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PARKING CONSULTANTS

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March 10, 2017

Mr. Maury Stern
Partner
Road & Washington, LLC
c/o Insight Property Group
4601 N Fairfax Drive, Suite 1150
Arlington, VA 22203

Re: Updated Shared Parking Study
Insight at Falls Church
Falls Church, VA
Project #: 14-4039.02

Dear Mr. Stern:

Walker is pleased to present our draft report of the Updated Shared Parking Analysis performed for the Insight at Falls Church Project. Based on the reported programming information received by Walker and the shared parking analysis detailed herein, 600 spaces are recommended for the referenced development project itself.

We thank you for the opportunity to provide our services, and we look forward to discussing the report with you at your earliest convenience.

Sincerely,

WALKER PARKING CONSULTANTS

Michael P. Albers, P.E.
Vice President

Megan Gardo
Parking Analyst

Enclosure

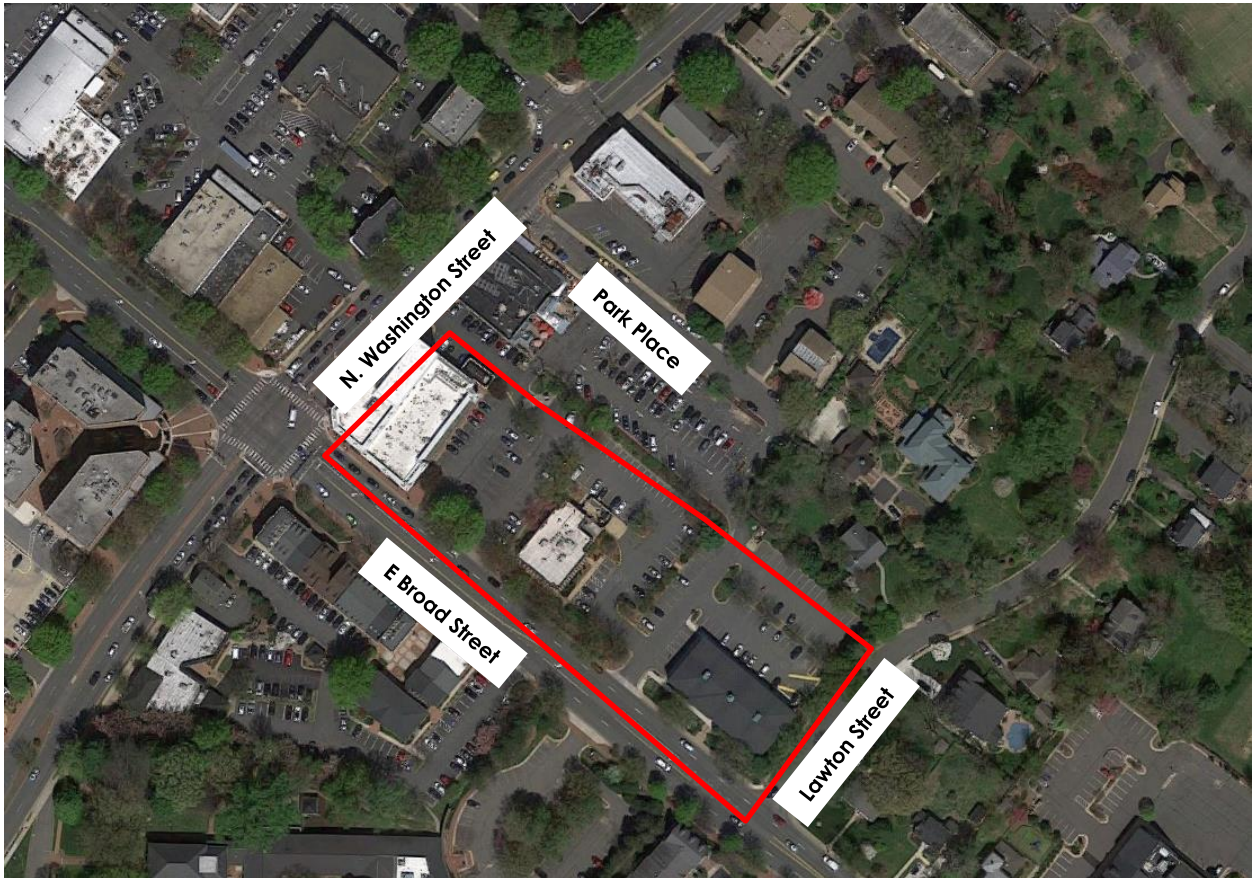
BACKGROUND

Insight Property Group (Insight) engaged Walker Parking Consultants to update our 2015 shared parking analysis of a proposed Insight at Falls Church mixed-used development at the corner of Broad and Washington Streets in Falls Church, VA. Currently, the property is occupied by two multi-story commercial buildings, an Applebee's, private parking to support these uses, and a 58 space publicly owned surface parking lot. The redeveloped property is proposed to include a mix of retail, restaurant, residential, and office land uses.

SUBJECT PROPERTY

The mixed-use project is located on a tract of land bordered by Park Place to the north, Lawton Street to the east, East Broad Street to the south, and North Washington Street to the west. The general location of the development is shown in Figure 1.

