KITTELSON & ASSOCIATES

HAYWARD PARK STATION PARKING LOT REDEVELOPMENT: PARKING STUDY

SAN MATEO, CA

June 5, 2022

Hayward Park Station Parking Lot Redevelopment: Parking Study

San Mateo, CA

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EXECUTIVE SUMMARY

The purpose of this parking analysis is to determine the anticipated transit parking demand at Hayward Park Station and assess options for the Project related to transit parking demand.

The Joint Powers Board (JPB) and Sares Regis Group of Northern California, LLC are proposing a public private partnership to redevelop the Hayward Park Station's 213 parking spaces located on 401 Concar Drive into 191 apartments with 192 parking spaces for residents and visitors. This would include a combination of studio, one-bedroom, and two-bedroom apartment homes totaling 235,195 square feet. Of these, 16 apartment homes will be reserved for households designated "very low income" and 12 apartment homes will be reserved for households designated "moderate income". The site plan includes a surface lot and parking garage providing a total of 192 parking spaces (178 assigned; 14 unassigned). No parking is publicly available for transit users.

The lack of public parking available for transit users is not consistent with adopted City of San Mateo plans and policies and there were concerns over the removal of a parking lot for transit users expressed by the public and by Commissioners at a September 2019 Planning Commission meeting discussing the Project. With increased transit service planned for the Station there is concern that City residents would not be able to park and ride to use transit at the Hayward Park Station if there is a deficient number of available transit user parking spaces. The need for this report was identified to evaluate the existing and near-term transit park and ride user parking demands for the Hayward Park Station.

A parking assessment was performed to evaluate the transit parking demand against the available parking supply. A 2019 Fehr & Peers assessment of Hayward Park Station explored who was parking at the Station, Station access mode split and breakdown of observed pedestrian origins, and the potential unofficial "spillover" of transit riders parking on public streets for free or convenience and walking to the Station. A baseline transit parking demand was established based on that study and then adjustments were made to estimate a near-term (post-electrification) transit parking demand considering the following:

- Existing and future Caltrain service levels
- Changes to land use near the station
- City policies to balance modal opportunities for residents
- Caltrain policies to incentivize non-vehicle travel
- Changes in travel behaviors after the COVID-19 pandemic

The estimated post-electrification transit parking demand for Hayward Park Station is estimated to be 51 vehicles, which consists of 46 regular parking spaces and 5 accessible (ADA) spaces.

Discussion and supporting evaluation of a shared parking strategy and utilizing public street parking are included in the report for consideration by the applicant and City staff as project reviews are performed and conditions of approval are determined.

INTRODUCTION

This report documents a parking supply and demand evaluation for the proposed Hayward Park Station development in San Mateo, California. The Caltrain Hayward Park Station (Station) is located at 401 Concar Drive within the City of San Mateo (City). The area within a half-mile of the Station is zoned for transit oriented development. The proposed Hayward Park Station project (Project) would redevelop the existing Station parking lot into a multistory apartment building. The proposed site plan does not provide parking for public transit users.

This report describes an analysis of the transit parking need at the Caltrain Hayward Park Station based on current demand and as complementary land uses are activated to increase the number of transit accessible housing and jobs in the area. This includes considering imminent implementation of Caltrain's 2040 Service Vision to provide faster and more frequent service to its riders through electrification and other operational upgrades with a focus on the Station's transit parking need in the near-term post-electrification. Caltrain estimates that the planned improvements will increase ridership at the Hayward Park Station by 32% post-electrification and triple network ridership over the next two decades.[1] While Caltrain currently manages parking spaces at most Caltrain stations, the agency's 2040 Business Plan reports that maximizing joint development and alternative-mode access (walking, biking, transit, and drop-off/pick-up) results in higher ridership and lower operating cost per passenger than investment in automobile access and parking spaces.

The lack of public parking available for transit users at the Project is not consistent with adopted City of San Mateo plans and policies and there were concerns over the removal of a parking lot for transit users expressed by the public and by Commissioners at a September 2019 Planning Commission meeting discussing the Project. With increased transit service planned for the Station there is concern that City residents would not be able to park and ride to use transit at the Hayward Park Station if there is a lack of available transit user parking spaces. While access for other modes is provided, this report serves to evaluate the existing and near-term parking demands for the Hayward Park Station.

Findings were developed using professional parking assessment tools with considerations of existing and future conditions as they relate to land use, service levels, station access, transit parking counts, and Caltrain and City of San Mateo policy documents.

SCOPE OF STUDY

The purpose of this parking analysis is to determine the anticipated transit parking demand at Hayward Park Station and assess options for the Project related to transit parking demand.

1 Source: Email from Caltrain. Hayward Park percentage is over 2019 ridership and amounts to 670 daily riders.

PROJECT DESCRIPTION

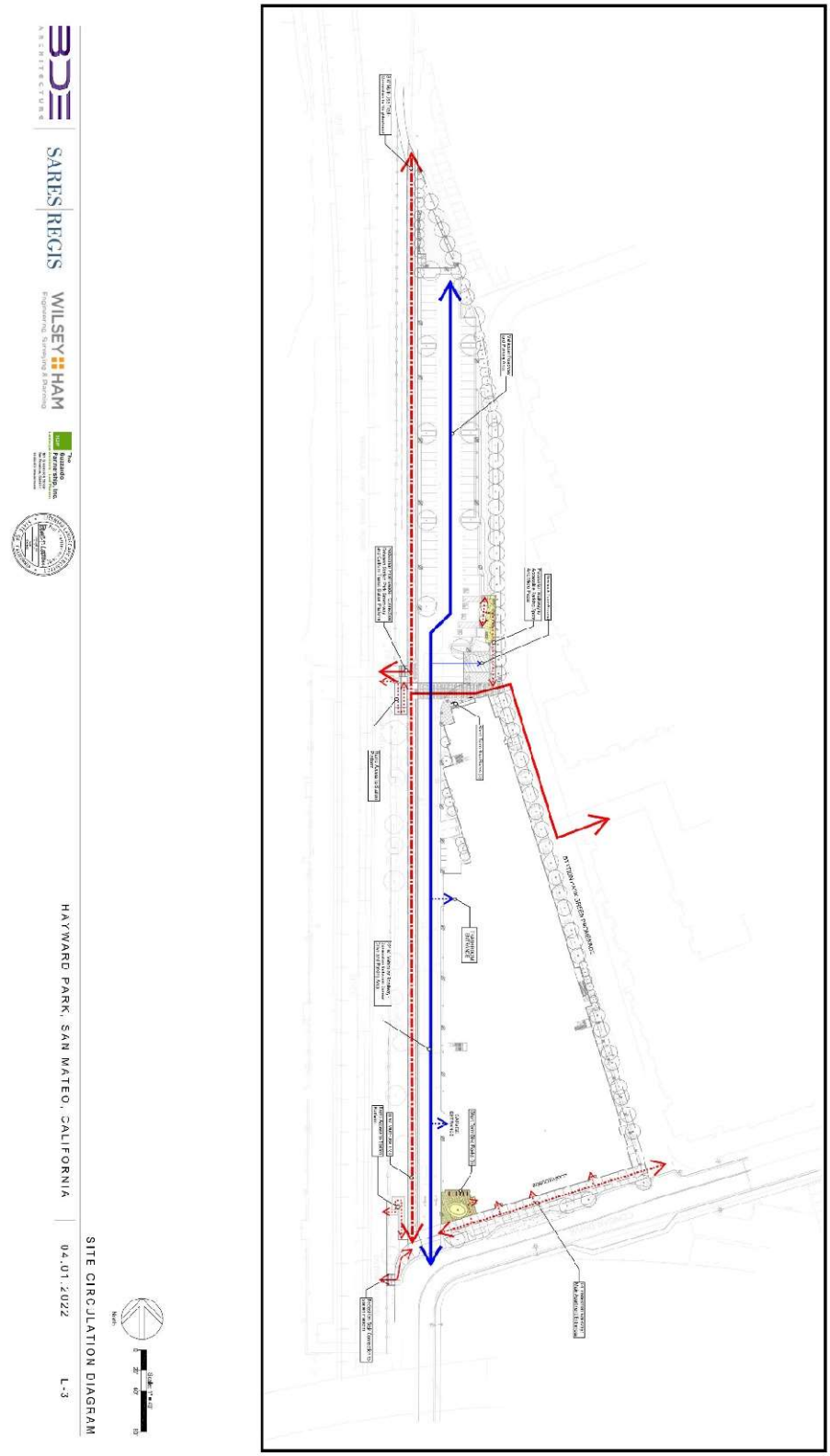
The Joint Powers Board (JPB) and Sares Regis Group of Northern California, LLC are proposing a public private partnership to redevelop the Hayward Park Station's 213 parking spaces located on 401 Concar Drive into 191 apartments with 192 parking spaces for residents and visitors. This would include a combination of studio, one-bedroom, and two -bedroom apartment homes totaling 235,195 square feet. Of these, 16 apartment homes will be reserved for households designated "very low income" and 12 apartment homes will be reserved for households designated "moderate income".

Figure 1 shows the Project elevation and Figure 2 shows the site plan with blue lines depicting vehicle paths and red lines depicting pedestrian paths.

Figure 1: Hayward Park Station Redevelopment Project Elevation

Source: Project Plans by BDE Architecture/Sares Regis/Wilsey Ham/The Guzzardo Partnership, 04/01/2022

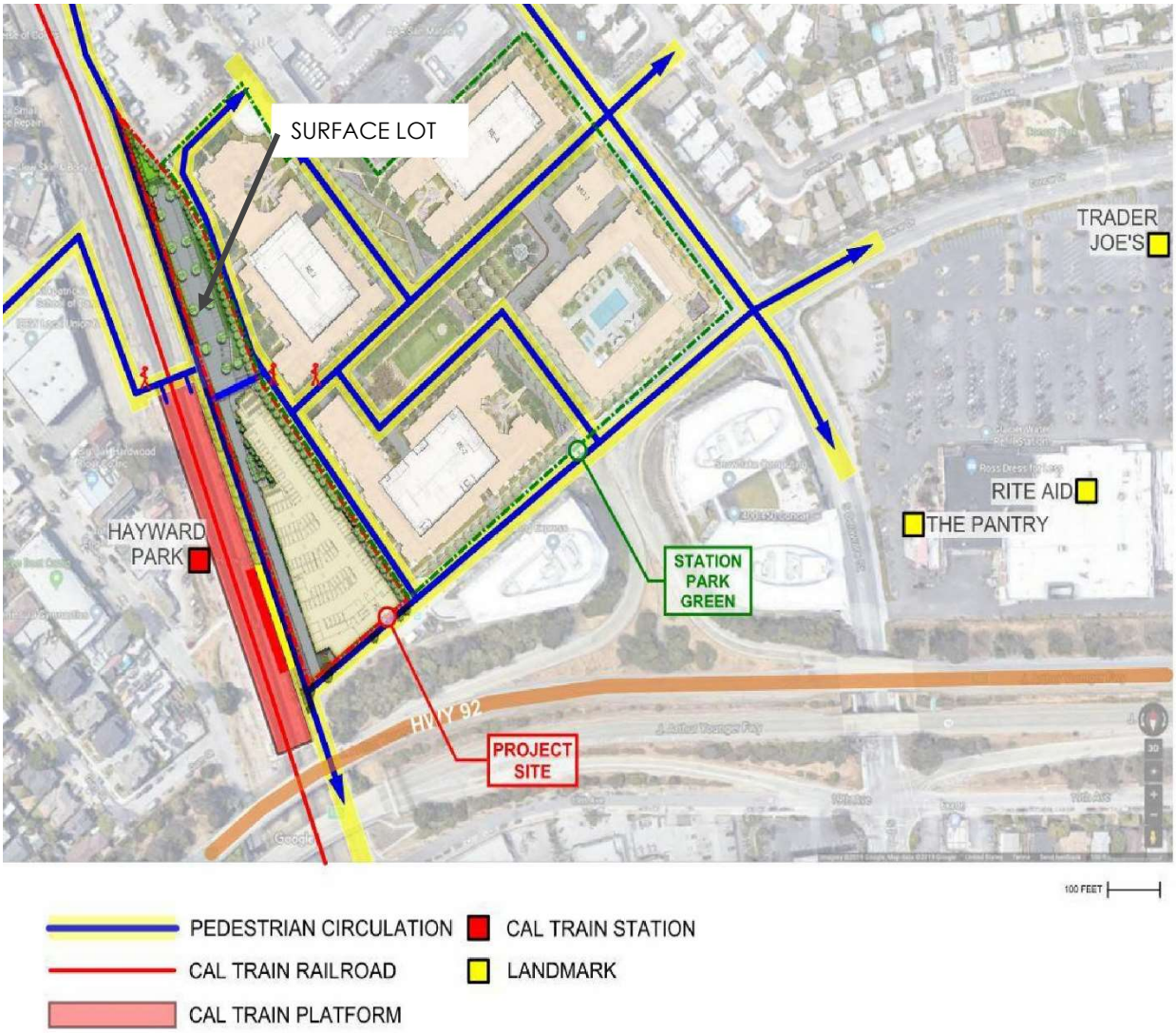
Figure 2: Hayward Park Station Site Circulation Plan



Source: Project Plans by BDE Architecture/Sares Regis/Wilsey Ham/The Guzzardo Partnership, 04/01/2022

The site plan includes a surface lot and parking garage providing a total of 192 parking spaces (178 assigned; 14 unassigned). Figure 3 illustrates the location of the surface parking lot and its proximity to the Caltrain platform. Additional Project amenities include private patios, game areas, open seating spaces, seating lounge nooks, outdoor dining area, television, and a connection to neighborhood ped/bike trail system with artful gateway monuments, building signage, and wayfinding.

Figure 3: Project Surface Parking Lot



Source: Project Plans by BDE Architecture/Sares Regis/Wilsey Ham/The Guzzardo Partnership, 04/01/2022

PROJECT PARKING SUPPLY

The proposed project is providing 192 parking spaces as summarized in Table 1.

Table 1: Project Parking Summary

Location / Source	Garage	Surface Lot	Project Total
Assigned Residential Spaces	75 standard 25 EVCs 6 ADA	67 standard 1 EVCs 4 ADA	142 standard 26 EVCs 10 ADA
Unassigned Residential Spaces	12 standard 1 EVCs 1 ADA	0 standard 0 EVCs 0 ADA	12 standard 1 EVCs 1 ADA
Total Site	87 standard 26 EVCs 7 ADA 120 total	67 standard 1 EVCs 4 ADA 72 total	154 standard 27 EVCs 11 ADA **192 total**

Notes: EVCs = Electric Vehicle Charging stations; ADA spaces include both standard and EVC options

This project falls under the Rail Corridor Transit-Oriented Development Plan area and hence the City of San Mateo off-street parking requirements[2] do not apply to this project.

It is important to consider whether the proposed parking for the Project has been "right sized" so that it satisfies realistic resident demand but does not undermine the goals and needs of the Transit-Oriented Development (TOD) zone and the Caltrain service at large. In general, TOD is a smart growth strategy that co-locates synergistic land uses to optimize public space while expanding the geography of mobility and opportunity within a community. Concentrating denser residential developments around transit enables residents to offset transportation costs. This is particularly salient for expanding affordable housing and promoting sustainable urban ecosystems that can reduce a community's need to build infrastructure for (and allocate space to) the personal vehicle over designing public space for people. TOD benefits developers by providing an environment in which they may not be required to reserve land for expensive and inefficient parking lots. In addition, developers may choose to unbundle any parking – meaning that a space is not automatically assigned to a unit – thus reducing rent for those who do need to store a personal vehicle.

