## Appendix I: <br> Transportation Analysis

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# - Hexagon Transportation Consultants, Inc. 

## 455 Piercy Road Warehouse

## Transportation Analysis

Prepared for:

## FirstCarbon Solutions

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## Executive Summary

This report presents the results of the transportation analysis conducted for a proposed 121,600 square-foot (s.f.) warehouse located at 455 Piercy Road in the Edenvale Area of San Jose, California. As planned, the warehouse would operate between the hours of 7:00 AM and 7:00 PM, 7 days a week, and would employ between 40 and 80 full-time workers. The 8.97-acre project site is vacant. Two fullaccess driveways on Piercy Road would provide access to the project site.

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed industrial project. The transportation impacts of the project were evaluated following the standards and methodologies established in the City of San Jose's Transportation Analysis Handbook (April 2020). Based on the City of San Jose's Transportation Analysis Policy (Policy 5-1) and the Transportation Analysis Handbook, the project includes a California Environmental Quality Act (CEQA) level Transportation Analysis (TA) and a non-CEQA Local Transportation Analysis (LTA). The project would generate fewer than 100 new peak-hour vehicle trips, thus, a Congestion Management Program (CMP) traffic analysis based on the Santa Clara Valley Transportation Authority (VTA) Guidelines (2014) is not required.

## CEQA Transportation Impact Analysis

## Project Vehicle Miles Traveled (VMT) Analysis

The project VMT estimated by the City's VMT Evaluation Tool is 14.69 VMT per worker, which exceeds the industrial threshold (existing regional average) of 14.37 VMT per worker. Since the VMT generated by the project would exceed the threshold of significance for industrial employment uses in the area, the project would result in a significant transportation impact on VMT, and mitigation measures are required to reduce the VMT impact to a less-than-significant level.

## Project Mitigation

The following multi-modal infrastructure improvement (Tier 2 VMT reduction strategy) and Transportation Demand Management (TDM) measure (Tier 4 VMT reduction strategy) need to be implemented to mitigate the significant VMT impact:

1. Traffic Calming Measures - The project will shorten the northbound dual left-turn pocket and extend the raised median island on Hellyer Avenue at the Hellyer Avenue/Silver Creek Valley Road intersection. Field observations show the existing northbound dual left-turn pocket capacity far exceeds the vehicle queues that occur during the weekday AM and PM peak commute periods. In addition, the queuing analysis contained in Chapter 4 shows that the maximum left-turn vehicle queues under background plus project conditions are estimated to be less than half of the turn pocket capacity. Accordingly, Hexagon recommends reducing the
northbound dual left-turn pocket length from 450 feet to 250 feet. Raised median islands help to reduce vehicular speeds by narrowing the roadway, as well as provide a physical barrier between vehicles and pedestrians. Providing traffic calming measures creates a safer environment and promotes walking and biking as alternatives to driving. This multi-modal infrastructure improvement is intended to reduce drive-alone commute trips, thereby reducing VMT.
2. Commute Trip Reduction Marketing and Education - The project should implement a marketing campaign targeting all employees that encourages the use of shared rides and active modes of transportation. Marketing strategies may include new employee orientation on alternative commute options, event promotions, and publications. The project should provide information and encouragement to use transit services, shared ride modes (i.e., carpooling), and active modes to reduce drive-alone commute trips and, thus, VMT. It is assumed that $25 \%$ of the warehouse employees would participate in the commute trip reduction marketing and education program.

Based on the City's VMT Evaluation Tool, implementing the recommended mitigation measures would lower the project VMT to 14.25 per worker (a reduction of about $3.5 \%$ ), which would reduce the project impact to a less-than-significant level (below the industrial threshold of 14.37 VMT per worker).

## Cumulative VMT Impact Analysis

The proposed warehouse project is consistent with the uses allowed within the Industrial Park (IP) land use designation and is consistent with the following City of San Jose Land Use Policies:

- Land Use Policy LU-6.4: Encourage the development of new industrial areas and the redevelopment of existing older or marginal industrial areas with new industrial uses, particularly in locations which facilitate efficient commute patterns.
- Land Use Policy LU-6.5: Maintain and create Light Industrial and Heavy Industrial designated sites that are at least one acre in size in order to facilitate viable industrial uses.
- Land Use Policy LU-7.1: Encourage industrial supplier/service business retention and expansion in appropriate areas in the City.

The proposed project is consistent with the Envision San Jose 2040 General Plan and would not require a General Plan Amendment (GPA). The construction of a new warehouse would facilitate the development of an industrial site and would help retain industrial designated land within the City. Thus, the project would be considered part of the cumulative solution to meet the General Plan's long-range transportation goals and would result in a less-than-significant cumulative impact.

## Local Transportation Analysis

## Project Trip Generation

After applying the ITE trip rates to the proposed project and applying the appropriate trip reductions, it is estimated that the project would generate 201 new daily trips, with 20 new trips ( 15 inbound and 5 outbound) occurring during the AM peak hour and 22 new trips ( 6 inbound and 16 outbound) occurring during the PM peak hour.

## Intersection Traffic Operations

The results of the intersection level of service evaluation show that the three signalized study intersections are currently operating at acceptable levels of service during the AM and PM peak hours
of traffic and would continue to operate acceptably under background and background plus project conditions.

## Edenvale Area Development Policy Conformance

The project site is located within Edenvale Sub-Area 3 of the Edenvale Area Development Policy (EADP) boundaries. The site already has approval for up to 156,293 s.f. of industrial development as part of the EADP based on a maximum allowable FAR of 0.40 . Since the proposed project FAR is below an FAR of 0.40, the project is in conformance with the EADP and would not be required to pay the EADP Traffic Impact Fee (TIF).
Other Transportation Items
The proposed site plan shows adequate site access and on-site circulation for automobiles, trucks (including emergency vehicles), and pedestrians.

## 1. Introduction

This report presents the results of the transportation analysis conducted for a proposed 121,600 square-foot (s.f.) warehouse located at 455 Piercy Road in the Edenvale Area of San Jose, California. As planned, the warehouse would operate between the hours of 7:00 AM and 7:00 PM, 7 days a week, and would employ between 40 and 80 full-time workers. The 8.97 -acre project site is vacant. Two fullaccess driveways on Piercy Road would provide access to the project site. The project site and surrounding area are shown on Figure 1. The proposed site plan is shown on Figure 2.

The project site is located within the Edenvale Area Development Policy (EADP) boundaries. With approval of the nearby iStar development proposal in 2006, 494,000 s.f. of potential industrial development was approved for future industrial/R\&D/office development within Edenvale Sub-Areas 1 and 3. The project site is located in Edenvale Sub-Area 3, which means the site already has approval for industrial development as part of the EADP. The traffic study that was completed for the iStar development identified intersection improvements based on full buildout of the 494,000 s.f. of industrial development. The necessary intersection improvements that were identified have already been completed. For this reason, the project is not required to analyze any signalized intersections for potential adverse effects due to the project. The project is, however, required to report the intersection levels of service under existing, background, and background plus project conditions for informational purposes.

The project is required to be in conformance with the maximum allowable floor area ratio (FAR) for Edenvale Sub-Area 3 development, which is an FAR of 0.40 for industrial development. The project site is 8.97 acres in size and, therefore, is approved for up to 156,293 s.f. of industrial development calculated as follows:

$$
8.97 \mathrm{ac} \times(43,560 \text { s.f. } / 1 \mathrm{ac}) \times 0.4 \text { FAR }=156,293 \text { s.f. }
$$

The amount of industrial square footage proposed for the site (121,600 s.f.) is less than the 156,293 s.f. of industrial development allowed on the site under the EADP. Thus, the proposed project density is in conformance with the EADP.

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed industrial project. The transportation impacts of the project were evaluated following the standards and methodologies established in the City of San Jose's Transportation Analysis Handbook (April 2020). Based on the City of San Jose's Transportation Analysis Policy (Policy 5-1) and the Transportation Analysis Handbook, the project includes a California Environmental Quality Act (CEQA) level Transportation Analysis (TA) and a non-CEQA Local Transportation Analysis (LTA). The project would generate fewer than 100 new peak-hour vehicle trips, thus, a Congestion Management Program (CMP) traffic analysis based on the Santa Clara Valley Transportation Authority (VTA) Guidelines (2014) is not required.

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Figure 1
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## Transportation Policies

As established in Council Policy 5-1, San Jose evaluates transportation impacts under CEQA based on vehicle miles traveled (VMT). All new projects are required to analyze transportation impacts using the VMT metric and conform to Policy 5-1. The Policy aligns with the Envision San Jose 2040 General Plan which seeks to focus new development growth within Planned Growth Areas, bringing together office, residential, and service land uses to internalize trips and reduce VMT. VMT-based policies support dense, mixed-use, infill projects as established in the General Plan's Planned Growth Areas.