Figure 1: Property Location



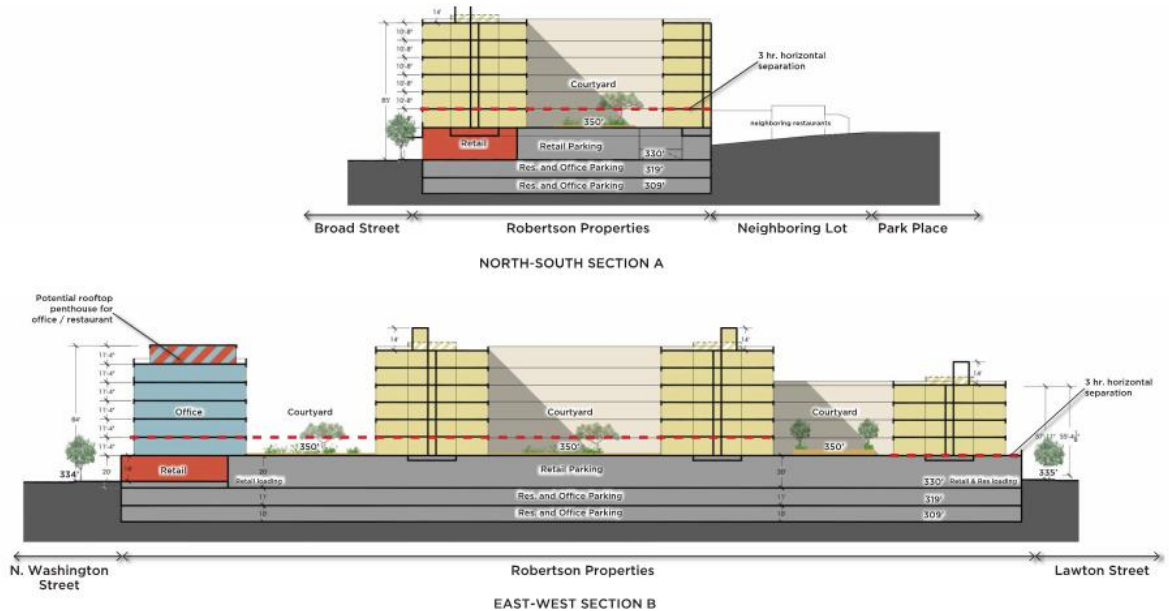
Source: Google, 2017

PROJECT UNDERSTANDING

Walker's analysis is based on the programming drawings developed by MV+A dated 1/11/17 and additional discussions with Insight. The project is anticipated to include the following:

- 62,500 SF of office space
- 6,500 SF of retail space
- 6,500 SF of fine/casual dining space
- 6,500 SF of fast/casual dining space
- 50 seat performance art theater
- 292 residential rental units

Figure 2: Site Plan/Elevation Plan



Source: MV+A, 2017

Walker's Shared Parking Model utilizes parking ratios expressed as a ratio of x spaces per y units. The units vary depending upon the land use – i.e., keys for a hotel, units for a residential complex, or square feet of building space. Additionally, parking generation rates for retail and restaurant land uses are based on the gross leasable area (GLA), whereas the rates for office land uses are based on the total gross building area (GFA). In this analysis, Walker was instructed by Insight to use the GFA quantities for the retail and restaurant uses, as there were no significant differences in the GFA and GLA values.

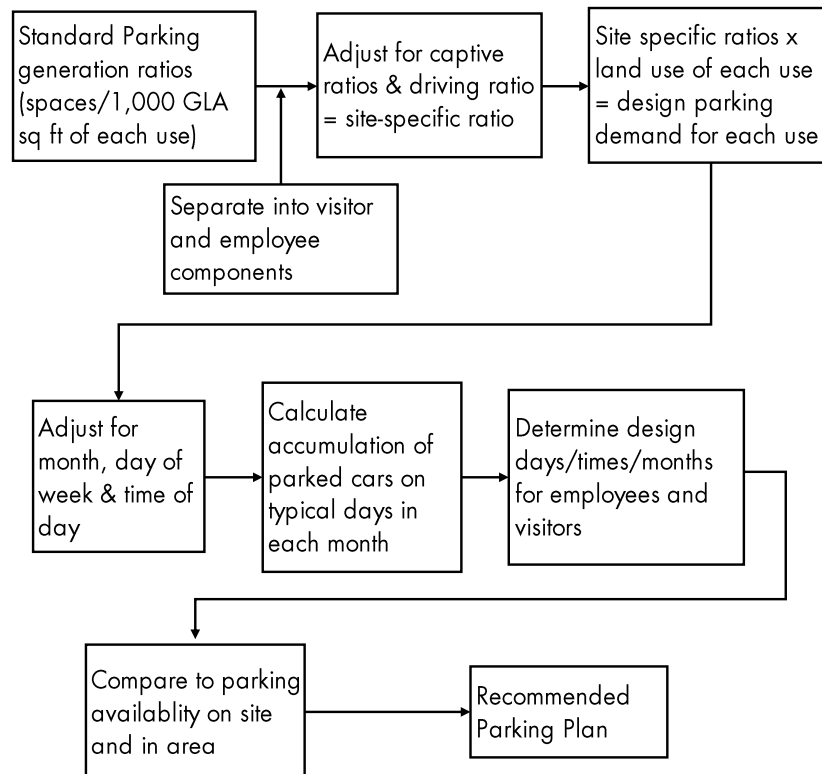
SHARED PARKING ANALYSIS

METHODOLOGY

Shared parking is possible where parking spaces can be used to serve two or more individual land uses without conflict or encroachment. One of the fundamental principles of downtown planning from the earliest days of the automobile has always been to share parking resources rather than to have each use or building have its own parking. The resurgence of many central cities resulting from the addition of vibrant office, residential, retail, and entertainment developments continues to rely heavily on shared parking for economic viability. In addition, mixed-use projects in many different settings have benefited from shared parking. Shared parking offers numerous benefits to a community at large, not the least of which is the environmental benefit of significantly reducing the amount of parking provided to serve commercial development.

