



## MEMORANDUM

**To:** Town of Vienna  
**From:** Nelson\Nygaard  
**Date:** August 20, 2021  
**Subject:** Technical Memo #1: Analysis of Town of Vienna Zoning Ordinance Parking Standards and the Comprehensive Plan

---

This Memo is intended to serve as a foundation for the recommended regulatory and parking policy updates to be presented in Technical Memo #3. The foundation created in this Memo is built from a comprehensive review of current off-street parking regulation and management in Vienna. The consultant team evaluated adopted plans and policies, available parking inventory and utilization data, multimodal travel patterns, and off-street parking supply provided in association with recent development projects.

The Town has recognized that in order to maintain an attractive and vibrant commercial center, parking policies and practices in the zoning code must realistically address the needs of local residents, businesses, and visitors, while facilitating broader Town goals identified in the recent Comprehensive Plan. Zoning codes are a key mechanism to implement a comprehensive plan. Vienna has taken preliminary steps to achieve comprehensive plan goals by updating other sections of the zoning code. Effective parking regulation and management in the updated zoning code should strategically optimize existing and new parking assets, without compromising the special and unique character of Vienna or preventing development that supports the Town's long-term success.

This Memo lays out how Town regulations currently coordinate land use and transportation, and assesses issues and opportunities in the current code. It then presents an analysis of the current parking supply and use of that parking, based on data collected by the Town.

## TOWN OF VIENNA GOALS

The Town of Vienna's Comprehensive Plan, adopted in 2015 and amended through 2020, articulates an overarching vision:

*The Town of Vienna will be a safe, vibrant, and environmentally conscious community with small-town character, strong residential neighborhoods, and distinguished businesses and services.<sup>1</sup>*

Beyond this ambitious vision, the Comprehensive Plan includes goals and objectives related to land use, economic development, transportation, community facilities, parks, the environment, and more. Visions for the Church Street and Maple Avenue corridors include pedestrian-friendly streets with smaller scale shops and restaurants among a mix of uses and a “park-once” neighborhood.

The Comprehensive Plan notes that much of Maple Avenue consists of 1960s and 1970s-era strip commercial structures in need of redevelopment due to age, obsolescent design, and changing preferences. Concurrently with redevelopment, new or expanded Town-sponsored municipal parking facilities may help create a neighborhood where visitors and residents can park at one location and walk to multiple attractive destinations along safe sidewalks and paths, instead of driving from destination to destination.

Transportation goals of the Comprehensive Plan strive to:

- Provide for efficient and reliable movement for all transportation modes
- Manage the impact of regional and local traffic on residential neighborhoods
- Maximize safety and dependability
- Encourage people to walk and bicycle
- Reduce congestion for environmental benefits
- Manage the effects of regional development and travel trends

The provision of parking connects directly to each of the Town’s stated transportation goals. For example, providing necessary parking can support reliable movement, but requiring a surplus of parking can incentivize driving and undermine walkability, safety, and environmental goals.

To execute and implement development to help achieve Comprehensive Plan goals of a more walkable and bikeable Vienna, the Town’s zoning ordinance and subdivision ordinance must be aligned. The Comprehensive Plan describes a few zoning regulations and site plan review tools to directly help achieve multimodal transportation goals.

- Locate parking lots and parking structures so that they do not front on streets. Parking lots and parking structures should be designed to provide retail, office, or other uses along the street level. (Parts of the zoning code support this, but other parts do not.)
- Encourage inter-parcel connectivity and reduce curb cuts. (Parts of the zoning code support this, but other parts do not.)

---

<sup>1</sup> <https://www.viennava.gov/home/showpublisheddocument/1358/637433006019870000>; p. vii. Accessed 7/30/21 via <https://www.viennava.gov/your-government/town-departments-at-your-service/planning-and-zoning/comprehensive-and-long-range-planning>.

