

Unified Development Ordinance



**Adopted:
November 16, 2005**

Town of Knightdale * 950 Steeple Square Court * Knightdale, NC 27545



Acknowledgements

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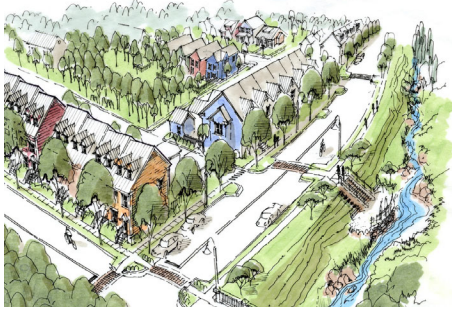


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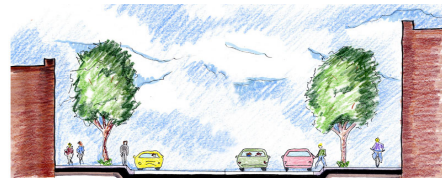
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Special thanks to Mr. Ryan Lockett, Integrated Design, Raleigh, NC
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Chapter 1. PURPOSE AND APPLICABILITY

1.1 Title

This appendix of the Knightdale Code of Ordinances shall be known as and may be cited as the “Unified Development Ordinance (UDO) for the Town of Knightdale,” and may be referred to as the “Knightdale Development Ordinance” or “Knightdale UDO”.

1.2 Authority

The Knightdale UDO is hereby adopted under the authority and provisions in Chapter 160A, Article 19; Chapter 160A, Article 8; Chapter 160A, §§ 174 and 185; Chapter 143, Article 21, Part 1 and rules promulgated by the Environmental Management Commission thereunder; Chapter 143, Article 21, Part 6; Chapter 153A, Article 18; and Chapter 113A, Article 4 of the North Carolina General Statutes (N.C.G.S.); and Article 14, Section 5 of the Constitution of North Carolina.

Whenever any provision of this appendix refers to or cites a section of the N.C.G.S. and that section is later amended or superseded, the appendix shall be deemed amended to refer to the amended section or the section that most nearly corresponds to the superseded section.

1.3 Jurisdiction

The Knightdale UDO shall be effective throughout the Town of Knightdale and its extraterritorial planning jurisdiction (ETJ). The planning jurisdiction of the Town may be modified from time to time in accordance with §160A-360 of the N.C.G.S.

1.4 Intent

A. Declaration of Necessity

In order to protect and promote the health, safety, and general welfare of the town and its ETJ, the Knightdale UDO is adopted by the Town Council to regulate and restrict by means of zoning and subdivision regulations the height and size of buildings and other structures; the appearance and design of developments; the percentage of lots that may be covered or occupied; the dimensions of setbacks; the size of open spaces; the density of population; the allocation of municipal water capacity; the construction and installation of infrastructure; and the location, use and design of landscaping, buildings, structures, and land for trade, industry, residence, and other purposes.

B. Purpose

The purpose of the regulations set forth in the Knightdale UDO shall be to fulfill the goals and objectives of the Knightdale 2027 Comprehensive Plan, adopted July 7, 2003, as may be amended from time to time.

1.5 Required Conformance to Knightdale UDO Provisions

A. Conformance In General: Except as otherwise specifically provided in the Knightdale UDO, no land shall be subdivided; no land or structure shall hereafter be used or occupied; no excavation, removal of soil, clearing of a site, or placing of fill shall take place on lands contemplated for development; no infrastructure shall be constructed or installed; and no structure, or part thereof, shall be constructed, erected, altered, or moved, unless in compliance with all of the applicable provisions of the Knightdale UDO.

B. Certain Farmland Exempt: Any tract of land that meets the following requirements shall be exempt from the provisions of this ordinance:

1. is at least three (3) acres in size under common ownership;
2. is used for dairying, the raising of agricultural products, the raising of horticultural products, timbering and silviculture, the raising of livestock or poultry; or houses facilities for the sale of onsite-produced products; and
3. has generated at least an average of \$1,000 in annual farm sales over the most recent three (3) year period.

Timbering and silviculture operations are not exempt from the provisions and potential penalties of Section 8.2D.

This exemption does not apply to swine farms as defined in N.C.G.S. §106-802.