As part of the project review of the proposed parking supply, City staff shared information on parking demand ratios for recently approved projects near the proposed Hayward Park Station project, which include Station Park Green and Concar Passage projects[3]. Parking ratios used for these recent projects were based on bedrooms, and resulted in 1.0 space per studio, 1.3 space per 1-bedroom, and 1.5 space per 2-

[2] Chapter 27.64 Off-Street Parking Standards, https://www.cityofsanmateo.org/DocumentCenter/View/9881/CH27-64, Accessed 2022.
[3] City of San Mateo's email on 4/7/2022 regarding parking ratios of Station Park Green and Concar Passage projects.

bedroom unit. The parking ratios proposed for these neighboring approved projects and the resulting number of parking spaces calculations based on these parking ratios for Hayward Park Station project are provided in Table 2 for reference. According to these parking ratios, the proposed project mix of 191 dwelling units would be expected to provide 254 parking spaces.

Table 2: Project Parking Supply Using Ratios for Neighboring Approved Projects in the Project Vicinity

Dwelling Unit	Off-Street Parking Ratio	Proposed Project Parking Calculations	
		Units	Parking Spaces
Studio	1.0	17	17
One-Bedroom	1.3	119	155
Two-Bedroom	1.5	55	82
Total		191 units	254 spaces

Additional information shared by City staff from a parking demand study prepared for the Azara apartment complex at 1650 S. Delaware Street documented an actual parking demand averaging 0.78 spaces per bedroom. This included study of two residential projects located at 888 N San Mateo Drive and 282 Pony Lane, which are both within the vicinity of a Caltrain station. The parking ratios from that study and the resulting number of parking spaces calculations based for the Hayward Park Station project are provided in Table 3 for reference. According to this parking ratio, the proposed project mix of 191 dwelling units would be expected to provide 192 parking spaces.

Table 3: Project Parking Supply Using Ratios from Azara's Parking Demand Study

Dwelling Unit	Off-Street Parking Ratio	Proposed Project Parking Calculations	
		Units	Parking Spaces
Studio	0.78	17	13
One-Bedroom	0.78	119	93
Two-Bedroom	1.56	55	86
Total		191 units	192 spaces

The Project applicant has proposed the parking supply based on their understanding of the area needs to be competitive in the housing market, which is an understandable approach to striving to provide amenities that attract residents. The proposed parking supply seems to correlate with documented residential parking demand of other similar and nearby uses.

PROJECT SETTING

The Project proposes to redevelop the Caltrain Hayward Park Station's parking lot into a residential building. This subsection provides information on the existing characteristics of the Hayward Park Station and its associated parking.

PROJECT LOCATION

The Project will be constructed on the existing Caltrain Hayward Park Station parking lot located at 401 Concar Drive. Regional access to the Project site would be primarily provided by State Route (SR) 92 via the interchange at Concar Drive and S Delaware Street. Local access to the Project site would be provided by Concar Drive (and Pacific Boulevard). Nearby land uses include residential, commercial/retail, recreational, and institutional. There is also a park to the southwest of the site.

The City's **Rail Corridor Transit-Oriented Development (TOD) Plan** recognizes the need to develop safe and comfortable connections to the Station and recommends improvements for bicycle and pedestrian access. The platform is not immediately co-located with any other uses, as seen with the San Mateo Caltrain station, however directly to the west there is a small cluster of commercial enterprises nestled amongst the surrounding single family homes emanating outwards. The land directly east of the platforms is currently undergoing densification in addition to the residential units proposed for the Project. The new developments are a mix of residential and commercial uses, adding both housing stock and employment opportunities within walking and biking distance of the transit station as shown in Figure 4.

Figure 4: Project Location

Source: Google Earth

AREA LAND USE

While there are many nearby established neighborhoods within walking distance of the Hayward Park Station, the street network in the area reflects characteristics which can disincentivize non-automotive modes of station access such as freeway overpasses and at-grade railroad crossings. In addition, San Mateo's **2030 General Plan** notes that much of the city is within a quarter mile of a bus route, although that does not always translate to accessibility to designated bus stops. Hayward Park Station is served by SamTrans routes. Pre-COVID, the site could also be accessed via free first and last mile Norfolk shuttle service.

Land Use Maps in Appendix C are from the 2030 General Plan and demonstrate that land use is expected to densify within a quarter mile of the Station, and that there are several established neighborhoods within a half-mile of the Station. New development within a quarter-mile of Hayward Park Station – typically considered a reasonable walking distance for able bodied people – is zoned for the highest densities allowed and is almost exclusively north of SR-92. Workers and residents beyond the quarter-mile catchment area may face infrastructure adversity (uncomfortable or inconvenient connecting facilities e.g., SR-92 underpass, crossing Delaware or El Camino Real, non-existent or infrequent bus/shuttle) that could dissuade them from walking, biking, or taking transit to the Station until improvements are implemented. Residents in the established neighborhoods outside of the TOD are the most likely potential riders to be driving to Hayward Park today. The evolution of quality and comfort of the street network and "first and last mile" modes (e.g., transit and e-mobility devices become more accessible) will improve not only connections to the Station but also for intra-community trips, helping the area realize its vision of becoming a transit-oriented community.

COMMUTE BY PUBLIC TRANSIT

According to data from the American Community Survey 2015-2020, a growing number of households in census tracts adjacent to the Hayward Park Station commute to work via public transportation. Between 2016 and 2019, zero-vehicle households have also grown in number in the communities adjacent to Hayward Park Station. This should be taken into consideration when assessing station accessibility and anticipated parking demand. Maps showing the change in commute patterns within San Mateo and close to the Station can be found in Appendix C.

TRANSIT SERVICE LEVELS

Hayward Park is served by Caltrain "local" service, while neighboring San Mateo and Hillsdale Stations have shorter peak hour headways. Hillsdale Station is also served by the commuter focused Baby Bullet express service which connects San Francisco and San Jose in roughly one hour. Table 4 summarizes peak hour trains serving each of the three stations as of March 2022. Service to Hayward Park generally runs hourly with half-hourly evening service. All three stations are in Caltrain Zone 2.

Table 4: Transit Service Levels Summary

	Southbound			Northbound		
Station Name	**# Weekday Peak Hour AM Trains (6-9am)**	**# Weekday Peak Hour PM Trains (4-7pm)**	**First and Last Train**	**# Weekday Peak Hour AM Trains (6-9am)**	**# Weekday Peak Hour PM Trains (4-7pm)**	**First and Last Train**
Hillsdale	9	9	5:32 AM; 12:45 AM	10	10****	5:22 AM; 12:09AM
Hayward Park	4	4*	5:28 AM; 12:42 AM	3	3	5:25 AM; 12:12 AM
San Mateo	7	7**	5:25 AM; 12:38 AM	7***	6	5:28 AM; 12:16 AM

*Includes 3:52PM train; **Includes 3:56PM train ; ***includes 5:55AM train ; ***includes 3:58PM train | Source: March 2022 Caltrain Timetables

STATION ACCESS

A 2019 Fehr & Peers assessment of Hayward Park explored who was parking at the Station, Station access mode split and breakdown of observed pedestrian origins, and the potential unofficial "spillover" of transit riders parking on public streets for free or convenience and walking to the Station. Field visits were done during the fall and summer of 2019; during this period construction related to Caltrain and adjacent development (Station Park Green) impacted the official and unofficial use of the Hayward Park lot. The study tracked where people came from or went to by six origin/destination zones near the Station. Key takeaways from that memorandum are highlighted below.

- 96% of riders accessed the station by walking, cycling, pick-up/drop-off, or public shuttle.
- 43% of riders observed accessing the platform from the west of the tracks and 53% from the east side of the tracks.
- 22 transit riders were observed parking at the station.
- The maximum transit related parking demand at one time was 13 vehicles.
- The parking lot was primarily utilized by non-transit parking demand.
    - 29% attributed to construction activity: 60 of the 213 spaces were officially reserved for Caltrain construction activity and the lot experienced construction related parking spillover from the Station Park Green development.
    - 55% were destined for the commercial buildings east of the platform at 400/450 Concar Dr.
- An examination of public on-street parking occupancy rates did not reveal a correlation to Caltrain ridership peaks and concluded that it was unlikely that significant on-street parking demand could be attributed to transit demand.

- A 2017 study found that on a typical weekday Hayward Park accounts for 7% of boardings at Caltrain stations in the City, with the remaining occurring at the other two stations: San Mateo and Hillsdale.

STATION AMENITIES

Hayward Park Station has ticket vending machines (TVM), Variable Message Signs (VMS) for real-time arrival information, benches, and covered shelters on the platform as well as 18 bicycle racks and 4 secure bike lockers in the parking lot.

STATION PARKING OPTIONS

There are 220 spaces (including 7 ADA spaces) in the Station parking lot to the east of the platform, which is the site of the Project. As of the date of this report, Station parking is available at the cost of a daily weekday ($5.50) or monthly ($82.50) permit.

There is no transit-dedicated parking to the west of the platform.

There are several streets within a quarter mile of the Station where one can park all day for free. These parking spaces are for general public use serving all of the adjacent land uses. Street parking is free to use, and most spaces do not have a time limit restriction. An inventory of the available parking within a quarter mile of the Station is provided later in this report.

Table 5 compares the characteristics of the three transit stations in the City of San Mateo. The Hayward Park Station was found to have underutilized parking, while the adjacent stations were both heavily utilized.

Table 5: San Mateo Caltrain Station Parking Summary

Station	Existing Parking	Existing Parking Utilization	Existing Service Type	Top 3 Origin/Destination
San Mateo	42 spaces; permit required	Overutilized	Local Limited	4th & King Palo Alto Redwood City
Hayward Park	213 spaces (+7 ADA); permit required	Underutilized	Local Limited	4th & King Palo Alto Redwood City
Hillsdale	518 spaces; permit required	Overutilized	Local Limited Bullet	4th & King Palo Alto Mountain View

Utilization source: Fehr & Peers 2019, Study | Station characteristics source: Caltrain 2040 San Mateo Booklet (2019)

RELEVANT POLICY DOCUMENTS

Several adopted policy documents have bearing on the Project. This section summarizes those documents, their recommendations, and their relevance to this assessment.

SAN MATEO

County and City of San Mateo documents that reference or are relevant to the Hayward Park Station area are listed below:

- City of San Mateo Rail Corridor Transit Oriented Development (TOD) Plan (2005)
- San Mateo County Transit Oriented Development Study (2007)
- City of San Mateo Analysis of Local Land Use Planning and Regional Growth (2019)

SAN MATEO RAIL CORRIDOR TOD PLAN

This City document provides guidance for TOD within a half-mile radius of the Hillsdale and Hayward Park Stations, ensuring that development near stations is consistent with city goals and policies set for the TOD area. The circulation design and access considerations in this plan place an emphasis on redesigning and improving the street network to be safe, effective, and facilitate multimodal use. To that end, the plan identifies several infrastructure improvements to address station access via city streets.

> ***Key Takeaways:***
>
> *Provide a balanced street system in the plan area that safely connects Hillsdale and Hayward Park stations to the adjacent and greater community by providing for convenient access by a* ***mix of modes*** *of travel including* ***pedestrians, bicycles, buses, and automobiles both on and off-site****. (Policy 4.12)*
>
> *Meeting projected parking demand is an important challenge to be addressed at both stations. This Plan highly encourages the use of the most innovative approaches to solving this,* ***possibly including shared parking*** *in multiple locations. (Policy 6.6)*
>
> *Capitalize on* ***the potential of Hayward Park Station as a local transit hub*** *that efficiently accommodates Caltrain, Samtrans buses, shuttles, bicycles, pedestrians, taxis, automobile drop-off and pick-up, and* ***park and ride****. (Policy 6.9)*

> *As part of an overall TDM program,* ***reduce the amount of land or buildings devoted solely to storage of automobiles by encouraging parking management solutions such as shared parking*** *between different compatible uses, particularly office and residential development. (Objective Q)*

The TOD Plan's vision for Hayward Park is one of an "accessible and inviting neighborhood" served by a conveniently walkable Caltrain station and where connecting streets have character and comfortable scale and are fronted with shops and residences. The document's objectives underscore a future where the Hayward Park Station area engenders a transit oriented community characterized by accessible multimodal connections, mixed-use densities, active public spaces, and neighborhood-serving retail districts while retaining community character.

Rail Corridor policies encourage a variety of parking options including shared-use between the JPB and adjacent landowners (via parking garage or surface lot) and increasing "parking streets" via perpendicular striping. It notes these strategies as well as retaining at a minimum the same number of spaces as are there today in order to make transit user parking more convenient.

Key objectives and policies outlined in the Circulation and Community Character chapters relevant to Hayward Park promote providing a balanced street system and accessibility for multiple modes including automobiles. A summary of relevant policies can be found in Appendix B.

SAN MATEO COUNTY TRANSIT ORIENTED DEVELOPMENT OPPORTUNITY STUDY

This report outlined opportunities, constraints, and recommendations for advancing TOD adjacent to Caltrain station areas in San Mateo County. It identified station access and connectivity to existing activity centers as primary constraints at the Hayward Park Station area, which are in line with the Rail Corridor TOD findings.

