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October 5, 2017

Hilton Garden Inn

Transportation Demand Management (TDM) Plan

Prepared for
Shashi Group

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SJ16-1700

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1. INTRODUCTION

The Hilton Garden Inn's location on El Camino Real near a variety of complementary land uses, transit services, and roadways with bike lanes provides the opportunity for hotel guests and employees to travel by modes other than driving alone. These nearby services and facilities plus the measures provided in this Transportation Demand Management (TDM) Plan will reduce the hotel's parking demand, support the proposed parking supply, and allow the hotel to meet its TDM obligation per the El Camino Real Precise Plan.

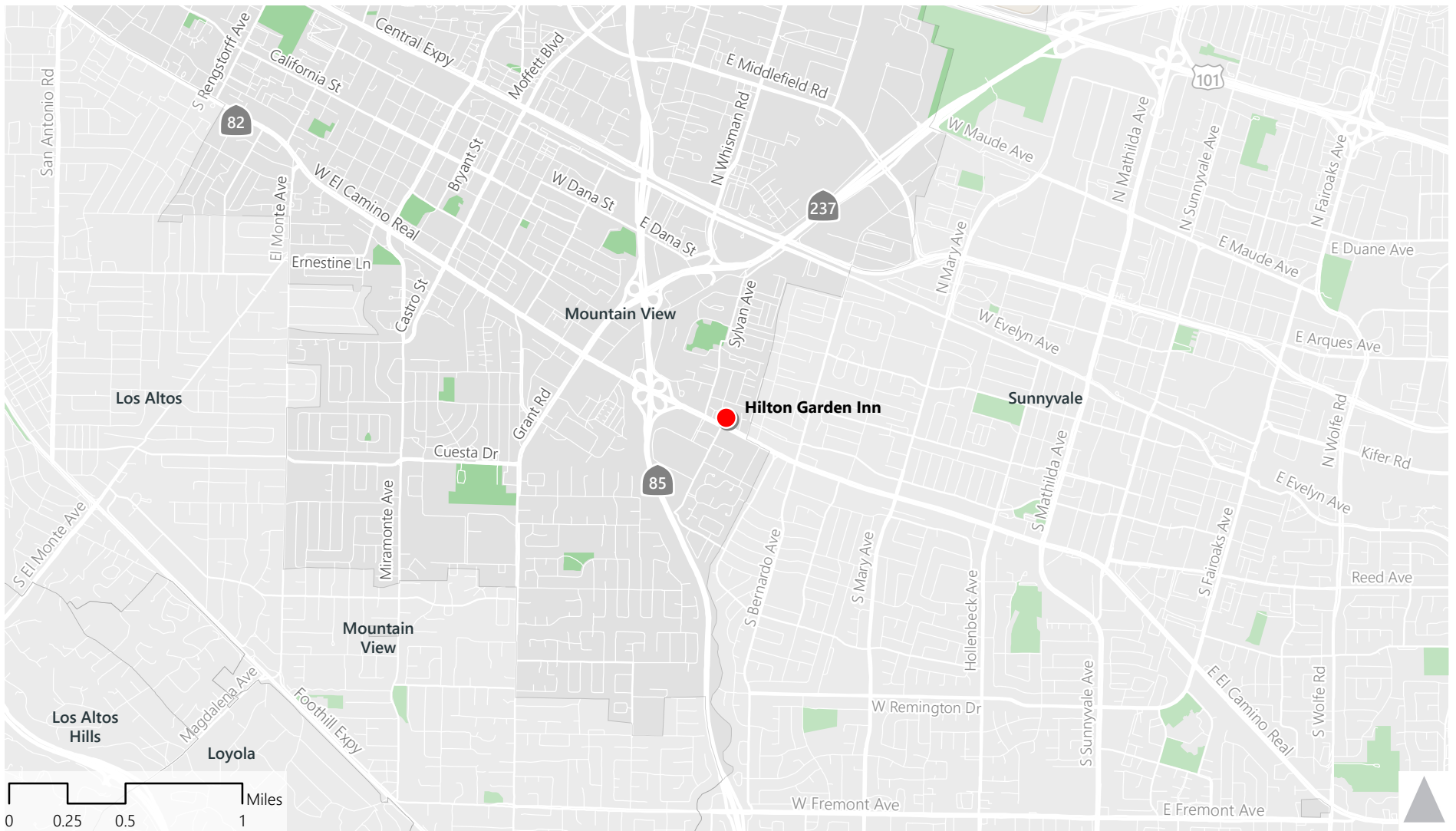
The primary purpose of any TDM plan is to reduce the amount of vehicle traffic and parking generated by a development by creating measures, strategies, incentives, and policies to shift people from driving alone to using other travel modes including transit, carpooling, cycling, and walking. TDM strategies include informational resources, physical site enhancements, monetary incentives, management strategies and more. This report presents the comprehensive TDM Plan for the Hilton Garden Inn with a primary goal of reducing vehicle parking demand and a secondary goal of reducing the amount of traffic generated by hotel and restaurant employees by approximately 20 percent.

The TDM Plan includes attributes of the site's location/physical improvements at the site and TDM measures/programs that will be provided by the hotel operator. These measures and their implementation are described in detail.

1.1 PROJECT DESCRIPTION

The Hilton Garden Inn is located on El Camino Real east of State Route (SR) 85 in Mountain View, California. Currently, the hotel includes 160 guest rooms, 250 square feet of meeting space, and 3,800 square feet of restaurant space. The proposed expansion will add 38 guest rooms and a new 4,300-square foot restaurant. The proposed parking supply is 149 spaces, 41 percent less than City code requirements of 254 spaces. The site location is shown on **Figure 1**. The site plan is shown on **Figure 2**. Vehicular and pedestrian access is provided by the main driveway and sidewalk on El Camino Real.





 Project Site



Figure 1
Site Location



Figure 2
Site Plan

1.2 PARKING REDUCTION

The existing hotel has 152 parking spaces. As shown in **Table 1**, 208 spaces are required by formula per the City’s municipal code. The municipal code requirements do not account for a hotel’s unique characteristics that can affect its peak parking demand, including the site’s context, the peak parking demand of the hotel rooms and the restaurant occurring at different times of the day, and the overlap of restaurant patrons and hotel guests. In addition, they do not take into account the effect Transportation Network Companies (TNCs), such as Uber and Lyft, have had on hotel parking. Therefore, parking surveys were conducted to measure the hotel’s unique parking demand characteristics. The results of the surveys showed that the peak parking demand with 100 percent room occupancy is 110 parked vehicles, or about 100 spaces less than the code requirements.

The proposed expansion will provide 149 parking spaces when 254 are required. Based on the parking analysis conducted in December 2016 (see **Appendix A**), which is based on the hotel’s specific parking characteristics, the 149 spaces should be sufficient. The purpose of this TDM Plan is to further support reductions in the parking supply.

TABLE 1: EXISTING AND PROPOSED HILTON GARDEN INN PARKING SPACE SUMMARY

Land Use	Quantity	Unit	Parking Ratio	Unit	Parking Requirement
Existing Hotel					
Hotel – Rooms	160	Rooms	1.00	space/room	160
Hotel – Employees	20	Employees	0.50	space/employee	10
Restaurant	3.8	KSF	10.00	space/ksf	38
Total Parking Space Requirements per City of Mountain View Municipal Code					208
Existing Parking Supply					152
Existing Parking Demand					110
Proposed Hotel Expansion					
Hotel – Rooms	198	Rooms	1.00	space/room	198
Hotel – Employees	26	Employees	0.50	space/employee	13
Restaurant	4.3	KSF	10.00	space/ksf	43
Total Parking Space Requirements per City of Mountain View Municipal Code					254
Proposed Parking Supply					149
Estimated Parking Demand					141

Source: Fehr & Peers, 2017.



