LINSCOTT LAW & GREENSPAN engineers

SUMNER PLACE UPDATED PARKING MANAGEMENT PLAN

Eastvale, California

January 22, 2021

Engineers & Planners
Traffic
Transportation
Parking

LINSCOTT LAW & GREENSPAN
engineers

Engineers & Planners
Traffic
Transportation
Parking

Linscott, Law & Greenspan, Engineers
2 Executive Circle
Suite 250
Irvine, CA 92614
949.825.6175 T
949.825.6173 F
www.llgengineers.com

Pasadena
Irvine
San Diego
Woodland Hills

January 22, 2021

SC Sumner, LLC
c/o Patrick Potts
Stratham Homes
2201 Dupont Drive, Suite 300
Irvine, CA 92612

LLG Reference: 2.20.4321.1

Subject: **Updated Parking Management Plan for Sumner Place**
Eastvale, California (update of report dated October 15, 2020)

Dear Mr. Potts:

As requested, Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit this Updated Parking Management Plan for Sumner Place Eastvale (hereinafter referred to as SPE). This Parking Management Plan has been revised to address applicable parking comments prepared by the City of Eastvale dated December 9, 2020 as it pertains to the *Parking Management Plan for Sumner Place Eastvale*, dated October 15, 2020. Sumner Place is a planned mixed-use residential village consisting of 216 apartment units with 5,000 SF of retail/commercial space to be located at the southeast corner of Schleisman Road and Sumner Avenue in the City of Eastvale, California.

A comprehensive parking study has been prepared to evaluate SPE's parking demand and adequacy of proposed parking supply for the retail/commercial portion of the proposal as well as the residential component in comparison to the City requirements as outlined in Section 120.05.060 – Off-Street Vehicle Parking of the Municipal Code.

The result of this study and analysis, in conjunction with extensive prior work experience on similar projects, and our understanding of the City of Eastvale parking requirements, has resulted in the preparation of the attached Parking Management Plan (PMP). The PMP is required to ensure more than adequate parking for all Project tenants, employees and guests, and eliminate any parking intrusion on the adjacent residential properties. This PMP is intended to be used to ensure that the Project's parking supply will be sufficient to accommodate the actual parking demand for both SPE's retail/commercial village as well as the adjacent residential component.

We appreciate the opportunity to provide this analysis for SC Sumner LLC/Stratham Homes and the City of Eastvale. Should you have any questions, please call us at 949.825.6175.

Respectively submitted,
Linscott, Law & Greenspan, Engineers

Richard E. Barretto, P.E.
Principal

Attachments

cc: Shane Green, P.E., Senior Transportation Engineer

EXECUTIVE SUMMARY

The proposed parking supply for the residential component of Sumner Place satisfies the City's code requirement and should be expected to exceed the actual parking needs.

The results of the shared parking analysis demonstrate that the neighborhood commercial village and residential guest component would have more than adequate parking and not impact adjacent residential properties.

To maintain the onsite parking supply at all times, it is recommended that the attached Parking Management Plan (PMP) as requested by Stratham Homes, be implemented and enforced, to ensure that accessible and convenient parking is available for all users at all times.

In summary, the proposed Project provides more than adequate parking to accommodate the needs of both the commercial users and residential users. The proposed PMP measures would help ensure these adequacies for all.

PARKING GOALS

1. Meet or exceed City minimum requirements for total parking spaces.
2. Provide all resident and guest parking spaces onsite.
3. Provide flexible onsite parking opportunities for mixed commercial and resident parking that respect both commercial tenants and guest parking needs.
4. Enact policies that promote parking efficiencies and effective communication between Property Management, commercial tenants and project residents.
5. Enact policies of enforcement that are sufficiently flexible to meet current and changing parking demands.

PROJECT DESCRIPTION AND MULTIMODAL SETTING

Sumner Place is a proposed mixed-use residential apartment project to be located southeast corner of Schleisman Road and Sumner Avenue in the City of Eastvale, California. The Project site is a square shaped parcel of land totaling 7.7±-acres and that is primarily vacant farmland with two single family homes. ***Figure 1*** is an existing aerial photograph of the Project site.

According to the Project Site Plan, prepared by AO, the proposed Project includes the development of seven (7) apartment buildings, identified as Building 1 through Building 7, with a total of 216 apartment units and 5,000 square-feet (SF) of retail/commercial building that may be occupied with a mix of retail, and/or "take-out" food uses, creating a neighborhood village setting. The residential component of the Project consists of 98 one-bedroom units, 96 two-bedroom, and 22 two-bedroom townhome units. For this assessment, we have assumed a mix of 2,600 SF of retail space and 2,400 SF of take-out food uses space. The Project is proposing to provide 429 spaces of which 62 spaces are located outside of the gated residential community. Of the 62 spaces, 24 spaces are located in surface (external) lot that is accessed via a driveway on Schleisman Road, with another nine (9) spaces located with a surface lot located off of Sumner Avenue. The remaining 29 are diagonal on-street parking spaces that are located along Sumner Avenue.

Table 1, attached to this letter, provides a summary of the Project development, inclusive of the Project's proposed parking supply based on information provided by AO. ***Figure 2*** presents the proposed site plan, prepared by AO.

Project's Pedestrian Connections

Pedestrian circulation would be provided via new sidewalks, pathways, and extensions to existing trails and sidewalks along Sumner Avenue and Schleisman Road (current site has no existing sidewalks). The existing sidewalk system within the project vicinity provides direct connectivity to the City of Eastvale Community Center, public schools and neighborhood parks.

Project's Proximity to Public Transit

Public transit bus service for the Project site is adequate and is provided in the project area by the Riverside Transit Agency (RTA). Two (2) RTA bus routes operate within the vicinity of the project site on Sumner Avenue, Hamner Avenue, and Limonite Avenue, which consists of the following:

- RTA Route 3: The major route of travel is Hamner Avenue. Nearest to the project site are bus stops on Sumner Avenue – northbound and southbound on the intersection with Schleisman Road. Route 3 operates on approximate 2-hour headways on the weekdays and weekends. It should be noted that the headways are based on current bus schedules which reflect adjustments due to Covid-19.

- RTA Route 29: The major routes of travel include Limonite Avenue and Hamner Avenue. Nearest to the project site are bus stops on Hamner Avenue – northbound and southbound north and east of the intersection with Limonite Avenue. Route 29 operates on approximate 1-hour and 15-minute headways on the weekdays and

weekends. It should be noted that the headways are based on current bus schedules which reflect adjustments due to Covid-19.

Figure 3 graphically illustrates the transit routes of RTA within the vicinity of the project. ***Figure 4*** identifies the locations of the existing bus stops in proximity to the Project site. These bus services provided connectivity to the Corona Metrolink Station located at 250 E Blaine Street. From the project site, it would take approximately 29 minutes by bus to reach the Corona Metrolink Station that is 6.8 miles from the site.

Project's Proximity to Bicycle Facilities

The City of Eastvale promotes bicycling as a means of mobility and a way in which to improve the quality of life within its community. The Bikeway Master Plan recognizes the needs of bicycle users and aims to create a complete and safe bicycle network throughout the City. The current bicycle facilities in the study area are a Class I bike lane north of the Santa Ana River, between Archibald Avenue and Hamner Road. In addition, Class II bike lanes along Sumner Avenue and 65th Street, between Bellegrave Avenue and Citrus Street and between Archibald Avenue and Hamner Avenue. Figure 5 presents the City Eastvale Bikeway Master Plan.

PARKING REQUIREMENTS

Parking Requirements per City Code Requirements

To determine the number of parking spaces required to support the proposed Project uses, the parking requirement was calculated based on parking information published in the *City of Eastvale Municipal Code Section 120.05.060 – Off-Street Vehicle Parking.* The following parking ratio was used to determine the required parking:

- **Multi-Family Single-bedroom or studio dwelling unit:** 1.25 space per unit.
- **Multi-Family Two-bedroom dwelling unit:** 2.25 space per unit plus
- **Leasing Office:** 1 space per employee
- **General Retail including but not limited to neighborhood, community and regional shopping centers including those with restaurants:** 5.5 spaces for each 1000 SF of gross floor area (GFA).
- **Restaurants, cafes, etc for the sale and consumption on the premises of food and beverages:** 1 space for each 45 SF of serving area plus 1 space per 2 employees.

Given the above-reference City code ratio for restaurants, where food consumption is primarily on the premises, it is assumed that the City code rate of 5.5 spaces per 1000

SF of gross floor area would apply to "take-out" food uses (i.e. donut, yogurt, café, etc.) since these type of tenants would function as a "grab-n-go" or "take-out" with limited to number of seating, and the "food" would be consumed primarily away from the premises.

Table 2 presents the code parking requirement for the Project. Review of the upper half of *Table 2* identifies that the Project's residential component would require 391 spaces. With a proposed parking supply of 391 parking spaces, the Project is projected to have a balanced condition (See Row C) and satisfied the City's parking requirements. Review of Row D shows that this equates to a composite parking ratio of 1.81 for the residential component.

Review of the lower half of *Table 2* identifies that the Project's retail/commercial component would have a requirement of 28 spaces. With a proposed parking supply of 38 spaces, the Project is projected to have a surplus of 10 spaces under these tenant mix assumptions. If the retail/commercial component of the Project were occupied entirely by 5,000 SF of a mix of retail tenants, the proposed 38 space parking supply would satisfy the code-required 28 spaces (5.5 space/1000 SF x 5,000 SF) as well.

However, knowing that the retail/commercial and residential guest component of the Project are expected to share spaces and would have peaks that occur at different times of the day a shared parking assessment has been considered. The shared parking approach would be apart of the Project's PMP to ensure adequate parking is maintained for all users of the Project.

Shared Parking Analysis

To validate the adequacy of the proposed retail/commercial parking supply in combination with the residential guest component a shared parking analysis has been prepared based on the utilization profile of each included land use component. The following section calculates the parking requirements for Project based on the shared parking methodology outlined in ULI Shared Parking, 3rd Edition.

The specific tenancy mix of the Project provides an opportunity to share parking spaces based on the utilization profile of each included land use component. The parking ratios identified above have been used directly for incorporation into a shared parking analysis consistent with the methodology outlined in the Urban Land Institute (ULI) and published in Shared Parking, 3rd Edition. Based on the results of this shared parking assessment, the adequacy of the Project's retail/commercial and resident guest parking supply of 135 spaces can be determined.

Key inputs in the shared parking analysis for each land use include:

- Peak parking demand by land use for visitors and employees.

- Adjustments for alternative modes of transportation, if applicable.
- Adjustment for internal capture (captive versus non-captive parking demand), if applicable.
- Hourly variations of parking demand.
- Weekday versus weekend adjustment factors
- Monthly adjustment factors to account for variations of parking demand over the year.
- Applicable parking ratios per *Section 120.05.060 – Off-Street Vehicle Parking* in the City of Eastvale Municipal Code

For this analysis, a conservative 10% parking adjustment to account for (1) "walk-in/internal capture" trips attributable to synergy between uses within the Project and adjacent residential uses, and (2) alternative modes of travel (i.e. carpool, vanpool, transit, bicycle, pedestrian) were utilized to provide a conservative parking demand forecast for the proposed Project. These adjustments are representative of the interaction between the Project' retail and residential component and as well as the existing uses in the vicinity of the Project site.

Tables 3 and ***4*** present the overall weekday and weekend parking demand profiles for the retail/commercial and residential guest components of the Project based on the shared parking methodology. Columns (1) through (3) of these tables present the parking accumulation characteristics and parking demand of the proposed uses for the hours of 6:00 AM to midnight. Columns (4) through (5) presents the expected joint-use parking demand for the Center on an hourly basis and further presents the hourly parking surplus/deficiency for the proposed Project compared to the parking supply of 135 spaces. Both tables highlight the forecast peak parking demand for the retail/commercial center component of the Project during the morning peak hour (shown in), afternoon peak period (shown in) and evening peak hour (shown in).

Based on our experience, the shared parking approach summarized in *Tables 3* and *4* are believed to be the most appropriate in evaluating the parking supply-demand relationships for Project. The results in these tables are the focus of this parking investigation and recommendations.

Shared Parking Results

Review of *Tables 3* and *4* indicates that the future full occupancy weekday peak retail/commercial and residential guest parking demands will occur at 7:00 PM with peak demands of 116 spaces. Based on the proposed retail/commercial and residential guest parking supply of 135 spaces, the peak demand hours on a weekday will result

in a surplus of 19 spaces. On a weekend the peak parking demand will occur at 7:00 PM with a peak demand of 115 spaces resulting in a surplus of 20 spaces. ***Appendix A*** contains the detailed weekday and weekend shared parking worksheets.

Figures 6 and ***7*** graphically illustrate the weekday and weekend hourly parking demand forecast for the shared parking component, respectively. Each of the anticipated land use component/tenant mix and its corresponding hourly Shared Parking demand for various mixes of uses, which were presented in *Tables 3* and *4*, are depicted in these two figures relative to a proposed parking supply of 135 spaces. A review of these figures indicates that the Project's parking supply for the retail/commercial and resident guest of 135 spaces will adequately accommodate the weekday and weekend hourly shared parking demand.

Residential Parking Ratio Comparison

Although the combination of City code and shared parking results in a balanced condition for the proposed mix of uses additional surplus are anticipated. The actual residential parking requirements are expected to be less that the provided ratio of 1.81 as noted in Row D of *Table 2*. LLG's previous field studies of actual parking demand at existing sites similar to the Project, in addition to parking demand/empirical ratio compilations from other sources shows multifamily parking ratios below the City code requirement.

Table 5 presents a comparison of site development and parking ratios from various sources. The upper portion of *Table 5* presents twelve (12) comparable sites in Fullerton, Orange, Santa Ana, Irvine, Costa Mesa, Monrovia, Laguna Niguel, and Pasadena. Additional details for the comparable sites are also provided inclusive of the location, development summary, parking facility type, parking supply, and presence of ground floor retail.

Review of the rightmost column of Table 5 presents the tenant and guest peak parking ratio (spaces per DU) for each of the twelve comparable sites. This array of peak parking rates yields an average ratio of 1.35 spaces per unit, an 85th percentile ratio of 1.48 spaces per unit, and a 95th percentile ratio of 1.61 spaces per unit. Given the above, LLG concludes that the parking ratios derived from the twelve comparable sites are accurate representations for the unique parking characteristics of the proposed Project that are not reflected in the City Code ratio.

Parking Generation (5th Edition) published by the Institute of Transportation Engineers (ITE), and Shared Parking published by the Urban Land Institute (ULI), as well as other reference materials for the cities of Ontario and Rancho Cucamonga, San Bernardino County, and Riverside County, provide peak parking ratios for apartment complexes, as summarized in the lower portion of *Table 5*. These parking

ratios range from 1.21 spaces per unit (average ratio per ITE) to 1.66 spaces per unit (field studies in Ontario and Rancho Cucamonga).

Project Residential Parking Supply versus Demand

The bottom portion of *Table 5* estimates the project's parking needs based on the application of the average, 85th percentile, and 95th percentile parking rates from comparable sites. For the 216 units as now proposed, it is estimated that the average demand would be 292 spaces, the 85th percentile demand would be 320 spaces, and the 95th percentile demand would be 348 spaces. Comparing the 95th percentile demand of 348 spaces against the proposed supply of 391 spaces yields a surplus of 43 spaces. Given these results, we conclude that the proposed residential parking supply of 391 spaces is more than adequate and will satisfy the Project's residential parking demands.

PARKING MANAGEMENT PLAN (PMP)

PMP Measures

To ensure adequate and convenient parking is provided for both tenants, employees and guests of the Project, as well as future tenants (2 spaces allocated) and to eliminate any and all parking intrusion on the adjacent residential properties, the following Parking Management Plan has been developed by LLG at the request of the Property Owner and will be implemented by the Project. ***Figure 8*** presents the recommended parking allocation based on the strategies summarized below.

- The PMP should identify where the retail/commercial employees park within the site.
- The PMP should identify where location of short-term parking spaces for service retail uses and/or food uses (take-out/curb side service, etc.).
- The PMP should restrict residents to park in their designated garage spaces and provide parking to accommodate resident guest parking needs.
- The PMP should restrict vehicles from exceeding the time restriction on the short-term parking and/or on-street parking spaces.
- The PMP should provide rules of conduct for tenants and guest to abide by. Strict enforcement shall be adhered to.

Retail/Commercial Component

1. The Property Owner/Property Management Company will implement a reciprocal parking program to ensure the pool of parking for the commercial component and guest of the residential component is available to be "shared".

2. The Property Owner/Property Management Company will work with tenants of The Village to implement an employee parking program, with the goal of providing a convenient and accessible shopping experience for customers and to leave the most desirable parking spaces close to the entrances. The location of designated employee parking spaces will be developed in collaboration with Village tenants. The employee parking spaces will be identified with a white or yellow circle.

3. The Property Owner/Property Management Company will work with Village tenants to identify the need for "short term/time restricted spaces" on an as need basis, dependent on the needs of the proposed retail and/or food use. These short-term spaces will most likely be designated in the surface parking that is located directly in front of the retail/commercial building. The short-term spaces may be used for "curbside/take out" and/or for service retail-type users. The number and location of spaces will be determined by Property Owner/Property Management Company and the potential retail/commercial tenants of the Village.

4. Relative to the 29 diagonal on-street parking spaces located on Sumner Avenue, the Property Owner/Property Management Company will work with the City of Eastvale on time-restrictive signage for these spaces. No overnight parking should be allowed on these spaces and parking should be limited to no more than 2-hours during the period of 8:00 AM to 7:00 PM daily. The PMP may consider limiting resident and/or resident guest parking to after 5:00 PM daily.

Residential Component

5. The Property Owner/Property Management Company shall assign one (1) parking space to every unit. Additional spaces may be assigned to any unit that requests additional assigned spaces dependent on the number of bedrooms provided within said unit. The 2nd access/tandem spaces should be assigned to two-bedroom units. The Property Owner/Property Management Company shall determine the allocation of parking spaces for resident tenants and location of guest parking spaces, inclusive of spaces designated and signed for prospective resident tenants.

6. The Property Owner/Property Management Company shall require residents that have garages to utilize their garage space for their vehicle. Recognizing that

garages are sometimes used for storage, it is will be the resident's responsibility to ensure that a resident's vehicle can park in the garage with the door closed.

7. Every resident will be required to register their vehicle. The registered owner must be a lease holding resident. No permits will be issued to non-lease holders, or vehicles not registered to a lease holder. This registration will be updated annually at the time of recertification.

8. Resident vehicles not parking in their garage space will be towed.

9. Pending the requirements of the Property Owner/Property Management Company, Resident vehicles may be allowed to parked temporary outside their garages. However, if a temporary valid permit is not obtained from the Property Owner/Property Management Company and is not properly displayed, the vehicle may be towed at the owners' expense.

10. Vehicles lacking current registration will not be issued a permit. Vehicles that have lapsed registration will be towed by the Property Owner/Property Management Company.

11. If you obtain a new vehicle, you must provide new registration, and will be given a new permit (transferring permits is not permissible).

12. Each household will be provided with monthly guest parking permits (amount to be determined) by the Property Owner/Property Management Company, which would reset the 1st of every month. Resident guests will be able to park, on a first come first serve basis, within the adjacent surface parking spaces or in any on-street parking space along Sumner Avenue. The resident guest parking permit must always be displayed.

13. Since the anticipated retail/commercial and residential guest component of the Project is anticipated to require 135 spaces during peak times the residential guest component requires access to the internal (gated) parking facilities. The Property Owner/Property Management Company shall allow guest access to the gated community via a call box/keypad entry. From a review of *Figure 8,* it is noted that all residential guest parking demand is accommodated on-site via a combination of 75 "gated" guest parking spaces and the use of 22 spaces located in the surface lot accessed via Schleisman Road.

