

## MEMORANDUM



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**To:** City of Fairfax Zoning Department

**From:** Michael J. Workosky, PTP, TOPS, TSOS  
John F. Cavan, P.E., PTOE

**Re:** Willowwood Plaza  
N29 Apartments Phase 1  
**Fairfax, Virginia**

**Subject:** Shared Parking Reduction Request

**Date:** Revised October 16, 2023

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### INTRODUCTION

This memorandum presents the results of a parking reduction study conducted for the N29 Apartments. The site (noted as Tax Map number 47-4-02-02-002) is located within the existing Willowwood Plaza office development on the north side of Eaton Place, north of Fairfax Boulevard (U.S. Route 29/50) and east of Chain Bridge Road (Route 123) as shown on Figure 1. Willowwood Plaza is currently developed with two (2) office buildings that consist of 277,720 S.F. of general office uses and served by 763 surface parking spaces as shown on Figure 2.

The Applicant, Capital City Real Estate, has filed an application to rezone the property from CR (Commercial Retail) to CU (Commercial Urban) and develop the western portion of the site with 260 multifamily residential units and 5,000 S.F. of retail space (Phase 1). This portion of the site would be served by a new structured parking garage. A copy of the site plan is shown on Figure 3.

The eastern portion of the site (Phase 2) is ultimately proposed to be developed with 50 condominiums (two-over-two units). The condominium units would meet City zoning requirements and the office parking supply will be replaced with new structured parking garages. However, for purposes of this parking analysis, the Phase 2 portion of the site was not assumed to be redeveloped and the 375 existing surface parking spaces would be maintained.

The parking reduction request is applicable to the Phase 1 portion of the site through the use of shared parking. (Note that the two existing office buildings in the northern portion of the site are not included in the application but are referenced in this parking analysis to account for the sharing of parking spaces.)

