



Memorandum

Date: September 4, 2018
To: Mr. Gregg Bunker
From: Brian Jackson
Subject: Trip Generation and Site Access Study for the Proposed Mixed-Use Project at 999 Fremont Avenue in Los Altos, CA

Hexagon Transportation Consultants, Inc. has completed a trip generation and site access study for a proposed mixed-use development in Los Altos, California. The triangular-shaped project site is located at 999 Fremont Avenue. The proposed project would construct 3 condominium units and 1,498 square feet (s.f.) of retail space. The project would receive credit for the removal of the existing use on the site, which is currently a drive-up coffee shop. Note that at the onset of this study in 2014, Loyola Beauty Salon was operating on the site.

The City of Los Altos typically does not require a comprehensive traffic study that includes an intersection level of service analysis if a project is projected to generate fewer than 50 daily vehicle trips, as identified in Section C.8 of the circulation element of the General Plan. For projects that would generate fewer than 50 daily trips, a trip generation analysis typically satisfies the City's requirement. The reason the City typically does not require more extensive traffic analysis for "small" projects, including intersection level of service, is because once the project-generated peak hour trips are assigned to the roadway network based on the inbound/ outbound splits, the trips disperse and the number of new trips added to any intersection is effectively negligible. This approach to intersection level of service analysis has become standard procedure in the City of Los Altos.

Hexagon prepared project trip estimates based on trip generation rates obtained from the *ITE Trip Generation Manual, 10th Edition*. After applying the ITE rates and trip credits for the existing use to be removed, the project would be expected to generate 37 new daily vehicle trips, with 1 new trip occurring during the AM peak hour of traffic, and 4 new trips occurring during the PM peak hour of traffic (see **Table 1**). Note that the existing trip credit estimates are based on the previous beauty salon use and not the current drive-through coffee shop use. The ITE average rates for Shopping Center (ITE Land Use 820) were used to estimate existing trip credits because the ITE rates for Hair Salon (ITE Land Use 918) are based on very limited data (only 1 trip generation study). Since a drive-through coffee shop generates more trips than a beauty/hair salon, the net project trip generation estimates presented in this traffic study are conservative estimates. In actuality, the proposed project would most likely generate fewer vehicle trips than the drive-through coffee shop currently operating on the site.

Figure 1 shows the estimated project trip distribution patterns and the peak-hour project trip assignment at the intersections of Miramonte Avenue/A Street, Fremont Avenue/A Street and Miramonte Avenue/Fremont Avenue. The trip distribution patterns were estimated based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses. Since the amount of estimated peak-hour vehicle trips added to the roadways in the vicinity of the project site would be very small, the project would not produce a noticeable change in traffic volumes in the study area. Thus, it is our professional opinion that this project does not warrant preparation of a comprehensive transportation impact analysis (TIA).

**Table 1
Project Trip Generation Estimates**

| Land Use | Size | Daily Rate | Daily Trips | AM Peak Hour | | | PM Peak Hour | | | | |
|-----------------------------|----------|------------|-------------|--------------|----------|----------|--------------|------------|----------|----------|----------|
| | | | | Pk-Hr Rate | In | Out | Total | Pk-Hr Rate | In | Out | Total |
| Proposed Uses | | | | | | | | | | | |
| Condominiums ¹ | 3 DU | 7.32 | 22 | 0.46 | 0 | 1 | 1 | 0.56 | 1 | 1 | 2 |
| Retail ² | 1,498 SF | 37.75 | 57 | 0.94 | 1 | 0 | 1 | 3.81 | 3 | 3 | 6 |
| Subtotal: | | | 79 | | 1 | 1 | 2 | | 4 | 4 | 8 |
| Existing Uses | | | | | | | | | | | |
| Retail (Salon) ² | 1,100 SF | 37.75 | (42) | 0.94 | (1) | 0 | (1) | 3.81 | (2) | (2) | (4) |
| Net New Trips: | | | 37 | | 0 | 1 | 1 | | 2 | 2 | 4 |

Notes:
¹ Trip generation based on average rates contained in the *ITE Trip Generation Manual, 10th Edition*, for Multifamily Housing Low-Rise (Land Use 220) located in a General Urban/Suburban setting. Rates are expressed in trips per unit.
² Trip generation based on average rates contained in the *ITE Trip Generation Manual, 10th Edition*, for Shopping Center (Land Use 820). Trip rates expressed in trips per 1,000 square feet.

Site Access and On-Site Circulation

This section describes the site access, circulation and parking evaluation for the proposed project. Site access and on-site circulation were evaluated using commonly accepted traffic engineering principles. This review is based on the April 2, 2018 project site plan labeled “Loyola Corners Estates” prepared by the Dahlin Group (see **Figure 2**).