LINSCOTT LAW & GREENSPAN engineers

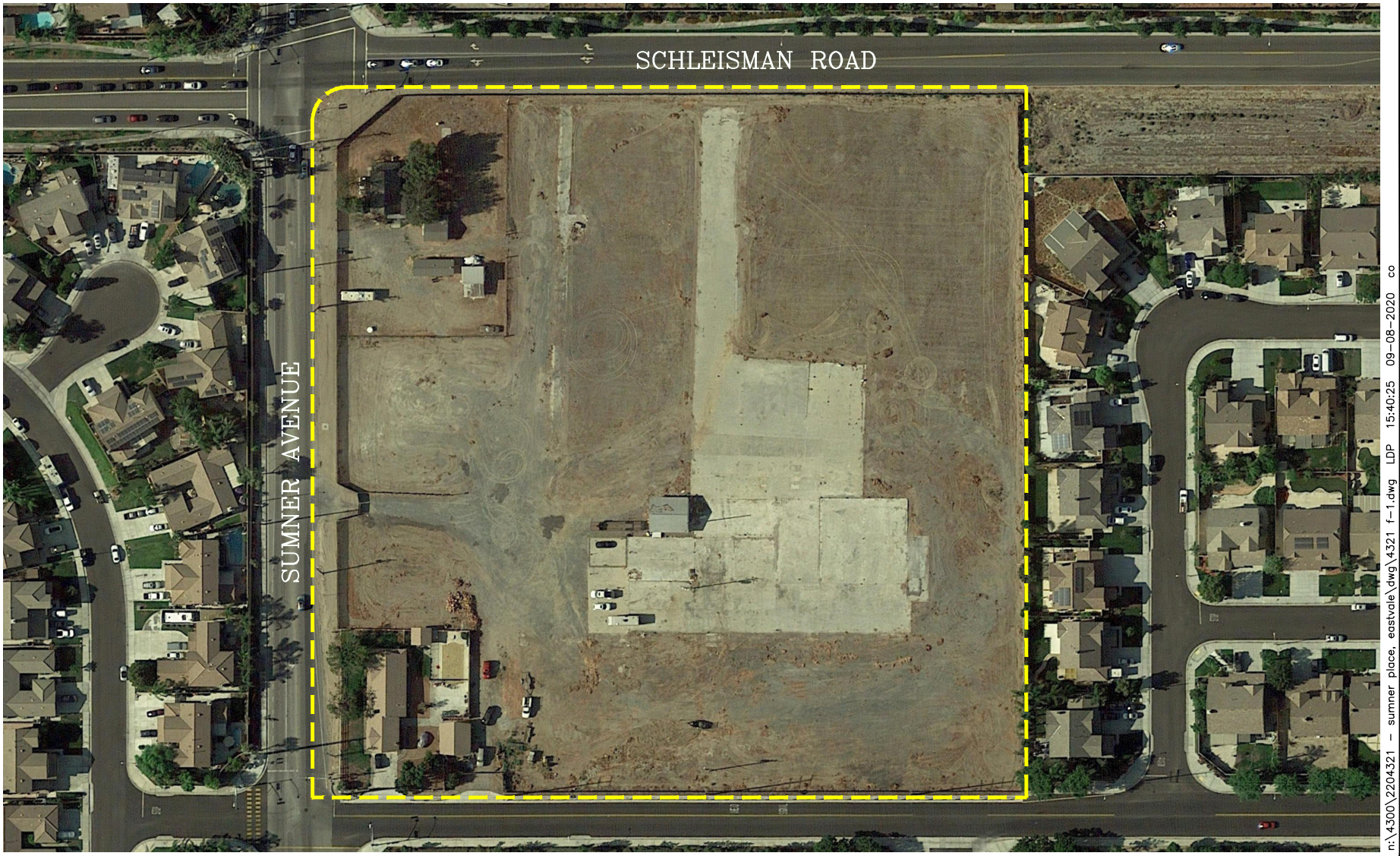
Retail/Commercial & Residential Component

14. The parking conditions for the Project will be reviewed/monitored on a quarterly basis by the Property Owner/Property Management Company and appropriate actions detailed above will be taken to ensure that the necessary PMP measures are being implemented and enforced.

    As a result of the quarterly review/monitoring, a partnership will be formed to ensure that the Management Team, Sumner Place tenants, and the Village retail/commercial Management and employees, and neighborhood partners all work together to ensure the parking program is enforced property-wide.

* * * * * * * * * * *

We appreciate the opportunity to provide this analysis for SC Sumner LLC/Stratham Homes and the City of Eastvale. Should you have any questions, please call us at 949.825.6175.



n:\4300\2204321 - sumner place, eastvale\dwg\4321 f-1.dwg LDP 15:40:25 09-08-2020 co

LINSCOTT LAW & GREENSPAN engineers

N

NO SCALE

SOURCE: GOOGLE

KEY

= PROJECT SITE

FIGURE 1

EXISTING AERIAL SITE PLAN

SUMNER PLACE, EASTVALE

n:\4300\2204321 – sumner place, eastvale\dwg\4321 f-2.dwg LDP 12:28:36 01-21-2021 co

SOURCE: ARCHITECTS ORANGE

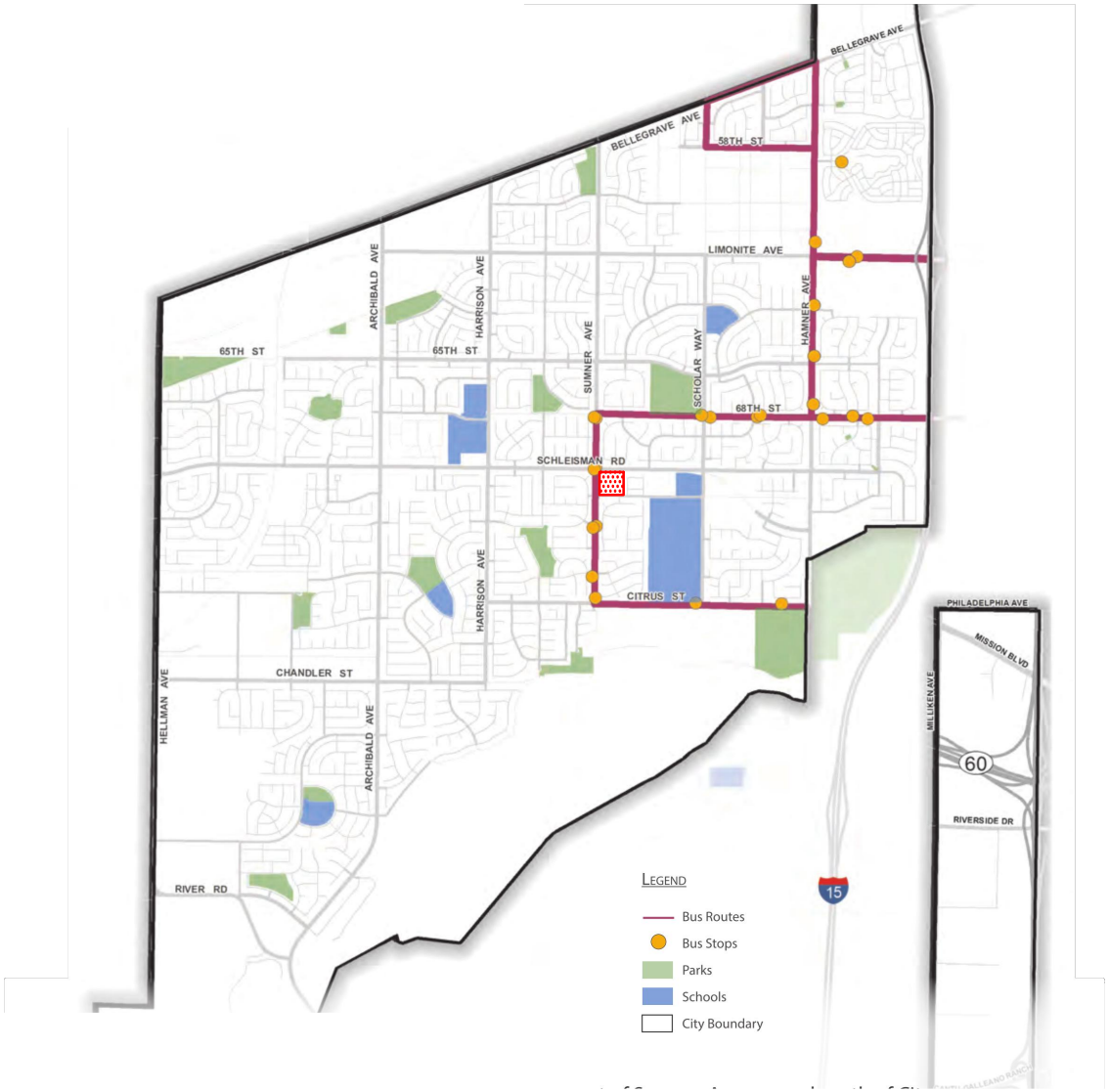
LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

FIGURE 2

PROPOSED SITE PLAN

SUMNER PLACE, EASTVALE



n:\4300\2204321 – sumner place, eastvale\dwg\4321 f-3.dwg LDP 14:10:26 09-08-2020 co

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

SOURCE: RTA

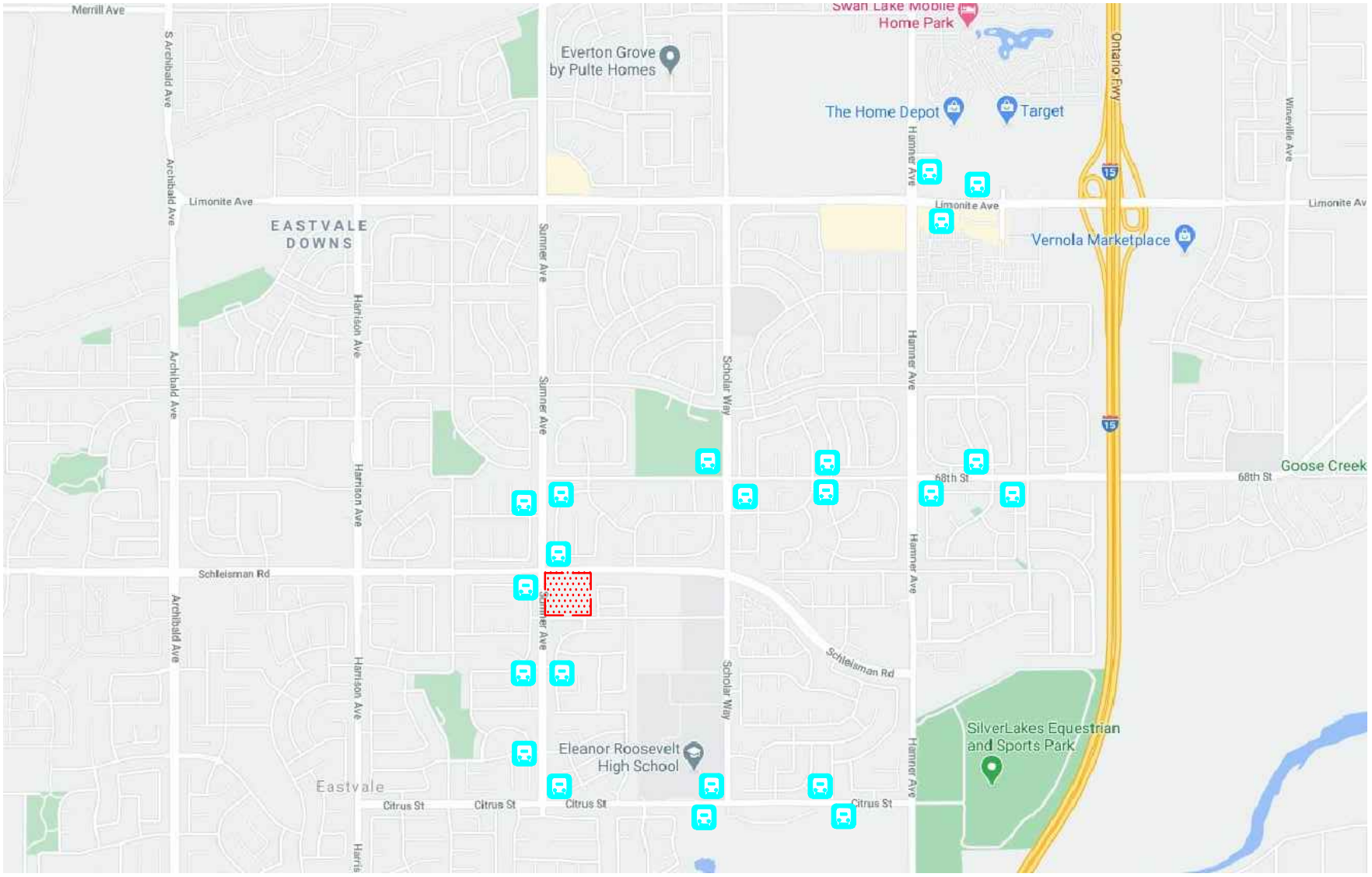
KEY

= PROJECT SITE

FIGURE 3

RTA TRANSIT MAP

SUMNER PLACE, EASTVALE



n:\4300\2204321 - sumner place, eastvale\dwg\4321 f-4.dwg LDP 14:43:09 09-08-2020 co

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

SOURCE: GOOGLE

KEY

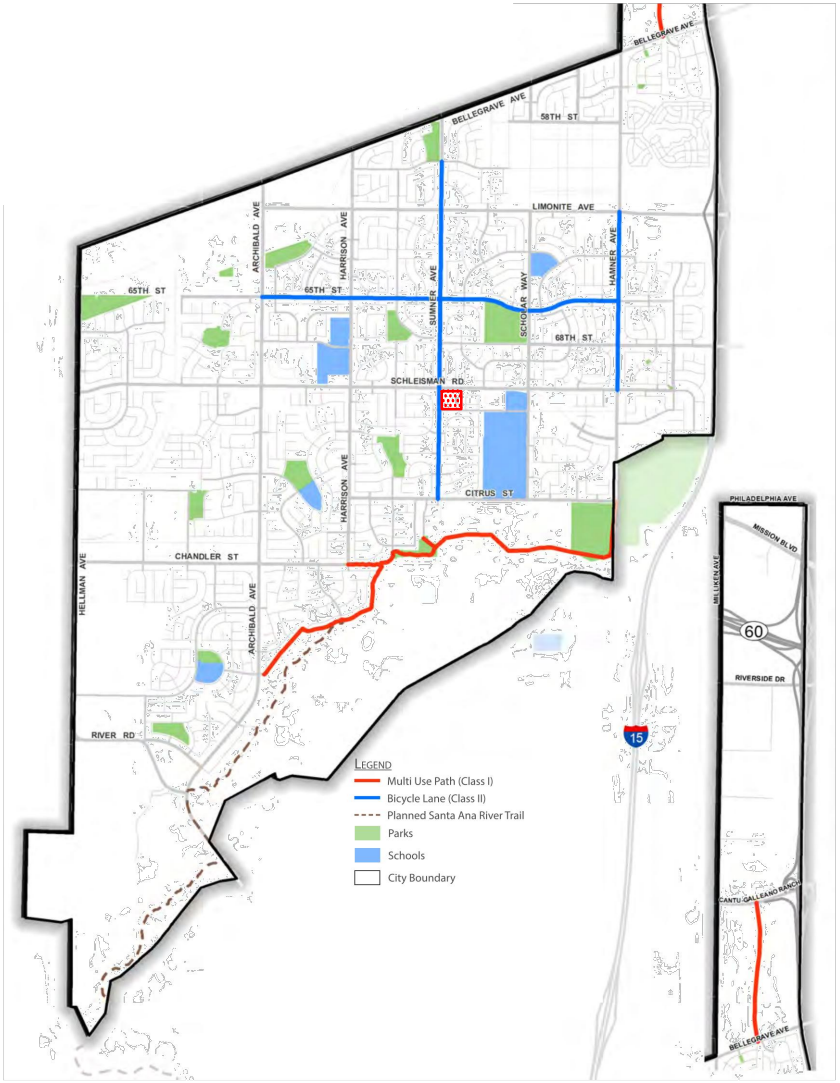
= PROJECT SITE

= TRANSIT STOP

FIGURE 4

TRANSIT STOP LOCATIONS

SUMNER PLACE, EASTVALE



n:\4300\2204321 – sumner place, eastvale\dwg\4321 f-5.dwg LDP 15:45:34 09-08-2020 co

