. The City must decide whether it wishes to continue with the current model of enforcement and simply add more officers and new beats or whether it wants to adjust the purpose and organization of enforcement activities. One alternative model would be to more explicitly target the role of enforcement to promoting parking management activities and to deemphasize ticketing as a revenue source. For example, the City of Houston has developed a “parking ambassador” program that changes the role of the enforcement office to also include helping customers and visitors pay for on-street parking (rather than only issuing citations).

### ***Revenue Control and Finance***

The scope of this study did not include an evaluation of the City's current parking revenue streams and labor costs. However, it is important to note that many of the management tools suggested will generate revenue and many will also incur significant costs. How these resultant costs and revenue streams are managed is an important question facing the City that should be assessed. Options include passing all revenues and costs through the General Fund. The City could also use parking districts or to allocate all or a portion of revenues back to the neighborhoods where they were collected (parking increment program). Parking revenues, even if they are aggregated at the citywide level, can also be targeted to fund alternative modes or to finance new parking supply expansion projects in areas where more physical supply is needed.

## Transportation Demand Management

A Transportation Demand Management (TDM) Plan includes supporting increased density, mixed use and increasing alternative mode share. As discussed in the section above demand management is an essential element to a successful parking management program, but parking is only one element of a comprehensive TDM program. Other elements include congestion and traffic reduction, livability, and improved access. Additionally, a TDM program is further defined with respect to how it is administered and enforced.

A parking management program is typically managed by the city and the TDM program is typically managed by a transportation management association (TMA) set up specifically for defined district. The City of San Jose currently has an active event based TDM program in the Diridon Area.

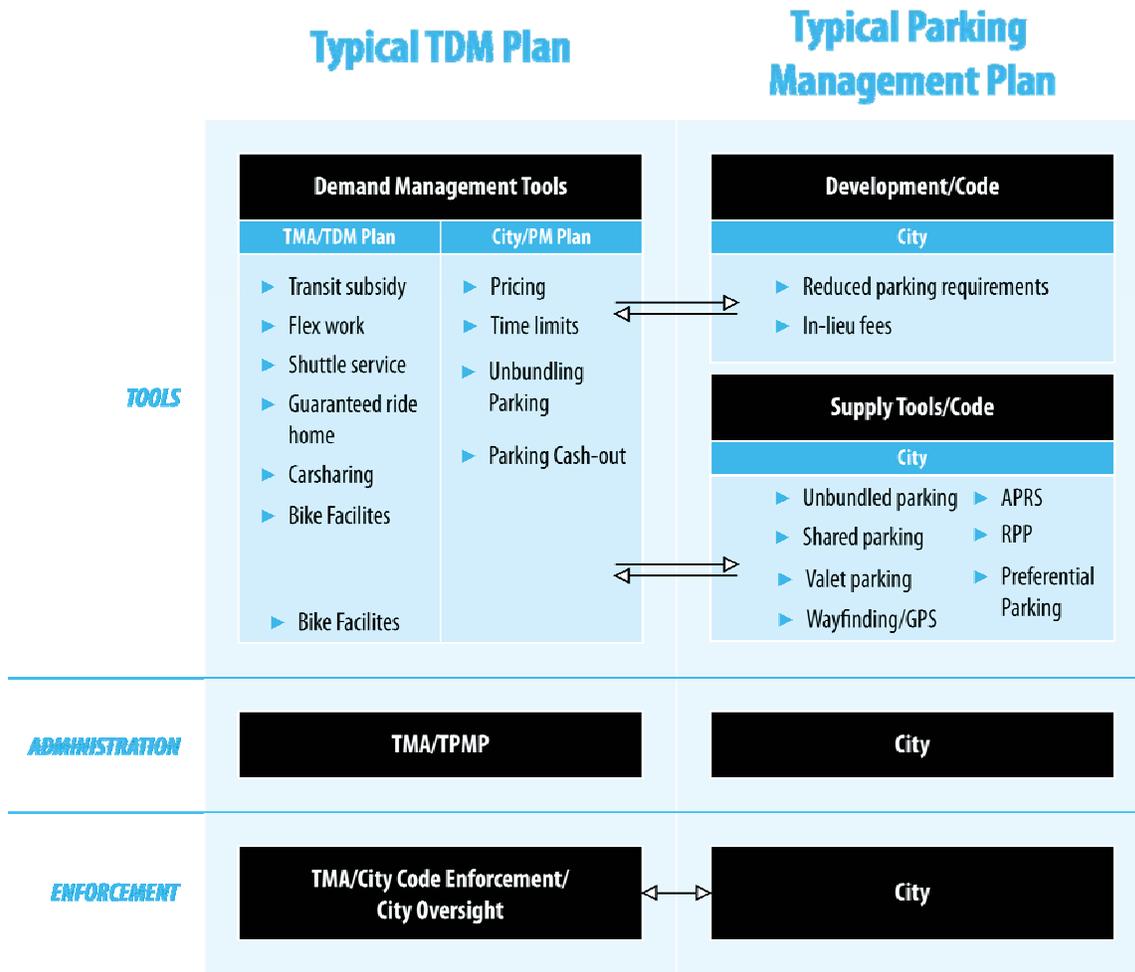
### ADMINISTRATION

The City of San Jose prepares and administers Transportation and Parking Management Plans (TPMPs) for major developments. The recently executed 3rd Amendment to the amended and restated San Jose Arena Management Agreement refers to TPMPs that already have been prepared in the Diridon area and intentions of the City to prepare future TPMPs for the large scale projects. The San Jose Arena Management Agreement provides a strong basis for the administration of a continuing transportation demand management (TDM) program.

This agreement currently focuses on the details of the event management for the San Jose Arena and the proposed ball park which includes traffic, transit, bicycle, and pedestrian management and operations. Additional sections discuss detailed operational frameworks for parking management and transit TPMPs.

It is recommended that these TPMPs be fleshed out in greater

FIGURE 2-7-2: RELATIONSHIP BETWEEN TYPICAL PARKING AND TRAFFIC MANAGEMENT PLANS



detail as the Diridon Station Area develops to include the TDM elements discussed in the section below.

**TDM STRATEGIES**

A TDM plan generally includes strategies that aim to promote and encourage more efficient use of transportation resources. A TDM plan may comprise of a multitude of solutions and evaluative techniques that provide information on measures to increase transportation system efficiency. Most importantly, an effective

TDM plan coordinates and encourages the interaction and participation between the community, local government agencies and stakeholders. This cooperation creates a framework for implementing key transportation strategies that establish specific goals and objectives important to both entities.

The transportation network in and around the proposed station area is and would continue to be challenged by increasing roadway congestion. As very limited opportunities exist to increase traffic capacity near the site, effective management of travel demand becomes a critically important tool to accommodate future development and economic growth. Given the location and the nature of the station area, along with the high amount of traffic, transit, bicycle, and pedestrian activity in and around the station area, pedestrian and bicycle safety as well as traffic congestion and transit circulation become key issues of concern within the local community. In order to address these issues, effective TDM strategies are necessary to facilitate and manage travel demand in and around the station area while promoting safety for patrons and residences of the area.