The Envision San Jose 2040 General Plan contains policies to encourage the use of non-automobile transportation modes to minimize vehicle trip generation and reduce VMT, including the following:

- Accommodate and encourage the use of non-automobile transportation modes to achieve San Jose's mobility goals and reduce vehicle trip generation and VMT (TR-1.1);
- Consider impacts on overall mobility and all travel modes when evaluating transportation impacts of new developments or infrastructure projects (TR-1.2);
- Increase substantially the proportion of commute travel using modes other than the singleoccupant vehicle in order to meet the City's mode split targets for San Jose residents and workers (TR-1.3);
- Through the entitlement process for new development, projects shall be required to fund or construct needed transportation improvements for all transportation modes, giving first consideration to improvement of bicycling, walking and transit facilities and services that encourage reduced vehicle travel demand (TR-1.4);
- Actively coordinate with regional transportation, land use planning, and transit agencies to develop a transportation network with complementary land uses that encourage travel by bicycling, walking and transit, and ensure that regional greenhouse gas emissions standards are met (TR-1.8);
- Coordinate the planning and implementation of citywide bicycle and pedestrian facilities and supporting infrastructure. Give priority to bicycle and pedestrian safety and access improvements at street crossings and near areas with higher pedestrian concentrations (school, transit, shopping, hospital, and mixed-use areas) (TR-2.1);
- Provide a continuous pedestrian and bicycle system to enhance connectivity throughout the City by completing missing segments. Eliminate or minimize physical obstacles and barriers that impede pedestrian and bicycle movement on City streets. Include consideration of gradeseparated crossings at railroad tracks and freeways. Provide safe bicycle and pedestrian connections to all facilities regularly accessed by the public, including the Mineta San Jose International Airport (TR-2.2);
- Integrate the financing, design and construction of pedestrian and bicycle facilities with street projects. Build pedestrian and bicycle improvements at the same time as improvements for vehicular circulation (TR-2.5);
- Require new development where feasible to provide on-site facilities such as bicycle storage and showers, provide connections to existing and planned facilities, dedicate land to expand existing facilities or provide new facilities such as sidewalks and/or bicycle lanes/paths, or share in the cost of improvements (TR-2.8);
- As part of the development review process, require that new development along existing and planned transit facilities consist of land use and development types and intensities that
contribute towards transit ridership, and require that new development is designed to accommodate and provide direct access to transit facilities (TR-3.3);
- Support the development of amenities and land use and development types and intensities that increase daily ridership on the VTA, BART, Caltrain, ACE and Amtrak California systems and provide positive fiscal, economic, and environmental benefits to the community (TR-4.1);
- Promote transit-oriented development with reduced parking requirements and promote amenities around appropriate transit hubs and stations to facilitate the use of available transit services (TR-8.1);
- Support using parking supply limitations and pricing as strategies to encourage the use of nonautomobile modes (TR-8.3);
- Discourage, as part of the entitlement process, the provision of parking spaces significantly above the number of spaces required by code for a given use (TR-8.4);
- Allow reduced parking requirements for mixed-use developments and for developments providing shared parking or a comprehensive transportation demand management (TDM) program, or developments located near major transit hubs or within Urban Villages and other Growth Areas (TR-8.6);
- Within new development, create and maintain a pedestrian-friendly environment by connecting the internal components with safe, convenient, accessible, and pleasant pedestrian facilities and by requiring pedestrian connections between building entrances, other site features, and adjacent public streets (CD-3.3);
- Create a pedestrian-friendly environment by connecting new residential development with safe, convenient, accessible, and pleasant pedestrian facilities. Provide such connections between new development, its adjoining neighborhood, transit access points, schools, parks, and nearby commercial areas (LU-9.1); and
- Facilitate the development of housing close to jobs to provide residents with the opportunity to live and work in the same community (LU-10.5).


## CEQA Transportation Analysis Scope

## VMT Analysis

The CEQA Transportation Analysis includes an evaluation of VMT. The City of San Jose defines VMT as the total miles of travel by personal motorized vehicles a project is expected to generate in a day. VMT is calculated for residential, office, and industrial projects using the Origin-Destination VMT method, which measures the full distance of personal motorized vehicle-trips with one end within the project.

A project's VMT is compared to the appropriate thresholds of significance based on the project location and type of development. When assessing a residential project, the project's VMT is divided by the number of residents expected to occupy the project to determine the VMT per capita. When assessing an office or industrial project, the project's VMT is divided by the number of employees to determine VMT per worker. The thresholds of significance for development projects, as established in the Transportation Analysis Policy, are based on the existing citywide average VMT level for residential uses and the existing regional average VMT level for employment uses.

To determine whether a project would result in CEQA transportation impacts related to VMT, the City has developed the San Jose VMT Evaluation Tool to streamline the analysis for residential, office, and
industrial projects with local traffic. The tool estimates a project's VMT and compares it to the appropriate thresholds of significance based on the project location (i.e., assessor's parcel number) and type of development.

## Screening Criteria for VMT Analysis Exemption

The City of San Jose's Transportation Analysis Handbook, 2020 includes screening criteria for projects that are expected to result in a less-than-significant VMT impact based on the project description, characteristics and/or location. The screening criterion set forth in the Transportation Analysis Handbook for small infill industrial projects is described below.

## Screening Criterion for Small Infill Industrial Projects

- 30,000 square feet of total gross floor area or less

The project is proposing to construct an approximately 121,600 s.f. warehouse. Therefore, the project does not meet the screening criterion for small infill industrial projects. And since there is no other basis to screen out the project, a CEQA transportation analysis is required to address potential significant VMT impacts.

Figure 3 shows the current VMT levels estimated by the City for industrial workers based on the locations of industrial jobs. Developments in the green-colored areas are estimated to have VMT levels that are below the thresholds of significance, while the orange- and pink-colored areas are estimated to have VMT levels that are above the thresholds of significance. Orange areas are deemed to be capable of being mitigated, whereas pink areas are considered incapable of being mitigated to a less-thansignificant level. The project site is identified as being located in an orange area (mitigation possible).

The CEQA transportation analysis of the project includes a project-level VMT impact analysis using the City's VMT Evaluation Tool and a cumulative impact analysis that demonstrates the project's consistency with the Envision San Jose 2040 General Plan.

## Local Transportation Analysis Scope

The non-CEQA Local Transportation Analysis (LTA) supplements the VMT analysis by identifying potential adverse operational effects that may arise due to a new development, as well as evaluating the effects of a new development on site access, circulation, and other safety-related elements in the proximate area of the project. As part of the LTA, a project is generally required to conduct an intersection operations analysis if the project is expected to add 10 or more vehicle trips per hour per lane to any signalized intersection that is located within a half-mile of the project site. Based on these criteria, as outlined in the City's Transportation Analysis Handbook, a list of study intersections is then developed for the LTA. As previously described, City staff have determined that the project is not required to analyze any signalized intersections for potential adverse effects since the amount of industrial development proposed for the site (which is located in Edenvale Sub-Area 3) has already been approved as part of the EADP. The project is, however, required to report intersection levels of service under existing, background, and background plus project conditions for informational purposes.


Figure 3
VMT per Industrial Job Heat Map in San Jose

Based on the site location, project trip generation estimates and trip distribution pattern, the LTA includes an evaluation of AM and PM peak hour traffic conditions for the following three intersections:

1. Piercy Road and Silver Creek Valley Road
2. Hellyer Avenue and Silver Creek Valley Road
3. Hellyer Avenue and Piercy Road

The list of study intersections was approved by City of San Jose staff. Traffic conditions at the study intersections were reported for the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour typically occurs between 7:00 AM and 9:00 AM and the PM peak hour typically occurs between 4:00 PM and 6:00 PM on a regular weekday. These are the peak commute hours during which most traffic congestion occurs on the roadways.

Traffic conditions for the LTA were evaluated for the following scenarios: existing conditions, background conditions, and background plus project conditions. Traffic volumes for all scenarios are tabulated in Appendix A. The traffic scenarios are described in detail below.

- Existing Conditions. Due to the current COVID-19 pandemic situation, the City of San Jose is requiring that all new traffic counts for study intersections be put on hold until further notice. Instead of conducting new turning movement counts, City staff are requesting that an annual growth factor of $1 \%$ be applied to historical count data. Accordingly, a 1\% annual growth factor was applied to the turning movement counts provided by City staff for this project. The study intersections were evaluated with a level of service analysis using TRAFFIX software in accordance with the 2000 Highway Capacity Manual methodology.
- Background Conditions. Background traffic volumes reflect traffic added by nearby approved projects that are not yet completed or occupied. The added traffic from approved but not yet completed developments was provided by the City of San Jose in the form of the Approved Trips Inventory (ATI). The ATI sheets are contained in Appendix B.
- Background Plus Project Conditions. Background plus project conditions reflect projected traffic volumes on the planned roadway network with completion of the project and approved developments that are not yet completed or occupied. Background plus project traffic volumes were estimated by adding to background traffic volumes the additional traffic generated by the project.

The LTA also includes a vehicle queuing analysis, an evaluation of potential project adverse effects on bicycle, pedestrian, and transit facilities, and a review of site access, on-site circulation, and parking demand.

## VMT Analysis Methodology

## Methodology

To determine whether a project would result in CEQA transportation impacts related to VMT, the City has developed the San Jose VMT Evaluation Tool to streamline the analysis for residential, office, and industrial projects with local traffic. Accordingly, the City's VMT Evaluation Tool was used for this VMT analysis; it calculates VMT and compares it to the appropriate thresholds of significance based on the project location and type of development.

Based on the assessor's parcel number (APN) of a project, the VMT Evaluation Tool identifies the existing average VMT per capita and VMT per employee for the area. Based on the project location, type of development, project description, and proposed trip reduction measures, the evaluation tool calculates the project VMT. Projects located in areas where the existing VMT is above the established
threshold are referred to as being in "high-VMT areas". Projects in high-VMT areas are required to include a set of VMT reduction measures that would reduce the project VMT to the extent possible.

The VMT Evaluation Tool evaluates a list of selected VMT reduction measures that can be applied to a project to reduce the project VMT. There are four strategy tiers whose effects on VMT can be calculated with the Evaluation Tool:

1. Project characteristics (e.g., density, diversity of uses, design, and affordability of housing) that encourage walking, biking and transit uses;
2. Multimodal network improvements that increase accessibility for transit users, bicyclists, and pedestrians;
3. Parking measures that discourage personal motorized vehicle-trips; and
4. Transportation Demand Management (TDM) measures that provide incentives and services to encourage alternatives to personal motorized vehicle-trips.

The first three strategies - land use characteristics, multimodal network improvements, and parking are physical design strategies that can be incorporated into the project design. TDM includes programmatic measures that aim to reduce VMT by decreasing personal motorized vehicle mode share and by encouraging more walking, biking, and riding transit. TDM measures are typically enforced through annual trip monitoring to assess the project's status in meeting the VMT reduction goals.