> ***Key Takeaway:*** *The Hayward Park Station area is still in a relatively early phase of the Hayward Park TOD build-out and Caltrain's electrification improvements are still being implemented. As the area approaches the long-term fully connected and accessible neighborhood vision laid out by the San Mateo and Caltrain documents it will continuously grow to provide competitive options to personally owned vehicle travel.*

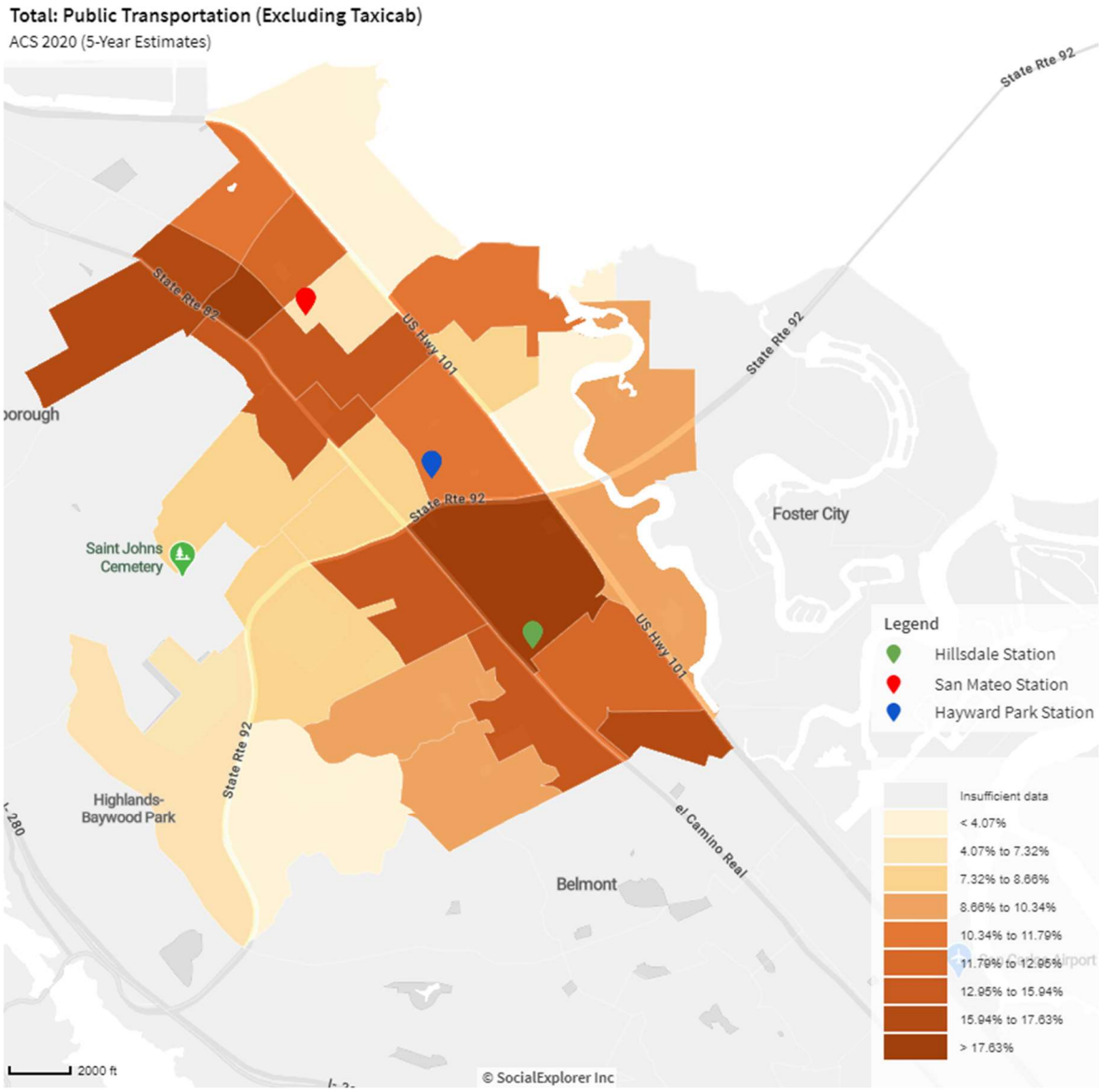
SAN MATEO ANALYSIS OF LOCAL LAND USE PLANNING AND REGIONAL GROWTH (TOD ISSUES PAPER)

Although not an adopted plan or policy by the CIty, this issue paper was developed during the process of the San Mateo 2040 General Plan and evaluates the performance of TOD policies in the City of San Mateo in the context of increasing densification and persistent congestion. An examination of 2017 trip counts for commercial and residential projects built in the Rail Corridor revealed these developments engendered lower traffic volumes than expected. This information is helpful to document that transit oriented development is a potentially successful way to reduce vehicle trips in the City of San Mateo.

> *According to ongoing monitoring efforts of new developments in the Rail Corridor Plan area, these residents and workers are more likely to use mass transit and have significantly reduced the number of vehicle trips beyond what was initially expected.*
>
> *San Mateo TOD Issues Paper 2019.*

Figure 5 demonstrates that residents in the Hayward Park area currently commute by transit at a lower percentage in comparison to San Mateo and Hilldale stations. While a TOD policy does not immediately eliminate all vehicle trips – especially if transit is not competitive or first and last mile connections are not efficient and safe - this trip reduction result suggests the TOD around Hayward Park could be expected to generate similar travel behavior from residents and employees commuting into and out of the area.

Figure 5: San Mateo Residents Commuting by Transit



CALTRAIN

These Caltrain policy documents provide a framework for the use and development of JPB property as well as a long term vision for the corridor's operations:

- Caltrain Transit Oriented Development Policy
- Caltrain Rail Corridor Use Policy
- Caltrain 2040 Long Range Service Vision
- Caltrain 2040 Business Plan
- Caltrain Access Policy Statement

Caltrain TOD Policy (2020)

This document provides guidance for managing developable JPB right of way and encouraging transit supportive uses without compromising current or future railway uses.

The TOD Policy applies to properties that are owned by the JPB and are available for development independent from a capital project as identified by RCUP. In advancing TOD, the JPB seeks to achieve the following overarching goals:

- **Sustainable Transportation.** Promote Caltrain ridership and sustainable transportation modes.
- **Value Creation.** Create value for the JPB, consistent with the JPB's overall business strategy, which can be reinvested into the railroad's core mission of providing rail transportation service.
- **Equity.** Provide an appropriate balance of land uses, equity in access, and other benefits that align with the priorities of the local community.
- **Complete Communities.** Establish station areas as complete communities in partnership with other stakeholders.

Several policies have relevance to the parking evaluation and the overall Project design and components and can be found in Appendix B. Policy topics highlight:

- Transit supportive uses
- Limited on-site parking for private development
- Balance park & ride needs with land use that maximizes TOD density and revenue

In sum, the Caltrain TOD policies encourage efficient, sustainable land uses that will strengthen the transit corridor. Transit oriented development allows transit oriented communities (TOC) to flourish by providing a density of destinations that a person can access more easily without needing a car, particularly by walking, biking or high quality transit. Oversupplying parking at developments directly adjacent to a transit station is an inefficient use of land and may induce vehicle ownership or trips. Creative policies like shared-use

agreements can help optimize parking utilization by balancing demand from residents who commute via car with transit users who require park & ride spaces.

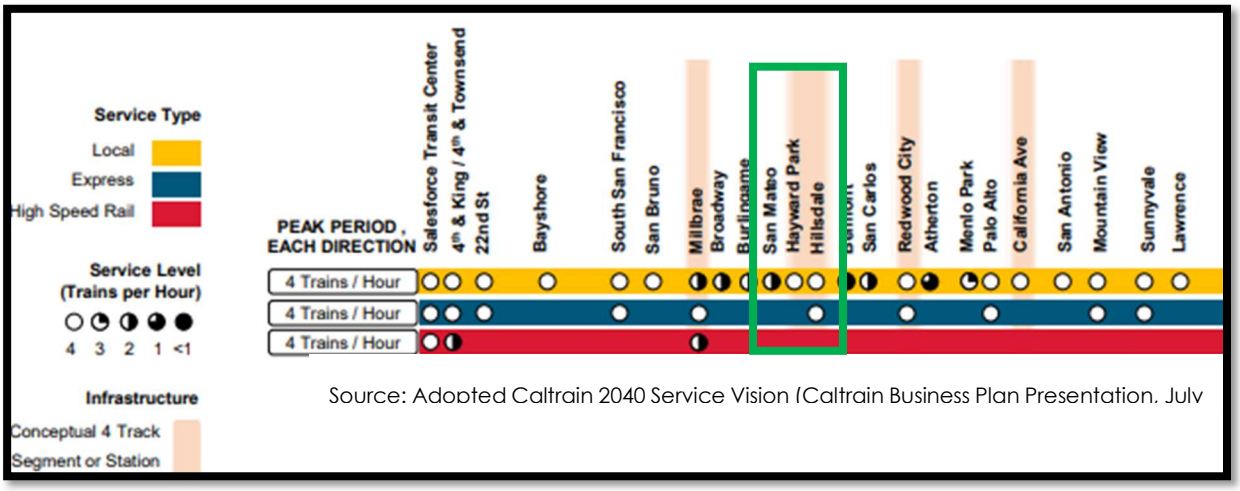
Caltrain Rail Corridor Use Policy (2020)

This document describes the administrative framework to ensure that existing and future railroad operations are not compromised by proposed non-railroad uses of JPB Property. The Hayward Park Station parcel is designated "Property Use Zone 2" and is not covered by the "service vision overlay" meaning that it is not necessary to restrict or preserve right of way for future JPB capital projects.

Caltrain 2040 Long Range Service Vision

The Service Vision was adopted by the JPB to guide long range development of Caltrain services, plans, policies, and documents in the context of a future with substantially higher quality service (e.g. increased frequencies, extensive grade separation, high speed rail, and potentially new regional and mega-regional connections). In 2019 Caltrain's board adopted a moderate-growth long-term service vision which is expected to triple demand. This adopted service vision has the potential to scale and provide foundational investments toward the realization of the more expensive and operationally complex "high-growth" scenario. The service type vision is shown in Figure 6, with the San Mateo stations – San Mateo, Hayward Park, and Hillsdale – outlined for reference.

Figure 6: Caltrain 2040 Transit Service Levels



Source: Adopted Caltrain 2040 Service Vision (Caltrain Business Plan Presentation, July

As shown in the Caltrain 2040 Service Vision, post-electrification frequencies for local service improve at Hayward Park Station (4 trains/hour), however it is not served by express, skip stop, or high speed rail. This is a higher level of service than nearby San Mateo (2 trains/hour) but less frequent than nearby Hillsdale which will be served by both local (4 trains/hour) and express service (4 trains/hour). In the adopted service vision, no stations within the City of San Mateo are served by high speed rail. Table 6 shows the travel time changes for travelers using the Hayward Park Station to get to different regional areas under the Moderate Growth Scenario of the 2040 Caltrain Business Plan.

Table 6: Travel Time Comparison in Minutes (Hayward Park, Moderate Growth Scenario)

	Salesforce Transit Center	Palo Alto	Mountain View	San Jose
Existing	N/A	:23m	:37m	:45m
2040 Service Vision	:32m	:17m	:23m	:39m
Travel time improvement	New service	-5m	-14m	-6m

Travel time comparison concepts for full implementation of the Moderate Growth Scenario relevant to Hayward Park Station. (2040 Caltrain Business Plan: San Mateo Booklet, 2019)

Caltrain 2040 Business Plan

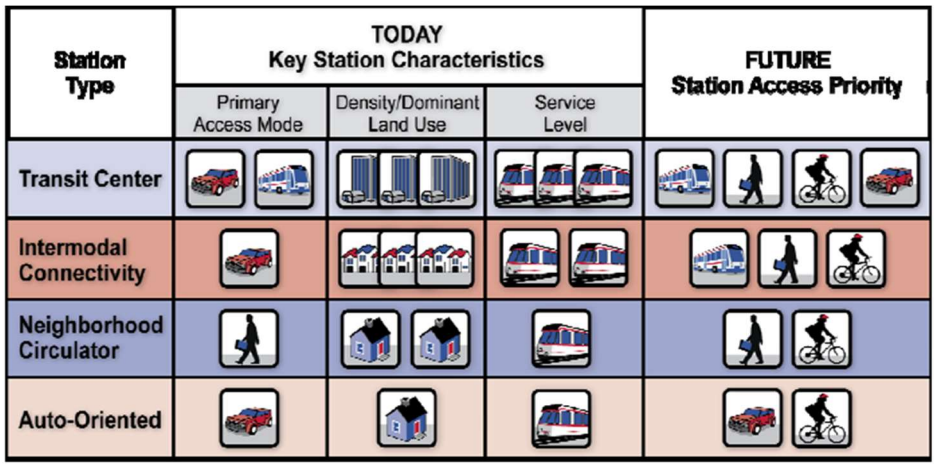
Caltrain's Business Plan identifies opportunities for the Caltrain system to meet the future transportation needs of the region. It considers the future potential of the railroad under the 2040 Service Vision and the region's projected growth. Key system wide observations are highlighted below:

- Caltrain does not dynamically manage Park & Ride pricing, thus subsidizing parking at some stations relative to market rates (i.e. more expensive public and private lots nearby).
- A significant portion of weekday passengers access Caltrain stations via walking and biking and there is substantial need to work with local jurisdictions to improve pedestrian and bicycle facilities connecting to stations.
- A $4M investment is underway to fund improved bike parking and e-lockers; investing in shared bike stations present and opportunity to scale over time.
- Making improvements to enhancing access for walking, biking, and passenger loading are the least costly investments and support sustainable modes.
- Maximizing joint development, active transportation, and transit access results in higher ridership and less driving.

Caltrain Access Policy

The **2010 Caltrain Comprehensive Access Program Policy Statement** noted that riders primarily access stations via personal vehicle, which is not sustainable environmentally or economically for the agency. The agency outlined guiding principles for preparing capital investments in future access strategies that prioritized walking, transit, and biking over driving and developed context sensitive station typologies that would drive access strategy investments. Figure 7 illustrates the different station types and future access priorities.

Figure 7: Caltrain Station Types



Under the station types identified, Hayward Park is a neighborhood circulator whose riders arrive primarily as pedestrians. The 2019 Fehr & Peers study included documentation of observations of access mode split at the station that verified this typology assessment.

TRANSIT PARKING DEMAND ASSESSMENT

A baseline parking demand was established based on documented information from 2019. A near-term transit parking demand was then estimated founded upon the following inputs:

1. Pre-COVID transit parking demand at Hayward Park Station
2. Parking demand on public streets within a quarter mile of Hayward Park Station
3. Existing and future land use and circulation context
4. Existing and future Caltrain service levels

Using this information, a parking assessment was performed that evaluated the transit parking demand against the available parking supply. Following the assessment, recommendations are made on the parking supply needed for the Project.

BASELINE TRANSIT PARKING DEMAND

This section establishes a baseline transit parking demand using information from previous studies and available sources.

ESTIMATED AND OBSERVED PARKING LOT DEMAND

An estimated parking lot demand was developed based on prior surveys which provide datapoints for the number of boardings and the percent of those boardings associated with vehicles using the station. The datapoints found were:

- 380 individuals boarded Caltrain at Hayward Park Station on a typical weekday in 2017 (Fehr & Peers, 2019).
- 16% of riders boarding at the Station also parked in the lot (Caltrain Access Survey, 2016). Notably, this 2016 survey indicated the total percentage of riders parking at the Station (subject to natural turnover) and did not isolate peak demand.

Using this information, an estimated historical demand for the site in one day would be 61 cars (380 riders x 16% riders using cars = 61 cars). Assuming this number of vehicles, the resulting lot utilization would be 28.6% as shown in Table 7. This information helps confirm that the parking lot is underutilized, and that peak demand would be equal to or less than 61.

Table 7: Estimated Baseline Daily Parking Demand at Hayward Park Station

Lot Capacity	# Cars Parked	Utilization %
213	61 (daily)	28.6%

The 2019 Fehr & Peers assessment conducted to determine the level and context of parking demand in the Hayward Park Station area found that 22 riders were observed parking in the lot and walking to the Caltrain platform between the hours of 4:30 AM and 7:00 PM. During the observation period, the lot's 213 spaces were reduced by 63 due to Caltrain related construction activity. Transit demand never surpassed 13 cars in the lot at one time, peaking just after 10:30 AM. Table 8 demonstrates that the Station lot was observed to be severely undersubscribed for transit use. It is possible that true transit parking demand did not materialize during this site visit due to a variety of factors including construction activities in the lot causing people who otherwise would have parked at the lot to choose an alternative mode, park nearby and walk, or drive to another station. However, this can be difficult to quantify and rider observation information in the 2019 Fehr & Peers assessment did not identify people walking from other areas of the neighborhood. To further investigate the likelihood of "hidden demand", nearby parking utilization was analyzed as part of this study to assess if transit users are being diverted from parking at the Hayward Parking Station due to construction activity or availability of free parking.