C. Alternate Means of Compliance: As part of a Utility Allocation/Annexation Agreement (UAA) for a development project, the Town council may apply alternate means of compliance with otherwise applicable UDO design, connectivity, sign, landscaping, parking, lighting or similar standards allowing the ultimate intent or spirit of the Ordinance to be maintained. Alternate means of compliance should reflect the spirit and intent of the ordinance and are not provided to circumvent the variance procedures. Further the UAA shall be consistent with and include measures of the Water Allocation Policy. Alternate means of compliance shall only be approved if conditions are limited to impacts that are related to the development of the site and are intended to allow for voluntary alternate conditions to help further the goals and objectives of the Town Council not to alleviate hardships. The UAA shall act as a development agreement as defined in N.C.G.S. §160A-400.20.

1.6 Relationship to the Existing Zoning Ordinance and Subdivision Ordinance

A. Continuation of Provisions

To the extent that the provisions of the Knightdale UDO are the same as the previously adopted provisions that they replace in the Zoning Ordinance and the Subdivision Regulations and the 1995 Unified Development Ordinance, they shall be considered as continuation thereof and not as new enactment unless otherwise specifically provided.

B. Repeal of Existing Subdivision and Zoning Regulations

The existing subdivision regulations entitled "Subdivision Regulations for the Town of Knightdale, North Carolina" as adopted on June 6, 1977 and as subsequently amended are hereby repealed. The existing zoning regulations entitled "Zoning Ordinances for the Town of Knightdale, North Carolina" as adopted on February 28, 1974 and as subsequently amended are hereby repealed. The adoption of the Knightdale UDO, however, shall not affect nor prevent any pending or future prosecution of, or action to abate an existing violation of said regulations.

1.7 Conflict with Other Laws

When provisions of the Knightdale UDO impose higher standards than are required in any other statute or local ordinance or regulation, provisions of the Knightdale UDO shall govern. When the provisions of any other statute or local ordinance or regulation impose higher

standards than are required by the provisions of the Knightdale UDO, the provisions of that statute or local ordinance or regulation shall govern.

1.8 Prior Final Approvals, and Complete Applications

All projects for which a complete application was submitted and approved by the Town of Knightdale prior to the effective date of this ordinance shall be exempt from complying with all provisions of this ordinance dealing with the control and/or management of post-construction runoff, apart from those post-construction runoff provisions in the preceding 1995 UDO.

1.9 Comprehensive Plan

It is the intention of the Council that the Knightdale UDO implements the planning policies adopted for the Town and its ETJ, as reflected in the 2027 Comprehensive Plan and other related planning documents. While the Council reaffirms its commitment that the Knightdale UDO and any amendment to it, be in conformity with adopted planning policies, the Council hereby expresses its intent that neither the Knightdale UDO nor any amendment to it may be challenged on the basis of any alleged non-conformity with any planning document.

1.10 Violations Continue

Any violation of provisions existing on the effective date of this ordinance shall continue to be a violation under this ordinance and be subject to penalties and enforcement under Chapter 18, unless the use, development, construction or other activity complies with the provisions of this ordinance.

1.11 Effective Date

These regulations shall become effective on November 16, 2005. Upon adoption, these regulations shall supercede, repeal, and replace the Knightdale UDO, as made effective on August 14, 1995.

Many provisions herein are a restatement of provisions of the Knightdale Subdivision Regulations or the Zoning Ordinance, adopted May 6, 1991, or the 1995 Knightdale UDO with an effective date of August 14, 1995 and are hereby continued without interruption. All other provisions of this Ordinance shall become effective November 16, 2005.

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CHAPTER 2. DISTRICT PROVISIONS

2.1 General Intent and Establishment of Districts

The Districts have been ordered and classified according to a Rural-Urban Transect. The Transect is a method of classifying the natural and built environments as a continuum of six conditions, ranging from rural to urban. The value of the Transect is that it serves to locate any given place within a context in which all of the parts fit together harmoniously.

For example, a rural street typically has no curbs or sidewalks and its buildings look like farmhouses or barns. An urban street, depending on the intensity of urbanism, may have curbs and gutters, regularly placed street trees, sidewalks, and building forms that include common walls, flat roofs, and cornices. Each Transect zoning category has detailed provisions for each neighborhood, for density, height, street design, the design of parks, the mix of uses, building design, parking, and other aspects of the human environment.