## Thresholds of Significance

Table 1 shows the VMT thresholds of significance for development projects, as established in the City's Transportation Analysis Policy. The VMT impact threshold is the regional average for industrial employment uses. Thus, projects that include industrial employment uses (such as the proposed project) are said to create a significant adverse impact when the estimated project-generated VMT exceeds the existing regional average VMT, which is 14.37 VMT per employee (significant impact threshold).

Projects that trigger a significant VMT impact can assess a variety of the four strategies described above to reduce the impact. A significant impact is said to be satisfactorily mitigated when the strategies and VMT reductions implemented render the VMT impact less than significant.

## Intersection Operations Analysis Methodology

This section presents the methods used to determine the traffic conditions at the study intersections. It includes descriptions of the data requirements, the analysis methodologies, and the applicable intersection level of service standards. The study intersections are located within the City of San Jose and were evaluated according to the City of San Jose level of service (LOS) standards for informational purposes.

## Data Requirements

The data required for the analysis were obtained from the City of San Jose. The following data were collected from these sources:

- existing traffic volumes
- trips from approved projects
- existing lane configurations
- signal timing and phasing

Table 1
VMT Thresholds of Significance for Development Projects (March 2018)

| Project Types | Significance Criteria | Current Level | Threshold |
| :--- | :--- | :--- | :--- |
| Residential Uses | Project VMT per capita exceeds existing citywide <br> average VMT per capita minus 15 percent, or existing <br> regional average VMT per capita minus 15 percent, <br> whichever is lower. | VMT per capita <br> (Citywide Average) | VMT per capita |

## Level of Service Standards and Analysis Methodologies

Traffic conditions at the study intersections were evaluated using level of service (LOS). Level of Service is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The various analysis methods are described below.

## City of San Jose Signalized Intersections

The City of San Jose level of service methodology for signalized intersections is the 2000 Highway Capacity Manual (HCM) method. This method is applied using the TRAFFIX software. The 2000 HCM operations method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. The City of San Jose level of service standard for signalized intersections is LOS D or better. The correlation between average control delay and level of service is shown in Table 2.

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## Table 2

Signalized Intersection Level of Service Definitions Based on Control Delay

| Level of <br> Service | Description | Average Control Delay <br> Per Vehicle (sec.) |
| :---: | :---: | :---: | :---: |
| A | Operations with very low delay occurring with favorable progression and/or <br> short cycle lengths. | up to 10.0 |

## Intersection Vehicle Queuing Analysis

The analysis of intersection operations was supplemented with a vehicle queuing analysis at study intersections where the project would add a noteworthy number of trips to the left-turn movements. Similar to the intersection level of service analysis, the intersection queuing analysis is presented for informational purposes only. The City of San Jose has not defined a policy related to queuing. Vehicle queues were estimated using a Poisson probability distribution, which estimates the probability of " $n$ " vehicles for a vehicle movement using the following formula:

$$
P(x=n)=\frac{\lambda^{n} e^{-(\lambda)}}{n!}
$$

Where:
$P(x=n)=$ probability of " $n$ " vehicles in queue per lane
$\mathrm{n}=$ number of vehicles in the queue per lane
$\lambda$ = average \# of vehicles in the queue per lane (vehicles per hr. per lane/signal cycles per hr.)
The basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the $95^{\text {th }}$ percentile maximum number of queued vehicles per signal cycle for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the movement.

For signalized intersections, the $95^{\text {th }}$ percentile queue length value indicates that during the peak hour, a queue of this length or less would occur on 95 percent of the signal cycles. Or, a queue length larger than the $95^{\text {th }}$ percentile queue would only occur on 5 percent of the signal cycles (about 3 cycles during the peak hour for a signal with a 60 -second cycle length). Therefore, left-turn pocket storage designs based on the $95^{\text {th }}$ percentile queue length would ensure that storage space would be exceeded only 5 percent of the time for a signalized movement.

## Edenvale Area Development Policy Conformance

The project site is located within the Edenvale Area Development Policy (EADP) boundaries. With approval of the nearby iStar development proposal in 2006, 494,000 s.f. of potential industrial development was approved for future industrial/R\&D/office development within Edenvale Sub-Areas 1 and 3. The project site is located in Edenvale Sub-Area 3, which means the site already has approval for industrial development as part of the EADP. The traffic study that was completed for the iStar development identified intersection improvements based on full buildout of the 494,000 s.f. of industrial development. The necessary intersection improvements that were identified have already been completed. For this reason, the project is not required to analyze any signalized intersections for potential adverse effects due to the project. The project is, however, required to be in conformance with the maximum floor area ratio (FAR) for Edenvale Sub-Area 3 development, which is an FAR of 0.40 for industrial development.

The project site is 8.97 acres in size and, therefore, is approved for up to 156,293 s.f. of industrial development calculated as follows: 8.97 ac $\times(43,560$ s.f. / 1 ac) x 0.4 FAR $=156,293$ s.f. The amount of industrial square footage proposed for the site ( 121,600 s.f.) is less than the 156,293 s.f. of industrial development allowed on the site under the EADP. Thus, the proposed project density is in conformance with the EADP.

## Report Organization

This report has a total of five chapters. Chapter 2 describes the existing roadway network, transit service, bicycle, and pedestrian facilities. Chapter 3 describes the VMT analysis. Chapter 4 describes the local transportation analysis (LTA) including the method by which project traffic is estimated, intersection operations analysis, intersection vehicle queuing analysis, site access and on-site circulation review, effects on bicycle, pedestrian, and transit facilities, and parking. Chapter 5 presents the conclusions of the transportation analysis.

## 2. <br> Existing Conditions

This chapter describes the existing conditions of the transportation system within the study area of the project. It presents the VMT of the existing land uses in the proximity of the project and describes transportation facilities in the vicinity of the project site, including the roadway network, transit service, and pedestrian and bicycle facilities. The analysis of existing intersection operations is included as part of the LTA (see Chapter 4).

## VMT of Existing Land Uses

To determine whether a project would result in CEQA transportation impacts related to VMT, the City has developed the San Jose VMT Evaluation Tool to streamline the analysis for residential, office, and industrial projects. Based on the Evaluation Tool and the project's APN, the existing Area VMT for industrial uses in the project vicinity is 14.74 VMT per worker. The current regional average VMT for industrial uses is 14.37 VMT per worker (see Table 1 in Chapter 1). Thus, the VMT levels of existing industrial uses in the project area are slightly higher than the regional average VMT levels. The VMT Evaluation Tool summary report for the project is included in Chapter 3.

## Existing Roadway Network

Regional access to the project site is provided by US 101, SR 85, and Monterey Road.
US 101 is an eight-lane freeway (three mixed-flow lanes and one HOV lane in each direction) in the vicinity of the site. US 101 extends northward through San Francisco and southward through Gilroy. Access to and from the site is provided via full interchanges at Blossom Hill Road/Silver Creek Valley Road and Bernal Road/Silicon Valley Boulevard.

SR 85 is a predominantly north-south freeway that is oriented in an east-west direction in the vicinity of the project site. It extends from Mountain View to south San Jose, terminating at US 101. SR 85 is a six-lane freeway with four mixed-flow lanes and two HOV lanes. SR 85 provides access to the project site via an interchange at Bernal Road.

Monterey Road is a four- to six-lane north-south oriented Grand Boulevard that extends from Alma Street in downtown San Jose to US 101 south of the City of Gilroy. Monterey Road has a raised median island with left-turn pockets and has a posted speed limit of 55 mph in the project vicinity. A sidewalk is provided on the east side of the street only while striped bike lanes are provided on both
sides. Monterey Road provides access to the project site via interchanges at Blossom Hill Road and Bernal Road.

Other roadways within the project study area include Blossom Hill Road, Silver Creek Valley Road, Bernal Road, Silicon Valley Boulevard, Hellyer Avenue, and Piercy Road. These roadways are described below.

Blossom Hill Road is a six-lane divided arterial that runs in an east-west direction from the US 101/Silver Creek Valley Road interchange to the town of Los Gatos. In the vicinity of the proposed project, it has a posted speed of 40 mph and has an interchange with the US 101 southbound ramps. East of the interchange, Blossom Hill Road becomes Silver Creek Valley Road. Blossom Hill Road has sidewalks and striped bike lanes on both sides of the street east of the US 101 northbound off-ramp. There are no bike lanes or sidewalks between US 101 and Monterey Road. Blossom Hill Road is a designated Main Street west of Snell Avenue and a designated City Connector Street east of Snell Avenue. Blossom Hill Road provides access to the project site via Silver Creek Valley Road.

Silver Creek Valley Road is generally a divided four-lane arterial that extends from the US 101/Blossom Hill Road interchange in the west to Yerba Buena Road in the east. In the vicinity of the proposed project, Silver Creek Valley Road has a posted speed of 45 mph , has an interchange with the US 101 northbound ramps, and provides access to the project site via Hellyer Avenue and Piercy Road. Silver Creek Valley Road is a designated On-Street Primary Bicycle Facility with striped bike lanes and sidewalks on both sides of the street in the project vicinity. East of Hellyer Avenue, Silver Creek Valley Road has a sidewalk on one side of the street only.

Bernal Road is a six-lane divided City Connector Street that intersects US 101, SR 85 and Monterey Road. Bernal Road has a posted speed limit of 40 mph and has striped bike lanes and sidewalks on both sides of the street west of San Ignacio Avenue. There are no bike lanes east of San Ignacio Avenue. East of US 101, Bernal Road becomes Silicon Valley Boulevard.

Silicon Valley Boulevard is a four-lane divided City Connector Street that extends from Hellyer Avenue in the east and becomes Bernal Road west of the US 101. In the vicinity of the project, Silicon Valley Boulevard has a posted speed limit of 40 mph . Silicon Valley Boulevard includes sidewalks along the west side but has limited sidewalks along the east side.

Hellyer Avenue is a four-lane divided City Connector Street with a posted speed limit of 45 mph . Hellyer Avenue extends north from Silicon Valley Boulevard until its intersection with Senter Road. Hellyer Avenue has striped bike lanes along the extent of the roadway and sidewalks on both sides of the street in the immediate vicinity of the project site. To the south, Hellyer Avenue has sidewalks on the east side of the street only. Hellyer Avenue provides access to the project site via Piercy Road.

