



**WALKER**  
PARKING CONSULTANTS

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October 6, 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 #: 14-4039.03

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, 636 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

Megan Gardo  
Parking Analyst

Enclosure

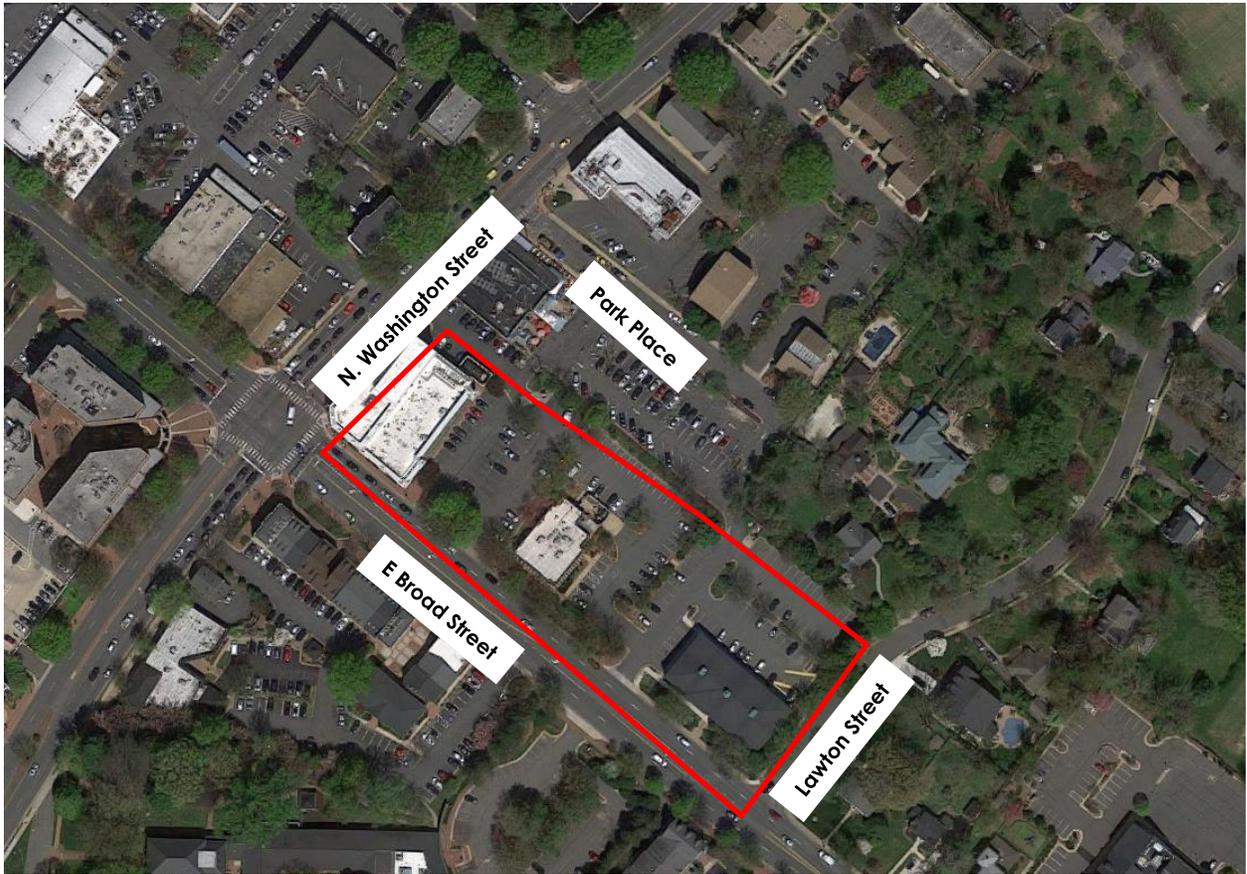
## BACKGROUND

Insight Property Group (Insight) engaged Walker Parking Consultants to update our 2015 shared parking analysis of the 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:

- 66,700 SF of office space
- 5,000 SF of retail space
- 6,900 SF of fine/casual dining space
- 6,900 SF of family restaurant dining space
- 2,500 SF of fast/casual dining space
- 100 seat performance art theater
- 277 market based residential rental units
- 18 affordable housing units(ADU)

Figure 2: Parking Elevations



Source: MV+A and Insight Property Group, 2017



Walker's Shared Parking Model utilizes parking demand estimates expressed as a ratio of x spaces per y units. The units vary depending upon the land use – i.e., keys for a hotel, dwelling units for a residential complex, or square feet of building space. Additionally, parking ratios for retail and restaurant land uses are based on the gross leasable area (GLA), whereas the ratios 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**

Shared Parking is an industry-accepted method of generating a parking capacity recommendation for real estate development projects. This should not be confused with a model that projects annual parking demand, which can vary widely based on a number of factors including type and quantity of land use, seasonal factors, and month of year and hour of day, transportation modal split, non-captive ratio and general business activity levels.