Table 8: Observed Baseline Parking Demand at Hayward Park Station

	Lot Capacity	# Cars Parked	Utilization %
Baseline Peak Demand	143* (adjusted)	13 (peak)	9.0%
	213	13 (peak)	6.1%
Baseline Daily Demand	143* (adjusted)	22 (daily)	15.4%
	213	22 (daily)	10.3%

*Reserved (63) and ADA (7) spaces removed from capacity; Source: Fehr & Peers, 2019

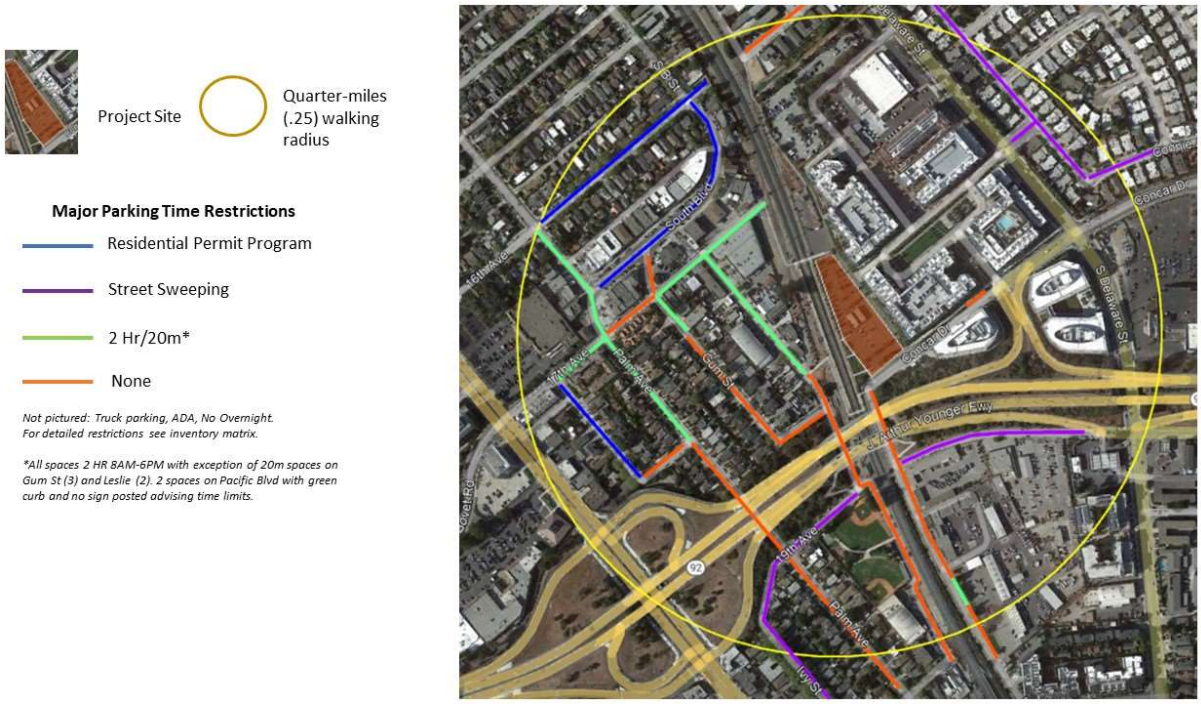
In addition, the 2019 Fehr & Peers study reported that 5 of the 7 ADA spaces were observed to be in use throughout the day and were not included in the parking occupancy analysis. It will be prudent to consider the provision of replacement ADA parking specifically.

ADJACENT STREET PARKING

As part of this study's development, street parking inventory and utilization was collected in March 2022 for the street network within a quarter mile of the Hayward Park Station. The inventory excluded streets that have

a residential parking permit program and spaces that had time limit restrictions of two hours or less – including loading zones. A graphic showing the available street inventory is shown in Figure 8. A detailed inventory is provided in Appendix A.

Figure 8: Street Parking Inventory, Quarter Mile Radius



Utilization was documented on each block on a weekday in March 2022 between the hours of 5:00 AM and 6:00 PM. A summarization of the street parking utilization is provided in Table 9 and graphical illustrations are provided in Appendix A.

Street utilization was found to be most utilized near the Station between the hours of 9AM and 1PM. Even during these times, the utilization fluctuated indicating regular turnover of parking and there was street parking available close to the Station. A comparison of nearby on-street parking utilization to peak transit boardings found no significant correlation in both the 2019 Fehr & Peers study and data collected in 2022. The data is inconclusive in making a clear determination if and to what extent on-street parking use is transit users.

Table 9: Observed Street Parking Occupancy, Weekday (Current Conditions)

Map Letter	Inventory	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM
A	70	1%	1%	6%	10%	17%	19%	20%	20%	19%	19%	17%	9%	7%	6%
B	43	30%	33%	30%	26%	28%	35%	44%	40%	26%	37%	37%	30%	23%	26%
C	6	83%	67%	50%	67%	100%	100%	100%	100%	100%	83%	100%	100%	67%	50%
D	59	28%	29%	29%	29%	29%	28%	26%	28%	26%	28%	26%	26%	22%	24%
E	10	70%	60%	50%	40%	40%	20%	40%	50%	60%	60%	40%	60%	70%	40%
F	20	40%	45%	40%	30%	30%	30%	30%	30%	25%	30%	30%	25%	25%	35%
G	33	94%	100%	100%	94%	100%	97%	97%	97%	94%	91%	97%	100%	100%	100%
H	90	81%	82%	71%	70%	67%	67%	74%	74%	67%	59%	66%	63%	68%	74%
I	68	78%	78%	76%	71%	78%	72%	79%	72%	66%	69%	68%	75%	60%	69%
J	122	11%	12%	21%	33%	47%	55%	51%	48%	48%	52%	54%	54%	51%	41%
K	64	38%	36%	31%	30%	27%	28%	28%	27%	25%	25%	25%	27%	27%	34%
L	20	30%	25%	20%	25%	15%	20%	20%	20%	15%	10%	10%	15%	15%	20%
M	36	81%	78%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
N	37	78%	70%	65%	46%	32%	43%	49%	46%	51%	46%	54%	51%	70%	62%

<30% (Underutilized) 30-54% (Moderately Utilized) 55-85% (Consistently Utilized)
>85% (Nearing or At Capacity) Peak Caltrain Hours

BASELINE TRANSIT PARKING DEMAND SUMMARY

The information available for estimated and observed baseline demand and inconclusive findings on transit users parking on the public streets suggests a baseline transit parking demand for Hayward Park Station is likely between 13 and 61 cars. The 61 car demand was calculated in the "Estimated and Observed Parking Lot Demand" section and represents the total daily vehicles anticipated to be using the park and ride currently over a 24-hour period. The length a vehicle stays parked can range greatly depending on the length of the transit trip and time spent at the destination. Consequently, total daily utilization is not representative of park and ride peak occupancy, which represents the highest volume of transit rider vehicles that is anticipated will need to be accomodated at a single time. The 13 car demand was a data point for peak park and ride vehicles that used the parking lot at one time, observered during a time with heavy construction activity within the parking lot[4]. These data points were obtained from different sources and years but give an indication of the range of potential park and ride transit users. Based on the information available, the baseline demand is estimated to be an average of the two data points (13 and 61). **This results in an estimated transit park and ride baseline demand of 37 vehicles.**

In addition, the transit park & ride ADA space occupancy of 5 vehicles observed in the Fehr & Peers report is assumed to be the need for accessible spaces and are carried forward as a static demand throughout the calculations of future projections.

Estimated Transit Parking Demand
37 regular + 5 ADA = 42 total vehicles

POST-ELECTRIFICATION TRANSIT PARKING DEMAND

As Caltrain implements its 2040 Service Vision, providing Hayward Park Station with more frequent local service, transit demand is likely to grow. This scenario considers the impact of post-electrification and increasing job and housing densities in the TOD around Hayward Park in the near term.Assuming a correlation between transit ridership and parking demand, the increase in service would result in an increased near term baseline demand. Using the same mode share assumption for Hayward Park, the near term demand would be increased linearly with the increased service levels.

Based on an e-mail from Caltrain, the post-electrification scenario is anticipated to increase ridership at the Hayward Park Station by 32%.[5] Applying a similar increase to the baseline parking demand (not including ADA demand) has an increased parking demand of 12 vehicles (37 vehicles *1.32 growth = 49 vehicles). **The**

[4] As discussed in "Estimated and Observed Parking Lot Demand" (Table 6)
[5] SamTrans e-mail to City of San Mateo (October 27, 2021)

resulting post-electrification baseline demand is estimated to be 49 vehicles. The ADA parking demand was assumed to stay constant at 5 vehicles.

Estimated Post-Electricification Transit Parking Demand
49 regular + 5 ADA = 54 total vehicles

DEMAND ADJUSTMENTS

Estimating a future demand should also consider changes that may affect travel behavior, patterns, and opportunities. Regarding the Hayward Park Station, the following are also included in this evaluation when considering future parking demand:

- Change in adjacent land use
- Roadway network or Project features that encourage non-vehicle travel
- City policies to balance modal opportunities for residents
- Caltrain policies to incentivize non-vehicle travel
- Change in travel behaviors after the COVID-19 pandemic

Table 10: Parking Demand Adjustment Considerations

Topic	Consideration	Application	Estimated Effect on Parking Demand
Change in adjacent land use	Near term development in the area would increase the residential and mixed use land uses within walking distance of the station. This aligns with transit oriented development close to the site and would increase activity and need for multimodal connections to the station.	Transit oriented development can reduce vehicle miles travelled up to 27% which correlates to a reduction in vehicle parking demand.[6]	Increased population and services near transit is anticipated to increase transit ridership and reduce vehicle trips only for those within the walkable transit oriented development area and would have less effect on modifying trip patterns currently relying on driving to the site. **Thus, a reduction of 25% was applied only to new ridership estimates (+12 parking spaces). This consideration results in a**

[6] California Air Pollution Control Officers Association Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity Final Draft December 2021

Topic	Consideration	Application	Estimated Effect on Parking Demand
			reduction of 3 vehicle parking space demand.
Project features that encourage non-vehicle travel	The Project provides an opportunity for improved bicycling, walking, and shared mobility options and amenities near the Hayward Park Station. These improvements may change the way people travel to and from Hayward Park by making alternative mode and shared mobility options competitive.	Improved pedestrian, bicycle, and carshare programs and community-based travel planning reduce vehicle miles travelled 1-2% which correlates to a minor reduction in vehicle parking demand. The improved facilities would be compatible with planned adjacent land use changes.	This consideration results in no additional change to the vehicle parking demand beyond those identified for nearby TOD.
City policies to balance modal opportunities for residents	The City of San Mateo has policies on how transit oriented development is envisioned and include maintaining parking supply for those that choose to drive. This includes maintaining parking supply for the Hayward Park Station.	To align with the vision of the City and provide modal options for their residents, the number of parking spaces available should be adequate to capture parking demand.	This is applied by setting a minimum parking demand equivalent to the baseline demand estimated in this report.
Caltrain policies to incentivize non-vehicle travel	Caltrain has set a vision to reduce reliance on vehicles to connect to some of their stations,	To align with the vision of Caltrain's neighborhood circulation typology that aims to reduce the number of vehicle trips, the number	This is applied by including demand adjustments for TOD and multimodal improvements described in this section.

Topic	Consideration	Application	Estimated Effect on Parking Demand
	promoting walking, bicycling, and shared mobility connections.	of parking spaces required should be reduced from historical numbers.	
Change in travel behaviors after the COVID-19 pandemic	The COVID-19 pandemic changed how people live, work, and travel. It is anticipated that remote work options will be more readily available and overall there will be a reduction in commute travel.	Unknown effect on parking demand. Transit ridership was greatly reduced during the pandemic and to what level it will return is unknown – with potential for both lower or higher ridership.	This consideration results in no change to the vehicle parking demand.

With these considerations, the near term baseline demand for regular parking spaces is assumed to be reduced by 3 parking spaces to account for change in travel demand with increased transit oriented development and improved facilities and travel options resulting from adjacent land use changes as described in Table 10. **This results in an adjusted near term estimated demand of 46 vehicles.** The ADA parking demand was assumed to stay constant at 5 vehicles.

Estimated Mid- to Long-Term Transit Parking Demand
46 regular + 5 ADA = 51 total vehicles

POST-ELECTRIFICATION TRANSIT PARKING DEMAND SUMMARY

The estimated post-electrification baseline demand was estimated to be 49 vehicles based on an increase in service to Hayward Park and a continued mode share correlation between service provided and vehicle demand. A reduction of 3 vehicles was applied to account for adjacent land use development and improved facilities that reduce the need for future vehicle trips to the site. **The adjusted near term parking demand for Hayward Park Station is estimated to be 46 vehicles for regular parking spaces. In addition, 5 ADA spaces should be provided to account for the documented demand of ADA parking spaces at the current parking lot. This results in a total transit parking demand of 51 vehicles.** This transit use park demand would be assumed between the hours of 5:00 am and 7:00 pm when transit parking is traditionally most active.

PARKING SUPPLY

The following section discusses the available parking supply to accommodate the estimated post-electrification parking demand for Hayward Park Station.

PROJECT PARKING SUPPLY

The Project currently proposes zero parking spaces for transit users, replacing the existing parking lot with its building and parking areas dedicated for residents. The anticipated transit parking demand for Hayward Park was calculated to be 51 vehicles as described in the previous section. This would result in 51 transit user park and ride vehicles being displaced and needing to find parking.

PUBLIC STREET PARKING AVAILABILITY

Occupancy utilization of the streets within a quarter mile of the Hayward Park Station was taken as described previously in this report to evaluate potential current use of public street parking for transit users. Any availability of parking along public streets is a shared resource for the adjacent residential, retail, and office uses and has no guarantee of providing park and ride supply for transit users. Public parking spaces are subject to change such as implementing hour resections in the future. Use of public street parking to accommodate Hayward Park station transit user park and ride is not considered a feasible long term solution. Therefore, parking available on public streets near the station is not considered to be available parking supply for transit park and ride users.

ADJACENT CALTRAIN STATION PARKING AVAILABILITY

The adjacent Caltrain stations – Hillsdale and San Mateo – were found to have overutilized parking lots that would not be able to absorb additional parking demand displaced by the Project. Any availability of parking at those sites would also likely be filled with new ridership from increased local service post-electrification, similar to the expectation of increased ridership at Hayward Park Station. Thus, the parking demand for Hayward Park will continue and cannot be reassigned to adjacent stations.

FINDINGS

The estimated post-electrification transit parking demand for Hayward Park Station is 51 vehicles (46 regular and 5 ADA spaces). The Project is not providing any public transit parking and no other current parking supply was identified for a long term solution to absorbing the transit parking demand. As a result, there is a need for the project to identify parking for 51 park and ride transit user vehicles.

PARKING SUPPLY OPTIONS

This section discussions potential options for providing parking supply that may be relevant to meet the post-electrification parking demand for the Caltrain Hayward Park Station transit riders based on policies and information discussed in this report. This information is provided for consideration by the applicant and City staff as project reviews are performed and conditions of approval are determined.

SHARED-USE AGREEMENT

Policy Support: As discussed throughout this document, several existing Caltrain and City policy documents support and encourage the execution of shared-use parking agreements to optimize land use, reduce the prospect of induced vehicle trips within a TOD zone, and balance synergistic demands.

Coordination: A shared-use agreement would require coordination with Caltrain. In order to prevent inducing vehicle trips, the shared-use agreement could consider provision for charging transit users for parking permits, particularly should Caltrain implement dynamic pricing strategies.

ADA: ADA park & ride spaces could be accommodated though a shared-use agreement.

Unbundled Parking: For shared parking to be incorporated by the Project, parking spaces need to be general spaces not assigned directly to a resident's personal use. This often comes from a leasing structure using unbundled parking spaces, where purchasing a dedicated parking space is a separate cost from the fee for living in the building. Unbundled parking also can help reduce vehicle miles travelled, as it attracts those not reliant on a vehicle or discourages vehicle use by charging separately for vehicle parking.

