

# Parking & Driveways

## 9.1 PURPOSE AND INTENT

Parking lots and similar facilities are necessary elements in the urban environment. However, the provision of parking facilities must be regulated in order to avoid negative impacts such as:

- Increased storm water volume and velocity,
- Increased surface pollutants,
- Increased surface level heat and glare,
- Reduction in the efficiency of the connecting street system, and
- Reduction in the operations of the surrounding pedestrian and bicycle network.

The purpose of this chapter is to ensure the adequate provision of parking in Wake Forest without degrading the urban or natural environment.

## 9.2 APPLICABILITY

The provisions of this chapter shall apply to all new and expanded development, as well as any changes in use. The notable exception shall be any Planned Unit Development District, which is intended to create its own parking standards through the PUD Concept Plan.

## 9.3 PERMITTED PARKING LOCATIONS

	Civic/Institutional	Detached House	Townhouse	Apartment	Commercial	Mixed-Use	All Other Bldgs	
<b>OS</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	<b>Permitted Parking Configurations*</b> (Also see diagrams below)  <b>Location A</b> – Parking permitted in 3 <sup>rd</sup> Layer only <b>Location B</b> – Parking permitted in 2 <sup>nd</sup> and 3 <sup>rd</sup> Layers only <b>Location C</b> – Parking permitted in 2 <sup>nd</sup> and 3 <sup>rd</sup> Layers. Parking in 1 <sup>st</sup> Layer restricted to one drive aisle with 2 bays. <b>Location D</b> – Parking permitted in 2 <sup>nd</sup> and 3 <sup>rd</sup> Layers. Parking in 1 <sup>st</sup> Layer restricted to a driveway or paved surface not to exceed 40% of the lot width. <b>U</b> – Unrestricted
<b>RD</b>	U	U	-	-	-	-	-	
<b>GR3 &amp; GR5</b>	U	U	-	-	-	-	-	
<b>GR10</b>	C	D	B	B	-	-	-	
<b>NB</b>	C	D	-	-	C	C	-	
<b>HB</b>	C	-	-	-	U	C	-	
<b>ICD</b>	B	D	B	B	B	B	-	
<b>LI</b>	-	-	-	-	U	U	U	
<b>HI</b>	-	-	-	-	U	U	U	
<b>UR</b>	B	D	B	B	-	-	-	
<b>RMX</b>	B	D	B	B	B	B	-	
<b>NMX &amp; RA-HC</b>	B	D	B	B	B	B	-	
<b>UMX</b>	B	-	A	A	A	A	-	

\* These requirements are intended to be applied from the principal frontage of the lot as determined by the Administrator. Parking configurations may have additional restrictions specified in the tables of district standards in Sections 2.2.3 and 2.2.5, and in Chapter 5 – Building Design Standards, and, if located in the Special Highway Overlay District, in Section 2.4.3 or in the Glen Royall Mill Village Character Preservation Overlay District in Section 2.4.6. The Administrator may waive or alter parking configuration requirements to accommodate unique constraints, such as severe topography, on a site-by-site basis.

PERMITTED PARKING CONFIGURATION DIAGRAMS	
	<p><b>Location A</b>  <i>Parking permitted in 3<sup>rd</sup> Layer only</i></p> <p><b>1<sup>st</sup> Layer</b> – distance from right-of-way to front of building  <b>2<sup>nd</sup> Layer</b> – 20 feet  <b>3<sup>rd</sup> Layer</b> – remainder of lot</p>
	<p><b>Location B</b>  <i>Parking permitted in 2<sup>nd</sup> and 3<sup>rd</sup> Layers only</i></p> <p><b>1<sup>st</sup> Layer</b> – distance from right-of-way to front of building  <b>2<sup>nd</sup> Layer</b> – 20 feet  <b>3<sup>rd</sup> Layer</b> – remainder of lot</p>
	<p><b>Location C</b>  <i>Parking permitted in 2<sup>nd</sup> and 3<sup>rd</sup> Layers. Parking in 1<sup>st</sup> Layer restricted to one drive aisle with 2 bays.</i></p> <p><b>1<sup>st</sup> Layer</b> – distance from right-of-way to front of building  <b>2<sup>nd</sup> Layer</b> – 20 feet  <b>3<sup>rd</sup> Layer</b> – remainder of lot</p>
	<p><b>Location D</b>  <i>Parking permitted in 2<sup>nd</sup> and 3<sup>rd</sup> Layers. Parking in 1<sup>st</sup> Layer restricted to a driveway or paved surface not to exceed 40% of the lot width.</i></p> <p><b>1<sup>st</sup> Layer</b> – distance from right-of-way to front of building  <b>2<sup>nd</sup> Layer</b> – 20 feet  <b>3<sup>rd</sup> Layer</b> – remainder of lot</p>
	<p><b>U – Unrestricted</b></p> <p><b>1<sup>st</sup> Layer</b> – distance from right-of-way to front of building  <b>2<sup>nd</sup> Layer</b> – 20 feet  <b>3<sup>rd</sup> Layer</b> – remainder of lot</p>

## 9.4 PARKING REQUIREMENTS

Permanent off-street parking (including on-street parking in accordance with the requirements below) is required subject to the table below. If required, parking shall be provided at the time of erection, alteration, enlargement, establishment or change of use of any building or open use of land which require additional off-street parking. Mixed use developments or lots containing more than one use shall determine the total number of required parking spaces by adding together the required number of spaces for each of the proposed uses as if they were separate.