In fact, Walker's Shared Parking model represents a methodology that is likely to produce a safety net and recommended parking capacity that will not be needed every day of the year. Shared Parking is driven by base parking demand ratios that were forged on a collaborative basis by a team of consultants with significant parking study experience. The demand ratios used to formulate Walker's model are based on historical data collection for various land uses. The demand ratios tend to represent higher limits of demand that occur during typical peak hours. For example, the base ratio for retail is intended to represent the 20th busiest hour of retail activity during the year, while the ratio used for medical office buildings is intended to represent the 95th percentile of conditions.

Finally, the ultimate goal when developing a Shared Parking model is to promote the shared use of parking spaces between land uses and reduce the overall parking requirements for the site, while at the same time, to project an adequate number of spaces to accommodate the parking requirements for the proposed development. This sharing of uses assumes that the property is able to segregate long-term parkers such as employees and residents from short-term parkers such as retail and restaurant patrons and/or office and residential visitors but also share those spaces when the demand generated by the dominant user group is low. Office and residential land use activities are ideal candidates for shared parking as office generates the tradition "9 to 5" Monday through Friday curvature of activity while residential demand peaks in the evenings and weekends when, conceivably, the residents return home from work.

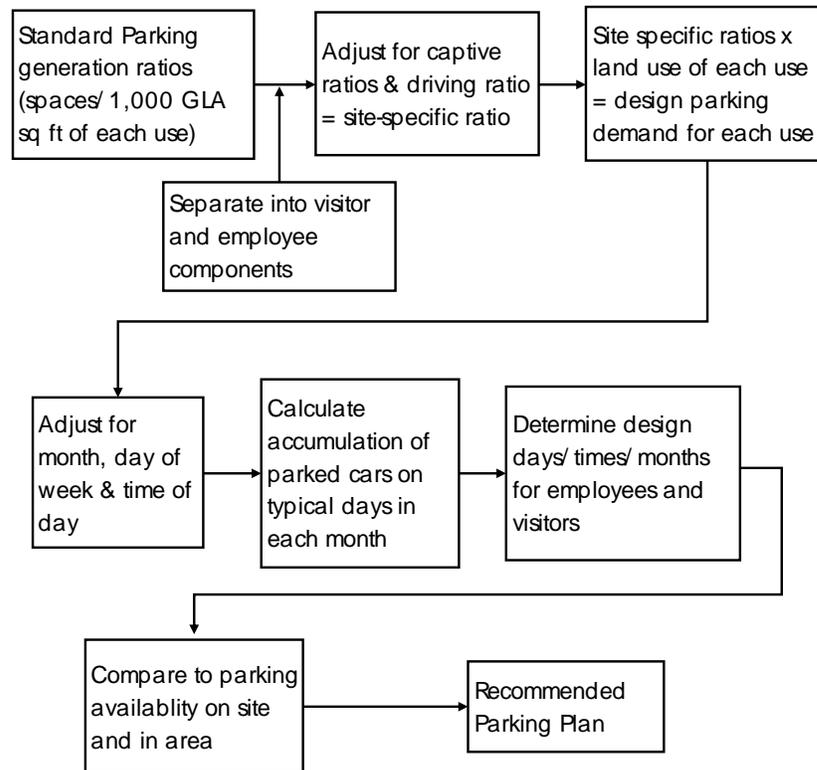


## METHODOLOGY

As noted, 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



Source: Adapted from Transportation Planning Handbook, ITE, 1999

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*<sup>1</sup> 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 85<sup>th</sup> 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.

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<sup>1</sup> *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
Family Restaurant	9.00	1.50	12.75	2.25	/ksf GLA	10.50	15.00
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	3.31	0.03	0.33	/ksf GFA	3.61	0.36

Source: ULI and Walker Parking Consultants, 2017

The base ratios are later modified by applying driving ratios, non-captive factors, and presence factors that are believed to be accurate and unique to the particular area and/or development. 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 Insight at Falls Church at full build-out and tenant occupancy is 979 spaces, occurring on a weekday, as shown in Table 2. Also shown is the unshared weekend parking demand, which is 824 spaces.