1.3 EMPLOYEE VEHICLE TRIP REDUCTION

Based on the information in the El Camino Precise Plan and directions provided by City of Mountain View, the goal for this TDM Plan is to reduce the amount of traffic generated the hotel and restaurant employees by 20 percent. Since employee traffic cannot be easily discerned from guest-generated traffic, the reduction goal will primarily be assessed by surveying the travel modes used by the employees and identifying the percentage that use non-drive-alone modes including ridesharing, transit, bicycling, and walking. Annual driveway counts will also be conducted to measure the amount of traffic generated by the site. The results of the driveway counts combined with the employee travel mode surveys will be used to assess the level of success of the TDM Plan in reducing employee vehicle trips.



2. SITE CONTEXT AND NEARBY TRANSPORTATION SERVICES

The transportation system serving the site includes roadway facilities, pedestrian and bicycle facilities, and transit services. The existing transit, bicycle and pedestrian facilities, and planned improvements that will support travel to the site by modes of transportation other than driving alone, are described below. In addition, adjacent land uses and nearby destinations that are easily accessible can have an impact on how people travel to and from the site. Several destinations that are accessible to hotel guests and employees (such as restaurants) are also described below.

2.1 ADJACENT LAND USES AND NEARBY DESTINATIONS

There are several stores, restaurants and other destinations within walking and biking distance to the site. Some examples of destinations within a ten-minute walk or bike ride include Best Buy, Starbucks, Sylvan Park, the Mountain View Center for the Performing Arts, and many local restaurants, including Himalayan Kitchen, Saktar Indian Cuisine, and Super Taqueria. These walkable and bike-able locations (and others) are shown on **Figure 3**.

2.2 NEARBY TRANSIT SERVICE

The City of Mountain View encourages the use of transit as an alternative mode of transportation and is served by two major transit providers: Santa Clara Valley Transportation Authority (VTA) and Caltrain. VTA provides local and regional bus and light rail service, and Caltrain provides commuter rail service. Transit service and facilities - bus routes nearest to the site, bus stops within half a mile to the site, Caltrain and VTA light rail - are shown on **Figure 4**. The site's close proximity to the Mountain View and Sunnyvale Transit Centers, which serve VTA bus and light rail, and Caltrain can be deciding factors, especially for employees who are traveling longer distances. The site is less than a ten-minute walk to several VTA bus stops along on El Camino Real and Bernardo Avenue. **Table 2** summarizes hours of operation and service frequencies for the bus routes nearest the site.

2.2.1 SANTA CLARA VALLEY TRANSPORTATION AUTHORITY (VTA)



The Santa Clara Valley Transit Authority (VTA) operates a light rail and bus system in Santa Clara County. VTA has recently finalized updates to the 2018 and 2019 transit service plan, known as the Next Network, which completely redesigned the transit network. The Next Network is expected to be implemented in late 2017.



Several VTA Next Network bus routes and one light rail line are within the vicinity of the Hilton Garden Inn. These routes include VTA's 22, 53, and Rapid 522, and Green (902) light rail line. Several bus stops are accessible within a ten-minute walk to and from the site; the closest stops are located on El Camino Real and Bernardo Avenue. VTA's Orange light rail line runs along Central Expressway and is accessible at the Mountain View Transit Center and Evelyn Station.

2.2.2 MOUNTAIN VIEW COMMUNITY SHUTTLE

In partnership with Google, the City of Mountain View operates the Mountain View Community Shuttle that provides free service throughout Mountain View. Serviced stops include Sylvan Park, El Camino Hospital, San Antonio Center, and the Mountain View Transit Center.



The El Camino Real/Sylvan stop can be accessed in three minutes by walking from the Hilton Garden Inn. The Mountain View Community Shuttle serves one bi-directional route operating at 30-minute headways during the week and 60-minute headways on weekends and holidays.

2.2.3 CALTRAIN



Caltrain provides weekday commuter rail service between Gilroy and San Francisco. There are currently 40 trains traveling northbound to San Francisco and 40 trains traveling southbound from San Francisco, for a total of 80 trains that depart the Mountain View Transit Center per day. The Mountain View Transit Center is located approximately 1.5 miles northwest of the site and can be accessed by walking 35 minutes, by a nine-minute bicycle ride, or by bus or shuttle via multiple routes near the site that drop riders off directly in front of Mountain View Station.

TABLE 2: NEARBY TRANSIT SERVICES

Route	From	To	Weekdays		Saturdays		Sundays	
			Operating Hours	Peak Headway (minutes)	Operating Hours	Headway (minutes)	Operating Hours	Headway (minutes)
Santa Clara Valley Transportation Authority (VTA) Bus								
22	Palo Alto Transit Center	Eastridge Transit Center	24 hours	15	24 hours	15	24 hours	15
53	Santa Clara Transit Center	Sunnyvale Transit Center	5:30 am – 8:00 pm	30	9:00 am – 6:00 am	60	N/A	N/A
Rapid 522	Palo Alto Transit Center	Eastridge Transit Center	5:00 am – 11:00 pm	12	6:00 am – 11:00 pm	15	6:00 am – 10:00 pm	15
City of Mountain View Community Shuttle								
Community Shuttle	Loop throughout the City of Mountain View		10:00 am – 6:00 pm	30	10:00 am – 6:00 pm	60	10:00 am – 6:00 pm	60
Santa Clara Valley Transportation Authority (VTA) Light Rail								
Orange Line	Mountain View Transit Center	Alum Rock Transit Center	5:00 am – 11:30 pm	15	6:30 am – 11:30 pm	30	7:00 am – 11:30 pm	30

Source: VTA NEXT Network, June 2017.