Given the nature of the proposed station area, an effective TDM plan would need to focus on balancing short-term and long-term parking demand, while continuing to maintain a viable, transportation network that allows all patrons access to various modes of transportation. Figure 2-7-3 lists various TDM measures that are applicable to the proposed station area.

FIGURE 2-7-3: TRANSPORTATION DEMAND STRATEGIES

TDM Strategy	Type	Purpose	Goals Supported	Target Audience	Implementation	Coordination/Monitoring
Wayfinding	PP/I	Enhance accessibility/ Promote “Park Once” Initiative	Traffic reduction/ Improve circulation/ Assist short-term demand	Visitors/ Short-term user groups	City/TMA	City/TMA
Bicycle Storage	I	Increase bicycle mode of travel/ Create “bike station” areas	Traffic reduction/ Liveability	Residents/ Employees	City/TMA	City
Bikesharing	PP	Reduce auto-based demand/ Increase accessibility	Traffic management/ Liveability/ Accessibility	Residents/ Employees	City/TMA/ PPP	City/TMA/ PPP
Transit Subsidies/ EcoPass	PP	Encourage alternative modes of travel/ Reduce auto-based demand/ Enhance multimodal environment	Parking management/ Traffic reduction/ Improve circulation/ Liveability	All study area	City/TMA/ Private businesses	TMA
TDM Coordinator/ Rideshare	PP	Reduce employee-based demand	Parking management/ Enhance transit usage/ Traffic reduction	Employers/ Employees	City/ Private businesses	City/ Private businesses
Carsharing	PP	Reduce single-occupancy vehicle demand/ Reduce cost of private ownership/ Increase accessibility	Traffic management	Residents/ Employees	City/TMA/ PPP	City/TMA/ PPP
Flex Work	PP	Reduce peak demand	Traffic management	Employers/ Employees	Private/Public businesses	Private/Public businesses
Shuttle Service	PP	Encourage transit usage/ Enhance mode share goals	Traffic management/ Accessibility	Employers/ Employees	Private/Public businesses	Private/Public businesses
Guaranteed Ride Home	PP	Reduce auto dependency	Accessibility	Employers/ Employees	Private/Public businesses	Private/Public businesses
Parking Cash-Out	PP	Reduce employee-based demand	Parking management/ Traffic reduction	Employers/ Employees	City/Private businesses	City/Private businesses
Parking Pricing	PP	Reduce short-term demand/ Improve off-street parking efficiency/ Promote turnover in high activity zones	Parking management/ Maximize parking efficiency	Visitors/ Employees	City/TMA	City/TMA
Unbundled Parking	PP	Reduce cost of parking development/ Allocate parking needs in required areas	Parking management	Residents/ Developers	City	City
Reduce Parking Standards	PP	Reduce cost of parking development/ Avoid oversupply of parking/ Enhance mode share goals	Parking management	All study area	City	City

Notes:  
 PP – Policy/Program Strategy  
 I – Infrastructure Strategy  
 TMA – Transportation Management Agency  
 PPP – Public Private Partnership

## 2.8 Parking supply and demand

### PROPOSED DEVELOPMENT

The building characteristics and proposed development capacity associated with Preferred Alternative is broken up into three distinct Areas. The Central Zone is a high intensity downtown core with high density office, retail and hotel uses near the proposed station, primarily in the Central Subarea H.

The Northern Zone consists of Subarea A and B which are primarily high density office and R&D and Subarea C which has office along the rail corridor and residential retail mixed use adjacent to the existing residential neighborhood.

The Southern Zone consists of Subareas D and F which contain the bulk of the residential units for the plan. Each of these subareas also contain a significant amount of neighborhood supporting retail. Subarea E primarily contains commercial office development with some supportive retail development.

### PROPOSED PARKING DEMAND

The following proposed parking ratios are projections of future parking ratios to be achieved upon the complete implementation and development of this Plan. These ratios will also be used to estimate full development capacity in the Diridon Station Area and will be used for analysis in the Environmental Impact Report (EIR). These proposed parking ratios are in conformance with the Draft Envision San Jose 2040 General Plan goals and policies for VMT reductions and mode shift changes. Although aggressive these ratios are appropriate for a multi-modal rich environment, such as the Diridon Station Area.

The proposed parking ratios are not recommended parking revisions to the City's Zoning Code; recommend parking revisions will be explored and developed as a next step in the planning process for the Diridon Station Area. Given that maximum parking

ratios are not proposed, developers could build more parking spaces than would be provided with the proposed parking ratios. If this were to happen, then additional parking would need to be built in lieu of development capacity, potentially resulting in less overall development for the Diridon Station Area than proposed in this Plan.

### ***Commercial/Light Industrial***

The recommended parking rate is based on the Envision San Jose's 2040 General Plan 20 percent VMT reduction goal which leads to a weighted rate of 1.51 parking spaces per 1,000 gross square feet for commercial-light industrial. This rate weighs the developments from the North, South and Central Areas according to the transit benefits, alternative mode improvements, density and mix of uses in each area. Those areas with the highest mix, density and transit benefit have greatest potential for TDM and parking management success, thus have the lowest parking ratios.

### ***Retail***

Retail parking rates of 0 spaces per 1,000 gross square feet are proposed consistent with the current City of San Jose Downtown Zoning Regulations, as established in the Chapter 20.70 of the City Municipal Code.

### ***Residential***

The recommended residential parking rate is at 1.0 space per unit, split between 0.75 for units and 0.25 for guest spaces. Guest spaces should be pooled into shareable commercial space when part of a mixed-use development. When the unit configuration allows (i.e. apartments vs. townhomes), residential parking should be unbundled from the lease or condominium sale price. Car-sharing programs as indicated in the TDM discussion should be explored as a part of each residential development in order to

reduce the number of parking spaces required.

### *Hotel*

Hotel parking in a high density transit hub such as Diridon will be well served by 1 parking space per every 5 rooms (0.2). This station area will be highly served by multiple transit and shuttle operators and have easy access to the airport for out of town guests. In a high demand area such as Diridon served that is served by transit, parking is often provided for a fee and by valet service.

### **SUMMARY**

Based on these planned developments, the total projected parking demand would yield a need for approximately 10,249 parking spaces to accommodate this development. This is detailed by land use type in Figure 2-8-1.

The Central Zone Subarea (H) would be comprised of 1,146,000 gross square feet of commercial light industrial uses, 140,000 gross square feet of retail and restaurant use and 250 hotel units. Based on the recommended parking rates, the proposed uses would require approximately 1,727 parking spaces.

The Northern Zone would include 3,012,400 gross square feet of commercial/light industrial use; approximately 81,100 gross square feet of retail and restaurant use; and 223 residential units. This proposed development capacity would require 4,763 parking spaces based on the recommended parking rates.