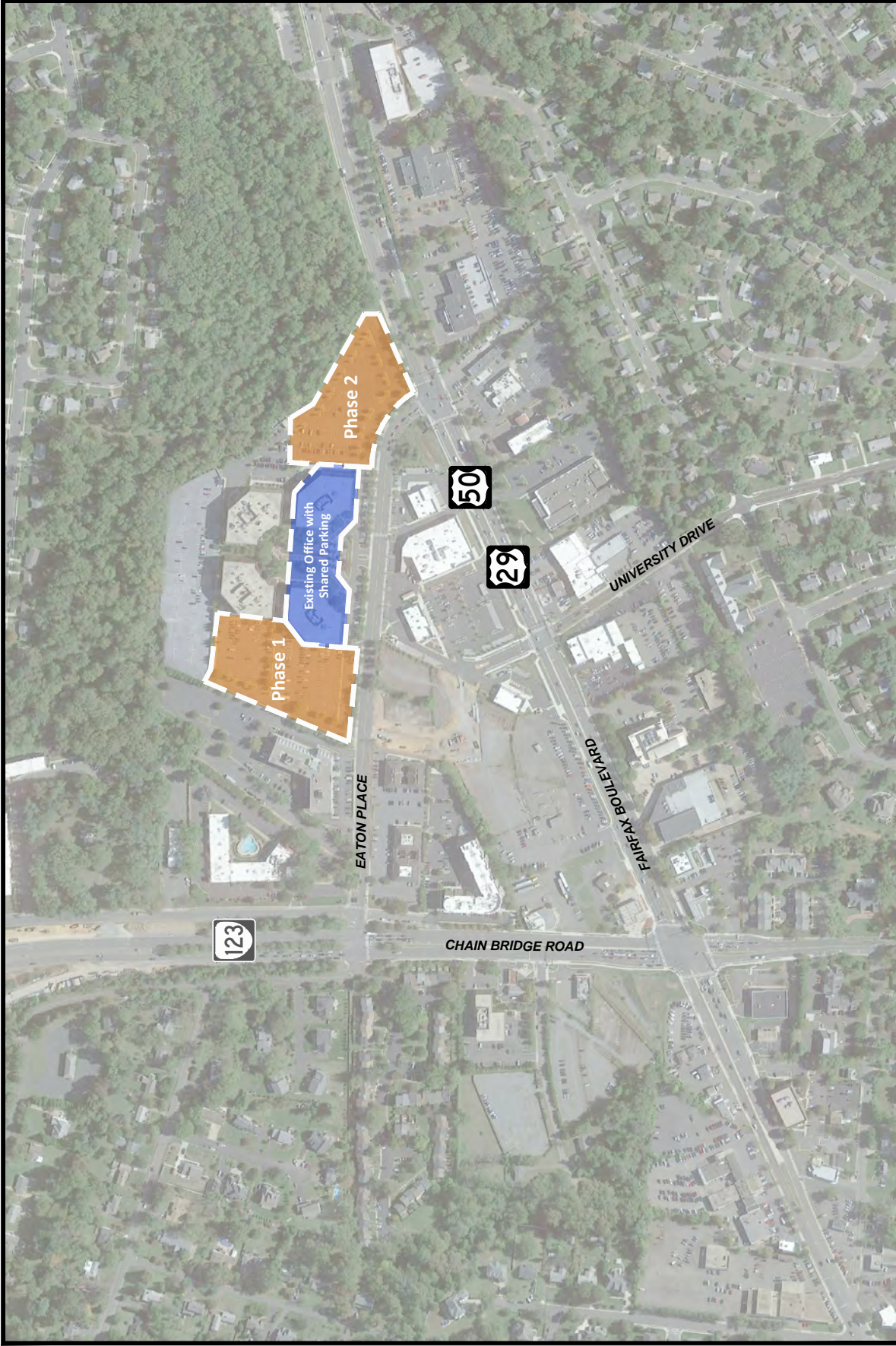


Figure 1  
Site Location

 NORTH  
Willowwood Plaza  
City of Fairfax, Virginia



**Figure 2**  
Existing Conditions Plan



NORTH  
N29 Willowwood  
City of Fairfax, Virginia



PLAN PROVIDED BY: HICKOK COLE

Figure 3  
Proposed Development Plan

← NORTH  
N29 Willowwood  
City of Fairfax, Virginia

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The Applicant is requesting an overall parking reduction of 7.9 percent (or up to 93 fewer spaces) than the 1,180 spaces that would be required by the Ordinance for the Phase 1 uses and two existing office buildings. A parking supply of 1,087 spaces is proposed. The parking reduction is based on the sharing of spaces between the Phase 1 uses and two existing office buildings.

Sources of data for this analysis include, but are not limited to, the files and library of Wells + Associates (W+A), christopher consultants, Cozen O'Connor, Capital City Real Estate, the Institute of Transportation Engineers (ITE), Urban Land Institute (ULI), and City of Fairfax.

### BACKGROUND INFORMATION

The site is currently zoned CR (Commercial Retail) and a rezoning application has been submitted to rezone the property to CU (Commercial Urban). As mentioned previously, Phase 1 would consist of 260 multifamily residential units and 5,000 S.F. of retail space.

The Phase 2 portion of the development would include 50 two-over-two condominium units but was not included in this parking analysis.

### Residential Unit Mix

Multifamily Units. The Applicant is intending to provide the following unit type ratios:

■ One (1) Bedroom Units:	164 Units (63 percent)
■ Two (2)/Three (3) Bedroom Units:	<u>96 Units (37 percent)</u>
Total	260 units

As shown above, the proposed project would provide a majority of one-bedroom units.

### Project Phasing

This parking reduction request is associated with the Phase 1 development on western portion of the site. These uses would include the multifamily residential and retail spaces. It is noted that the Phase 1 uses would share parking with the two existing office buildings as outlined later in the report.