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

SOURCE: CITY OF EASTVALE BICYCLE MASTER PLAN

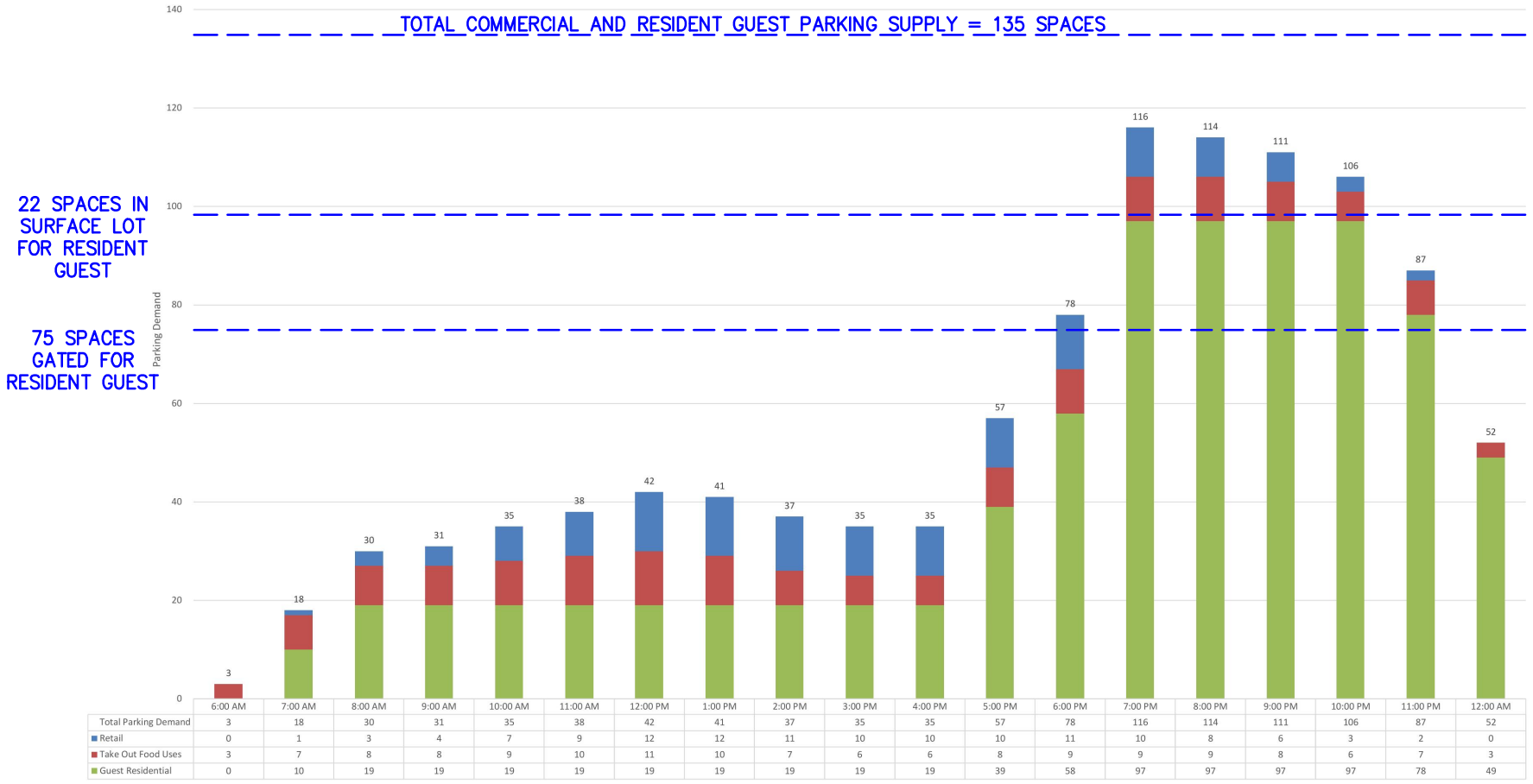
KEY

= PROJECT SITE

FIGURE 5

CITY OF EASTVALE BIKEWAY EXISTING MASTER PLAN

SUMNER PLACE, EASTVALE



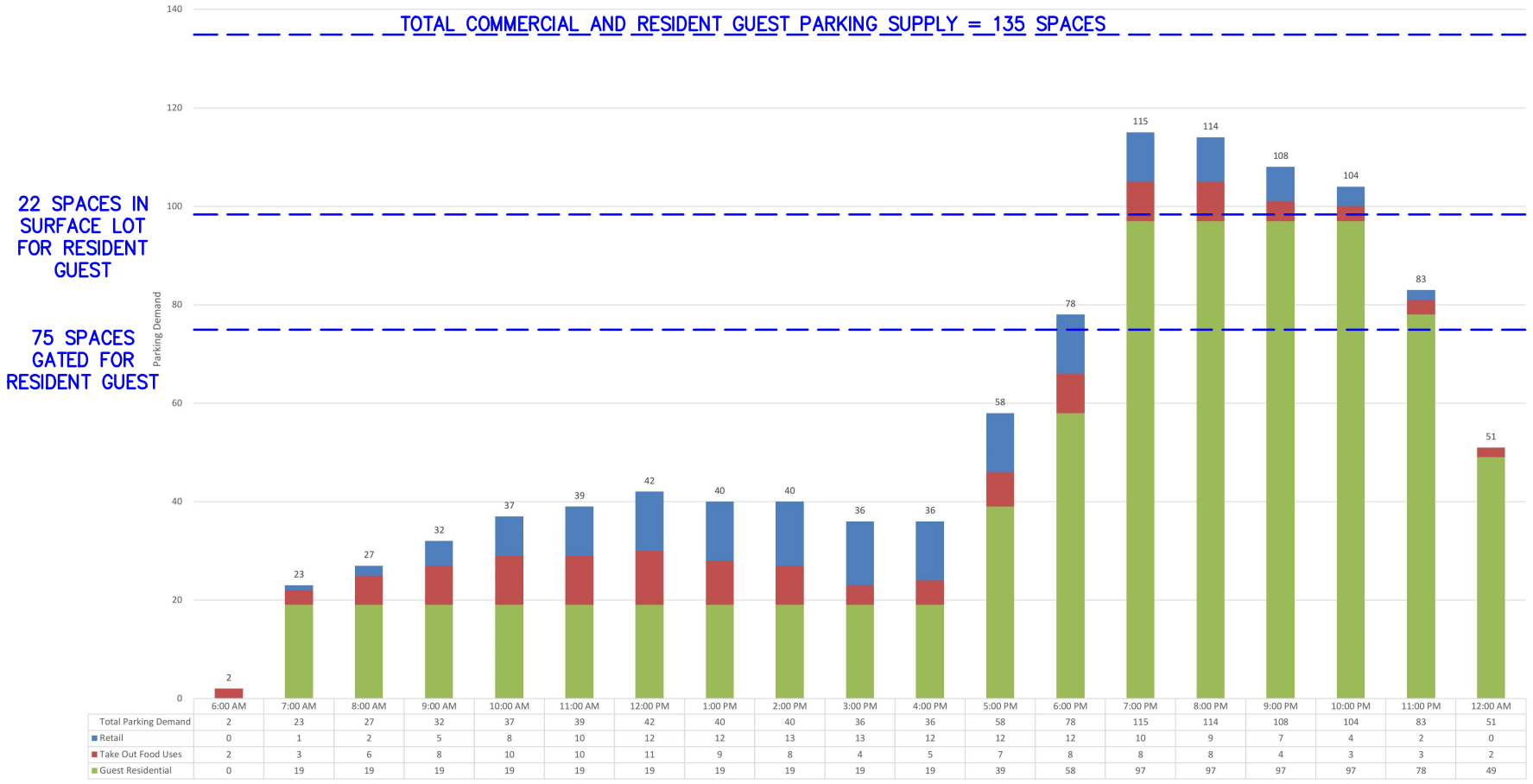
	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM
Total Parking Demand	3	18	30	31	35	38	42	41	37	35	35	57	78	116	114	111	106	87	52
Retail	0	1	3	4	7	9	12	12	11	10	10	10	11	10	8	6	3	2	0
Take Out Food Uses	3	7	8	8	9	10	11	10	7	6	6	8	9	9	9	8	6	7	3
Guest Residential	0	10	19	19	19	19	19	19	19	19	19	39	58	97	97	97	97	78	49

LINSCOTT LAW & GREENSPAN engineers

FIGURE 6

WEEKDAY PARKING DEMAND PROFILE

SUMNER PLACE, EASTVALE



	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM
Total Parking Demand	2	23	27	32	37	39	42	40	40	36	36	58	78	115	114	108	104	83	51
Retail	0	1	2	5	8	10	12	12	13	13	12	12	12	10	9	7	4	2	0
Take Out Food Uses	2	3	6	8	10	10	11	9	8	4	5	7	8	8	8	4	3	3	2
Guest Residential	0	19	19	19	19	19	19	19	19	19	19	39	58	97	97	97	97	78	49

LINSCOTT LAW & GREENSPAN engineers

FIGURE 7

WEEKEND PARKING DEMAND PROFILE

SUMNER PLACE, EASTVALE

n:\4300\2204321 - sumner place, eastvale\dwg\4321 f-8.dwg LDP 09:39:44 01-20-2021 co

LINSCOTT LAW & GREENSPAN
engineers

N
NO SCALE

SOURCE: ARCHITECTS ORANGE

KEY

- = TIME RESTRICTED (28 SPACES)
- = GUEST/COMMERCIAL PARKING (22 SPACES)
- = GUEST LEASING PARKING (2 SPACES)
- = GATED GUEST PARKING (75 SPACES)
- = FLEX PARKING (10 SPACES)
- = GATED ASSIGNED RESIDENTIAL (216 SPACES)
- = GATED ASSIGNED TANDEM RESIDENTIAL (48 SPACES)
- = GATED UNASSIGNED RESIDENTIAL (28 SPACES)

FIGURE 8

PROPOSED PARKING ALLOCATION

SUMNER PLACE, EASTVALE

LINSCOTT LAW & GREENSPAN engineers

TABLE 1
PROJECT DEVELOPMENT SUMMARY[1]
SUMNER PLACE, EASTVALE

Land Use / Project Description	Commercial Building	Building 1 Development	Building 2 Development	Building 3 Development	Building 4 Development	Building 5 Development	Building 6 Development	Building 7 Development	Total Project Development
❑ Residential Component									
o 1 Bedroom	--	26 Units	9 Units	9 Units	5 Units	23 Units	13 Units	13 Units	98 Units
o 2 Bedrooms	--	16 Units	17 Units	17 Units	19 Units	15 Units	6 Units	6 Units	96 Units
o 2 Bedrooms Townhomes	--	2 Units	5 Units	5 Units	2 Units	4 Units	2 Units	2 Units	22 Units
Total Residential Units:	***--***	***44 Units***	***31 Units***	***31 Units***	***26 Units***	***42 Units***	***21 Units***	***21 Units***	***216 Units***
❑ Retail/Commercial Component									
o Retail Shops	2,600 SF	--	--	--	--	--	--	--	2,600 SF
o Take-Out Food Uses	2,400 SF	--	--	--	--	--	--	--	2,400 SF
Total Retail/Commercial Space:	***5,000 SF***	--	--	--	--	--	--	--	***5,000 SF***
❑ On-Site Parking Supply									
Residential Parking - Garage	--	16 spaces	24 spaces	24 spaces	16 spaces	25 spaces	17 spaces	17 spaces	139 spaces
Residential External Lot	--	--	--	--	--	--	--	--	24 spaces
Residential Internal Lot	--	--	--	--	--	--	--	--	94 spaces
Residential Parking – 2nd Access (Tandem)	--	4 spaces	23 spaces	10 spaces	11 spaces	--	--	--	48 spaces
Residential Parking – Carport	--	--	13 spaces	24 spaces	17 spaces	18 spaces	8 spaces	8 spaces	86 spaces
Residential Parking – Subtotal		***20 spaces***	***60 spaces***	***58 spaces***	***44 spaces***	***43 spaces***	***25 spaces***	***25 spaces***	*391 spaces*
❑ Commercial/Retail									38 spaces
On-Street Angled Parking	29 spaces	--	--	--	--	--	--	--	29 spaces
On-site surface Parking	9 spaces	--	--	--	--	--	--	--	9 spaces
Retail Parking – Subtotal:	*38 spaces*	--	--	--	--	--	--	--	*38 spaces*
Total Parking Supply:	***38 spaces***	***391 spaces***							***429 spaces***

[1] Source: Architects Orange.

LINSCOTT LAW & GREENSPAN engineers

TABLE 2

CITY CODE PARKING REQUIREMENT AND COMPOSITE PARKING SUPPLY RATIOS[2]

SUMNER PLACE, EASTVALE

Land Use / Project Description	Size	City of Eastvale Code Parking Requirement	Spaces Required
Sumner Place Residential			
o 1 Bedroom Units	98 units	1.25 space per unit	123
o 2 Bedroom Units	118 units	2.25 space per unit	266
o Leasing Office	2 employees	1 space per employee	2
Total	*216 units*		*391*
A. Total Residential Parking Code Requirement:			**391**
B. Proposed Residential Parking Supply:			**391**
C. Residential Parking Surplus/Deficiency (+/-) [Row B – Row A]:			**+0**
D. Residential Use Code Composite Parking Demand Ratio (sp/du) [Row A ÷ total DU]			**1.81**
Sumner Place Commercial			
o Retail	2,600 SF	5.5 space per 1,000 SF	15
o Retail/Take-Out Food	2,400 SF	5.5 space per 1,000 SF	13
Total	*5,000 SF*		*28*
E. Total Commercial Parking Code Requirement:			**28**
F. Proposed Commercial Parking Supply:			**38**
G. Commercial Parking Surplus/Deficiency (+/-) [Row F – Row E]:			**+10**

[2] Source: City of Eastvale Municipal Code, *Section 120.05.060 – Off-Street Vehicle Parking*.

LINSCOTT LAW & GREENSPAN engineers

TABLE 3

WEEKDAY COMMERCIAL SHARED PARKING DEMAND SUMMARY [1]

SUMNER PLACE, EASTVALE

Land Use	Retail	Take-Out Food [3]	Guest Residential	Total Spaces = 125 Shared Parking Demand	Comparison w/ Parking Supply 135 Spaces
Size	2.600 KSF	2.400 KSF	389 Spc.		
Pkg Rate[2]	5.5 /KSF	5.5 /KSF	[4]		
Gross Spaces	15 Spc.	13 Spc.	97 Spc.		
Time of Day	Number of Spaces	Number of Spaces	Number of Spaces		Surplus (Deficiency)
6:00 AM	0	3	0	3	132
7:00 AM	1	7	10	18	117
8:00 AM	3	8	19	30	105
9:00 AM	4	8	19	31	104
10:00 AM	7	9	19	35	100
11:00 AM	9	10	19	38	97
12:00 PM	12	11	19	42	93
1:00 PM	12	10	19	41	94
2:00 PM	11	7	19	37	98
3:00 PM	10	6	19	35	100
4:00 PM	10	6	19	35	100
5:00 PM	10	8	39	57	78
6:00 PM	11	9	58	78	57
7:00 PM	**10**	**9**	**97**	**116**	**19**
8:00 PM	8	9	97	114	21
9:00 PM	6	8	97	111	24
10:00 PM	3	6	97	106	29
11:00 PM	2	7	78	87	48
12:00 AM	0	3	49	52	83

= Green highlted represents morning peak parking demand hour

= Blue highlighted represents afternoon peak parking demand hour

= Yellow BOLD highlighed represents overall/evening peak parking demand hour

Notes:

[1] Source: ULI - Urban Land Institute "Shared Parking," Third Edition, 2020.

[2] Parking rates for all land uses based on City code.

[3] Based on the ULI it is assumed there will be 2 employees working during peak hours.

[4] Guest parking requirement is assumed to be 25% of the total parking requirement.

LINSCOTT LAW & GREENSPAN engineers

TABLE 4
WEEKEND COMMERCIAL SHARED PARKING DEMAND SUMMARY [1]
SUMNER PLACE, EASTVALE

Land Use	Retail	Take-Out Food [3]	Guest Residential	Total Spaces = 125 Shared Parking Demand	Comparison w/ Parking Supply 135 Spaces
Size Pkg Rate[2]	2.600 KSF 5.5 /KSF	2.400 KSF 5.5 /KSF	389 Spc. [4]		
Gross Spaces	15 Spc.	13 Spc.	97 Spc.		
Time of Day	Number of Spaces	Number of Spaces	Number of Spaces		Surplus (Deficiency)
6:00 AM	0	2	0	2	133
7:00 AM	1	3	19	23	112
8:00 AM	2	6	19	27	108
9:00 AM	5	8	19	32	103
10:00 AM	8	10	19	37	98
11:00 AM	10	10	19	39	96
12:00 PM	12	11	19	42	93
1:00 PM	12	9	19	40	95
2:00 PM	13	8	19	40	95
3:00 PM	13	4	19	36	99
4:00 PM	12	5	19	36	99
5:00 PM	12	7	39	58	77
6:00 PM	12	8	58	78	57
7:00 PM	**10**	**8**	**97**	**115**	**20**
8:00 PM	9	8	97	114	21
9:00 PM	7	4	97	108	27
10:00 PM	4	3	97	104	31
11:00 PM	2	3	78	83	52
12:00 AM	0	2	49	51	84

= Green highlted represents morning peak parking demand hour

= Blue highlighted represents afternoon peak parking demand hour

= Yellow BOLD highlighed represents overall/evening peak parking demand hour

Notes:

[1] Source: ULI - Urban Land Institute "Shared Parking," Third Edition, 2020.

[2] Parking rates for all land uses based on City code.

[3] Based on the ULI it is assumed there will be 2 employees working during peak hours.

[4] Guest parking requirement is assumed to be 25% of the total parking requirement.

LINSCOTT LAW & GREENSPAN engineers

TABLE 5
COMPARATIVE PARKING RATIO SUMMARY AND DEMAND
SUMNER PLACE, EASTVALE

	Comparable Site	City	Address	Development Summary	Parking Facility	Parking Supply	Retail	Survey Period	Tenant & Guest Peak Parking Ratio - Spaces per DU (Peak Hour)	Tenant & Guest Saturday Daytime Peak Parking Ratio (Peak Hour)
1	Anton Residential Mid-Rise Building	Costa Mesa	580 Anton Boulevard	250 Unit Luxury Apartments • 80 2 Bedroom Units • 170 Studio/1 Bedroom Units	Structure	438 Spaces • Residents - 330 sp. • Guests - 108 sp.	--	--	1.75 (Peak Hour N/A)	--
2	Main Street Village [a]	Irvine	2555 Main Street	481 Unit Apartments • 265 1 Bedroom Units • 200 2 Bedroom Units • 16 3 Bedroom Units	Structure	1,020 Spaces • Residents - 847 sp. • Public/Guests - 173 sp.	--	Wednesday & Thursday 10PM-12AM	1.42 (@ 12:00 AM)	--
3	279 Unit Complex [b]	Irvine	--	279 Unit Apartments • 2 Studio Units • 162 1 Bedroom Units • 115 2 Bedroom Units	Gated Structure	600 Spaces	--	Tuesday 6PM-1AM	1.36 (Peak Hour N/A)	--
4	403 Unit Complex [b]	Irvine	--	403 Unit Apartments • 326 1 Bedroom Units • 77 2 Bedroom Units	Gated Structure	643 Spaces	--	Tuesday 6PM-1AM	1.29 (Peak Hour N/A)	--
5	460 Unit Complex [b]	Orange	--	460 Unit Apartments • 256 1 Bedroom Units • 204 2 Bedroom Units	Gated Structure, Gated Surface Lot	784 Spaces	--	Tuesday 6PM-1AM	1.4 (Peak Hour N/A)	--
6	183 Unit Complex [b]	Fullerton	--	183 Unit Apartments • 129 1 Bedroom Units • 54 2 Bedroom Units	Gated Residential Structure	223 Residential Spaces	Yes	--	1.1 (Peak Hour N/A)	--
7	250 Unit Complex [b]	Santa Ana	--	250 Unit Apartments • 108 1 Bedroom Units • 145 2-3 Bedroom Units	Gated Residential Structure	453 Residential Spaces	Yes	--	0.94 (Peak Hour N/A)	--
8	Paragon at Old Town [a]	Monrovia	700 S. Myrtle Avenue	163 Unit Apartments • 82 1 Bedroom Units • 81 3 Bedroom Units	Surface Lot, On-Street Parking	404 Spaces • Residents - 329 sp. • Public/Guests - 75 sp.	--	Wednesday & Thursday 6PM-12AM	1.48 (@ 11:00 PM)	--
9	Trio Apartments [a]	Pasadena	44 N. Madison Avenue	304 Unit Apartments • 46 Studio Units • 141 1 Bedroom Units • 117 2 Bedroom Units	Surface Lot, On-Street Parking	480 Spaces • Residents - 450 sp. • Public/Guests - 30 sp.	--	Wednesday & Thursday 10PM-12AM	1.22 (@12:00 AM)	--
10	Adagio on the Green [d]	Mission Viejo	2660 Oso Parkway	256 Unit Apartments	Garage, Surface Lot	512 Spaces • Residents - 424 sp. • Public/Guests - 88 sp.	--	Wednesday & Thursday 7PM-2AM Saturday: 12PM-3PM, 7PM-2AM	1.45 (@12:00 AM)	0.97 (@ 2:00 PM & 3:00 PM)
11	Skye at Laguna Niguel [d]	Laguna Niguel	28100 Cabot Road	142 Unit Apartments • 97 1 Bedroom Units • 45 2 Bedroom Units	Garage	294 Spaces • Residents - 240 sp. • Public/Guests - 54 sp.	--	Wednesday & Thursday 7PM-2AM Saturday: 12PM-3PM, 7PM-2AM	1.49 (@ 11:00 PM)	1.07 (@ 12:00 PM)
12	Apex Laguna Niguel [d]	Laguna Niguel	27960 Cabot Road	284 Unit Apartments • 32 Studio Units • 161 1 Bedroom Units • 91 2 Bedroom Units	Garage	539 Spaces • Residents - 461 sp. • Public/Guests - 78 sp.	--	Wednesday & Thursday 7PM-2AM Saturday: 12PM-3PM, 7PM-2AM	1.28 (@ 2:00 AM)	1.13 (@ 3:00 PM)
								Average:	**1.35**	
								85th Percentile:	**1.48**	
								95th Perentile:	**1.61**	
								Additional Parking Ratio References:		
								ITE *Parking Generation* , 5th Edition Low-Rise Apartment		
								Average:	**1.21**	
								85th Percentile:	**1.52**	
								ITE *Parking Generation* , 5th Edition Mid-Rise Apartment		
								Average:	**1.31**	
								85th Percentile:	**1.47**	
								ULI *Shared Parking* : Residential (Rental) Units	**1.65**	
								Field Studies in Ontario and Rancho Cucamonga [c]	**1.58 - 1.66**	
								American Community Survey (ACS) in Ontario [c]	**1.62**	
								Household Surveys in San Bernardino and Riverside [c]	**1.45**	
								Parking Calculation Using Empirical Rates Above (216 DU's for Sumner Place)		
								Average Demand (1.35 x 216 DUs):	**292**	
								85th Percentile Demand (1.48 x 216 DUs):	**320**	
								95th Percentile Demand (1.61 x 216 DUs):	**348**	

Notes:

[a] Source: *Parking Demand Analysis for the Proposed Fifth Avenue/Huntington Drive Mixed-Use Project City of Monrovia, California, prepared by LLG, Oct. 2012*

[b] Source: *Parking Study for AMLI Orange Apartment Project* , prepared by IBI Group, Nov. 2012

[c] Source: *Parking Reform Made Easy* , Richard W. Willson, 2013

[d] Source: Counts collected by LLG on December 2016.

APPENDIX A

SHARED PARKING WORKSHEETS

Appendix Table A-1

SHOPPING CENTER (TYPICAL DAYS)
WEEKDAY SHARED PARKING DEMAND ANALYSIS [1]

Land Use	Shopping Center (Typical Days)				
Size	2.600 KSF				
Pkg Rate[2]	6 /KSF				
Mode Adjust	0.90		1.00		
Non-Captive Ratio	0.90		1.00		
Gross	14 Spaces				
Spaces	11 Guest Spc.		3 Emp. Spc.		Shared
Time of Day	% Of Peak [3]	# Of Spaces	% Of Peak [3]	# Of Spaces	Parking Demand
6:00 AM	1%	0	9%	0	0
7:00 AM	5%	1	14%	0	1
8:00 AM	14%	2	23%	1	3
9:00 AM	32%	3	41%	1	4
10:00 AM	54%	5	68%	2	7
11:00 AM	68%	6	86%	3	9
12:00 PM	90%	8	90%	3	11
1:00 PM	90%	8	90%	3	11
2:00 PM	86%	7	90%	3	10
3:00 PM	77%	6	90%	3	9
4:00 PM	77%	6	90%	3	9
5:00 PM	77%	6	90%	3	9
6:00 PM	81%	7	90%	3	10
7:00 PM	72%	6	90%	3	9
8:00 PM	59%	5	81%	2	7
9:00 PM	41%	4	54%	2	6
10:00 PM	14%	2	36%	1	3
11:00 PM	5%	1	18%	1	2
12:00 AM	0%	0	0%	0	0

Notes:

[1] Source: ULI - Urban Land Institute "Shared Parking," Third Edition, 2020.