Vehicular Site Access

The project is proposing to relocate the existing driveway on Miramonte Avenue mid-way between A Street and Fremont Avenue, and reduce the driveway width from 36 feet to 30 feet. This full-access driveway would provide direct access to the parking garage and would provide adequate site access to and from the surrounding roadway network. The existing inbound only driveway on Fremont Avenue would be removed and the sidewalk along the project frontage on Fremont Avenue would be reconstructed.

Providing vehicular access to the project parking garage via Miramonte Avenue, as proposed, is preferable to providing access via Fremont Avenue. Whereas a driveway on Miramonte Avenue provides full access to and from the site, Fremont Avenue is a one-way street so site access is limited to right turns only. Also, sight distance is better along the project frontage on Miramonte Avenue where parking is prohibited than along the project frontage on Fremont Avenue where parking is allowed. Lastly, there is a horizontal bend in Fremont Avenue at its intersection with Miramonte Avenue that reduces sight distance. Thus, providing vehicular site access via Miramonte Avenue is the best option available for the project.

Sight Distance at the Project Driveway

The project driveway 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 Miramonte Avenue. Providing adequate sight distance reduces the likelihood of a collision at the driveway and provides drivers with the ability to exit the driveway or locate sufficient gaps in traffic. Any landscaping, parking and signage should be located in such a way to ensure an unobstructed view for drivers entering and exiting the site.