Piercy Road is a two-lane Local Collector Street with a posted speed limit of 30 mph that extends south from Silver Creek Valley Road, runs east-west through its intersection with Hellyer Avenue, and runs north-south again ultimately terminating at its intersection with Tennant Avenue. Sidewalks are provided along both sides of the street in the immediate vicinity of the project site and west of Hellyer Avenue. Sidewalks are provided along the west side of the street only where Piercy Road bends to the south east of Hellyer Avenue. Piercy Road does not have bike lanes. Piercy Road provides direct access to the project site.

## Existing Intersection Lane Configurations

The existing lane configurations at the study intersections are shown on Figure 4.


Figure 4
Existing Intersection Lane Geometries

NORTH

## Existing Pedestrian and Bicycle Facilities

Pedestrian facilities consist of sidewalks and crosswalks in the project vicinity, as well as the Coyote Creek Trail. Crosswalks with pedestrian signal heads and push buttons are located at all the signalized intersections in the study area. On Hellyer Avenue, between Silver Creek Valley Road and Tennant Avenue/Silicon Valley Boulevard, there are sidewalks along northbound Hellyer Avenue and along portions of southbound Hellyer Avenue. In the project vicinity, there are sidewalks along portions of Silver Creek Valley Road. Piercy Road has sidewalks on both sides between Silver Creek Valley Road and the project site, and on the southbound side of the street between the project site and Tennant Avenue. There are existing crosswalks and accessible ramps at the nearby signalized intersections of Hellyer Avenue/Silver Creek Valley Road and Hellyer Avenue/Piercy Road.
The Coyote Creek Multi-Use Trail is approximately 20 miles long and connects to Silver Creek Valley Road, Yerba Buena Road, and Capitol Expressway. The closest trail access is provided at the intersection of Piercy Road and Silver Creek Valley Road, approximately $1 / 2$ mile west of the project site. The Coyote Creek Trail is a shared pedestrian and bicycle facility that is separated from motor vehicle traffic. This trail qualifies as a Class I bicycle facility.

Additional bicycle facilities in the project vicinity consist of on-street bike lanes. Bike lanes, or Class II bicycle facilities, are provided on the roadways listed below.

- Hellyer Avenue
- Silver Creek Valley Road
- Monterey Road

Existing bicycle facilities within the study area are shown on Figure 5.

## Existing Transit Service

The project site is served by only one bus route. Bus service is provided by VTA Local Route 42. Route 42 travels along Silver Creek Valley Road, Hellyer Avenue and Silicon Valley Boulevard in the project vicinity and provides service between Evergreen Valley College and Kaiser San Jose. Route 42 runs on 60-minute headways between 6:00 AM and 7:00 PM and provides service to the Blossom Hill Caltrain station. The Blossom Hill Caltrain Station is located about one mile from the project site at the intersection of Monterey Road/Ford Road. Local Route 42 has stops within walking distance of the project site on Hellyer Avenue at Piercy Road (northbound and southbound bus stops).

## Observed Existing Traffic Conditions

Due the current COVID-19 pandemic situation, traffic volumes are generally lower than during "normal" conditions. However, it is still valuable to observe traffic conditions in the field to identify any existing operational deficiencies. Accordingly, traffic conditions in the study area were observed during the weekday AM (7:00-9:00 AM) and PM (4:00-6:00 PM) peak traffic periods.

Based on the field observations, the study intersections operated adequately during both the weekday AM and PM peak hours of traffic, and no noteworthy operational issues were observed. There are low volumes at the study intersections relative to the capacity for which the intersections have been built.


Figure 5
Existing Bicycle Facilities

## 3.

## CEQA Transportation Analysis

This chapter describes the CEQA transportation analysis, including the VMT threshold of significance, the project-level VMT impact analysis results, any mitigation measures to reduce a VMT impact, and the cumulative transportation impact analysis used to determine consistency with the City's General Plan.

## Project Level VMT Analysis

The project-level impact analysis under CEQA uses the VMT metric to evaluate a project's transportation impact by comparing against the VMT thresholds of significance as established in the Transportation Analysis Policy. The San Jose VMT Evaluation Tool is used to estimate the project VMT based on the project location (APN), type of development, project description, and proposed trip reduction measures. The threshold of significance for industrial employment uses (see Table 1 in Ch. 1) was used for the VMT analysis. The VMT threshold for industrial employment uses is the existing regional average VMT level of 14.37 per employee.

## Screening Criteria for VMT Analysis Exemption

The City of San Jose's Transportation Analysis Handbook, 2020 includes screening criteria for projects that are expected to result in a less-than-significant VMT impact based on the project description, characteristics and/or location. The screening criterion set forth in the Transportation Analysis Handbook for small infill industrial projects is described below.

## Screening Criteria for Small Infill Projects

- Industrial of 30,000 square feet of total gross floor area or less

The project is proposing to construct an approximately 121,600 s.f. warehouse. Therefore, the project does not meet the screening criterion for small infill industrial projects. And since there is no other basis to screen out the project, a CEQA transportation analysis is required to address potential significant VMT impacts.

## Project VMT Impact Analysis Results

Per the City's VMT Evaluation Tool, the existing Area VMT for employment uses is 14.74 VMT per worker, which is above the existing regional average threshold of 14.37 VMT per worker. The project VMT estimated by the Evaluation Tool is 14.69 VMT per worker, which also exceeds the industrial threshold of 14.37 VMT per worker. According to the Transportation Analysis Handbook, projects located in areas where the existing VMT is above the established threshold are referred to as being in
"high-VMT areas" and are required to include VMT reduction measures that would reduce the project VMT to the extent possible.

## Project Impact

Since the VMT generated by the project would exceed the threshold of significance for industrial employment uses in the area, the project would result in a significant transportation impact on VMT, and mitigation measures are required to reduce the VMT impact to a less-than-significant level.

## Project Mitigation

The following multi-modal infrastructure improvement (Tier 2 VMT reduction strategy) and Transportation Demand Management (TDM) measure (Tier 4 VMT reduction strategy) need to be implemented to mitigate the significant VMT impact:

1. Traffic Calming Measures - The project will shorten the northbound dual left-turn pocket and extend the raised median island on Hellyer Avenue at the Hellyer Avenue/Silver Creek Valley Road intersection. Field observations show the existing northbound dual left-turn pocket capacity far exceeds the vehicle queues that occur during the weekday AM and PM peak commute periods. In addition, the queuing analysis contained in Chapter 4 (see Table 5) shows that the maximum left-turn vehicle queues under background plus project conditions are estimated to be less than half of the turn pocket capacity. Accordingly, Hexagon recommends reducing the northbound dual left-turn pocket length from 450 feet to 250 feet. Raised median islands help to reduce vehicular speeds by narrowing the roadway, as well as provide a physical barrier between vehicles and pedestrians. Providing traffic calming measures creates a safer environment and promotes walking and biking as alternatives to driving. This multi-modal infrastructure improvement is intended to reduce drive-alone commute trips, thereby reducing VMT.
2. Commute Trip Reduction Marketing and Education - The project should implement a marketing campaign targeting all employees that encourages the use of shared rides and active modes of transportation. Marketing strategies may include new employee orientation on alternative commute options, event promotions, and publications. The project should provide information and encouragement to use transit services, shared ride modes (i.e., carpooling), and active modes to reduce drive-alone commute trips and, thus, VMT. It is assumed that $25 \%$ of the warehouse employees would participate in the commute trip reduction marketing and education program.

Based on the City's VMT Evaluation Tool, implementing the recommended mitigation measures would lower the project VMT to 14.25 per worker (a reduction of about $3.5 \%$ ), which would reduce the project impact to a less-than-significant level (below the industrial threshold of 14.37 VMT per worker).
Figures 6A and 6B show the VMT summary reports generated by the City of San Jose's VMT Evaluation Tool without and with implementation of the recommended mitigation measures, respectively.

## Cumulative VMT Impact Analysis

Projects must demonstrate consistency with the Envision San Jose 2040 General Plan to address cumulative impacts. Consistency with the City's General Plan is based on a consideration of all its aspects, including the project's density, design, and ability to further the General Plan goals and policies and not obstruct their attainment. If a project is determined to be inconsistent with the General Plan, a cumulative impact analysis is required as part of the City's Transportation Analysis Handbook.

According to the Envision San Jose 2040 General Plan, the project site is designated as Industrial Park (IP). This land use designation is an industrial designation intended for a wide variety of industrial uses such as research and development (R\&D), manufacturing, assembly, testing, and office uses. Industrial uses are consistent with this designation insofar as any functional or operational characteristics of a hazardous or nuisance nature can be mitigated through design controls. Warehouse uses are allowed where they are compatible with adjacent industrial uses and will not constrain future use of the subject site for industrial purposes.

The proposed warehouse project is consistent with the uses allowed within the Industrial Park land use designation and is consistent with the following City of San Jose Land Use Policies:

- Land Use Policy LU-6.4: Encourage the development of new industrial areas and the redevelopment of existing older or marginal industrial areas with new industrial uses, particularly in locations which facilitate efficient commute patterns.
- Land Use Policy LU-6.5: Maintain and create Light Industrial and Heavy Industrial designated sites that are at least one acre in size in order to facilitate viable industrial uses.
- Land Use Policy LU-7.1: Encourage industrial supplier/service business retention and expansion in appropriate areas in the City.

The proposed project is consistent with the Envision San Jose 2040 General Plan and would not require a General Plan Amendment (GPA). The construction of a new warehouse would facilitate the development of an industrial site and would help retain industrial designated land within the City. Thus, the project would be considered part of the cumulative solution to meet the General Plan's long-range transportation goals and would result in a less-than-significant cumulative impact.

Page

Figure 6A

## San Jose VMT Evaluation Tool Summary Report - No Mitigation



EMPLOYMENT ONLY
The tool estimates that the project would generate per non-industrial worker VMT and per industrial worker VMT above the City's threshold.