The Zoning Districts for the Town of Knightdale have thus been ordered along this Transect providing an appropriate detailing of development at each end (*rather than homogenous standardization*) as well as a simplified tool for users of this Code to use to facilitate appropriate development. Figure 2.1 shows the defining features of various types of developments at either end of the Rural-Urban spectrum.

Figure 2.1: Rural-Urban Transect





The Transect begins with two zones that are entirely rural in character: Natural Zone (or T-1), which is made up of lands protected in perpetuity; and Rural Zone (T-2), which includes areas of high environmental or scenic quality that are not currently preserved, but perhaps should be.

The transition zone between countryside and town is called the Suburban Zone (T-3), which encompasses the most rural part of the neighborhood, and the countryside just beyond. The Edge is primarily single family homes. Although the Edge is the most purely residential zone, it can have some mixed-use, such as civic buildings; schools are particularly appropriate for the Edge.

Next is the General Urban Zone (T-4), typically the largest zone. In general, it is primarily residential, but more urban in character, having somewhat higher density with a mix of housing types and a slightly greater mix of uses allowed.

At the more urban end of the spectrum are two zones which are primarily mixed use: Urban Center (T-5). This can be a small neighborhood center or a larger town center, the latter serving more than one neighborhood.

The Urban Core or Downtown (T-6) serves the region, not only adjacent neighborhoods, and is typically understood as the central business district.

Assigned Districts, in addition to the six (6) zones, make allowance for auto-dependent activities, such as big box retail, institutional campuses, and industrial zones.

A. Base Districts

In accordance with N.C.G.S. §160A-382 that sets forth the establishment of zoning regulation by district, the Town of Knightdale, as indicated on the Official Zoning Map (*Appendix D*), is hereby divided into various districts that set forth uniform regulations for the development of land within each district.

The purpose of these district regulations is to provide a comprehensive plan for the use of land and buildings in conditions of good health and safety and in conditions of orderly community development. These regulations shall apply to all land and structures within the respective zoning district. The base districts are listed as follows:

- Transect Districts
- Open Space Preserve (OSP)
- Rural Transition (RT)
- Rural Residential (RR1)
- General Residential (GR3 and GR8)
- Urban Residential (UR12)
- Residential Mixed-Use (RMX)
- Neighborhood Mixed-Use (NMX)
- Town Center (TC)

- Assigned Districts
- Highway Business (HB)
- Manufacturing and Industrial (MI)
- Mining and Quarrying (MQ)

B. Planned Development Districts

The following planned development districts function as floating overlay districts that may be applied if a developer so chooses as part of a re-zoning request (*Section 15.6C*). These districts establish their own uses (*Section 2.3C*), but are otherwise subject to the requirements and regulations of the underlying district as well as any additional district standards enumerated in Sections 2.15A, 2.15B, and 2.16C respectively.

Manufactured Home Development (MHD)
Traditional Neighborhood Development (TND)
Planned Unit Development (PUD)

C. Conditional Districts

Each Base District is permitted a corresponding Conditional District subject to the submission of a Master Plan as a prerequisite to any development. These districts are described more fully in Section 2.16, and the process for establishing a Conditional District is detailed in Section 15.6C(4).

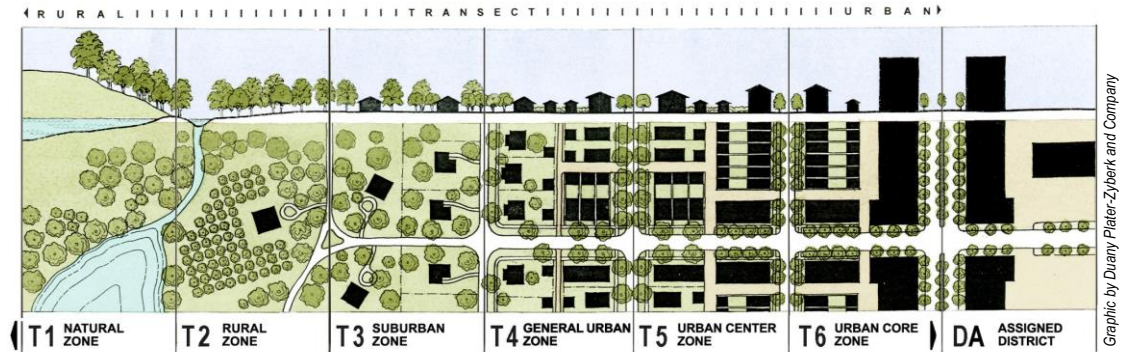
D. Overlay Districts

In accordance with N.C.G.S. §160A-382, the following overlay districts are established. These overlay districts impose additional requirements on properties within one or more underlying base or conditional districts.