The following flow chart describes the logical progression of a basic shared parking analysis.

Figure 3: Shared Parking Analysis Methodology





The ability to share parking spaces is the result of two conditions:

1. Variations in the accumulation of vehicles by hour, by day or by season at the individual land uses.
2. Relationships among the land uses that result in visiting multiple land uses on the same auto trip. For example, a substantial percentage of patrons at one business (restaurant) may be employees of a nearby business (office). This is referred to as the "effects of the captive market." These patrons are already parking and contribute only once to the number of peak hour parkers. In other words, the parking demand ratio for individual land uses should be factored downward in proportion to the captive market support received from neighboring land uses.

Although the interplay of land uses can reduce the overall demand, it should be noted that there are limits imposed by proximity of land uses to each other and to parking facilities. While "shared parking" by definition is capitalizing on the different demand period for a combination of land uses, it is not logical to assume that a hotel (with peak demand in the evening) can share with an office building (with peak demand during the day) if the two land uses are too far apart. Human behavior, such as limits to the distance users are willing to walk from a parking facility to their final destinations, restricts shared parking opportunities.

Walker's Shared Parking Model is based on the Urban Land Institute and International Council of Shopping Center's *Shared Parking*¹ publication. Walker led a team of consultants in writing the updated *Shared Parking Second Edition* and features the most up-to-date parking demand model. The model is designed to recommend the parking capacities of a mixed-use development from 6:00 a.m. to 12:00 midnight on a typical weekday and a Saturday for every month of the year based on 85th percentile level of activity conditions. While it is not a "predictor" of parking demand, it is an industry-accepted method of generating a parking capacity recommendation for a proposed development project.

BASE PARKING DEMAND

Base parking demand ratios, as found in the ULI Shared Parking model and in some cases refined through additional research by Walker, are used as a starting point in the analysis. Based on research on the parking generation rates for free-standing developments, these industry standards are later adjusted to reflect site-specific conditions. Table 1 shows the base ratios for visitors and employees for a weekday and weekend.

¹ *Shared Parking (Second Edition)*, 2005, The Urban Land Institute, Washington, D.C.



Table 1: Base Demand Ratios

Land Use	Weekday		Weekend		Unit	Total	
	Visitor	Employee	Visitor	Employee		Weekday	Weekend
Retail	2.90	0.70	3.20	0.80	/ksf GLA	3.60	4.00
Fine/Casual Dining	15.25	2.75	17.00	3.00	/ksf GLA	18.00	20.00
Fast Casual/Fast Food	12.75	2.25	12.00	2.00	/ksf GLA	15.00	14.00
Performing Arts Theater	0.30	0.07	0.33	0.07	/seat	0.37	0.40
Residential ADU: Studio/Efficiency	0.10	1.00	0.15	1.00	/unit	1.10	1.15
1 bedroom	0.10	1.10	0.15	1.10	/unit	1.20	1.25
2 bedroom	0.10	1.35	0.15	1.35	/unit	1.45	1.50
Residential Market: Studio/Efficiency	0.10	1.00	0.15	1.00	/unit	1.10	1.15
1 bedroom	0.10	1.40	0.15	1.40	/unit	1.50	1.55
2 bedroom	0.10	1.65	0.15	1.65	/unit	1.75	1.80
>3 bedroom	0.10	1.90	0.15	1.90	/unit	2.00	2.05
Office 25k to 100k sq ft	0.30	3.33	0.03	0.33	/ksf GFA	3.63	0.36

Source: Walker Parking Consultants, 2017

The base ratios are modified by applying driving ratios, non-captive factors, and presence factors. The following sections present a brief explanation of these adjustments.

UNSHARED PARKING DEMAND

Assuming that each of these land uses required a separate pool of parking spaces, the peak unshared parking demand for the whole project is 933 spaces, occurring on a weekday, as shown in Table 2. Also shown is the unshared weekend parking demand, which is 755 spaces.

Table 2: Unshared Parking Demand

Land Use	Weekdays		Weekends		
	Base Ratio	Unadj Pkg Sp	Base Ratio	Unadj Units	Unadj Pkg Sp
Retail	2.90 /ksf GLA	19	3.20 /ksf GLA		21
Employee	0.70	5	0.80		5
Fine/Casual Dining	15.25 /ksf GLA	99	17.00 /ksf GLA		111
Employee	2.75	18	3.00		20
Fast Casual/Fast Food	12.75 /ksf GLA	83	12.00 /ksf GLA		78
Employee	2.25	15	2.00		13
Performing Arts Theater	0.30 /seat	15	0.33 /seat		17
Employee	0.07	4	0.07		4
Residential Guest	0.10 /unit	29	0.15 /unit		44
Residential ADU					
Studio/Efficiency	1.00 /unit	3	1.00 /unit		3
1 bedroom	1.10 /unit	10	1.10	0.00	10
2 bedroom	1.35 /unit	7	1.35	0.00	7
Residential Market					
Studio/Efficiency	1.00 /unit	30	1.00	0.00	30
1 bedroom	1.40 /unit	213	1.40	0.00	213
2 bedroom	1.65 /unit	137	1.65	0.00	137
>3 bedroom	1.90 /unit	19	1.90	0.00	19
Office 25k to 100k sq ft	0.30 /ksf GFA	19	0.03 /ksf GFA		2
Employee	3.33	208	0.33		21
Subtotal Customer/Guest		264			273
Subtotal Employee/Resident		396			209
Subtotal Reserved Resident - ADU	79% resident	16			16
Subtotal Reserved Resident - Market	65% resident	257			257
TOTAL		933			755

Source: Walker Parking Consultants, 2017

Please note that a nested parking area for some residential parkers will be located on the lowest level of the garage. Based on discussions with Insight, we assume 0.8 spaces per residential will be reserved in a gated area. The remaining residential parking demand will park in a shared area of the garage and will likely share space with office parking.