The Phase 2 portion the site at the southeastern side of the development would consist of 50 condominiums (two-over-two units). While this phase would likely be constructed shortly after Phase 1, separate parking would be provided and is not the subject of this parking reduction.

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### Proposed Parking Supply

A future parking supply of 1,087 parking spaces is proposed and includes the following:

- 26 existing surface spaces (dedicated to office) on off-site Parcels 47-4-02-02-002 and 47-4-02-02-001
- 375 existing surface spaces (dedicated to office) on off-site Parcel 47-4-02-02-001
- 676 spaces within proposed parking structure for this subject application of which\*:
  - 174 spaces dedicated to office
  - 234 spaces dedicated to multifamily (0.9 spaces per unit)
  - 268 shared spaces
- An additional ten (10) surface spaces are proposed within the subject site

**TOTAL PARKING PROVIDED – 1,087 SPACES**

### CITY OF FAIRFAX PARKING REQUIREMENTS

Chapter 110, Article 4, Section 4.2.3.E of the Zoning Ordinance (see **Attachment III**) outlines the parking requirements for multifamily residential uses as follows:

- 1 bedrooms – “1.5 spaces per unit”
- 2 or more bedrooms – “2 spaces per unit”

In addition, Section 4.2.3.D.1.c allows for a ten percent parking reduction within the CU district where structured parking is provided.

Based on the proposed unit mix, the 260 multifamily units would require 394 spaces.

For retail uses, the required parking would be “1 space per 200 sq. ft. of floor area” with a ten percent reduction for being within the CU district. Therefore, the proposed 5,000 square feet (S.F.) of retail space would require 23 parking spaces based on the code ratios. The two existing office buildings are currently served by 763 parking spaces. Based on the April 2018 determination from City staff, the existing office buildings are in conformance to City standards. Therefore, the existing parking supply of 763 spaces was assumed for purposes of the office parking requirement.

Based on a strict application of the Zoning Ordinance, 1,180 spaces are required for the proposed Phase 1 uses as well as the two existing off-site office buildings.

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It is noted that based on the Applicant's proffers, up to 3,020 sq. ft. of retail could be converted to up to three (3) loft-style apartment units. Under such a scenario, the Code parking requirements for the residential and retail uses would be reduced from 1,180 to 1,171 spaces and, therefore, the analysis in this memorandum would be conservative. See Attachment I for additional information.

### REQUESTED PARKING REDUCTION

As outlined above, Phase 1 of the planned development and existing office buildings would require a minimum of 1,180 parking spaces to meet a strict application of the Zoning Ordinance parking requirements (see Table 1). The Applicant is requesting an overall parking reduction of 7.9 percent (or up to 93 fewer spaces) than would be required by the Ordinance based on a proposed parking supply of 1,087 spaces.

Specifically, the parking reduction considers the shared parking between a portion of the residential and office uses. Section 4.2.5.C.3 allows for a reduction of up to 50 percent of the residential requirement when residential and office parking are shared. Based on a residential requirement of 394 spaces, this provision would allow for a reduction of up to 197 spaces. Thus, the proposed reduction of 93 spaces is within the limits of this provision.

### SHARED PARKING REDUCTION ANALYSIS

Shared parking is defined as "a parking space that can be used to serve two or more individual land uses without conflict or encroachment." The approach to managing the parking demand at the Willowood Plaza is to provide a portion of dedicated parking for residents within the parking garage and take advantage of the variations in parking accumulation by residents, visitors, office workers and retail patrons.

Applying shared parking techniques provides a systematic way to apply appropriate adjustments for variations in parking demand patterns. Sharing parking resources attempts to provide a balance between providing adequate parking to support a development from a commercial viewpoint, while avoiding excessive costs, over building parking, and storm drainage and other environmental impacts.