Quarry Overlay (QOD)
Special Highway Overlay (SHOD)

2.2 Form-Based Standards by Zoning District

The purpose of the form-based standards found throughout this UDO is to put a new focus on the physical form of the Town as opposed to solely on the separation of land uses. They also emphasize the elements of a town that make up the public realm and serve as a tool that provides the regulatory means to achieve development objectives with greater certainty.



Graphic by Duany Plater-Zyberk and Company

Base District	OSP (§2.4) CD (§2.18)	RT (§2.5) RR1 (§2.6)	GR3 (§2.7) GR8 (§2.7)	UR12 (§2.8) RMX (§2.9)	NMX (§2.10)	TC (§2.11)	HB (§2.12) MI (§2.13) MQ (§2.14)
Development District		MHD (§2.15)	TND (§2.15) PUD (§2.16)				
Building Type <i>(CH 2 & 5)</i>	Civic	Institutional House	Townhouse	Apartment Mixed-Use	Commercial		
Max. Density <i>(Units/ Acre)</i>	Not Applicable	RT - .5 RR - 1	GR3 - 3 GR8 - 8	UR12 - 12 RMX - 18	No Maximum	No Maximum	Not Applicable
Open Space Dedication <i>(CH 7)</i>	Not Applicable	Yes ¹	Yes ¹	Yes ¹	Yes ¹	Yes ¹	Not Applicable
On-Street Parking <i>(CH 10)</i>	Not Applicable	Occasional	Occasional	Marked	Marked	Marked	Marked ³
Curb <i>(CH 10 & 17)</i>	Not Required	RT - Yes ² RR - Not Required	Yes ²	Yes ²	Yes ²	Yes ²	Yes ³
Drainage <i>(CH 6 & 17)</i>	Open Swale	RT - Closed RR - Open Swale	Closed	Closed	Closed	Closed	Closed ⁴
Street Trees <i>(CH 8 & 17)</i>	Not Required	RT - 40 ft average spacing in planting strip RR -Not Required	40 ft average spacing in planting strip	40 ft average spacing in planting strip	40 ft average spacing in planting strip or tree wells	40 ft average spacing in tree wells	40 ft average spacing in planting strip or tree wells ³
Sidewalk <i>(CH 9 & 17)</i>	Not Required	RT - 5 feet both sides RR - Multi-Use Path (6 ft min)	5 feet both sides	5 feet both sides	5-16 feet both sides	8-16 feet both sides	5-16 feet both sides (HB), one side (MI) ³

¹ Except for residential structures.
² Standard curb and gutter not required on “park” side of a parkway style street.
³ Not Applicable or Not Required in MQ District.
⁴ Open Swale in MQ District.

2.3 Use Categories and Tables of Permitted Uses

A. Categories

All uses permitted in this Code have been divided into nine (9) general categories as detailed in Chapter 19, Definitions and are generally defined as follows:

1. **Residential:** Premises available for long-term human habitation by means of ownership and rental, but excluding short-term leasing or rental of less than a month's duration.
2. **Lodging:** Premises available for short-term human habitation, including daily and weekly rental.
3. **Office/Service:** Premises available for the transaction of general business and the provision of services, but excluding retail sales and manufacturing, except as a minority component.
4. **Retail/Restaurants:** Premises available for the commercial sale of merchandise, prepared foods, and food and drink consumption, but excluding manufacturing.
5. **Entertainment/Recreation:** Premises for the gathering of people for purposes such as arts and culture, amusement, and recreation.
6. **Manufacturing/Wholesale/Storage:** Premises available for the creation, assemblage, storage, and repair of items including their wholesale or retail sale.
7. **Civic/Institutional:** Premises available for organizations dedicated to religion, education, government, social service, health care, and other similar functions.
8. **Infrastructure:** Uses and structures dedicated to transportation, communication, information, and utilities.