DRIVING RATIO ADJUSTMENTS

Adjustments are made to account for the number of patrons who arrive at the subject property by means other than personal vehicle.

Walker used data generated by the U.S. Census Bureau to make adjustments to the driving ratio. According to census data, approximately 67 percent of employees in the

immediate area drive or ride to work in a personal vehicle near the project site. Walker assumed that 67 percent of all employees in the area arrive via personal vehicle², while the other 33 percent utilize another means of transportation, such as mass transit, bicycle, or walking. It is important to note that service industry-related land uses, such as retail and restaurant, generally experience lower drive ratios than employees in an office setting. This has been accounted for in Walker's model.

Walker also made adjustments to the residential drive ratio, also known as the residential car ownership rate. While vehicle ownership varies depending on the number of people in the household and whether the space is an apartment or a condo, the residential vehicle ownership rate in the immediate area around the Insight project is approximately 85%. Approximately 85% of households in the area own one or more vehicles, while the remaining 15% of households do not own a vehicle.

Table 3 illustrates the driving ratios for weekday and weekend employees and guests used in this analysis.

Table 3: Drive Ratios

Land Use	Weekday		Weekend	
	Daytime	Evening	Daytime	Evening
Retail	85%	95%	95%	95%
Employee	62%	67%	67%	72%
Fine/Casual Dining	85%	95%	95%	95%
Employee	62%	67%	67%	72%
Fast Casual/Fast Food	85%	95%	95%	95%
Employee	62%	67%	67%	72%
Performing Arts Theater	85%	95%	95%	95%
Employee	62%	67%	67%	72%
Residential Guest	85%	95%	95%	95%
Residential ADU	85%	85%	85%	85%
Studio/Efficiency	85%	85%	85%	85%
1 bedroom	85%	85%	85%	85%
2 bedroom	85%	85%	85%	85%
Residential Market	85%	85%	85%	85%
Studio/Efficiency	85%	85%	85%	85%
1 bedroom	85%	85%	85%	85%
2 bedroom	85%	85%	85%	85%
≥3 bedroom	85%	85%	85%	85%
Office 25k to 100k sq ft	85%	95%	95%	95%
Employee	67%	72%	72%	77%

Source: Walker Parking Consultants, 2017

² Includes both single occupancy vehicles and carpooling.

NON-CAPTIVE ADJUSTMENTS

“Captive market” is borrowed from market researchers to describe people who are already present in the immediate vicinity at certain times of the day. In the shared parking analysis, the term “captive market” reflects the adjustment of parking needs and vehicular trip generation rates due to the interaction among uses in an area. Traditionally, the non-captive adjustment is used to fine-tune the parking needs of restaurants and retail patronized by employees of adjacent office buildings, or other persons already counted as being parked for the day.

Walker, in designing a shared use analysis, uses the inverse or non-captive ratio, which is the percentage of parkers who are not already counted as being parked. There is usually a primary land use, in this case the residential and office space, which account for the longest parking durations of a vehicle.

Table 4 details the weekday and weekend non-captive factors used in this analysis.

Table 4: Non-Captive Ratios

Land Use	Weekday		Weekend	
	Daytime	Evening	Daytime	Evening
Retail	83%	82%	90%	76%
Employee	94%	97%	96%	97%
Fine/Casual Dining	90%	95%	92%	96%
Employee	94%	97%	96%	97%
Fast Casual/Fast Food	66%	82%	85%	83%
Employee	94%	97%	96%	97%
Performing Arts Theater	100%	100%	100%	100%
Employee	94%	97%	96%	97%
Residential Guest	100%	100%	100%	100%
Residential ADU	100%	100%	100%	100%
Studio/Efficiency	100%	100%	100%	100%
1 bedroom	100%	100%	100%	100%
2 bedroom	100%	100%	100%	100%
Residential Market	100%	100%	100%	100%
Studio/Efficiency	100%	100%	100%	100%
1 bedroom	100%	100%	100%	100%
2 bedroom	100%	100%	100%	100%
≥3 bedroom	100%	100%	100%	100%
Office 25k to 100k sq ft	100%	100%	100%	100%
Employee	98%	100%	100%	100%

Source: Walker Parking Consultants, 2017

In order to estimate the retail non-captive factor, we assumed that a small percentage of restaurant customers, residents and employees would visit the retail tenants. Similarly, we assumed a large number of employees, residents, and retail patrons would also visit



the fast/casual and fine/casual dining restaurants while already parked for their primary destination.

PRESENCE FACTORS

Presence is the last factor applied to the shared parking model. It is expressed as a percentage of potential demand modified for time of day and time of year. Considering that parking demand for each land use may peak at different times generally means that fewer parking spaces are needed for the combination of land uses in a project than would be required if each land use were considered separately.