The Southern Zone would include 805,000 gross square feet of commercial/light industrial use; approximately 203,000 gross square feet of retail and restaurant use, 650 hotel units and 2365 residential units. Based on the recommended parking rates, these proposed uses would require approximately 3,708 parking spaces.

FIGURE 2-8-1: DEVELOPMENT-BASED PARKING DEMAND BY LAND USE CATEGORY AND ZONE

20% VMT reduction		Proposed Development by Land Use			
		Commercial/Light Industrial	Retail/Restaurant	Residential	Hotel
North	rate	1.9	0	1	0.2
A. Arena North		576,400	40,300		
B. Julian North		1,634,000			
C. Stockton Corridor		802,000	40,800	223	
	Total	3,012,400	81,100	223	0
South	rate	1.4	0	1	0.2
D. Dupont/McEvoy			61,000	1175	
E. Royal/Auzerias		805,000	12,000	155	200
F. Park/ San Carlos			130,000	1035	450
	Total	805,000	203,000	2365	650
Central	rate	0.55	0	1	0.2
G. Ballpark			0	0	
H. Station East		1,146,000	140,000		250
	Total	1,146,000	140,000	0	250
Total Development		4,963,400	708,200	2,588	900
Projected Parking Demand					
North	5,947	5,724	0	223	0
South	3,622	1,127	0	2365	130
Central	680	630	0	0	50
	Total	10,249	7,481	0	2,588
Weighted Rate		1.51	0.00	1.00	0.20

### BALLPARK PARKING DEMAND

The Supplemental Environmental Impact Report for the proposed Major League Baseball (MLB) Ballpark approved by the City Council in June 2010 assumes a parking demand of 12,450 to 13,929 spaces, the majority of which are east of highway 87. These parking facilities are in both public and private garages and surface lots, most of which have low usage during the evening hours and weekends when the vast majority of Major League Baseball games are played. The additional parking planned for Diridon is not critical or necessary to accommodate the needs of baseball.

## TRANSIT PARKING DEMAND

There are multiple transit agencies that have current or future interest in providing parking for their riders on the Diridon Station site. Diridon Station serves an increasingly dense station area and is uniquely well-connected to the region rail transit system, with connections ultimately being provided to serve High Speed Rail, BART, Caltrain, VTA bus and light rail, Capitol Corridor, ACE, Amtrak and other regional transit services. As such, the station is less appropriate to have a major park and ride function. Decreasing reliance on private vehicle for station access is desired and anticipated. At the same time, it is recognized that some supply of commuter parking is required to support continuing transit ridership growth as the station area evolves and as new services are added over time.

Estimates of transit parking demand have been developed based on the following principles

- The station is classified as a Transit Center per Caltrain's station access policy, identified as "stations situated in urban or suburban downtown cores with high service levels, ridership, transit connectivity, and residential and employment densities.
- Park and Ride access mode share to the station will decrease over time, consistent with City of San José VMT reduction goals as well as the policies of the transit operations to prioritize alternative means of access.
- Mode share for transit transfers will increase over time as new transit services are initiated and service by existing operators is increased.
- Mode share for station access by walking will increase over time as significant amounts of new transit-oriented development are provided within the immediate station area.
- Overnight long term parking will not be provided immediately adjacent to the station. This demand will be served by existing and future parking facilities located within 3 miles of the station with shuttle buses or other modes of transit access.

Parking demand estimates were developed for the BART, Caltrain and High Speed Rail providers in the following subsections.

***BART, Caltrain and Other Conventional Rail Operators***

The BART and Caltrain station area parking demand estimates were developed from 2030 ridership and unconstrained parking demand forecasts provided by VTA (BART Silicon Valley)(15) and Caltrain. These unconstrained estimated were then adjusted to reflect a decrease in park and ride (PNR) mode share. Parking reduction scenarios were developed based on the mode shares at BART and Caltrain stations with comparable land uses and intensity of development. These stations are shown in Figure 2-8-2 below.

FIGURE 2-8-2: COMPARABLE STATIONS BY MODE SPLIT GOAL

<i>Comparable Stations (PNR mode split)</i>	<i>10%</i>	<i>15%</i>	<i>20-25%</i>
<i>BART</i>	<i>12th Street Oakland</i>	<i>Glen Park</i>	<i>Ashby</i>
<i>Caltrain</i>	<i>Burlingame</i>	<i>Palo Alto</i>	<i>San Mateo</i>

Based on discussions with VTA and Caltrain they believe that these mode split goals will be achievable given the planned land use changes that will support a higher walk mode share and increased transit connections that will support higher transit transfer rates.

Parking demand was also estimated for Amtrak and Capitol Corridor services by using available station access mode share information and extrapolating to future ridership levels. Commuter parking for ACE is not anticipated at Diridon Station. The parking demand estimates are summarized in Figure 2-8-3.

(15) SVRT EIS, Chapter 3, P3-31.

FIGURE 2-8-3:DIRIDON STATION TRANSIT ACCESS MODE SPLIT GOALS AND PARKING SPACES

	2030 Projection	10% PNR Mode Share Target	15% PNR Mode Share Target	20% PNR Mode Share Target
BART	2,585	260	390	520
Caltrain	2,281	600	900	1,200
Amtrak and Capitol Corridor	65	65	65	65
High Speed Rail*	3,800	428	428	428
Total		1,353	1,783	2,213

\*Refer to HSR discussion below

### High Speed Rail

According to the High Speed Rail (HSR) Authority, there is a total demand for 3,800 spaces at Diridon Station(16) . Demand for commuter trips (daily parking) can be accommodated within the station area. Long term, overnight parking will be accommodated outside of the ½ mile station area at remote parking locations within three miles of the station. Using passenger demand forecast information provided by HSR, it is estimated that 428 parking spaces will be required within the station area to serve commuter demand. Overnight, long distance trips will account for a large share of the parking demand. This is due to the fact that passengers taking longer distance trips will also have longer duration trips. For example, a commuter passenger driving to the station will occupy a parking space for one day, while a long distance, overnight trip passenger will occupy a parking space for multiple days. Commuter parking demand was estimated as follows:

- 31% of daily passengers are intra-regional (local) trips(16)
- 1,400 vehicles arriving to park daily (16)
- Commuter parking spaces = 31% of 1,400 vehicles = 428 parking spaces

Substantial additional work will be undertaken to confirm the feasibility of accommodating parking for overnight HSR customers

(16)California High Speed Rail Authority. *Parking Guidance Memo. July 2010.*

FIGURE 2-8-4: DIRIDON PARKING DEMAND SUMMARY

Total Parking Demand			
	Low	Med	High
Total Transit Parking Demand	1,353	1,783	2,213
Total Development Demand		10,249	
Total Estimated Parking Demand	11,602	12,032	12,462

outside the Diridon area and within a 3-mile radius. The analysis of potential locations will address the following points:

- Means to enforce this arrangement for overnight parking
- Identification of sites, with associated commitments, for accommodating this overnight parking.
- Establishment of shuttle arrangements for transporting these overnight patrons to and from the Diridon Station.
- Economic feasibility of these off-site parking and shuttle arrangements.

