



PROJECT 37-8693.00  
606 South Olive Street, Suite 1100  
Los Angeles, CA 90014

DATE: January 7, 2019  
TO: Megan Moloughney  
COMPANY: The Ratkovich Company  
ADDRESS: 1000 S. Fremont Avenue, Unit 1  
Building A-7, Suite 7300  
CITY/STATE: Alhambra, California  
COPY TO:  
FROM: Weckstein, Jeff  
PROJECT NAME: The Alhambra  
PROJECT NUMBER: 37-8693.00

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Dear Ms. Moloughney,

Walker Consultants (“Walker”) is pleased to present the following draft shared parking analysis for The Alhambra, located in Alhambra, California. This analysis is intended for internal project team consumption, and assumes the audience has some familiarity with the project and the shared parking concept. A formal shared parking analysis report, for submittal to the City, will be prepared once the project description, assumptions, and analysis scenario(s) have been finalized to the extent practical.

**SUMMARY OF CONCLUSIONS/RECOMMENDATIONS**

**Commercial Component**

- Based on the City’s minimum parking requirements, the commercial component of the Alhambra would be required to provide 4,206 parking spaces.
- Based on the approved 2004 parking variance, the commercial component of the Alhambra would be required to provide 3,049 parking spaces.
- Based on the results of a Walker/ULI shared parking analysis, a parking supply of 2,213 parking spaces is recommended to satisfy peak periods of parking demand for the commercial uses.
- The project proposes to provide 2,290 parking spaces which exceeds the recommended parking supply by 77 parking spaces.

**Residential Component**

- The project is proposing to park the North Plan Area (516 condominium/townhome dwelling units) to code (1,135 parking spaces).
- The project is proposing to park the South and Corner plan areas (545 apartment dwelling units) based on the recommended parking ratios in the Walker/ULI shared parking model.
- Based on the Walker/ULI parking ratios for apartment dwelling units, 922 parking spaces would be provided for residents and guests in the South and Corner plan areas, a reduction of 330 spaces from the 1,252 parking spaces required by code.

Walker offers the following conservation regarding the interplay of resident, residential guest, and commercial parking:

- While the project proposes to provide on-site parking in accordance with industry standard rates (Walker/ULI parking ratios), The commercial component could potentially provide a large amount of additional parking on nights and weekends if the need arises.

- If the project generates resident or guest parking demand at a higher rate than the recommended parking supply, it could be accommodated in the commercial area where there is projected to be over 1,000 vacant spaces on weekday nights and on weekends when residential guest parking demand is highest. This would require execution of a shared parking agreement between the various parties.

## INTRODUCTION

The Alhambra is a 38.38+-acre mixed-use property located in the City of Alhambra. Existing development on the property includes 870,000 square feet of office space, a 50,000-square foot LA Fitness, a 42,222-square foot building on the Corner Company Lot and approximately 3,440± parking spaces in two structures (1,778± spaces) and several surface lots (approximately 1,662± spaces). The following table illustrates the parking areas and space count.

Table 1: The Alhambra – Current Parking Inventory

Parking Area	Number of Spaces
B2 Structure	746
B7 Structure	1,032
A11 Lot	22
A12 Lot	27
North Parking Lot	429
Northeast Parking Lot	94
Central Parking Lot	251
B14 Lot	55
Corner Company Lot	186
Southeast parking Lot	95
South Visitor Parking	110
South Parking Lot	393
<b>Total</b>	<b>3,440</b>

Source: The Ratkovich Company, PSOMAS, 2017.

The Ratkovich Company is currently working on entitling approximately 20.62+ acres of the site, that currently includes office and industrial uses and provides surface parking for the existing uses, for residential uses. The 20.62+ acres consist of a 10.87+-acre north plan area, a 5.86+-acre south plan area and 2.13+-acre corner plan area. A 1.75+-acre east plan area will also be developed with a 490± space parking garage.

The Ratkovich Company (“TRC”) has engaged Walker to identify the number of parking spaces required for the existing site based on projected demand after development of the north, south and corner parcels. Due to the potential for sharing of parking amongst the different uses, the projected campus-wide aggregate demand is expected to be lower than if designing parking supply to support the projected demand of each use individually. The north, corner and south plan areas have been included in this analysis under the assumption that a portion of the residential guest parking supply will be accommodated by the east plan area parking structure.

## SHARED PARKING METHODOLOGY

This study entails a parking needs analysis that relies on estimates of parking requirements based on recommendations in studies from the Urban Land Institute (ULI), and namely Shared Parking<sup>1</sup>. For the analysis herein, Walker employed the use of a shared parking model to assess projected demand. Shared parking methodology was developed in the 1980s and has been a widely-accepted industry standard for rightsizing parking facilities over the past 30+ years. Adopted by cities throughout the U.S., and codified in zoning ordinances as an acceptable practice, shared parking is endorsed by the ULI, the American Planning Association (APA), the National Parking Association (NPA), and International Council of Shopping Centers (ICSC), as an acceptable method of parking planning and management.

Shared parking allows for the sharing of parking spaces among uses in a mixed-use environment—in lieu of providing a minimum number of parking spaces for each individual use. Shared parking commonly results in a reduction of required parking spaces. This reduction, which is sometimes significant, depends on the quantities and mix of uses and local code requirements.

Shared Parking is defined as the ability to use the same parking resource by multiple nearby or adjacent land uses without encroachment. Shared parking takes into account the parking demand for more than 45 different land uses; the availability and use of alternative modes of transportation; captive market effects<sup>2</sup>; and daily, hourly, and seasonal variations. In the case of the Project, a shared parking analysis recognizes the interrelationship of parking among the existing office, health club, educational uses as well as the proposed residential uses.

A shared parking model generates 456 parking computations as follows:

- 19 hours during a day, beginning at 6 a.m. and concluding at 1 a.m.
- 2 days per week, a weekday and a weekend day
- 12 months of the year
- $19 \times 2 \times 12 = 456$  different calculations

The recommended parking capacity is derived based on the highest figure generated from these 456 computations. Therefore, the intent is to design for the busiest hour of the year, busiest day of the year, and busiest month of the year, at an 85th percentile level of parking demand relative to similar properties.