[2] Parking rates for all land uses based on City code.

[3] Percentage of peak parking demand factors reflect relationships between weekday parking demand ratios and peak parking demand ratios, as summarized in Table 2-2 of the "Shared Parking" manual.

Appendix Table A-2

SHOPPING CENTER (TYPICAL DAYS)
WEEKEND SHARED PARKING DEMAND ANALYSIS [1]

Land Use	Shopping Center (Typical Days)				
Size	2.600 KSF				
Pkg Rate[2]	6 /KSF				
Mode Adjust	0.90		1.00		
Non-Captive Ratio	0.95		1.00		
Gross	14 Spaces				
Spaces	11 Guest Spc.		3 Emp. Spc.		Shared
Time of Day	% Of Peak [3]	# Of Spaces	% Of Peak [3]	# Of Spaces	Parking Demand
6:00 AM	1%	0	10%	0	0
7:00 AM	5%	1	15%	0	1
8:00 AM	10%	1	40%	1	2
9:00 AM	30%	3	75%	2	5
10:00 AM	50%	5	85%	3	8
11:00 AM	65%	6	95%	3	9
12:00 PM	80%	8	100%	3	11
1:00 PM	90%	9	100%	3	12
2:00 PM	100%	9	100%	3	12
3:00 PM	100%	9	100%	3	12
4:00 PM	95%	9	100%	3	12
5:00 PM	90%	9	95%	3	12
6:00 PM	80%	8	85%	3	11
7:00 PM	75%	7	80%	2	9
8:00 PM	65%	6	75%	2	8
9:00 PM	50%	5	65%	2	7
10:00 PM	35%	3	45%	1	4
11:00 PM	15%	2	15%	0	2
12:00 AM	0%	0	0%	0	0

Notes:

[1] Source: ULI - Urban Land Institute "Shared Parking," Third Edition, 2020.

[2] Parking rates for all land uses based on City code.

[3] Percentage of peak parking demand factors reflect relationships between weekday parking demand ratios and peak parking demand ratios, as summarized in Table 2-2 of the "Shared Parking" manual.

Appendix Table A-3

TAKE OUT FOOD USES
WEEKDAY SHARED PARKING DEMAND ANALYSIS [1]

Land Use	Family Restaurant				
Size	2.400 KSF				
Pkg Rate[2]	6 /KSF				
Mode Adjust	0.90		1.00		
Non-Captive Ratio	0.90		1.00		
Gross Spaces	13 Spaces				
	11 Guest Spc.		2 Emp. Spc.		Shared
Time of Day	% Of Peak [3]	# Of Spaces	% Of Peak [3]	# Of Spaces	Parking Demand
6:00 AM	25%	2	50%	1	3
7:00 AM	50%	5	75%	2	7
8:00 AM	60%	6	90%	2	8
9:00 AM	75%	6	90%	2	8
10:00 AM	85%	7	100%	2	9
11:00 AM	90%	8	100%	2	10
12:00 PM	100%	9	100%	2	11
1:00 PM	90%	8	100%	2	10
2:00 PM	50%	5	100%	2	7
3:00 PM	45%	4	75%	2	6
4:00 PM	45%	4	75%	2	6
5:00 PM	75%	6	95%	2	8
6:00 PM	80%	7	95%	2	9
7:00 PM	80%	7	95%	2	9
8:00 PM	80%	7	95%	2	9
9:00 PM	60%	6	80%	2	8
10:00 PM	55%	5	65%	1	6
11:00 PM	75%	6	65%	1	7
12:00 AM	25%	2	35%	1	3

Notes:

[1] Source: ULI - Urban Land Institute "Shared Parking," Third Edition, 2020.

[2] Parking rates for all land uses based on City code.

[3] Percentage of peak parking demand factors reflect relationships between weekday parking demand ratios and peak parking demand ratios, as summarized in Table 2-2 of the "Shared Parking" manual.

Appendix Table A-4

TAKE OUT FOOD USES
WEEKEND SHARED PARKING DEMAND ANALYSIS [1]

Land Use	Family Restaurant				
Size	2.400 KSF				
Pkg Rate[2]	6 /KSF				
Mode Adjust	0.90		1.00		
Non-Captive Ratio	0.90		1.00		
Gross Spaces	13 Spaces				
	11 Guest Spc.		2 Emp. Spc.		Shared
Time of Day	% Of Peak [3]	# Of Spaces	% Of Peak [3]	# Of Spaces	Parking Demand
6:00 AM	10%	1	49%	1	2
7:00 AM	25%	2	74%	1	3
8:00 AM	44%	4	88%	2	6
9:00 AM	69%	6	88%	2	8
10:00 AM	88%	8	98%	2	10
11:00 AM	88%	8	98%	2	10
12:00 PM	98%	9	98%	2	11
1:00 PM	84%	7	98%	2	9
2:00 PM	64%	6	98%	2	8
3:00 PM	39%	3	74%	1	4
4:00 PM	44%	4	74%	1	5
5:00 PM	59%	5	93%	2	7
6:00 PM	69%	6	93%	2	8
7:00 PM	69%	6	93%	2	8
8:00 PM	64%	6	93%	2	8
9:00 PM	29%	2	79%	2	4
10:00 PM	25%	2	64%	1	3
11:00 PM	15%	2	64%	1	3
12:00 AM	10%	1	34%	1	2

Notes:

[1] Source: ULI - Urban Land Institute "Shared Parking," Third Edition, 2020.

[2] Parking rates for all land uses based on City code.

[3] Percentage of peak parking demand factors reflect relationships between weekday parking demand ratios and peak parking demand ratios, as summarized in Table 2-2 of the "Shared Parking" manual.

Appendix Table A-5

RESIDENTIAL
WEEKDAY SHARED PARKING DEMAND ANALYSIS [1]

Land Use	Residential		
Size Pkg Rate[2]			
Gross Spaces	97 Guest Spc.		Shared
Time of Day	% Of Peak [3]	# Of Spaces	Parking Demand
6:00 AM	0%	0	0
7:00 AM	10%	10	10
8:00 AM	20%	19	19
9:00 AM	20%	19	19
10:00 AM	20%	19	19
11:00 AM	20%	19	19
12:00 PM	20%	19	19
1:00 PM	20%	19	19
2:00 PM	20%	19	19
3:00 PM	20%	19	19
4:00 PM	20%	19	19
5:00 PM	40%	39	39
6:00 PM	60%	58	58
7:00 PM	100%	97	97
8:00 PM	100%	97	97
9:00 PM	100%	97	97
10:00 PM	100%	97	97
11:00 PM	80%	78	78
12:00 AM	50%	49	49

Notes:
[1] Source: ULI - Urban Land Institute "Shared Parking," Se
[2] Parking rates for all land uses based on ULI procedure
[3] Percentage of peak parking demand factors reflect relationships between weekday parking demand ratios and peak parking demand ratios, as summarized in Table 2-2 of

Appendix Table A-6

RESIDENTIAL
WEEKEND SHARED PARKING DEMAND ANALYSIS [1]

Land Use	Residential		
Size Pkg Rate[2]			
Gross Spaces	97 Guest Spc.		Shared
Time of Day	% Of Peak [3]	# Of Spaces	Parking Demand
6:00 AM	0%	0	0
7:00 AM	20%	19	19
8:00 AM	20%	19	19
9:00 AM	20%	19	19
10:00 AM	20%	19	19
11:00 AM	20%	19	19
12:00 PM	20%	19	19
1:00 PM	20%	19	19
2:00 PM	20%	19	19
3:00 PM	20%	19	19
4:00 PM	20%	19	19
5:00 PM	40%	39	39
6:00 PM	60%	58	58
7:00 PM	100%	97	97
8:00 PM	100%	97	97
9:00 PM	100%	97	97
10:00 PM	100%	97	97
11:00 PM	80%	78	78
12:00 AM	50%	49	49

Notes:
[1] Source: ULI - Urban Land Institute "Shared Parking," Se
[2] Parking rates for all land uses based on ULI procedure
[3] Percentage of peak parking demand factors reflect relationships between weekday parking demand ratios and peak parking demand ratios, as summarized in Table 2-2 of

APPENDIX B

COMPARATIVE PARKING RATIO SUMMARY AND DEMAND BACKUP DATA

COMPARABLE SITE #1:
ANTON RESIDENTIAL MID-RISE BUILDING

PLANNING COMMISSION AGENDA REPORT

MEETING DATE: SEPTEMBER 9, 2013 **ITEM NUMBER:** PH-3

SUBJECT: **FINAL MASTER PLAN PA-13-19 FOR THE ANTON MIDRISE RESIDENTIAL PROJECT AT 580 ANTON BOULEVARD IN THE PDR-HD ZONE**

DATE: **SEPTEMBER 2, 2013**

FOR FURTHER INFORMATION CONTACT: **CLAIRE L. FLYNN, AICP, ASST. DEV.SVCS. DIRECTOR (714) 754-5278**

DESCRIPTION

The proposed Anton Residential Mid-Rise Building at 580 Anton Boulevard in the PDR-HD zone involves the following:

Final Master Plan PA-13-19 involving: (a) demolition of 21,349 sq.ft. of The Lakes Pavilions Retail Center; (b) construction of a maximum 250-unit midrise residential building consisting of seven stories above grade and one subterranean level. The five story, type III, fully sprinklered residential building is over a three level parking garage (one parking level below grade). The building is proposed at a height of 87 feet. It includes 438 parking spaces with additional ancillary retail and amenity spaces; (c) variance from parking requirements [minimum 450 required; 438 spaces proposed]; (d) variance from the open space perimeter setback requirement for the corner of the building at Avenue of the Arts and Anton Boulevard [20 foot setback required; 10-11 foot setback proposed].

Note: A preliminary master plan establishing the maximum density and building height had previously been approved in 2007.

The proposed project would supersede a previously-approved master plan for a 26-story high-rise residential project consisting of twin towers (April 2008). The final master plan review allows consideration of the structures' scale, site planning, landscaping, and appearance, with the goal of promoting design excellence while giving consideration to the project's compatibility with existing uses and consistency with the North Costa Mesa Specific Plan.

RECOMMENDATION

Adopt resolution to approve the Addendum to the North Costa Mesa High Rise Residential Project EIR and Final Master Plan PA-13-19.

PLANNING APPLICATION SUMMARY

Location: 580 Anton Boulevard Application Number: Final Master Plan PA-13-19

Request: The Californian at Town Center

SUBJECT PROPERTY:

Zone: PDR-HD

General Plan: High Density Residential

Lot Dimensions: Irregular

Lot Area: 87,115 sq.ft. (about 2 acres)

Existing Development: The Lakes Pavilions Retail Center

SURROUNDING PROPERTY:

North: The Lakes Apartments and Wyndham Hotel

South: South Coast Metro Center

East: Sakioka Lot 1 (future Irvine Apartment Community)

West: South Coast Plaza Town Center

DEVELOPMENT STANDARD COMPARISON

Development Standard	Zoning Code or NCMSP Requirement	Proposed Project
General Plan – High Density Res.	20 du/ac	125 du/ac[1]
Zone – PDR-HD	1 du per 2,178 sf = 20 dwelling units	1 du per 348 sf = 125 dwelling units[1]
Lot Size – Development Lot		
Lot Width	100 ft.	Irregular
Lot Area	12,000 sf	87,115 sq.ft.
Site Coverage – Overall Project:		
Buildings	Not Applicable	Not Applicable
Perimeter Open Space	20' abutting Public ROW	20' abutting Public ROW; Excluding encroachment of corner of building at 10 to 11'foot setback[2]
Open Space	42% of total site area at grade and above grade as allowed by NCMSP[4] 36,627 sq.ft.	Minimum 42% of total site area if landscaped podium and private pool/deck/and walkways are included. 40,174 sq.ft.
Min. private open space patio/balcony	Varies, depending on size of common amenity areas	varies[4]
Setbacks for Development Lot (excluding corner): Main Building conforms to setback requirements EXCLUDING building corner of 7-story midrise which is located at a 10 to 11 foot setback from the corner of Avenue of Arts/Anton Blvd. Variance required.[2]		
Front (Anton Boulevard)	20'	20' abutting Public ROW[2]
Side (Ave of Arts on left side)	20'	20'
Side / Rear (interior)	None required	NA
Building Height	280' AGL	7 stories / 87 feet
Parking:[3]		
Tenant	1.5 to 2.0 spaces per unit: Minimum 375 spaces	1.45 spaces per unit: 363 spaces
Guest	0.5 spaces per unit with credit of 0.25 spaces per unit above 50 units = 75 spaces	75 spaces
TOTAL	Min. 450 spaces	438 spaces[3,5]
Driveway Width:	Min. 16 ft.	> 20 to 30 ft. wide

[1] Site-specific density allowed by General Plan and North Costa Mesa Specific Plan Amendments previously approved in 2007.

[2] Variance requested for corner of building to encroach into setback. Recorded map includes modification of existing landscape easements from 25 feet to 20 feet along Avenue of the Arts and from 25 feet to 15-20 feet along Anton Boulevard. [3] North Costa Mesa Specific Plan, as amended, allows approval of compact and tandem parking spaces. [4] North Costa Mesa Specific Plan, as amended, allows inclusion of above-ground common recreational areas in open space calculation. [5] Variance from parking requirements. Total parking supply may be adjusted accordingly with associated changes in proposed bedroom mix provided that the project conforms to the NCMSP parking requirements or the parking rate is no lower than approved in the Master Plan.

CEQA STATUS: Addendum to Final Program EIR No. 1052, Certified on November 21, 2006 by City Council

FINAL ACTION ON FINAL MASTER PLAN: Planning Commission

motif features contemporary, yet elegant design elements with architectural contrasts in building materials including plaster, stone, and clean butted metal panels. This will serve to create an aesthetically pleasing elevation and enhance the street frontage along Avenue of the Arts and Anton Boulevard. The project will feature a grand 2 story high motor court entrance off of Avenue of the Arts which will also serve as a window into the existing lake and open space behind the property. The two story clear height element will extend into the lobby area which leads to variety of common area uses including lounge, game, & clubhouse rooms, business center with meeting facilities, and "state of the art" fitness and yoga room. The top of the second story will feature an abundantly landscaped outdoor living deck which will overlook the lake. The outdoor living deck will be centered by a resort-style lap pool and spa, outdoor bbq and dining area, and also include intimate areas for sitting, socializing or quiet reflection. The project will also include amenities such as a dog washing room, free use of "city bikes" for residents, and electric-car charging stations.

The unit interiors will feature condo-quality finishes, including hard surface counter tops (quartz type), stainless steel appliances, and high end cabinetry. Wood type and hard surface floorings will be used through the living areas, with carpet in the bedroom areas.

We anticipate that the project will appeal to professional and arts oriented residents seeking to live in a high end community offering an exceptional level of "concierge type customer service" in a unique cosmopolitan setting.

Parking Description

As noted in the comparison table above, the proposed Project will provide a minimum of 438 parking spaces, which translates to a ratio of 1.75 spaces per unit or 1.33 spaces per bedroom.

Based upon our experience with developing and managing infill residential projects throughout California we have a found that parking demand is primarily driven by the type of units being offered and more specifically by the number of bedrooms in the community. We customarily assign 1 parking space per bedroom not to exceed the number of residents in the unit; so therefore would offer 1 parking space for Studio and 1 bedroom units, and 2 parking spaces for 2 bedroom units. While in some instances more than 1 resident will reside in a 1 bedroom unit, we find instances occurring with 1 resident occupying a 2 bedroom unit, (e.g.-home office, etc.) and will balance the parking demand to the specific bedroom count.

The proposed project will include 330 assigned parking spaces, with the ability to offer additional floating parking from the additional 108 over-flow and guest parking spaces in the project. In no event, would the guest parking be less than 63 spaces which is considered ample.

The proposed parking ratio exceeds the parking provided in the currently approved project. Since the currently approved project consists of 90% 2 and 3 bedroom units with a total bedroom count of 516 bedrooms plus 2,350 square feet of retail spaces, this translates to a parking ratio of 1.03 spaces per bedroom or .29 spaces per spaces per bedroom less than our current proposal. The proposed Project has only 30% of 2 bedroom units with the balance comprising studios and 1 bedroom residences.

It is also important to note that rarely are all units occupied at any given time. Projects of this nature tend to be 94% occupied at any given time. Especially given the cosmopolitan nature of this location, we expect many residents will not occupy their residence on a full time basis. A

LEGACY
PARTNERS

portion of the resident profile is expected to be bi-coastal in nature and only reside when in town on business, shopping or during seasonal periods of time.

While we believe that our proposed parking will be more than adequate, it should be noted that the proposed project has use rights to approximately 32 parking spaces on the adjacent property on the southeast corner of Anton and Avenue of the Arts which could be utilized for additional guest parking should the need ever arise.

Claire, we appreciate your efforts to date and look forward to moving forward on this beautiful project. We look forward to staff's comments and input.

Should you have any additional questions or comments, please feel free to contact me.

Sincerely,

LEGACY PARTNERS RESIDENTIAL, INC.

By: _____
Timothy J. O'Brien
Senior Managing Director

Cc: Roger and Barbara Allensworth

COMPARABLE SITE #2:
MAIN STREET VILLAGE

DRAFT

MEMORANDUM

To:	Mr. Jason Silver Lincoln Property Company	Date:	October 15, 2012
From:	Alfred C. Ying, P.E., PTP Chin S. Taing, PTP LLG, Engineers	LLG Ref:	1-12-3990-1
Subject:	Parking Demand Analysis for the Proposed Fifth Avenue/Huntington Drive Mixed-Use Project City of Monrovia, California		

LINSCOTT LAW & GREENSPAN engineers

Engineers & Planners
Traffic
Transportation
Parking

Linscott, Law & Greenspan, Engineers
236 N. Chester Avenue
Suite 200
Pasadena, CA 91106
626.796.2322 T
626.792.0941 F
www.llgengineers.com

Pasadena
Costa Mesa
San Diego
Las Vegas

This memorandum has been prepared to summarize the parking demand analysis associated with the proposed Fifth Avenue/Huntington Drive Mixed-Use project located in the City of Monrovia, California. Pursuant to the request of the City of Monrovia, LLG Engineers has prepared this parking analysis as part of the entitlement process for the proposed project. This analysis is used as a basis so that a determination can be made as to the adequacy of the future planned parking supply to meet the anticipated peak site-wide parking demand following development of the proposed Fifth Avenue/Huntington Drive Mixed-Use project. The following sections provide a review of the following:

- A description of the existing and proposed site conditions, including a review of the proposed on-site parking supply;
- Off-street parking requirements applicable to the project site pursuant to the City of Monrovia Municipal Code;
- A comparison of parking standards for other nearby communities for multi-family residential uses;
- A review of the observed parking demand at other similar developments (e.g., as summarized in the Institute of Transportation Engineers [ITE] *Parking Generation* publication[1] and the Urban Land Institute's [ULI] *Shared Parking* publication[2];
- A review of the observed existing parking demand conducted at other comparable multi-family residential development sites;
- A forecast of peak parking demand for the project utilizing the empirical parking demand ratios from other comparable sites; and
- A conclusion regarding adequacy of the proposed parking supply to accommodate the forecast future peak parking demand.

[1] Institute of Transportation Engineers *Parking Generation* manual, 4th Edition, Washington D.C., 2010.
[2] Urban Land Institute, *Shared Parking,* 2nd Edition, Washington D.C., 2005.