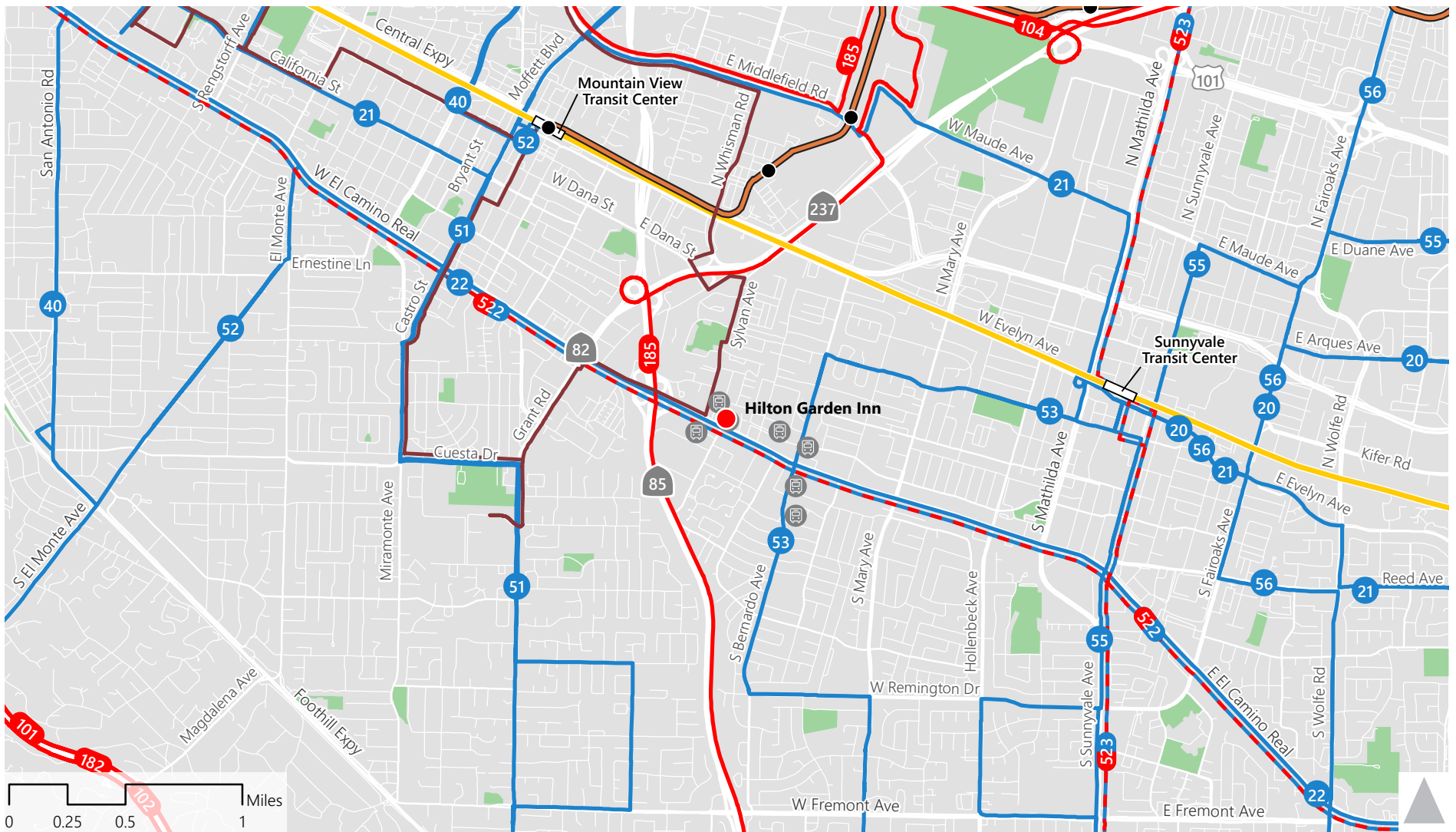




- Project Site
- 10 Minute Walk Buffer (0.5 miles)
- Destination Points
- 10 Minute Bike Buffer (1.8 miles)



Figure 3
Locations Easily Accessible by Walking or Biking



Source: VTA Next Network, July 2017

- Project Site
- Regular Bus Routes
- - - Rapid Bus Routes
- Express Bus Routes
- Light Rail: Orange Line (903)
- Caltrain Line & Stations
- Mountain View Community Shuttle
- Bus/Shuttle Stops Near Project Site (within 0.5 miles)



Figure 4
Existing Transit Service

2.3 EXISTING PEDESTRIAN AND BICYCLE FACILITIES

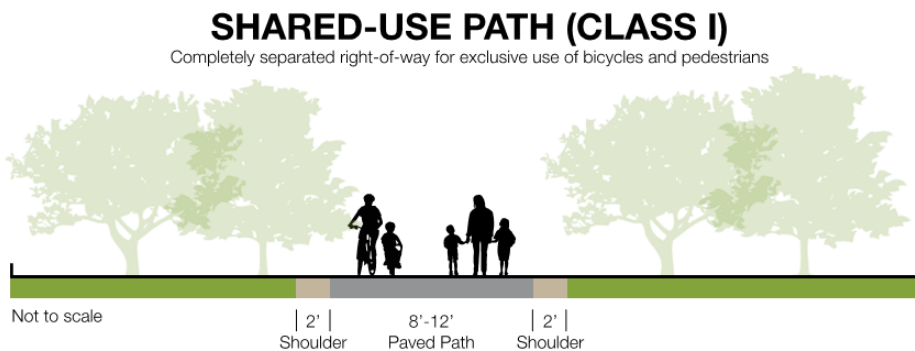
2.3.1 EXISTING PEDESTRIAN FACILITIES

Pedestrian facilities near the site include sidewalks, crosswalks, curb ramps, pedestrian signals, and off-street paths that provide safe and convenient routes for pedestrians to access destinations such as local restaurants along El Camino Real and recreational facilities such as Sylvan Park.

2.3.2 EXISTING BICYCLE FACILITIES

The California Department of Transportation (Caltrans) recognizes four classifications of bicycle facilities:

- **Class I Shared-Use Path**, or commonly referred to as a Bikeway or Bike Path, is a facility separated from automobile traffic for the exclusive use of bicyclists. Class I facilities can be designed to accommodate other modes of transportation, including pedestrians and equestrians, in which case they are referred to as shared use paths.

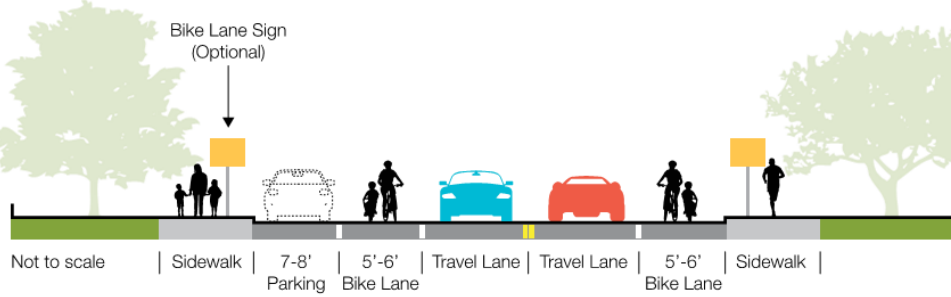


- **Class II Bicycle Lane** is a dedicated facility for bicyclists immediately adjacent to automobile traffic. Class II facilities are identified with striping, pavement markings and signage, and can be modified with a painted buffer to become a buffered bicycle lane (Class II)



BICYCLE LANE (CLASS II)

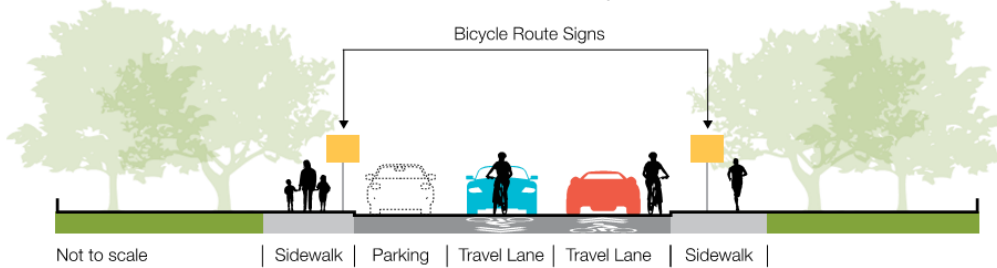
On-street striped lane for one-way bike travel



- **Class III Bicycle Route** is an on-street route where bicyclists and automobiles share the road. They are identified with pavement markings and signage, and are typically assigned to low-volume and/or low-speed streets.

BICYCLE ROUTE (CLASS III)

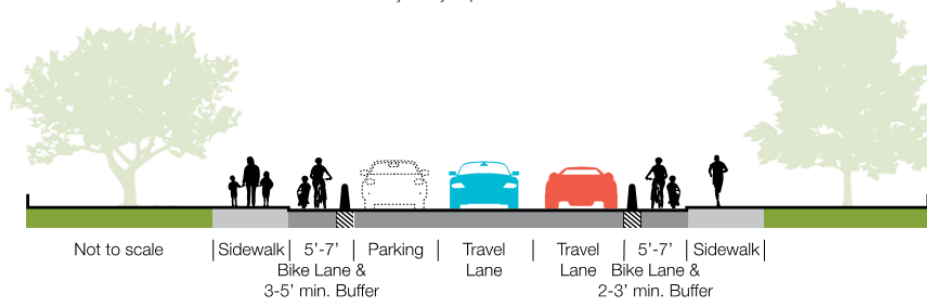
Shared on-street facility



- **Class IV Cycle Track or Separated Bikeway**, commonly referred to as a protected bicycle lane, is a facility that combines elements of Class I and Class II facilities. They offer an exclusive bicycle route immediately adjacent to a roadway similar to a Class II facility, but provide a physical separation from traffic with plastic delineators, raised curb, or parked automobiles.