Industrial Threshold .......................... 14.37

Figure 6B
San Jose VMT Evaluation Tool Summary Report - With Mitigation


## 4.

## Local Transportation Analysis

This chapter describes the non-CEQA local transportation analysis (LTA) including existing traffic conditions, the method by which project traffic is estimated, intersection operations for existing, background and background plus project scenarios, intersection queuing analysis, site access and onsite circulation review, effects on bicycle, pedestrian and transit facilities, and parking supply.

## Intersection Operations Analysis

The intersection operations analysis is intended to quantify the operations of the signalized study intersections for informational purposes. Information required for the intersection operations analysis related to project trip generation, trip distribution, and trip assignment are presented in this section.

## Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic entering and exiting the site is estimated for the AM and PM peak hours. As part of the project trip distribution, the directions to and from which the project trips would travel are estimated. In the project trip assignment, the project trips are assigned to specific streets and intersections. These procedures are described below.

## Trip Generation

Through empirical research, data have been collected that quantify the amount of traffic produced by many types of land uses. This research is compiled in the Trip Generation Manual, 10 Edition (2017) published by the Institute of Transportation Engineers (ITE). The magnitude of traffic added to the roadway system by a particular development is estimated by multiplying the applicable trip generation rate(s) by the size of the development. Trips that would be generated by the proposed project were estimated using the ITE trip rates for Warehousing (ITE Land Use 150) located in a general urban/suburban setting.

## Trip Adjustments and Reductions

In accordance with San Jose’s Transportation Analysis Handbook (April 2020, Section 4.8, "Intersection Operations Analysis"), the project is eligible for adjustments and reductions from the baseline trip generation. Based on the 2020 San Jose guidelines, the project qualifies for a location-based adjustment. The location-based adjustment reflects the project's vehicle mode share based on the "place type" in which the project is located per the San Jose Travel Demand Model. The project's place type was obtained from the San Jose VMT Evaluation Tool. Based on the Evaluation Tool, the project

Page
site is located within a Suburban with Single-Family Homes place type. Therefore, the baseline project trips were adjusted to reflect the mode share associated with this place type.
Industrial developments located within areas designated Suburban with Single-Family Homes have a vehicle mode share of 95 percent (according to Table 6 of the City's Transportation Analysis Handbook). Thus, a 5 percent reduction was applied to the project trip generation estimates based on the location-based vehicle mode share outputs produced from the San Jose Travel Demand Model.

## Net Project Trips

After applying the ITE trip rates to the proposed project and applying the appropriate trip reduction, it is estimated that the project would generate 201 new daily trips, with 20 new trips ( 15 inbound and 5 outbound) occurring during the AM peak hour and 22 new trips ( 6 inbound and 16 outbound) occurring during the PM peak hour (See Table 3).
Table 3
Project Trip Generation Estimates


## Trip Distribution and Assignment

The trip distribution pattern for the project was estimated based on existing travel patterns on the surrounding roadway system, freeway access, and the locations of complementary land uses. The peak-hour vehicle trips associated with the project were added to the roadway network in accordance with the trip distribution pattern. It is estimated that about one-third of the project trips originating from the west via Silver Creek Valley Road would utilize Hellyer Avenue to access the site and about twothirds would utilize Piercy Road to access the site, since Piercy Road provides a slightly more direct route. The same assumption holds true for outbound project trips. The project trip distribution pattern and trip assignment are shown on Figure 7.

## Traffic Volumes Under All Scenarios

## Existing Traffic Volumes

Due to the current COVID-19 pandemic situation, some businesses and schools are closed, and people are working at home to the extent possible. As a result, existing traffic volume is lower than what it was prior to the virus outbreak. It is not known when traffic levels will return to pre-virus conditions. Even though many businesses and schools have reopened, most are operating well below capacity. Thus, traffic volume is expected to remain reduced for an indefinite amount of time. For this reason, the City of San Jose is requiring that all new traffic counts for study intersections be put on hold until further notice. Instead of conducting new turning movement counts, City staff are requesting that an annual growth factor of $1 \%$ be applied to historical count data. Accordingly, a $1 \%$ annual growth factor was applied to the turning movement counts provided by City staff for this project. This approach allows transportation studies such as this to move forward without waiting for conditions to return to "normal".


Figure 7
Project Trip Distribution Pattern and Trip Assignment

Existing AM and PM peak hour traffic volumes for the three study intersections were provided by City of San Jose staff. The counts used were conducted in 2014, 2016 and 2018. An annual growth factor of $1 \%$ was applied to estimate existing traffic conditions.

## Background Traffic Volumes

Background AM and PM peak hour traffic volumes were estimated by adding to existing traffic volumes the trips generated by nearby approved but not yet completed or occupied projects. The vehicular trips associated with the approved projects in the area are listed in the City of San Jose's Approved Trips Inventory (ATI) contained in Appendix B.

## Background Plus Project Traffic Volumes

Project trips were added to background traffic volumes to obtain background plus project traffic volumes.

The AM and PM peak-hour intersection volumes under existing, background and background plus project conditions are shown on Figure 8.

## Intersection Traffic Operations

City staff have determined that the project is not required to analyze any signalized intersections for potential adverse effects since the amount of industrial development proposed for the site (which is located in Edenvale Sub-Area 3) has already been approved as part of the EADP. The project is, however, required to report intersection levels of service under existing, background, and background plus project conditions for informational purposes. The results of the intersection level of service evaluation (see Table 4) show that the signalized study intersections are currently operating at acceptable levels of service during the AM and PM peak hours of traffic and would continue to operate acceptably under background and background plus project conditions.

The detailed signalized intersection level of service calculations are contained in Appendix C.
Table 4
Intersection Levels of Service

| \# | Signalized Intersection | Peak <br> Hour | Count Date ${ }^{1}$ | Existing |  | Background |  | Background + Project |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Avg. Delay (sec) | LOS | Avg. <br> Delay <br> (sec) | LOS | Avg. <br> Delay <br> (sec) | LOS |
| 1 | Piercy Rd \& Silver Creek Valley Rd | AM | 9/9/2014 | 7.6 | A | 7.5 | A | 7.6 | A |
|  |  | PM | 9/9/2014 | 22.1 | C | 22.9 | C | 23.0 | C |
| 2 | Hellyer Av \& Silver Creek Valley Rd | AM | 9/27/2018 | 25.8 | C | 28.6 | C | 28.6 | C |
|  |  | PM | 9/27/2018 | 28.3 | C | 34.1 | C | 34.2 | C |
| 3 | Hellyer Av \& Piercy Rd | AM | 10/26/2016 | 18.5 | B | 23.0 | C | 23.2 | C |
|  |  | PM | 10/26/2016 | 22.7 | C | 22.2 | C | 22.8 | C |
| Notes: |  |  |  |  |  |  |  |  |  |
| An annual growth factor of $1 \%$ was applied to the historical count date to estimate "normal" (i.e., pre-COVID-19) traffic conditions. |  |  |  |  |  |  |  |  |  |

## LEGEND

|  | $=$ Site Location |
| ---: | :--- |
| $X$ | $=$ Study Intersection |
| $X X(X X)$ | $=A M(P M)$ Peak-Hour Traffic Volumes |



Figure 8
Existing, Background and Background Plus Project Conditions

## Vehicle Queuing Analysis

A vehicle queuing analysis was prepared for selected left-turn movements at intersections where the project would add a noteworthy number of peak hour vehicle trips. For the purpose of this study, 5 AM or PM peak hour vehicle trips per lane was assumed to be a noteworthy number of project-generated trips. This analysis provides a basis for estimating future left-turn pocket storage requirements at the intersections under background plus project conditions. Vehicle queues were estimated using Poisson probability distribution, as described in Chapter 1.

Based on the criterion listed above, vehicle queuing was analyzed for the southbound and westbound left-turn movements at the intersection of Hellyer Avenue and Piercy Road. Note that vehicle queuing was also evaluated for the northbound left-turn movement at the intersection of Hellyer Avenue and Silver Creek Valley Road for informational purposes. As shown in Table 5, the intersections would provide adequate left-turn pocket vehicle storage under background plus project conditions.

Table 5
Intersection Vehicle Queuing Analysis Results

| Measurement | Hellyer Avenue \& Silver Creek Valley Road |  | Hellyer Avenue \& Piercy Road |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NBL |  | SBL |  | WBL |  |
|  | AM | PM | AM | PM | AM | PM |
| Existing |  |  |  |  |  |  |
| Cycle/Delay ${ }^{1}$ (sec) | 110 | 110 | 104 | 104 | 104 | 104 |
| Volume (vphpl) | 28 | 53 | 60 | 39 | 1 | 8 |
| 95th \%. Queue (veh/ln.) | 3 | 4 | 4 | 3 | 1 | 1 |
| 95th \%. Queue (ft./ln) ${ }^{2}$ | 75 | 100 | 100 | 75 | 25 | 25 |
| Storage (ft./ In.) | 450 | 450 | 200 | 200 | 200 | 200 |
| Adequate (Y/N) | Y | Y | Y | Y | Y | Y |
| Background |  |  |  |  |  |  |
| Cycle/Delay ${ }^{1}$ (sec) | 110 | 110 | 104 | 104 | 104 | 104 |
| Volume (vphpl ) | 56 | 136 | 60 | 39 | 1 | 8 |
| 95th \%. Queue (veh/ln.) | 4 | 8 | 4 | 3 | 1 | 1 |
| 95th \%. Queue (ft./In) | 100 | 200 | 100 | 75 | 25 | 25 |
| Storage (ft./ In.) | 450 | 450 | 200 | 200 | 200 | 200 |
| Adequate (Y/N) | Y | Y | Y | Y | Y | Y |
| Background Plus Project |  |  |  |  |  |  |
| Cycle/Delay ${ }^{1}$ (sec) | 110 | 110 | 104 | 104 | 104 | 104 |
| Volume (vphpl) | 56 | 138 | 65 | 41 | 3 | 13 |
| 95th \%. Queue (veh/n.) | 4 | 8 | 4 | 3 | 1 | 2 |
| 95th \%. Queue (ft./ln) ${ }^{2}$ | 100 | 200 | 100 | 75 | 25 | 50 |
| Storage (ft./ In.) | 450 | 450 | 200 | 200 | 200 | 200 |
| Adequate (Y/N) | Y | Y | Y | Y | Y | Y |
| Notes: |  |  |  |  |  |  |
| ${ }^{1}$ Vehicle queue calculations based on cycle length. ${ }^{2}$ Assumes 25 Feet Per Vehicle Queued. |  |  |  |  |  |  |

## Vehicular Site Access and On-Site Circulation

The site access and circulation evaluations are based on the August 12, 2021 site plan prepared by Kimley-Horn and Associates, Inc. (see Figure 2 in Chapter 1). Site access was evaluated to determine the adequacy of the site's driveways with regard to the following: traffic volume, geometric design, truck access, and overall operations. On-site vehicular circulation and parking layout were reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

## Project Driveway Dimensions

As proposed, the project would provide one 26 -foot-wide driveway and one 40 -foot-wide driveway on Piercy Road. The project would not have access to the existing access road that runs along the northern boundary of the site. Large trucks would be required to use the wider eastern driveway for ingress and egress.