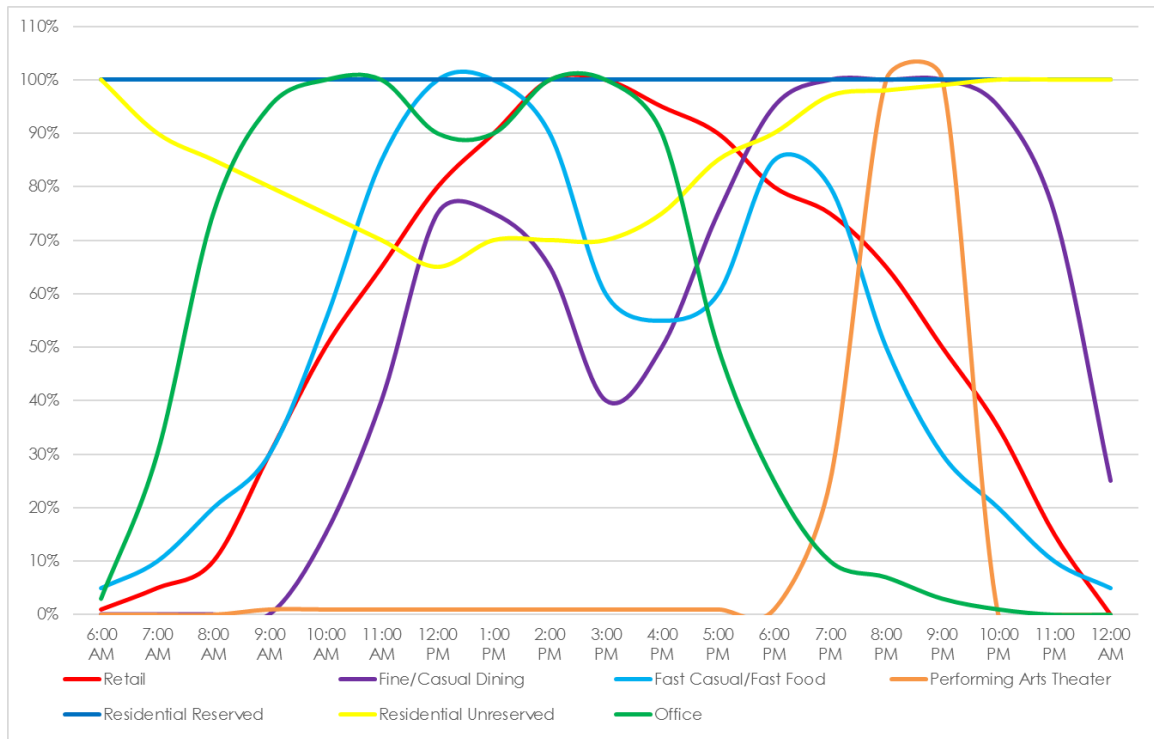
The shared parking demand model evaluates parking demand for each land use from 6:00 a.m. to midnight on weekdays and weekends for every month of the year.³

The model concludes that peak weekend parking demand occurs around 2:00 p.m. when the residential reserved, retail, and fast/casual restaurant space are at or near their peak demand. Figure 4 shows the major land uses and their projected hourly occupancy rates. As an example, fine/casual dining experiences a smaller peak around lunch time and reaches its overall peak around 8:00 p.m. before rapidly falling by midnight.

³ An additional analysis of the last week of December is included and considered a "thirteenth month." During this unique period, special analysis is required due to the difference in parking demand patterns, as opposed to the first three weeks of December.