Although these feasibility analyses and conclusions are beyond the scope of this report, they will be completed and presented to the City Council prior to the City’s adoption of the EIR for the Diridon area.

**PARKING DEMAND SUMMARY**

Figure 2-8-4 summarizes the total anticipated parking demand for the Diridon Station Area Plan.

**ADDITIONAL COMMENTS ABOUT PARK AND RIDE PARKING DEMAND IN THE STATION AREA**

For a non-event day regular parking occupancy at the lots in subarea H in the vicinity of the Diridon Station were observed to average 86 percent at 5PM. Occupancy in these lots subsequently dropped sharply to 26 percent after commute hours between 5-9PM. This correlates to similar reduction in overall parking demand around

the station area for park and ride parking in the evening. This indicates that during typical commute days in the Diridon Station Area, the majority of parkers leave after 5PM, freeing the off-street supply for other uses such as evening events at the HP Pavilion. Assuming typical patterns continue, 350 to 575 parkers(17) can be expected to remain in the Diridon Station Area after 5PM, freeing up parking for other uses such as evening events.

#### **PARKING SUPPLY LOCATIONS**

Parking supply locations are discussed in more detail in section 4.2 of this report.

*Minimum is based on a 10% mode split and maximum is based on a 20% mode split.  
Approximately 465 parkers would remain based on a 15% mode split.*

## 2.9 Infrastructure capacity and demand

As indicated in the existing conditions analysis, the existing utility infrastructure serving the Diridon Station Area is antiquated and undersized to meet the future buildout needs. The majority of the infrastructure systems will justify replacement to meet the increased demand, improved reliability, and distribution objectives.

### STORMWATER FACILITIES

Flood Plain considerations, Stormwater Conveyance upgrades, Hydrograph Modification implementation, River/Creek Outfall improvements, and Stormwater Quality Management compliance must be considered in implementing stormwater infrastructure.

### FLOOD PLAIN

Flood Plain. The existing conditions report indicates low-lying areas in proximity to the river and creek are currently subject to flood inundation during extreme storm events. These areas will require improvements that either raise the properties above the existing flood levels or sufficiently lower the current flood level designations to remove them from the flood plain mapping and the requirements for flood insurance. It is unlikely that Santa Clara Valley Water District considered these areas for storm water storage when modeling the capacity of the rivers and creeks. Raising or “filling” the sites therefore should not negatively impact the overall storage capability of the areas storm water conveyance facilities. Any proposed mitigation will require a study through the flood control district coupled with a FEMA application and approval (Letter of Map Revision) for FEMA to modify the areas Flood Insurance Rate Map.

### STORMWATER CONVEYANCE

The stormwater conveyance lines that bisect and collect runoff from the planning area appear to have been sized to accommodate

roughly a two year statistical storm event. With the City's current stormwater design policy requiring attenuation of the 'ten year storm event,' many of the gravity conveyance lines in the area will need to be upsized to meet current requirements.

### **HYDROGRAPH MODIFICATION**

Stormwater detention/retention may be needed at both the site specific project level and/or at the regional level within the Diridon Station Area Plan. Detaining/retaining stormwater would assist in attenuating the stormwater levels in the creek watershed so as not to inundate downstream properties. A study will need to demonstrate how the the area plan will handle stormwater runoff.

### **RIVER/CREEK OUTFALLS**

The current system is collected and discharged directly to the Guadalupe River and Creek via multiple outfall structures located in the channel banks. An analysis of each individual outfall is needed to determine its condition and suitability for reuse. If new or replacement outfalls are needed, each will require permitting from the Army Corps of Engineers, the California Regional Water Quality Control Board, the California Department of Fish and Game, and multiple other local, regional, and federal agencies.

### **STORMWATER QUALITY MANAGEMENT**

The potential need for new outfall structures into the river and creek would likely require a US Army Corps of Engineers Permit(s) along with Regional Water Quality Control Board Water Quality Certification. Thus Diridon Station Area will likely need a Stormwater Management Plan to address stormwater quality issues. This plan should address the potential for treating stormwater runoff in vegetative treatment systems integral with the parks and open spaces. While each specific project within the area should develop their own stormwater quality plan to treat stormwater at the point

source, the backbone infrastructure that supports the entire plan may need regional areas to treat stormwater runoff from the streets and other public areas.

### WATER FACILITIES

Currently distribution lines within the area range from asbestos cement, cast iron, polyvinyl chloride and ductile iron pipes. Many of the distribution lines in the Planning Area are 6-inch in diameter. The land use, densities, and building heights associated with the Preferred Alternative will require replacement of the water distribution system within the area to meet both the domestic demand and the fire service demands for new building structures. Trunk water mains that feed the area may also need to be upsized to meet increased fire service demands.

### WATER DEMAND ANALYSIS

Based on the land use and associated consumption rates, the comparative water demand for Diridon Station Recommended Alternative is approximately 1.84 million gallons per day.

FIGURE 2-9-1: WATER USAGE

PREFERRED ALTERNATIVE:			WATER CONSUMPTION RATE		WATER DEMAND		WASTEWATER DEMAND <sup>1</sup>	
LAND USE	TOTAL	UNIT	RATE	UNIT	GPM	MGPD	GPM	MGPD
COMMERCIAL	4,963,400	SF	0.18	GPD/SF	620	0.89	558	0.80
RETAIL	424,100	SF	0.50	GPD/SF	147	0.21	133	0.19
RESIDENTIAL	2,588	UNITS	200	GPD/UNIT	288	0.41	259	0.37
HOTEL	900	ROOMS	175	GPD/UNIT	109	0.16	98	0.14
BALL PARK	32,000	SEATS	5	GPD/SEAT	111	0.16	100	0.14
<b>TOTAL</b>					<b>1,276</b>	<b>1.84</b>	<b>1,148</b>	<b>1.65</b>

1. SEWER GENERATION RATES ARE BASED ON 90% OF THE ESTIMATED DOMESTIC WATER CONSUMPTION

## WASTEWATER FACILITIES

As noted in the existing conditions report, siphons transfer wastewater from the area below the Guadalupe River and Los Gatos Creek. The Preferred Alternative will increase wastewater flow generation beyond the current condition. As the City of San José does not typically allow flow rates to increase through these siphons, an analysis to determine if the increased dry weather wastewater flows can be offset by decreased infiltration and inflow would be required. A decrease in flow would be expected through the replacement of older antiquated vitrified clay pipes with new polyvinylchloride or high density polyethylene pipes. The analysis is likely to show that pipe replacement alone will not mitigate all of the increased sewer loads and that some of the siphons may require replacement. The permitting for these replacement siphons would include multiple local, state and federal agencies, including the Santa Clara Valley Water District, the U.S. Army Corps of Engineers, the California Regional Water Quality Control Board and the California Department of Fish and Game.