A shared parking analysis begins first by taking the land use quantities of the Project, and multiplying by a base parking demand ratio and monthly and hourly adjustment factors. In general, the base ratios and hourly and monthly adjustments used for the office, health club, and residential land uses are industry standards that are based on thousands of parking occupancy studies, vetted by leading parking consultants and real estate professionals, and documented within the Second Edition of ULI/ICSC's Shared Parking. The Alhambra also includes several land uses that are not reflected in Shared Parking. Base parking ratios were defined for education, storage, data center, and building services uses in this analysis as follows:

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<sup>1</sup> Shared Parking, Second Edition. Washington DC: ULI-The Urban Land Institute, 2005.

<sup>2</sup> Recognition of a user group already on site for another primary purpose and not generating incremental parking demand for an accessory use. For example, a sandwich shop located in an office tower generates very little, if any, outside parking demand. Since the parking demand for the office tower tenants has already been accounted for, to avoid double counting, a non-captive adjustment factor is applied to the parking demand calculation for the sandwich shop. In this extreme example, the non-captive ratio may be 0 percent.



- Education – established based on counts of the Corner Company site on a Tuesday (March 14, 2017) which indicated peak demand at a ratio of approximately 3.1 per 1,000 square feet, as well as lease terms for educational tenants that require four or more spaces per 1,000 square feet.
- Storage – since this supports existing building uses, it does not generate any parking demand.
- Data Center – established based on input from The Ratkovich Company suggesting that the vast majority of this space is for computer hardware with only a small number of employees.
- Building Services – the majority of this space directly supports the other uses on the campus with functions such as engineering, security and landscaping. Employee parking ratios have been established based on daytime staffing. Some visitors are assumed, such as vendors and consultants. There is a 170-seat auditorium which hosts events once per week on average. On weekdays during typical office hours the auditorium space is generally used for functions internal to the Alhambra with very few visitors traveling from offsite to attend a function. On weekends, some of these events may attract larger volumes of outside visitors and visitor parking demand; however, since office users are not present on weekends, ample parking exists for weekend functions.
- Residential Condominium – It is Walker’s understanding that the project applicant plans to park the proposed condominium dwelling units to code, and that this parking will not be shared.
  - The base (unshared) parking ratio for the 516 condominium and townhome dwelling units has been input at 2.2 spaces per unit since this portion of the project intends to satisfy minimum code parking requirements.
    - 2.0 resident spaces per unit
    - 0.2 guest parking spaces per unit
- Residential Apartments – For this analysis, the Walker/ULI base parking ratios for apartment dwelling units have been utilized since it is Walker’s understanding that the Project will seek a variance from the City’s minimum parking requirements for the proposed apartment dwelling units. Achievement of these ratios is contingent on the project securing a variance from the City of Alhambra.
  - The base (unshared) parking ratio for the 545 apartment dwelling units in the shared parking model are as follows:
    - Studio Units – 1.0 spaces per unit (1.0 space per unit below Code requirement)
    - One Bedroom Units – 1.50 spaces per unit (0.5 space per unit below Code requirement)
    - Two Bedroom Units – 1.75 spaces per unit (0.25 space per unit below Code requirement)
    - Three Bedroom Units – 2.0 spaces per unit (equals Code requirement)These ratios are consistent with the recommended base parking ratios for apartment dwelling units in the Walker/ULI Shared Parking Model. When applied to the proposed mix of apartment dwelling units, the overall blended parking ratio for the 545 apartment dwelling units is 1.54 resident spaces per unit. This figure is contingent on the project receiving a variance from the City of Alhambra.
  - The base (unshared) parking ratio for guest parking in the shared parking model is 0.15 spaces per unit, which is lower than both the Code requirement for residential on an arterial (0.33 guest spaces per unit) and residential on a local street (0.20 guest spaces per unit)
  - In the shared parking model output in this analysis, all resident and guest parking is analyzed as reserved for residents and unavailable for sharing with the development at large.

Walker, as the analyst for this study and in accordance with standard shared-parking methodology, applies two additional adjustments to the base parking demand ratios, one to reflect an estimate of the local transportation modal split (called the driving ratio) and another to account for the best estimate of captive market effects<sup>3</sup> (called the non-captive ratio). These will all be described in more detail in the sections to follow.

The following graphic provides an illustrative view of the steps involved in the shared parking analysis. This graphic is used within this document to help the reader understand the shared parking process and to also assist in communicating the step of the analysis that is being described within this report. The Shared Parking Analysis section of this report follows this graphic in consecutive order, moving from left to right, and in subsequent report sections, the gray highlighted section of the graphic (note: all sections are highlighted in Figure 1) designates the step that is being described.

Figure 1: Steps of a Shared Parking Analysis

Land Use Units (Number of rooms, square footage, etc.)	X	Standard or Base Parking Generation Ratio	X	Monthly Factor	X	Hourly Factor	X	Non- Captive Ratio	X	Driving Ratio	=	TOTAL
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Source: Walker Consultants, 2019

For most land uses, shared parking is based on the 85th percentile of peak-hour observations, a standard espoused by the ITE, the NPA’s Parking Consultants Council, and renowned parking planners. This 85th percentile is a significant and high threshold to meet in terms of supplying parking capacity in that it provides a parking supply that will not be needed by a majority of developments. The 85th percentile recommendation is informed by field data counts in the fourth edition of ITE’s Parking Generation<sup>4</sup> and this threshold represents the 85th percentile of peak-hour observations supplied during the study. Comparatively, an average project could be expected to generate parking needs near the 50th percentile level of activity.

The key goal of a shared parking analysis is to find the balance between providing adequate parking to support a development from a commercial and operational standpoint and protect the interests of neighboring property owners, while minimizing the negative aspects of excessive land area or resources devoted to parking. The ultimate goal of a shared parking analysis is to find a peak period, reasonably predictable worst-case scenario, or design day condition.

Allowing multiple land uses and entities to share parking spaces has allowed for and led to the creation of many popular real estate developments and districts, resulting in the combination of office, residential, retail, hotel, and entertainment districts that rely heavily on shared parking for economic viability while providing parking accommodations to meet the actual demand generated by the development. Traditional downtowns in large and small cities alike have depended on the practice in order to be compact, walkable, and economically viable. In the same way, mixed-use projects have also benefited from the shared-parking principle, which offers multiple benefits to a community, not the least of which is a lesser environmental impact due to the reduction in required parking needed to serve commercial developments, as well as the ability to create a more desirable mix of uses

<sup>3</sup> Captive market means attendees who are on-site for more than one reason and are not creating additive parking demand.