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Table 1  
N29 Willowwood  
Development Program and Code Parking Summary <sup>(1) (2)</sup>

Land Use	Buildout Conditions	
	Size	Units
Retail	5,000	SF GLA
Studio/1-Bedroom	164	D.U.
2 -Bedroom or more	96	D.U.
<i>Total Residential Apartments</i>	<i>260</i>	<i>D.U.</i>

Code Parking Required	Units/Size	Ratio (min)	Adjustment Factor	Parking Required
Retail (GFA)	5,000	1.0 per 200 SF	90%	23
Office	277,720	See Footnote 3	n/a	<u>763</u>
<b>Commercial Parking Required</b>				<b>786</b>
<b>Phase 1 Residential Apartments</b>				
1-Bedroom	164	1.50	90%	221
2 -Bedroom or more	<u>96</u>	2.00	90%	<u>173</u>
<b>Apartment Parking Required</b>	<b>260</b>	<b>1.52</b>		<b>394</b>
<b>Total Parking Required</b>	<b>1,180</b>	<b>spaces</b>		
<b>Total Parking Provided</b>	<b>1,087</b>	<b>spaces</b>		
<b>Difference</b>	<b>(93)</b>	<b>spaces</b>		
<b>Percent</b>	<b>-7.9%</b>			

Notes: (1) Based on Chapter 110, Article 4 of the City of Fairfax Zoning Ordinance.  
 (2) Phase 2 condominiums will be self-parked and are not included in this parking analysis  
 (3) Based on the existing parking supply of 763 spaces



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A shared parking analysis employs the following steps as identified in the *Shared Parking, Third Edition* Manual:

1. Gather and review project data.
2. Select parking ratios.
3. Select factors and analyze differences in activity patterns.
4. Develop scenarios for critical parking need periods.
5. Adjust ratios for mode split and persons per car for each scenario.
6. Apply captive market adjustments for each scenario.
7. Calculate required parking spaces for each scenario.
8. Determine if the scenarios reflect all critical parking needs and management concerns.
9. Recommend a parking plan.

The ULI methodology has established recommended parking indices, hourly accumulations, and seasonal variations in parking for various land uses.

### Parking Analysis Assumptions

The shared parking assumptions are summarized below:

- The proposed 260 multifamily units would require 394 parking spaces based on the code ratios (1.5 spaces per 1-bedroom unit and 2.0 spaces for 2- or 3-bedroom unit) and applying a ten percent reduction for being within the CU zoning district.
- The proposed 5,000 square feet (S.F.) of retail space would require 23 parking spaces based on the code ratio of one (1) space per 200 S.F. floor area and applying a ten percent reduction being within for the CU zoning district.
- The two existing office buildings require 763 spaces based on the existing parking supply.
- A future parking supply of 1,087 parking spaces is proposed and includes the following:
  - 26 existing surface spaces (dedicated to office) on off-site Parcel 47-4-02-02-002
  - 375 existing surface spaces (dedicated to office) on off-site Parcel 47-4-02-02-001
  - 676 spaces within proposed parking structure for this subject application of which:
    - 174 spaces dedicated to office
    - 234 spaces dedicated to multifamily units (0.9 spaces per unit)
    - 268 shared spaces
  - An additional ten (10) surface spaces are proposed within the subject site
- A minimum of 575 spaces would be required at all times to serve office users. It was assumed that office users would use the dedicated spaces first given the location adjacent to the office buildings. If office demand exceeded 575 spaces, the additional demand would be accommodated by the shared spaces.

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- Up to 0.9 spaces per multifamily unit would be reserved at all times for each multifamily residential unit. The remaining 0.62 spaces per multifamily unit would be served by the shared parking spaces and would include surplus resident parking and visitors.
- The 23 retail parking spaces would be served by the shared parking spaces.

### Shared Parking Methodology

The hourly parking demands for uses served by the shared spaces were calculated using the base rates described above and the hourly adjustment factors presented in the Urban Land Institute's (ULI) Shared Parking, Third Edition. Reserved parking spaces were treated as occupied during all hours. No additional adjustments for non-auto mode share or internal capture were assumed.