Based on the land use and associated generation rates, the comparative wastewater generation for Diridon Station Specific Plan Preferred Alternative is approximately 1.65 million gallons per day assuming that wastewater generation is 90-percent of the domestic water consumption. Utilizing a plan area peaking factor of 2.5, yields a peak wastewater flow of 4.1 million gallons per day.

## 2.10 Affordable housing

### NEED FOR AFFORDABLE HOUSING

In addition to market rate residential development, the need for affordable housing in the City of San Jose will continue to increase over the next 30 years according to numerous recent studies. According to the San Francisco Bay Area Housing Needs Plan, "Santa Clara County is the most populous county in the Bay Area and will experience the greatest amount of growth. Santa Clara County is expected to grow by nearly 23 percent over the next 25 years.....and despite the recent mortgage crisis and soaring number of foreclosures, most Bay Area homes continue to be too expensive for families with average household incomes to afford."

The projected growth will occur in two primary populations, [1] persons under age 34 and [2] those 65 years old and older. There will also be an increased need for housing those in danger of homelessness and for those with special needs. As indicated in the City's 5 Year Housing Investment Plan and its federal Consolidate Plan, the San Jose Housing Department directs its resources to facilitate the production of housing opportunities for those families and households in greatest need. This includes very-low income households who earn up to \$52,000; low income households earning up to \$81,000; and moderate-income households earning up to \$124,000. (Income limits reflect a household size of four. The income limits increase or decrease depending on household size, and are annually adjusted as necessary).

The increasing number of households with persons under the age of 34 and households with persons over the age of 65, along with special needs populations will all require a focus on affordable housing with specific unit types, amenities, adjacency to retail and services, and proximity to public transportation. The City of San Jose General Plan and a recent Blue Ribbon Task Force on Homelessness, co-chaired by former Santa Clara County Supervisor Don Gage and City of San Jose Mayor Chuck Reed identified

numerous strategies to accommodate the need for affordable housing. Location near transit is a primary recommendation.

### **LISC STUDY**

The 2007 study, *Housing Silicon Valley: A 20 Year Plan to End the Affordable Housing Crisis*, prepared for the Bay Area Local Initiatives Support Corporation [Bay Area LISC] is one of the most comprehensive studies conducted regarding affordable housing demand and production.

The Study indicates that over 41,000 Santa Clara County households across all income levels experience severe housing needs, which is defined by paying over 50% of household incomes on housing. These households are termed “severely rent burdened”. Of these, 21,758 households are in San Jose. Of these existing, rent-burdened households, 40% are single person households, and 25% are two person households.

The LISC Study projects a need for 90,000 affordable households in Santa Clara County through 2027, with the City of San Jose assuming a major role in housing production. The single largest need [76% or 68,700 units] are for extremely low-income [ELI], very low-income [VLI] and low-income [LI] households. According to the Study, 39% of the needed ELI and VLI units would require a studio apartment or one bedroom apartment.

### **ENVISION SAN JOSÉ 2040 GENERAL PLAN UPDATE**

The City of San José General Plan, Appendix B, prepared by the Center for the Continuing Study of the California Economy [August 2008] projects household population growth by the year 2040 to increase primarily in the 20-34 age group and in the 65 and older population.

FIGURE 2-10-1: SAN JOSE POPULATION BY AGE GROUP 2007 - 2040 (THOUSANDS)

	2007	2025	2040	2007-2025	2025-2040	Change 2007-2040
0-4	72	83	97	11	14	25
5-19	210	215	261	5	46	51
20-34	178	269	295	91	26	117
35-54	315	275	366	-41	92	51
55-64	98	166	115	68	-51	17
65+	100	209	310	108	102	210
Total	974	1216	1445	242	229	471

*From: "Projections of Jobs, Population and Households for the City of San Jose"—prepared by Center for the Continuing Study of the California Economy", August 2008*

Seniors, in particular will need affordable housing located near major transit and retail. The growth in the senior population will also increase the need for special needs housing with easy access for case workers, in-home service providers, and family members.

Those in the 20-34 population will seek affordable housing options near shopping and transit for access to workplaces. This population will favor easy access to downtown San Jose retail and cultural amenities, coffee shops, and jobs. Experience of local non-profit developers indicates that this group of urban singles prefers small units with on-site amenities like gyms, community kitchens, computer rooms and laundry rooms. Once the U.S. economy recovers, highly mobile, educated workers will be looking for innovative workplaces with big city amenities. A recent article in the Wall Street Journal [September 30, 2009] listed the top ten "Next Youth-Magnet Cities" with the City of San Jose as number 10.

**CERTIFIED HOUSING ELEMENT**

State law requires that cities must include a residential component called the Housing Element in their General Plan. The Housing Element identifies policies and programs to facilitate the production of housing units in order to meet the cities' fair share of the region's housing needs. The City of San Jose's current Housing

Element must plan for approximately 35,000 housing units for the 2009-2014 planning period, composed of 19,000 affordable units and 16,000 market rate units. While the City's current Housing Element emphasizes residential development in infill and transit-oriented locations, recently passed State legislation requiring greenhouse gas reduction and sustainable land use planning will even more tightly integrate housing development with proximity to transit infrastructure and other land uses in future Housing Element planning cycles."

### **SPECIAL NEEDS HOUSING**

Providing housing opportunities for the special needs population is especially important at Diridon Station. This population, which includes a diverse group of individuals, including the elderly, the frail elderly, the physically disabled, persons with addictions, large households, mental illness, and people with HIV/AIDS, spans a wide range of housing and service needs. The City of San Jose's federal Consolidated Plan identifies a total unmet need of 41,400 units for its special needs population. In particular, the special needs population requires affordable housing options located within easy access to non auto-oriented forms of transportation that allow them to reach essential medical and social services, as well as amenities for everyday life. The social services may be provided by residential developers themselves or contracted out to organizations that specialize in providing special needs services to tenants. Diridon's position as one of the most connected transit stations in the US makes it one of the prime areas in San Jose in which to create affordable housing opportunities for its special needs population.

### **INCORPORATING AFFORDABLE HOUSING:**

There are a variety of tools for creating affordable housing opportunities. One mechanism is San Jose's recently adopted citywide inclusionary ordinance, which requires 15% of residential

units to be built as affordable homes once the ordinance becomes operational. Affordable housing units created through the inclusionary ordinance can either be integrated directly into the same building as market-rate units for a mixed-income development that includes above-moderate income households; or the affordable units can be produced in “stand alone” developments without market rate units.

