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TO: Cindy Petkac, AICP
Town of Vienna Department of Planning and Zoning

FROM: William F. Johnson, P.E.
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RE: 380 Maple Avenue West; MAC Proffer Amendment
Transportation Assessment

DATE: November 15, 2019
Revised November 27, 2019

Introduction

This memorandum summarizes the results of a transportation assessment conducted for the proposed redevelopment of a site in the Town of Vienna located at 380 Maple Avenue West. The site is located on the southeast quadrant of the Maple Avenue (Route 123) and Wade Hampton Drive intersection. The property is identified as Fairfax County Tax Map 38-3 ((2)) 147 and is currently developed with an office building of approximately 23,620 square feet.

In June 2019, the Vienna Town Council approved a rezoning of the subject site to the MAC (Maple Avenue Commercial) district. An amendment was approved by the Town Council on August 19, 2019. The approved development envisioned a multifamily residential building with ground floor commercial/restaurant uses. Development of the property in accordance with the MAC approval has not proceeded to date. Sunrise Senior Living has submitted an application to amend the proffers (the “Proffer Amendment”) and request a Conditional Use Permit (CUP) in order to develop the site as an assisted living facility in lieu of the approved multifamily and commercial uses. A reduction of the proposed site layout is provided in Figure 1.

As shown in the application submission, the proposed amended development retains the general layout and scale of the approved building, but, as detailed in this memorandum, results in significantly fewer new vehicular trips than forecasted conditions under current approvals. As a result, Town staff determined that an amended Traffic Impact Study (TIS) would not be required. However, this memorandum provides a detailed comparison of the proposed assisted living development to the existing on-site uses and the previously approved development. Additionally, this report includes a detailed evaluation of the proposed parking supply and the associated parking requirements of the amended development program.



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Trip Generation

As stated previously, the site is currently developed with an existing 23,620 square foot office building. Under the approved MAC rezoning, the existing office building would be razed and redeveloped with a multifamily residential mixed-use building with ground floor retail/commercial uses. As part of the Town's review of the approved rezoning, a Traffic Impact Study, *380 Maple Avenue West* prepared by Kimley-Horn and revised through March 18, 2019 (the "Previous TIS") was prepared which evaluated redevelopment of the site with the following land use program:

- 4,500 GSF Shopping Center
- 4,000 GSF Restaurant
- 42 Multifamily Dwelling Units

A copy of the trip generation analysis from the Previous TIS is provided herein as Attachment 1. It should be noted that the development program ultimately approved by Council in June 2019 reflected a reduction of the shopping center component to 3,500 GSF (limiting the total retail/commercial space to 7,500 GSF) and a reduction to 37 multifamily dwelling units. Therefore, for purposes of comparison, this memorandum focuses on the trips associated with the approved development program.

The Applicant proposes to amend the approved rezoning and redevelop the subject site as an assisted living facility with the following land use program:

- Up to 85 assisted living units (up to 120 beds)
- 950 Gross Square Feet (GSF) publicly accessible commercial use (evaluated as a 20-seat restaurant, or bistro)

Wells + Associates completed a trip generation analysis comparing the existing office building (assuming full occupancy), the uses currently approved for the site under the MAC rezoning, and the proposed amended development program. The analysis was performed using standard Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition rates/equations. The results of the analysis are summarized in Table 1. As shown, the proposed amended uses are forecasted to generate (without consideration of any transit/mode split or internal trip reductions) 36 weekday AM peak hour trips, 48 weekday PM peak hour trips, and 419 weekday daily trips. When compared to the existing office building, the proposed development would increase the weekday AM peak hour by 1 trip, increase the PM peak hour by 14 trips, and increase the weekday daily traffic by 189 trips. When compared to the currently approved MAC uses, the proposed redevelopment would *reduce* the trip generation potential of the site by 43 weekday AM peak hour, 52 weekday PM peak hour, and 363 weekday daily trips.

Table 1
380 Maple Avenue West
Trip Generation Comparison (1)

Land Use	Land Use Code	Size	Units	AM Peak Hour			PM Peak Hour			Weekday ADT	Saturday Peak Hour		
				In	Out	Total	In	Out	Total		In	Out	Total
Existing Use													
General Office Building	710	23,620	SF	31	4	35	6	28	34	230	7	6	13
Current Approval Trip Generation (2)													
Shopping Center	820	3,500	SF	6	5	11	8	7	15	132	8	8	16
High-Turnover (Sit-Down) Restaurant	932	4,000	SF	32	24	56	36	34	70	449	23	22	45
Multifamily Housing (Mid-Rise)	221	37	DU	3	9	12	9	6	15	201	8	8	16
Total Approved Program				41	38	79	53	47	100	782	39	38	77
Proposed Program													
Assisted Living	254	120	Beds	14	9	23	12	19	31	312	15	17	32
High-Turnover (Sit-Down) Restaurant (3)	932	950	SF	7	6	13	9	8	17	107	6	5	11
Total Proposed Program				21	15	36	21	27	48	419	21	22	43
Proposed Program vs Existing Office				(10)	11	1	15	(1)	14	189	14	16	30
Proposed Program vs Approved Program				(20)	(23)	(43)	(32)	(20)	(52)	(363)	(18)	(16)	(34)

Note(s):

- (1) Trip generation based on the Institute of Transportation Engineers' Trip Generation Manual, 10th Edition.
(2) Trip generation based on the approved 380 Maple Avenue West TIS, dated March 18, 2019, by Kimley-Horn and Associates, Inc., revised to account for density adjustments approved by Council.
(3) The weekday peak hour trip generation for the "proposed" restaurant is based on peak hour of the generator, consistent with the approved TIA by Kimley-Horn and Associates, Inc.