<sup>4</sup> Parking Generation, Fourth Edition. Washington DC: Institute of Transportation Engineers, 2010.

at one location, all the while ensuring that parking supply is designed for the busiest hour of the year, busiest day of the year, and busiest month of the year, at an 85th percentile relative to similar properties.

### SHARED PARKING ANALYSIS

In accordance with accepted shared-use methodology, this section of the report documents the steps taken to appropriately determine a recommended parking capacity for the Project. Base parking generation ratios, representing weekday and weekend conditions, are taken verbatim from the Second Edition of ULI/ICSC’s Shared Parking (except as noted in the previous section for the Education, Storage, Data Center and Residential uses) and multiplied by the Project’s land use quantities, yielding a product which is then adjusted by multiplying by hourly and monthly factors for each of the Project’s respective land uses. These are called “presence factors”. Two final adjustments are made to the standard or base parking generation ratios. One adjustment discounts the demand to account for local transportation modal split characteristics, recognizing that not everyone drives an automobile for every trip, and a second adjustment is made to avoid double counting people who are on-site for more than one reason and are therefore not creating additive parking demand. These last two calculations are referred to as the “driving ratio” and “non-captive” adjustments. The balance of this section of the report documents the math that underlies this analysis, following the steps listed below.

List of Shared Parking Steps	Page
Step 1: Identification and Quantification of Project Land Use Components	6
Step 2: Application of Standard or Base Parking Generation Ratios	8
Step 3: Application of Presence Factors	9
Step 4: Application of Non-Captive Adjustment	10
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### LAND USE UNITS: BUILDING PROGRAM DESCRIPTION

Table 2 documents the proposed land uses associated with the Project. The new uses proposed on the site include 545 apartment dwelling units and 516 condominium/townhome dwelling units. For the purpose of the shared parking analysis the 36 townhome units were considered as 3-bedroom units

#### Step 1: Identification and Quantification of Project Land Use Components

Land Use Units (Number of rooms, square footage, etc.)	X	Standard or Base Parking Generation Ratio	X	Monthly Factor	X	Hourly Factor	X	Non- Captive Ratio	X	Driving Ratio	=	TOTAL
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Source: Walker Consultants, 2019

The program assumptions in Table 2, provided to Walker by TRC, were used in the analysis of parking needs.

Table 2: Summary of Existing/Proposed Development

Land Use Component	Number of Units/Square Feet of GLA
Office	652,352 SF GFA
Health Club	50,558 SF GLA
Building Services	14,201 SF GFA
Education	126,214 SF GLA
Data Center	31,390 SF GLA
Residential Apartments	(545 Total DU)
- Studio	80 DU
- 1 Bedroom	237 DU
- 2 Bedroom	207 DU
- 3 Bedroom	21 DU
Residential Condominium/Townhome	(516 Total DU)
- 2 Bedroom	330 DU
- 3 Bedroom	186 DU
<b>Components That Will Not Generate Parking Demand Additive to the Site</b>	
Storage	2,421 SF GLA

Note: The difference between the commercial use square footages shown in Table 2 (877,3136 square feet) and the total building floor area (902,201 square feet) is due to the use of gross leasable area for certain components on the project since the ratios in the shared parking model for several of the uses are based on Gross Leasable Area as opposed to Gross Floor Area.

Source: The Ratkovich Company, 2018

### STANDARD OR BASE PARKING GENERATION RATIOS

Simply put, the base parking demand ratios represent how many spaces should be supplied to each use if the spaces are unshared, and the project is located in a suburban context where the driving ratio is at or near 100 percent. The following table documents the base parking generation rates employed, rates taken verbatim from the Second Edition of Shared Parking and informed by thousands of field parking occupancy studies performed by parking and transportation professionals over decades. These ratios have been vetted by a team of consultants who specialize in parking demand analyses and who mutually agreed upon the use of these ratios prior to the publication of the Second Edition of Shared Parking, with the following exceptions:

- Education – established based on counts of the Corner Company site on a Tuesday (March 14, 2017) which indicated peak demand at a ratio of approximately 3.1 per 1,000 square feet, as well as lease terms for educational tenants that require four or more spaces per 1,000 square feet.
- Storage – since this supports existing building uses, it does not generate any parking demand.
- Data Center – established based on input from TRC suggesting that the vast majority of this space is for computer hardware with only a small number of employees.
- Building Services – the majority of this space directly supports the other uses on the campus with functions such as engineering, security and landscaping. Employee parking ratios have been established based on daytime staffing. Some visitors are assumed, such as vendors and consultants. There is a 170-seat auditorium which hosts events once per week on average.

- Residential Condominium – It is Walker’s understanding that the project applicant plans to park the proposed condominium dwelling units to code, and that this parking will not be shared.
  - The base (unshared) parking ratio for the 516 condominium and townhome dwelling units has been input at 2.2 spaces per unit since this portion of the project intends to satisfy minimum code parking requirements.
    - 2.0 resident spaces per unit
    - 0.2 guest parking spaces per unit
- Residential Apartments– For this analysis, the Walker/ULI base parking ratios for apartment dwelling units have been utilized since it is Walker’s understanding that the Project will seek a variance from the City’s minimum parking requirements for the proposed apartment dwelling units. Achievement of these ratios is contingent on the project securing a variance from the City of Alhambra.
  - The base (unshared) parking ratio for the 545 apartment dwelling units in the shared parking model are as follows:
    - Studio Units – 1.0 spaces per unit (1.0 space per unit below Code requirement)
    - One Bedroom Units – 1.50 spaces per unit (0.5 space per unit below Code requirement)
    - Two Bedroom Units – 1.75 spaces per unit (0.25 space per unit below Code requirement)
    - Three Bedroom Units – 2.0 spaces per unit (equals Code requirement)

These ratios are consistent with the recommended base parking ratios for apartment dwelling units in the Walker/ULI Shared Parking Model. When applied to the proposed mix of apartment dwelling units, the overall blended parking ratio for the 545 apartment dwelling units is 1.54 spaces per unit. This figure is contingent on the project receiving a variance from the City of Alhambra.
  - The base (unshared) parking ratio for guest parking in the shared parking model is 0.15 spaces per unit, which is lower than both the Code requirement for residential on an arterial (0.33 guest spaces per unit) and residential on a local street (0.20 guest spaces per unit).
  - In the shared parking model output in this analysis, all resident and guest parking is analyzed as reserved for residents and unavailable for sharing with the development at large.