Table 2: Unshared Parking Demand

Land Use	Weekdays		Weekends	
	Base Ratio Unit	Unadj Pkg Sp	Base Ratio Units	Unadj Pkg Sp
Retail	2.90 /ksf GLA	15	3.20 /ksf GLA	16
Employee	0.70	4	0.80	4
Fine/Casual Dining	15.25 /ksf GLA	105	17.00 /ksf GLA	117
Employee	2.75	19	3.00	21
Family Restaurant	9.00 /ksf GLA	62	12.75 /ksf GLA	88
Employee	1.50	10	2.25	16
Fast Casual/Fast Food	12.75 /ksf GLA	32	12.00 /ksf GLA	30
Employee	2.25	6	2.00	5
Performing Arts Theater	0.30 /seat	30	0.33 /seat	33
Employee	0.07	7	0.07	7
Residential Guest	0.10 /unit	30	0.15 /unit	44
Residential ADU				
Studio/Efficiency	1.00 /unit	2	1.00 /unit	2
1 bedroom	1.10 /unit	11	1.10 0.00	11
2 bedroom	1.35 /unit	8	1.35 0.00	8
Residential Market				
Studio/Efficiency	1.00 /unit	31	1.00 0.00	31
1 bedroom	1.40 /unit	217	1.40 0.00	217
2 bedroom	1.65 /unit	150	1.65 0.00	150
>3 bedroom	1.90 /unit	0	1.90 0.00	0
Office 25k to 100k sq ft	0.30 /ksf GFA	20	0.03 /ksf GFA	2
Employee	3.31	220	0.33	22
Subtotal Customer/Guest		294		330
Subtotal Employee/Resident		407		216
Subtotal Reserved Resident - ADU	81% resident	17		17
Subtotal Reserved Resident - Market	66% resident	261		261
<b>TOTAL</b>		<b>979</b>		<b>824</b>

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 unit 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 75 percent of employees in the area drive or ride to work in a personal vehicle near the project site. Walker assumed that 75 percent of all employees in the area arrive via personal vehicle<sup>2</sup>, while the other 25 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 adjusted 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 percent based on census data. Approximately 85 percent of households in the area own one or more vehicles, while the remaining 15 percent of households do not own a vehicle.

It is important to note that transportation demand management (TDM) strategies such as bike sharing, unbundled parking leases, and market-based parking rates, as well as public transit incentives may be implemented at the property, all of which contribute to lower vehicle ownership rates and greater usage of alternative transportation options. These same strategies are included in the City of Falls Church's Comprehensive Plan and are generally found within development requirements and site plan conditions. The community lessens its dependence on single-occupancy automobile travel and the developer is required to build fewer spaces. While this is a significant development cost savings when building fewer parking spaces, the developer and its property manager must recognize the operating expenses associated with transit subsidies, unbundling of parking pricing, and parking access control equipment.

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

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<sup>2</sup> Includes both single occupancy vehicles and carpooling.



Table 3: Drive Ratios

Land Use	Weekday		Weekend	
	Daytime	Evening	Daytime	Evening
Retail	82%	92%	92%	92%
Employee	65%	70%	70%	75%
Fine/Casual Dining	82%	92%	92%	92%
Employee	65%	70%	70%	75%
Family Restaurant	82%	92%	92%	92%
Employee	65%	70%	70%	75%
Fast Casual/Fast Food	82%	92%	92%	92%
Employee	65%	70%	70%	75%
Performing Arts Theater	82%	92%	92%	92%
Employee	65%	70%	70%	75%
Residential Guest	82%	92%	92%	92%
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	82%	92%	92%	92%
Employee	75%	80%	80%	85%

Source: Walker Parking Consultants, 2017

### 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 dominant 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	75%	73%	82%	61%
Employee	96%	97%	97%	97%
Fine/Casual Dining	75%	92%	92%	92%
Employee	96%	97%	97%	97%
Family Restaurant	75%	92%	90%	92%
Employee	96%	97%	97%	97%
Fast Casual/Fast Food	7%	51%	58%	55%
Employee	96%	97%	97%	97%
Performing Arts Theater	100%	100%	100%	100%
Employee	96%	97%	97%	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