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Parking Evaluation

Parking Supply. As shown on the Applicant's amended Concept Plan, the site will provide a total of 80 off-street parking spaces within the parking garage, *without consideration of the MAC parking garage incentive factor*. These spaces will be open/available to the visitors, employees, and patrons of the site and access will not be restricted. Furthermore, the parking supply will be comprised of standard parking spaces and will not include compact or tandem spaces. A separate area designated for lay-by activities and ambulance access is provided within the garage and is not counted within the stated parking supply.

Parking Requirements. The calculated parking requirements for the amended development program is summarized in Table 2. Article 16, Section 18-130 of the Town's Zoning Ordinance outlines the parking requirements for "Commercial Building" (i.e., retail) uses as follows:

"1 space per 200 square feet of floor area on all floors"

Furthermore, the Ordinance outlines the parking requirements for "Restaurants" as follows:

"1 space per 4 seats"

Based on the application of the Zoning Ordinance, the proposed 950 GSF (20 seats) of commercial/restaurant use requires 5 parking spaces, whether the parking is calculated as commercial or restaurant.

The Town does not have a parking requirement in the Ordinance specific to an assisted living use. For purposes of determining the required parking for the assisted living component, Wells + Associates consulted the Fairfax County parking requirements. The off-street parking requirements for Fairfax County are primarily found in Article 11 of the Ordinance. As stated in the Ordinance, an assisted living facility would require:

"One (1) space per three (3) residents, plus one (1) additional space for each employee".

Based on information from the Applicant, no more than 35 assisted living employees are anticipated to be on the site at any one time during the peak shift. Therefore, in accordance with the County's requirements as shown in Table 1, a total of 75 spaces is required for the assisted living use. This supply corresponds to a parking ratio of 0.88 spaces per unit, which is well in excess of the 85th-percentile peak parking ratio of 0.53 spaces per unit reported in the Institute of Transportation Engineers (ITE) *Parking Generation Manual*, 5th Edition.

Table 2

380 Maple Avenue West
Parking Analysis

Land Use	Amount	Units	Code Requirement	Spaces
Proposed Program				
<i>Commercial or Restaurant</i>	950 GSF 20 Seats		1 space per 200 SF OR 1 space per 4 seats (1)	5
<i>Assisted Living</i>	120 beds 35 employees		1 space per 3 residents plus 1 space per employee (2)	40 35
<i>Parking Spaces - Calculated Requirement</i>				80
<i>Parking Spaces Provided</i>				80

Note(s): (1) Calculations based on Vienna Zoning Ordinance.
(2) Calculations based on Fairfax County Zoning Ordinance.

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As shown in Table 2, the total required parking for the proposed amended uses is 80 spaces, which is equivalent to the proposed off-street parking supply. Of that supply, 15 spaces will be located at ground level and 65 spaces located below grade. The total number of required spaces and corresponding parking supply will be refined at the time of site plan.

While the amended development has proposed a parking supply that meets the requirements of the on-site uses by any reasonable standard, the Applicant has also committed to additional measures to ensure the functionality of the parking supply and encourage the use of transit and other modes by the employees of the site. These include:

- A bicycle parking supply of 22 spaces, including 8 surface (streetscape) spaces and 14 garage spaces. The bicycle parking supply meets the MAC requirements without the need for a modification.
- A Transportation Demand Management (TDM) proffer which provides a sizeable transit incentive annual budget for the employees of the assisted living use to encourage the use of transit to access the site.

With these additional considerations, the proposed parking supply will more than adequately accommodate the proposed amended site uses.

Site Access/Circulation

Access to the existing office building is currently provided via an entrance on Maple Avenue West and three entrances along Wade Hampton Drive.

As shown on Figure 1, as part of the amended concept plan, the Applicant proposes to retain vehicular access along Maple Avenue West. Additional access will be provided via a single entrance on Wade Hampton Drive, which reduces the curb cuts proposed on Wade Hampton Drive. This access configuration allows for complete circulation within the site's parking garage. Vehicular access to the below-grade parking deck will be internal to the garage and accessible via either entrance.

The Applicant will operate the Wade Hampton Drive access point so as to prohibit left turns exiting the property. At the recommendation of the community, a channelizing island (i.e., "porkchop") has been incorporated in the plan to physically restrict that turning movement.