### Results

A summary of the hourly parking demands is shown in Table 2 and Figure 4. Based on the assumptions described above, a maximum of 1,084 parking spaces would be needed to accommodate the peak weekday parking requirement expected to occur at 10:00 AM. The proposed parking supply of 1,087 spaces would provide a surplus of three (3) parking spaces during this period. Thus, the proposed parking supply would adequately serve the site.

As shown in Figure 3, parking would be available for residents in the evening and early morning when office parking demand is low. In addition, parking spaces would be available on weekends when there is low office parking demand.

As noted previously, based on the Applicant's proffers, up to 3,020 sq. ft. of retail could be converted to up to three (3) loft-style apartment units. Under such a scenario, the 1,080 spaces would be required to accommodate weekday parking demands, four (4) fewer spaces than the results described above. See Attachment I for additional information.

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Table 2  
N29 Willowwood  
Weekday Shared Parking Demand

	Hour of Day																		
	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	12 AM
<b>Retail</b>	1%	5%	15%	35%	60%	75%	100%	100%	95%	85%	85%	85%	90%	80%	65%	45%	15%	5%	0%
<b>Office</b>	3%	15%	50%	90%	100%	100%	85%	85%	95%	95%	95%	60%	25%	15%	5%	3%	1%	0%	0%
<b>Residential Apartments</b>	0%	10%	20%	20%	20%	20%	20%	20%	20%	20%	20%	40%	60%	100%	100%	100%	100%	80%	50%
<b>Residential Apartments - Shared</b>	95%	80%	67%	55%	50%	45%	40%	40%	40%	40%	45%	50%	60%	70%	80%	85%	95%	97%	100%
<b>Retail</b>	1	2	4	9	14	18	23	23	22	20	20	20	21	19	15	11	4	2	-
<b>Office - Within Shared Spaces</b>	-	-	-	112	188	188	74	74	150	150	74	-	-	-	-	-	-	-	-
<b>Office - Within Dedicated Spaces</b>	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575
<b>Residential</b>	-	3	6	6	6	6	6	6	6	6	6	11	16	26	26	26	26	21	13
<b>Residential - Shared Spaces</b>	128	108	91	74	67	61	54	54	54	54	61	67	81	94	108	114	128	130	134
<b>Residential - Dedicated Spaces</b>	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234
<b>Totals Parking Required</b>	938	922	910	1,010	1,084	1,082	966	966	1,041	1,039	970	907	927	948	958	960	967	962	956
<b>Difference</b>	149	165	177	77	3	5	121	121	46	48	117	180	160	139	129	127	120	125	131

**Office Parking Summary**

Spaces Required by Office 763 spaces  
 Dedicated Garage Spaces 575 spaces  
 Balance in Shared Area 188 spaces