Feasibility: The proposed site-plan depicts a surface lot with 67 regular spaces, 1 electric vehicle charging station space, and 4 ADA spaces within a short walking distance of the Caltrain platform. The 67 spaces or a portion thereof, if unbundled, would be sufficient to meet the Station parking demand. The four ADA spaces would be one space short of the identified historical use and need for ADA spaces at the site.

Shared-use agreements are generally most successful where the peak-user demands are opposite of one another. For example, an office building, whose peak-user demands are in the daytime and on weekdays, may share parking spaces with a movie theater whose peak demand is at night and on weekends. The following discussion considers several reports and studies that provide insight on parking demand for the proposed residential use to support the feasibility of a shared parking arrangement.

Calculating Shared-use Capacity

This section is provided to discuss the feasibility of a shared-use parking agreement. **The ITE Parking Generation Manual** (5th Edition, 2019) is a well-known professional reference for parking supply estimates. ITE conducts parking counts throughout the day to provide guidance on the estimated parking demand at

different land uses for an average weekday. The ITE land use code 221 for Multifamily Housing (Mid-Rise) (LU221) is most comparable to the Project.

Table 11 indicates that ITE LU221 average peak parking rates are .71 (dense multi-use urban) or 1.12 (general urban/suburban) parked vehicles per dwelling unit (DU). This means that if there are 100 DUs, demand for residential spaces is between 71 and 112 during peak hours and as much as 71% - 49% less than the peak demand throughout the times when transit users would most likely be occupying parking spaces. While the land use context for this Project is consistent with ITE's "Dense Multi-Use Urban" category, the general urban/suburban context is considered here as well as a proxy for a TOD that is still in transition. The project is currently proposing parking supply at a rate near 1.00 space per dwelling unit, which is closer to the general urban/suburban setting.

Table 11: ITE Peak Parking Demand Estimates per Dwelling Unit

Land Use Context	Average Peak Period Parking Demand	Range of Rates
General Urban/Suburban (<.5 mile to rail transit)	1.12	.55 – 1.45
Dense Multi-Use Urban (<.5 mile to rail transit)	.71	.17-1.50

Source: ITE Parking Generation Manual 5th Edition - Multifamily Housing (Mid Rise) – Land Use Code 221

Applying a .71 – 1.12 per unit ratio to the Project's 191 units yields a range of 136 – 214 parking spaces required for residents during peak (9PM-6AM). However, it is the off-peak demand that is relevant to determining the shared-use capacity as that is when spaces are likely undreutilized by residents and available for transit park and ride users.

The ITE Parking Generation Manual Time of Day Distribution table provided in Appendix D demonstrates that on an average weekday between 80-100% of peak residential parking demand occurs between the hours of 9PM and 6AM, and does not significantly overlap with the peak transit hours which are typically between 5AM-9AM and 3PM-6PM. While early morning overlap (5AM and 6AM) have high utilization, it quickly drops off by 7AM. Assuming a peak transit parking demand around 6AM, the 6AM rate of 83% was used to calculate the residential parking need during potential shared-use hours.

An estimate of available shared use parking inventory can be calculated subtracting the difference of residential off-peak parking demand from the total parking supply provided by the Project. Table 12 shows the relationship between peak, off-peak, and available supply. The calculations indicate that there would be between 14 and 79 parking spaces available for a shared-use arrangement during off-peak residential hours to accommodate the 51 total space parking demand for transit park and ride users.

Table 12: Estimated Residential Peak Parking Demand Per Unit at Project Site using ITE Ratios for LU221

Land Use Context	ITE Peak Demand/Unit	Proposed # Units	Peak Residential Parking Demand	Off-Peak Residential Parking Demand (83%)	Available Shared Use Supply*
General Urban/Suburban (<.5 mile to rail transit)	1.12	191	214	178	14
Dense Multi-Use Urban (<.5 mile to rail transit)	.71	191	136	113	79

*Equal to 192 minus the Off-Peak Residential Parking Demand, where 192 is the Project's currently proposed total parking supply

It is likely the Hayward Park Station would be in alignment with the Dense Multi-Use Urban setting, which would have more parking spaces available for a shared parking arrangement. To support this, a technical memo regarding multi-family parking demand rates (2018) for the City of Palo Alto[7] reviewed the results of local parking supply vs demand studies and determined that for affordable and market rate units, oversupply was associated with proximity to transit. The closer residential units were in proximity to transit access, the more residential parking spaces were underutilized – even at night.

The report's findings for peak parking demand are in line with the ITE calculations used in the above section. A parking survey at a market rate multi-family apartment complex half a mile from a Caltrain station, which was the most comparable comparison to the proposed development at Hayward Park, resulted in a .79 percent of peak parking demand. The .79 rate is higher than the ITE .71 peak parking demand, however as the proposed Project is much closer to transit the .71 can be assumed as a reasonable "proximity to transit" adjustment.

Based on this shared parking calculation and review of similar project parking patterns, a shared parking arrangement seems to be a feasible option to accommodate both resident and transit park and ride user parking needs. Parking during resident off-peak times (morning/day) is anticipated to have enough parking supply to accommodate transit park and rider needs. And parking would then be available for residents during their peak times (evenings/nights).

7 Fehr & Peers Multi-Family Parking Study - Palo Alto and Statewide (cityofpaloalto.org)

PUBLIC STREET PARKING

Policy Support: As discussed throughout this document, relying on public on-street parking to accommodate public transit pakring demand is inconsistent with several City adopted plans.

ADA: Dedicated ADA spaces are not available within public street parking near the station and it would be an unmet parking need if the project were to rely on public street parking for transit park and ride users that rely on ADA spaces.

Parking Space Use: The public street spaces are provided and maintained by the City and intended for use by a variety of resident and business uses and there is no guarantee adequate supply would be available for transit park and ride users. Public street parking restrictions may be modified in the future to implement time restrictions or other changes that would effect the ability for transit park and ride users to utilize spaces. Reserving parking spaces adjacent to the Station on public streets using time limitations during transit hours has been a strategy utilized by BART to help improve capacity as shown in the Tennyson Road example illustrated in Figure 9. Drivers who park in these spaces must still pay a parking fee. Coordination between JPB/Caltrain and the City of San Mateo would be required to investigate a desire to maintain an on street system and supporting infrastructure (e.g. parking validation machines and enforcement) and is currently not considered a feasible option for the project.

Figure 9: BART parking spaces on Tennyson Rd (Hayward, CA) adjacent to South Hayward Station

Public Street Parking Occupancy: Occupancy data for public street parking spaces within a quarter-mile radius was collected as part of this study. If transit park and ride user demand were to use public City of San Mateo streets, this would most likely primarily occur along 19th Avenue, Pacific Boulevard, Concar Drive, Leslie Street, and Gum Street due to proximity and ease of access to the site but may influence all streets within walking distance. Table 13 shows the utilization during the highest morning peak of each individual street segment and Table 14 shows the utilization during the 11:00 AM hour which had the highest overall network utilization. If the 51 vehicles identified in this report as the transit park and ride demand were to be added to the adjacent streets, there could be a reduction of 14% in available parking spaces near the Station, increasing utilization from 46% to 60%. The street parking utilization with the vehicles absorbed onto the public streets closest to the station is illustrated in Figure 10. Further, these streets are on the fringes of residential neighborhoods and on largely commercial or industrial corridors where people walking from their cars to the Station may not feel safe or comfortable, particularly in early morning or evening hours when activity is low. Additional lighting or removal of overgrown landscaping would be recommended to improve sight lines.

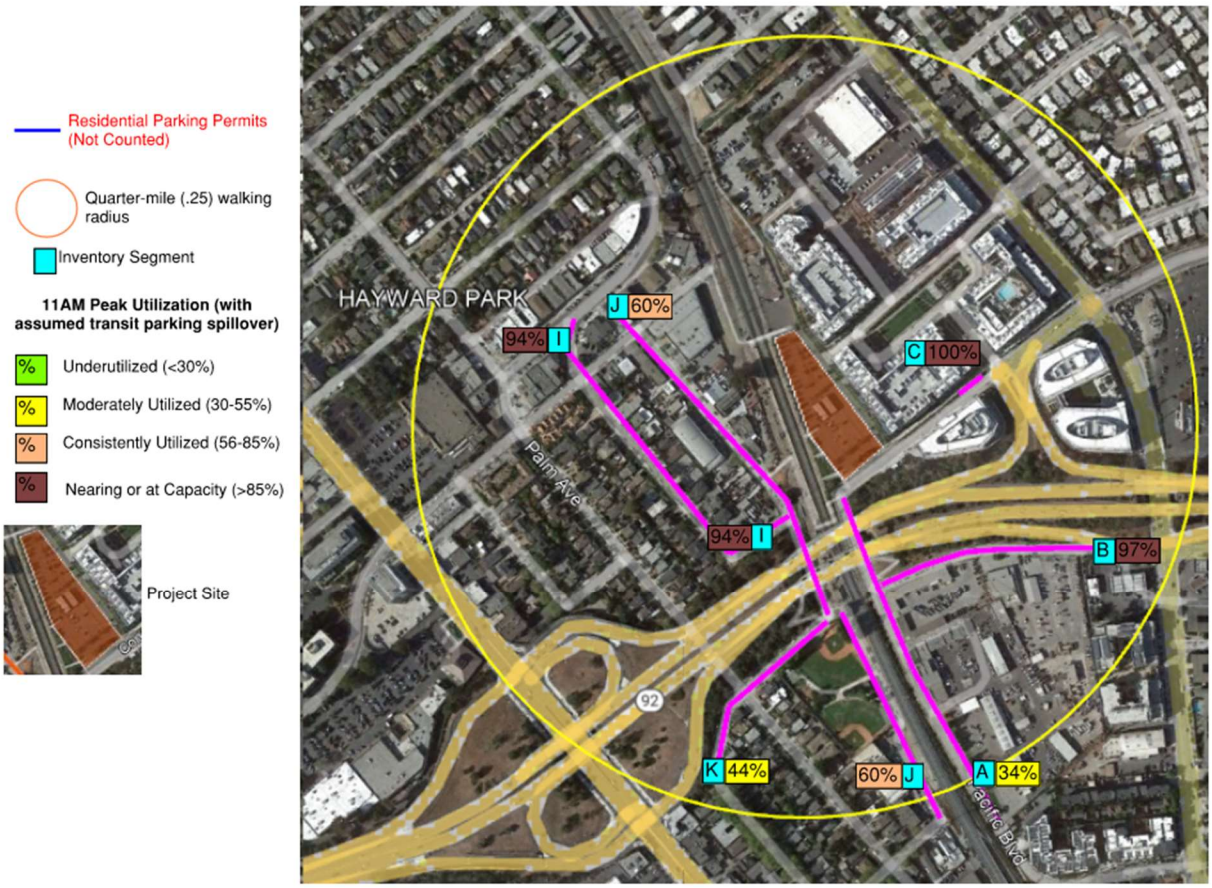
Table 13: Street Parking Occupancy with Transit Demand Absorption, Weekday AM Street Segment Peak

Street Segment	Inventory	Highest Utilization at Individaul Peak (5-9AM)	Utilization With Absorbtion	Adjusted Utilization
Pacific (A)	70	12 (17%)	22 (+10)	31%
19th (B)	43	14 (33%)	24 (+10)	56%
Concar (C)	6	6 (100%)	6 (+0)	100%
Leslie(J)	122	57 (47%)	68 (+11)	56%
19th (K)	64	24 (38%)	34 (+10)	53%
Gum(I)	68	53 (78%)	63 (+10)	93%

Table 14: Street Parking Occupancy with Transit Demand Absorption, Weekday AM Network Peak

Street Segment	Inventory	Highest Utilization at Network Peak (11AM)	Utilization With Absorbtion	Adjusted Utilization
Pacific (A)	70	14 (20%)	24 (+10)	34%
19th (B)	43	19 (44%)	29 (+10)	97%
Concar (C)	6	6 (100%)	6 (+0)	100%
Leslie(J)	122	62 (51%)	73 (+11)	60%
19th (K)	64	18 (28%)	28 (+10)	44%
Gum(I)	68	54 (79%)	64 (+10)	94%

Figure 10: Street Parking Availability Post-Electrification with Project Parking (11AM) for Absorption Streets



Feasibility: Use of public street parking is not a viable long-term solution for transit parking demand. It is inconsistent with City adopted plans, has no guarantee of long-term sustainability of providing supply, and would impact available parking in the adjacent neighborhood streets.

CONCLUSION

An assessment of post-electrification Hayward Park Station transit parking demand considered the following factors and their assumed impact on park & ride demand:

- Existing park & ride use at Hayward Park Station
- Post-electrification transit rider growth
- Changes to land use near the station
- Changes in travel behaviors after the COVID-19 pandemic
- City policies to balance modal opportunities for residents
- Caltrain policies to incentivize non-vehicle travel

The estimated post-electrification transit parking demand for Hayward Park Station is 51 vehicles (46 regular and 5 ADA spaces). As a result, there is a need for the project to identify parking for 51 park and ride transit user vehicles.

Further discussion and analysis of options were included for consideration to accommodate this demand. A shared parking agreement was found to be a potentially feasible option that could be considered. Utilizing public street parking was found to not be a feasible option.