### A. OFF-STREET PARKING SCHEDULE “A”

Use Category	Minimum Required Auto Spaces	Minimum Required Bicycle Parking Spaces <sup>1</sup>
<b>Residential</b>		
Dwelling-Single Family & Two Family	1 per unit, or 2 per unit if parking is provided in an enclosed garage	No requirement
Dwelling-Townhome & Multifamily	1.8 per unit	2 per 40 auto spaces
Dwelling-Accessory	1 per unit	No requirement
Live-Work Units	1 per 600 sf	2 per 40 auto spaces
Residential Care Facilities	1 per 2 resident rooms	2 per 40 auto spaces
All Other Residential Uses	No requirement	No requirement
Cluster Mailbox Unit	2 spaces per location, one space must meet ADA accessibility requirements	No requirement
Recreation facility, private (single-family dwellings or townhomes)	Subdivisions with 100 or more dwelling units shall provide: <ul style="list-style-type: none"> <li>• 1 per 300 sf of clubhouse with interior gathering space</li> <li>• 1 per 100 sf of surface area of the pool (water area)</li> <li>• 2 per sports amenity (e.g., court, field, playground, park, etc.)</li> </ul> Subdivisions with less than 100 dwelling units shall provide: <ul style="list-style-type: none"> <li>• 1 per 300 sf of clubhouse with interior gathering space</li> <li>• 1 per 200 sf of surface area of the pool (water area)</li> <li>• 2 per sports amenity (e.g., court, field, playground, park, etc.)</li> </ul>	4 spaces or 1 space per 30 dwelling units, whichever is greater
Recreation facility, private (multi-family)	No requirement	4 spaces or 1 space per 30 dwelling units, whichever is greater
<b>Lodging – All Lodging Uses</b>	1 per room	2 per 50 auto spaces
<b>Office/Service</b>		
Child/Adult Day Care Centers (More than 8 persons)	1 per 6-person capacity	2 per 50 auto spaces
Funeral Home	1 per 5 seats in chapel	2 per 50 auto spaces
Medical Clinic	1 per 250 sf	2 per 50 auto spaces
Office	1 per 300 sf	2 per 50 auto spaces
Veterinary Services	Schedule B	2 per 50 auto spaces
All Other Office/Service Uses	1 per 500 sf	2 per 50 auto spaces

Use Category	Minimum Required Auto Spaces	Minimum Required Bicycle Parking Spaces <sup>1</sup>
<b>Commercial</b>		
Restaurant Bar/Tavern Nightclub	1 per 200 sf (minimum of 8)	2 per 50 auto spaces
General Commercial	1 per 350 sf	2 per 40 auto spaces
General Commercial – Greater than 100,000 sf	1 per 300 sf	2 per 40 auto spaces
Shooting range, outdoor	1 space per target and 1 space for every 300 sf of office area	2 per 50 auto spaces
All Other Commercial Uses	1 per 400 sf	2 per 40 auto spaces
<b>Automotive</b>		
	Schedule B	2 per 50 auto spaces
<b>Entertainment/Recreation</b>		
Amusements (Indoor)	1 per 4 persons permitted	2 per 40 auto spaces
Amusements (Outdoor)	1 per 4 persons permitted	2 per 40 auto spaces
Recreational Facility (Indoor)	1 per 4 persons permitted	2 per 40 auto spaces (minimum of 4 racks)
Recreational Facility (Outdoor)	Schedule C	4 spaces or a minimum of 2 per 40 auto spaces (minimum of 4 racks)
Sports Arena/ Stadium	Schedule C	2 per 40 auto spaces
Theater (Indoor & Outdoor)	1 per 5 seats	2 per 40 auto spaces
All Other Entertainment/Recreation Uses	Schedule C	2 per 40 auto spaces
<b>Civic/Educational/Institutional</b>		
Civic Meeting Facilities	1 per 100 sf	2 per 50 auto spaces
Community or Cultural Facility	1 per 300 sf	
Hospital	1 per 2 beds plus 1 per employee	2 per 50 auto spaces
Religious Institution (RA-HC, NMX, UMX)	No requirement	2 per 50 seats
Religious Institution (All Other Districts)	1 per 4 seats in the main assembly hall	2 per 50 seats
Schools – Elementary & Secondary	1 per 4 seats in the main assembly hall or gymnasium*	2 per 50 students
Studio – Art, dance, martial arts, music	1 per 400 sf	2 per 20 auto spaces
Vocational School/Technical	Schedule C	2 per 50 auto spaces
All Other Civic/Educational/Institutional Uses	Schedule C	2 per 40 auto spaces
<b>Industry/Wholesale/Storage</b>		
All Industry/Wholesale/Storage Uses	Schedule B	2 per 50 auto spaces
<b>Agricultural</b>		
Garden or Nursery	1 per 1,000 sf of open-air sales plus space for retail sales per Schedule B	2 per 50 auto spaces
Kennel, Outdoor	Schedule B	2 per 50 auto spaces
All Other Agricultural Uses	Schedule C	No requirement
<b>Infrastructure – All Infrastructure Uses</b>		
	Schedule C	No requirement

<sup>1</sup> Bicycle parking minimums are based on the number of automobile parking spaces provided on-site, not the minimum number of automobile parking spaces required.