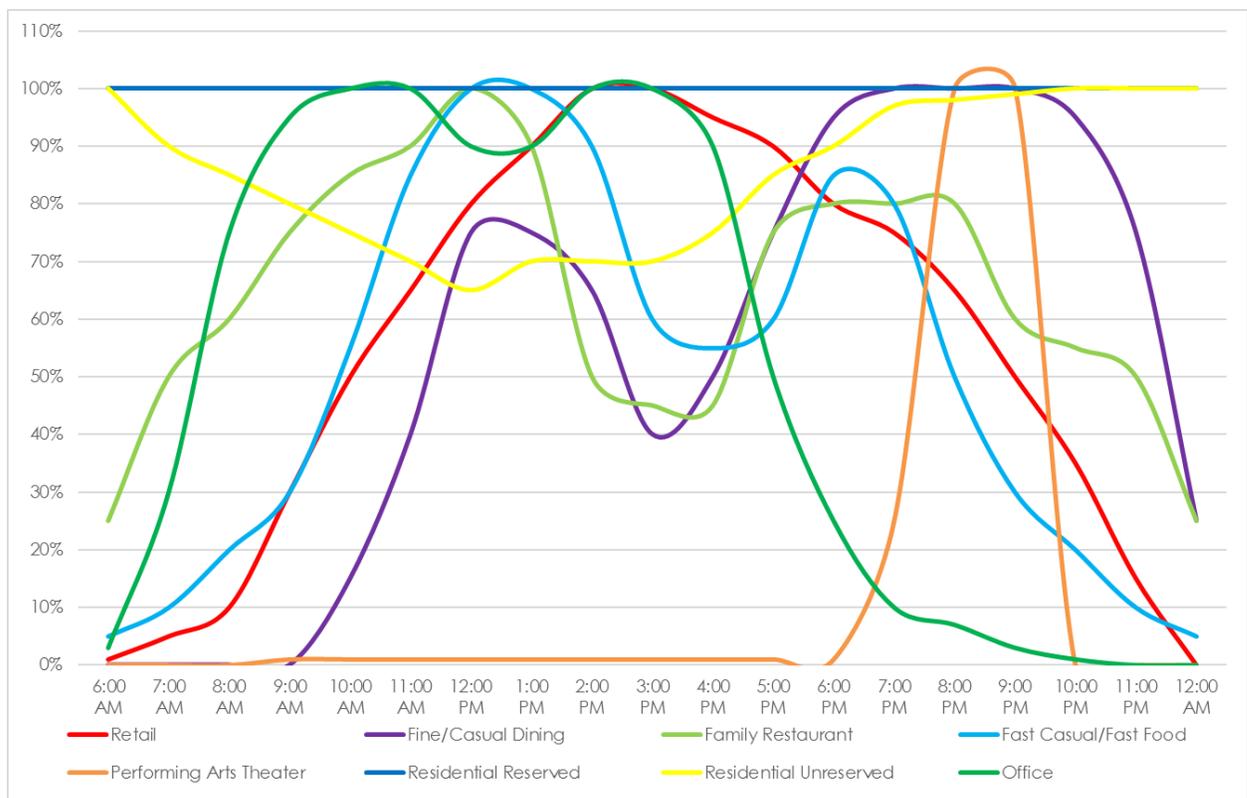
Presence is the last factor applied to the shared parking model. It is expressed as a percentage of potential demand modified for time of day and time of year. Considering that parking demand for each land use may peak at different times generally means that fewer parking spaces are needed for the combination 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.<sup>3</sup>

The model concludes that peak weekend parking demand occurs around 1:00 p.m. when the residential reserved, retail, office, family restaurant, 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.