CYCLE TRACK/SEPARATED BIKEWAY (CLASS IV)

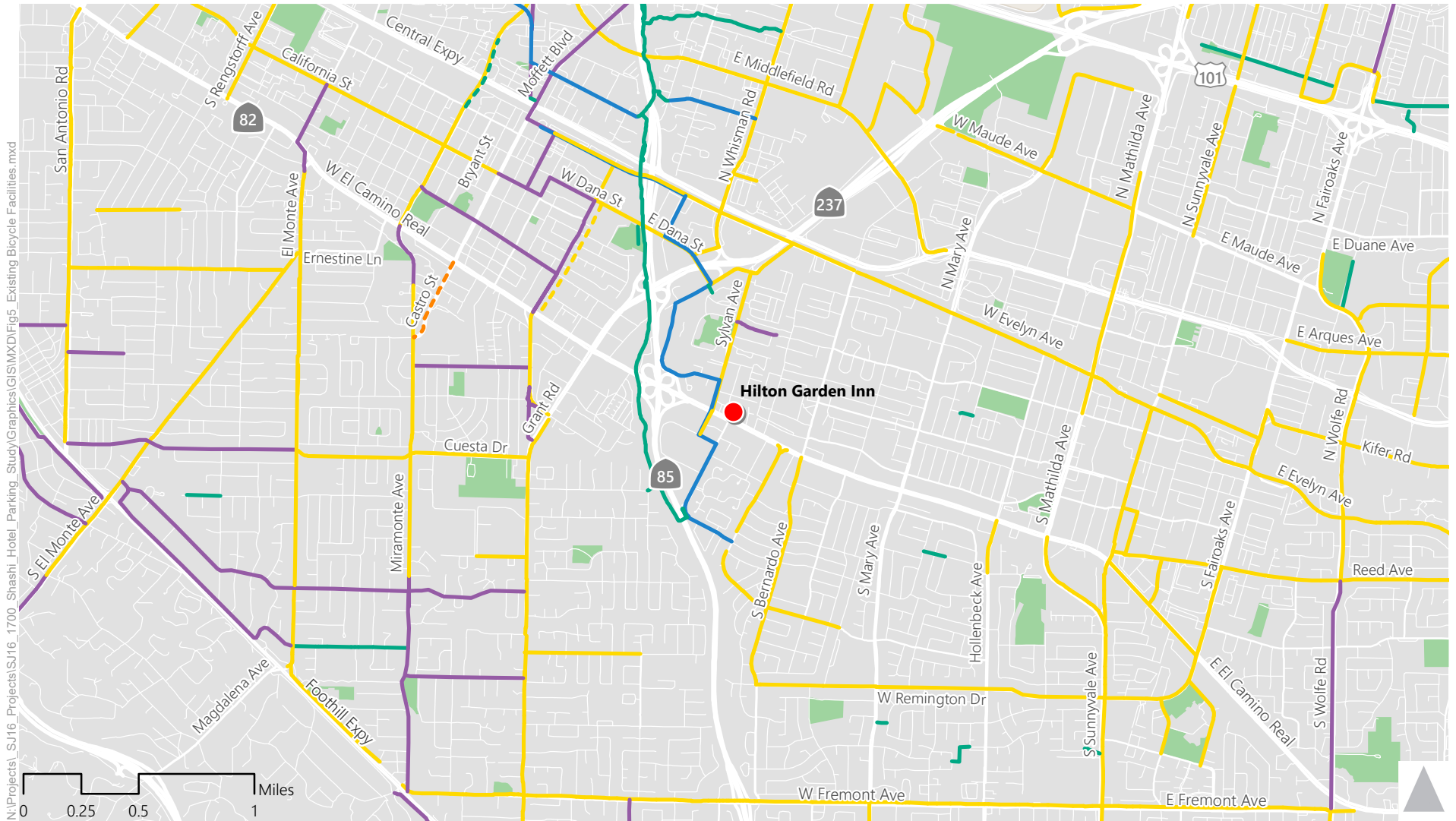
Physically separated bike lane



Several Class II and Class III bike facilities exist and are planned near the site, as shown in **Figure 5**. Bernardo Avenue, Knickerbocker Drive, Sylvan Avenue, and Dana Street have Class II bike lanes near the site. Dale Avenue, Americana, Sylvan Avenue, Rainbow Drive, Alice Avenue, and Moorpark Way have Class III bike boulevards near the site. The Stevens Creek Trail Class I bike path serves recreational and local trips with north-south connectivity on an off-roadway facility in the area, making biking a viable travel option. The Stevens Creek Trail extends from Hearthstone Way to the Stevens Creek Shoreline Nature Study Area. It is located approximately 0.5 miles to the west of the site.

Class II bike lanes are currently planned along Calderon Avenue to complete the between Dana Street and El Camino Real nearest the site. Class II buffered bike lanes are also planned for segments of Castro Street. These planned bikeways (shown as dashed lines in **Figure 5**) have been approved by the City Mountain View for future design and may not be currently suitable for all bicyclists in their existing condition.





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- | Existing Bicycle Facility | | Planned Bicycle Facility | | | |
|---------------------------|----------------------------|--------------------------|----------------------------|--|----------------------------------|
| | Project Site | | Class I - Bicycle Path | | Class III - Bike Route |
| | Class II - Bicycle Lane | | Class I - Bicycle Path | | Class II - Bicycle Lane |
| | Class III - Bike Route | | Class III - Bike Boulevard | | Class II - Buffered Bicycle Lane |
| | Class III - Bike Boulevard | | | | |



Figure 5
Existing and Planned Bicycle Facilities

3. TDM MEASURES AND STRATEGIES

There are numerous strategies that can be used to encourage hotel guests and employees to use modes of transportation other than driving alone and, therefore, reduce the parking demand for Hilton Garden Inn. Some strategies are incorporated into the hotel’s design, such as providing ample bicycle parking. Others are policies and programs that are provided by the hotel operator, such as providing information to promote alternative travel modes in new employee and guest welcome packets.

3.1 TDM MEASURES AND STRATEGIES

Table 3 presents the primary TDM measures to achieve the parking demand reduction and employee vehicle trip reduction goals for the Hilton Garden Inn. **Table 4** includes “contingency” measures that could be implemented if the goals are not achieved.

TABLE 3: PRIMARY TDM MEASURES AND STRATEGIES FOR HILTON GARDEN INN


TDM Measure	Description
Transit	
Free Transit Passes for Guests	Free transit passes will be available for all hotel guests. The free transit passes will provide each hotel guest with a preloaded Clipper Card, worth the equivalent of an adult day-pass for VTA buses/LRT and Caltrain. Information will be included to instruct hotel guests how to load additional funds onto their cards. This will encourage guests to use nearby transit services, such as the Free Community Shuttle, VTA bus and light-rail, and Caltrain. 
Free Transit Passes for Employees	Free transit passes will be available for all hotel employees. The transit pass program will provide hotel employees with access to the VTA Eco Pass and Caltrain Monthly Pass (for up to two zones). Hotel management will provide a transit pass to each employee who requests one.
Bicycle	
Free Loaner Bicycles	Five free bicycles, bike helmets and bike locks will be available for use by hotel guests/visitors or employees to encourage bicycle use for short trips. These bicycles will be regularly maintained by a bicycle shop in the area to ensure that they are safe to ride. The storage location will be designated in the final site plan.