**B. OFF-STREET PARKING SCHEDULE “B”**

Activity	Minimum Required Auto Spaces
Office or administrative area	1 per 300 sf
Indoor Sales Area	1 per 200 sf
Outdoor sales or display area (3,000 sf or less)	1 per 750 sf
Outdoor sales or display area (Over 3,000 sf)	

Activity	Minimum Required Auto Spaces
Motor vehicles/equipment sales	1 per 2,000 sf
Other sales/display	1 per 1,000 sf
Indoor Storage/warehousing	
1-50,000 sf	1 per 1,500 sf
50,001 and greater sf	1 per 2,000 sf
Vehicle Service/manufacturing area	
1-3,000 sf	1 per 250 sf
3,001-5,000 sf	1 per 500 sf
5,001-10,000 sf	1 per 750 sf
10,001-50,000 sf	1 per 1,250 sf
50,001 and greater sf	1 per 2,000 sf

### C. OFF-STREET PARKING SCHEDULE “C”

Uses that are not listed in Schedule A or that reference Schedule C have widely varying parking and loading demand characteristics, making it impossible to specify a single off-street parking or loading standard. Upon receiving a development application for a use subject to Schedule C standards, the Administrator shall apply the off-street parking and loading standard specified for the listed use that is deemed most similar to the proposed use, or shall establish minimum off-street parking requirements based on a parking and loading study prepared by the applicant. Such a study must include estimates of parking demand based on recommendations of the Institute of Traffic Engineers (ITE), or other acceptable estimates as approved by the Administrator, and should include other reliable data collected from uses or combinations of uses that are the same as, or comparable with, the proposed use. Comparability will be determined by density, scale, bulk, area, type of activity, and location. The study must document the source of data used to develop the recommendations.

#### 9.4.1 MAXIMUM PARKING

The minimum parking requirements above have intentionally been set below general market expectations as a means to mitigate against the negative aspects of paved surfaces on the environment such as excessive water runoff, water pollution, and urban heat island effect. To this end, there shall also be a maximum parking standard for large parking facilities as follows:

##### A. Pervious Pavement Required

1. If a parking lot exceeds 150 spaces and includes more than twice the minimum number of spaces established for a use, as outlined in Section 9.4.1 above, any parking spaces over twice the minimum required must be installed using pervious pavement systems only.
2. If there are no minimum parking requirements for the use given in Section 9.4.1 above, the maximum parking standard shall be 35% of the site area.

**B. Exception:** Where poorly draining soil types prevent the use of this technique, the Administrator may grant an exception to the maximum parking standard above upon sufficient justification from the applicant of the need for such extra parking facilities.

#### 9.4.2 EXEMPTIONS, EXCEPTIONS AND ADJUSTMENTS

**A. Exemptions:** All uses in the RA-HC District are exempt from providing the minimum, off-street, automobile parking, required by the section. Bicycle parking is

required as outlined in Section 9.4.A, based on the minimum of automobile spaces that would otherwise be provided.

- B. Exceptions for Non-Residential Uses in the Renaissance Area:** Nonresidential uses, located outside of the RA-HC district, in the Renaissance Area of downtown (as defined by the Renaissance Plan for Downtown Wake Forest, NC, dated September 2017, and as amended), may reduce the required off-street, automobile parking spaces, required in this Chapter, by up to 50% with Administrator approved provided the following are met:
1. The remaining number of required off-street parking spaces must be provided on-site, within a shared parking area (Section 9.4.3), a satellite parking area (Section 9.4.4), or by adjacent on-street parking (Section 9.4.2.D);
  2. If a mixed-use development is proposed, the total number of required residential spaces must be provided; and
  3. Additional bicycle parking, over and above what is required by Section 9.4.A, is required. A minimum increase of 50%, but not less than two (2) Type I or Type II bicycle spaces shall be provided.
- C. Exceptions for Residential Uses in the Renaissance Area:** Residential uses, located outside of the RA-HC district, in the Renaissance Area (as defined in the Renaissance Plan for Downtown Wake Forest, NC, dated September 2017 and as amended), may utilize the following methods to either reduce the amount of space required for parking or to reduce the number of off-street parking spaces required in this Chapter by no more than 10%. Administrator approval is required.
1. **Tandem Parking:** Tandem parking is permitted for single-unit, two-unit, and multi-unit residential dwellings. Each tandem space must measure at least 9 feet in width by 36 feet in length. Both parking spaces in tandem must be assigned to the same dwelling unit. Guest parking, if provided, may not utilize tandem parking.
  2. **Private Car Sharing Program:** The parking requirements for all dwelling units may be reduced by three (3) parking spaces for each car-share vehicle provided as part of an active on-site car-sharing program made available for the exclusive use of residents of multi-family dwelling developments. The total number of required spaces may not be reduced by more than 10% utilizing this method.
- D. Adjacent On-Street Parking:** In the Renaissance Area (as defined in the Renaissance Plan for Downtown Wake Forest, NC, dated September 2017 and as amended), public, off-site, on-street parking spaces, located immediately adjacent to the property line of any give site, may be counted as a parking space to meet the minimum parking requirements of this Chapter. These on-street parking spaces shall not be reserved or signed as parking for a particular use or site. Further, a note shall be added to the plans indicating these spaces are only to be counted for meeting the parking requirements on that particular development and in no way shall be counted toward any other development's off-street parking requirements.
- D. Adjustments for Tree Preservation:** The minimum number of parking spaces required may be adjusted by the Administrator when it has been determined that the reductions are necessary to preserve a healthy tree or trees (with a 12 inch or greater diameter at breast height) from being damaged or removed, and where the site plan provides for the retention of said tree or trees.