- Develop bike parking requirements for new commercial/non-residential developments. (This has not been implemented in the zoning code.)
- Create and adopt a Town-wide transportation demand management (TDM) policy, coordinated with the region, to ensure that new development projects provide accommodations for and promote all modes of transportation. This TDM policy would help reduce demand for driving, which lowers demand for parking. With lower demand, regulations can allow less parking to be built.<sup>2</sup> (This has not been implemented in the zoning code.)
- Shared parking, where uses with complementary demand can share the same parking supply over the course of the day and week. (This has not been implemented in the zoning code.)

## Multimodal Study

Planning for and regulation of vehicle parking and other modes of access requires a comprehensive understanding of existing travel patterns and the costs and market value of parking, beyond understanding existing parking supply and utilization patterns. The Town commissioned a “Multimodal Transportation and Land Use Study” for the Maple Avenue Corridor in 2020.<sup>3</sup> This study describes existing vehicle travel patterns, and resulting traffic considerations and concerns, as well as current conditions for people walking, biking, and taking transit. It does not directly address parking, although it notes disconnected surface parking lots as an issue.

As part of community engagement, this study found public parking (on- and off-street) to be one of the top five community priorities:

- Traffic Calming & Driveway Management
- On-Street Bicycle Facilities
- Fill Existing Sidewalk Gaps & Improve/Enhance Street Crossings
- Local Circulator (transit) Service
- Public Parking (On- or Off-Street)

The study’s recommendations include design changes, such as allowing on-street parking on more streets, including Maple Ave during off-peak periods. The study also recommends a Town-wide study of parking supply and demand, which would include additional data collection to supplement the understanding of supply and utilization

---

<sup>2</sup> TDM strategies help to reduce the impact of new development on the transportation network by supporting the development and provision of programs, infrastructure, and incentives to reduce single utilization vehicle travel and the parking needed to support it. TDM programs create and encourage choosing walking, biking, transit, and carpooling. A TDM plan that results in a reduction in vehicle trips can be combined with a reduction in parking requirements as part of site plan approval.

<sup>3</sup> “Maple Avenue Corridor Multimodal Transportation and Land Use Study,” final report dated 7/20/2020, by Kimley-Horn for the Town of Vienna. Accessed 8/20/21 at <https://www.viennava.gov/home/showpublisheddocument/1480/637436560357830000> via <https://www.viennava.gov/residents/town-project-updates/multimodal-transportation-and-land-use-study>.

described above. An additional recommendation to develop TIA guidelines could yield additional data, as well as providing an avenue for developers to prioritize support for walking, biking, and transit in addition to or in lieu of building unnecessary parking.

## PARKING IN THE DEVELOPMENT CODE

### Municipal Code

Chapter 18 of the Town of Vienna code regulates land use and parking within the Town of Vienna.<sup>4</sup> Chapter 18 of the code specifies zoning restrictions, including transportation components, primarily organized into Articles pertaining to each zoning district. Section 18, Article 16 governs the provision of off-street parking and loading areas. In general, prioritizing parking over more productive land uses undermines the Comprehensive Plan goals of a safe and efficient multimodal transportation system.

- Section 18-128 governs dimensions of off-street parking spaces and aisles.
- Section 18-130 governs minimum parking requirements. Minimum parking requirements for land uses are high and require more spaces than similar municipalities. Notable specific minimum requirements include<sup>5</sup>:
  - General commercial: 1 space per 200 square feet of area (1:200)
  - Restaurants: 1 space per 4 seats
  - Multifamily residential: 1-2 spaces per unit
- Section 18-130 also governs other parking requirements. It makes no reference to public parking facilities or on-street parking. Bicycle parking requirements are not included in the municipal code. Shared parking requirements are mentioned only in the context of outdoor playing field complexes.
- Section 18-131 governs parking location and allows for limited crediting of off-site parking<sup>6</sup> within 400 feet for commercial and industrial uses. Parking location is currently only a design consideration in the C-1B Pedestrian Commercial Zoning District/Church Street Vision, which recommends parking should be located

---

<sup>4</sup> [https://library.municode.com/va/vienna/codes/code\\_of\\_ordinances?nodeId=PTIICOOR\\_CH18ZO](https://library.municode.com/va/vienna/codes/code_of_ordinances?nodeId=PTIICOOR_CH18ZO). Accessed 7/30/21.