## Project Driveway Operations

The project-generated trips that are estimated to occur at the project site are 15 inbound trips and 5 outbound trips during the AM peak hour, and 6 inbound trips and 16 outbound trips during the PM peak hour. Large trucks would be required to use the wider east driveway for ingress and egress. Passenger vehicles and small trucks could use either driveway to access the site. It is expected that most vehicles would turn left from Piercy Road to enter the site and most vehicles would turn right to exit the site. Inbound and outbound vehicle trips would generally be unimpeded due to the extremely low traffic volumes on Piercy Road east of Hellyer Avenue, and there are no conflicting driveways on nearby properties along Piercy Road. Due to the low number of project-generated trips and low traffic volumes on Piercy Road east of Hellyer Avenue, operational issues related to vehicle queueing and/or delay are not expected to occur at the project driveways.

The City typically requires developments to provide adequate on-site stacking space for at least two inbound vehicles ( 40 to 50 feet) between the face of curb and any entry gates or on-site drive aisles or parking spaces. This prevents vehicles from queuing onto the street and blocking traffic. Approximately 50 feet of inbound vehicle stacking space would be provided between Piercy Road and the first drive aisle serving the project parking lot. According to the site plan, the project would not add parking, a drive aisle, or a security gate within 50 feet of the street. Thus, adequate on-site stacking space would be provided at the project driveways.

## Sight Distance at the Driveways

The project driveways should be free and clear of any obstructions to provide adequate sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and vehicles and bicycles traveling on Piercy Road. Any landscaping and signage should be located in such a way to ensure an unobstructed view for drivers exiting the site. Providing the appropriate sight distance reduces the likelihood of a collision at a driveway or intersection and provides drivers with the ability to exit a driveway or locate sufficient gaps in traffic. The minimum acceptable sight distance is considered the Caltrans stopping sight distance. Sight distance requirements vary depending on roadway speeds. For driveways on Piercy Road, which has a posted speed limit of 30 mph , the Caltrans stopping sight distance is 250 feet (based on a design speed of 35 mph ). Accordingly, a driver must be able to see 250 feet along Piercy Road in order to stop and avoid a collision. Both project driveways would meet the Caltrans stopping sight distance requirement.

## On-Site Vehicular Circulation and Parking Layout

On-site vehicular circulation was reviewed for the project in accordance with generally accepted traffic engineering standards and City of San Jose design guidelines. The City's standard minimum width for two-way drive aisles is 26 feet wide where 90 -degree parking is provided. This allows sufficient room for vehicles to back out of the parking stalls. According to the site plan, all the two-way drive aisles are shown to be at least 26 feet wide and would provide access to the 90 -degree parking stalls throughout the site. The two-way drive aisle along the east side of the warehouse building would be 40 feet wide to accommodate trucks. This drive aisle would be utilized by trucks to access the secure container parking area on the northeast corner of the site. The site plan shows one dead-end drive aisle on the east side of the building due to the security gate that would separate the long container parking stalls from the standard vehicle parking stalls. However, since only passenger vehicles would potentially need to turn around, the 40 -foot-wide drive aisle would provide sufficient room to perform a three-point maneuver.

## Parking Stall Dimensions

The City's off-street parking design standard for 90-degree full-size parking stalls is 9 feet wide by 18 feet long. All the standard parking stalls shown on the site plan measure 9 feet wide by 18 feet long, which meets the City's design standard. The six accessible ADA stalls also measure 9 feet wide by 18 feet long and include access aisles of 5 feet or more for van accessibility. These stall dimensions would meet ADA standards.

## Truck Access and Circulation

The project site plan was reviewed for truck access using the truck turning-movement template for CA Legal (WB-65) truck types. The WB-65 truck turning template was used to represent the largest semitrailer trucks that would access the site. Based on the site plan configuration adequate access would be provided for WB-65 type trucks to enter the eastern 40 -foot-wide driveway on Piercy Road, pass through the security gate (with keypad access), and back into the loading docks or container/trailer parking spaces (see Figure 9). The project anticipates 10-15 container parking spaces would likely be occupied at any one time. Trucks would exit the same way they enter (see Figure 10). Although WB-65 trucks would require the full width of Piercy Road when exiting the site, this situation is common for large trucks.

## Garbage Collection

The site plan shows the trash bins would be located outside the building within a standard trash enclosure near the eastern entrance. Garbage trucks could easily access the bins on collection days. Adequate clearance would be provided for garbage trucks to empty the bins over the truck. Since garbage collection would occur on-site, traffic operations along Piercy Road would not be affected during garbage collection activities.

## Emergency Vehicle Access

The City of San Jose Fire Code requires that all portions of the building be within 150 feet of a fire department access road and requires a minimum 6 feet of clearance from the property line along all sides of the building. The Fire Code also requires driveways to provide at least 20 feet of width for fire access.

According to the project site plan, all areas of the building would be within 150 feet of a fire access road (i.e., drive aisle), and at least 6 feet of clearance would be provided around the perimeter of the building. The driveway widths as proposed would be adequate to accommodate emergency vehicles. Therefore, the project would comply with the City's Fire Code requirements.
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## Construction Activities

Typical activities related to the construction of any development could include lane narrowing and/or lane closures, sidewalk and pedestrian crosswalk closures, and bike lane closures. In the event of any type of closure, clear signage (e.g., closure and detour signs) must be provided to ensure vehicles, pedestrians and bicyclists are able to adequately reach their intended destinations safely.

Per City standard practice, the project would be required to submit a construction management plan for City approval that addresses demolition, remediation, construction schedule, street closures and/or detours, construction staging areas and parking, and planned truck routes.

## Pedestrian, Bicycle, and Transit Facilities

All new development projects in San Jose should encourage multi-modal travel, consistent with the goals and policies of the City's General Plan. It is the goal of the General Plan that all development projects accommodate and encourage the use of non-automobile transportation modes to achieve San Jose's mobility goals and reduce vehicle trip generation and vehicle miles traveled. In addition, the adopted City Bike Master Plan establishes goals, policies and actions to make bicycling a daily part of life in San Jose. The Master Plan includes designated bike lanes along many City streets, as well as on designated bike corridors. In order to further the goals of the City, pedestrian and bicycle facilities should be encouraged with new development projects.

## Pedestrian and Bicycle Facilities

Pedestrian facilities consist of sidewalks and crosswalks in the project vicinity, as well as the Coyote Creek multi-use trail. Crosswalks with pedestrian signal heads and push buttons are located at all the signalized intersections in the study area. According to the site plan, the project is not proposing to widen the existing 6 -foot-wide sidewalk along the project frontage on Piercy Road. However, the sidewalk along the project frontage is consistent with the other sidewalks in the project vicinity. The network of sidewalks exhibits good connectivity and would provide employees of the project with safe routes to transit stops and other points of interest in the immediate project vicinity.

Bicycle facilities in the project vicinity consist of striped bike lanes (Class II bicycle facilities) on Hellyer Avenue, Silver Creek Valley Road and Monterey Road, as well as the aforementioned Coyote Creek trail (Class I bicycle facility). The network of bike facilities exhibits good connectivity and would provide employees of the project with safe bicycle routes in the immediate project vicinity. Currently, a continuous bicycle route between the project site and the residential and commercial areas west of US 101 does not exist on either Blossom Hill Road or on Silicon Valley Boulevard. However, the US101/Blossom Hill Road interchanges is being reconstructed and will include bicycle facilities.

The project would not remove any bicycle facilities, nor would it conflict with any adopted plans or policies for new bicycle facilities. The project would provide bicycle parking near the main office entrance at the southern end of the building. Providing adequate and convenient on-site bike parking would help to create a bicycle-friendly environment and encourage bicycling by employees of the project.

## Transit Facilities

The project site is not well served by bus or rail service. Bus service in the project vicinity is provided by VTA local route 42 only. Route 42 travels along Silver Creek Valley Road, Hellyer Avenue and Silicon Valley Boulevard in the project vicinity and provides service between Evergreen Valley College and Kaiser San Jose. Route 42 runs on 60-minute headways between 6:00 AM and 7:00 PM and provides service to the Blossom Hill Caltrain station. The Blossom Hill Caltrain Station is located about one mile
from the project site at the intersection of Monterey Road/Ford Road. Local Route 42 has stops within walking distance of the project site on Hellyer Avenue at Piercy Road (northbound and southbound bus stops).

Due to the lack of transit service options within walking distance of the site, it is reasonable to assume that few employees of the project would utilize transit. A small increase in transit demand generated by the proposed project could be accommodated by the current available ridership capacity of the transit service in the study area.