#### 9.4.3 SHARED AUTOMOBILE PARKING

- A. One parking lot may contain required parking spaces for several different uses; however, the required parking spaces assigned to one use may not be counted or assigned to another uses, unless otherwise provided in this section.
- B. To the extent that developments that wish to make joint use of the same parking spaces operate at different, off-peak times, the same spaces may be credited to both uses.
- C. In the joint use of the same parking spaces by two or more principal uses involves satellite parking spaces, then the provisions of Section 9.4.4 are also applicable.
- D. Where vehicle access is provided between adjoining nonresidential developments and the operating hours of adjoining uses do not significantly overlap, the uses may share up to 50% of the required parking spaces.
- E. An applicant proposed the use of the shared parking must:
  - 1. Demonstrate that the applicant has the express legal right to use the parking spaces in question;
  - 2. Provided the shared use parking agreement detailing how the parking spaces will be shared among the uses; and
  - 3. Sign an acknowledgement that the continuing validity of the applicant’s development permit depends upon the continuing ability to provide the requisite number of parking spaces. If the shared parking is no longer available or the property owner fails to comply with the requirements of this section, the parking requirement reverts to those requirements found in the table in Section 9.4.A and the property owner or applicant must demonstrate compliance with said requirements or the development permit shall be revoked.
- F. Should there be a change in owner, change in use, expansion or reduction in building or parking area, a new shared use agreement and agreement in outlined in subsection E above shall be submitted to the Town and additional parking may have to be provided as required by this Ordinance or the permit shall be revoked.

**9.4.4 SATELLITE AUTOMOBILE PARKING**

- A. If the off-street parking spaces required by this section cannot be reasonably provided on the same lot on which the principal use is located, such space may be provided on any land within 660 feet. Such measurement shall be taken from the edge of the satellite parking area to the entryway of the principal use for which the parking is provided. A safe, direct, paved, and lit pedestrian routed shall be provided between the lot and the entrance of the principal use.
- B. Satellite parking may not be used for residential visitor/guest parking or for the provisions of the ADA required spaces unless located within 200 feet of the entryway of the principal use for which the parking is provided.
- C. If satellite parking is utilized to fulfill parking requirements, the owner or authorized agent for the land upon which such satellite parking is located shall restrict the use of such parking area for parking only in connection with the use(s) or structure(s) for which such satellite parking is provided. Such restriction shall be recorded through an easements plat properly filed with the Register of Deeds of Wake County, which may be released only by written consent of the town.
- D. Satellite parking for a particular use shall not be established in any district that does not allow that use.
- E. The applicant wishing to utilize the provisions of this section must present satisfactory written evidence that the applicant has the legal right to use the satellite

parking spaces, and that such right is exclusive during the operation hours of the use in question. The applicant must also sign an acknowledgement that the continuing validity of the applicant’s permit depends upon the continuing ability to provide exclusive use during operation hours of the requisite number of parking spaces. If the parking spaces are required for residential uses, “operating hours” shall be considered 24 hours a day for the purposes of this section.

- F. The applicant using satellite parking to comply with the requirements of this section must sign an acknowledgement that the continuing validity of the applicant’s permit depends on the continuing ability to provide the requisite number of parking spaces. If the applicant or property owner fails to comply with the requirement so this section, the parking requirements reverts to those requirements in this Chapter and the property owner and applicant must demonstrate compliance with said requirements or the development permit may be revoked.
- G. Should there be a change in owner, change in use, expansion or reduction in building or parking area, the applicant will have to demonstrate continued compliance through the satellite parking and/or provide additional parking as required by this Ordinance or the permit shall be revoked.

**9.4.5 OFF-STREET LOADING REQUIREMENTS**

- A. **Off-Street Loading Schedule:** Off-street loading spaces shall be required for industrial, major institutional, and business uses that can be expected to regularly receive or deliver goods, pursuant to the following Off-Street Loading Schedule (RA-HC is exempt from this requirement)

Gross Floor Area (Square Feet)	Required Number of Spaces
0-20,000	0
20,001 - 40,000	1
40,001 - 100,000	2
100,001 - 160,000	3
160,001 - 240,000	4
240,001 - 320,000	5
320,001 – 400,000	6
Each 90,000 over 400,000	1