In the past, many market rate developers have paid “in-lieu” fees rather than building the affordable units. The City utilizes the in-lieu fees as an additional financing source for stand-alone (100%) affordable development through public/private partnerships with non-profit residential developers. These partnerships are especially important for creating household opportunities for those most in need, such as extremely low-income households and the special needs population, as this group is projected to increase. Policies must be developed as part of this Plan to ensure that any in-lieu fees paid within the Diridon Planning Area be kept within the Diridon Area in order to meet its affordable housing needs. The in-lieu fees may also be applied to immediately adjacent neighborhoods that connect into and directly support the Diridon Area Plan, such as The Alameda, Downtown, along Park Ave, and adjacent portions of West San Carlos. These areas should be within one-quarter mile of the Plan boundary, but no more than one-half mile away.

The second strategy for providing affordable housing is to acquire and rehabilitate existing units in the Diridon Planning Area and apply long-term affordability requirements to them. This strategy has the benefit of furthering sustainability goals by utilizing the existing housing stock rather than relying solely on new construction to provide housing opportunities. It also helps prevent displacement by providing the opportunity for existing residents to continue living in their community. This strategy may be appropriate if the Diridon Area Plan has existing buildings that fit the envisioned built environment of the Plan and that can be acquired and rehabilitated with long term affordability provisions.

The third strategy for the provision of affordable housing is through public-private partnerships between non-profit residential developers and the City. Affordable housing can be created by non-profit developers with assistance from the City of San Jose's Housing Department through gap financing from redevelopment tax increment and State or federal funding sources. Other important sources may include community development funds and tax credits. This public purpose lending function has been the City's primary tool in which it has facilitated the development of affordable housing opportunities, especially for those most in need such as extremely-low income households or the special needs population.

These public-private developments often involve funding applications seeking highly competitive funding sources such as low-income housing tax credits that rate a project development proposal on various criteria such as proximity to transit, services, and amenities. Many of these amenities must be in place or developed concurrently for a project proposal to be competitive and to receive maximum funding. In order to best facilitate affordable housing at Diridon Station, the City should proactively seek to develop the Diridon Area in a strategic manner that integrates land uses and that realizes the mixed-use and complete community goals of the Plan. In this manner, there is a higher likelihood that the proper infrastructure and amenities would be in place or developed concurrently with the residential development, allowing the affordable housing proposals to be highly competitive when seeking important funding sources.

### EXISTING POPULATION IN THE PROJECT AREA

The existing population in the Diridon Station Planning area has unique characteristics relative to the rest of San Jose. The City of San Jose's Housing Department analyzed the Diridon's existing characteristics and found the following:

- Percentage of workers taking public transit, walking, biking or working at home is 16.3% compared to 8.6% citywide;
- Median Income for Tract 5003 is \$45,057 compared to \$70,243 citywide;
- Median gross rent for Tract 5003 = \$877 compared to \$1,123 citywide;
- Percent renters = 78% versus 42% citywide.

These characteristics indicate two particularly important features of the existing residential community at Diridon. First, the households at Diridon have lower incomes than San Jose as a whole. Second, these households take non-auto oriented forms of transit at twice the Citywide rate. This reflects the continued need to provide a wide variety of housing opportunities across all income levels at Diridon Station as housing close to transit helps to reduce overall costs while maximizing transit use. Additionally, this will help to create a more diverse community at Diridon Station. The Diridon Plan should continue to support these existing residents while accommodating a new residential population.

**EXISTING AFFORDABLE HOUSING IN THE PROJECT AREA:**

There are approximately 150 existing affordable dwelling units in

FIGURE 2-10-2: EXISTING AFFORDABLE DWELLING UNITS IN THE PROJECT AREA

Project Name	ELI	VLI	LI	MOD	Total
Gifford		6			6
Legacy @ Museum Park				19	19
Delmas Park	26	40	56		122
<b>Total</b>	26	46	56	19	147

Source: City of San Jose Department of Housing

the project area in developments partnering with the City of San Jose. These developments have 55 year affordability restrictions and are relatively new developments.

### THE PREFERRED PLAN FOR DIRIDON STATION

The Preferred Plan calls for approximately 2,400 to 2,700 housing units in two major clusters between the east/west arterial streets of Park Avenue and San Carlos Street. A third, smaller housing cluster is planned for the area between The Alameda and Julian Street west of the HP Pavillion. In order to meet the residential and placemaking goals of Diridon Station, it is important that the City works with both market rate and affordable housing developers to ensure that a wide range of housing types are provided in the Diridon Planning Area.

It should be noted that the total number of housing units in the Preferred Plan is based upon the assumption that the average dwelling unit will be between 900-1,000 square feet. This dwelling unit size is appropriate for urban, market rate apartments, but may be larger than necessary for affordable housing—particularly studios and one bedrooms for single persons and seniors. An urban studio is usually from 450-500 square feet and a senior, and a one-bedroom apartment is usually around 675 square feet. With these smaller affordable units (the City does not have a density bonus ordinance based on State policy, which has been a discussion point over the last few years), there is an opportunity to provide additional affordable dwelling units within the housing clusters illustrated in the Preferred Plan.

Another way to increase the housing supply would be to allow, under certain specified conditions, upper floor housing over “edge” commercial. A good example would be the commercially designate area at the northeastern corner of Stockton and The Alameda.. This location is across from a future Whole Foods store and would be an excellent location for studio housing or artist’s lofts. More importantly, upper floor housing provides “eyes on the

street” on the weekends and during the evenings whereas upper floor commercial is usually vacant. Finally, providing housing in a mixed-use format in strategic retail locations whenever possible brings more resident-shoppers to local stores, thereby increasing traffic to stores and enhancing their economic viability.

### FINANCING STRATEGIES AND IMPLEMENTATION PLAN

Financing strategies for affordable dwelling units may include, but are not limited to, the following:

- City of San Jose Inclusionary Ordinance.
- “Stand alone” Affordable Housing in partnership with a market rate developer to provide the required inclusionary dwelling units.
- Affordable Housing developed in response to City of San Jose Notice of Funding Availability [NOFA’s] using either tax credits and/or HUD financing.
- Partnerships that utilize community development funds or other sources to create mixed-use/mixed-income developments.
- “Value capture” mechanisms that capture the increased value of land due to public investments in order finance affordable housing.

In terms of overall strategy, an implementation plan to ensure that housing opportunities across income categories should be incorporated as part of the Diridon plan. Because land is expensive near transit, and will become more so with the implementation of this Plan, high land values at Diridon Station could quickly price out developers seeking to meet affordable housing needs in the area, forcing them to locate in other parts of San Jose where land is less expensive but perhaps not as desirable for residential development. An implementation plan should include strategies that would make affordable residential development a reality. Such a plan might include financing and/or land acquisition strategies.

## 2.11 Public art

The artist team for this project have prepared a separate summary report for the public art component of the Station Area Plan, entitled "At the Crossroads: Diridon Station Area Art Master Plan".