**Retail Parking Summary**

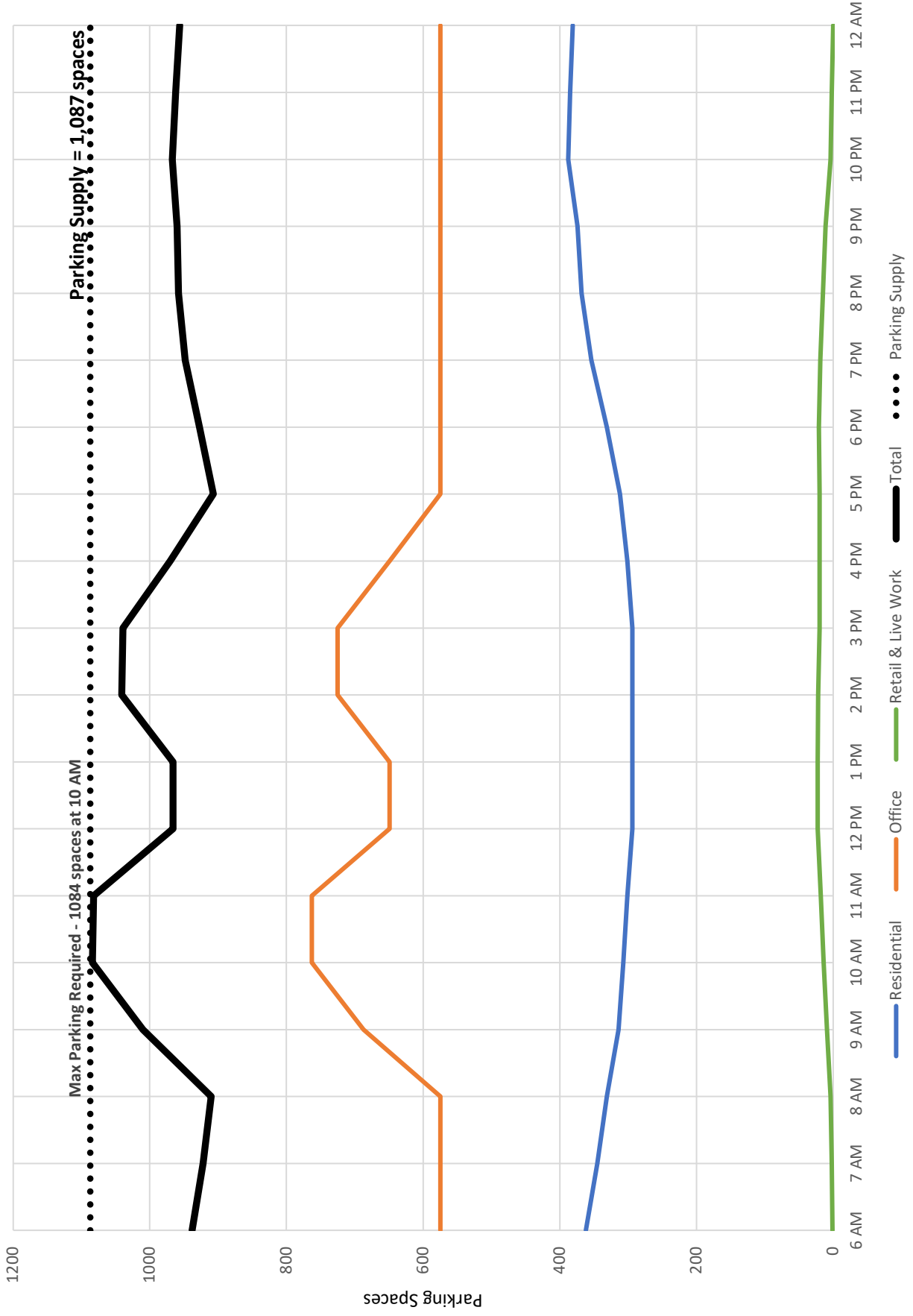
Assumed to be in shared area 23 spaces

**Multifamily Residential Parking Summary**

Number of Units 260 units  
 Total Parking Required 394 spaces  
 Dedicated Residential Spaces 234 spaces  
 Balance in Shared Area 160 spaces  
 Visitors in Shared in Shared Area 26 spaces  
 Residents in Shared in Shared Area 134 spaces

Parking Supply 1,087 spaces

Figure 4 - Hourly Parking Requirements



## MEMORANDUM

### CONCLUSIONS

Based on the documentation provided herein, the following can be concluded:

1. A parking reduction is proposed for the Phase 1 uses which include 260 multifamily residential units and 5,000 S.F. of retail space. The parking reduction is based on the nature of the proposed residential uses and the sharing of spaces between Phase 1 uses and two existing office buildings.
2. Based on a strict application of the Zoning Ordinance, 1,180 spaces are required for the proposed Phase 1 uses as well as the two existing off-site office buildings.
3. A future parking supply of 1,087 parking spaces is proposed and includes parking within the subject site as well as parking on the office parcels.
4. The Applicant is requesting an overall parking reduction of 7.9 percent reduction (or up to 93 fewer spaces) than would be required by the Ordinance.
5. Based on the shared parking analysis, a maximum of 1,084 parking spaces would be needed to accommodate the peak weekday parking requirement expected to occur at 10:00 AM. Parking would be available for residents in the evening and early morning when office parking demand is low. In addition, parking spaces would be available on weekends when there is low office parking demand.
6. The proposed parking reduction is generally compatible with potential parking reduction criteria outlined in Zoning Ordinance Section 4.2.5.C.3.

Questions regarding this document should be directed to Wells + Associates.

**At achment I**  
**Supplemental Parking Analysis**  
**(Residential Option)**

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## MEMORANDUM

Table 1  
N29 Willowwood  
Development Program and Code Parking Summary <sup>(1) (2)</sup>

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<b>Difference</b>	<b>(93)</b>	<b>spaces</b>		
<b>Percent</b>	<b>-7.9%</b>			

Notes: (1) Based on Chapter 110, Article 4 of the City of Fairfax Zoning Ordinance.

(2) Phase 2 condominiums will be self-parked and are not included in this parking analysis

(3) Based on the existing parking supply of 763 spaces

## MEMORANDUM

Table II-2  
N29 Willowwood  
Weekday Shared Parking Demand (Residential Option)

	Hour of Day																		
	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	12 AM
<b>Retail</b>	1%	5%	15%	35%	60%	75%	100%	100%	95%	85%	85%	85%	90%	80%	65%	45%	15%	5%	0%
<b>Office</b>	3%	15%	50%	90%	100%	100%	85%	85%	95%	95%	85%	60%	25%	15%	5%	3%	1%	0%	0%
<b>Residential Apartments</b>	0%	10%	20%	20%	20%	20%	20%	20%	20%	20%	20%	40%	60%	100%	100%	100%	100%	80%	50%
<b>Residential Apartments - Shared</b>	95%	80%	67%	55%	50%	45%	40%	40%	40%	40%	45%	50%	60%	70%	80%	85%	95%	97%	100%
<b>Retail</b>	1	1	2	4	6	7	9	9	9	8	8	8	8	9	8	6	5	2	1
<b>Office - Within Shared Spaces</b>	-	-	-	112	188	188	74	74	150	150	150	74	-	-	-	-	-	-	-
<b>Office - Within Dedicated Spaces</b>	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575
<b>Residential</b>	-	3	6	6	6	6	6	6	6	6	6	6	11	16	26	26	26	21	13
<b>Residential - Shared Spaces</b>	130	109	92	75	68	62	55	55	55	55	62	68	82	96	109	116	130	132	136
<b>Residential - Dedicated Spaces</b>	237	237	237	237	237	237	237	237	237	237	237	237	237	237	237	237	237	237	237
<b>Totals Parking Required</b>	943	925	912	1,009	1,080	1,075	956	956	1,032	1,031	962	899	919	942	953	959	970	966	961
<b>Difference</b>	144	162	175	78	7	12	131	131	55	56	125	188	168	145	134	128	117	121	126

**Office Parking Summary**

Spaces Required by Office 763 spaces  
 Dedicated Garage Spaces 575 spaces  
 Balance in Shared Area 188 spaces

**Retail Parking Summary**

Assumed to be in shared area 9 spaces

**Multifamily Residential Parking Summary**

Number of Units 263 units  
 Total Parking Required 399 spaces  
 Dedicated Residential Spaces 237 spaces  
 Balance in Shared Area 162 spaces  
 Visitors in Shared in Shared Area 26 spaces  
 Residents in Shared in Shared Area 136 spaces

Parking Supply 1,087 spaces