Figure 4: Hourly Presence Factors - Weekday



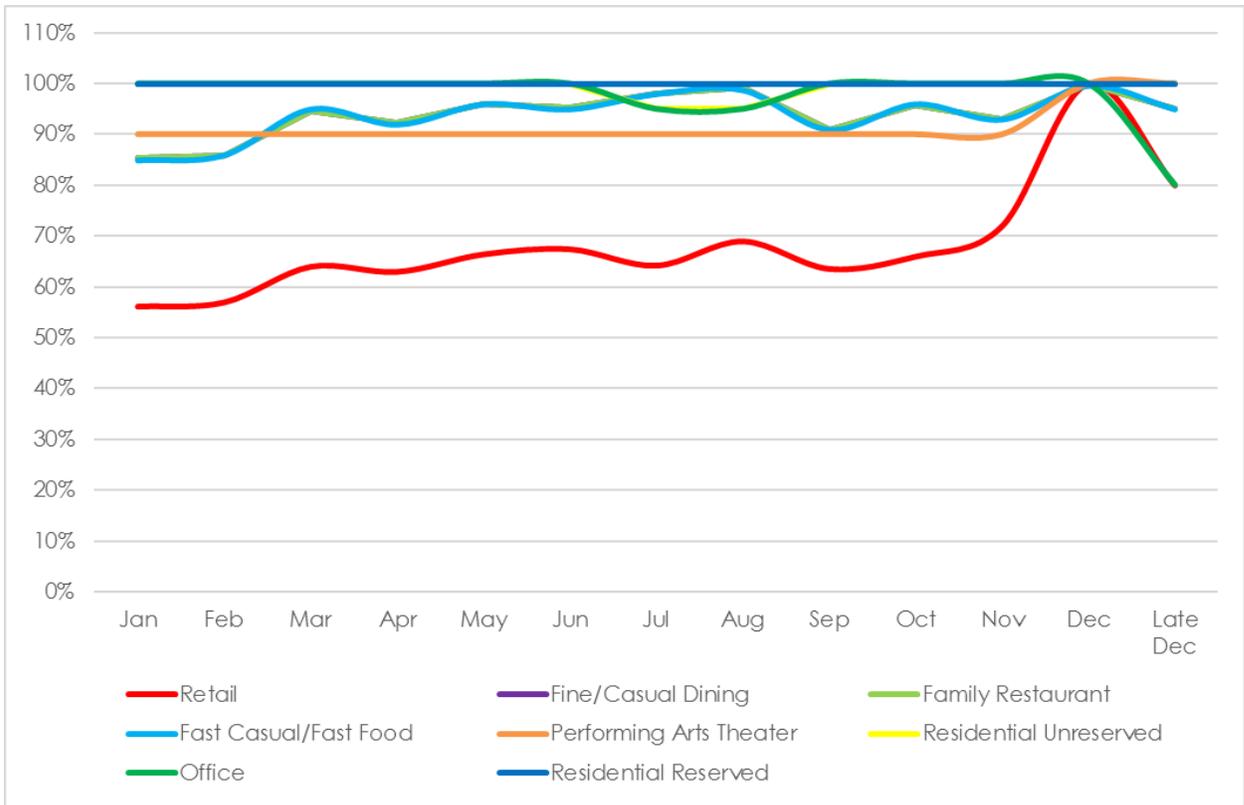
Source: Walker Parking Consultants, 2017

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.

<sup>3</sup> 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 5: Monthly Presence Factors



Source: Walker Parking Consultants, 2017

### OPERATIONAL ASSUMPTIONS

At this time, we understand Insight intends to install a Parking Access and Revenue Control System (PARCS) in the garage to manage both monthly and transient parking demand. With a pay-on-foot (POF) application, the transient user enters the garage by taking a ticket from an entrance lane ticket dispenser and parks in the parking structure, in this case either the ground or P1 level of the garage. To exit the garage, the patron proceeds to a POF station, pays the appropriate fee, and is issued a validated ticket for use at the exit verifier. The monthly customer uses their proximity card or their AVI transponder at the entrance and exit to operate the gates.

Residential parkers who have elected to pay for a reserved space would proceed to the lowest level of the garage where they would access a second set of gates to park in a nested area. As stated previously, reserved residential parking will be provided at 0.8 spaces per residential unit, or approximately 236 spaces. Preliminary site plans indicate the capacity of the P2 level of the garage is 246 spaces. It is unclear if/how many of these 10 extra spaces may be allocated as reserved residential and how many may be lost to PARCS equipment installation.



Residential parking that is not located interior to the nested area will share the parking on the P1 level with the office employees during the weekday and retail/restaurant users on nights and weekends. Short-term transient parkers should be encouraged to park on-grade, with overflow directed to the P1 level. It will be important to both ensure adequate parking remains available for residents/monthly permit holders on the P1 level and maintain the ground floor level for transient parkers. We assume this balance will be achieved through signage, permits, and regular enforcement. We recommend Insight closely monitor the number of monthly permits sold to both residents and office employees and adjust to market conditions until a balanced distribution of monthly and transient parking is reached. Note that the City of Falls Church may require Insight to provide a much more detailed transportation management plan (TMP) to ensure that the number of spaces provided and shared use strategy employed will prove effective.

Please note, should Insight elect to restrict access to both lower levels of the garage to residential and office (monthly) parkers only, Walker's shared parking recommendations would need to be revised and increased. Nesting both the P1 and P2 levels would result in unused spaces on these levels on nights and weekends. Additionally, our analysis suggests that the approximately 105 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, and that these fees would be unbundled from office and residential rents. Providing or subsidizing parking for no or minimal cost to the user 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 capacities 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 979 spaces on a weekday is expected. Adjusting for shared parking, the weekday shared peak parking demand is anticipated to occur in December, with 598 parking spaces occupied at around 2:00 p.m.