## Parking

The majority of the site would be paved and would include 60 standard parking spaces, 5 ADA compliant spaces with van accessibility, 42 container parking spaces ( $12 \mathrm{ft} \times 55 \mathrm{ft}$ ), 17 loading dock spaces, 14 EV spaces, 53 EV capable spaces, 3 motorcycle spaces, and 12 bicycle parking spaces. The project anticipates $10-15$ container parking spaces would likely be occupied at any one time.

## Vehicular Parking

According to the City of San Jose's off-street parking requirements (Chapter 20.90, Table 20-190 of the City's Zoning Code), warehouses in excess of 25,000 s.f. of total gross floor area require a minimum of 1 vehicle parking space per 5,000 s.f. of warehouse space (rounded up). Accordingly, the project would be required to provide at least 25 vehicle parking spaces (rounded up) as follows: 121,600 s.f. / 5,000 s.f. $=24.32$ spaces.

The site plan shows a total of 132 vehicle parking spaces would be provided, which would exceed the City's vehicle parking requirement.

## Motorcycle Parking

According to the City of San Jose's off-street parking requirements (Chapter 20.90, Table 20-250 of the City's Zoning Code), the motorcycle parking requirement for general industrial uses is 1 motorcycle parking space for every 10 code-required auto parking spaces. Accordingly, the project is required to provide 3 motorcycle parking spaces (rounded up) as follows: $25 / 10=2.5$ spaces.

The site plan shows 3 motorcycle parking spaces located near the eastern project entrance, which would meet the City's motorcycle parking requirement.

## Bicycle Parking

According to the City of San Jose's off-street parking requirements (Chapter 20.90 of the City's Zoning Code), non-residential projects must provide a minimum of 2 short-term bicycle parking spaces and 1 long-term bicycle parking space.

The project would provide 8 short-term bicycle parking spaces and 4 long-term bicycle parking spaces, which would exceed the City's bicycle parking requirement. The short-term bicycle parking spaces (i.e., bike racks) would be situated adjacent to the main office entrance at the southeast corner of the building. Although not shown on the site plan, the long-term bicycle parking spaces would be provided inside the building.

## 5. <br> Conclusions

This report presents the results of the transportation analysis conducted for a proposed 121,600 square-foot (s.f.) warehouse located at 455 Piercy Road in the Edenvale Area of San Jose, California. The 8.97-acre project site is vacant. Two full-access driveways on Piercy Road would provide access to the project site.

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed industrial project. The transportation impacts of the project were evaluated following the standards and methodologies established in the City of San Jose's Transportation Analysis Handbook (April 2020). Based on the City of San Jose's Transportation Analysis Policy (Policy 5-1) and the Transportation Analysis Handbook, the project includes a California Environmental Quality Act (CEQA) level Transportation Analysis (TA) and a non-CEQA Local Transportation Analysis (LTA). The project would generate fewer than 100 new peak-hour vehicle trips, thus, a Congestion Management Program (CMP) traffic analysis based on the Santa Clara Valley Transportation Authority (VTA) Guidelines (2014) was not required.

## CEQA Transportation Impact Analysis

## Project Vehicle Miles Traveled (VMT) Analysis

The project VMT estimated by the City's VMT Evaluation Tool is 14.69 VMT per worker, which exceeds the industrial threshold (existing regional average) of 14.37 VMT per worker. Since the VMT generated by the project would exceed the threshold of significance for industrial employment uses in the area, the project would result in a significant transportation impact on VMT, and mitigation measures are required to reduce the VMT impact to a less-than-significant level.

## Project Mitigation

The following multi-modal infrastructure improvement (Tier 2 VMT reduction strategy) and Transportation Demand Management (TDM) measure (Tier 4 VMT reduction strategy) need to be implemented to mitigate the significant VMT impact:

1. Traffic Calming Measures (Tier 2 VMT reduction strategy)
2. Commute Trip Reduction Marketing and Education (Tier 4 VMT reduction strategy)

Based on the City's VMT Evaluation Tool, implementing the recommended mitigation measures would lower the project VMT to 14.25 per worker (a reduction of about $3.5 \%$ ), which would reduce the project impact to a less-than-significant level (below the industrial threshold of 14.37 VMT per worker).

## Cumulative VMT Impact Analysis

The proposed warehouse project is consistent with the uses allowed within the Industrial Park (IP) land use designation and is consistent with the City of San Jose Land Use Policies LU-6.4, LU-6.5 and LU7.1. Since the proposed project is consistent with the Envision San Jose 2040 General Plan, a General Plan Amendment (GPA) would not be required. The construction of a new warehouse would facilitate the development of an industrial site and would help retain industrial-designated land within the City. Thus, the project would be considered part of the cumulative solution to meet the General Plan's longrange transportation goals and would result in a less-than-significant cumulative impact.

## Local Transportation Analysis

## Project Trip Generation

After applying the ITE trip rates to the proposed project and applying the appropriate trip reductions, it is estimated that the project would generate 201 new daily trips, with 20 new trips ( 15 inbound and 5 outbound) occurring during the AM peak hour and 22 new trips ( 6 inbound and 16 outbound) occurring during the PM peak hour.

## Intersection Traffic Operations

The results of the intersection level of service evaluation show that the three signalized study intersections are currently operating at acceptable levels of service during the AM and PM peak hours of traffic and would continue to operate acceptably under background and background plus project conditions.

## Edenvale Area Development Policy Conformance

The project site is located within Edenvale Sub-Area 3 of the Edenvale Area Development Policy (EADP) boundaries. The site already has approval for up to 156,293 s.f. of industrial development as part of the EADP based on a maximum allowable FAR of 0.40 . Since the proposed project FAR is below an FAR of 0.40, the project is in conformance with the EADP and would not be required to pay the EADP Traffic Impact Fee (TIF).

## Other Transportation Items

The proposed site plan shows adequate site access and on-site circulation for automobiles, trucks (including emergency vehicles), and pedestrians.

## 455 Piercy Road Warehouse TA Technical Appendices

## Appendix A Intersection Volumes

455 Piercy Road Warehouse


455 Piercy Road Warehouse


## Appendix B Approved Trips Inventory (ATI)

Intersection of : Fontanoso Rd \& Hellyer Av \& Silver Creek Valley Rd \& N Silver Cre
Traffix Node Number : 3848

| Permit No./Proposed Land | M09 | M08 | M07 | M03 | M02 | M01 | M12 | M11 | M10 | M0 6 | M05 | M04 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Use/Description/Location | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
| EDENVALE1 | 5 | 18 | 0 | 4 | 4 | 48 | 186 | 0 | 1 | 0 | 2 | 19 |

Office/Industrial
EAST OF 101, NORTH OF SILVER CREEK VALLEY RD EDENVALE ZONE 1


Office/Industrial
W/O 101, BOUNDED BY COTTLE RD, SANTA TERESA AND
EDENVALE ZONE 2


Office/Industrial
EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD
EDENVALE ZONE 3\&4


Office/Industrial
EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD
EDENVALE AREA 3-4 POOL
EEHDP (RES) $\quad 0 \quad 0 \quad 0 \quad 0 \quad 0 \quad 0 \quad 0$

Residential
EVERGREEN
EEHDP (RESIDENTIAL)


Office/Industrial
5600 COTTLE RD
HITACHI CREDIT
NORTH COYOTE
Office/Industrial
NORTH COYOTE VALLEY
NORTH COYOTE VALLEY CAMPUS INDUSTRIAL

Intersection of : Fontanoso Rd \& Hellyer Av \& Silver Creek Valley Rd \& N Silver Cre
Traffix Node Number : 3848

| Permit No./Proposed Land | M09 | M08 | M07 | M03 | M02 | M01 | M12 | M11 | M10 | M0 6 | M05 | M04 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Use/Description/Location | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
| PDC04-100R\&D (3-14681) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 29 | 0 |

Office/Industrial
ROUTE 85/GREAT OAKS
ISTAR - R\&D PORTION


LEGACY

CISCO NORTH COYOTE VALLEY

| TOTAL: | 55 | 51 | 23 | 4 | 140 | 63 | 192 | 145 | 159 | 98 | 587 | 19 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |


|  | LEFT | THRU | RIGHT |
| :--- | :---: | :---: | :---: |
| NORTH | 4 | 140 | 63 |
| EAST | 98 | 587 | 19 |
| SOUTH | 55 | 51 | 23 |
| WEST | 192 | 145 | 159 |

Intersection of : Fontanoso Rd \& Hellyer Av \& Silver Creek Valley Rd \& N Silver Cre
Traffix Node Number : 3848

| Permit No./Proposed Land | M09 | M08 | M07 | M03 | M02 | M01 | M12 | M11 | M10 | M0 6 | M05 | M04 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Use/Description/Location | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
| EDENVALE1 | 0 | 2 | 0 | 18 | 17 | 197 | 2 | 2 | 4 | 0 | 0 | 2 |

Office/Industrial
EAST OF 101, NORTH OF SILVER CREEK VALLEY RD EDENVALE ZONE 1


Office/Industrial
W/O 101, BOUNDED BY COTTLE RD, SANTA TERESA AND
EDENVALE ZONE 2
EDENVALE3-4

Office/Industrial
EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD
EDENVALE ZONE 3\&4

Office/Industrial
EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD
EDENVALE AREA 3-4 POOL

| EEHDP (RES) | 0 |
| :--- | :--- |

Residential
EVERGREEN
EEHDP (RESIDENTIAL)


Office/Industrial
5600 COTTLE RD
HITACHI CREDIT

Office/Industrial
NORTH COYOTE VALLEY
NORTH COYOTE VALLEY CAMPUS INDUSTRIAL

PM PROJECT TRIPS

Intersection of : Fontanoso Rd \& Hellyer Av \& Silver Creek Valley Rd \& N Silver Cre
Traffix Node Number : 3848

| Permit No./Proposed Land | M09 | M08 | M07 | M03 | M02 | M01 | M12 | M11 | M10 | M0 6 | M05 | M04 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Use/Description/Location | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
| PDC04-100R\&D (3-14681) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 0 | 3 | 0 |