- B. **Dimensions:** Required loading spaces shall have the following minimum dimensions: 12-foot minimum width, 25-foot minimum length, and 14-foot minimum vertical clearance.
- C. **Locations:**
  1. Required off-street loading spaces shall not be located within a building, but shall be on the site of the use served or on an adjoining site.
  2. Required off-street loading spaces shall be located to the sides and/or rear of the lot to maximize the street exposure of the primary structure.
  3. A loading area shall not be located in a required setback. In addition, street-side loading docks shall be set back at least 70 feet from the street property line or 110 feet from the street center line, whichever is greater.
  4. No loading bay may intrude into any portion of a required parking aisle or access dimension.
  5. Loading areas visible from a street shall be screened on three sides by a solid, decorative fence, wall, or hedge at least six feet in height.
- D. **Access:**



1. A required loading stall shall be accessible without parking a truck across a street property line unless the Administrator determines that provision of turn-around space is infeasible and approves alternate access.
2. An occupied loading space shall not prevent access to a required off-street parking space.

## 9.5 VEHICLE PARKING DESIGN STANDARDS

### 9.5.1 PARKING AREA GENERAL DESIGN STANDARDS

- A. Parking areas shall be located and designed to avoid undue interference with the use of public rights-of-way, driveways or pedestrian ways. Parking stalls shall not be located in areas that would require backing into access driveways or streets except where allowed for residences.
- B. Parking design and location shall be in accordance with the Wake Forest Manual of Specifications, Standards and Design (MSSD).
- C. Parking stalls shall be located a minimum of 10 feet from public rights-of-way and buildings to allow sufficient separation for sidewalks, landscaping and other site features except along the backs of buildings in areas designed for loading and unloading.
- D. Parking shall not be located in landscaped, open space or tree save areas.
- E. Parking areas shall be maintained to provide for vehicle access and shall be kept free of litter, debris, outdoor display and sales and material storage, including portable containers.
- F. Parking for service vehicles shall be designated, located and screened to minimize the view from adjacent properties and rights-of-way, generally at the rear of buildings.
- G. Vehicle storage or display areas shall be identified on the site plan distinct from customer and employee parking areas and shall comply with parking access, location and design requirements, except that striping of the display or storage area shall not be required. Vehicle storage or display areas shall not be located in a manner that interferes with vehicle or pedestrian access aisles or driveways.
- H. Tractor trailers, cargo trucks, busses and other large commercial vehicles or heavy equipment parking and storage shall comply with parking access, location and design requirements except for stall size and aisle size which shall be as appropriate for the vehicles to be stored and shall be designated on a site plan.
- I. Compact car spaces in accordance with the MSSD may be used for any parking provided above the minimum required parking which has been met with standard car spaces.

### 9.5.2 SURFACING

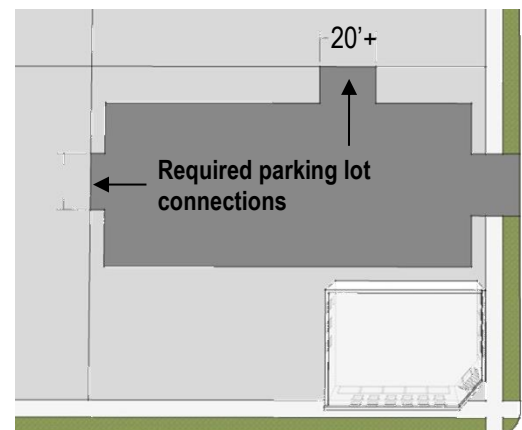
Off-street parking areas shall be properly graded, marked and located on improved lots or within parking structures. The material for surface parking spaces and corresponding access drives required by this section, except for single-family detached and duplex residences, shall consist of suitable material as set forth below.

- A. **Suitable Materials:** Suitable paving materials for parking areas include, but are not limited to, asphalt, porous asphalt, porous paving blocks, and concrete.

- B. Accessible Spaces:** All accessible spaces and corresponding access paths shall consist of concrete or asphalt.
- C. Gravel:** When gravel is used it must be maintained on site with a concrete apron at the traveled way.
- D. Pervious Surfaces:** Porous paving blocks and pervious paving materials are permitted and encouraged as material for parking lots. The use of reinforced grass as a parking lot surface is permitted for satellite parking areas.
- E. Parking Space Marking:** The individual parking spaces in a lot shall be delineated in all parking lots except those utilizing road bond, gravel, grass or other vegetative surfacing.
- F. Exceptions to Paved Parking:** An overflow parking lot used only for occasional use (Use that occurs on two or fewer days per week) or is temporary in nature (not exceeding 6 months) is exempted from the requirements of this Section.
  - 1. Off-street areas used for special event parking (to accommodate occasional overflow volumes) may be constructed of any dust-free and compacted ground cover. The owner of the property shall be responsible for the maintenance of such parking areas in a clean and dust-free condition. Grass, gravel, and mulch are examples of acceptable ground cover.
- G. Non-Paved Areas:** Whenever a permanent parking area is exempt from the paved parking requirements or otherwise not required to be paved, the Administrator shall:
  - 1. Require that landscape aisles or spatial separations be provided where the Administrator finds it is desirable to ensure that the parking spaces will be readily identifiable to the users; and
  - 2. Require the perimeter of the vehicle accommodation area encompassing the parking stalls and the side of any unpaved drive or aisle leading to said stalls, to be edged with brick, pressure treated timbers, or cast in place concrete, and anchored into place. Alternate borders may be considered on a case by case basis.