Table 3
SUMMARY OF PARKING DEMAND RATIOS [1]
COMPARABLE SITES

COMPARABLE SITES	TOTAL NO. OF DWELLING UNITS [2]	UNIT OCCUPANCY LEVELS [2]	EXISTING ON-SITE [3]		EXISTING OBSERVED [4]		AT FULL OCCUPANCY [5]	
			ON-SITE PARKING SUPPLY	PARKING SUPPLY RATIO (SPACES/UNIT)	PEAK PARKING DEMAND	PEAK PARKING DEMAND RATIO (SPACES/UNIT)	PEAK PARKING DEMAND	PEAK PARKING DEMAND RATIO (SPACES/UNIT)
1. Paragon at Old Town	163	95.7%	404	2.48	231	1.42	241	1.48
2. Trio Apartments	304	94.0%	480	1.58	348	1.14	370	1.22
3. Main Street Village	481	93.8%	1,020	2.12	639	1.33	681	1.42
TOTALS	**948**	**94.5%**	**1,904**	**2.01**	**1,218**	**1.28**	**1,292**	**1.36**

[1] The parking demand ratios were developed based on the number of dwelling units and parking spaces provided at each observation site, as well as the results of the parking accumulation surveys conducted for each site (on-site and on-street as applicable) in September 2012 (refer to Appendix A for a summary of the parking surveys for each site).

[2] The site characteristics, including number of residential units and the site occupancy levels at the time of the parking accumulation surveys were provided by Lincoln Property Company representatives.

[3] The parking supply was inventoried by LLG Engineers in September 2012. The parking supply includes all marked parking spaces provided on-site (i.e., regular, handicap, visitor, etc.) for residents, guests, vendors. The existing supply parking ratios are based on the number of spaces provided on-site divided by the total number of dwelling units.

[4] The existing peak parking demand was observed to occur at 11:00 PM for the Paragon at Old Town and at 12:00 AM midnight for the Trio Apartments and Main Street Village. The existing peak parking demand for the Paragon at Old Town and Trio Apartments included on-site and on-street observed parking demand associated with residents/guests for the sites. Refer to Appendix A for the parking surveys for each site. The weekday parking demand ratios are based on the parking demand observed for each site divided by the total number of dwelling units.

[5] Peak parking demand was forecasted at full (100%) occupancy for each site. The peak parking demand ratios at full occupancy were derived by dividing the peak parking demand by the total number of dwelling units.

APPENDIX A

PARKING ACCUMULATION SURVEYS

Appendix Table A-3
MAIN STREET VILLAGE (2555 MAIN STREET, IRVINE) PARKING ACCUMULATION SURVEYS [1]
SURVEY DATES: WEDNESDAY (SEPTEMBER 12, 2012) AND THURSDAY (SEPTEMBER 13, 2012)

PARKING LOCATION	[2] NO. OF SPACES	WEDNESDAY, SEPTEMBER 12, 2012						THURSDAY, SEPTEMBER 13, 2012					
		10:00 PM		11:00 PM		12:00 AM		10:00 PM		11:00 PM		12:00 AM	
		OCC.	PERCENT	OCC.	PERCENT	OCC.	PERCENT	OCC.	PERCENT	OCC.	PERCENT	OCC.	PERCENT
Basement Level													
Unmarked Spaces	152	102	67.1%	108	71.1%	117	77.0%	100	65.8%	105	69.1%	107	70.4%
LEV/FEV Spaces	12	9	75.0%	9	75.0%	9	75.0%	8	66.7%	7	58.3%	9	75.0%
Resident Unassigned Spaces	1	1	100.0%	1	100.0%	1	100.0%	1	100.0%	1	100.0%	1	100.0%
Handicap Spaces	2	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Fenced Off-Bicycle Pkg Spaces	12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total Basement Parking	179	112	62.6%	120	67.0%	127	70.9%	109	60.9%	113	63.1%	117	65.4%
Level 1													
Unmarked Spaces	110	61	55.5%	65	59.1%	71	64.5%	60	54.5%	69	62.7%	69	62.7%
LEV/FEV Spaces	12	12	100.0%	12	100.0%	12	100.0%	12	100.0%	12	100.0%	12	100.0%
Resident Unassigned Spaces	12	12	100.0%	12	100.0%	12	100.0%	11	91.7%	12	100.0%	12	100.0%
Leasing Spaces	7	6	85.7%	6	85.7%	6	85.7%	3	42.9%	7	100.0%	7	100.0%
5-Minute Spaces	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Handicap Spaces	6	2	33.3%	3	50.0%	2	33.3%	3	50.0%	3	50.0%	3	50.0%
Total Level 1 Parking	148	93	62.8%	98	66.2%	103	69.6%	89	60.1%	103	69.6%	103	69.6%
Level 2													
Unmarked Spaces	126	92	73.0%	97	77.0%	99	78.6%	91	72.2%	94	74.6%	95	75.4%
LEV/FEV Spaces	12	12	100.0%	12	100.0%	12	100.0%	12	100.0%	12	100.0%	12	100.0%
Resident Unassigned Spaces	15	15	100.0%	15	100.0%	14	93.3%	15	100.0%	15	100.0%	15	100.0%
Handicap Spaces	6	3	50.0%	4	66.7%	3	50.0%	3	50.0%	3	50.0%	3	50.0%
Total Level 2 Parking	159	122	76.7%	128	80.5%	128	80.5%	121	76.1%	124	78.0%	125	78.6%
Level 3													
Unmarked Spaces	124	75	60.5%	78	62.9%	82	66.1%	79	63.7%	77	62.1%	83	66.9%
LEV/FEV Spaces	12	12	100.0%	11	91.7%	12	100.0%	12	100.0%	12	100.0%	12	100.0%
Resident Spaces	2	1	50.0%	2	100.0%	2	100.0%	2	100.0%	2	100.0%	2	100.0%
Resident Unassigned Spaces	15	14	93.3%	15	100.0%	14	93.3%	15	100.0%	15	100.0%	15	100.0%
Handicap Spaces	6	2	33.3%	3	50.0%	3	50.0%	2	33.3%	2	33.3%	2	33.3%
Total Level 3 Parking	159	104	65.4%	109	68.6%	113	71.1%	110	69.2%	108	67.9%	114	71.7%
Level 4													
Unmarked Spaces	127	67	52.8%	61	48.0%	72	56.7%	72	56.7%	77	60.6%	77	60.6%
LEV/FEV Spaces	12	10	83.3%	11	91.7%	11	91.7%	11	91.7%	11	91.7%	11	91.7%
Resident Spaces	17	15	88.2%	15	88.2%	15	88.2%	15	88.2%	17	100.0%	17	100.0%
Handicap Spaces	4	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total Level 4 Parking	160	92	57.5%	87	54.4%	98	61.3%	98	61.3%	105	65.6%	105	65.6%
Level 5													
Visitor Spaces	152	62	40.8%	62	40.8%	64	42.1%	67	44.1%	60	39.5%	60	39.5%
Visitor Spaces (coned-off)	8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
LEV/FEV Spaces	6	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Visitor LEV/FEV Spaces	7	2	28.6%	3	42.9%	4	57.1%	2	28.6%	3	42.9%	3	42.9%
Total Level 5 Parking	173	64	37.0%	65	37.6%	68	39.3%	69	39.9%	63	36.4%	63	36.4%
Level 6													
Unmarked Spaces	42	2	4.8%	2	4.8%	2	4.8%	1	2.4%	1	2.4%	0	0.0%
Total Level 6 Parking	42	2	4.8%	2	4.8%	2	4.8%	0	0.0%	0	0.0%	0	0.0%
Total On-Site Parking	1,020	589	57.7%	609	59.7%	**639**	**62.6%**	596	58.4%	616	60.4%	627	61.5%

[1] The parking survey was conducted by The Traffic Solution.
[2] Parking inventory based on field review by LLG Engineers in September 2012.

COMPARABLE SITE #3:
279 UNIT COMPLEX

IBI GROUP

IBI Group
18401 Von Karman Avenue – Suite 110
Irvine CA 92612 USA

tel 949 833 5588
fax 949 833 5511

Memorandum

To/Attention	Nate Carlson	**Date**	November 19, 2012
From	Bill Delo, AICP	**Project No**	33148
cc		**Steno**	ch
Subject	Parking Study for AMLI Orange Apartment Project		

Introduction

AMLI is proposing to develop a 334-unit residential apartment project in the City of Orange and provide 1.7 parking spaces per unit for the project. The current city code requires a minimum of 2.02 parking spaces per unit. The purpose of this memorandum is to examine the typical peak parking rates identified in published parking manuals and from similar site surveys to determine whether a proposed rate of 1.7 parking spaces per unit is sufficient to meet estimated parking demand for this type of residential development.

Project Location and Background

The proposed project will be located near the Anaheim Metrolink Station and major employment centers in the City of Orange. Adjacent employers and the number of employees are summarized in Table 1-1.

Table 1-1 Adjacent Employers

Employer	Number of Employees
UCI Medical Center	4,500
Government Offices	1,400
Hilton Hotel	400
Office Towers	3,000-5,000
Outlets at Orange	2,500

Source: Pierce-Eislen, Inc.

Due to its close proximity to employment centers and transit, there is a chance for increased pedestrian and transit activity by residents of the proposed project as an alternative transportation option to the automobile. A recent study by Caltrans (*Travel Characteristics of Transit-Oriented Development in California*) assessed the travel patterns of people who live, work, shop, and recreate near suburban and infill rail transit stations throughout California. The study found that those who live in transit-oriented developments or within close proximity to mass transit have higher levels of transit use than persons in surrounding areas.

Nate Carlson – October 7, 2012

Similar Site Parking Counts

To identify a recommended minimum parking ratio, similar site parking surveys were conducted at three residential apartment developments in Orange County. The survey sites were selected based on their similarities to the project site, including development size and close proximity to employment centers. The three survey sites consist of:

- Survey Site #1, Irvine, CA – 279-unit apartment complex that is currently 93.9% occupied (262 units). This apartment complex provides 600 parking spaces in a gated parking structure. This corresponds to a parking supply ratio of 2.15 spaces per unit. The unit mix for this complex is 2 studio units, 162 1-bedroom units; and 115 2-bedroom units. This apartment is not located near mass transit.
- Survey Site #2, Irvine, CA – 403-unit apartment complex that is currently 96.8% occupied (390 units). This apartment complex provides 643 parking spaces in a gated parking structure. This corresponds to a parking supply ratio of 1.6 spaces per unit. The unit mix for this complex is 326 1-bedroom units; and 77 2-bedroom units. This apartment is not located near mass transit.
- Survey Site #3, Orange, CA – 460-unit apartment complex that is currently 95.2% occupied (440 units). This apartment provides 784 parking spaces in a gated parking structure and gated surface parking lot. This corresponds to a parking supply ratio of 1.78 spaces per unit. The unit mix for this complex is 256 1-bedroom units; and 204 2-bedroom units. This apartment is located within 1 mile of the Anaheim Metrolink Station.

Surveys were conducted on a Tuesday and Saturday between 6:00 PM – 1:00 AM to capture the peak parking demand generated by residential uses at the two similar sites. The peak hour parking rates from the three sites are summarized in Table 1-2.

Table 1-2 Similar Site Parking Rates – Residential Only

Survey Site	Units Occupied	Weekday		Weekend	
		Peak Hour Parking Demand (spaces)	Rate (spaces/unit)	Peak Hour Parking Demand (spaces)	Rate (spaces/unit)
Survey Site #1	262	354	1.35	356	1.36
Survey Site #2	390	504	1.29	443	1.14
Survey Site #3	440	616	1.40	547	1.24
Average	364	491	1.35	449	1.25

IBI Group also conducted parking surveys at two mixed-use residential apartment and retail developments in Orange County, California. These two survey sites consist of:

- Survey Site #3, Fullerton, CA – 183-unit apartment complex that is currently 95% occupied (174 units). The apartment complex provides 223 residential parking spaces in a gated parking structure. The unit mix for this complex is 129 1-bedroom units and 54 2-bedroom units. This corresponds to a parking supply ratio of 1.21 spaces per unit. This apartment is located within 1 mile of the Fullerton Transportation Center.
- Survey Site #4, Santa Ana, CA – 250-unit apartment complex that is currently 90% occupied (225 units). The apartment complex provides 453 residential parking spaces in a gated parking structure. This corresponds to a parking supply ratio of 1.8 spaces

per unit. The unit mix for this complex is 108 1-bedroom units and 145 2 to 3 bedroom units. This apartment is not located near mass transit.

These additional survey sites are smaller than the proposed project and include a retail component as part of the apartment development. However, both survey sites are mid-rise apartment complexes in similar settings to the proposed project. The peak hour parking demand per dwelling unit from these two surveys are provided in Table 1-3.

Table 1-3 Parking Rates for Additional Sites – Residential and Retail Developments

Survey Site	Units Occupied	Weekday		Weekend	
		Peak Hour Parking Demand (spaces)	Rate (spaces/unit)	Peak Hour Parking Demand (spaces)	Rate (spaces/unit)
Survey Site #3	174	191	1.10	191	1.10
Survey Site #4	225	212	0.94	208	0.92
Average	183	202	1.02	200	1.01

Comparison to Other Parking Rates

For comparison, rates from the ITE Parking Generation Manual, 4th Edition are provided below. The ITE Parking Generation Manual provides averages, ranges, and statistical quality values of parking demand generated by various land uses. The typical parking demand generated by a low/mid-rise apartment development is summarized in Table 1-4.

Table 1-4 ITE Parking Generation

Use Classification	Weekday		Weekend	
	Avg. Size of Studied Developments (dwelling units)	Avg. Parking Demand Rate	Avg. Size of Studied Developments (dwelling units)	Avg. Parking Demand Rate
Low/Mid-Rise Apartment (suburban)	311	1.23	n/a	n/a
Low/Mid-Rise Apartment (urban)	70	1.20	147	1.03

Source: ITE Parking Generation Manual, 4th Edition. Note that the Parking Generation Manual does not provide a weekend estimate for suburban locations.

Given the proposed location for this development within a more urban section of the City of Orange, the urban data points provided by ITE provide a good basis for comparison. The 85th percentile demand value for the urban designation was 1.61 spaces per unit for weekdays and 1.14 for weekends.

Nate Carlson – October 7, 2012

Summary of Parking Rates

Based on the data collected from the two similar survey sites, the average peak hour parking demand per dwelling unit would be anticipated to be 1.35 spaces on a weekday and 1.25 spaces on a Saturday. Per the ITE Parking Generation Manual, 4th Edition, the typical observed parking demand is 1.23 spaces on a weekday and 1.03 spaces per unit on a Saturday. The average parking rate from the additional survey sites is 1.02 parking spaces per unit on a weekday and 1.01 parking spaces per unit on a Saturday. A summary of these rates is provided in Table 1-5.

Table 1-5 Summary of Average Peak Hour Parking Demand

Survey Site	Avg. Units Occupied	Average Rate (spaces/unit)	
		Weekday	Weekend
Survey Site #1, #2 and #3	364	1.35	1.25
Survey Site #3 and #4	183	1.02	1.01
ITE Parking Manual	229	1.23	1.03

Conclusion

Based on the average rates from the similar site surveys, the proposed 1.7 parking spaces per unit should be more than sufficient to meet estimated parking demand generated by a 334-unit apartment complex in the City of Orange. In all observed cases, actual parking demand for similar residential projects in Orange County did not exceed 1.35 spaces per unit. Additionally, the ITE Parking Generation Manual, 4th Edition provides an estimated average demand of 1.03 to 1.23 for low or mid-rise apartment complexes.

In terms of parking supply, the surveyed apartment complexes provide between 1.20 and 2.15 parking spaces per unit. The combined average parking supply ratio for the five developments is 1.71 parking spaces per unit. In all four cases, the apartment complexes provide parking supply levels that are well in excess of current demand, even when all four complexes are experiencing occupancy levels of 90% or above.

COMPARABLE SITE #4:
403 UNIT COMPLEX

IBI Group
18401 Von Karman Avenue – Suite 110
Irvine CA 92612 USA

tel 949 833 5588
fax 949 833 5511

Memorandum

To/Attention	Nate Carlson	**Date**	November 19, 2012
From	Bill Delo, AICP	**Project No**	33148
cc		**Steno**	ch
Subject	Parking Study for AMLI Orange Apartment Project		

Introduction

AMLI is proposing to develop a 334-unit residential apartment project in the City of Orange and provide 1.7 parking spaces per unit for the project. The current city code requires a minimum of 2.02 parking spaces per unit. The purpose of this memorandum is to examine the typical peak parking rates identified in published parking manuals and from similar site surveys to determine whether a proposed rate of 1.7 parking spaces per unit is sufficient to meet estimated parking demand for this type of residential development.

Project Location and Background

The proposed project will be located near the Anaheim Metrolink Station and major employment centers in the City of Orange. Adjacent employers and the number of employees are summarized in Table 1-1.

Table 1-1 Adjacent Employers

Employer	Number of Employees
UCI Medical Center	4,500
Government Offices	1,400
Hilton Hotel	400
Office Towers	3,000-5,000
Outlets at Orange	2,500

Source: Pierce-Eislen, Inc.

Due to its close proximity to employment centers and transit, there is a chance for increased pedestrian and transit activity by residents of the proposed project as an alternative transportation option to the automobile. A recent study by Caltrans (*Travel Characteristics of Transit-Oriented Development in California*) assessed the travel patterns of people who live, work, shop, and recreate near suburban and infill rail transit stations throughout California. The study found that those who live in transit-oriented developments or within close proximity to mass transit have higher levels of transit use than persons in surrounding areas.

Nate Carlson – October 7, 2012

Similar Site Parking Counts

To identify a recommended minimum parking ratio, similar site parking surveys were conducted at three residential apartment developments in Orange County. The survey sites were selected based on their similarities to the project site, including development size and close proximity to employment centers. The three survey sites consist of:

- Survey Site #1, Irvine, CA – 279-unit apartment complex that is currently 93.9% occupied (262 units). This apartment complex provides 600 parking spaces in a gated parking structure. This corresponds to a parking supply ratio of 2.15 spaces per unit. The unit mix for this complex is 2 studio units, 162 1-bedroom units; and 115 2-bedroom units. This apartment is not located near mass transit.
- Survey Site #2, Irvine, CA – 403-unit apartment complex that is currently 96.8% occupied (390 units). This apartment complex provides 643 parking spaces in a gated parking structure. This corresponds to a parking supply ratio of 1.6 spaces per unit. The unit mix for this complex is 326 1-bedroom units; and 77 2-bedroom units. This apartment is not located near mass transit.
- Survey Site #3, Orange, CA – 460-unit apartment complex that is currently 95.2% occupied (440 units). This apartment provides 784 parking spaces in a gated parking structure and gated surface parking lot. This corresponds to a parking supply ratio of 1.78 spaces per unit. The unit mix for this complex is 256 1-bedroom units; and 204 2-bedroom units. This apartment is located within 1 mile of the Anaheim Metrolink Station.

Surveys were conducted on a Tuesday and Saturday between 6:00 PM – 1:00 AM to capture the peak parking demand generated by residential uses at the two similar sites. The peak hour parking rates from the three sites are summarized in Table 1-2.

Table 1-2 Similar Site Parking Rates – Residential Only

Survey Site	Units Occupied	Weekday		Weekend	
		Peak Hour Parking Demand (spaces)	Rate (spaces/unit)	Peak Hour Parking Demand (spaces)	Rate (spaces/unit)
Survey Site #1	262	354	1.35	356	1.36
Survey Site #2	390	504	1.29	443	1.14
Survey Site #3	440	616	1.40	547	1.24
Average	364	491	1.35	449	1.25

IBI Group also conducted parking surveys at two mixed-use residential apartment and retail developments in Orange County, California. These two survey sites consist of:

- Survey Site #3, Fullerton, CA – 183-unit apartment complex that is currently 95% occupied (174 units). The apartment complex provides 223 residential parking spaces in a gated parking structure. The unit mix for this complex is 129 1-bedroom units and 54 2-bedroom units. This corresponds to a parking supply ratio of 1.21 spaces per unit. This apartment is located within 1 mile of the Fullerton Transportation Center.
- Survey Site #4, Santa Ana, CA – 250-unit apartment complex that is currently 90% occupied (225 units). The apartment complex provides 453 residential parking spaces in a gated parking structure. This corresponds to a parking supply ratio of 1.8 spaces

per unit. The unit mix for this complex is 108 1-bedroom units and 145 2 to 3 bedroom units. This apartment is not located near mass transit.

These additional survey sites are smaller than the proposed project and include a retail component as part of the apartment development. However, both survey sites are mid-rise apartment complexes in similar settings to the proposed project. The peak hour parking demand per dwelling unit from these two surveys are provided in Table 1-3.