B. Interpretation of Use Matrices

1. Any use not listed in the Use Matrix is prohibited unless the Administrator determines that it falls within the same class as a listed use as set forth below.
2. Uses not listed as permitted (P), permitted with additional standards (PS), or requiring a special use permit (SU) or conditional district (CD) are presumed to be prohibited from the applicable zoning district. In the event that a particular use is not listed in the Use Matrix, and such use is not listed as a prohibited use and is not otherwise prohibited by law, upon application filed with the Planning Department, the Administrator shall determine whether a materially similar use exists in this Chapter. Should the Administrator determine that a materially similar use does exist, the regulations governing that use shall apply to the particular use not listed and the Administrator's decision shall be documented in writing as part of the "UDO Interpretation Log". Should the Administrator determine that a materially similar use does not exist, the proposed use shall be prohibited. This Chapter may be amended to establish a specific listing for the use in question. Written notice of any interpretation made by the Administrator pursuant to this Section 2.3B shall be mailed to the applicant and the owners of all adjacent property within 100 feet of the parcel that is the subject of the application. Such notice of interpretation shall reference the procedure for appealing Administrative decisions set forth in Section 15.5C, including specifically the deadline for filing an appeal of the decision.

3. The Administrator may determine that a use is materially similar if both of the following are met:
 - a. According to the Land-Based Classification Standards (LBCS) coding system of the American Planning Association [*Reference: <http://www.planning.org/lbcs/>*], the proposed use falls under a higher Structure or Function classification that is already enumerated in the Use Matrix (*Section 2.3C*); and
 - b. The proposed use shall not generate average daily trips that exceed the average daily trips generated by other similar uses permitted in the zoning district by more than ten percent (10%), as determined by the most recent edition of the Institute of Transportation Engineers'; *Trip Generation* manual (the "ITE Manual"), which document is hereby incorporated by this reference.

Note: If the trip generation for the proposed use is not listed in the ITE Manual, then the trip generation data associated with the use that most closely approximates the proposed use shall be utilized.

4. In order to assist in interpretation of the Use Matrix, the LBCS code classifications are noted in Chapter 19: Definitions, where applicable. In interpreting the Use Matrix, the following rules shall apply:
 - a. When a general/higher level use (e.g. LBCS 'F1000') and one of its associated more specific/lower level uses ('F1010') are both listed separately in the Use Matrix, the more specific Use Matrix listing governs when applicable. The permissions listed by the Use Matrix for the general/higher use ('F1000') do not apply to the more specific/lower use ('F1010') simply because they share a similar LBCS code classification. In all cases, the most specific/lowest applicable LBCS code classification listed in the Use Matrix governs.
 - b. When two (2) uses (e.g. '2.3C9a' and '2.3C9b') are listed separately in the Use Matrix, but have the same LBCS code classification ('F1000'), the individual Use Matrix listings govern. The permissions listed by the Use Matrix for Use '2.3C9a' do not apply to Use '2.3C9b' simply because they share the same LBCS code classification ('F1000') and vice versa.