### 9.5.3 CONNECTIVITY

- A.** Adjoining parking lots serving (or potentially serving) non-residential or multi-family uses shall be interconnected as follows: (See illustration below)
  - 1. The parking lot under development has a minimum of 24 parking spaces or equivalent parking area.
  - 2. At least 1 connection is provided at all lot lines that are coincident for at least 60 feet with another lot zoned for non-residential use.
  - 3. The connection is at least 20 feet wide.
  - 4. If applicable, the connection aligns with a connection that has been previously constructed on an adjacent property.
  - 5. The connection has a slope of no greater than 15 percent.



6. The connection is not placed where a building on an adjacent property is within 50 feet of the lot line which would hamper traffic movements within the parking lot.
  7. The connection is placed in an area which will not require the removal of significant natural features such as wetlands or trees with a caliper of 6 inches or more.
  8. In the event these conditions cannot be met without undue hardship, or if such connections would create undesirable traffic flow, the Administrator may waive the connection requirement.
- B.** Where a parking lot connection is required an easement for ingress and egress to adjacent lots shall be recorded by the property owner with the Wake County Register of Deeds in the form of an easement plat.

#### 9.5.4 STRUCTURED PARKING

- A. Screening Required:** Where an above-ground parking structure fronts a public street, the ground level shall be screened in such a way that cars are not visible from the street (e.g., structure could be wrapped by retail, office or some other active use along the primary façade).
- B. Materials:** Along pedestrian-oriented streets, parking structure façades shall be treated with high quality materials and given vertical articulation and emphasis compatible with the principle structure. The façade shall be designed to visually screen cars.
- C. Entries:** Pedestrian entries shall be clearly visible.
- D. Bicycle Parking:** Parking structures shall provide bicycle parking within the structure. It shall be located on the level closest to the street and/or a primary building entrance.

### 9.6 BICYCLE PARKING STANDARDS

Bicycle parking shall be provided by all non-residential, multi-family, recreation and industrial uses. Bicycle parking facilities required by this section shall be designed to provide convenient bicycle parking and to protect parked bicycles from damage. Acceptable rack elements, rack location and access, rack area and site conditions such as protection from the elements and visibility shall conform to the Association of Pedestrian and Bicycle Professionals Bicycle Parking Guidelines.

#### 9.6.1 BICYCLE PARKING FACILITIES

Bicycle parking spaces shall be Class I, Class II, or Class III facilities. Racks which only support one wheel are not acceptable.

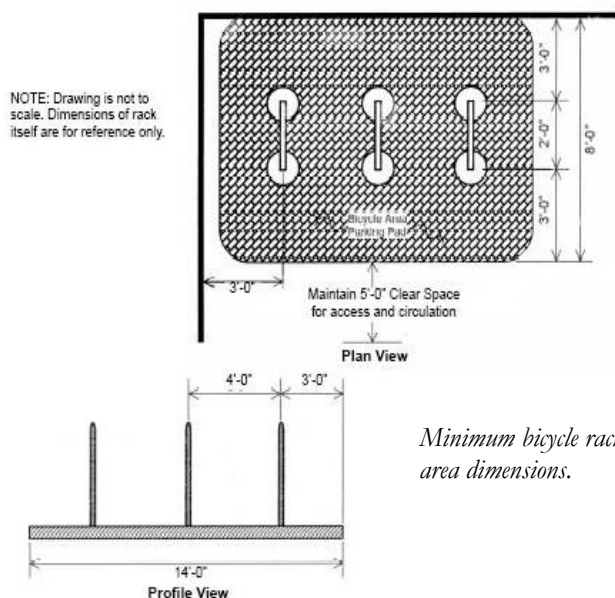
- A. Class I:** Bicycle lockers are generally rectangular enclosures, each holding one or 2 bicycles.
- B. Class II:** Bicycle parking racks which allow all 3 major components of the bicycle, back wheel, frame, and front wheel, to be locked, without removal of the front wheel.

C. **Class III:** Racks such as loop, post, rails, “A” and inverted “U” racks. Each rack provides 2 bicycle parking spaces. Common properties in a class III facility include its support of the bicycle with or without the front wheel removed and post or pipe dimensions which allow the lock to encompass the front tire and down post or the rear wheel and seat post. Class III facilities are recommended for short-term parking, although, in combination with shelter, they can be adequate for long-term storage.



9.6.2 GENERAL BICYCLE PARKING DESIGN STANDARDS

- A. **Multi-Family Development:** Required bicycle parking spaces in multi-family development shall be provided in Class I facilities, or in Class II or III facilities if shelter is provided to accommodate long-term storage. If completely enclosed garages or accessory storage structures of at least 8 feet by 6 feet that may be locked or otherwise secured by individual tenants are provided for every unit in a multi-family development, no additional bicycle parking shall be required.
- B. **Surfacing:** Bicycle parking shall be provided on a hard-surface, all-weather pavement of asphalt or concrete with curb ramps installed as appropriate.
- C. **Signage:** Where not clearly visible from the access way, directional signage shall be provided to route bicyclists to the bicycle parking facility.
- D. **Installation:** Installation shall be according to the manufacturers’ instructions.
- E. **Placement:** Bicycle parking shall be:
  1. Separated from automobile parking by a physical barrier or by at least 5 feet where automobile parking is prohibited and shall be located as close to public and employee entrances as possible without interfering with the flow of pedestrian and vehicular traffic.
  2. Conveniently located near entrances (where multiple entrances exist, the racks shall be dispersed among the entrances rather than located in large groupings)
  3. Located so as not to interfere with pedestrian access.