Table 1-3 Parking Rates for Additional Sites – Residential and Retail Developments

Survey Site	Units Occupied	Weekday		Weekend	
		Peak Hour Parking Demand (spaces)	Rate (spaces/unit)	Peak Hour Parking Demand (spaces)	Rate (spaces/unit)
Survey Site #3	174	191	1.10	191	1.10
Survey Site #4	225	212	0.94	208	0.92
Average	183	202	1.02	200	1.01

Comparison to Other Parking Rates

For comparison, rates from the ITE Parking Generation Manual, 4th Edition are provided below. The ITE Parking Generation Manual provides averages, ranges, and statistical quality values of parking demand generated by various land uses. The typical parking demand generated by a low/mid-rise apartment development is summarized in Table 1-4.

Table 1-4 ITE Parking Generation

Use Classification	Weekday		Weekend	
	Avg. Size of Studied Developments (dwelling units)	Avg. Parking Demand Rate	Avg. Size of Studied Developments (dwelling units)	Avg. Parking Demand Rate
Low/Mid-Rise Apartment (suburban)	311	1.23	n/a	n/a
Low/Mid-Rise Apartment (urban)	70	1.20	147	1.03

Source: ITE Parking Generation Manual, 4th Edition. Note that the Parking Generation Manual does not provide a weekend estimate for suburban locations.

Given the proposed location for this development within a more urban section of the City of Orange, the urban data points provided by ITE provide a good basis for comparison. The 85th percentile demand value for the urban designation was 1.61 spaces per unit for weekdays and 1.14 for weekends.

Summary of Parking Rates

Based on the data collected from the two similar survey sites, the average peak hour parking demand per dwelling unit would be anticipated to be 1.35 spaces on a weekday and 1.25 spaces on a Saturday. Per the ITE Parking Generation Manual, 4th Edition, the typical observed parking demand is 1.23 spaces on a weekday and 1.03 spaces per unit on a Saturday. The average parking rate from the additional survey sites is 1.02 parking spaces per unit on a weekday and 1.01 parking spaces per unit on a Saturday. A summary of these rates is provided in Table 1-5.

Table 1-5 Summary of Average Peak Hour Parking Demand

Survey Site	Avg. Units Occupied	Average Rate (spaces/unit)	
		Weekday	Weekend
Survey Site #1, #2 and #3	364	1.35	1.25
Survey Site #3 and #4	183	1.02	1.01
ITE Parking Manual	229	1.23	1.03

Conclusion

Based on the average rates from the similar site surveys, the proposed 1.7 parking spaces per unit should be more than sufficient to meet estimated parking demand generated by a 334-unit apartment complex in the City of Orange. In all observed cases, actual parking demand for similar residential projects in Orange County did not exceed 1.35 spaces per unit. Additionally, the ITE Parking Generation Manual, 4th Edition provides an estimated average demand of 1.03 to 1.23 for low or mid-rise apartment complexes.

In terms of parking supply, the surveyed apartment complexes provide between 1.20 and 2.15 parking spaces per unit. The combined average parking supply ratio for the five developments is 1.71 parking spaces per unit. In all four cases, the apartment complexes provide parking supply levels that are well in excess of current demand, even when all four complexes are experiencing occupancy levels of 90% or above.

COMPARABLE SITE #5:
460 UNIT COMPLEX

IBI Group
18401 Von Karman Avenue – Suite 110
Irvine CA 92612 USA

tel 949 833 5588
fax 949 833 5511

Memorandum

To/Attention	Nate Carlson	**Date**	November 19, 2012
From	Bill Delo, AICP	**Project No**	33148
cc		**Steno**	ch
Subject	Parking Study for AMLI Orange Apartment Project		

Introduction

AMLI is proposing to develop a 334-unit residential apartment project in the City of Orange and provide 1.7 parking spaces per unit for the project. The current city code requires a minimum of 2.02 parking spaces per unit. The purpose of this memorandum is to examine the typical peak parking rates identified in published parking manuals and from similar site surveys to determine whether a proposed rate of 1.7 parking spaces per unit is sufficient to meet estimated parking demand for this type of residential development.

Project Location and Background

The proposed project will be located near the Anaheim Metrolink Station and major employment centers in the City of Orange. Adjacent employers and the number of employees are summarized in Table 1-1.

Table 1-1 Adjacent Employers

Employer	Number of Employees
UCI Medical Center	4,500
Government Offices	1,400
Hilton Hotel	400
Office Towers	3,000-5,000
Outlets at Orange	2,500

Source: Pierce-Eislen, Inc.

Due to its close proximity to employment centers and transit, there is a chance for increased pedestrian and transit activity by residents of the proposed project as an alternative transportation option to the automobile. A recent study by Caltrans (*Travel Characteristics of Transit-Oriented Development in California*) assessed the travel patterns of people who live, work, shop, and recreate near suburban and infill rail transit stations throughout California. The study found that those who live in transit-oriented developments or within close proximity to mass transit have higher levels of transit use than persons in surrounding areas.

Nate Carlson – October 7, 2012

Similar Site Parking Counts

To identify a recommended minimum parking ratio, similar site parking surveys were conducted at three residential apartment developments in Orange County. The survey sites were selected based on their similarities to the project site, including development size and close proximity to employment centers. The three survey sites consist of:

- Survey Site #1, Irvine, CA – 279-unit apartment complex that is currently 93.9% occupied (262 units). This apartment complex provides 600 parking spaces in a gated parking structure. This corresponds to a parking supply ratio of 2.15 spaces per unit. The unit mix for this complex is 2 studio units, 162 1-bedroom units; and 115 2-bedroom units. This apartment is not located near mass transit.
- Survey Site #2, Irvine, CA – 403-unit apartment complex that is currently 96.8% occupied (390 units). This apartment complex provides 643 parking spaces in a gated parking structure. This corresponds to a parking supply ratio of 1.6 spaces per unit. The unit mix for this complex is 326 1-bedroom units; and 77 2-bedroom units. This apartment is not located near mass transit.
- Survey Site #3, Orange, CA – 460-unit apartment complex that is currently 95.2% occupied (440 units). This apartment provides 784 parking spaces in a gated parking structure and gated surface parking lot. This corresponds to a parking supply ratio of 1.78 spaces per unit. The unit mix for this complex is 256 1-bedroom units; and 204 2-bedroom units. This apartment is located within 1 mile of the Anaheim Metrolink Station.

Surveys were conducted on a Tuesday and Saturday between 6:00 PM – 1:00 AM to capture the peak parking demand generated by residential uses at the two similar sites. The peak hour parking rates from the three sites are summarized in Table 1-2.

Table 1-2 Similar Site Parking Rates – Residential Only

Survey Site	Units Occupied	Weekday		Weekend	
		Peak Hour Parking Demand (spaces)	Rate (spaces/unit)	Peak Hour Parking Demand (spaces)	Rate (spaces/unit)
Survey Site #1	262	354	1.35	356	1.36
Survey Site #2	390	504	1.29	443	1.14
Survey Site #3	440	616	1.40	547	1.24
Average	364	491	1.35	449	1.25

IBI Group also conducted parking surveys at two mixed-use residential apartment and retail developments in Orange County, California. These two survey sites consist of:

- Survey Site #3, Fullerton, CA – 183-unit apartment complex that is currently 95% occupied (174 units). The apartment complex provides 223 residential parking spaces in a gated parking structure. The unit mix for this complex is 129 1-bedroom units and 54 2-bedroom units. This corresponds to a parking supply ratio of 1.21 spaces per unit. This apartment is located within 1 mile of the Fullerton Transportation Center.
- Survey Site #4, Santa Ana, CA – 250-unit apartment complex that is currently 90% occupied (225 units). The apartment complex provides 453 residential parking spaces in a gated parking structure. This corresponds to a parking supply ratio of 1.8 spaces

per unit. The unit mix for this complex is 108 1-bedroom units and 145 2 to 3 bedroom units. This apartment is not located near mass transit.

These additional survey sites are smaller than the proposed project and include a retail component as part of the apartment development. However, both survey sites are mid-rise apartment complexes in similar settings to the proposed project. The peak hour parking demand per dwelling unit from these two surveys are provided in Table 1-3.

Table 1-3 Parking Rates for Additional Sites – Residential and Retail Developments

Survey Site	Units Occupied	Weekday		Weekend	
		Peak Hour Parking Demand (spaces)	Rate (spaces/unit)	Peak Hour Parking Demand (spaces)	Rate (spaces/unit)
Survey Site #3	174	191	1.10	191	1.10
Survey Site #4	225	212	0.94	208	0.92
Average	183	202	1.02	200	1.01

Comparison to Other Parking Rates

For comparison, rates from the ITE Parking Generation Manual, 4th Edition are provided below. The ITE Parking Generation Manual provides averages, ranges, and statistical quality values of parking demand generated by various land uses. The typical parking demand generated by a low/mid-rise apartment development is summarized in Table 1-4.

Table 1-4 ITE Parking Generation

Use Classification	Weekday		Weekend	
	Avg. Size of Studied Developments (dwelling units)	Avg. Parking Demand Rate	Avg. Size of Studied Developments (dwelling units)	Avg. Parking Demand Rate
Low/Mid-Rise Apartment (suburban)	311	1.23	n/a	n/a
Low/Mid-Rise Apartment (urban)	70	1.20	147	1.03

Source: ITE Parking Generation Manual, 4th Edition. Note that the Parking Generation Manual does not provide a weekend estimate for suburban locations.

Given the proposed location for this development within a more urban section of the City of Orange, the urban data points provided by ITE provide a good basis for comparison. The 85th percentile demand value for the urban designation was 1.61 spaces per unit for weekdays and 1.14 for weekends.

Nate Carlson – October 7, 2012

Summary of Parking Rates

Based on the data collected from the two similar survey sites, the average peak hour parking demand per dwelling unit would be anticipated to be 1.35 spaces on a weekday and 1.25 spaces on a Saturday. Per the ITE Parking Generation Manual, 4th Edition, the typical observed parking demand is 1.23 spaces on a weekday and 1.03 spaces per unit on a Saturday. The average parking rate from the additional survey sites is 1.02 parking spaces per unit on a weekday and 1.01 parking spaces per unit on a Saturday. A summary of these rates is provided in Table 1-5.

Table 1-5 Summary of Average Peak Hour Parking Demand

Survey Site	Avg. Units Occupied	Average Rate (spaces/unit)	
		Weekday	Weekend
Survey Site #1, #2 and #3	364	1.35	1.25
Survey Site #3 and #4	183	1.02	1.01
ITE Parking Manual	229	1.23	1.03

Conclusion

Based on the average rates from the similar site surveys, the proposed 1.7 parking spaces per unit should be more than sufficient to meet estimated parking demand generated by a 334-unit apartment complex in the City of Orange. In all observed cases, actual parking demand for similar residential projects in Orange County did not exceed 1.35 spaces per unit. Additionally, the ITE Parking Generation Manual, 4th Edition provides an estimated average demand of 1.03 to 1.23 for low or mid-rise apartment complexes.

In terms of parking supply, the surveyed apartment complexes provide between 1.20 and 2.15 parking spaces per unit. The combined average parking supply ratio for the five developments is 1.71 parking spaces per unit. In all four cases, the apartment complexes provide parking supply levels that are well in excess of current demand, even when all four complexes are experiencing occupancy levels of 90% or above.

COMPARABLE SITE #6:
183 UNIT COMPLEX

IBI Group
18401 Von Karman Avenue – Suite 110
Irvine CA 92612 USA

tel 949 833 5588
fax 949 833 5511

Memorandum

To/Attention	Nate Carlson	**Date**	November 19, 2012
From	Bill Delo, AICP	**Project No**	33148
cc		**Steno**	ch
Subject	Parking Study for AMLI Orange Apartment Project		

Introduction

AMLI is proposing to develop a 334-unit residential apartment project in the City of Orange and provide 1.7 parking spaces per unit for the project. The current city code requires a minimum of 2.02 parking spaces per unit. The purpose of this memorandum is to examine the typical peak parking rates identified in published parking manuals and from similar site surveys to determine whether a proposed rate of 1.7 parking spaces per unit is sufficient to meet estimated parking demand for this type of residential development.

Project Location and Background

The proposed project will be located near the Anaheim Metrolink Station and major employment centers in the City of Orange. Adjacent employers and the number of employees are summarized in Table 1-1.

Table 1-1 Adjacent Employers

Employer	Number of Employees
UCI Medical Center	4,500
Government Offices	1,400
Hilton Hotel	400
Office Towers	3,000-5,000
Outlets at Orange	2,500

Source: Pierce-Eislen, Inc.

Due to its close proximity to employment centers and transit, there is a chance for increased pedestrian and transit activity by residents of the proposed project as an alternative transportation option to the automobile. A recent study by Caltrans (*Travel Characteristics of Transit-Oriented Development in California*) assessed the travel patterns of people who live, work, shop, and recreate near suburban and infill rail transit stations throughout California. The study found that those who live in transit-oriented developments or within close proximity to mass transit have higher levels of transit use than persons in surrounding areas.

Nate Carlson – October 7, 2012

Similar Site Parking Counts

To identify a recommended minimum parking ratio, similar site parking surveys were conducted at three residential apartment developments in Orange County. The survey sites were selected based on their similarities to the project site, including development size and close proximity to employment centers. The three survey sites consist of:

- Survey Site #1, Irvine, CA – 279-unit apartment complex that is currently 93.9% occupied (262 units). This apartment complex provides 600 parking spaces in a gated parking structure. This corresponds to a parking supply ratio of 2.15 spaces per unit. The unit mix for this complex is 2 studio units, 162 1-bedroom units; and 115 2-bedroom units. This apartment is not located near mass transit.
- Survey Site #2, Irvine, CA – 403-unit apartment complex that is currently 96.8% occupied (390 units). This apartment complex provides 643 parking spaces in a gated parking structure. This corresponds to a parking supply ratio of 1.6 spaces per unit. The unit mix for this complex is 326 1-bedroom units; and 77 2-bedroom units. This apartment is not located near mass transit.
- Survey Site #3, Orange, CA – 460-unit apartment complex that is currently 95.2% occupied (440 units). This apartment provides 784 parking spaces in a gated parking structure and gated surface parking lot. This corresponds to a parking supply ratio of 1.78 spaces per unit. The unit mix for this complex is 256 1-bedroom units; and 204 2-bedroom units. This apartment is located within 1 mile of the Anaheim Metrolink Station.

Surveys were conducted on a Tuesday and Saturday between 6:00 PM – 1:00 AM to capture the peak parking demand generated by residential uses at the two similar sites. The peak hour parking rates from the three sites are summarized in Table 1-2.

Table 1-2 Similar Site Parking Rates – Residential Only

Survey Site	Units Occupied	Weekday		Weekend	
		Peak Hour Parking Demand (spaces)	Rate (spaces/unit)	Peak Hour Parking Demand (spaces)	Rate (spaces/unit)
Survey Site #1	262	354	1.35	356	1.36
Survey Site #2	390	504	1.29	443	1.14
Survey Site #3	440	616	1.40	547	1.24
Average	364	491	1.35	449	1.25

IBI Group also conducted parking surveys at two mixed-use residential apartment and retail developments in Orange County, California. These two survey sites consist of:

- Survey Site #3, Fullerton, CA – 183-unit apartment complex that is currently 95% occupied (174 units). The apartment complex provides 223 residential parking spaces in a gated parking structure. The unit mix for this complex is 129 1-bedroom units and 54 2-bedroom units. This corresponds to a parking supply ratio of 1.21 spaces per unit. This apartment is located within 1 mile of the Fullerton Transportation Center.
- Survey Site #4, Santa Ana, CA – 250-unit apartment complex that is currently 90% occupied (225 units). The apartment complex provides 453 residential parking spaces in a gated parking structure. This corresponds to a parking supply ratio of 1.8 spaces

per unit. The unit mix for this complex is 108 1-bedroom units and 145 2 to 3 bedroom units. This apartment is not located near mass transit.

These additional survey sites are smaller than the proposed project and include a retail component as part of the apartment development. However, both survey sites are mid-rise apartment complexes in similar settings to the proposed project. The peak hour parking demand per dwelling unit from these two surveys are provided in Table 1-3.

Table 1-3 Parking Rates for Additional Sites – Residential and Retail Developments

Survey Site	Units Occupied	Weekday		Weekend	
		Peak Hour Parking Demand (spaces)	Rate (spaces/unit)	Peak Hour Parking Demand (spaces)	Rate (spaces/unit)
Survey Site #3	174	191	1.10	191	1.10
Survey Site #4	225	212	0.94	208	0.92
Average	183	202	1.02	200	1.01

Comparison to Other Parking Rates

For comparison, rates from the ITE Parking Generation Manual, 4th Edition are provided below. The ITE Parking Generation Manual provides averages, ranges, and statistical quality values of parking demand generated by various land uses. The typical parking demand generated by a low/mid-rise apartment development is summarized in Table 1-4.

Table 1-4 ITE Parking Generation

Use Classification	Weekday		Weekend	
	Avg. Size of Studied Developments (dwelling units)	Avg. Parking Demand Rate	Avg. Size of Studied Developments (dwelling units)	Avg. Parking Demand Rate
Low/Mid-Rise Apartment (suburban)	311	1.23	n/a	n/a
Low/Mid-Rise Apartment (urban)	70	1.20	147	1.03

Source: ITE Parking Generation Manual, 4th Edition. Note that the Parking Generation Manual does not provide a weekend estimate for suburban locations.

Given the proposed location for this development within a more urban section of the City of Orange, the urban data points provided by ITE provide a good basis for comparison. The 85th percentile demand value for the urban designation was 1.61 spaces per unit for weekdays and 1.14 for weekends.

Nate Carlson – October 7, 2012

Summary of Parking Rates

Based on the data collected from the two similar survey sites, the average peak hour parking demand per dwelling unit would be anticipated to be 1.35 spaces on a weekday and 1.25 spaces on a Saturday. Per the ITE Parking Generation Manual, 4th Edition, the typical observed parking demand is 1.23 spaces on a weekday and 1.03 spaces per unit on a Saturday. The average parking rate from the additional survey sites is 1.02 parking spaces per unit on a weekday and 1.01 parking spaces per unit on a Saturday. A summary of these rates is provided in Table 1-5.

Table 1-5 Summary of Average Peak Hour Parking Demand

Survey Site	Avg. Units Occupied	Average Rate (spaces/unit)	
		Weekday	Weekend
Survey Site #1, #2 and #3	364	1.35	1.25
Survey Site #3 and #4	183	1.02	1.01
ITE Parking Manual	229	1.23	1.03

Conclusion

Based on the average rates from the similar site surveys, the proposed 1.7 parking spaces per unit should be more than sufficient to meet estimated parking demand generated by a 334-unit apartment complex in the City of Orange. In all observed cases, actual parking demand for similar residential projects in Orange County did not exceed 1.35 spaces per unit. Additionally, the ITE Parking Generation Manual, 4th Edition provides an estimated average demand of 1.03 to 1.23 for low or mid-rise apartment complexes.

In terms of parking supply, the surveyed apartment complexes provide between 1.20 and 2.15 parking spaces per unit. The combined average parking supply ratio for the five developments is 1.71 parking spaces per unit. In all four cases, the apartment complexes provide parking supply levels that are well in excess of current demand, even when all four complexes are experiencing occupancy levels of 90% or above.

COMPARABLE SITE #7:
250 UNIT COMPLEX

IBI Group
18401 Von Karman Avenue – Suite 110
Irvine CA 92612 USA

tel 949 833 5588
fax 949 833 5511

Memorandum

To/Attention	Nate Carlson	**Date**	November 19, 2012
From	Bill Delo, AICP	**Project No**	33148
cc		**Steno**	ch
Subject	Parking Study for AMLI Orange Apartment Project		

Introduction

AMLI is proposing to develop a 334-unit residential apartment project in the City of Orange and provide 1.7 parking spaces per unit for the project. The current city code requires a minimum of 2.02 parking spaces per unit. The purpose of this memorandum is to examine the typical peak parking rates identified in published parking manuals and from similar site surveys to determine whether a proposed rate of 1.7 parking spaces per unit is sufficient to meet estimated parking demand for this type of residential development.

Project Location and Background

The proposed project will be located near the Anaheim Metrolink Station and major employment centers in the City of Orange. Adjacent employers and the number of employees are summarized in Table 1-1.

Table 1-1 Adjacent Employers

Employer	Number of Employees
UCI Medical Center	4,500
Government Offices	1,400
Hilton Hotel	400
Office Towers	3,000-5,000
Outlets at Orange	2,500

Source: Pierce-Eislen, Inc.