All loading activities, excluding trash pick-up, will occur within the parking garage. As shown on Figure 1, a loading area has been designated (not counted within the tabulated parking supply) which will not hinder vehicle circulation. Loading vehicles will enter the garage via Wade Hampton Drive and, upon completing the loading/unloading activity, exit the garage via Maple

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Avenue. Furthermore, a separate lay-by area has been designated within the garage which will also serve as ambulance loading. This lay-by/ambulance loading area is conveniently located adjacent to the main lobby area of the building for ready access, as needed.

Transportation Commitments

As part of the current approvals, a number of transportation improvements/enhancements were proffered. These proffers will be carried forward as part of the amended development proposal and include the following commitments. A complete draft proffer statement is enclosed with the application materials.

1. Monetary contribution toward future traffic safety improvements along Wade Hampton Drive and Roland Street (previous Proffer #3).
2. A comprehensive Transportation Demand Management (TDM) program, including the designation of a Transportation Management Coordinator (TMC) (previous Proffer #4).

In addition to the above, and as stated elsewhere in this memorandum, the Applicant has indicated a commitment to the following transportation improvements:

3. Retention/expansion of existing on-street parking on Wade Hampton Drive along the property's frontage. These spaces are not counted toward the off-street parking supply required for the site uses.
4. All normal loading activities (excluding trash pick-up) will be located completely within the garage in a designated loading area. The Applicant has retained the commitment that delivery trucks will not exceed 30 feet in length.
5. The Applicant has included a lay-bay space near the main entrance that is large enough to accommodate an ambulance. Additionally, the garage has been designed to allow fire truck access through the garage.
6. Vehicles exiting the site on to Wade Hampton Drive will be restricted from making left turns toward the adjacent residential community. This restriction will be accomplished through a combination of signage and physical channelization.
7. The Applicant will establish an annual transit subsidy for employees of the assisted living use. Such a subsidy is not included in the currently approved TDM proffer.

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Conclusion

The proposed amendment to the approved MAC development plan represents a significant reduction in forecasted vehicle trips when compared to the currently approved development program. Additionally, when compared to the existing office building, the proposed development program would generate peak hour trips consistent with trips associated with the existing office floor area.

As demonstrated herein, the proposed parking supply will be more than sufficient to accommodate the proposed uses on-site.

In support of the development and the Town's stated goals of the MAC district, the Applicant has proposed a number of transportation improvements/enhancements to address any transportation impacts. Overall, the amended development proposal represents a much more favorable outcome in terms of forecasted vehicle trips and associated impacts to the surrounding roadway network when compared to current approvals. With the implementation of the plan and the improvements as committed, the traffic and parking impacts associated with the development are fully mitigated.

If you have any questions on this assessment, please contact Will Johnson at 703.676.3653 or at wjohnson@wellsandassociates.com.

Attachments: a/s

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ATTACHMENT 1

Excerpt from *380 Maple Avenue West Traffic Impact Study*, Prepared by Kimley Horn
March 18, 2019

Table 8: Existing and Proposed Trip Generation										
Land Use	AM			PM			Saturday Midday			ADT
	In	Out	Total	In	Out	Total	In	Out	Total	
Existing – 23,620 GSF General Office Building (LUC 710)	-31	-4	-35	-6	-28	-34	-7	-6	-13	-230
Proposed - 4,500 SF Shopping Center	8	6	14	10	9	19	10	10	20	170
Proposed - 4,000 SF High-Turnover (Sit-Down) Restaurant	32	24	56	36	34	70	23	22	45	449
Proposed – 42 DU Multifamily Housing (Mid -Rise)	4	9	13	10	7	17	9	9	18	228
Net Site Generated Trips	13	35	48	50	22	72	35	35	70	617

During the AM peak hour, the proposed use generates 48 additional trips compared to existing use. During the PM peak hour, the proposed use generates 72 additional trips compared to existing use. During the Saturday Midday peak hour, the proposed use generates 70 additional trips compared to the existing use.

No pass-by or internal capture reductions were applied in this analysis. This results in a conservative analysis of traffic impacts as it is likely there would be double counting of retail trips that would originate from the on-site residents, as well as assuming there would be no existing motorists along Maple Avenue would be attracted to the shopping center or restaurant.

SITE TRIP DISTRIBUTION AND ASSIGNMENT

Existing trips were removed and site generated trips were assigned to the study area intersections based on the distributions agreed to as part of project scoping and summarized in **Table 9** below, and shown on **Figure 18**.

Table 9: Directional Distribution of Site Generated Traffic	
Direction To/From	Percentage
To/From East on Maple Avenue	35%
To/From West on Maple Avenue	25%
To/From South on Nutley Street	30%
To/From North on Nutley Street	10%
Total	100%

Figure 19 to Figure 21 show the removal of trips generated by the existing office. **Figure 22 to Figure 24** shows the assignment of site generated trips. **Figure 25 to Figure 27** shows the assignment of the net site generated trips onto study area intersections.