C. Use Matrix

BASE DISTRICT	T1	T2	T3	T4	T5	T6	Assigned Districts					Planned Districts		
	OSP	RT	RR	GR	UR	RMX	NMX	TC	HB	MI	MQ	MHD	TND	PUD
(1) Residential														
a. Dwelling-Single Family	—	PS	PS	P	P	P	P	P	—	—	—	PS	PS	PS
b. Dwelling-Duplex	—	—	—	P	P	P	P	P	—	—	—	PS	PS	PS
c. Dwelling-Multifamily 4 units/bldg or less	—	—	—	—	SU	SU	SU	SU	—	—	—	SU	SU	PS
d. Dwelling-Multifamily more than 4 units/bldg	—	—	—	—	SU	SU	SU	SU	—	—	—	—	SU	PS
e. Dwelling-Secondary	—	SU	SU	—	—	—	—	—	—	—	—	—	SU	SU
f. Family Care Home (6 or Less residents)	—	PS	PS	PS	PS	PS	PS	PS	—	—	—	PS	PS	PS
g. Home Occupation	—	PS	PS	PS	PS	PS	PS	PS	—	—	—	PS	PS	PS
h. Housing Service for the Elderly	—	—	—	PS	PS	P	P	P	—	—	—	—	---	---
i. Live-Work Units	—	—	—	—	PS	PS	PS	PS	—	—	—	—	PS	PS
j. Manufactured Housing	—	—	PS	PS	—	—	—	—	—	—	—	PS	—	—
(2) Lodging														
a. Bed and Breakfast Inns	—	PS	PS	PS	PS	PS	PS	P	P	—	—	—	PS	PS
b. Hotels/Motels/Inns	—	—	—	—	—	—	CD	CD	P	—	—	—	CD	CD
c. Rooming or Boarding House	—	—	—	—	—	PS	PS	PS	—	—	—	—	PS	PS
(3) Office/Service														
a. Animal Services	—	SU	SU	—	—	—	PS	PS	PS	P	—	—	---	---
b. ATM	—	—	—	—	—	PS	P	P	P	P	—	—	PS	PS
c. Banks, Credit Unions, Financial Services	—	—	—	—	—	—	CD	PS	CD	P	—	—	P	P
d. Business Support Services	—	—	—	—	—	—	PS	P	P	P	—	—	P	P
e. Child/Adult Day Care Home (Fewer than 6 people)	—	PS	PS	PS	PS	PS	PS	PS	—	—	—	—	PS	PS
f. Child/Adult Day Care Center (6 or more people)	—	—	PS	—	PS	PS	PS	P	—	—	—	—	P	P
g. Community Service Organization	—	P	P	—	P	P	P	P	P	—	—	—	P	P
h. Cremation Facilities	—	—	—	—	—	—	SU	P	P	—	—	—	—	—
i. Drive Thru Service	—	—	—	—	—	—	CD	—	CD	PS	—	—	—	—
j. Equipment Rental	—	—	—	—	—	—	—	PS	CD	P	—	—	—	—
k. Funeral Homes	—	—	—	—	—	—	P	P	P	—	—	—	—	—
l. Government Services	P	P	P	P	P	P	P	P	P	P	—	—	P	P
m. Group Care Facility (More than 6 residents)	—	—	SU	—	—	—	SU	SU	—	—	—	—	—	—
n. Medical Services	—	—	—	—	—	P	P	P	P	P	—	—	P	P
o. Outdoor Animal Boarding/Equestrian Facilities	—	SU	SU	—	—	—	—	—	—	SU	—	—	—	—
p. Personal Services	—	—	—	—	—	PS	PS	PS	PS	PS	—	—	PS	PS
q. Post Office	—	—	—	—	—	P	P	P	—	P	—	—	P	P
r. Professional Services	—	—	—	—	—	P	P	P	P	P	—	—	P	P
s. Studio – Art, dance, martial arts, music	—	—	—	—	—	P	P	P	P	P	—	—	P	P
t. Tattoo Shop	—	—	—	—	—	—	—	—	PS	PS	—	—	—	—
u. Vehicle Services – Maintenance/Body Work/Repair	—	—	—	—	—	—	CD	—	CD	PS	—	—	—	—

— Not Permitted P Permitted PS Permitted subject to Additional Standards in Chapter 3
 SU Permitted subject to any Additional Standards in Chapter 3 as well as obtaining a Special Use Permit (Section 15.5E)
 CD Conditional District (Section 2.16, Additional Standards in Chapter 3, and 15.6C(4))