Figure 4: Hourly Presence Factors - Weekday

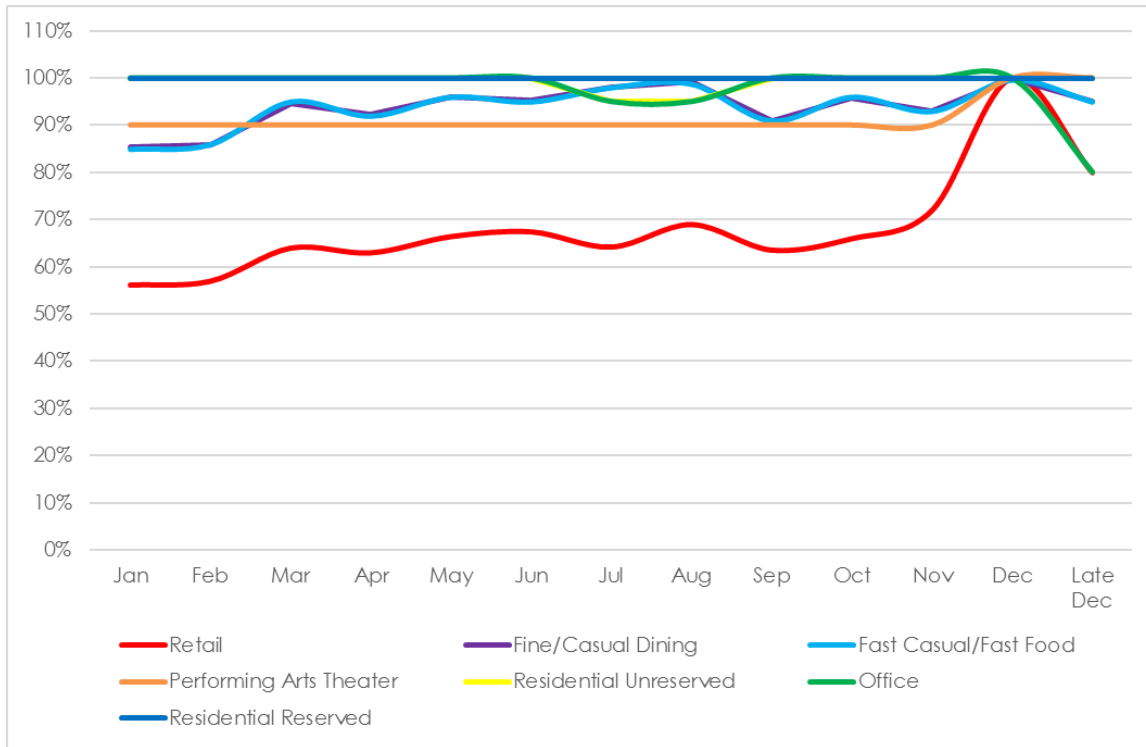


Source: Walker Parking Consultants, 2017

The monthly presence factors used in our model for the major land uses are shown in Figure 5. Retail parking peaks during the holiday shopping season in December, and quickly falls off thereafter. Late December (post-Christmas) is calculated separately due to the change in patterns. The retail spike accounts for the December peak projected by our model.



Figure 5: Monthly Presence Factors



Source: Walker Parking Consultants, 2017

OPERATIONAL ASSUMPTIONS

At this time, we understand Insight does not intend to install parking access and revenue control (PARC) equipment at either of the garage's two entry/exits; however, access control equipment will be used on the lowest level of the garage to create a nested area for reserved residential parking. As stated previously, reserved residential parking will be provided at 0.8 spaces per residential unit, or approximately 232 spaces.

Residential parking that is not located interior to the nested area will share the parking on the first level below grade with the office space. We assume this level will not be segregated from the at-grade level of parking, but will be managed through signage, permits, and regular enforcement. Spaces on this level could be used by retail and restaurant patrons during nights and weekends after office employees have vacated the property. It will be important to ensure adequate parking remains available for residents on this level if gates are not used to control access.

Please note, should Insight elect to restrict access to both lower levels of the garage to residential and office parkers only, Walker's shared parking recommendations would need to be revised and increased. During the weekday, office and residential demand is well balanced for shared parking. The spaces vacated by residents are used by office



parkers during the day. However, the number of vacated resident spaces is not enough to support all of the office demand generated by the project. Reserving enough parking to meet the needs of office and residential parking during peak conditions requires both lower levels of the garage and would result in empty spaces on nights and weekends. Our analysis indicates 100 spaces at grade may not be enough to support the transient parking need under peak conditions.

Lastly, please note that our parking capacity recommendations assume Insight charges market rates for monthly parkers, including residents and employees. Providing parking for no or minimal cost would impact the parking generation rates and would require Walker's shared parking recommendations to be revised and increased.

SHARED PARKING DEMAND

The recommended peak hour occupancies for a weekday and weekend using the shared parking methodology are presented in the tables below. The unadjusted or unshared parking demand is also shown for comparison.

Assuming that each of these land uses required a separate pool of parking spaces, a peak unshared parking demand of 933 spaces on a weekday is expected. Adjusting for shared parking, the weekday shared peak parking demand is anticipated to occur in December, with 600 parking spaces occupied at around 2:00 p.m. The shared parking recommendation represents a 36 percent reduction.

The table below also includes an alternate peak hour in the early evening for comparison, when office demand decreases and restaurant and residential demand increases.

Table 5: Weekday Shared Parking Demand

Land Use	Unadj	Month Adj	Pk Hr Adj	Non Captive	Drive Ratio	Demand
	Demand	December	2:00 PM	Daytime	Daytime	December 2:00 PM
Retail	19	100%	100%	83%	85%	13
Employee	5	100%	100%	94%	62%	3
Fine/Casual Dining	99	100%	65%	90%	85%	49
Employee	18	100%	90%	94%	62%	9
Fast Casual/Fast Food	83	100%	90%	66%	85%	42
Employee	15	100%	95%	94%	62%	8
Performing Arts Theater	15	100%	1%	100%	85%	0
Employee	4	100%	30%	94%	62%	1
Residential Guest	29	100%	20%	100%	85%	5
Residential Reserved - ADU	16	100%	100%	100%	85%	13
Residential Unreserved - ADU	4	100%	70%	100%	85%	2
Residential Reserved - Market	257	100%	100%	100%	85%	219
Residential Unreserved - Market	142	100%	70%	100%	85%	84
Office 25k to 100k sq ft	19	100%	100%	100%	85%	16
Employee	208	100%	100%	98%	67%	136
Subtotal Customer/Guest	264					125
Subtotal Employee/Resident	396					243
Subtotal Reserved Resident - ADU	16					13
Subtotal Reserved Resident - Market	257					219
Total Parking Spaces Required	933					600