This document articulates a vision for art at the heart of the experience of the urban realm, defining the character of the community and engaging the public in their daily comings and goings. It provides a framework for giving the area a distinctive character as a unique part of downtown focused on entertainment and multimodal transportation, creating connectivity throughout the region. An executive summary is included below.

### PUBLIC ART MASTER PLAN - EXECUTIVE SUMMARY

The City of San José Office of Cultural Affairs Public Art Program initiated the Diridon Station Area Art Master Plan in conjunction with the City's effort to develop a forward-thinking land use plan, capitalizing on the dramatic changes anticipated over the next decade. The addition of High Speed Rail station (HSR), BART and a potential Major League Ballpark create an opportunity for the City to stimulate new commercial and residential development that adds dynamism to the City life.

A public art initiative currently underway in the Diridon Station Area is the Climate Clock Project. It will be a landmark public artwork that serves to reinforce San José's commitment to a green economy, and the intersection of art and technology through unique partnerships only available in the Silicon Valley. The critical decision was made to locate the Climate Clock within the Diridon Station Planning Area recognizing the future significance of this location as a nexus of land-based public transit for Northern California with the greatest potential for considerable exposure of the Climate Clock, and thereby the greatest potential for realization of the Initiative's mission. Three finalist artist teams are currently developing proposals for the project. Artist selection is

an anticipated to occur in 2012.

The Diridon Station Area is at a crossroads. The current Diridon Station spans the historic El Camino Real, also known as the California Mission Trail; which historically linked San Diego to San Francisco and on to Sonoma via the 21 missions. Later through state highways, the same route was charted from San Francisco, through San José to the southern U.S. border. With the arrival of the HSR, El Camino Real is recreated, and, San José and the Diridon Station Area stand at a 21st Century crossroads—that of the international network created by technology. The City wishes to capitalize on this opportunity and reinforce and escalate its iconic identity as a regional center serving as an international platform for technological innovation. Art in infrastructure and natural systems can support the goals of promoting environmental sustainability and urban livability, it can help shift the relationship between people and place.

### **ART APPROACH: AT THE CROSSROADS**

The Diridon Station Area Art Master Plan follows the land uses identified in the Land Use Plan, embracing a varied approach to art integration, responding to the concept of San José at the Crossroads. The San José Public Art Program will be the lead agency in implementing the public art program in the Diridon Station Area. It will work with the San José Redevelopment Agency and other public and private entities to achieve the vision of the Master Plan.

### **MISSION**

The mission of the Diridon Station Area Art Program is to identify San José as a diverse global center for innovation and change.

The Diridon Station Area Art Master Plan celebrates San José as a Crossroads:

- of engagement
- of innovation
- of ecology

This thematic approach creates a broad framework within which artists may work. It envisions art that takes many forms and may:

- use technology and/or comment upon it
- reveal natural systems or alternative energy use
- be celebratory, adding spectacle, whimsy, and a sense of play
- draw upon San José's rich ethnic mix
- be interactive, creating opportunities for cross-cultural communication and public engagement

### *Vision*

The long-term vision for the Diridon Station Area is to be a lively and engaging part of downtown defined by its dynamic and sustainable built and natural environments with a character that is manifest by art, architecture and an aesthetic approach to infrastructure that is integrated into its surroundings.

### *Framework*

The Diridon Station Area Art Master Plan envisions three different zones in the Diridon Station Area in which artwork is differentiated in aesthetic approach, influenced by the character of development and uses (Figure 2-11-1). This differentiation is not a hard distinction, however, and overlapping approaches are anticipated in some areas.

FIGURE 2-11-1: ART ZONE MASTER PLAN

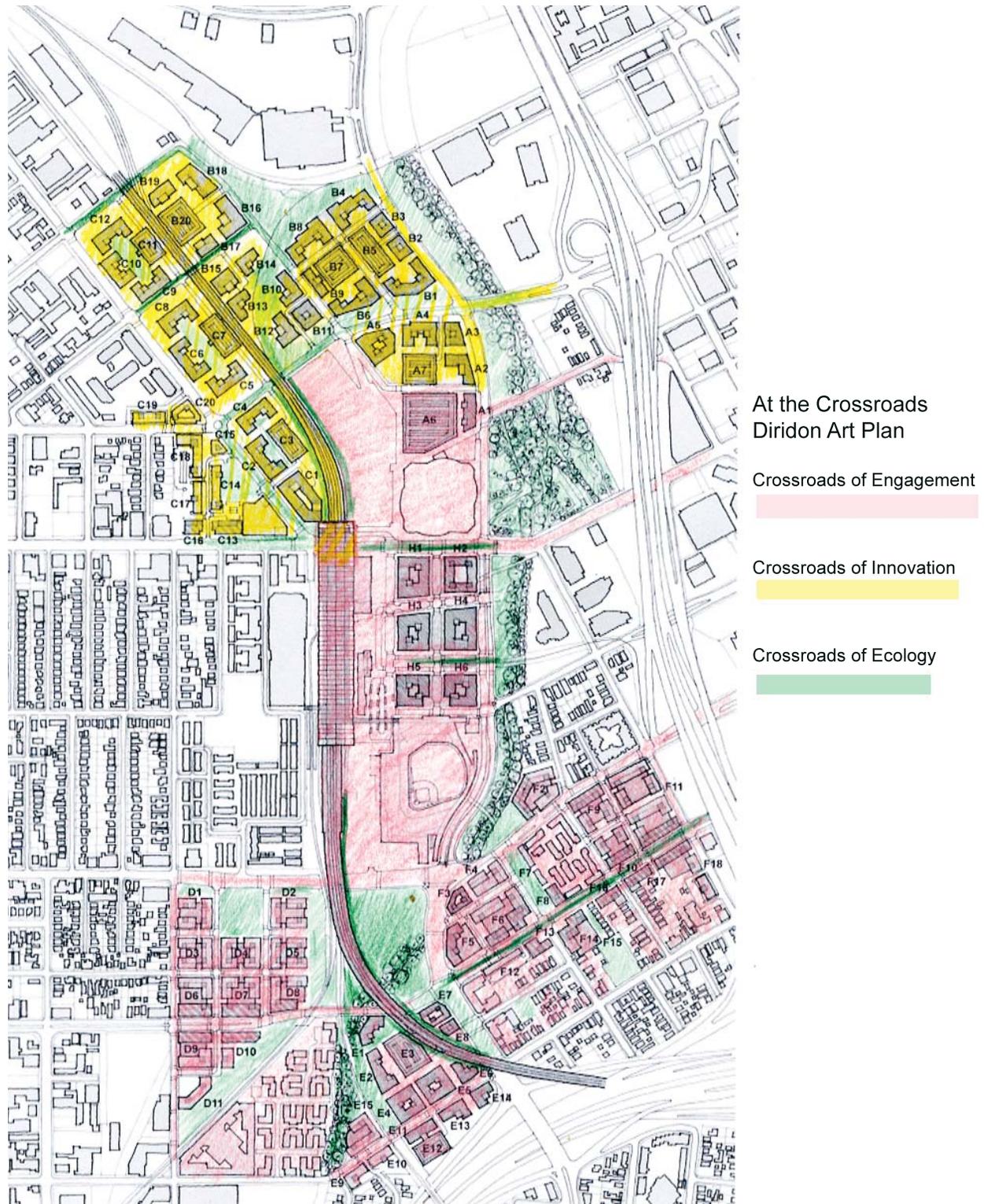


FIGURE 2-11-2: CROSSROADS OF ENGAGEMENT



The Crossroads of Engagement corresponds to the area described as “commerce and entertainment” in the Land Use Plan. The artwork here should invoke a sense of excitement and encourage interaction among people. The intention is that art creates a strong sense of civic identity. Artwork associated with the HSR and the ballpark should be dynamic and theatrical. Both the art and the architecture of the HSR multimodal station should be iconic in nature, reinforcing San José as a destination for technological innovation.