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

**Table 5: Weekday Shared Parking Demand**

Land Use	Weekday					Alternate Peak	
	Unadj	Month Adj	Pk Hr Adj	Non Captive	Drive Ratio	Demand	Demand
	Demand	December	2:00 PM	Daytime	Daytime	2:00 PM	8:00 PM
Retail	15	100%	100%	75%	82%	9	7
Employee	4	100%	100%	96%	65%	2	2
Fine/Casual Dining	105	100%	65%	75%	82%	42	89
Employee	19	100%	90%	96%	65%	11	13
Family Restaurant	62	100%	50%	75%	82%	19	42
Employee	10	100%	100%	96%	65%	6	6
Fast Casual/Fast Food	32	100%	90%	7%	82%	2	8
Employee	6	100%	95%	96%	65%	4	2
Performing Arts Theater	30	100%	1%	100%	82%	0	28
Employee	7	100%	30%	96%	65%	1	5
Residential Guest	30	100%	20%	100%	82%	5	28
Residential Reserved - ADU	17	100%	100%	100%	85%	14	14
Residential Unreserved - ADU	4	100%	70%	100%	85%	2	3
Residential Reserved - Market	261	100%	100%	100%	85%	222	222
Residential Unreserved - Market	137	100%	70%	100%	85%	81	114
Office 25k to 100k sq ft	20	100%	100%	100%	82%	16	0
Employee	220	100%	100%	98%	75%	162	12
<b>Subtotal Customer/Guest</b>	<b>294</b>					<b>93</b>	<b>202</b>
<b>Subtotal Employee/Resident</b>	<b>407</b>					<b>269</b>	<b>157</b>
<b>Subtotal Reserved Resident - ADU</b>	<b>17</b>					<b>14</b>	<b>14</b>
<b>Subtotal Reserved Resident - Market</b>	<b>261</b>					<b>222</b>	<b>222</b>
<b>Total Parking Spaces Recommended</b>	<b>979</b>					<b>598</b>	<b>595</b>

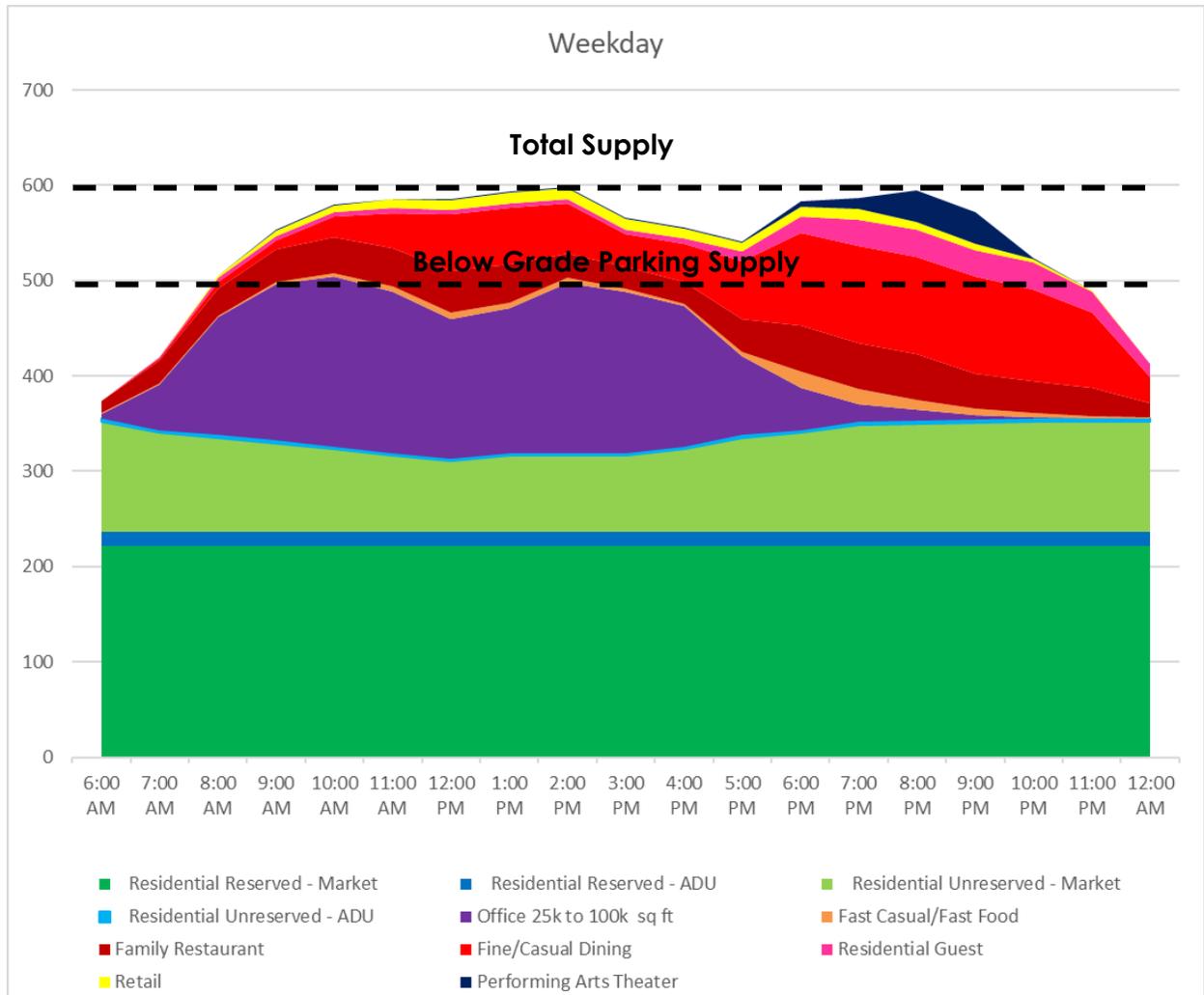
Source: Walker Parking Consultants, 2017