APPENDICES

APPENDIX A: STREET PARKING OCCUPANCY DATA

Appendix A

Hayward Park Parking Study [3/2/2022]							Limitations							
Map Sgmt Letter	Segment	From	To	Block Side	Inventory (All)	Inventory No Green/ADA	ADA	Green Spaces	Green Times	No Overnight Pkg	No overnight pkg times	No Truck Parking	St Sweep	St Sweep times
A	Pacific Blvd	19th Ave	Concar Dr	East	0	0	0	0	-	0	-	0	0	-
A	Pacific Blvd	Mode Apt Dwy	19th Ave	East	18	16	0	2	No sign posted	16	10 PM-3 AM	0	0	-
A	Pacific Blvd	19th Ave	Concar Dr	West	12	12	0	0	-	12	10 PM-5 AM	0	0	-
A	Pacific Blvd	Mode Apt Dwy	19th Ave	West	42	42	0	0	-	0	-	0	0	-
A	**Pacific Blvd**			**Full Segment**	**72**	**70**	**0**	**2**	**-**	**28**	**-**	**0**	**0**	**-**
B	19th Ave	Pacific Blvd	Hwy 92 Off Ramp	North	17	17	0	0	-	0	-	0	17	1st & 3rd Fri 7-
B	19th Ave	Pacific Blvd	Hwy 92 Off Ramp	South	26	26	0	0	-	0	-	0	26	2nd & 4th Friday 7-9AM
B	**19th Ave**	**Pacific Blvd**	**Hwy 92 Off Ramp**	**Full Segment**	**43**	**43**	**0**	**0**	**-**	**0**	**0**	**0**	**43**	**-**
C	**Concar Dr**	**Across from Klarna**		**Full Segment**	**6**	**6**	**0**	**0**	**-**	**0**	**-**	**0**	**0**	**-**
D	Eleanor Dr	Connie Ave	Charles Ln	East	12	11	1	0	-	0	-	0	11	1st & 3rd Fri 7-
D	Eleanor Dr	Charles Ln	Edna Way	East	3	3	0	0	-	0	-	0	3	2nd & 4th Fri 7-9AM
D	Eleanor Dr	Edna Way	Vanessa Dr	East	7	7	0	0	-	0	-	0	7	2nd & 4th Fri 7-9AM
D	Eleanor Dr	Vanessa Dr	Joanne Dr	East	6	6	0	0	-	0	-	0	6	2nd & 4th Fri 7-9AM
D	Eleanor Dr	Connie Ave	Charles Ln	West	7	7	0	0	-	0	-	0	7	2nd & 4th Fri 7-9AM
D	Eleanor Dr	Charles Ln	Edna Way	West	4	4	0	0	-	0	-	0	4	1st & 3rd Fri 7-
D	Eleanor Dr	Edna Way	Vanessa Dr	West	10	10	0	0	-	0	-	0	10	1st & 3rd Fri 7-
D	Eleanor Dr	Vanessa Dr	Joanne Dr	West	10	10	0	0	-	0	-	0	10	1st & 3rd Fri 7-
D	**Eleanor Dr**			**Full Segment**	**59**	**58**	**1**	**0**	**-**	**0**	**-**	**0**	**59**	**-**
E	Charles Ln	Delaware St	Eleanor Dr	North	5	5	0	0	-	0	-	0	5	1st & 3rd Fri 7-
	Charles Ln	Delaware St	Eleanor Dr	South	5	5	0	0	-	0	-	0	5	1st & 3rd Fri 7-
E	**Charles Ln**			**Full Segment**	**10**	**10**	**0**	**0**	**-**	**0**	**-**	**0**	**10**	
F	Connie Ave	Eleanor Dr	Edna Way	North	7	7	0	0	-	0	-	0	7	1st & 3rd Fri 7-
F	Connie Ave	Eleanor Dr	Edna Way	South	13	13	0	0	-	0	-	0	13	7-9AM 1st & 3rd Fri (7); 2nd & 4th (13)
F	**Connie Ave**			**Full Segment**	**20**	**20**	**0**	**0**	**-**	**0**	**-**	**0**	**20**	**2nd & 4th Fri 7-9AM**
G	16th Ave	Railroad Ave	Claremont St	North	12	12	0	0	-	0	-	0	0	-
G	16th Ave	Claremont St	Delaware St	North	9	9	0	0	-	0	-	0	0	-
G	16th Ave	Railroad Ave	Claremont St	South	7	7	0	0	-	0	-	0	0	-
G	16th Ave	Claremont St	Delaware St	South	5	5	0	0	-	0	-	0	0	-
G	**16th Ave**			**Full Segment**	**33**	**33**	**0**	**0**	**-**	**0**	**-**	**0**	**0**	**-**
H	Palm Ave	16th Ave	South Blvd	East	7	7	0	0	-	0	-	0	0	-
H	Palm Ave	South Blvd	17th Ave	East	1	1	0	0	-	0	-	0	0	-
H	Palm Ave	17th Ave	18th Ave	East	18	18	0	0	-	0	-	0	0	-
H	Palm Ave	18th Ave	19th Ave	East	10	10	0	0	-	0	-	0	0	-
H	Palm Ave	19th Ave	20th Ave	East	23	23	0	0	-	0	-	0	23	2nd & 4th Fri 6-8AM
H	Palm Ave	16th Ave	South Blvd	West	8	0	0	8	2 HR: 8AM-6PM	0	-	0	0	-
H	Palm Ave	South Blvd	17th Ave	West	7	0	0	7	2 HR: 8AM-6PM	0	-	0	0	-
H	Palm Ave	17th Ave	18th Ave	West	21	0	0	21	2 HR: 8AM-6PM	0	-	0	0	-
H	Palm Ave	18th Ave	19th Ave	West	8	8	0	0	-	0	-	0	0	-
H	Palm Ave	19th Ave	20th Ave	West	23	23	0	0	-	0	-	0	23	1st & 3rd Fri 6-
H	**Palm Ave**			**Full Segment**	**126**	**90**	**0**	**36**	**-**	**0**	**-**	**0**	**23**	**-**
I	Gum St	South Blvd	17th Ave	East	4	4	0	0	-	0	-	0	0	-
I	Gum St	17th Ave	Gum St	East	25	20	0	5	20m (3); Passenger loading (2)	0	-	0	0	-
I	Gum St	Gum St	Leslie St	North	6	6	0	0	-	0	-	0	0	-
I	Gum St	Gum St	Leslie St	South	10	10	0	0	-	0	-	0	0	-
I	Gum St	South Blvd	17th Ave	West	6	6	0	0	-	0	-	0	0	-
I	Gum St	17th Ave	Gum St	West	22	22	0	0	-	0	-	0	0	-
I	**Gum St**			**Full Segment**	**73**	**68**	**0**	**5**	**-**	**0**	**-**	**0**	**0**	**-**
J	Leslie St	17th Ave	Gum St	East	27	27	0	0	-	0	-	27	0	-
J	Leslie St	Gum St	19th Ave	East	16	16	0	0	-	0	-	16	0	-
J	Leslie St	19th Ave	20th Ave	East	34	34	0	0	-	0	-	0	0	-
J	Leslie St	17th Ave	Gum St	West	19	0	0	19	2 HR: 8AM-6PM	0	-	0	0	-
J	Leslie St	Gum St	19th Ave	West	16	16	0	0	-	0	-	16	0	-
J	Leslie St	19th Ave	20th Ave	West	29	29	0	0	-	0	-	0	0	-
J	**Leslie St**			**Full Segment**	**141**	**122**	**0**	**19**	**-**	**0**	**-**	**43**	**0**	**-**
K	19th Ave	Ivy St	Palm Ave	North	19	19	0	0	-	0	-	0	19	1st & 3rd Fri 6-8AM
K	19th Ave	Palm Ave	Leslie St	North	16	16	0	0	-	0	-	16	0	-
K	19th Ave	Palm Ave	Leslie St	South	11	11	0	0	-	0	-	0	0	-
K	19th Ave	Palm Ave	Leslie St	South	18	18	0	0	-	0	-	18	0	-
K	**19th Ave**			**Full Segment**	**64**	**64**	**0**	**0**	**-**	**0**	**-**	**34**	**19**	**-**
L	18th Ave	Ivy St	Palm Ave	North	9	9	0	0	-	0	-	0	0	-
L	18th Ave	Ivy St	Palm Ave	South	11	11	0	0	-	0	-	0	0	-
L	**18th Ave**			**Full Segment**	**20**	**20**	**0**	**0**	**-**	**0**	**-**	**0**	**0**	**-**
M	17th Ave	Gum St	Leslie St	North	7	7	0	0	-	0	-	0	0	-
M	17th Ave	Gum St	Leslie St	South	6	4	0	2	20min	0	-	0	0	-
M	17th Ave	Ivy St	Palm Ave	North	2	2	0	0	-	0	-	0	0	-
M	17th Ave	Ivy St	Palm Ave	South	10	0	0	10	2 HR: 8AM-6PM	0	-	0	0	-
M	17th Ave	Leslie St	Dead End	North	9	9	0	0	-	0	-	0	0	-
M	17th Ave	Leslie St	Dead End	South	10	0	0	10	2 HR: 8AM-6PM	0	-	0	0	-
M	17th Ave	Palm Ave	Gum St	North	4	4	0	0	-	0	-	0	0	-
M	17th Ave	Palm Ave	Gum St	South	10	10	0	0	-	0	-	0	0	-
M	**17th Ave**			**Full Segment**	**58**	**36**	**0**	**22**	**-**	**0**	**-**	**0**	**0**	**-**
N	Ivy St	19th Ave	20th Ave	East	21	21	0	0	-	0	-	0	21	2nd & 4th Fri 6-8AM
N	Ivy St	19th Ave	20th Ave	West	16	16	0	0	-	0	-	0	16	8AM
N	**Ivy St**			**Full Segment**	**37**	**37**	**0**	**0**	**-**	**0**	**-**	**0**	**37**	**-**

Hayward Park Parking Study [3/2/2022]																
Map Sgmt Letter	Segment	Inventory	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM
A	Pacific Blvd	70	1%	1%	6%	10%	17%	19%	20%	20%	19%	19%	17%	9%	7%	6%
B	19th Ave	43	30%	33%	30%	26%	28%	35%	44%	40%	26%	37%	37%	30%	23%	26%
C	Concar Dr	6	83%	67%	50%	67%	100%	100%	100%	100%	100%	83%	100%	100%	67%	50%
D	Eleanor Dr	58	28%	29%	29%	29%	29%	28%	26%	28%	26%	28%	26%	26%	22%	24%
E	Charles Ln	10	70%	60%	50%	40%	40%	20%	40%	50%	60%	60%	40%	60%	70%	40%
F	Connie Ave	20	40%	45%	40%	30%	30%	30%	30%	30%	25%	30%	30%	25%	25%	35%
G	16th Ave	33	94%	100%	100%	94%	100%	97%	97%	97%	94%	91%	97%	100%	100%	100%
H	Palm Ave	90	81%	82%	71%	70%	67%	67%	74%	74%	67%	59%	66%	63%	68%	74%
I	Gum St	68	78%	78%	76%	71%	78%	72%	79%	72%	66%	69%	68%	75%	60%	69%
J	Leslie St	122	11%	12%	21%	33%	47%	55%	51%	48%	48%	52%	54%	54%	51%	41%
K	19th Ave	64	38%	36%	31%	30%	27%	28%	28%	27%	25%	25%	25%	27%	27%	34%
L	18th Ave	20	30%	25%	20%	25%	15%	20%	20%	20%	15%	10%	10%	15%	15%	20%
M	17th Ave	36	81%	78%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
N	Ivy St	37	78%	70%	65%	46%	32%	43%	49%	46%	51%	46%	54%	51%	70%	62%

<30% (Underutilized) | 30-54% (moderately utilized) | 55-85% (consistently utilized) | >85% (nearing or at capacity) | Peak Caltrain Hrs

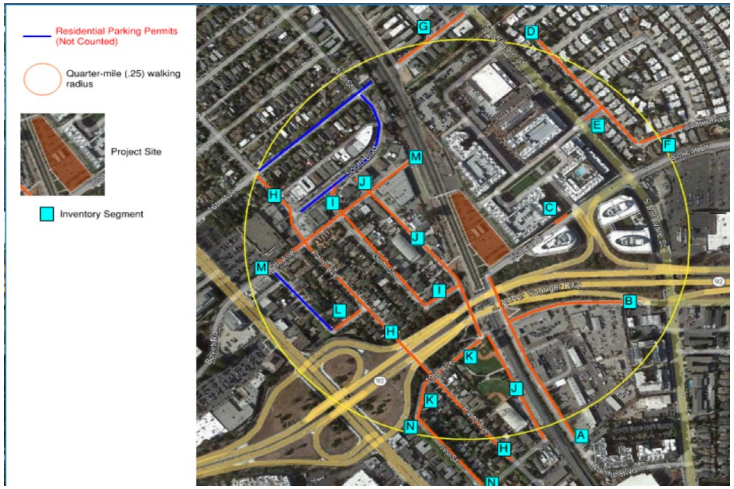
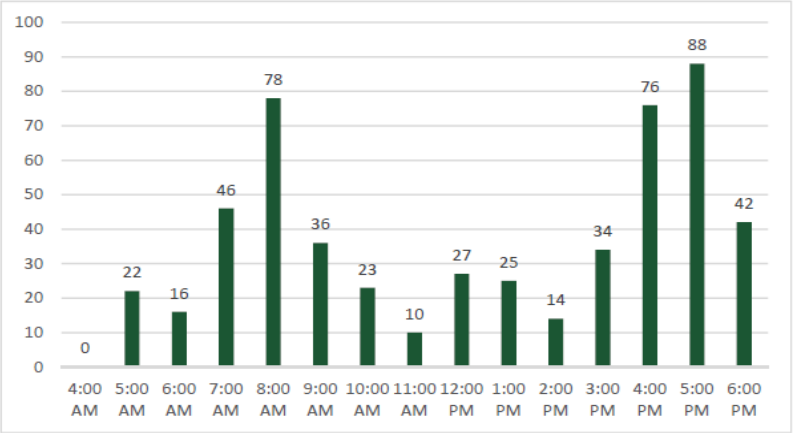


Figure 8: Estimated Hourly Caltrain Boardings, August 22, 2019



APPENDIX B: POLICY DOCUMENT SUMMARIES

SAN MATEO RAIL CORRIDOR PLAN RELEVANT POLICIES/STATEMENTS

Policy/Program/Statement	Description
Objective H: Improve Train Station Areas:	Seating, signage, lighting, automobile and bicycle parking, and pedestrian and vehicular access to rail stations and platforms.
Objective Q: Encourage Shared Parking	As part of an overall TDM program, reduce the amount of land or buildings devoted solely to storage of automobiles by encouraging parking management solutions such as shared parking between different compatible uses, particularly office and residential development. Explore the feasibility of sharing parking among the future Hillsdale Station Caltrain garage, the San Mateo County Expo Center, and adjacent development.
Station Access	Parking at the Hayward Park Station is currently provided only on the east side of the tracks[…]In order to make transit user parking more convenient, the JPB plans to provide Caltrain parking on both sides of the tracks, retaining at a minimum the same number of spaces as are there today. [..]Caltrain patron parking should be provided either with "parking streets" (streets incorporating perpendicular on-street parking on both sides) as described above or with off-street parking garages. The use of on street parking for transit user parking allows the street to also serve as a through-street, making the roadway system more efficient. Alternately, a parking structure is an efficient use of land when higher densities of development are permitted and encouraged in the surrounding areas. Should a parking structure be developed at the station it should be sited in such a manner as to not block views or prevent convenient access to the station itself. The JPB and adjacent landowners

Policy/Program/Statement	Description
	consider shared parking at the station. Regardless of the parking configuration, the Caltrain parking spaces could be made available to residents of adjacent new development in the evenings and weekends. The JPB has indicated a willingness to explore a shared parking arrangement.
Policy 4.12	Provide a balanced street system in the plan area that safely connects Hillsdale and Hayward Park stations to the adjacent and greater community by providing for convenient access by a mix of modes of travel including pedestrians, bicycles, buses, and automobiles both on and off-site.
Policy 4.15	Ensure the creation of a circulation system at the Hayward Park Station that will accommodate many modes of transit, and fulfills its role of serving the adjacent neighborhood and greater community.
Policy 4.16	Improve the visibility of Hayward Park Station from the surrounding community to make it identifiable for ease of access.
Policy 5.11	Provide for the inclusion of multi-modal transit facilities within the Hayward Park Station TOD zone.
Policy 6.6	Work closely with the JPB to ensure the design for the Hillsdale and Hayward Park Caltrain Stations are not only efficient, but also contribute to the character of the neighborhoods that surround them. […] Meeting projected parking demand is an important challenge to be addressed at both stations. This Plan highly encourages the use of the most innovative approaches to solving this, possibly including shared parking in multiple locations.

Policy/Program/Statement	Description
Policy 6.9	Capitalize on the potential of Hayward Park Station as a local transit hub that efficiently accommodates Caltrain, Samtrans buses, shuttles, bicycles, pedestrians, taxis, automobile drop-off and pick-up, and park and ride.
Policy 7.19 Development Projects within TOD zone required to submit trip reduction and parking management plan	All development projects within the TOD zone shall be required to submit a trip reduction and parking management plan as part of the development application. Projects outside the TOD zone, but within the corridor plan area shall be strongly encouraged to submit this trip reduction and parking management information as part of the development application. The zoning code shall be modified to establish a threshold defining projects such as remodeling or additions to existing development within the corridor plan area that trigger the TDM requirement.