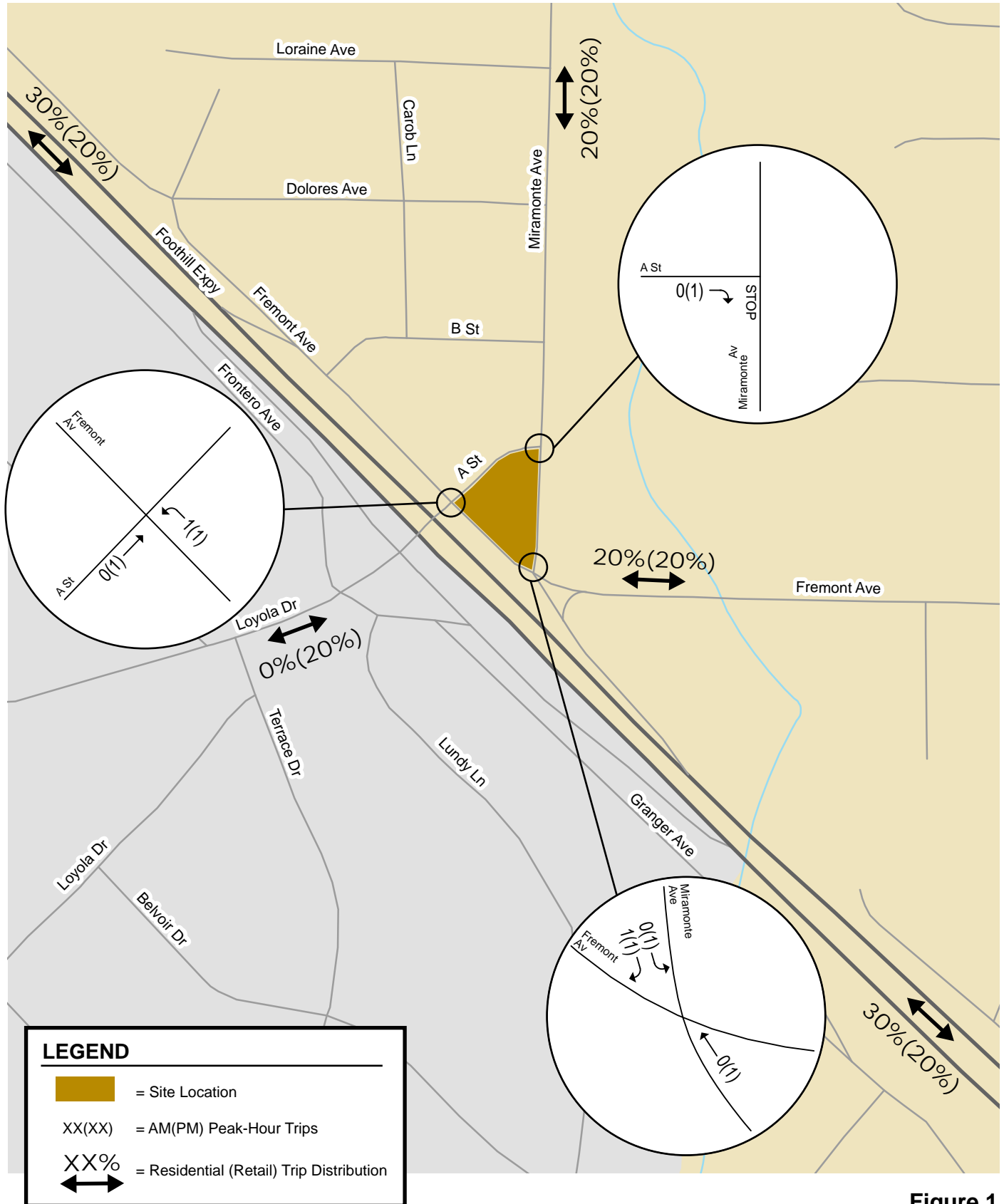
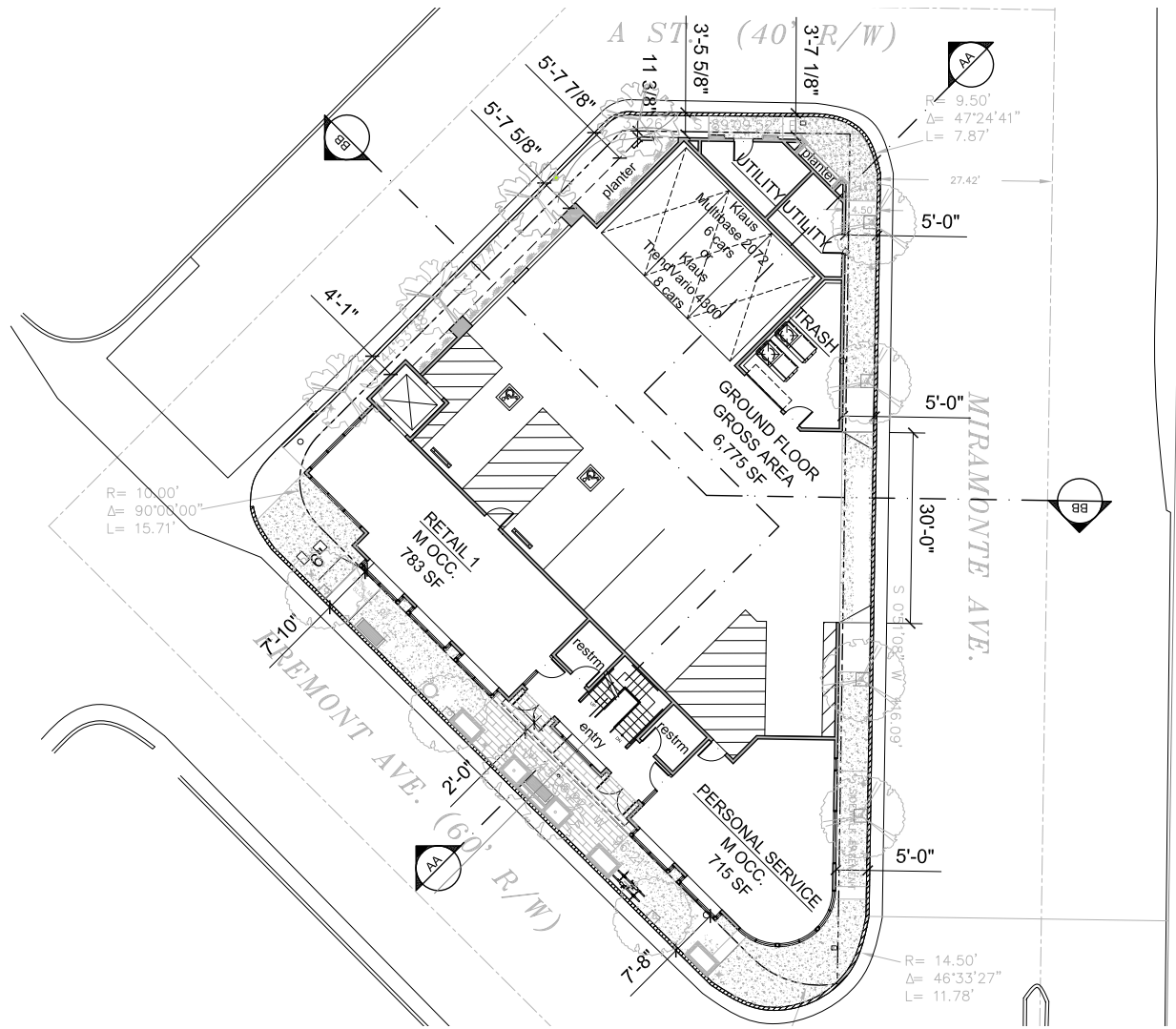