**9.7 TRANSPORTATION FACILITY PERMITS**

A Transportation Facility (TF) is any surface parking lot of 1500 spaces or more, a combination of surface and structure parking of 1000 spaces of more, or any parking structure of 750 spaces. Transportation Facilities must comply with the regulations pertaining to the TF Program administered by the North Carolina Department of Environmental and Natural Resources, Division of Air Quality. Any existing facility that plans a modification that exceeds the above threshold is subject to the TF Program regulations.

**9.8 DRIVEWAY ACCESS**

**9.8.1 DRIVEWAY STANDARDS**

Any use which requires lowered or cutaway curbs, for purposes of ingress or egress, shall be subject to the provisions below.

**A. Single-Family Residential Lots:**

Frontage Width	Maximum Permitted Driveways
Less than 50 feet	1
More than 50 feet	2

*For residential properties, the requirements of Section 5.5.4 shall also apply.*

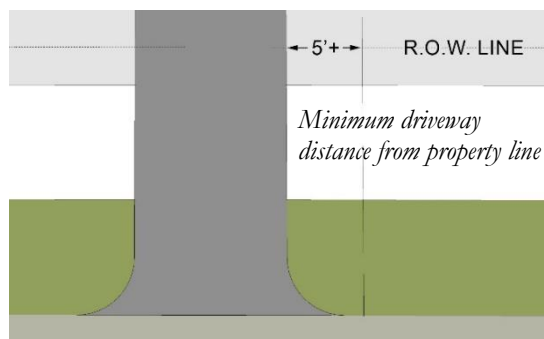
- B. Non- Residential Driveways:** The maximum number of combined entrances and exits allowed on any parcel shall correspond to the frontage of that parcel on any one street as indicated in the following table, except that properties with frontage on major access corridors in the Special Highway Overlay Districts shall be subject to the driveway requirements of Section 2.4.3.E.

Frontage Width	Maximum Permitted Driveways
Less than 500 feet	1
501 – 1200 feet	2
More than 1200 feet	3

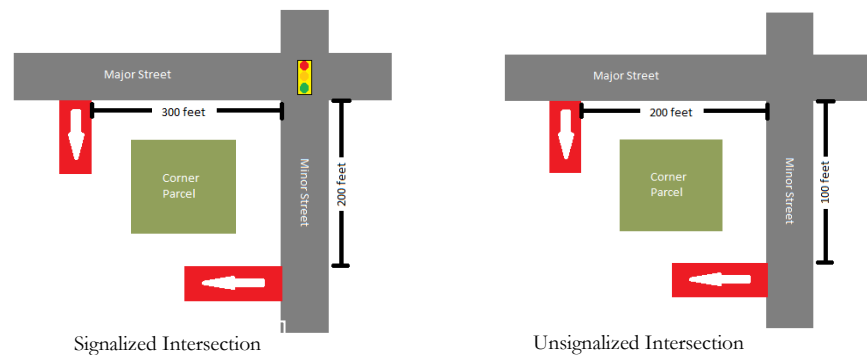
*Additional entrances or exits shall be permitted after showing of actual requirements of convenience and necessity and upon approval of the Board of Commissioners.*

### C. Location of Driveway Access Points

- All non-shared access driveways shall be constructed to be at least 5 feet from any property line at the right-of-way, except that a curb return may become tangent to a curb line at a point where said property line extended intersects said curb line.
- Driveways shall be located at a point along the frontage where it is possible for drivers of vehicles entering the highway to see in both directions along the traveled way far enough to allow entering the roadway without creating a hazardous situation.
- Consideration of adjacent public/private streets and other driveways shall be used to prevent closely spaced driveways to adjacent properties and favor a more centralized driveway(s) to promote connectivity.
- The Town reserves the right to permit access where it deems appropriate for the operational needs of the site and existing infrastructure. There is no guarantee of access to the applicant's preferred driveway location or access point.
- Access may be restricted to less than a full access movement. Any required infrastructure improvements may be required as a condition of the site plan in addition to the required improvements of Section 6.3.
- Along Major roadways the minimum distance between any 2 driveways/curb cuts on the same side of the street shall be not less than 200 feet.



7. At signalized street intersections, no driveway/curb cut shall be located within 300 feet of the intersection on Major Roadways and 200 feet on Minor/Local Streets.
8. At unsignalized street intersections, no driveway/curb cut shall be located within 200 feet of the intersection on Major Roadways and 100 feet on Minor/Local Streets.