CALTRAIN TRANSIT ORIENTED DEVELOPMENT POLICY

Include transit-supportive uses. TOD on JPB property should encourage transit ridership and enable daily activities that do not require a car. Parking to serve private development should be limited to discourage vehicle trips in favor of other modes, including walking, biking and transit.

Limit onsite parking for private development. In general, TOD on JPB property should discourage vehicle trips by providing limited parking for the private development. JPB encourages creative parking strategies with TOD projects such as unbundled parking, shared parking facilities, and/or transportation demand management, as consistent with community and Caltrain objectives.

Include a balance of station access options at each site, as consistent with Caltrain's access plans and policies. The extent to which TOD will include new parking facilities to replace existing Caltrain transit patron parking will be studied for each site and determined on a case-by-case basis. The amount of replacement patron parking will balance Caltrain station parking needs with objectives to facilitate non-vehicular access modes and generate TOD density and revenue. The JPB will seek to partner with other transit and transportation providers to provide a variety of access options, with focus on pedestrian and bicycle access.

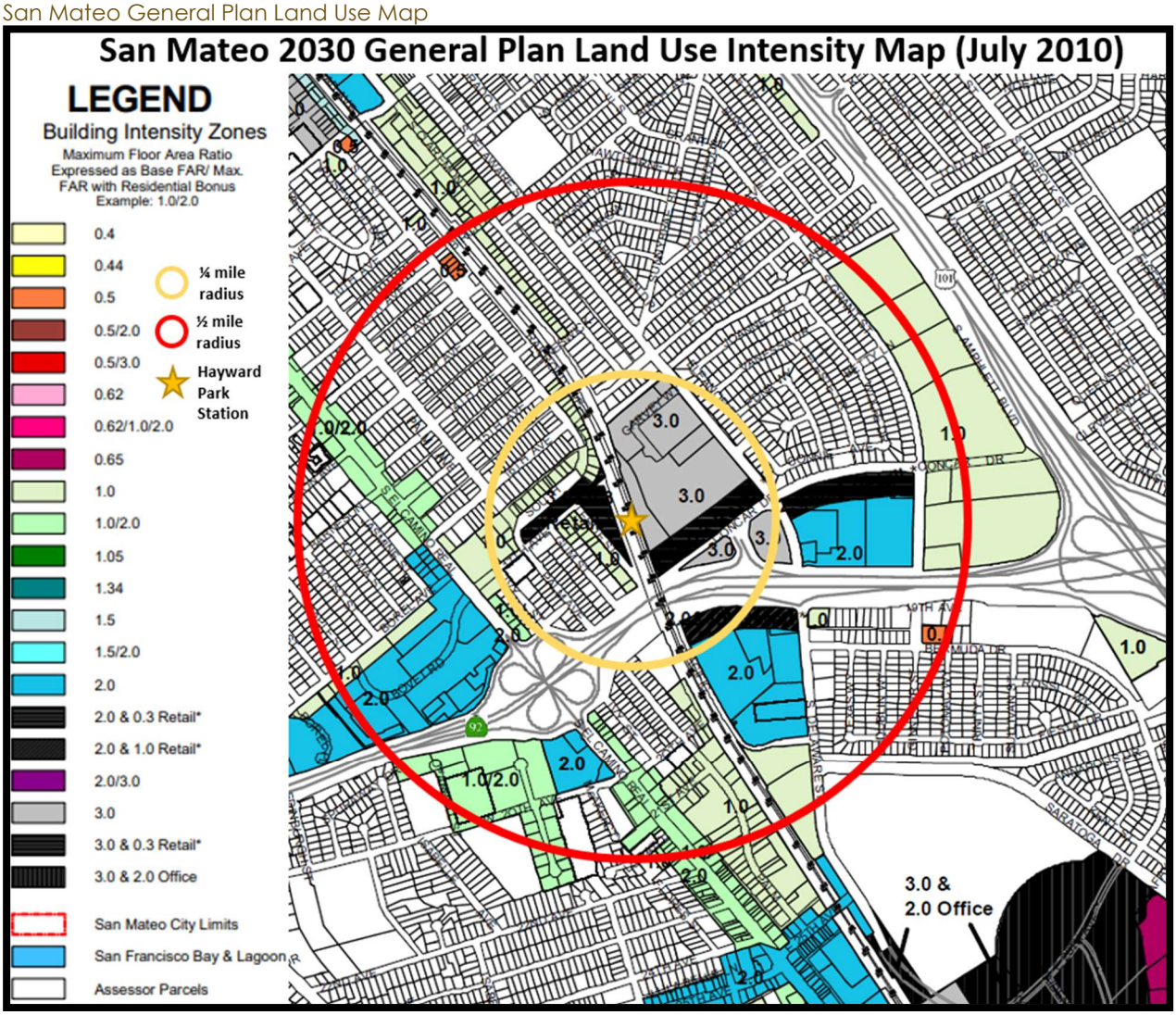
TOD should complement uses in the surrounding area. Development should consider the site context and complement other uses in the surrounding area, including a mix of uses where appropriate and financially feasible, provided that such plans are consistent with promotion of transit ridership

Seek community participation. Development proposals should consider station area plans and community preferences for use provided that such plans are consistent with promotion of transit ridership. Creation of solicitation documents and the developer selection process should include participation by the local jurisdiction.

Require residential TOD to provide affordable housing onsite. Residential development will be required offer at least 30 percent of units onsite at below market rents. At least 10 percent of units will be targeted to households with incomes of no more than 120 percent of Area Median Income (AMI), at least 10 percent of units will be targeted to households with incomes of no more than 80 percent of AMI and at least 10 percent of units will be targeted to households with incomes of no more than 50 percent of AMI.

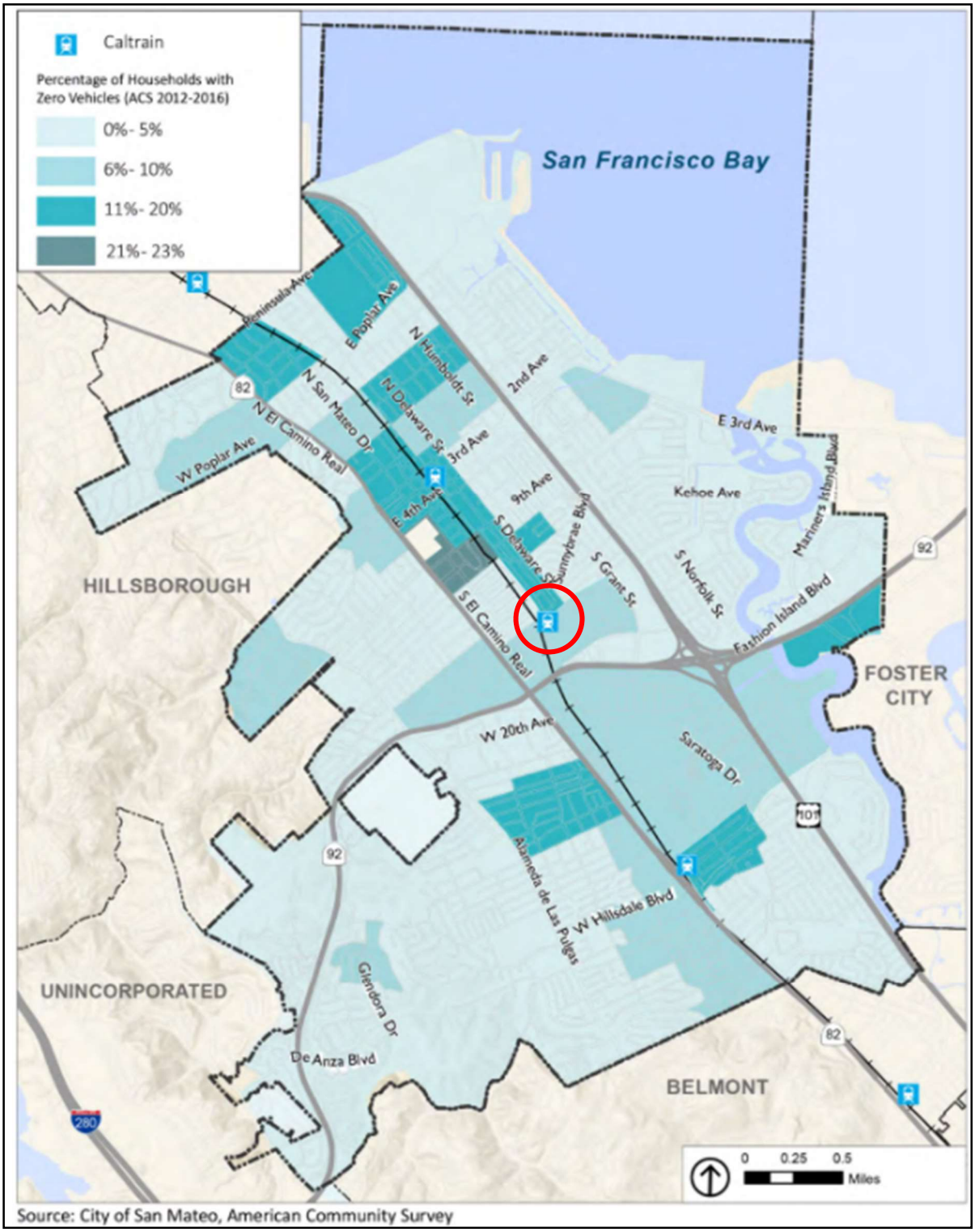
APPENDIX C: CONTEXT MAPS

San Mateo General Plan Land Use Map



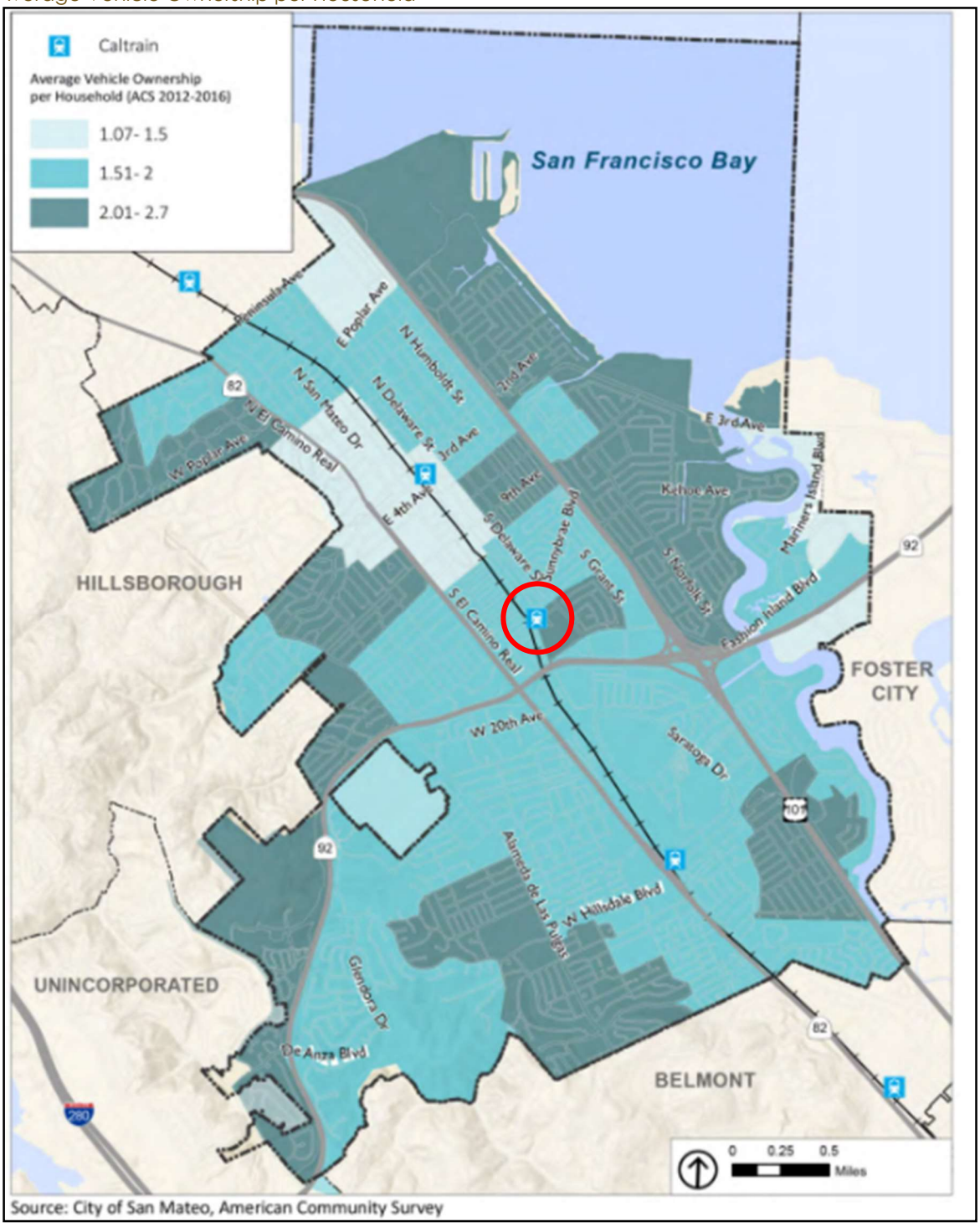
Source: San Mateo 2030 General Plan (2010)

Percent Zero Vehicle Households



Source: San Mateo 2030 General Plan (2010)