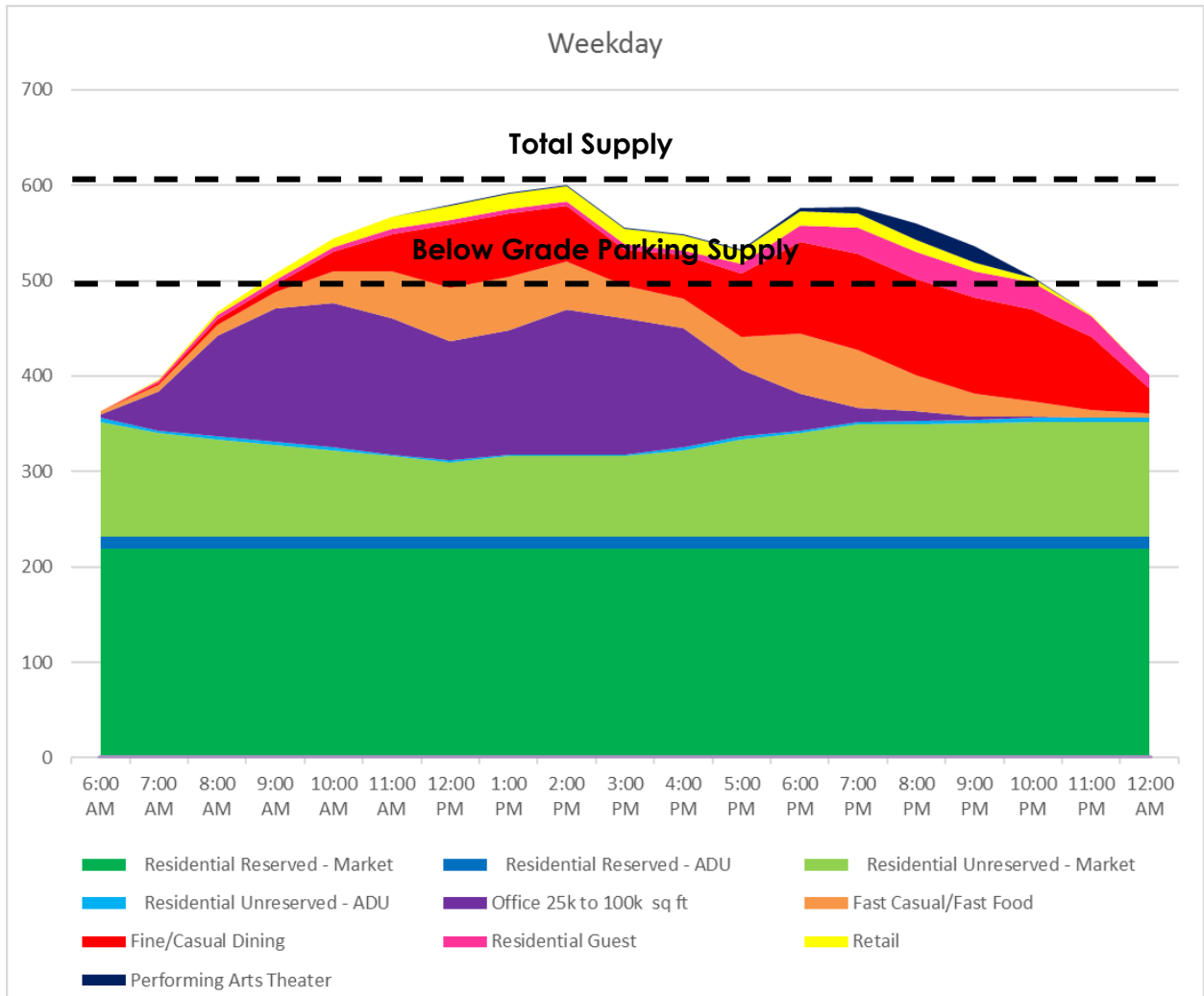
Source: Walker Parking Consultants, 2017

The figure below shows the cumulative parking demand for each land use from 6:00 a.m. until midnight during a weekday in December during peak conditions. Per Insight, 0.8 spaces per residential unit or approximately 232 spaces are 100% reserved. Residential parking demand (both reserved and shared) account for the largest portion of demand generated onsite.

The available supply is also shown on the figure below.



Figure 6: Weekday Parking Demand



Source: Walker Parking Consultants, 2017

As a reference, the figure above also includes lines demarking the total available parking supply and the cumulative below grade parking supply. The reserved parking for the residential land use does not occupancy the lowest level in its entirety; the office and residential demand together also do not fully occupy the below grade parking supply in the garage. During the evening, much of the first level below grade would be empty if restricted to just office and residential use.

It is also important to note that some of the projected parking demand could be mitigated by directing commercial/retail employees to park off-site. This management practice would also be difficult to implement without access control at the garage's entrances or regular enforcement.

Peak parking demand during the weekend is expected to occur in December at 7:00 p.m., with around 582 parking spaces. The unadjusted parking demand is projected at 755 spaces. The shared parking projection represents a 23 percent reduction from the unadjusted calculation. Again, we have included an alternate daytime peak hour for comparison.