Due to its close proximity to employment centers and transit, there is a chance for increased pedestrian and transit activity by residents of the proposed project as an alternative transportation option to the automobile. A recent study by Caltrans (*Travel Characteristics of Transit-Oriented Development in California*) assessed the travel patterns of people who live, work, shop, and recreate near suburban and infill rail transit stations throughout California. The study found that those who live in transit-oriented developments or within close proximity to mass transit have higher levels of transit use than persons in surrounding areas.

Nate Carlson – October 7, 2012

Similar Site Parking Counts

To identify a recommended minimum parking ratio, similar site parking surveys were conducted at three residential apartment developments in Orange County. The survey sites were selected based on their similarities to the project site, including development size and close proximity to employment centers. The three survey sites consist of:

- Survey Site #1, Irvine, CA – 279-unit apartment complex that is currently 93.9% occupied (262 units). This apartment complex provides 600 parking spaces in a gated parking structure. This corresponds to a parking supply ratio of 2.15 spaces per unit. The unit mix for this complex is 2 studio units, 162 1-bedroom units; and 115 2-bedroom units. This apartment is not located near mass transit.
- Survey Site #2, Irvine, CA – 403-unit apartment complex that is currently 96.8% occupied (390 units). This apartment complex provides 643 parking spaces in a gated parking structure. This corresponds to a parking supply ratio of 1.6 spaces per unit. The unit mix for this complex is 326 1-bedroom units; and 77 2-bedroom units. This apartment is not located near mass transit.
- Survey Site #3, Orange, CA – 460-unit apartment complex that is currently 95.2% occupied (440 units). This apartment provides 784 parking spaces in a gated parking structure and gated surface parking lot. This corresponds to a parking supply ratio of 1.78 spaces per unit. The unit mix for this complex is 256 1-bedroom units; and 204 2-bedroom units. This apartment is located within 1 mile of the Anaheim Metrolink Station.

Surveys were conducted on a Tuesday and Saturday between 6:00 PM – 1:00 AM to capture the peak parking demand generated by residential uses at the two similar sites. The peak hour parking rates from the three sites are summarized in Table 1-2.

Table 1-2 Similar Site Parking Rates – Residential Only

Survey Site	Units Occupied	Weekday		Weekend	
		Peak Hour Parking Demand (spaces)	Rate (spaces/unit)	Peak Hour Parking Demand (spaces)	Rate (spaces/unit)
Survey Site #1	262	354	1.35	356	1.36
Survey Site #2	390	504	1.29	443	1.14
Survey Site #3	440	616	1.40	547	1.24
Average	364	491	1.35	449	1.25

IBI Group also conducted parking surveys at two mixed-use residential apartment and retail developments in Orange County, California. These two survey sites consist of:

- Survey Site #3, Fullerton, CA – 183-unit apartment complex that is currently 95% occupied (174 units). The apartment complex provides 223 residential parking spaces in a gated parking structure. The unit mix for this complex is 129 1-bedroom units and 54 2-bedroom units. This corresponds to a parking supply ratio of 1.21 spaces per unit. This apartment is located within 1 mile of the Fullerton Transportation Center.
- Survey Site #4, Santa Ana, CA – 250-unit apartment complex that is currently 90% occupied (225 units). The apartment complex provides 453 residential parking spaces in a gated parking structure. This corresponds to a parking supply ratio of 1.8 spaces

per unit. The unit mix for this complex is 108 1-bedroom units and 145 2 to 3 bedroom units. This apartment is not located near mass transit.

These additional survey sites are smaller than the proposed project and include a retail component as part of the apartment development. However, both survey sites are mid-rise apartment complexes in similar settings to the proposed project. The peak hour parking demand per dwelling unit from these two surveys are provided in Table 1-3.

Table 1-3 Parking Rates for Additional Sites – Residential and Retail Developments

Survey Site	Units Occupied	Weekday		Weekend	
		Peak Hour Parking Demand (spaces)	Rate (spaces/unit)	Peak Hour Parking Demand (spaces)	Rate (spaces/unit)
Survey Site #3	174	191	1.10	191	1.10
Survey Site #4	225	212	0.94	208	0.92
Average	183	202	1.02	200	1.01

Comparison to Other Parking Rates

For comparison, rates from the ITE Parking Generation Manual, 4th Edition are provided below. The ITE Parking Generation Manual provides averages, ranges, and statistical quality values of parking demand generated by various land uses. The typical parking demand generated by a low/mid-rise apartment development is summarized in Table 1-4.

Table 1-4 ITE Parking Generation

Use Classification	Weekday		Weekend	
	Avg. Size of Studied Developments (dwelling units)	Avg. Parking Demand Rate	Avg. Size of Studied Developments (dwelling units)	Avg. Parking Demand Rate
Low/Mid-Rise Apartment (suburban)	311	1.23	n/a	n/a
Low/Mid-Rise Apartment (urban)	70	1.20	147	1.03

Source: ITE Parking Generation Manual, 4th Edition. Note that the Parking Generation Manual does not provide a weekend estimate for suburban locations.

Given the proposed location for this development within a more urban section of the City of Orange, the urban data points provided by ITE provide a good basis for comparison. The 85th percentile demand value for the urban designation was 1.61 spaces per unit for weekdays and 1.14 for weekends.

Nate Carlson – October 7, 2012

Summary of Parking Rates

Based on the data collected from the two similar survey sites, the average peak hour parking demand per dwelling unit would be anticipated to be 1.35 spaces on a weekday and 1.25 spaces on a Saturday. Per the ITE Parking Generation Manual, 4th Edition, the typical observed parking demand is 1.23 spaces on a weekday and 1.03 spaces per unit on a Saturday. The average parking rate from the additional survey sites is 1.02 parking spaces per unit on a weekday and 1.01 parking spaces per unit on a Saturday. A summary of these rates is provided in Table 1-5.

Table 1-5 Summary of Average Peak Hour Parking Demand

Survey Site	Avg. Units Occupied	Average Rate (spaces/unit)	
		Weekday	Weekend
Survey Site #1, #2 and #3	364	1.35	1.25
Survey Site #3 and #4	183	1.02	1.01
ITE Parking Manual	229	1.23	1.03

Conclusion

Based on the average rates from the similar site surveys, the proposed 1.7 parking spaces per unit should be more than sufficient to meet estimated parking demand generated by a 334-unit apartment complex in the City of Orange. In all observed cases, actual parking demand for similar residential projects in Orange County did not exceed 1.35 spaces per unit. Additionally, the ITE Parking Generation Manual, 4th Edition provides an estimated average demand of 1.03 to 1.23 for low or mid-rise apartment complexes.

In terms of parking supply, the surveyed apartment complexes provide between 1.20 and 2.15 parking spaces per unit. The combined average parking supply ratio for the five developments is 1.71 parking spaces per unit. In all four cases, the apartment complexes provide parking supply levels that are well in excess of current demand, even when all four complexes are experiencing occupancy levels of 90% or above.

COMPARABLE SITE #8:
PARAGON AT OLD TOWN

DRAFT

MEMORANDUM

To:	Mr. Jason Silver Lincoln Property Company	Date:	October 15, 2012
From:	Alfred C. Ying, P.E., PTP Chin S. Taing, PTP LLG, Engineers	LLG Ref:	1-12-3990-1
Subject:	Parking Demand Analysis for the Proposed Fifth Avenue/Huntington Drive Mixed-Use Project City of Monrovia, California		

LINSCOTT LAW & GREENSPAN engineers

Engineers & Planners
Traffic
Transportation
Parking

Linscott, Law & Greenspan, Engineers
236 N. Chester Avenue
Suite 200
Pasadena, CA 91106
626.796.2322 T
626.792.0941 F
www.llgengineers.com

Pasadena
Costa Mesa
San Diego
Las Vegas

This memorandum has been prepared to summarize the parking demand analysis associated with the proposed Fifth Avenue/Huntington Drive Mixed-Use project located in the City of Monrovia, California. Pursuant to the request of the City of Monrovia, LLG Engineers has prepared this parking analysis as part of the entitlement process for the proposed project. This analysis is used as a basis so that a determination can be made as to the adequacy of the future planned parking supply to meet the anticipated peak site-wide parking demand following development of the proposed Fifth Avenue/Huntington Drive Mixed-Use project. The following sections provide a review of the following:

- A description of the existing and proposed site conditions, including a review of the proposed on-site parking supply;
- Off-street parking requirements applicable to the project site pursuant to the City of Monrovia Municipal Code;
- A comparison of parking standards for other nearby communities for multi-family residential uses;
- A review of the observed parking demand at other similar developments (e.g., as summarized in the Institute of Transportation Engineers [ITE] *Parking Generation* publication[1] and the Urban Land Institute's [ULI] *Shared Parking* publication[2];
- A review of the observed existing parking demand conducted at other comparable multi-family residential development sites;
- A forecast of peak parking demand for the project utilizing the empirical parking demand ratios from other comparable sites; and
- A conclusion regarding adequacy of the proposed parking supply to accommodate the forecast future peak parking demand.

[1] Institute of Transportation Engineers *Parking Generation* manual, 4th Edition, Washington D.C., 2010.
[2] Urban Land Institute, *Shared Parking,* 2nd Edition, Washington D.C., 2005.

Table 3
SUMMARY OF PARKING DEMAND RATIOS [1]
COMPARABLE SITES

COMPARABLE SITES	TOTAL NO. OF DWELLING UNITS [2]	UNIT OCCUPANCY LEVELS [2]	EXISTING ON-SITE [3]		EXISTING OBSERVED [4]		AT FULL OCCUPANCY [5]	
			ON-SITE PARKING SUPPLY	PARKING SUPPLY RATIO (SPACES/UNIT)	PEAK PARKING DEMAND	PEAK PARKING DEMAND RATIO (SPACES/UNIT)	PEAK PARKING DEMAND	PEAK PARKING DEMAND RATIO (SPACES/UNIT)
1. Paragon at Old Town	163	95.7%	404	2.48	231	1.42	241	1.48
2. Trio Apartments	304	94.0%	480	1.58	348	1.14	370	1.22
3. Main Street Village	481	93.8%	1,020	2.12	639	1.33	681	1.42
TOTALS	**948**	**94.5%**	**1,904**	**2.01**	**1,218**	**1.28**	**1,292**	**1.36**

[1] The parking demand ratios were developed based on the number of dwelling units and parking spaces provided at each observation site, as well as the results of the parking accumulation surveys conducted for each site (on-site and on-street as applicable) in September 2012 (refer to Appendix A for a summary of the parking surveys for each site).

[2] The site characteristics, including number of residential units and the site occupancy levels at the time of the parking accumulation surveys were provided by Lincoln Property Company representatives.

[3] The parking supply was inventoried by LLG Engineers in September 2012. The parking supply includes all marked parking spaces provided on-site (i.e., regular, handicap, visitor, etc.) for residents, guests, vendors. The existing supply parking ratios are based on the number of spaces provided on-site divided by the total number of dwelling units.

[4] The existing peak parking demand was observed to occur at 11:00 PM for the Paragon at Old Town and at 12:00 AM midnight for the Trio Apartments and Main Street Village. The existing peak parking demand for the Paragon at Old Town and Trio Apartments included on-site and on-street observed parking demand associated with residents/guests for the sites. Refer to Appendix A for the parking surveys for each site. The weekday parking demand ratios are based on the parking demand observed for each site divided by the total number of dwelling units.

[5] Peak parking demand was forecasted at full (100%) occupancy for each site. The peak parking demand ratios at full occupancy were derived by dividing the peak parking demand by the total number of dwelling units.

APPENDIX A

PARKING ACCUMULATION SURVEYS

Appendix Table A-1
PARAGON AT OLD TOWN (700 SOUTH MYRTLE, MONROVIA) PARKING ACCUMULATION SURVEYS [1]
SURVEY DATES: WEDNESDAY (SEPTEMBER 12, 2012) AND THURSDAY (SEPTEMBER 13, 2012)

PARKING LOCATION	[2] NO. OF SPACES	WEDNESDAY, SEPTEMBER 12, 2012													
		6:00 PM		7:00 PM		8:00 PM		9:00 PM		10:00 PM		11:00 PM		12:00 AM	
		OCC.	PERCENT	OCC.	PERCENT	OCC.	PERCENT	OCC.	PERCENT	OCC.	PERCENT	OCC.	PERCENT	OCC.	PERCENT
Residential Parking															
Standard Spaces	325	117	36.0%	140	43.1%	157	48.3%	172	52.9%	178	54.8%	180	55.4%	182	56.0%
Handicap Spaces	4	3	75.0%	2	50.0%	3	75.0%	3	75.0%	3	75.0%	3	75.0%	3	75.0%
Total Residential Parking	329	120	36.5%	142	43.2%	160	48.6%	175	53.2%	181	55.0%	183	55.6%	185	56.2%
Public/Visitor Parking															
Standard Spaces	70	37	52.9%	37	52.9%	30	42.9%	25	35.7%	23	32.9%	25	35.7%	24	34.3%
Handicap Spaces	5	0	0.0%	1	20.0%	1	20.0%	1	20.0%	1	20.0%	1	20.0%	1	20.0%
Total Public/Visitor Parking	75	37	49.3%	38	50.7%	31	41.3%	26	34.7%	24	32.0%	26	34.7%	25	33.3%
Total On-Site Parking	404	157		180		191		201		205		209		210	
On-Street Parking	--	19		23		30		25		23		22		18	
Total Parking Occupancy	404	176	43.6%	203	50.2%	221	54.7%	226	55.9%	228	56.4%	**231**	**57.2%**	228	56.4%

PARKING LOCATION	[2] NO. OF SPACES	THURSDAY, SEPTEMBER 13, 2012													
		6:00 PM		7:00 PM		8:00 PM		9:00 PM		10:00 PM		11:00 PM		12:00 AM	
		OCC.	PERCENT	OCC.	PERCENT	OCC.	PERCENT	OCC.	PERCENT	OCC.	PERCENT	OCC.	PERCENT	OCC.	PERCENT
Residential Parking															
Standard Spaces	325	114	35.1%	134	41.2%	144	44.3%	151	46.5%	168	51.7%	175	53.8%	178	54.8%
Handicap Spaces	4	3	75.0%	3	75.0%	3	75.0%	3	75.0%	3	75.0%	3	75.0%	3	75.0%
Total Residential Parking	329	117	35.6%	137	41.6%	147	44.7%	154	46.8%	171	52.0%	178	54.1%	181	55.0%
Public/Visitor Parking															
Standard Spaces	70	41	58.6%	34	48.6%	28	40.0%	25	35.7%	26	37.1%	24	34.3%	26	37.1%
Handicap Spaces	5	0	0.0%	1	20.0%	1	20.0%	1	20.0%	1	20.0%	1	20.0%	1	20.0%
Total Public/Visitor Parking	75	41	54.7%	35	46.7%	29	38.7%	26	34.7%	27	36.0%	25	33.3%	27	36.0%
Total On-Site Parking	404	158		172		176		180		198		203		208	
On-Street Parking	--	11		15		19		19		20		19		16	
Total Parking Occupancy	404	169	41.8%	187	46.3%	195	48.3%	199	49.3%	218	54.0%	222	55.0%	224	55.4%

[1] The parking survey was conducted by The Traffic Solution.

[2] Parking inventory based on field review by LLG Engineers in September 2012.

[3] Vehicles parked on-street for more than three consecutive hours along the property frontages (i.e., north and south sides of Olive Avenue and Walnut Avenue, and east and west sides of Myrtle Avenue) that were not observed to patronize other nearby uses in the surrounding area were conservatively assumed to be related to the Paragon at Old Town (i.e., residents and/or guests).

COMPARABLE SITE #9:
TRIO APARTMENTS

DRAFT

MEMORANDUM

To:	Mr. Jason Silver Lincoln Property Company	Date:	October 15, 2012
From:	Alfred C. Ying, P.E., PTP Chin S. Taing, PTP LLG, Engineers	LLG Ref:	1-12-3990-1
Subject:	Parking Demand Analysis for the Proposed Fifth Avenue/Huntington Drive Mixed-Use Project City of Monrovia, California		

LINSCOTT LAW & GREENSPAN engineers

Engineers & Planners
Traffic
Transportation
Parking

Linscott, Law & Greenspan, Engineers
236 N. Chester Avenue
Suite 200
Pasadena, CA 91106
626.796.2322 T
626.792.0941 F
www.llgengineers.com

Pasadena
Costa Mesa
San Diego
Las Vegas

This memorandum has been prepared to summarize the parking demand analysis associated with the proposed Fifth Avenue/Huntington Drive Mixed-Use project located in the City of Monrovia, California. Pursuant to the request of the City of Monrovia, LLG Engineers has prepared this parking analysis as part of the entitlement process for the proposed project. This analysis is used as a basis so that a determination can be made as to the adequacy of the future planned parking supply to meet the anticipated peak site-wide parking demand following development of the proposed Fifth Avenue/Huntington Drive Mixed-Use project. The following sections provide a review of the following:

- A description of the existing and proposed site conditions, including a review of the proposed on-site parking supply;
- Off-street parking requirements applicable to the project site pursuant to the City of Monrovia Municipal Code;
- A comparison of parking standards for other nearby communities for multi-family residential uses;
- A review of the observed parking demand at other similar developments (e.g., as summarized in the Institute of Transportation Engineers [ITE] *Parking Generation* publication[1] and the Urban Land Institute's [ULI] *Shared Parking* publication[2];
- A review of the observed existing parking demand conducted at other comparable multi-family residential development sites;
- A forecast of peak parking demand for the project utilizing the empirical parking demand ratios from other comparable sites; and
- A conclusion regarding adequacy of the proposed parking supply to accommodate the forecast future peak parking demand.

[1] Institute of Transportation Engineers *Parking Generation* manual, 4th Edition, Washington D.C., 2010.
[2] Urban Land Institute, *Shared Parking,* 2nd Edition, Washington D.C., 2005.

Table 3
SUMMARY OF PARKING DEMAND RATIOS [1]
COMPARABLE SITES

COMPARABLE SITES	TOTAL NO. OF DWELLING UNITS [2]	UNIT OCCUPANCY LEVELS [2]	EXISTING ON-SITE [3]		EXISTING OBSERVED [4]		AT FULL OCCUPANCY [5]	
			ON-SITE PARKING SUPPLY	PARKING SUPPLY RATIO (SPACES/UNIT)	PEAK PARKING DEMAND	PEAK PARKING DEMAND RATIO (SPACES/UNIT)	PEAK PARKING DEMAND	PEAK PARKING DEMAND RATIO (SPACES/UNIT)
1. Paragon at Old Town	163	95.7%	404	2.48	231	1.42	241	1.48
2. Trio Apartments	304	94.0%	480	1.58	348	1.14	370	1.22
3. Main Street Village	481	93.8%	1,020	2.12	639	1.33	681	1.42
TOTALS	**948**	**94.5%**	**1,904**	**2.01**	**1,218**	**1.28**	**1,292**	**1.36**

[1] The parking demand ratios were developed based on the number of dwelling units and parking spaces provided at each observation site, as well as the results of the parking accumulation surveys conducted for each site (on-site and on-street as applicable) in September 2012 (refer to Appendix A for a summary of the parking surveys for each site).

[2] The site characteristics, including number of residential units and the site occupancy levels at the time of the parking accumulation surveys were provided by Lincoln Property Company representatives.

[3] The parking supply was inventoried by LLG Engineers in September 2012. The parking supply includes all marked parking spaces provided on-site (i.e., regular, handicap, visitor, etc.) for residents, guests, vendors. The existing supply parking ratios are based on the number of spaces provided on-site divided by the total number of dwelling units.

[4] The existing peak parking demand was observed to occur at 11:00 PM for the Paragon at Old Town and at 12:00 AM midnight for the Trio Apartments and Main Street Village. The existing peak parking demand for the Paragon at Old Town and Trio Apartments included on-site and on-street observed parking demand associated with residents/guests for the sites. Refer to Appendix A for the parking surveys for each site. The weekday parking demand ratios are based on the parking demand observed for each site divided by the total number of dwelling units.

[5] Peak parking demand was forecasted at full (100%) occupancy for each site. The peak parking demand ratios at full occupancy were derived by dividing the peak parking demand by the total number of dwelling units.