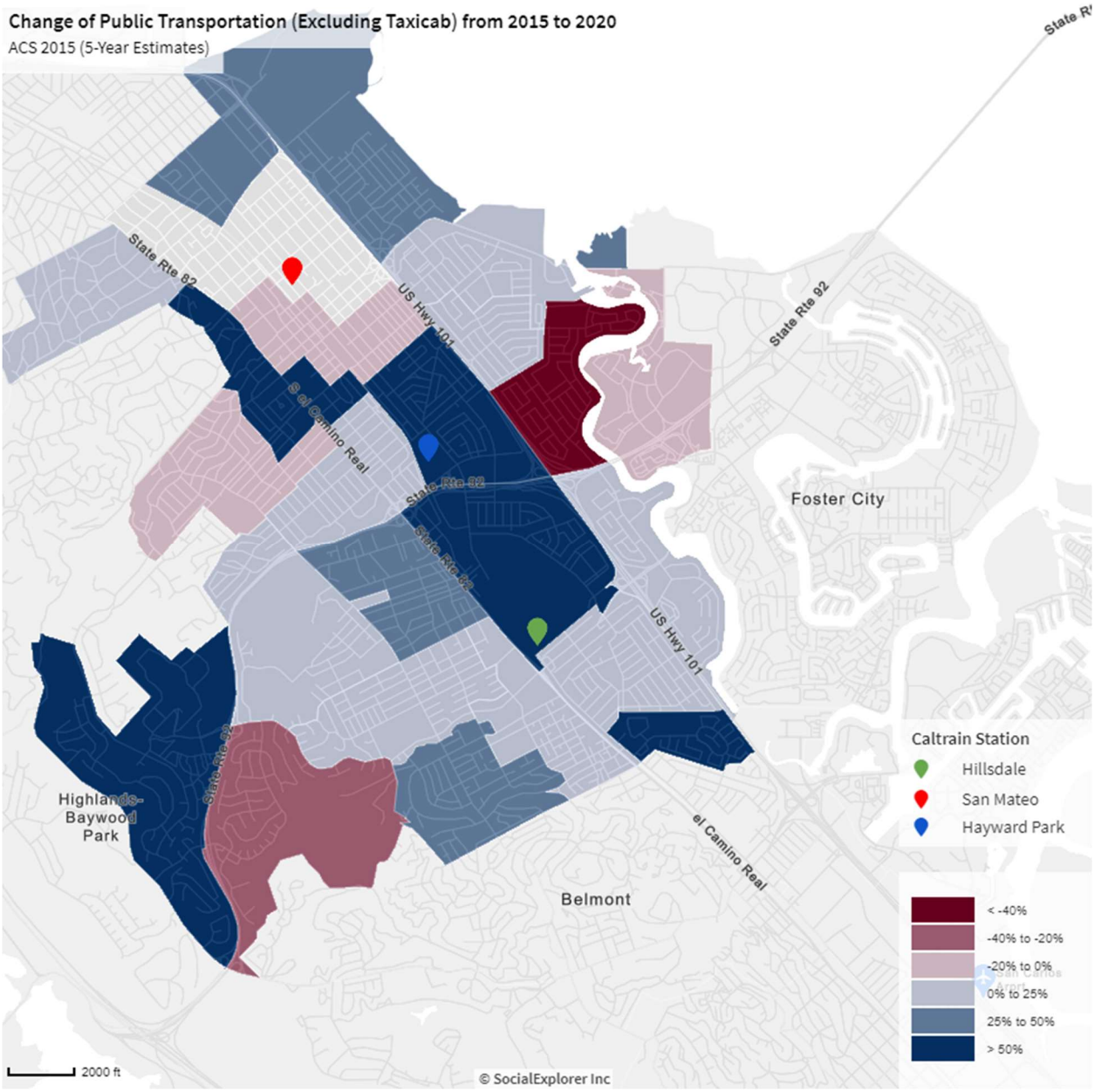
Average Vehicle Ownership per Household



Source: City of San Mateo, American Community Survey

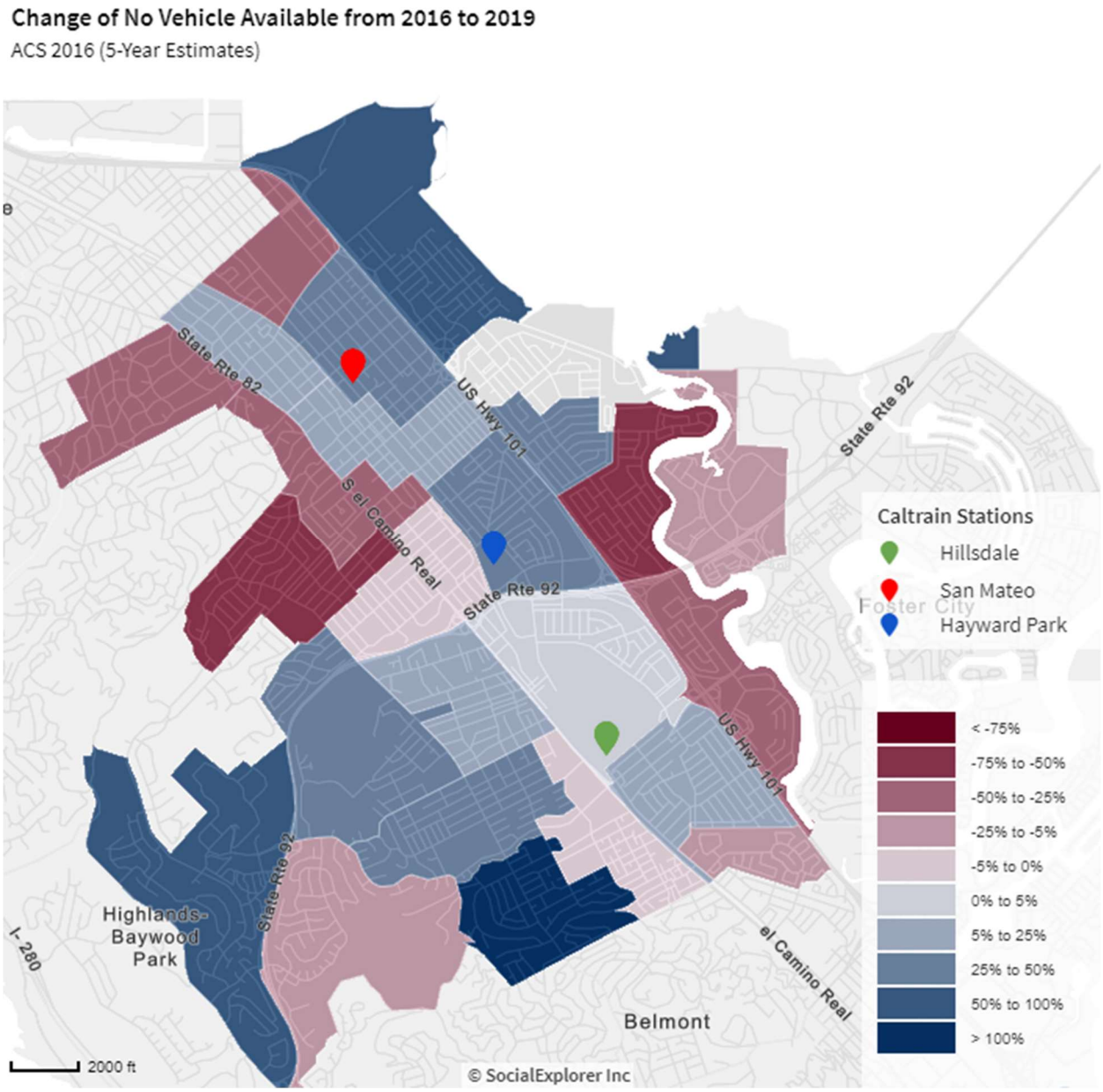
Source: San Mateo 2030 General Plan (2010)

Change in Commute by Public Transportation (American Community Survey years 2015-2020)



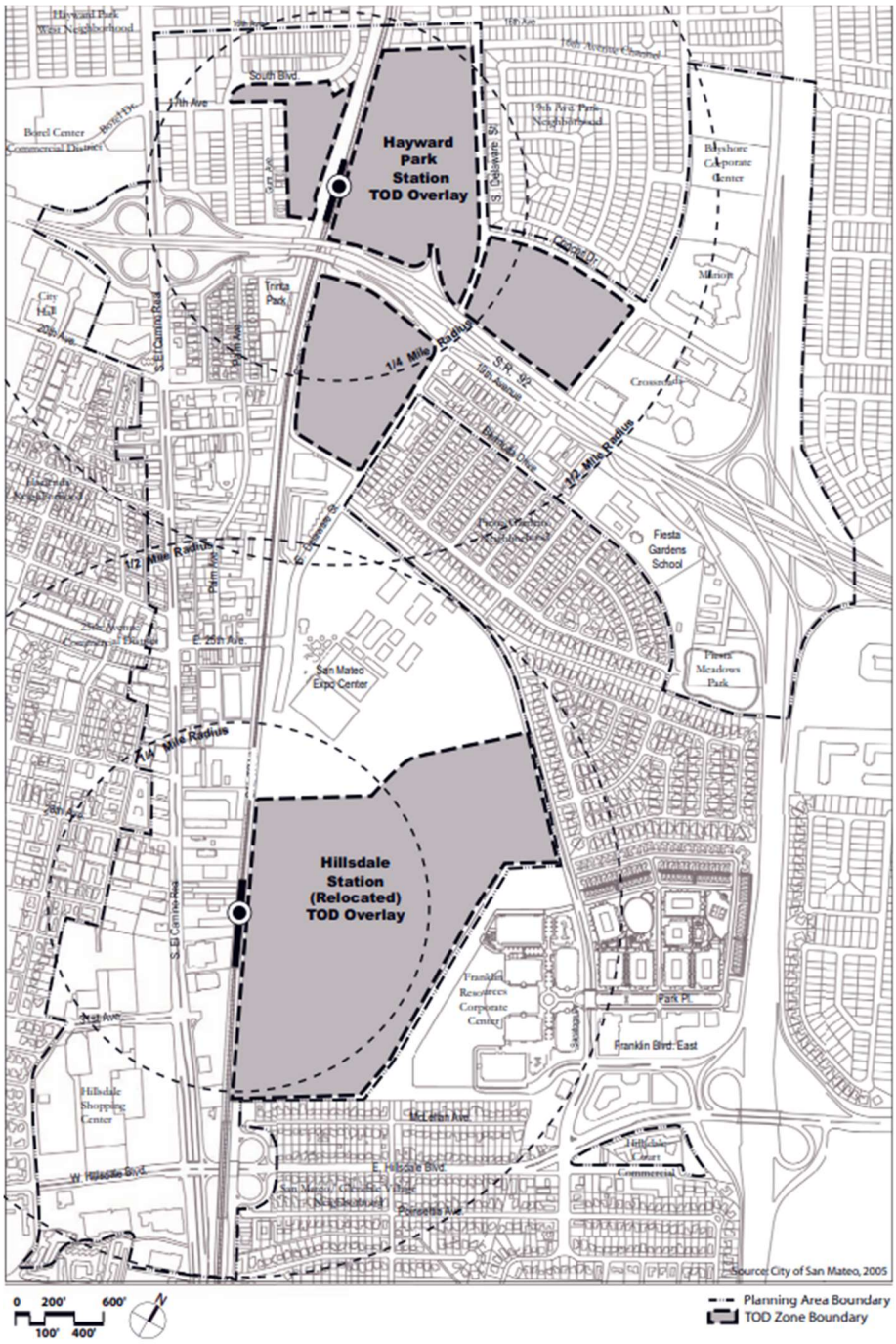
Note: White/Grey tracts (notably those around San Mateo Station) had no data available.

Change in Zero Vehicle Households 2016-2019 (American Community Survey 2016 estimates)

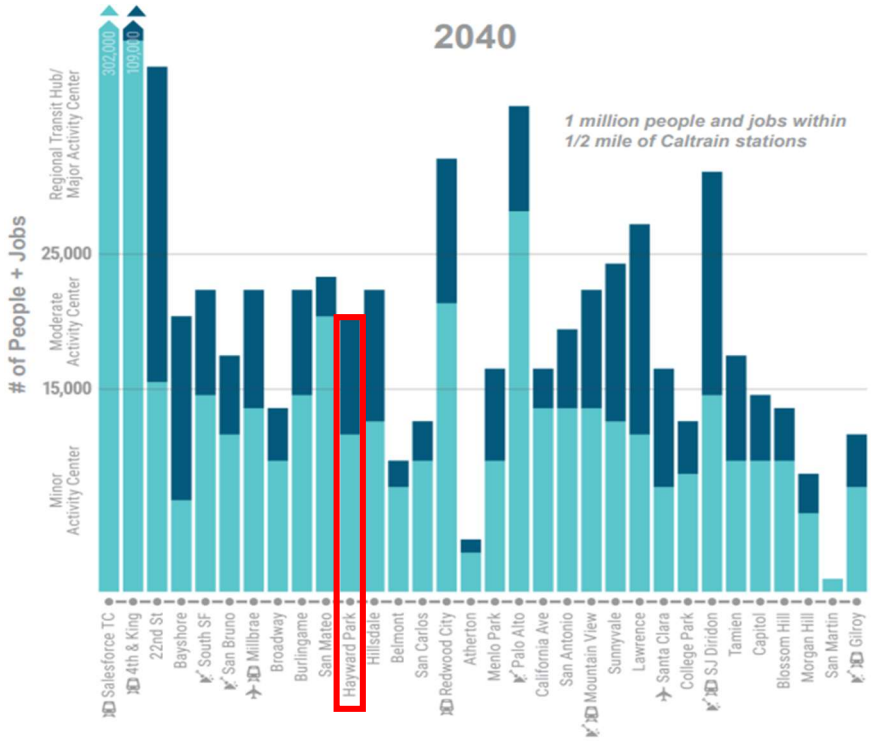


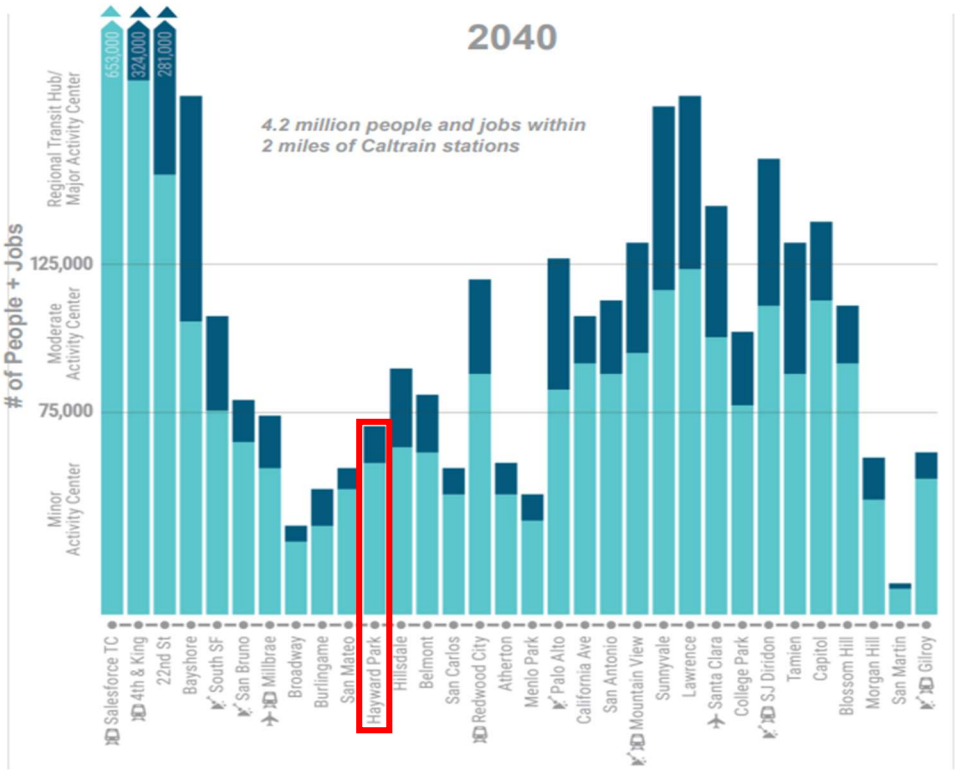
TOD OVERLAY MAP: HAYWARD PARK AND HILLSDALE STATIONS

SAN MATEO RAIL CORRIDOR TRANSIT ORIENTED DEVELOPMENT PLAN (2005)



Future Job and Housing Growth (Caltrain Business Plan Presentation)





APPENDIX D: ITE RESIDENTIAL PARKING PATTERN INFORMATION

	Percent of Peak Parking Demand		
Hour Beginning	Weekday	Saturday	Sunday
12:00–4:00 a.m.	100	100	100
5:00 a.m.	94	99	–
6:00 a.m.	83	97	–
7:00 a.m.	71	95	–
8:00 a.m.	61	88	–
9:00 a.m.	55	83	–
10:00 a.m.	54	75	–
11:00 a.m.	53	71	–
12:00 p.m.	50	68	–
1:00 p.m.	49	66	33
2:00 p.m.	49	70	40
3:00 p.m.	50	69	27
4:00 p.m.	58	72	13
5:00 p.m.	64	74	33
6:00 p.m.	67	74	60
7:00 p.m.	70	73	67
8:00 p.m.	76	75	47
9:00 p.m.	83	78	53

Source: ITE Parking Generation Manual, 5th Edition. Land Use: 221 Multifamily Housing (Mid-Rise) Time of Day Distribution for Parking Demand