TABLE 3: PRIMARY TDM MEASURES AND STRATEGIES FOR HILTON GARDEN INN

TDM Measure	Description
Bicycle Parking (long term)	Secure parking for five bicycles will be provided on site via bike lockers or indoor bike storage facilities. Safe, secure, easily accessible bicycle parking facilities support bicycling as a mode choice and encourages bicycle use, especially by employees. Bike storage should be located near building entrances to encourage bicycle use by hotel guests. Additionally, surface bike parking for 10 bicycles will be provided. The storage location will be designated in the final site plan.
Ride-Home Program	
Emergency Ride-Home Program	Employees who use transit or carpools, and employees who bike or walk to work are guaranteed a ride home in case of emergency, which helps to reduce concerns about using alternative modes. Hotel management will implement the emergency-ride-home service through a private ridesharing service, such as Uber or Lyft.
Marketing	
Employee and Guest Transportation Options Packet	All employees and hotel guests will be provided with a transportation options packet outlining alternative transportation options, such as the Free Community Shuttle and loaner bicycles, with explanations of the importance and benefits of using alternative transportation. The packets will also include information on the TDM program, the free transit pass programs (see above), and a bicycle riders guide with a map of bicycle routes, lanes, and paths and bicycle parking facilities near the site. These packets will make it easier for people interested in using alternative travel modes to become familiar with the facilities in the area. Guidelines and tips for safe bicycle riding will also be included. Introducing employees and guests to the TDM program creates an awareness and culture of drive-alone alternatives.
Travel Information Board	A one-stop shop for transit and travel information will be provided on-site. The board will provide education and support for easy use of alternative modes, such as the location and schedule for the nearby Mountain View Community Shuttle. It will also serve as a permanent location for TDM information and will be updated regularly to make sure the information is current.
Other	
Membership in the Transportation Management Association	Hilton Garden Inn will join and maintain ongoing membership and participation in the Mountain View Transportation Management Association (TMA) or other association or institution providing transportation services that has specific programs available for the City for the life of the project. The Mountain View TMA is a nonprofit organization run by business and landowners to reduce traffic for the benefit the entire City. Contributions made by member companies support the organization and fund projects that improve the City's transportation system. Pooling together resources into the Mountain View TMA will help to reduce parking demand on site.



TABLE 3: PRIMARY TDM MEASURES AND STRATEGIES FOR HILTON GARDEN INN

TDM Measure	Description
Free Airport Transportation Service	Hilton Garden Inn will provide free transportation services to Mineta San Jose International Airport (SJC), San Francisco International Airport (SFO), or the nearest High Speed Rail Station through a shared service, such as Uber or Lyft. This type of service can be used as a strategy encourage more people to use alternative modes of transportation, rather than a rental car, during their stay at the hotel.

Source: Fehr & Peers, 2017

TABLE 4: CONTINGENCY TDM MEASURES AND STRATEGIES FOR HILTON GARDEN INN

TDM Measure	Description
Carshare (e.g. Zip Car)	Employees who bike or walk or use transit or carpools and hotel guests who do not have access to a vehicle can utilize a carshare vehicle located on site for errands and other trips. To further encourage carshare use, the hotel may choose to buy a company membership and/or reimburse employees for use of carshare vehicles. Carshare spaces would be designated on-site should this measure be implemented.
Valet Parking	The on-site parking supply will meet the needs of the hotel with 100% room occupancy and full operation of the restaurant. Additional parking may be needed if the hotel is fully occupied and there is a special event attracting visitors that are not staying at the hotel, such as a retirement or holiday party. Valet parking can be used to temporarily increase the parking supply by parking vehicles in the circulation aisles. Other Shashi hotels have successfully used Corinthian International for valet services. An example of valet parking on the site is included in the parking study in the Appendix. With valet parking, the parking supply can be increased by 32 spaces, an increase of approximately 20%.



4. TDM MONITORING

This Transportation Demand Management (TDM) Plan contains the numerous programmatic measures and physical improvements that will be implemented by the Hilton Garden Inn to reduce employee vehicle trips and the demand for parking generated by its hotel guests and employees. The measures, which include free transportation services to SJC, SFO, and a nearby High Speed Rail (HSR) station, free transit passes, free loaner bicycles, secure bicycle parking provided on-site, and an emergency ride-home service will encourage hotel guests and employees to use alternative modes of transportation.

The hotel manager will oversee the TDM Plan to ensure that the guests and employees are provided with the resources they need to maximize their travel using non-auto modes. Each new employee and guest will be provided with a welcome package that describes the transit services in the area and includes a free transit pass to use them, explains the community bicycle program and nearby bike facilities, and describes destinations within walking distance of the hotel such as restaurants.

With the measures contained in this TDM Plan, the hotel will aim to achieve a 20 percent reduction in employee drive-alone trips. Since the travel behavior of hotel guests is largely determined by site location and could vary significantly on a day-to-day basis, no reduction target has been set for hotel guest vehicle trips.

To monitor the performance of the TDM program, hotel management will submit an annual report to the City of Mountain View with the results of a mode share survey of hotel and restaurant employees and driveway counts. The driveway counts will measure the number of inbound and outbound vehicles on a typical weekday and during the weekday AM and PM peak hours (highest hourly volumes between 7 and 9 am and between 4 and 6 pm).

Based on the report, a determination will be made whether the hotel is meeting the 20 percent reduction goal for employee trips. If the findings of the report show that the TDM reduction goal has not been met, hotel management would work with City staff to identify if there are additional TDM measures that could feasibly be implemented to further encourage employees to use alternative modes, including the contingency measures. Additionally, hotel management may choose to provide an annual report of mode share summary and usage of the TDM measures for hotel guests for the City's reference.



5. PARKING EXCEPTIONS

The El Camino Precise Plan (Precise Plan) contains information on parking exceptions for developments within this area. The proposed hotel expansion project meets two of the three potential reduction requirements described in **Table 14** of the Precise Plan:

1. *Shared parking reduction (up to 20 percent)*. As shown in Table 4 of the Mountain View Hilton Garden Inn Parking Study (dated December 22, 2016), the project is expected to serve two uses with different parking peaks. The individual peak demand adds up to 180 spaces, whereas the shared parking study shows a total demand of 141 spaces, which is 23 percent less than the combined individual demand.
2. *Rapid bus access (up to 10 percent)*. Rapid Bus access within a 1,000 feet of walking distance. The closest Rapid Bus stop is on El Camino Real at Hollenbeck, which is about one mile from the hotel. So the hotel does not qualify for the 10 percent reduction. Although there is a local bus stop located immediately adjacent to the project driveway.
3. *TDM program (up to 10 percent)*. As discussed previously, the project is committed to implement TDM measures to reduce on-site parking demand.

Therefore, per the Precise Plan, the project qualifies for a reduction of up to 30 percent to the City's parking standards.

The Precise Plan reductions do not account for the total reduction currently experienced at the existing hotel. As shown by the parking survey results at this site and supported by surveys at similar hotels on El Camino Real in Mountain View, the existing parking demand is over 40 percent lower than the City's code requirements. With the added TDM facilities and measures described in this TDM Plan, the hotel is committed to reduce the parking demand generated by employees and visitors to ensure that the proposed parking supply is more than adequate.





**APPENDIX A:
MOUNTAIN VIEW HILTON GARDEN INN PARKING STUDY**





MEMORANDUM

Date: December 22, 2016
To: Brian Froelich, Shashi Group LLC
From: Jane Bierstedt and Allen Wang, Fehr & Peers

Subject: Mountain View Hilton Garden Inn Parking Study

SJ16-1700

INTRODUCTION

This memorandum presents the results of the parking analysis conducted by Fehr & Peers to determine whether the planned parking supply for the Hilton Garden Inn is adequate to serve the parking demand generated by the proposed hotel expansion. The hotel is located at 840 E. El Camino Real in Mountain View, California. Currently, the hotel includes 160 guest rooms, 250 square feet of meeting space, and 3,800 square feet of restaurant space (located in the lobby area). All existing uses are served by the 152 parking spaces at the site, of which six are handicapped spaces. The proposed expansion will add 40 guest rooms and replace the existing restaurant with a new 4,300-square foot restaurant on the ground floor. It will remove the meeting space and three handicapped parking spaces to provide room for the building addition.