APPENDIX A

PARKING ACCUMULATION SURVEYS

Appendix Table A-2

TRIO APARTMENTS (44 NORTH MADISON AVENUE, PASADENA) PARKING ACCUMULATION SURVEYS [1]

SURVEY DATES: WEDNESDAY (SEPTEMBER 19, 2012) AND THURSDAY (SEPTEMBER 20, 2012)

PARKING LOCATION	[2] NO. OF SPACES	WEDNESDAY, SEPTEMBER 19, 2012					
		10:00 PM		11:00 PM		12:00 AM	
		OCC.	PERCENT	OCC.	PERCENT	OCC.	PERCENT
Residential Parking							
Standard Spaces	438	291	66.4%	304	69.4%	311	71.0%
Employee Spaces	2	0	0.0%	0	0.0%	0	0.0%
Handicap Spaces	10	5	50.0%	5	50.0%	7	70.0%
Total Residential Parking	450	296	65.8%	309	68.7%	318	70.7%
Vendor/Visitor Parking							
Standard Spaces	28	3	10.7%	3	10.7%	3	10.7%
Handicap Spaces	2	0	0.0%	0	0.0%	0	0.0%
Total Vendor/Visitor Parking	30	3	10.0%	3	10.0%	3	10.0%
Total On-Site Parking	480	299		312		321	
On-Street Parking [3]	--	4		1		1	
Total Parking Occupancy	480	303	63.1%	313	65.2%	322	67.1%

PARKING LOCATION	[2] NO. OF SPACES	THURSDAY, SEPTEMBER 20, 2012					
		10:00 PM		11:00 PM		12:00 AM	
		OCC.	PERCENT	OCC.	PERCENT	OCC.	PERCENT
Residential Parking							
Standard Spaces	438	322	73.5%	334	76.3%	337	76.9%
Employee Spaces	2	0	0.0%	0	0.0%	0	0.0%
Handicap Spaces	10	5	50.0%	6	60.0%	7	70.0%
Total Residential Parking	450	327	72.7%	340	75.6%	344	76.4%
Vendor/Visitor Parking							
Standard Spaces	28	6	21.4%	3	10.7%	3	10.7%
Handicap Spaces	2	0	0.0%	0	0.0%	0	0.0%
Total Vendor/Visitor Parking	30	6	20.0%	3	10.0%	3	10.0%
Total On-Site Parking	480	333		343		347	
On-Street Parking [3]	--	1		1		1	
Total Parking Occupancy	480	334	69.6%	344	71.7%	**348**	**72.5%**

[1] The parking survey was conducted by The Traffic Solution.

[2] Parking inventory based on field review by LLG Engineers in September 2012.

[3] Vehicles parked on Union Street (i.e., south side of Union Street between Madison Avenue and El Molino Avenue) along the property frontage and observed to be Trio Apartment residents/guests were included.

COMPARABLE SITE #10:
ADAGIO ON THE GREEN

Prepared by National Data & Surveying Services

Parking Study

Location: Adagio on the Green Apartments
City: Orange County

Day: Wednesday
Date: 11/30/2016

Time	Adagio on the Green Apartments																											
	Zone A Upper								Zone A Lower				Zone B				Zone C											
	Resident				Guest				Resident			Guest	Resident	Guest			Resident			Guest							
	Regular	Double Parking (10)	HC	HC Van	Guest	HC	HC Van	USPS	Regular	Double Parking (6)	Motorcycle (Unmarked)	N/A	N/A	Regular	HC Van	Future Resident Parking	Regular	Double Parking (2)	HC Van	Regular	Guest	HC Regular	HC Van	USPS	Resident Total	Guest Total	Resident Occupancy Percentage	Guest Occupancy Percentage
Spaces	86	20	5	2	52	2	1	1	187	12				3	1	3	56	4	1	51	20	2	2	1	373	139		
19:00	52	6	2	1	36	2	0	0	69	3	0			0	0	0	22	2	0	25	7	0	1	0	157	71	42%	51%
20:00	55	4	1	1	40	2	0	0	69	3	0			1	0	0	23	2	0	24	7	2	0	0	158	76	42%	55%
21:00	63	4	2	1	49	2	0	0	87	3	1			0	0	0	25	2	0	25	8	1	0	0	188	85	50%	61%
22:00	65	6	2	1	50	2	0	0	87	3	1			1	0	1	25	2	0	30	8	1	0	0	192	93	51%	67%
23:00	71	7	2	1	50	2	0	1	97	2	1			0	0	1	28	2	0	34	7	1	0	0	211	96	57%	69%
0:00	71	8	3	1	51	2	0	1	95	2	1			0	0	1	26	2	0	33	8	1	1	0	209	98	56%	71%
1:00	71	8	2	1	51	2	0	1	101	2	1			0	0	1	26	2	0	33	8	1	1	0	214	98	57%	71%
2:00	72	8	2	1	51	2	0	0	101	3	1			0	0	1	25	2	0	33	8	1	1	0	215	97	58%	70%

Notes:
Max Hours highlighted in orange

Prepared by National Data & Surveying Services

Parking Study

Location: Adagio on the Green Apartments
City: Orange County

Day: Thursday
Date: 12/1/2016

Time	Adagio on the Green Apartments																											
	Zone A Upper								Zone A Lower				Zone B				Zone C											
	Resident				Guest				Resident			Guest	Resident	Guest			Resident			Guest							
	Regular	Double Parking (10)	HC	HC Van	Guest	HC	HC Van	USPS	Regular	Double Parking (6)	Motorcycle (Unmarked)	N/A	N/A	Regular	HC Van	Future Resident Parking	Regular	Double Parking (2)	HC Van	Regular	Guest	HC Regular	HC Van	USPS	Resident Total	Guest Total	Resident Occupancy Percentage	Guest Occupancy Percentage
Spaces	86	20	5	2	52	2	1	1	187	12				3	1	3	56	4	1	51	20	2	2	1	373	139		
19:00	52	3	2	1	42	2	1	1	78	2	1			0	0	0	22	1	1	20	7	1	1	0	163	75	44%	54%
20:00	54	3	2	1	44	1	1	0	78	2	1			0	0	0	24	2	0	22	8	1	1	0	167	78	45%	56%
21:00	54	4	4	1	51	1	1	0	91	3	1			0	0	0	24	2	0	23	9	1	1	0	184	87	49%	63%
22:00	57	5	2	1	50	2	1	0	94	3	1			2	0	0	27	2	0	27	9	1	1	0	192	93	51%	67%
23:00	72	6	1	2	50	2	1	0	102	3	1			1	0	0	27	2	0	31	9	1	1	0	216	96	58%	69%
0:00	74	7	2	1	49	2	1	0	104	3	1			1	0	0	27	2	0	31	10	1	1	0	221	96	59%	69%
1:00	70	7	2	1	49	2	1	0	104	3	1			1	0	0	27	2	0	33	8	1	1	0	217	96	58%	69%
2:00	69	7	2	1	50	2	1	0	102	3	1			1	0	0	27	2	0	34	8	1	0	0	214	97	57%	70%

Notes:
Max Hours highlighted in orange

Prepared by National Data & Surveying Services

Parking Study

Location: Adagio on the Green Apartments
City: Orange County

Day: Saturday
Date: 12/3/2016

Time	Adagio on the Green Apartments																											
	Zone A Upper								Zone A Lower				Zone B				Zone C											
	Resident				Guest				Resident			Guest	Resident	Guest			Resident			Guest							
	Regular	Double Parking (10)	HC	HC Van	Guest	HC	HC Van	USPS	Regular	Double Parking (6)	Motorcycle (Unmarked)	N/A	N/A	Regular	HC Van	Future Resident Parking	Regular	Double Parking (2)	HC Van	Regular	Guest	HC Regular	HC Van	USPS	Resident Total	Guest Total	Resident Occupancy Percentage	Guest Occupancy Percentage
Spaces	86	20	5	2	52	2	1	1	187	12				3	1	3	56	4	1	51	20	2	2	1	373	139		
12:00	51	5	1	1	41	1	1	0	59	2	1			1	0	0	13	0	0	23	6	0	1	0	133	74	36%	53%
13:00	47	5	1	1	40	1	1	0	61	2	1			0	0	0	14	1	0	21	5	0	1	0	133	69	36%	50%
14:00	46	6	0	1	47	1	0	0	62	3	1			0	0	0	15	1	0	21	6	0	1	0	135	76	36%	55%
15:00	47	3	0	1	47	2	0	0	60	3	1			0	0	0	20	1	0	19	6	0	1	0	136	75	36%	54%
19:00	50	5	2	1	52	2	1	1	71	3	1			3	1	3	22	1	0	21	14	1	0	0	156	99	42%	71%
20:00	54	3	3	1	52	2	0	1	68	3	1			3	1	3	23	2	0	22	14	2	0	0	158	100	42%	72%
21:00	51	6	2	1	49	2	0	1	80	3	1			1	1	1	24	2	0	23	13	2	0	0	170	93	46%	67%
22:00	58	5	2	1	43	2	0	0	83	3	1			1	0	2	30	2	0	25	9	1	1	0	185	84	50%	60%
23:00	64	7	2	1	48	2	0	0	89	3	1			1	0	1	24	2	0	28	9	1	1	0	193	91	52%	65%
0:00	67	8	2	1	48	2	1	0	92	3	1			1	0	1	25	2	0	28	9	1	0	0	201	91	54%	65%
1:00	68	8	2	1	48	2	1	0	95	3	1			1	0	1	24	2	0	29	9	1	1	0	204	93	55%	67%
2:00	68	8	2	1	47	2	1	0	97	3	1			1	0	2	25	2	0	28	9	1	1	0	207	92	55%	66%

Notes:

Max Hours highlighted in orange
Zone A Upper: Guest area had 1 car parked blocking spaces at 2:00-3:00pm, and at 7:00-8:00pm
Zone A Lower: Resident area had 1 car parked blocking spaces at 12:00 Noon
Zone B: Guest area had 1 car parked blocking spaces at 9:00pm
Zone C: Residnt area had 1 car parked blocking spaces at 7:00-8:00pm, 1 motorcycle at 10:00pm-2:00am

COMPARABLE SITE #11:
SKYE AT LAGUNA NIGUEL

Prepared by National Data & Surveying Services

Parking Study

Location: Skye at Laguna Niguel
City: Orange County

Day: Wednesday
Date: 11/30/2016

Time	Skye at Laguna Niguel											Resident Total	Guest Total	Resident Occupancy Percentage	Guest Occupancy Percentage
	Level 1							Lower							
	Resident				Guest			Resident			Guest				
	Regulat	Double Parking (12)	HC	HC Van	Regular	HC	HC Van	Regular	Double Parking (10)	Motorcycle Unmarked	N/A				
Spaces	33	24	1	2	51	1	2	33	20			113	54		
19:00	9	3	0	0	38	1	0	9	3	4		28	39	25%	72%
20:00	15	7	0	0	39	0	0	15	7	4		48	39	42%	72%
21:00	14	8	0	0	41	0	0	14	8	3		47	41	42%	76%
22:00	17	9	0	0	46	1	0	17	9	4		56	47	50%	87%
23:00	17	9	0	0	43	1	0	17	9	4		56	44	50%	81%
0:00	17	9	0	0	44	1	0	17	9	4		56	45	50%	83%
1:00	17	9	0	0	44	1	0	17	9	3		55	45	49%	83%
2:00	17	9	0	0	43	1	0	17	9	3		55	44	49%	81%

Notes:
Max Hours highlighted in orange

Prepared by National Data & Surveying Services

Parking Study

Location: Skye at Laguna Niguel
City: Orange County

Day: Thursday
Date: 12/1/2016

Time	Skye at Laguna Niguel														
	Level 1							Lower							
	Resident				Guest			Resident				Guest			
	Regulat	Double Parking (12)	HC	HC Van	Regular	HC	HC Van	Regular	Double Parking (10)	Motorcycle Unmarked	N/A	Resident Total	Guest Total	Resident Occupancy Percentage	Guest Occupancy Percentage
Spaces	33	24	1	2	51	1	2	33	20			113	54		
19:00	8	4	0	0	30	0	0	41	3			56	30	50%	56%
20:00	14	6	0	0	38	0	0	48	4			72	38	64%	70%
21:00	13	6	0	0	38	1	0	52	5			76	39	67%	72%
22:00	14	6	0	0	39	1	0	60	6			86	40	76%	74%
23:00	14	6	0	0	39	1	0	60	6			86	40	76%	74%
0:00	14	7	0	0	40	1	0	61	6			88	41	78%	76%
1:00	15	7	0	0	43	1	0	62	6			90	44	80%	81%
2:00	14	7	0	0	43	1	0	63	6			90	44	80%	81%

Notes:
Max Hours highlighted in orange

Prepared by National Data & Surveying Services

Parking Study

Location: Skye at Laguna Niguel
City: Orange County

Day: Saturday
Date: 12/3/2016

Time	Skye at Laguna Niguel											Resident Total	Guest Total	Resident Occupancy Percentage	Guest Occupancy Percentage
	Level 1							Lower							
	Resident				Guest			Resident			Guest				
	Regulat	Double Parking (12)	HC	HC Van	Regular	HC	HC Van	Regular	Double Parking (10)	Motorcycle Unmarked	N/A				
Spaces	33	24	1	2	51	1	2	33	20			113	54		
12:00	12	6	0	0	41	1	0	44	2	0		64	42	57%	78%
13:00	10	4	0	0	33	1	1	34	2	3		53	35	47%	65%
14:00	8	4	0	0	27	1	1	35	1	3		51	29	45%	54%
15:00	10	5	0	0	28	0	0	40	4	3		62	28	55%	52%
19:00	12	7	0	0	44	1	0	46	3	3		71	45	63%	83%
20:00	16	6	0	0	48	1	0	49	3	3		77	49	68%	91%
21:00	15	7	0	0	48	1	0	49	3	3		77	49	68%	91%
22:00	13	8	0	0	41	1	0	56	3	3		83	42	73%	78%
23:00	14	9	0	0	44	1	0	73	4	3		103	45	91%	83%

Notes:

Max Hours highlighted in orange

Level 1: Guest area had 1 car parked blocking spaces at 12:00 noon-1:00pm, and at 8:00pm

COMPARABLE SITE #12:
APEX LAGUNA NIGUEL

Prepared by National Data & Surveying Services

Parking Study

Location: Apex Laguna Nigel
City: Orange County

Day: Wednesday
Date: 12/7/2016

Time	Apex Laguna Nigel																						Resident Total	Guest Total	Resident Occupancy Percentage	Guest Occupancy Percentage
	Upper Level						Ground								Basement 1					Basement 2								
	Resident					Guest	Resident				Guest				Resident				Guest	Resident			Guest				
	Regular	Double Parking (1)	HC	HC Van	Motorcycle	N/A	Regular	HC	USPS	Unmarked Space	Regular	HC	HC Van	Motorcycle	Regular	Double Parking (3)	HC	HC Van	N/A	Regular	Double Parking (34)	Motorcycle	N/A				
Spaces	94	2	1	1	2		8	2	1	1	73	2	2	1	194	6	4	3		68	68	6		461	78		
19:00	46	0	0	0	0		1	0	0	0	51	0	0	0	65	0	0	0		23	14	0		149	51	32%	65%
20:00	46	0	0	0	0		1	0	0	0	62	0	0	0	81	1	0	0		23	15	0		167	62	36%	79%
21:00	53	0	0	1	0		1	0	0	0	70	0	0	0	87	4	0	0		29	18	0		193	70	42%	90%
22:00	51	0	0	1	0		1	0	0	0	64	0	0	0	89	4	0	0		33	19	0		198	64	43%	82%
23:00	54	0	0	1	0		1	0	0	0	61	0	0	0	93	4	0	0		34	20	0		207	61	45%	78%
0:00	54	0	0	1	0		1	0	0	0	62	0	0	0	92	4	0	0		35	20	0		207	62	45%	79%
1:00	55	0	0	1	0		1	0	0	0	64	0	0	0	92	4	0	0		35	20	0		208	64	45%	82%
2:00	54	0	0	1	0		1	0	0	0	66	0	0	0	94	4	0	0		35	20	0		209	66	45%	85%

Notes:
Max Hours highlighted in orange

Prepared by National Data & Surveying Services

Parking Study

Location: Apex Laguna Nigel
City: Orange County

Day: Thursday
Date: 12/8/2016

Time	Apex Laguna Nigel																						Resident Total	Guest Total	Resident Occupancy Percentage	Guest Occupancy Percentage
	Upper Level						Ground								Basement 1					Basement 2								
	Resident					Guest	Resident				Guest				Resident				Guest	Resident			Guest				
	Regular	Double Parking (1)	HC	HC Van	Motorcycle	N/A	Regular	HC	USPS	Unmarked Space	Regular	HC	HC Van	Motorcycle	Regular	Double Parking (3)	HC	HC Van	N/A	Regular	Double Parking (34)	Motorcycle	N/A				
Spaces	94	2	1	1	2		8	2	1	1	73	2	2	1	194	6	4	3		68	68	6		461	78		
19:00	46	0	0	0	0		1	0	0	0	50	0	0	0	72	3	0	0		24	10	0		156	50	34%	64%
20:00	47	0	0	0	0		1	0	0	0	60	0	0	0	75	3	0	0		24	12	0		162	60	35%	77%
21:00	48	0	0	0	0		1	0	0	0	65	0	0	0	77	3	0	0		27	15	0		171	65	37%	83%
22:00	53	0	0	0	0		1	0	0	0	73	0	0	0	82	3	0	0		31	15	0		185	73	40%	94%
23:00	52	0	0	1	0		2	0	0	0	69	0	0	0	88	3	0	0		36	15	0		197	69	43%	88%
0:00	55	0	0	1	0		2	0	0	0	66	0	0	0	91	3	0	0		37	15	0		204	66	44%	85%
1:00	56	0	0	1	0		2	0	0	0	64	0	0	0	93	3	0	0		38	17	0		210	64	46%	82%
2:00	56	0	0	1	0		2	0	0	0	66	0	0	0	94	3	0	0		37	18	0		211	66	46%	85%

Notes:
Max Hours highlighted in orange

Prepared by National Data & Surveying Services

Parking Study

Location: Apex Laguna Nigel
City: Orange County

Day: Saturday
Date: 12/10/2016

Time	Apex Laguna Nigel																						Resident Total	Guest Total	Resident Occupancy Percentage	Guest Occupancy Percentage
	Upper Level						Ground								Basement 1					Basement 2							
	Resident					Guest	Resident				Guest				Resident				Guest	Resident			Guest				
	Regular	Double Parking (1)	HC	HC Van	Motorcycle	N/A	Regular	HC	USPS	Unmarked Space	Regular	HC	HC Van	Motorcycle	Regular	Double Parking (3)	HC	HC Van	N/A	Regular	Double Parking (34)	Motorcycle	N/A				
Spaces	94	2	1	1	2		8	2	1	1	73	2	2	1	194	6	4	3		68	68	6		461	78		
12:00	46	0	0	0	0		2	0	0	0	49	0	0	0	58	1	0	0		17	13	0		137	49	30%	63%
13:00	42	0	0	0	0		2	0	1	0	50	0	0	0	52	1	0	0		20	12	0		130	50	28%	64%
14:00	42	0	0	0	0		2	0	0	0	49	0	0	0	54	2	0	0		20	11	0		131	49	28%	63%
15:00	43	0	0	0	0		2	0	0	0	53	0	0	0	62	1	0	0		23	15	1		147	53	32%	68%
19:00	38	0	0	1	0		1	0	0	0	59	0	0	0	72	2	0	0		23	11	0		148	59	32%	76%
20:00	39	0	0	1	0		1	0	0	0	57	0	0	0	71	2	0	0		24	11	0		149	57	32%	73%
21:00	40	0	0	1	0		1	0	0	0	59	0	0	0	74	3	0	0		24	14	0		157	59	34%	76%
22:00	43	0	0	1	0		2	0	0	0	59	0	0	0	77	3	0	0		27	17	0		170	59	37%	76%
23:00	46	0	0	1	0		3	0	0	0	61	0	1	0	84	4	0	0		28	19	0		185	62	40%	79%
0:00	47	0	0	1	0		3	0	0	0	58	0	0	0	85	4	0	0		30	19	0		189	58	41%	74%
1:00	49	0	0	1	0		3	0	0	0	57	0	0	0	88	4	0	0		33	19	0		197	57	43%	73%
2:00	49	0	0	1	0		3	0	0	0	57	0	0	0	89	4	0	0		34	19	0		199	57	43%	73%

Notes:
Max Hours highlighted in orange