CHAPTER 2: DISTRICT PROVISIONS

BASE DISTRICT	T1	T2	T3	T4	T5	T6	Assigned Districts				Planned Districts			
	OSP	RT	RR	GR	UR	RMX	NMX	TC	HB	MI	MQ	MHD	TND	PUD
(4) Retail/Restaurants														
a. Auto Parts Sales	—	—	—	—	—	—	CD	PS	CD	P	—	—	—	—
b. Bar/Tavern/Night Club	—	—	—	—	—	—	P	P	P	—	—	—	PS	PS
c. Drive-Thru Retail/Restaurants	—	—	—	—	—	—	CD	—	CD	—	—	—	—	—
d. Gas Station with Convenience Store	—	—	—	—	—	—	CD	PS	CD	—	—	—	—	—
e. Neighborhood Retail/Restaurant – 2,000 sf or less	—	—	—	—	—	SU	P	P	P	—	—	—	P	P
f. General Retail – 10,000 sf or less	—	—	—	—	—	—	P	P	P	—	—	—	P	P
g. General Retail – 10,001 sf – 50,000 sf	—	—	—	—	—	—	—	P	P	—	—	—	P	P
h. General Retail – Greater than 50,000 sf	—	—	—	—	—	—	—	CD	CD	—	—	—	CD	CD
i. Restaurant	—	—	—	—	—	—	P	P	P	—	—	—	P	P
j. Shopping Center – Community Center	—	—	—	—	—	—	—	CD	CD	CD	—	—	—	—
k. Shopping Center – Neighborhood Center	—	—	—	—	—	—	—	CD	CD	CD	—	—	CD	CD
l. Sweepstakes Center	—	—	—	—	—	—	—	—	—	SU	—	—	—	—
m. Vehicle/Heavy Equipment Sales	—	—	—	—	—	—	—	—	CD	PS	—	—	—	—
(5) Entertainment/Recreation														
a. Adult Establishment	—	—	—	—	—	—	—	—	—	SU	—	—	—	—
b. Amusements, Indoor – 5,000 sf or less	—	—	SU	SU	SU	SU	P	P	P	P	—	—	—	—
c. Amusements, Indoor – 5,001 sf – 20,000 sf	—	—	—	—	—	SU	SU	SU	P	P	—	—	—	—
d. Amusements, Indoor – Greater than 20,000 sf	—	—	—	—	—	—	—	—	P	P	—	—	—	—
e. Amusements, Outdoor	—	SU	SU	—	—	PS	PS	PS	PS	PS	—	—	PS	PS
f. Cultural or Community Facility	SU	SU	SU	—	—	P	P	P	P	P	—	—	P	P
g. Meeting Facilities	SU	SU	SU	—	—	P	P	P	—	—	—	—	—	—
h. Recreation Facilities, Indoor	—	PS	PS	PS	PS	P	P	P	P	P	—	—	P	P
i. Recreation Facilities, Outdoor	P	SU	P	P	P	P	P	P	P	P	—	P	P	P
j. Theater, Live Performance	—	—	—	—	—	—	CD	CD	CD	CD	—	—	CD	CD
k. Theater, Movie	—	—	—	—	—	—	CD	CD	CD	CD	—	—	CD	CD
(6) Manufacturing/Wholesale/Storage														
a. Agribusiness	P	PS	PS	PS	—	—	—	—	—	PS	—	—	—	—
b. Laboratory - medical, analytical, research & development	—	—	—	—	—	—	—	—	P	P	—	—	—	—
c. Laundry, dry cleaning plant	—	—	—	—	—	—	—	—	P	P	—	—	—	—
d. Manufacturing, Light	—	—	—	—	—	—	—	—	PS	P	—	—	—	—
e. Manufacturing, Neighborhood	—	—	—	—	—	—	PS	PS	P	P	—	—	P	P
f. Manufacturing, Heavy	—	—	—	—	—	—	—	—	—	P	—	—	—	—
g. Media Production	—	—	—	—	—	—	—	P	P	P	—	—	—	—
h. Metal Products Fabrication, machine or welding shop	—	—	—	—	—	—	—	—	—	P	—	—	—	—
i. Mini-Warehouses	—	—	—	—	—	—	—	—	—	SU	—	—	—	—

— Not Permitted P Permitted PS Permitted subject to Additional Standards in Chapter 3
 SU Permitted subject to any Additional Standards in Chapter 3 as well as obtaining a Special Use Permit (Section 15.5E)
 CD Conditional District (Section 2.16, Additional Standards in Chapter 3, and 15.6C(4))