This analysis estimated the parking demand for the proposed expansion using parking data collected at the project site in October 2016 and recommended parking rates in Urban Land Institute's (ULI) *Shared Parking*, Second Edition (2005). The projected demand was compared with the proposed parking supply, City of Mountain View's Municipal Code requirements, and estimates based on rates in the Institute of Traffic Engineers (ITE) *Parking Generation*, Fourth Edition (2010).

SUMMARY OF FINDINGS

Based on the analysis presented in this memorandum, the peak parking demand for the proposed hotel expansion with full occupancy is estimated to be 141 spaces, occurring between 9:00 pm to 10:00 pm on a weekday. Therefore, this parking study demonstrates that the planned parking supply of 149 spaces would be sufficient to support the peak parking demand generated by the proposed hotel expansion.

EXISTING PARKING UTILIZATION

This section describes the existing parking conditions and presents the parking utilization data collected at the hotel site. The hotel provides 152 off-street parking spaces to support the hotel guests and visitors, employees as well as the demand generated by the complementary uses, including the ground floor restaurant and the meeting space.

EXISTING PARKING SURVEY

To better understand the existing parking demand and estimate parking rates for the hotel rooms, parking space utilization counts were collected at the site on four days, including two weekdays and two days on the weekend. Per conversations with the hotel management, higher occupancy is typically observed during the mid-week and on Fridays. This observation is consistent with the weekly parking demand pattern for the hotel land use category (Land Use 310) in ITE *Parking Generation*. Therefore, Wednesday and Friday were selected as the two weekdays for parking data collection. Counts were also conducted on a Saturday and a Sunday to observe the weekend parking demand. On each day, parking data was collected for 14 hours, from 11:00 am to 12:00 am (midnight), to ensure the peak parking demand and the time-of-day variations were captured. Additionally, hotel occupancy data for the survey days were obtained from the hotel management. **Table 1** presents the parking utilization survey results and the corresponding hotel occupancies. Detailed parking counts are presented in **Appendix A**.

As presented in **Table 1**, the peak parking demand for the existing hotel was 110 spaces. It was observed at 11:00 pm on Wednesday when all 160 hotel rooms were occupied. On all four days of data collection, peak demand occurred between 10:00 pm and midnight.

TABLE 1: EXISTING PARKING COUNTS (PARKED VEHICLES) AND HOTEL OCCUPANCY

Time	Wednesday (October 26, 2016)	Friday (October 28, 2016)	Saturday (October 29, 2016)	Sunday (October 30, 2016)
11:00 AM	31	36	30	41
12:00 PM	29	26	21	27
1:00 PM	28	25	13	19
2:00 PM	27	25	15	17
3:00 PM	27	29	20	21
4:00 PM	26	30	21	25
5:00 PM	36	27	28	27
6:00 PM	37	30	27	26
7:00 PM	57	36	27	32
8:00 PM	70	40	37	39
9:00 PM	88	53	41	47
10:00 PM	104	60	<u>53</u>	52
11:00 PM	<u>110</u>	<u>62</u>	50	49
12:00 AM	109	61	49	<u>53</u>
Occupancy Rate	100%	65%	58%	60%
Occupied Rooms	160	104	93	96

Note:

Underlined text highlights the highest parking demand of the day.

Source: Fehr & Peers, 2016.

EXISTING PARKING RATES FOR HOTEL ROOMS

As described in the previous section, the observed parking counts are comprised of demand generated by hotel guests, employees, as well as the demand generated by the restaurant and meeting space. Based on field observations and conversations with the hotel management, it is our understanding that the existing restaurant and meeting space primarily serves hotel guests. Therefore, this study assumed that the parking demand generated by the existing restaurant and meeting space from external traffic (non-hotel guests) is negligible.

To further understand the parking rates for hotel guests/visitors versus the rates for employees, the parking demand for employees was separated from the total parking counts. With the employee shift schedule provided by the hotel management, the employee parking demand was estimated using the recommended parking rate (0.25 space/employee) for hotel employees in ULI *Shared Parking*. **Table 2** presents the hourly employee count and the associated parking demand.

TABLE 2: EXISTING EMPLOYEE COUNT AND PARKING DEMAND

Time	Employee Count ¹		Employee Parking Demand ²	
	Weekday	Weekend	Weekday	Weekend
11:00 AM	16	16	4	4
12:00 PM	14	14	4	4
1:00 PM	14	15	4	4
2:00 PM	12	13	3	4
3:00 PM	12	13	3	4
4:00 PM	10	11	3	3
5:00 PM	10	11	3	3
6:00 PM	4	5	1	2
7:00 PM	3	4	1	1
8:00 PM	3	4	1	1
9:00 PM	3	4	1	1
10:00 PM	1	2	1	1
11:00 PM	1	2	1	1
12:00 AM	1	2	1	1

Note:

¹Hourly employee count is the sum of housekeeping, front desk, maintenance, and food & beverage employees.

²Employee parking demand was estimated using the parking rate of 0.25 space/employee for hotel employees in ULI *Shared Parking*, Second Edition (2005).

Source: Fehr & Peers, 2016.

The hourly parking demand for hotel guests and visitors was estimated to be the difference between the total observed parking demand (Table 1) and employee parking demand (Table 2). Subsequently, the peak parking demand for each occupied hotel room was calculated using the equation below:

$$\text{Peak Parking Rate} = \frac{\text{Peak Hotel Guest \& Visitor Parking Demand}}{\text{Number of Occupied Rooms}}$$

Table 3 summarizes the calculated peak parking rates for hotel rooms and the time-of-day variations. The highest parking rate for hotel guests and visitors is 0.68 space per occupied room, derived from the parking counts collected on Wednesday, October 26, 2016.

TABLE 3: EXISTING HOTEL ROOM PARKING RATES AND TIME-OF-DAY VARIATIONS

Time	Wednesday (October 26, 2016)	Friday (October 28, 2016)	Saturday (October 29, 2016)	Sunday (October 30, 2016)
11:00 AM	25%	52%	50%	71%
12:00 PM	23%	36%	33%	44%
1:00 PM	22%	34%	17%	29%
2:00 PM	22%	36%	21%	25%
3:00 PM	22%	43%	31%	33%
4:00 PM	21%	44%	35%	42%
5:00 PM	30%	39%	48%	46%
6:00 PM	33%	48%	48%	46%
7:00 PM	51%	57%	50%	60%
8:00 PM	63%	64%	69%	73%
9:00 PM	80%	85%	77%	88%
10:00 PM	94%	97%	<u>100%</u>	98%
11:00 PM	<u>100%</u>	<u>100%</u>	94%	92%
12:00 AM	99%	98%	92%	<u>100%</u>
Peak Parking Rate (space/occupied room)	0.68	0.59	0.56	0.54

Note:

Time-of-day variation is presented as a percentage of the peak parking rate.

Source: Fehr & Peers, 2016.

PARKING DEMAND ESTIMATES FOR THE PROPOSED EXPANSION

This section outlines the process for estimating the parking demand for the proposed hotel expansion. Estimates for each of the individual components of the parking demand are described below, and the total estimated peak demand is summarized in **Table 4**.

EMPLOYEES

The number of hotel employees was assumed to increase proportionally to the hotel expansion – existing housekeeping and front desk employees were factored up by 25 percent when estimating future employee parking demand. Additionally, the number of food and beverage employees was assumed to increase from two per shift to eight per shift to account for the increased restaurant capacity. The hourly variation of employees on-site is shown in **Table 4**. The detailed composition of employees is documented in **Appendix B**.