Figure 1
Project Trip Distribution and Net Trip Assignment



999 FREMONT AVENUE
 LOYOLA CORNERS ESTATES, LOS ALTOS, CA

SITE PLAN

DAHLIN

SCALE: 1/8" = 1'-0"

| | | |
|--|----------|---|
| JOB NO. | 1451.001 |  N A.2 |
| DATE | 04-02-18 | |
| 5865 Owens Drive Pleasanton, CA 94588 925-251-7200 | | |
| | | |

Figure 2
 Site Plan

Street parking is not allowed along the project side (west side) of Miramonte Avenue between A Street and Fremont Street. Hexagon recommends keeping this “no parking” condition to maintain adequate sight distance at the project driveway. The project is proposing to add four street trees along Miramonte Avenue. The trees would have narrow trunks and high canopies and would not create any visual obstructions.

The site plan shows approximately 5 feet from the edge of the project building to the traveled way. This proposed design would make it difficult for exiting vehicles to see pedestrians on the sidewalk and bicycles and vehicles traveling along Miramonte Avenue. For this reason, Hexagon recommends that additional distance be provided between the project building and the street, if possible, so exiting vehicles can partially pull out of the driveway before turning onto Miramonte Avenue. If providing additional distance between the garage entrance and Miramonte Avenue is not feasible, then an alternative would be to add notches or openings (i.e., windows) on the building walls on either side of the garage entrance to improve the sight distance for drivers exiting the garage. Convex mirrors should also be installed on both sides of the garage entrance to improve visibility. In addition, appropriate visible and/or audible warning signals should be provided to alert pedestrians and bicyclists to vehicles exiting the garage. Since the parking garage entrance would not be controlled by a security gate or control arms, a motion sensor of some kind would be required to trigger the warning signal.

Project Driveway Operations

Given the low travel speeds and traffic volumes on Miramonte Avenue and the small number of project-generated trips, the vehicles entering and exiting the project parking garage are not expected to cause noticeable delays on Miramonte Avenue or result in queuing issues at the project driveway. Based on field observations, the outbound vehicles would not experience excessive delay and would be able to find sufficient gaps in traffic along Miramonte Avenue to exit the driveway. As noted previously, the project is proposing to move the driveway on Miramonte Avenue mid-way between A Street and Fremont Avenue, thereby equalizing the sight distance between the project driveway and these two cross streets.

Vehicular Circulation

On-site vehicular circulation was evaluated for the parking garage. The project would provide 90-degree parking on the ground floor of the site with a 26-foot wide dead-end drive aisle, which is adequate for two-way circulation of vehicular traffic and allows enough room for vehicles to back out of the parking spaces. The site plan shows adequate access to the retail parking spaces and the residential parking lift system. However, the retail parking space located immediately adjacent to the parking garage entrance is hidden from drivers entering the garage and could be problematic. Convex mirrors at the garage entrance, as previously recommended, would improve visibility. The project applicant should coordinate with City staff to determine if the addition of convex mirrors would be adequate to address this potential operational issue.

Due to the minimal amount of space provided within the parking garage for maneuvering in and out of the parking spaces and the lack of inbound/outbound queuing space at the garage entrance, a vehicle backing out of any of the standard retail parking spaces would momentarily block another vehicle from entering the garage simultaneously. However, these conflicts would occur infrequently since the project is expected to generate only about 1 vehicle trip (inbound or outbound) every 15 minutes during the PM peak hour of traffic, which is when the majority of retail trips are expected to occur.

Garbage Truck Access

The site plan shows that a trash room would be located at the northeast corner of the site, outside the building. Garbage collection activities for the project are not expected to occur on-site due to

height and access limitations. Therefore, it is assumed that trash bins would be wheeled out to the curb along Miramonte Avenue on designated garbage collection days. Since parking is not allowed on Miramonte Avenue, the trash bins will not conflict with curb parking. The trash bins should be removed from the public right-of-way immediately after garbage pickup and returned to the trash rooms as to not impact AM or PM peak hour traffic conditions or sight distance at the driveway.