Indial
ROUTE 85/GREAT OAKS
ISTAR - R\&D PORTION


LEGACY

CISCO NORTH COYOTE VALLEY


|  | LEFT | THRU | RIGHT |
| :--- | :---: | :---: | :---: |
| NORTH | 18 | 31 | 198 |
| EAST | 9 | 111 | 2 |
| SOUTH | 167 | 137 | 99 |
| WEST | 26 | 579 | 20 |

Intersection of : Piercy Rd \& Silver Creek Valley Rd
Traffix Node Number : 3855

| Permit No./Proposed Land | M09 | M08 | M07 | M03 | M02 | M01 | M12 | M11 | M10 | M06 | M05 | M04 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Use/Description/Location | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT |  |
| WBR |  |  |  |  |  |  |  |  |  |  |  |  |

Office/Industrial
EAST OF 101, NORTH OF SILVER CREEK VALLEY RD
EDENVALE ZONE 1


Office/Industrial
W/O 101, BOUNDED BY COTTLE RD, SANTA TERESA AND
EDENVALE ZONE 2

Office/Industrial
EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD
EDENVALE ZONE 3\&4

Office/Industrial
EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD
EDENVALE AREA 3-4 POOL
EEHDP (RES)
Residential
EVERGREEN
EEHDP (RESIDENTIAL)
HITACHI CREDIT (3-14641)
Office/Industrial
5600 COTTLE RD
HITACHI CREDIT

AM PROJECT TRIPS

Intersection of : Piercy Rd \& Silver Creek Valley Rd
Traffix Node Number : 3855

| Permit No./Proposed Land | M09 | M08 | M07 | M03 | M02 | M01 | M12 | M11 | M10 | M0 6 | M05 | M04 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Use/Description/Location | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
| NORTH COYOTE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 241 | 0 |

Office/Industrial
NORTH COYOTE VALLEY
NORTH COYOTE VALLEY CAMPUS INDUSTRIAL


Office/Industrial
ROUTE 85/GREAT OAKS
ISTAR - R\&D PORTION

| PDC99-053 (3-13970) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  | 0 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

LEGACY
CISCO NORTH COYOTE VALLEY


|  | LEFT | THRU | RIGHT |
| :--- | :---: | :---: | :---: |
| NORTH | 0 | 0 | 0 |
| EAST | 0 | 722 | 0 |
| SOUTH | 63 | 0 | 12 |
| WEST | 0 | 670 | 263 |

Intersection of : Piercy Rd \& Silver Creek Valley Rd
Traffix Node Number : 3855

| Permit No./Proposed Land | M09 | M08 | M07 | M03 | M02 | M01 | M12 | M11 | M10 | M06 | M05 | M04 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Use/Description/Location | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT |  |
| WBR |  |  |  |  |  |  |  |  |  |  |  |  |

Office/Industrial
EAST OF 101, NORTH OF SILVER CREEK VALLEY RD
EDENVALE ZONE 1


Office/Industrial
W/O 101, BOUNDED BY COTTLE RD, SANTA TERESA AND
EDENVALE ZONE 2

Office/Industrial
EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD
EDENVALE ZONE 3\&4

Office/Industrial
EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD
EDENVALE AREA 3-4 POOL
EEHD (RES)
Residential
EVERGREEN
EEHDP (RESIDENTIAL)

Office/Industrial
5600 COTTLE RD
HITACHI CREDIT

PM PROJECT TRIPS

Intersection of : Piercy Rd \& Silver Creek Valley Rd
Traffix Node Number : 3855

| Permit No./Proposed Land | M09 | M08 | M07 | M03 | M02 | M01 | M12 | M11 | M10 | M06 | M05 | M04 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Use/Description/Location | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
| NORTH COYOTE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 241 | 0 | 0 | 60 | 0 |

Office/Industrial
NORTH COYOTE VALLEY
NORTH COYOTE VALLEY CAMPUS INDUSTRIAL
PDC04-100R\&D (3-14681)
Office/Industrial
ROUTE 85/GREAT OAKS
ISTAR - R\&D PORTION


LEGACY
CISCO NORTH COYOTE VALLEY


|  | LEFT | THRU | RIGHT |
| :--- | :---: | :---: | :---: |
| NORTH | 0 | 0 | 0 |
| EAST | 0 | 658 | 0 |
| SOUTH | 260 | 0 | 13 |
| WEST | 0 | 533 | 36 |

Intersection of : Hellyer Av \& Piercy Rd
Traffix Node Number : 3949

| Permit No./Proposed Land | M09 | M08 | M07 | M03 | M02 | M01 | M12 | M11 | M10 | M0 6 | M05 | M04 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Use/Description/Location | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
| EDENVALE1 | 0 | 22 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Office/Industrial
EAST OF 101, NORTH OF SILVER CREEK VALLEY RD EDENVALE ZONE 1


Office/Industrial
W/O 101, BOUNDED BY COTTLE RD, SANTA TERESA AND
EDENVALE ZONE 2
EDENVALE3-4

Office/Industrial
EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD
EDENVALE ZONE 3\&4


Office/Industrial
EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD EDENVALE AREA 3-4 POOL
TOTAL: 110124
------

|  | LEFT | THRU | RIGHT |
| :--- | :---: | :---: | :---: |
| NORTH | 0 | 232 | 85 |
| EAST | 0 | 12 | 0 |
| SOUTH | 110 | 124 | 0 |
| WEST | 19 | 48 | 40 |

PM PROJECT TRIPS
Intersection of : Hellyer Av \& Piercy Rd
Traffix Node Number : 3949

| Permit No./Proposed Land | M09 | M08 | M07 | M03 | M02 | M01 | M12 | M11 | M10 | M0 6 | M05 | M04 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Use/Description/Location | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
| EDENVALE1 | 0 | 2 | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 |  |

EDENVALE1
Office/Industrial
EAST OF 101, NORTH OF SILVER CREEK VALLEY RD
EDENVALE ZONE
EDENVALE2
Office/Industrial
W/O 101, BOUNDED BY COTTLE RD, SANTA TERESA AND
EDENVALE ZONE 2


Office/Industrial
EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD
EDENVALE ZONE $3 \& 4$


Office/Industrial
EAST OF 101, SOUTH OF SILVER CREEK VALLEY RD
EDENVALE AREA 3-4 POOL

| TOTAL: | 27 | 217 | 0 | 0 | 27 | 0 | 0 | 0 | 110 | 0 | 48 | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |


|  | LEFT | THRU | RIGHT |
| :--- | :---: | :---: | :---: |
| NORTH | 0 | 27 | 0 |
| EAST | 0 | 48 | 0 |
| SOUTH | 27 | 217 | 0 |
| WEST | 0 | 0 | 110 |

## Appendix C <br> Intersection Level of Service Calculations







Saturation Flow Module:

| MPARE | Weed Jul $2818: 46: 392021$ | Page 3.5 |
| :---: | :---: | :---: |
|  | $\begin{gathered} \hline \hline 455 \text { Piercy Road } \\ \text { 121,600 SF Warehouse } \\ \text { San Jose, CA } \end{gathered}$ |  |
|  | Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background PM |  |


 $\begin{array}{lllllllllllll}\text { Sat/Lane: } & 1900 & 1900 & 1900 & 1900 & 1900 & 1900 & 1900 & 1900 & 1900 & 1900 & 1900 & 1900 \\ \text { Adjustment: } & 0.92 & 1.00 & 0.92 & 0.92 & 1.00 & 0.92 & 0.92 & 1.00 & 0.92 & 0.92 & 1.00 & 0.92\end{array}$ $\begin{array}{lllllllllllll}\text { Adjustment: } & 0.92 & 1.00 & 0.92 & 0.92 & 1.00 & 0.92 & 0.92 & 1.00 & 0.92 & 0.92 & 1.00 & 0.92 \\ \text { Lanes: } & 1.95 & 0.00 & 0.05 & 0.00 & 0.00 & 0.00 & 1.00 & 3.00 & 1.00 & 1.00 & 3.00 & 0.00\end{array}$

Capacity Analysis Module:
Vol/Sat:
0.20 $0.00 \quad 0.20 \quad 0.00 \quad 0.00 \quad 0.00 \quad 0.00 \quad 0.21 \quad 0.06$ crit Moves: **** **** $\begin{array}{lllllllllllllll}\text { Green Time: } & 40.5 & 0.0 & 40.5 & 0.0 & 0.0 & 0.0 & 7.0 & 46.5 & 87.1 & 13.9 & 53.5 & 0.0 \\ \text { Volume/Cap: } & 0.53 & 0.00 & 0.55 & 0.00 & 0.00 & 0.00 & 0.06 & 0.50 & 0.07 & 0.02 & 0.55 & 0.00\end{array}$ $\begin{array}{lllllllllllll}\text { Volume/Cap: } & 0.53 & 0.00 & 0.55 & 0.00 & 0.00 & 0.00 & 0.06 & 0.50 & 0.07 & 0.02 & 0.55 & 0.00 \\ \text { Delay/Veh: } & 28.9 & 0.0 & 29.2 & 0.0 & 0.0 & 0.0 & 49.5 & 24.0 & 2.6 & 42.2 & 20.5 & 0.0 \\ \text { User DelAdj: } & 1.00 & 1.00 & 1.00 & 1.00 & 1.00 & 1.00 & 1.00 & 1.00 & 1.00 & 1.00 & 1.00 & 1.00\end{array}$ $\begin{array}{lrrrrrrrrrrrr}\text { AdjDel/Veh: } & 28.9 & 0.0 & 29.2 & 0.0 & 0.0 & 0.0 & 49.5 & 24.0 & 2.6 & 42.2 & 20.5 & 0.0 \\ \text { LoS by Move: } & \text { C } & \text { A } & \text { C } & \text { A } & \text { A } & \text { A } & \text { D } & \text { C } & \text { A } & \text { D } & \text { C } & \text { A }\end{array}$
Note: Queue reported is the number of cars per lane.



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