<sup>5</sup> [https://library.municode.com/va/vienna/codes/code\\_of\\_ordinances?nodeId=PTIICOOR\\_CH18ZO\\_ART16OREPAL\\_OAR\\_S18-130RE](https://library.municode.com/va/vienna/codes/code_of_ordinances?nodeId=PTIICOOR_CH18ZO_ART16OREPAL_OAR_S18-130RE). Accessed 8/5/21.

<sup>6</sup> Crediting off-site parking allows a developer or business to comply with minimum parking requirements via access to parking located off the development site, either off-street or on-street, within a designated maximum distance. This can reduce the amount of new parking that must be constructed as part of the development and make use of excess supplies provided at previous developments. This strategy can be used when new parking demand cannot be accommodated at the site by existing parking supplies or is financially prohibitive to constructing on-site. As such, off-site parking credits are often used for infill and mixed-use redevelopment projects.

behind buildings or alongside buildings with screening. While section 18-131 notes that no new parking should be constructed between the street and the building setback line in other commercial districts, it does not strictly prevent parking in front of buildings. Any off-site parking will require a Town approved and recorded agreement with the property owner.

## **Transportation Impact Analysis Guidelines**

Transportation impact analysis (TIA) guidelines describe how developers must evaluate the impact of multimodal traffic generated by proposed projects. The Town has not established its own TIA guidelines, except by requiring traffic studies for conditional use permits for drive-through facilities. The Town's site plan review procedures require description of the existing road network classification and geometry, traffic controls, traffic volumes, and ADA accommodations, but no analysis of future traffic conditions or multimodal impact.<sup>7</sup>

Fairfax County requires traffic impact analyses to follow VDOT's TIA regulations when development abuts state highways and on certain rezoning proposals that will substantially affect transportation on state highways.<sup>8</sup> TIAs prepared for VDOT focus on impacts to vehicle delay and "level of service" (vehicle speed), but also ask for analyses of pedestrian and bicycle facilities, bus route(s) and segment(s), and any proposed TDM measures. "Internal capture" reductions tied to mixed use developments can be applied as well, essentially allowing for recognition that people do walk among close destinations. For this, a "Mixed Use Trip Generation Model Spreadsheet" is available as a guide. Neither the spreadsheet nor the guidelines checklist address parking demand or resulting recommended supply.

## **ANALYSIS OF PARKING SUPPLY AND UTILIZATION**

The initial analysis of Vienna's existing parking conditions attempts to understand more than simple facility supply (how many parking spaces exist) and utilization (how those spaces are used). While public parking is typically the most discussed and prominent parking resource in commercial areas, much of the business and entertainment activity in Vienna relies primarily on privately owned parking.

---

<sup>7</sup> <https://www.viennava.gov/your-government/town-departments-at-your-service/planning-and-zoning/zoning-applications-permits-plan-reviews>. Accessed 7/30/21.

<sup>8</sup> [https://www.virginiadot.org/info/traffic\\_impact\\_analysis\\_regulations.asp](https://www.virginiadot.org/info/traffic_impact_analysis_regulations.asp) and [https://www.virginiadot.org/projects/resources/chapter527/Administrative\\_Guidelines\\_TIA\\_Regs\\_7.2012.pdf](https://www.virginiadot.org/projects/resources/chapter527/Administrative_Guidelines_TIA_Regs_7.2012.pdf). Accessed 7/30/21.

## Inventory of Existing Privately Owned Parking Supply

Overall, Town data reflect more than 5,250 off-street private parking spaces along the Maple Avenue corridor between East Street and the Town's southwestern boundary.<sup>9</sup> Of the 93 properties surveyed for their parking supply, the average facility contains 57 spaces. Most of these spaces are found in parking lots of fewer than 35 spaces. Lot sizes result from minimum parking requirements for individual properties and uses developed at different times.