- D. **Driveway Channelization:** Adequate driveway channelization is required in order accommodate the operations needs of the development while protecting the functionality of the intersection. Protected driveway channelization assists with traffic organization of entering and exiting traffic while preventing excessive maneuverability and cross-traffic close to the intersection. All developments are required to provide a minimum of fifty feet (50') of minimum channelization (from the edge of pavement on the intersecting roadway) prior to any internal driveways, cross access or direct parking areas. For larger commercial developments and high-density mixed-use developments, a minimum of one-hundred feet (100') will be required. Driveways that are served by a signalized intersection, a minimum of two-hundred feet (200') of protected channelization is required or beyond the limits of storage required by the signal, whichever is larger.
- E. **Driveway Vehicle Storage Space:** Adequate internal storage space shall be provided for all driveways for all services that required drivers to remain in their vehicles. This may include, but is not limited to, school drop-off and pick-up, banks, ATMs, and drive-thru's. Specific storage requirements will be made on a case-by-case basis based on the development and services to be provided.

At a minimum the following vehicle storage shall be provided. A storage space of twenty-five feet (25') per vehicle shall be used for passenger vehicles.

Type of Service	Minimum Storage Capacity
Single-Lane Bank/ATM	6 vehicles
Multi-Lane Bank/ATM	4 vehicles per lane
Full Service Car Wash	12 vehicles

<b>Automatic/Multi-Service Car Wash</b>	<b>4 vehicles per lane</b>
<b>Food/Drink Services</b>	<b>8 vehicles per lane (measured from the menu/ordering board)</b>
<b>Fuel/Gas Pumps</b>	<b>A minimum of 30 feet of storage measured from the island for all pumps</b>

**F. Driveway Width:** Driveway width measurements pertain to the measurement of the driveway at the sidewalk. At other points in the driveway the width may vary.

1. **Single Family Detached Residential Driveways:** Driveways on detached single family residential properties shall have a minimum width of 12 feet and shall not exceed a maximum width of 20 feet.
2. **All Other Driveways:** The width, in feet, of a driveway approach shall be within the minimum and maximum limits as specified below.
  - a. One-way drives shall have a minimum width of 12 feet and shall not exceed a maximum width of 30 feet.
  - b. Two-way drives shall have a minimum width of 16 feet and shall not exceed a maximum width of 36 feet.
3. **Public Service Driveways Exempt:** Driveways for fire protection, law enforcement, and other public services shall be exempt from the driveway width requirements of this paragraph.

**G. Joint Use Driveway**

1. Wherever feasible, the Administrator shall require the establishment of a joint use driveway serving 2 abutting properties.
2. When a property is developed before an abutting property is developed, the site shall be designed to ensure that its driveway and circulation may be modified to create a joint use driveway and interconnected parking with the abutting property at a later date.

**H. Utility Driveways:** A 10-foot-wide curb depression shall be provided at all locations where utilities cross curb and gutter to run into off-site easements. The purpose for the depression is to provide equipment access to easements without “hopping” over the curb.

**I. Compliance with Local and State Requirements**

1. Any person or corporation desiring to construct a driveway or other connection within the right-of-way of the town or state shall, before beginning any construction, secure the appropriate permits from the authorizing agency, allowing such construction. Driveway connections to residences are normally excluded from this requirement, but may be included at the option of the authorizing agency.
2. Failure to secure a permit prior to construction may result in the removal of the driveways and/or denial of access at that location.

**J. Minor Roadway (See Section 6.7.2) and Driveway Sight Triangles**

1. Town of Wake Forest follows the NCDOT standard of 10’ x 70’ in size along the intersecting rights-of-way, with the 70-foot dimension along the cross



street. This sight triangle must be shown at all connections to a town or state-maintained roadway, regardless of street or driveway classification or dimension, and is located on each side of the approaching street or driveway classification or dimension and is located on each side of the approaching street or driveway. No object that impedes sight distance between a height of 30 and 72 inches (vehicle height) above the ground surface, shall be located within any of the sight distance triangle.

**K. Major Roadway (See Section 6.7.2) and Driveway Sight Triangles**

The Town follows AASHTO's recommendations for sight distance along major roadways. Access to major roadways shall provide adequate sight distance to avoid striking an unexpected object in the travel way. This length will vary based on design speed on the intersecting roadway, grade, and stopping sight distance of the vehicles on the intersecting roadway. All sight distance triangles shall be computed from the decision point of the vehicle entering the major roadway.

1. The table below lists the length of sight distance that should be used along the major roadways on grades 3% or less.

Design Speed (mph)	Length of Sight Distance (ft)
15	70
20	90
25	115
30	140
35	165
40	195
45	220
50	245
55	285
60	325
65	365

2. For roadway grades >3%, the following table shall be used. All distances are shown in feet perpendicular to the decision point.

Approach Grade (%)	Design Speed (mph)									
	15	20	25	30	35	40	45	50	55	60
-6	77	99	126.5	154	181.5	214.5	242	294	342	390
-5	70	90	126.5	154	181.5	214.5	242	269.5	313.5	357.5
-4	70	90	115	154	181.5	214.5	242	269.5	313.5	357.5
-3 to +3	70	90	115	140	165	175.5	198	220.5	256.5	325
4	70	90	115	140	148.5	175.5	198	220.5	256.5	292.5
5	70	90	115	126	148.5	175.5	198	220.5	256.5	292.5
6	70	90	103.5	126	148.5	175.5	198	220.5	256.5	292.5