**Step 2: Application of Standard or Base Parking Generation Ratios**

Land Use Units (Number of rooms, square footage, etc.)	X	Standard or Base Parking Generation Ratio	X	Monthly Factor	X	Hourly Factor	X	Non-Captive Ratio	X	Driving Ratio	=	TOTAL
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Source: Walker Consultants, 2019



Table 3: Standard or Base Parking Generation Ratios

Land Use	Weekday		Weekend		Unit
	Visitor/ Guest	Employee/ Resident	Visitor/ Guest	Employee/ Resident	
Building Services	3.00	1.00	3.00	1.00	/ksf GFA
Education	2.50	1.00	2.50	0.50	/ksf GLA
Data Center	0.00	0.25	0.00	0.25	/ksf GLA
Storage	0.00	0.00	0.00	0.00	/ksf GLA
Health Club	6.60	0.40	5.50	0.25	/ksf GLA
Residential Condo:					
2 bedroom	0.20	2.00	0.20	2.00	/unit
>3 bedroom	0.20	2.00	0.20	2.00	/unit
Residential Apartment:					
Studio	0.15	1.00	0.15	1.00	/unit
1 bedroom	0.15	1.50	0.15	1.50	/unit
2 bedroom	0.15	1.75	0.15	1.75	/unit
>3 bedroom	0.15	2.00	0.15	2.00	/unit
Office over 500k sq ft	0.20	2.386	0.02	0.2386	/ksf GFA
Office Reserved	0.00	0.214	0.00	0.214	/ksf GFA

Source: Shared Parking, Second Edition; Urban Land Institute; and International Council of Shopping Centers, 2005, Walker, 2019  
 Note: GFA = Gross Floor Area, GLA = Gross Leasable Area

### PRESENCE FACTORS

After the Project’s land uses have been quantified and standard or base parking generation ratios have been applied to these land use quantities, adjustments are made to account for parking demand variability by hour of day and month of year. This is referred to as a “presence” adjustment.

#### Step 3: Application of Presence Factors

Land Use Units (Number of rooms, square footage, etc.)	X	Standard or Base Parking Generation Ratio	X	Monthly Factor	X	Hourly Factor	X	Non- Captive Ratio	X	Driving Ratio	=	TOTAL
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Source: Walker Consultants, 2019

Presence is expressed as a percentage of peak potential demand modified for both time of day and month of the year. The fact that parking demand for each component may peak at different times generally means that fewer parking spaces are needed for the project than would be required if each component were a freestanding development. Appendix A documents the presence factors used within this analysis.

### NON-CAPTIVE ADJUSTMENT RATIO

A shared parking analysis recognizes that people often visit two or more land uses housed within the same development site, without increasing their on-site parking use. For example, an office worker who goes to LA

Fitness, before work, during lunch, or after work and arrived by automobile creates parking demand for one, not two parking spaces. A non-captive ratio allows for an adjustment to the parking needs analysis by taking into account the portion of on-site visitors who are already accounted for as office worker or resident parking demand, and are therefore not creating additional parking demand. In this example, the health club demand is captive to both office and resident demand and therefore care must be taken in the shared parking analysis to avoid double counting. This double counting is avoided by applying what is referred to as a “non-captive ratio.”

Non-captive ratios can vary from one property to the next and from one function to the next within the same property. Typically, a reduction ranging from 20 to 70 percent has been used by parking and transportation professionals to fine tune the parking requirements for mixed-use projects with primary attractors and secondary attractors. The non-captive ratios included herein are intended to be reasonable and appropriate adjustments.

**Step 4: Application of Non-Captive Adjustment**

Land Use Units (Number of rooms, square footage, etc.)	X	Standard or Base Parking Generation Ratio	X	Monthly Factor	X	Hourly Factor	X	Non-Captive Ratio	X	Driving Ratio	=	TOTAL
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Source: Walker Consultants, 2019

Based on Walker’s experience with past mixed-use projects involving office and health club uses, we have assumed that 20% of LA Fitness patrons will already be on the campus for other purposes on weekdays, which equates to an 80% non-captive ratio.

Additionally, based on the inclusion of residential uses on the site, the model has assumed that 1% of office employees of the office space may live in the proposed apartments or condominiums, which equates to a 99% non-captive ratio for the office

**DRIVING RATIO ADJUSTMENT**

A driving ratio adjustment is the percentage of patrons and employees that are projected to drive to the site in a personal vehicle, expressed as a ratio. This excludes all non-driving modes of transportation including shuttle bus, taxi, ride-hailing (Lyft/Uber), walking, and carpooling passengers. Driving-ratio adjustments were made to the base ratios based on U.S. Census data (American Community Survey). Based on United States Census 2015 American Community Survey data, approximately 11% of those who work in the City of Alhambra commute to work using a non-auto mode and 11% carpool, the majority of which are in a two-person carpool (Table B08406). The United States Census does not have this data available for a smaller geography such as the census tract in which the subject is located.

In addition, in 2016 TRC performed a weeklong survey of employee commute mode as part of its LEED certification process. A total of 449 employees participated in the survey. On an average day, approximately 16% of employees do not drive to work. This includes those who are telecommuting or not working due to a compressed work week schedule.

Based on the data, we have assumed that 15% of employees as well as students commute to the campus by a non-auto mode (which accounts for those who carpool). All residents are assumed to drive.

**Step 5: Application of Driving Ratio**

Land Use Units (Number of rooms, square footage, etc.)	X	Standard or Base Parking Generation Ratio	X	Monthly Factor	X	Hourly Factor	X	Non-Captive Ratio	X	Driving Ratio	=	TOTAL
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Source: Walker Consultants, 2019

**SUMMARY**

Figure 2 displays the demand fluctuations for the commercial uses throughout an entire day for the weekday scenario. The graph displays the fluidity of demand based on the uses and adjustments factored into the analysis. It is important to note that when one use peaks (office), another use may be in a lull (health club). These relationships, in part, are what allow for the reduction in the number of spaces needed.