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 236 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. At 0.8 spaces per residential unit, the reserved parking for the residential land use would not occupy the lowest level in its entirety (236 spaces vs 246 spaces). The office (employee and visitor) and residential demand together also are not expected to 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.



Peak parking demand during the weekend is expected to occur in December at 8:00 p.m., with around 619 parking spaces. The unadjusted parking demand is projected at 824 spaces. Again, we have included an alternate daytime peak hour for comparison.

**Table 6: Weekend Shared Parking Demand**

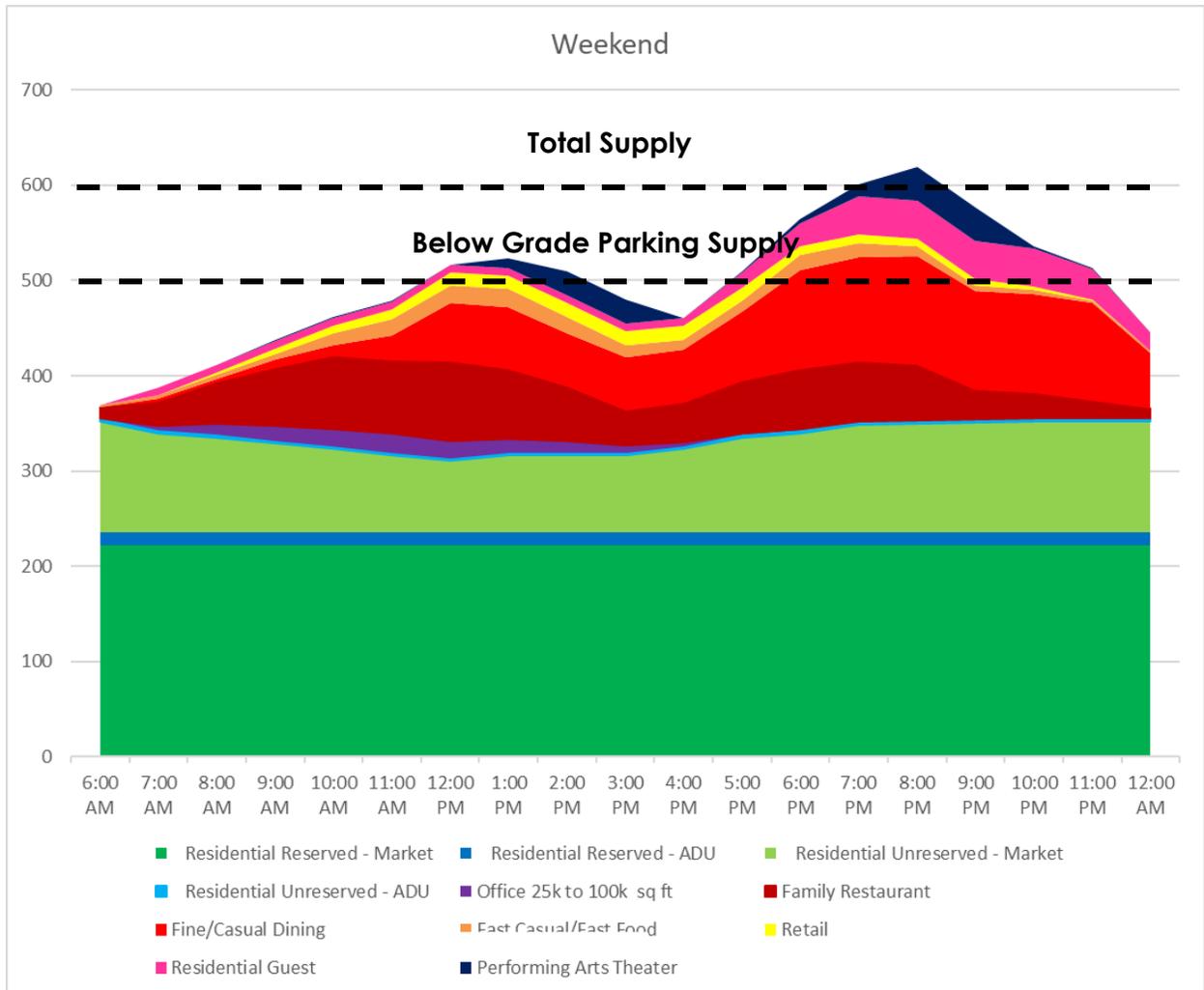
Land Use	Unadj Demand	Month Adj December	Pk Hr Adj 8:00 PM	Weekend		Alternate Peak	
				Non Captive Evening	Drive Ratio Evening	Demand December 8:00 PM	Demand December 1:00 PM
Retail	16	100%	65%	61%	92%	6	11
Employee	4	100%	75%	97%	75%	2	3
Fine/Casual Dining	117	100%	100%	92%	92%	99	54
Employee	21	100%	100%	97%	75%	15	11
Family Restaurant	88	100%	65%	92%	92%	48	62
Employee	16	100%	95%	97%	75%	11	11
Fast Casual/Fast Food	30	100%	50%	55%	92%	8	16
Employee	5	100%	60%	97%	75%	2	3
Performing Arts Theater	33	100%	100%	100%	92%	30	5
Employee	7	100%	100%	97%	75%	5	5
Residential Guest	44	100%	100%	100%	92%	40	8
Residential Reserved - ADU	17	100%	100%	100%	85%	14	14
Residential Unreserved - ADU	4	100%	98%	100%	85%	3	2
Residential Reserved - Market	261	100%	100%	100%	85%	222	222
Residential Unreserved - Market	137	100%	98%	100%	85%	114	81
Office 25k to 100k sq ft	2	100%	0%	100%	92%	0	1
Employee	22	100%	0%	100%	85%	0	14
<b>Subtotal Customer/Guest</b>	<b>330</b>					<b>231</b>	<b>157</b>
<b>Subtotal Employee/Resident</b>	<b>216</b>					<b>152</b>	<b>130</b>
<b>Subtotal Reserved Resident - ADU</b>	<b>17</b>					<b>14</b>	<b>14</b>
<b>Subtotal Reserved Resident - Market</b>	<b>261</b>					<b>222</b>	<b>222</b>
<b>Total Parking Spaces Recommended</b>	<b>824</b>					<b>619</b>	<b>523</b>

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 utilize the first level below grade during weekend conditions. If transient parking were limited to only the 105 spaces on grade, a parking deficit may exist during peak hours of operation.