Parking Rates

Consistent with the existing parking calculation, a parking rate of 0.25 spaces per employee was used to estimate the future parking demand for hotel and restaurant employees.

Estimated Parking Demand

Parking demand for hotel and restaurant employees was estimated using the assumptions described above. The peak parking demand for employee parking would be seven spaces, and would occur in the morning when the most employees are present.

HOTEL ROOMS (GUESTS AND VISITORS)

The proposed hotel expansion would add 40 guest rooms to the existing 160 rooms, yielding a total of 200 hotel rooms. According to the proposed site plan, the expansion would mainly occur in the building addition at the existing patio area. With the expansion, the types of hotel guests are expected to be similar to their existing guests.

Parking Rates and Time-of-Day Variations

Since the expanded hotel is anticipated to host similar types of guests and visitors as current conditions, it is assumed that the travel and parking pattern would also remain the same. Therefore, the existing parking rates for hotel rooms were used to develop estimates for the proposed 200-room hotel. Based on information shown in **Table 3**, the peak parking rate would be 0.68 spaces per occupied room. (The rates calculated from the counts on the other three days are all less than 0.60 spaces per occupied room.) To be

conservative, this study used the highest observed parking rate of 0.68 to estimate the parking demand generated by guests and visitors of the expanded 200-room hotel.

Estimated Parking Demand

Using the peak rate and time-of-day variations in **Table 3**, the peak parking demand for the expanded hotel with full occupancy was estimated to be 137 spaces, occurring between 11:00 pm and midnight. Detailed hourly demand estimates are presented in **Table 4**.

RESTAURANT PATRONS

The proposed expansion would replace the existing restaurant that mainly serves internal hotel guests with a new 4,300-square foot restaurant that is envisioned to carry its own identity and brand. The proposed site plan shows that the new restaurant would be located in the building addition at the existing outdoor patio area on El Camino Real; and restaurant patrons would have access from El Camino Real and through the hotel lobby. Based on the envisioned identity and proposed site plan, it is anticipated that the proposed restaurant would generate external (non-hotel guests) parking demand during its operating hours.

Parking Rates and Time-of-Day Variations

This study used the parking rates and time-of-day variations for Restaurant/Lounge under the broader Hotel land use category in ULI's *Shared Parking*, to estimate the parking demand generated by restaurant patrons. The recommended peak parking rate for this land use category is 10 spaces per thousand square feet (ksf), which is consistent with the parking requirement specified in the City of Mountain View Municipal Code. The time-of-day variation factors in ULI's *Shared Parking* indicate that the parking demand would peak around noon and reach approximately 70 percent between 6:00 pm to 8:00 pm. This analysis further increased the parking demand factor for the evening peak (6:00 pm to 8:00 pm) from 70 percent to 100 percent to account for the most conservative operating scenario (with highest parking demand) for the proposed restaurant. Based on information provided by the hotel management, the restaurant is expected to be closed after 10:00 pm; therefore this analysis assumed no demand would be generated by the restaurant patrons after 10:00 pm.

Estimated Parking Demand

Using the proposed square footage and the ULI parking rates, it is estimated that that peak parking demand generated by the restaurant-only patrons would occur at around noon (12:00 pm to 1:00 pm) and evening peak (6:00 pm to 8:00 pm), with 43 spaces (10 spaces/ksf x 4.3 ksf = 43). The peak parking demand for the restaurant would not overlap with the peak parking demand for the hotel guests and visitors.

SUMMARY OF ESTIMATED PARKING DEMAND

Based on demand rates and estimates for each of the individual components described above, the total estimated peak parking demand with full occupancy at the expanded Hilton Garden Inn is 141 spaces. The peak demand period is expected to occur on a weekday between 9:00 pm to 10:00 pm. **Table 4** and **Figure 1** present the summary of the aforementioned three components of the Hotel that generate parking demand and the time-of-day pattern of the parking demand. The peak parking demand for weekends was also calculated and presented in **Appendix C**.

**Figure 1 Estimated Parking Demand for the Proposed Hotel Expansion
 (at Full Occupancy)**

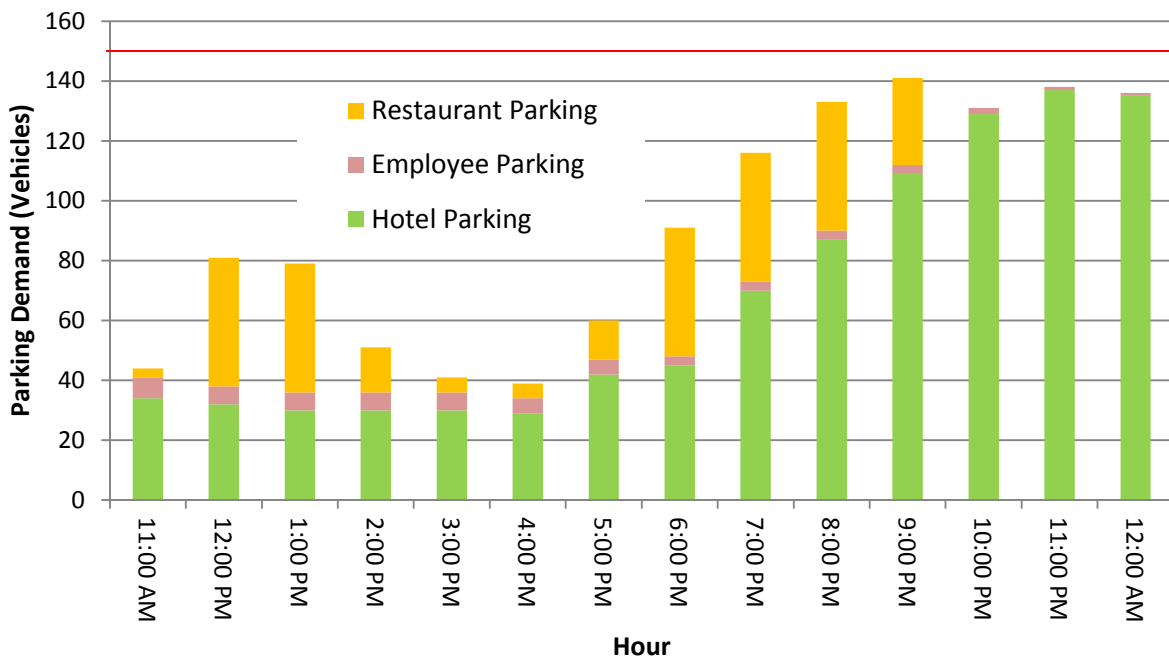


TABLE 4: ESTIMATED PARKING DEMAND FOR THE EXPANDED HILTON GARDEN INN

	Employees (ULI Shared Parking)		Hotel Guests/Visitors (Observed Rates)		Restaurant (ULI Shared Parking)		Total Parking Demand
	Base Rate ¹		Base Rate ²	Rooms	Base Rate ³	KSF	
	0.25		0.68	200	10.0	4.3	
Time	Employees	Employee Parking (A)	Hourly Variations	Hotel Parking (B)	Hourly Variations	Restaurant Parking (C)	A+B+C
11:00 AM	26	<u>7</u>	25%	34	5%	3	44
12:00 PM	24	6	23%	32	100%	<u>43</u>	81
1:00 PM	24	6	22%	30	100%	<u>43</u>	79
2:00 PM	21	6	22%	30	33%	15	51
3:00 PM	21	6	22%	30	10%	5	41
4:00 PM	19	5	21%	29	10%	5	39
5:00 PM	19	5	30%	42	30%	13	60
6:00 PM	11	3	33%	45	100% ⁴	<u>43</u>	91
7:00 PM	10	3	51%	70	100% ⁴	<u>43</u>	116
8:00 PM	10	3	63%	87	100% ⁴	<u>43</u>	133
9:00 PM	10	3	80%	109	67%	29	<u>141</u>
10:00 PM	6	2	94%	129	0%	0	131
11:00 PM	2	1	100%	<u>137</u>	0%	0	138
12:00 AM	2	1	99%	135	0%	0	136
Peak Parking Demand (9:00 pm - 10:00 pm)							<u>141</u>

Note:

¹Unit for employee parking rate is spaces/employee

²Unit for hotel guest/visitor parking rate is spaces/occupied room

³Unit for restaurant parking rate is spaces/ksf

⁴Hourly variations were increased from approximately 60-70 percent to 100 percent during the evening peak (6PM to 8PM) to account for highest demand

Underlined text highlights the peak parking demand for each component

Source: Fehr & Peers, 2016.