Residential parking supply/demand has been excluded from Figure 2 since all resident and residential guest parking is assumed to be reserved for residential use only and not shared with the commercial component of the project.

**Figure 2: Shared Parking Model Output - Recommended Weekday Supply by Hour – Commercial Uses**


Source: Walker Consultants, 2019

Table 4 summarizes the weekday shared parking analysis and recommended number of spaces which peaks on a weekday at 10am. Details of the presence factors and anticipated fluctuation in hourly parking demand may be found in Appendices A and B.

**Table 4: Total Weekday Recommended Number of Spaces from Shared Parking Analysis**

Land Use	Base Ratio	Unadj Demand	Month Adj January	Pk Hr Adj 10:00 AM	Non Captive Daytime	Drive Ratio Daytime	Demand January 10:00 AM
Building Services	3.00	43	100%	100%	100%	100%	43
Employee	1.00	14	100%	100%	100%	85%	12
Education	2.50	316	100%	100%	100%	85%	269
Employee	1.00	126	100%	100%	100%	85%	107
Data Center	0.00	0	100%	100%	100%	100%	0
Employee	0.25	8	100%	100%	100%	85%	7
Health Club	6.60	334	100%	70%	80%	100%	187
Employee	0.40	20	100%	75%	100%	85%	13
Residential Guest	0.00	0	100%	20%	100%	100%	0
Residential Reserved - Condo		1,135	100%	100%	100%	100%	1,135
Residential Reserved - Rental		922	100%	100%	100%	100%	922
Office over 500k sq ft	0.20	130	100%	100%	100%	100%	130
Employee	2.39	1,556	100%	100%	99%	85%	1,305
Office Reserved 24/7	0.21	140	100%	100%	100%	100%	140
<b>Subtotal Customer/Visitor</b>		<b>823</b>					<b>629</b>
<b>Subtotal Employee</b>		<b>1,724</b>					<b>1,444</b>
<b>Subtotal Reserved Office 24/7</b>		<b>140</b>					<b>140</b>
<b>Subtotal Commercial Parking</b>		<b>2,687</b>					<b>2,213</b>
<b>Subtotal Reserved Resident - Condo</b>		<b>1,135</b>					<b>1,135</b>
<b>Subtotal Reserved Resident - Rental</b>		<b>922</b>					<b>922</b>
<b>Subtotal Residential Parking</b>		<b>2,057</b>					<b>2,057</b>
<b>Total Parking Spaces Required</b>		<b>4,744</b>					<b>4,270</b>
						% reduction	10%

Source: Walker Consultants, 2019

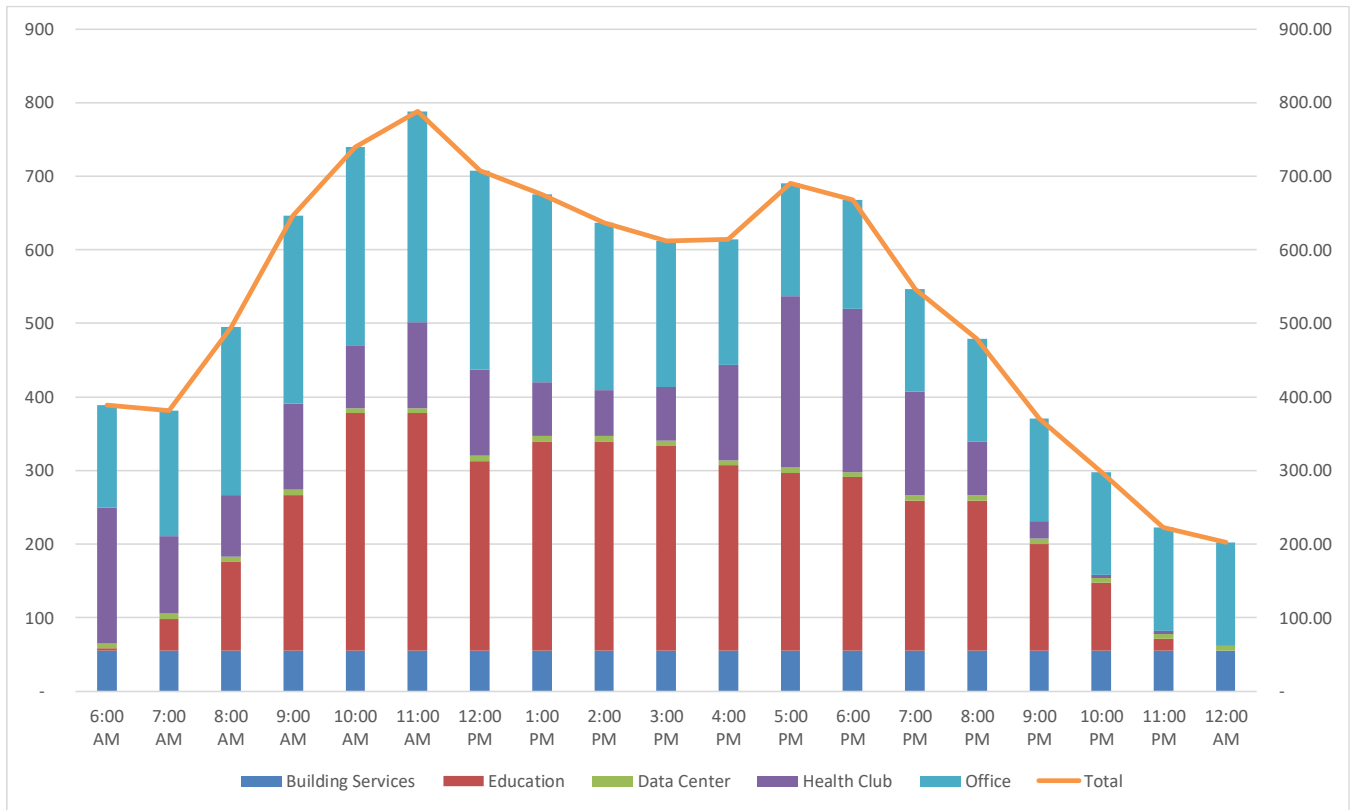
For a high demand weekday, representing full occupancy of the Project’s commercial space, and an 85<sup>th</sup> percentile-level of activity relative to other similar properties, the shared parking model suggests 4,270 total parking spaces are recommended.