**While the projected parking demand during weekend conditions is expected to exceed the on-site parking supply, by approximately 19 spaces during peak conditions, it is important to note that the shortage may only be experienced for a few hours throughout the course of the year. During the remaining hours of operation, the parking supply is expected to be sufficient to support demand.**

It is also important to note that some of the projected parking demand could be mitigated through additional parking management strategies such as arranging for commercial/retail employees to park off-site, particularly during the busiest periods of

**activity, and/or subsidizing or partially subsidizing employee and resident public transportation.**

## 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 85<sup>th</sup> 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 capacity for the Insight at Falls Church development project is 619 spaces. While the projected demand does exceed the planned capacity by approximately 19 spaces, the shortage is only expected to occur during a few hours throughout the course of the year. During these select times, alternative parking management strategies could be implemented to mitigate the parking shortage.

Management of the garage's parking supply will be critical to the success of this project. Insight plans to install access control equipment in the garage and charge market rates for parking. PARCS equipment will also be placed at the P2 level of the garage to create a nested area for residents. We assume parking management practices will be implemented to direct long-term parkers, such as residents and employees, to the P1 level of the garage while maintaining the parking supply at grade for short term users. Additionally, the management strategy should allow for transient parkers to utilize the lower level during nights and weekends when office demand is low. We recommend Insight closely monitor the number of residential and office permits sold to ensure long- and short-term parking needs are balanced.

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.