CITY OF MOUNTAIN VIEW MUNICIPAL CODE REQUIREMENTS

The City of Mountain View Municipal Code lists the number of required parking spaces for different types of development which are summarized in Chapter 36.32.50. **Table 5** presents the number of parking spaces required per the City of Mountain View Municipal Code. As shown in the table, the proposed 149 spaces for the expanded hotel would be 107 spaces less than the required 256 spaces (if no shared reduction is applied).

TABLE 5: PARKING SPACE REQUIREMENT PER CITY OF MOUNTAIN VIEW MUNICIPAL CODE

Land Use	Quantity	Unit	Parking Ratio	Unit	Parking Requirement
Hotel - Rooms	200	Rooms	1.00	space/room	200
Hotel - Employees	26	Employees	0.50	space/employee	13
Restaurant	4.3	KSF	10.00	space/ksf	43
Total Parking Demand					256

Source: Fehr & Peers, 2016.

It should be noted that the code requirements do not account for site-specific parking characteristics as those measured during the parking surveys. Chapter 36.32.70 also specifies that for parking facilities that are established and operated by multiple uses, parking requirements may be reduced upon determination by the planning commission if justified by an independent parking demand study such as the shared parking analysis detailed in this memorandum.

INSTITUTE OF TRANSPORTATION ENGINEERS (ITE)

Institute of Transportation Engineers (ITE) has also published an information report, *Parking Generation, Fourth Edition (2010)* that can be used to estimate parking demand of a development. The documents is based on parking demand studies submitted to ITE by public agencies, consulting firms, universities, and colleges; developers, associations, etc.

The parking demand for the proposed expansion estimated using the Hotel – Suburban land use category (Land Use 310) is 161 spaces on a weekday and 240 spaces on Saturday. Studies for this land use category in ITE include the parking demand generated by the supporting facilities including restaurants, meeting/banquet space and retail space. However, all previous study sites submitted to ITE did not specify the presence or the level of activities of the supporting facilities. Therefore, it would be difficult to determine the actual demand associated with hotel rooms separated from the demand generated by the supporting facilities.

SUMMARY AND CONCLUSION

The estimated peak parking demand generated by the proposed hotel expansion and the new restaurant, using a conservative set of assumptions, would occur on weekday evening between 9:00 pm and 10:00 pm and would be 141 spaces. The hotel would provide sufficient parking for all proposed uses on the site with 149 spaces.

If a shortfall would occur during special occasions (i.e. events, holidays, etc.), the hotel management could consider implementing valet parking service. Valet parking would utilize the aisle space between parking stalls. Assuming that each valet parking space is 20 feet long and 9 feet wide, the 230-foot aisle on the northern end of the parking lot can accommodate 11 valet parking spaces; the 129-foot parking aisle on the west side of the parking lot can accommodate six (6) valet parking spaces; the 114-ft parking aisle on the east side of the parking lot can accommodate five (5) valet parking spaces; and the center parking area can accommodate an additional six (6) spaces in the east-west direction and four (4) spaces in the north-south direction. As a result, the implementation of valet service would add up to 32 parking spaces to the proposed parking supply of 149 spaces and increase the parking supply to 181 spaces. A recommended valet parking layout is shown in **Figure 2**.

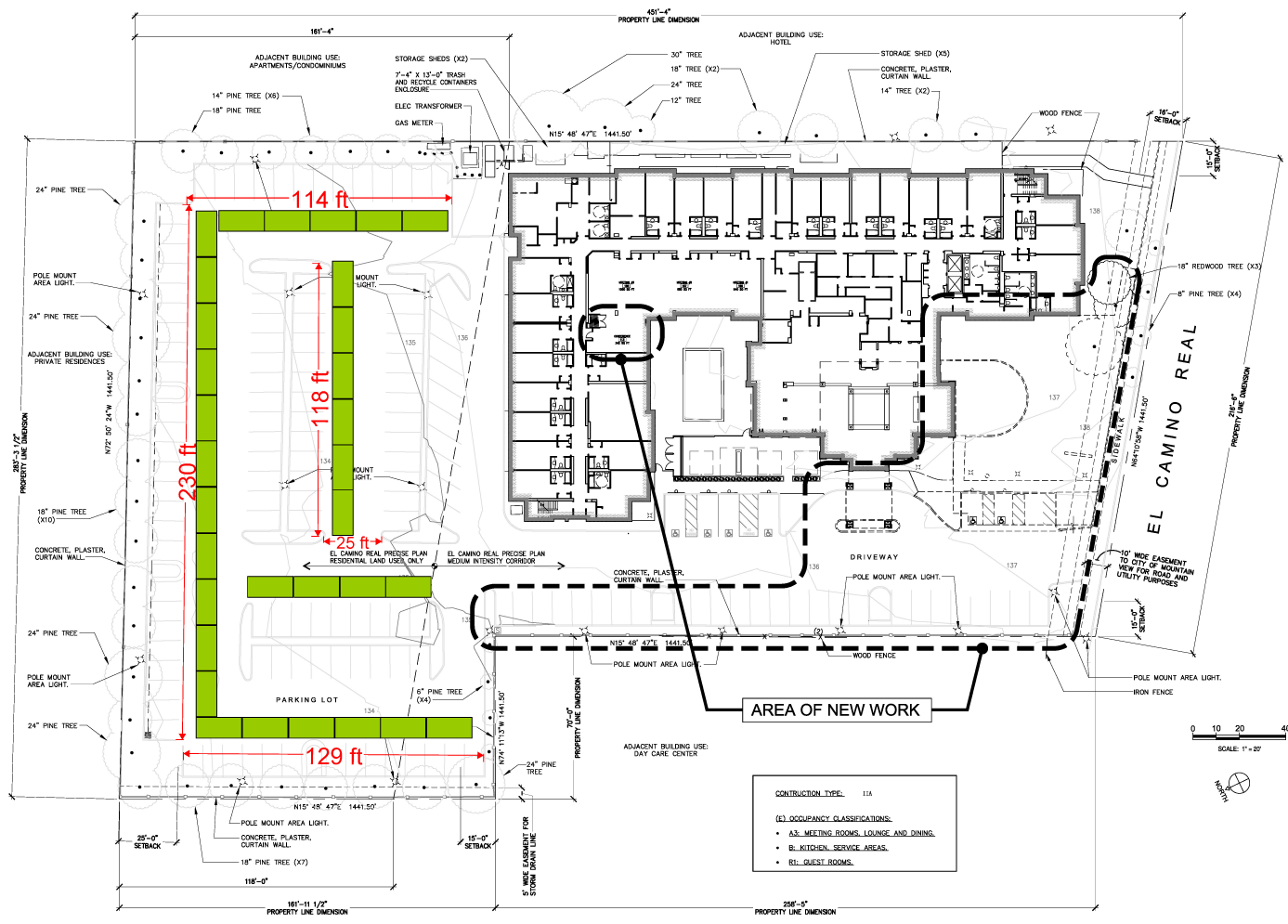


Figure 2
Recommended Valet Parking Layout