At peak, a total of 2,213 parking spaces are projected to be necessary to accommodate the peak period of parking activity at the commercial components of the Alhambra on a typical weekday.

Based on the City’s minimum parking requirements for condominiums/townhomes, the condominium/townhome portion of the proposed project would be required to provide 1,135 parking spaces for residents and guests. Based on the applicant-proposed parking requirements for the apartment dwelling units, 922 parking spaces would be required for residents and guests of the apartments.

Figure 3 displays the demand fluctuations for the commercial component throughout an entire day for the weekend scenario. The graph displays the fluidity of demand based on the uses and adjustments factored into the analysis. It is important to note that when one use peaks (office), another use may be in a lull (health club). These relationships, in part, are what allow for the reduction in the number of spaces needed.

Figure 3: Shared Parking Model Output - Recommended Supply by Hour of Day for a Weekend



Source: Walker Consultants, 2019

Table 5 summarizes the weekend shared parking analysis and recommended number of spaces which peaks on a weekend at 11am. Details of the presence factors and anticipated fluctuation in hourly parking demand may be found in Appendices A and B.

**Table 5: Total Weekend Recommended Number of Spaces from Shared Parking Analysis**

Land Use	Unadj Demand	Month Adj January	Pk Hr Adj 11:00 AM	Non Captive Daytime	Drive Ratio Daytime	Demand January 11:00 AM
Building Services	43	100%	100%	100%	100%	43
Employee	14	100%	100%	100%	85%	12
Education	316	100%	100%	100%	85%	269
Employee	63	100%	100%	100%	85%	54
Data Center	0	100%	100%	100%	100%	0
Employee	8	100%	100%	100%	85%	7
Health Club	278	100%	50%	80%	100%	111
Employee	13	100%	50%	100%	85%	6
Residential Guest	0	100%	20%	100%	100%	0
Residential Reserved - Condo	1,135	100%	100%	100%	100%	1,135
Residential Reserved - Rental	922	100%	100%	100%	100%	922
Office over 500k sq ft	13	100%	100%	100%	100%	13
Employee	156	100%	100%	100%	85%	133
Office Reserved 24/7	140	100%	100%	100%	100%	140
Subtotal Customer/Visitor	650					436
Subtotal Employee	254					212
Subtotal Reserved Office 24/7	140					140
<b>Subtotal Commercial Parking</b>	<b>1,044</b>					<b>788</b>
Subtotal Reserved Resident - Condo	1,135					1,135
Subtotal Reserved Resident - Rental	922					922
<b>Subtotal Residential Parking</b>	<b>2,057</b>					<b>2,057</b>
<b>Total Parking Spaces Required</b>	<b>3,101</b>					<b>2,845</b>
					% reduction	8%

Source: Walker Consultants, 2019

For a high demand weekend, representing full occupancy of the Project's commercial space, and an 85<sup>th</sup> percentile-level of activity relative to other similar properties, the shared parking model suggests 2,845 total parking spaces are recommended.

At peak, a total of 788 parking spaces are projected to be necessary to accommodate the parking demand associated with the peak period of parking activity at the commercial components of the Alhambra on a typical weekend day.

**PLANNED PARKING SUPPLY**
**COMMERCIAL PARKING SUPPLY**

After accounting for the loss of parking spaces on north and east plan areas (951 spaces), the corner area (186 spaces), and the south plan area (503 spaces), there are 1,800+ parking spaces remaining to serve the commercial uses at The Alhambra. Based on our shared parking analysis, it is projected that 2,213+ parking spaces are required for the office and commercial uses.

**Table 6: New Parking Required (in Addition to Displaced Surface Parking)**

	Number of Spaces
Existing Spaces	3,440
(-) North Plan Area	(951)
(-) Corner Plan Area	(186)
(-) South Plan Area	(503)
Remaining Spaces	1,800
(+) East Parcel Parking Structure	490
<b>Total Proposed Commercial Spaces</b>	<b>2,290</b>
Shared Parking Model Recommended Supply For Commercial Uses	2,213
Parking Surplus (Deficit)	77

Source: Walker Consultants, 2019

As shown in Table 5, with the proposed 490 space east parking structure, there will be a 2,290 parking spaces on the site during the peak period of parking demand for the commercial uses on the site.

**RESIDENTIAL PARKING SUPPLY**

The proposed residential component of the Alhambra consists of three areas: the north plan area, corner plan area and south plan area. The proposed land use and proposed/recommended parking supply for each area is provided in Table 7, based on the following assumptions:

- The North plan area (516 condominium/townhome dwelling units) will provide on-site parking for residents and guests in accordance with the City’s minimum parking requirements (2 resident parking spaces and 0.20 guest parking spaces per unit).
- The corner and south plan areas (545 apartment dwelling units) will provide on-site resident parking at the rates (varies by number of bedrooms) recommended in the Walker/ULI Shared Parking Model and on-site guest parking at the rate (0.15 spaces per unit) recommended in the Walker/ULI Shared Parking Model.

**Table 7: Recommended Residential Parking Supply by Plan Area**

North Plan Area	Number of Units	Recommended Parking Supply Ratio	Recommended Parking Supply
2-Bedroom Condominium Units	330	2.0 spaces per unit	660
3-Bedroom Condominium Units	150	2.0 spaces per unit	300
Townhomes	36	2.0 spaces per unit	72
Guest Parking		0.2 spaces per unit	103
<b>Total Units</b>	<b>516</b>	<b>Total Recommended Supply</b>	<b>1,135</b>

Corner Plan Area	Number of Units	Recommended Parking Supply Ratio	Recommended Parking Supply
Studio Apartments	20	1.0 space per unit	20
1-Bedroom Apartments	70	1.5 space per unit	105
2-Bedroom Apartments	59	1.75 spaces per unit	103
3-Bedroom Apartments	4	2.0 spaces per unit	8
Guest Parking		0.15 spaces per unit	23
<b>Total Units</b>	<b>153</b>	<b>Total Recommended Supply</b>	<b>259</b>

South Plan Area	Number of Units	Recommended Parking Supply Ratio	Recommended Parking Supply
Studio Apartments	60	1.0 space per unit	60
1-Bedroom Apartments	167	1.5 space per unit	251
2-Bedroom Apartments	148	1.75 spaces per unit	259
3-Bedroom Apartments	17	2.0 spaces per unit	34
Guest Parking		0.15 spaces per unit	59
<b>Total Units</b>	<b>392</b>	<b>Total Recommended Supply</b>	<b>663</b>

Source: Walker Consultants, 2019

It is recommended that all resident parking be provided on site, and it is Walker’s understanding that the developer intends to provide reserved resident and guest parking in all three plan areas.