For general commercial development in Vienna, the average private off-street parking facility provides 1 space per 220 square feet of development (denoted 1:220). This implies a slightly lower amount of parking than the current code minimum requirement of 1:200, but that average includes restaurant uses which typically require more parking per square foot.

Shopping centers tend to provide more parking spaces than the minimum 1:200 requirement. Those with lower ratios tend to be west of Maple and near either Center Street or Beulah Road.

Primarily restaurant buildings are parked at an average of 1:132, with Wendy's providing the most parking at 1:55.

Projects constructed in the Church Street Vision area, where zoning allows lower parking via the site plan review process, are parked at an average of 1:440, or less than half as much parking as required in general commercial areas. The lowest amount of parking provided is 1:595 for a project from the Church Street Vision area.

## Inventory of Existing Publicly Owned Off-Street Parking Supply

Close to 400 off-street spaces are available to the public, in lots ranging from 13 to 180 spaces. Some spaces are located close to major destinations, such as the Washington and Old Dominion Trail, or restaurants and retail off Maple Ave. Two of the larger facilities, at Town Hall and 115 Park Street, are available to the public only in the evening hours. All public parking provided by the Town, in lots and on-street, is provided free of charge.

---

<sup>9</sup> Data from Town of Vienna – Existing Parking Ratios for Commercial Parking. Sent to Nelson\Nygaard 6/26/21.



**Table 1: Public parking facilities in Vienna**

Public Parking Facility	Spaces	Restrictions
W&OD Trail Parking and Public Parking (owned by NOVA Parks)	39	15 spaces towards rear of lot open to public, except between 7:00 am and 1:00 pm on weekends and holidays when spaces are reserved for trail and train station visitors
W&OD Trail and Town Green Parking, Between Church St. NE and Maple Ave. E (owned by NOVA Parks)	18	
115 Park Street SE (privately owned, public/private agreement with Town of Vienna)	92	Public parking available after 7:30 pm Monday and Tuesday, after 5:00 pm Wednesday to Friday, and all day Saturday and Sunday
Vienna Shopping Center/Next to 116 Maple Ave W (owned by Town of Vienna)	13	
Vienna Town Hall, 127 Center St. S (owned by Town of Vienna)	52	Open to the public after 4:30 p.m. on weekdays and anytime on weekends.
Vienna Community Center, 120 Cherry St. SE (owned by Town of Vienna)	180	

The current Patrick Henry Library redevelopment project with Fairfax County will include a new garage for the library, with 209 parking spaces. A total of 84 spaces out will be available for public use.

## Supply in Planned but Unbuilt Development

A review of projects in the development pipeline<sup>10</sup> revealed few projects relevant to the significant private off-street parking supply described above. Projects listed as “Under review” or “Approved” but not yet “Under Construction” include a few commercial mixed-use developments. Three were approved under the revoked MAC zoning code regulations. Of note, each of these projects proposed constructing the minimum allowable parking spaces for vehicles, but above-minimum bike parking spaces. This indicates developers recognize that current minimum vehicle parking requirements, especially for mixed-use projects and areas, are too high.

## Parking Utilization

Town regulations and developer decisions combine to create the supply of off-street parking, but a number of other factors influence the demand for parking. This demand, at

---

<sup>10</sup> Town of Vienna Development Map, <https://vienna-va.maps.arcgis.com/apps/Shortlist/index.html?appid=436622d95628470a8acf1c8db58f9c89>. Accessed 8/5/2021.

different times of the day and on different days of the week, can be measured as the share of parking spaces occupied, and is commonly termed *parking utilization*. Parking supply is typically considered at optimal utilization when there is at roughly one empty space per block face or along a typical row of parking. This typically equates to a target of 15% vacancy or available spaces per block face, and 10% vacancy in off-street facilities.<sup>11</sup> This level ensures relatively convenient access to businesses by customers who drive, but also indicates a busy commercial environment without excess parking. If any block or parking facility has less availability than the target, it is effectively at its functional capacity. If any block or facility has more availability, it is not making productive use of valuable urban space. Of course, price can be used to match demand to supply, but in a situation where parking is oversupplied, it is very challenging to establish a market price.