Table 6: Weekend Shared Parking Demand

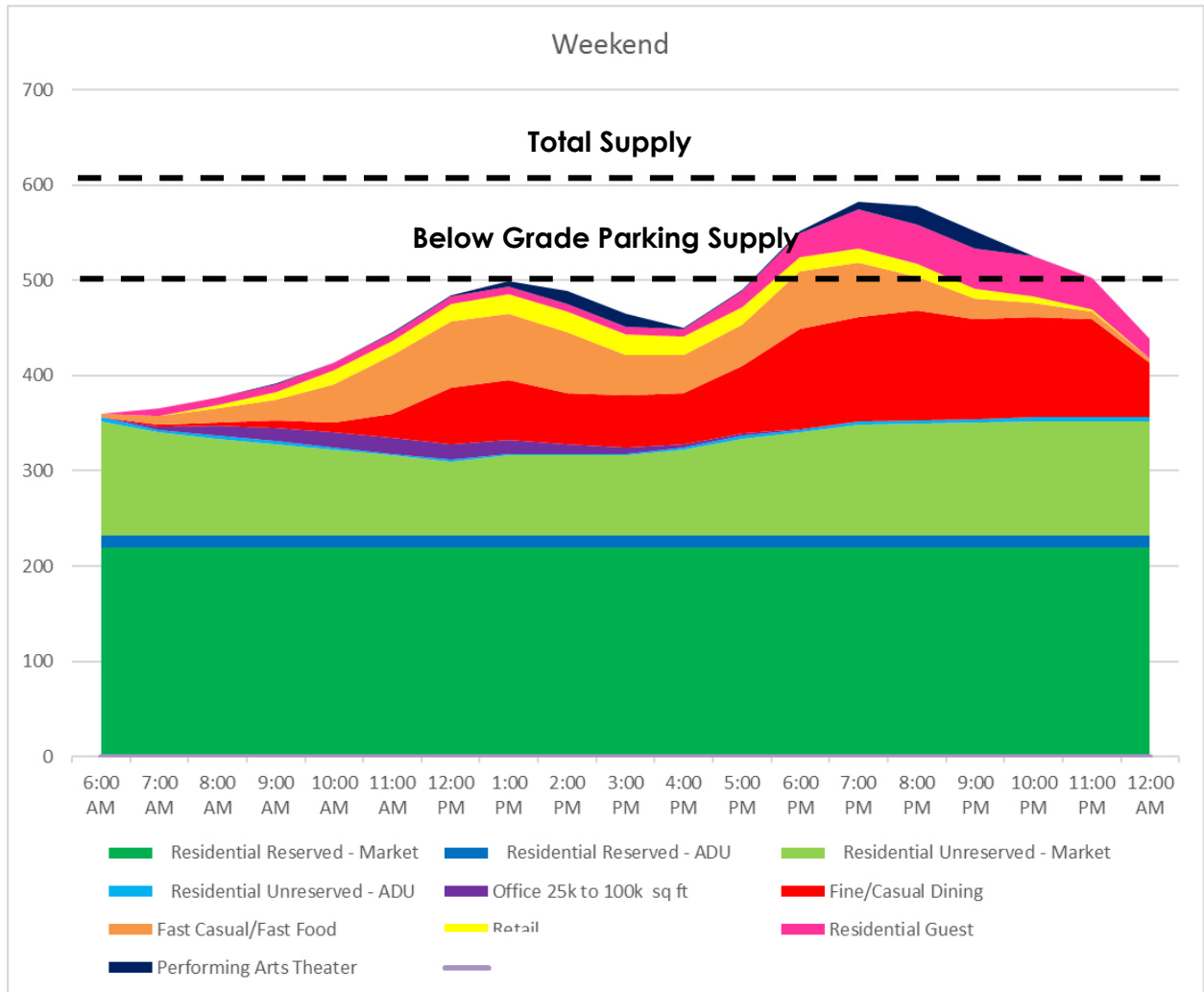
Land Use	Unadj Demand	Month Adj December	Pk Hr Adj 7:00 PM	Non Captive Evening	Drive Ratio Evening	Demand
						December 7:00 PM
Retail	21	100%	75%	75%	95%	11
Employee	5	100%	80%	96%	72%	3
Fine/Casual Dining	111	100%	95%	96%	95%	96
Employee	20	100%	100%	96%	72%	14
Fast Casual/Fast Food	78	100%	80%	83%	95%	49
Employee	13	100%	90%	96%	72%	8
Performing Arts Theater	17	100%	25%	100%	95%	4
Employee	4	100%	100%	96%	72%	3
Residential Guest	44	100%	100%	100%	95%	42
Residential Reserved - ADU	16	100%	100%	100%	85%	13
Residential Unreserved - ADU	4	100%	97%	100%	85%	3
Residential Reserved - Rental	257	100%	100%	100%	85%	219
Residential Unreserved - Market	142	100%	97%	100%	85%	117
Office 25k to 100k sq ft	2	100%	0%	100%	95%	0
Employee	21	100%	0%	100%	77%	0
Subtotal Customer/Guest	273					202
Subtotal Employee/Resident	209					148
Subtotal Reserved Resident - ADU	16					13
Subtotal Reserved Resident - Market	257					219
Total Parking Spaces Required	755					582

Source: Walker Parking Consultants, 2017

The following figure shows the cumulative parking demand for each land use from 6:00 a.m. until midnight during a Saturday in December during peak conditions. Again, the residential land uses account for more than half the demand generated by the project.



Figure 7: Weekend Parking Demand



Source: Walker Parking Consultants, 2017

Please note that retail and restaurant parking is expected to parking in the first level below grade during weekend conditions. If transient parking were limited to only the 100 spaces on grade, a parking deficit would exist.

CONCLUSIONS

While shared parking is an industry-accepted method of generating parking capacity recommendations, it is not a predictor of business activity levels, which vary greatly across the nation. Walker's shared parking analysis provides a recommended parking capacity for the proposed development that is based on 85th percentile level of activity conditions. Furthermore, it's important to note that peak demand conditions may only be experienced a few times each year.



Based on the development program provided by Insight, the recommended shared parking demand for the Insight at Falls Church development project is 600 spaces. The peak is expected to occur during a weekday, around 2:00 p.m. in December.

Insight plans to utilize access control equipment to restrict access to the lowest level of the parking garage to residents only. We also understand the first level below grade will be restricted to residents and office employees only, but may not be gated. We assume parking management practices will be implemented to ensure adequate supply remains available for these users. This management strategy allows transient parkers to utilize the lower level during nights and weekends when office demand is low.

Please note, if Insight were to nest both levels of below grade parking, Walker's shared parking recommendations would need to be revised and increased.