Moving and Delivery Truck Access

Currently, on-street parking is allowed along the project frontage on Fremont Avenue. The project is proposing to eliminate the inbound only driveway on Fremont Avenue and reconstruct/widen the sidewalk, resulting in some additional curb parking. The site plan does not show an off-street loading space or on-street freight loading zone. Hexagon recommends providing either a loading zone or short-term parking along the project frontage on Fremont Avenue near the lobby area for use by residential moving vehicles and delivery vehicles. A loading zone could be used to support commercial vehicles, while short-term parking could also serve retail customers and residential guests. The project applicant should coordinate with City of Los Altos staff to determine the preferred curb loading option, establish the best location for a curb loading area on Fremont Avenue, and verify that adequate right-of-way exists along the project frontage on Fremont Avenue.

Note that the site plan does not show direct access to the residential elevators from the lobby. The site plan does show access to the elevator from the ground floor parking level; however, the parking garage is not accessible by large trucks. It appears the garage could be accessed from the lobby by cutting through the commercial space on the southeast corner of the site labeled Personal Service on the site plan. The residential elevator could then be accessed.

Pedestrian and Bicycle Access and Circulation

Based on the site plan, the new driveway on Miramonte Avenue would be relocated mid-way between A Street and Fremont Avenue, and the width would be reduced from 36 feet to 30 feet. The reduced driveway width would enhance pedestrian safety along Miramonte Avenue. In addition, trees and planter boxes would be relocated close to the edge of the sidewalks to provide a buffer between pedestrians and vehicles traveling along Fremont Avenue and Miramonte Avenue. The project would also construct new ADA compliant curb ramps with truncated domes at all three corners of the site, as well as on both sides of the project driveway. Truncated domes are the current standard design requirement for detectable warnings which enable people with visual disabilities to determine the boundary between the sidewalk and the street. These project improvements would enhance pedestrian perceptions of comfort and safety around the site and provide a positive pedestrian experience.

The project would reconstruct the sidewalks along the project's frontages on Fremont Avenue and Miramonte Avenue. The site plan also shows the project would extend the sidewalk on Miramonte Avenue so that it wraps around the northeast corner of the site and provides access to the utility room that would front A Street.

Pedestrian access to the residential and retail components of the project would be provided via the sidewalk on Fremont Avenue. The project's entrance on Fremont Avenue would provide access to the main lobby and staircase. The elevator could be accessed from either the ground floor parking level or the basement level. The basement level would contain a bicycle storage room and three residential storage rooms (one for each residential unit). A residential lobby on the second floor of the building would provide common access to all three residential units.

The proposed plan would provide adequate connectivity to the site, including access to the parking and basement levels, for pedestrians and bicycles. The network of sidewalks and crosswalks in the immediate vicinity of the site has good connectivity and would provide residents with safe routes to

bus stops, commercial uses, and other points of interest in the area. The existing bicycle facilities in the study area, including a mix of striped bike lanes and designated bike routes on Fremont Avenue, Miramonte Avenue and A Street, would provide adequate bicycle access to the project site. Striped shoulders are also provided on Foothill Expressway and are suitable for bicycle travel.

Parking

Vehicle Parking

According to the City of Los Altos zoning map, the project site is designated CN (Commercial Neighborhood). For areas designated as CN, the City parking requirements (City Code Section 14.74) is 1 vehicle parking space for each 300 square feet for commercial uses and 2 vehicle parking spaces per unit for residential uses. The 1,498 square feet of commercial space would require 5 parking spaces. The 3 units of residential use would require 6 parking spaces. Therefore, the project would require 11 parking spaces.

As proposed, the project would provide 8 residential parking spaces and 6 retail parking spaces for a total of 14 vehicle parking spaces. Thus, the project would meet the City's parking requirements.

Residential Lift Parking System

The project proposes a mechanical stacker parking system (Klaus TrendVario 4300) to serve the residents. Three tri-level lifts would provide a total of 8 vehicle parking spaces: 8 mechanical parking platforms and one open space. The mechanical parking system would move vehicles between the ground level (top level) and the basement level (bottom level), as well as shift vehicles left and right, to allow residents to access their vehicles independently. The parking space selected is moved to the desired position by means of an automatic control system. The parking spaces on the lift would measure approximately 19 feet long by 9.5 feet wide, and would accommodate most passenger vehicles, trucks, SUVs and vans.

Bicycle Parking

The City of Los Altos does not have minimum parking requirements for bicycles. It is recommended that the project provide bicycle parking according to the recommendations contained in the VTA Bicycle Technical Guidelines, last updated in 2012. The VTA guidelines recommend 2 bicycle spaces per residential unit and 1 two-bicycle short-term rack for the commercial/retail use.

The project would provide 3 secured bicycle spaces per residential unit in the basement level of the parking garage and 2 short-term bicycle racks (4 spaces total) for the commercial/retail use along Fremont Avenue. Thus, the project would provide adequate bicycle parking per VTA guidelines.