Focusing on specific subareas helps clarify the difference between perceived parking availability and actual availability. For example, in the downtown Maple and Church corridor sub-area, a visitor who can't find available spaces because they are hidden around the corner or "too far to walk" may perceive a lack of availability regardless of actual overall availability.

The Town provided utilization data on 1,379 spaces on Maple Avenue and Branch Road and 812 spaces on Church Street, totaling 2,191 spaces in all.<sup>12</sup>

- The overall peak utilization hits just 59%, during the weekday "lunch hour" between 12:30 and 1:30pm.
- At the shopping plaza at 126-150 Branch Rd SE, parking utilization does not surpass 71% at peak, which is at weekday lunchtime. The three sections of the large lot are not uniformly full. Lot B serves the restaurants in the center and is most occupied during the lunchtime peak. Lot C abutting Maple Ave is most full in evening hours.
- In the lot between Branch Rd and Glyndon Street east of Maple Ave, the 567 spaces are never more than 39% occupied, peaking at 7:00PM. In the evening, the spaces closest to Outback Steakhouse are the most popular. At midday, the spaces closest to Giant are more full, but not more than 55% occupied.
- Between Glyndon Street and Park Street east of Maple Ave, the 286 spaces are consistently about 2/3rds full after 1:35PM. Spaces closer to the restaurants are in higher demand than by Walgreens in the middle.
- East of Maple Ave between Center Street and Courthouse Rd, each lot next to the commercial strips has a peak utilization around 12:30PM, experiencing a combined 72% utilization. Utilization falls to 54% by mid-afternoon and reaches less than a third full by dinnertime.

---

<sup>11</sup> Shoup, Donald. "The High Cost of Free Parking," APA Planners Press, 2005 revised 2011.

<sup>12</sup> Provided in the 2015 Comprehensive Plan,  
<https://www.viennava.gov/home/showpublisheddocument/1358/637433006019870000>. P. A30-A33.



- West of Church Street between Layers Rd and Mill Street, lots reach peak utilization at noon, with restaurant parking lots the most occupied.
- Parking facilities between Maple Avenue, Church Street, Center Street, and Dominion Road are the most consistently in demand along the entire corridor. Utilization at midday is at least 2/3rds full for half the lots.
- On-street spaces on Dominion next to the Town Green are 94% full. Spots next to Vienna Inn are 100% full in some weekday counts from. In the midafternoon, lots near the coffee roaster and dance academy are functionally full.

Overall, most of the off-street parking in Vienna's commercial areas is empty most of the time, related more to an overprovision of spaces than low levels of demand for the associated uses. At peak times, 25-50% of most lots remains empty, representing significant wasted space and economic opportunity for the Town and its residents and businesses. Only at small nodes and at peak times is finding convenient, free parking any harder than driving directly to your destination.

## CONCLUSIONS

The Town of Vienna strives to be “a safe, vibrant, and environmentally conscious community” and as part of that, to create a dependable, efficient, multimodal transportation system. In the Town's key commercial and mixed-use areas, primarily along Maple Ave, Church St, and their cross streets, extensive private off-street parking lots support business activity. They also encourage driving over access by other modes, contribute to traffic congestion, and create conflicts at access points.

Analysis of Town-provided parking supply and utilization data indicates that much of this surface parking is unused, even at peak times. When up to half of all parking remains empty, valuable land is wasted and reduces economic opportunity for the Town and its residents and businesses. Replacing this surplus parking with something more productive can better serve Town goals. Only at small nodes and at peak times is finding convenient, free parking any harder than driving directly to your destination, and those special cases can be specifically addressed in the zoning code update. Modernized regulations in the zoning code present the best opportunity to meet Town goals in the near future.