The next section compares the recommended parking supply to the parking supply required based on the City of Alhambra minimum off-street parking requirements and compares this requirement to the recommended/proposed parking supply.



**CITY OF ALHAMBRA MINIMUM OFF-STREET PARKING REQUIREMENTS**

Section 23.52.040 (Number of Parking Spaces Required) of the City of Alhambra Municipal code outlines minimum off-street parking requirements for various residential and commercial uses in the City. Table 8 summarizes the relevant requirement for the existing and proposed uses at the Alhambra.

**Table 8: City of Alhambra Minimum Parking Requirements**

Use	Minimum Parking Requirement*
Apartment units and Residential Condominiums	2 covered spaces within an enclosed garage for each unit, plus one additional space for each 500 square feet of gross living area in excess of 1,000 square feet for each unit
Guest Parking	1 space (for each 5 units on local residential streets)
	1 space for each 4 units on collector streets
	1 space for each 3 units on arterial streets
Health Club	1 space for each 125 square feet of gross leasable area
Building Services	1 space for each 250 square feet of gross floor area
Education	1 space for each 125 square feet of gross leasable area
Data Center	1 space for each 250 square feet of gross leasable area
Offices	1 space for each 250 square feet of gross floor area

Source: City of Alhambra Municipal Code Section 23.52.040

*\*The City of Alhambra approved a parking variance to allow shared parking and attendant parking for the existing office and commercial campus in 2004 (Variance V-04-19). This approved variance was based on a parking demand study that identified a peak parking demand of 2,867 parking spaces (3.03 spaces/1,000 sf) during the week and a total parking supply of 3,202 spaces (3.38 spaces/1,000 sf) when 4,518 parking spaces were required by the Alhambra Municipal Code at the time for 942,284 square feet of office and commercial uses on the site. This parking variance reduced the required parking from the Code-requirements. Utilizing the blended parking rate approved in the 2004 variance (3.38 spaces/1,000 sf of floor area) for the parking supply, the proposed remaining floor area of 902,201 square feet would require 3,049 parking spaces be supplied.*

*The current parking demand for the existing campus, as described in Table 6, identifies a mid-week peak parking demand of 2,213 spaces (2.45 spaces/1,000 sf) and non-residential parking supply of 2,268 spaces (2.51 spaces/1,000 sf) on 902,201 square feet of remaining office campus floor area. The reduced parking demand since 2004 is consistent with trends in the use of alternative modes of transportation over the years."*

Based on the City's minimum parking requirements, Table 9 summarizes the off-street parking requirements for each component of the proposed project and compares it to the recommended commercial parking supply from the Shared Parking Model output, and the proposed residential parking supply.

**Table 9: The Alhambra Parking Requirements Based on Code Versus Recommended/Proposed Supply**

Plan/Area	Proposed Use	Parking Required	Parking Provided/Recommended	Difference to Code
North Plan Area	330 Two-Bedroom Condominiums	660 Spaces	660 Spaces	0
	150 Three-Bedroom Condominiums	300 Spaces	300 Spaces	0
	36 Townhomes	72 Spaces	72 Spaces	0
	Guest Parking	<u>103 Spaces</u>	<u>103 Spaces</u>	<u>0</u>
	Total	1,135 Spaces	1,135 Spaces	0
Corner Plan Area	20 Studio Apartments	40 Spaces	20 Spaces	-20
	70 1-Bedroom Apartments	140 Spaces	105 Spaces	-35
	59 2-Bedroom Apartments	118 Spaces	103 Spaces	-15
	4 3-Bedroom Apartments	8 Spaces	8 Spaces	0
	Guest Parking	<u>31 Spaces</u>	<u>23 Spaces</u>	<u>-8</u>
	Total	337 Spaces	259 Spaces	-78
South Plan Area	60 Studio Apartments	120 Spaces	60 Spaces	-60
	167 1-Bedroom Apartments	334 Spaces	251 Spaces	-84
	148 2-Bedroom Apartments	296 Spaces	259 Spaces	-37
	17 3-Bedroom Apartments	34 Spaces	34 Spaces	0
	Guest Parking	<u>131 Spaces</u>	<u>59 Spaces</u>	<u>-72</u>
	Total	915 Spaces	663 Spaces	-252
Existing Commercial	Office: 652,352 square feet Health Club: 50,558 square feet Building Services: 14,201 square feet Education 126,214 square feet Data Center: 31,390 square feet Total: 902,201 square feet	2,610 spaces 404 spaces 57 spaces 1009 spaces <u>126 spaces</u> 4,206 spaces	2,213 Spaces Recommended 2,290 Spaces Planned	-1,916

Source: Walker Consultants, 2019

As shown in Table 9, the proposed project is requesting a variance to residential parking requirements in the South and Corner plan parcels, as well as a variance to the minimum parking requirements for the office land use based on the results of the shared parking model. In the north plan area, the project proposed to meet the City's minimum parking requirements.

As a point of reference, Walker consulted recommended residential parking supply ratios from other industry sources, such as the Institute of Transportation Engineers (ITE), National Parking Association (NPA) and the Urban Land Institute (ULI).

Table 10 summarizes the results of this research, and the recommended parking supply for the 545 proposed apartment dwelling units at the Alhambra based on each parking supply ratio.

**Table 10: The Alhambra Parking Requirements Based on Code Versus Recommended/Proposed Supply**

Multi-Family Residential (rental) - Recommended Parking Requirements						
Industry Research and Publications	Walker SPM	1.00	1.50	1.75	2.00	0.15
	ULI <sup>1</sup>	1.50	1.50	1.50	1.50	0.15
	ITE <sup>2</sup>	1.61	1.61	1.61	1.61	-
	NPA <sup>3</sup>	1.00	1.50	1.75	2.00	-
	Alhambra	2.00	2.00	2.00	2.00	0.20/0.33

Notes:

<sup>1</sup>Parking ratio for weekday.

<sup>2</sup>Weekend Parking ratio for low/midrise urban locations.