The Crossroads of Innovation defines the northern zone

FIGURE 2-11-3: CROSSROADS OF INNOVATION



(Commercial/Office Hub) and corresponds to the “innovation” zone of the Land Use Plan. Since most of the development in this area will be commercial, public investment will be in the public right-of-way. As such, artists should be engaged in infrastructure projects to ensure that streets and underpasses create interesting and engaging experiences for pedestrians, bicyclists and drivers. Many businesses, however, may be interested in commissioning artworks for their buildings or open spaces.

FIGURE 2-11-2: CROSSROADS OF ECOLOGY



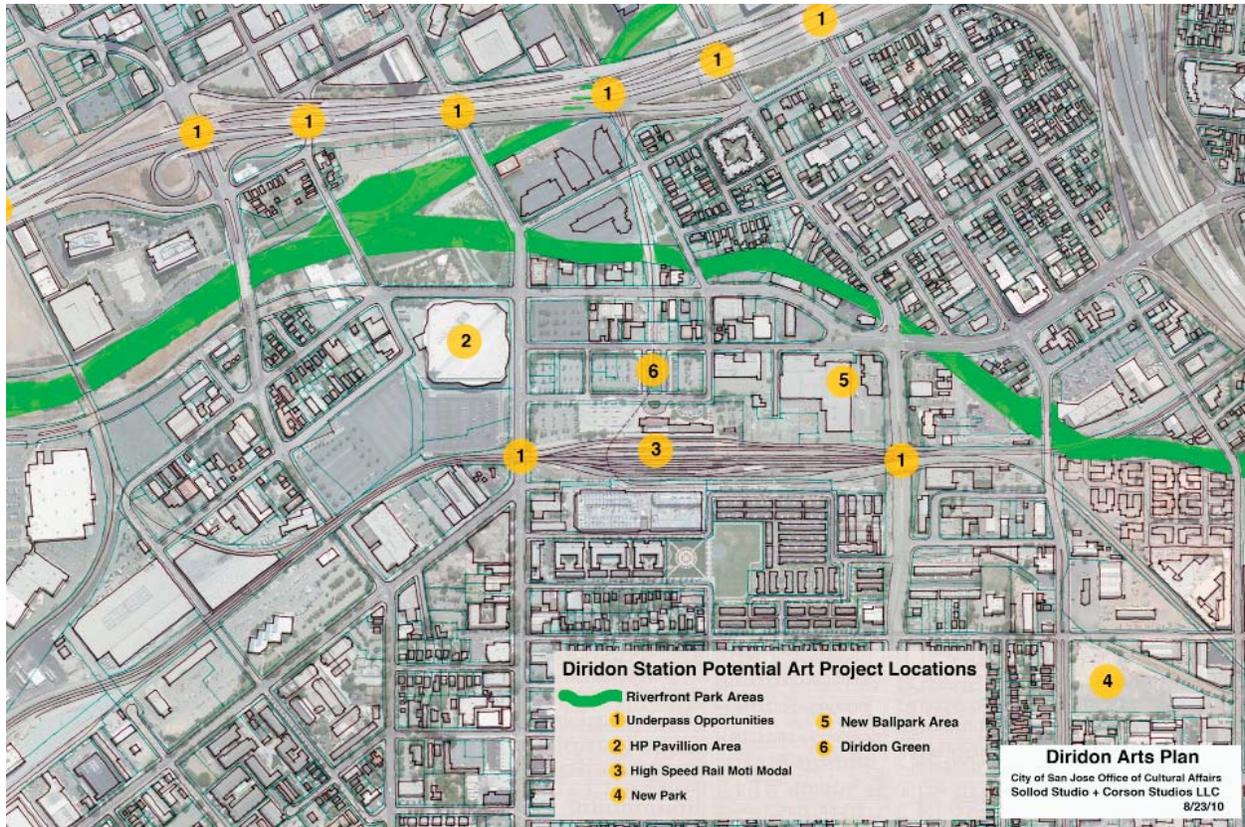
The Crossroads of Ecology is defined by the area’s parks and open spaces, the “green streets and fingers” designated in the Land Use Plan, and natural features that link the entire Diridon Station Area. This zone includes the residential areas south of the proposed ballpark, along with Los Gatos Creek and Trail, Guadalupe River Park, and the new park anticipated south of the station area. It also includes W. San Carlos Street from Lincoln to Vine. Park Avenue and W. Julian Street and the existing neighborhood, south of W. San Carlos Street. The type of artworks envisioned in this area would typically be of pedestrian scale and of a more intimate character. Los Gatos Creek and the new park lend themselves to artworks that are highly integrated into the environment.

In each of these zones, artists should be engaged as members of design teams to ensure that art is an integral and identifiable part of the experience of place. In addition to serving on design teams, individual artists will be commissioned to create specific works to enhance the public realm.

#### Summary of Key Recommendations

- Embrace the conceptual approach “at the crossroads—of engagement, of innovation, of ecology”—to guide artistic exploration in the Diridon Station Area.
- Prioritize the siting of the Climate Clock Project as early as possible in the build-out of the Diridon Station Area.
- Seize opportunities for artists to play a leadership role in creating dynamic places.
- Use strategic partnerships to increase resources for art acquisition and programming
- Engage the private sector in commissioning and presenting public art. Consider maintenance requirements for artworks when allocating resources for commissioning.
- Encourage inclusion of basic public utility infrastructure of power, water and data capability in public spaces to create a platform for a wide variety of art.

FIGURE 2-11-5: POTENTIAL ART PROJECT LOCATIONS



## CONCLUSION

Art in the Diridon Station Area will help forge a new dynamic neighborhood for San José, defining and infusing the area with vital “essence and identity” while fostering the spirit of innovation and environmental stewardship. The artwork will make this a landmark destination that reinforces San José’s identity as a center for innovation. Artists working as visionaries and collaborators will apply their talents helping to sculpt and define the public realm, inspiring us and helping us dream.