<sup>3</sup>Represents single-use projects with little to no transit service.

Parking Requirement Based on:	Corner Plan Area	South Plan Area
Alhambra Code	337 Spaces	915 Spaces
Walker SPM	252 Spaces	669 Spaces
ULI	252 Spaces	647 Spaces
ITE	246 Spaces	631 Spaces
NPA	229 Spaces	604 Spaces

Source: Walker Consultants, 2019

As shown in Table 10, the recommended parking supply based on industry publications tends to be lower than the existing City of Alhambra Municipal Code off-street parking requirements for multi-family residential. The recommended parking supply for the Corner and South parcels in this analysis is based on the Walker Shared Parking Model ratios, which are the most conservative (highest) overall of the industry publication rates.

## CONCLUSIONS/RECOMMENDATIONS

### Commercial Component

- Based on the City's minimum parking requirements, the commercial component of the Alhambra would be required to provide 4,206 parking spaces.
- Based on the approved 2004 parking variance, the commercial component of the Alhambra would be required to provide 3,049 parking spaces.
- Based on the results of a Walker/ULI shared parking analysis, a parking supply of 2,213 parking spaces is recommended to satisfy peak periods of parking demand for the commercial uses.
- The project proposes to provide 2,290 parking spaces which exceeds the recommended parking supply by 577 parking spaces.

### Residential Component

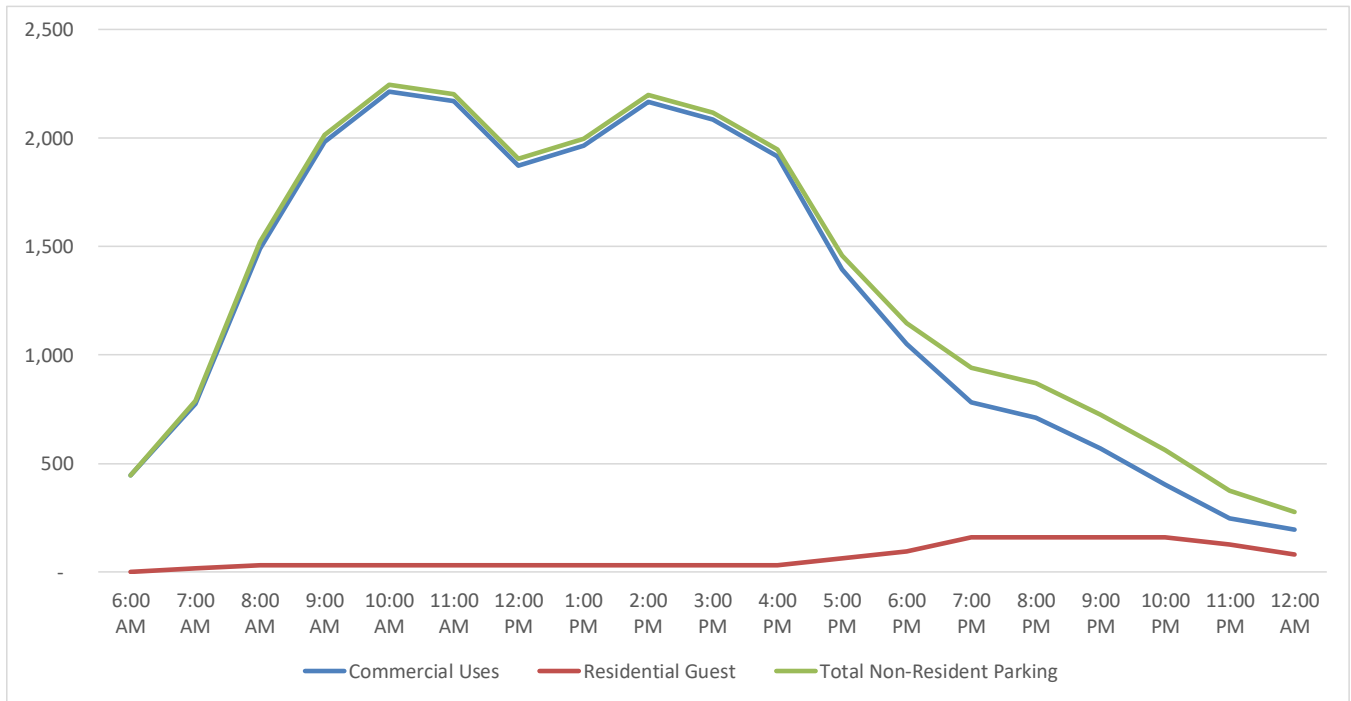
- The project is proposing to park the North Plan Area (516 condominium/townhome dwelling units) to code (1,135 parking spaces).
- The project is proposing to park the South and Corner plan areas (545 apartment dwelling units) based on the recommended parking ratios in the Walker/ULI shared parking model.
- Based on the Walker/ULI parking ratios for apartment dwelling units, 922 parking spaces would be provided for residents and guests in the South and Corner plan areas, a reduction of 330 spaces from the 1,252 parking spaces required by code.

Walker offers the following conservation regarding the interplay of resident, residential guest, and commercial parking:

- While the project proposes to provide on-site parking in accordance with industry standard rates (\*Walker/ULI parking ratios), The commercial component could potentially provide a large amount of additional parking on nights and weekends if the need arises.
  - If the project generates resident or guest parking demand at a higher rate than the recommended parking supply, it could be accommodated in the commercial area where there is projected to be over 1,000 vacant spaces on weekday nights and on weekends when residential guest parking demand is highest. This would require execution of a shared parking agreement between the various parties.

Figure 4 illustrates the relationship between the recommended parking supply for the commercial uses versus recommended parking supply for resident guest parking.

Figure 4: Weekday Shared Parking Demand by Hour of Day – Commercial &amp; Residential Guest



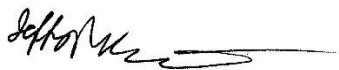
Source: Walker Consultants, 2017

As shown in Figure 4, residential guest parking demand, and hence the recommended supply to accommodate residential guest parking, peaks after the parking demand for the commercial uses at the Alhambra has declined significantly from peak.

Should you have any questions regarding this report, please do not hesitate to contact us.

Sincerely,

WALKER PARKING CONSULTANTS



Jeff Weckstein  
 Parking Consultant