CHAPTER 2: DISTRICT PROVISIONS

BASE DISTRICT	T1	T2	T3	T4	T5	T6	Assigned Districts			Planned Districts				
	OSP	RT	RR	GR	UR	RMX	NMX	TC	HB	MI	MQ	MHD	TND	PUD
(6) Manufacturing/Wholesale/Storage (continued)														
j. Quarrying and Stone Cutting	—	—	—	—	—	—	—	—	—	SU	P	—	—	—
k. Research and Development	—	—	—	—	—	—	—	—	PS	P	—	—	—	—
l. Storage - Outdoor storage yard as a primary use	—	—	—	—	—	—	—	—	---	PS	—	—	—	—
m. Storage - Warehouse, indoor storage	—	—	PS	—	—	—	—	—	PS	PS	—	—	—	—
n. Wholesaling and Distribution	—	—	—	—	—	—	—	—	SU	PS	—	—	—	—
(7) Civic/Institutional														
a. Campground	SU	—	SU	SU	—	—	—	—	P	P	—	P	P	P
b. Cemeteries	PS	—	—	—	—	—	PS	PS	PS	—	—	—	—	—
c. Colleges/Universities	—	—	—	—	—	CD	CD	CD	—	—	—	—	—	—
d. Hospital	—	—	—	—	—	—	—	CD	CD	CD	—	—	—	—
e. Public Safety Facility	P	—	P	P	P	P	P	P	P	P	—	P	P	P
f. Religious Institutions	—	—	P	P	P	P	P	P	P	—	—	P	P	P
g. Schools – Elementary & Secondary	—	—	SU	SU	CD	CD	CD	CD	—	—	—	—	P	P
h. Schools – Vocational/Technical	—	—	—	—	—	P	P	P	P	P	—	P	P	P
(8) Infrastructure														
a. Airport	—	SU	SU	—	—	—	—	—	—	SU	—	—	—	—
b. Transit, Road & Ground Passenger Services	—	—	—	—	—	—	—	PS	PS	PS	—	—	PS	PS
c. Wireless Telecommunication Facility-Stealth	—	—	—	PS	PS	PS	PS	PS	PS	PS	—	PS	PS	PS
d. Wireless Telecommunication Facility-Tower	—	—	SU	—	—	—	—	---	---	PS	—	—	—	—
e. Wireless Telecommunication Facility – Small Wireless Facilities inside Right-of-Way	—	PS	PS	PS	PS	PS	PS	PS	PS	PS	—	—	—	—
f. Wireless Telecommunication Facility – Small Wireless Facilities outside Right-of-Way	—	—	—	—	—	—	PS	PS	PS	PS	—	—	—	—
e. Utilities-Class 1 & 2	P	P	P	P	P	P	P	P	P	P	—	P	P	P
f. Utilities-Class 3	—	SU	SU	—	—	—	—	—	SU	P	—	—	—	—

— Not Permitted P Permitted PS Permitted subject to Additional Standards in Chapter 3
 SU Permitted subject to any Additional Standards in Chapter 3 as well as obtaining a Special Use Permit (*Section 15.5E*)
 CD Conditional District (*Section 2.16 and 15.6C(4)*)

2.4 Open Space Preserve (OSP)

- A. **Purpose and Intent:** The Open Space Preserve District is intended to protect areas that are permanently preserved as natural and/or environmentally significant lands. Such areas include rural parks, wetlands, and areas placed in a conservation easement.
- B. **Specific District Provisions:**

Building Type (CH 5):	All Buildings
Lot Width (Min)	100 ft
Front Setback (Min)	30 ft
Side Setback (Min)	10 ft
Rear Setback (Min)	20 ft
Accessory Structure Side/Rear Setback (Min)	5 ft
Maximum Height (a)	35 ft

Notes:
 (a) Refer to Section 4.5 for computation of height.

2.5 Rural Transition (RT)

- A. **Purpose and Intent:** The Rural Transition District is intended as a holding district for areas that are currently rural in nature, but could transition to more intense uses due to proximity of utilities, transportation, and other infrastructure.
- B. **Specific District Provisions:**

- 1. **Maximum Development Density:** .5 Unit/Acre (*Gross Acreage*)
- 2. **Lot and Building Dimensional Requirements:**

Building Type (CH 5):	House	Civic & Institutional
Lot Width (Min)	200 ft	100 ft
Front Setback (c) (Min)	50 ft	40 ft
Front Yard Encroachments (a)	8 ft	8 ft
Side Setback (c) (Min)	20 ft	10 ft
Rear Setback (c) (Min)	50 ft	30 ft
Accessory Structure Side/Rear Setback (Min)	5 ft	5 ft
Maximum Height (b)	35 ft	35 ft

Notes:
 (a) Balconies, stoops, stairs, chimneys, open porches, bay windows, and raised doorways are permitted to encroach into the front setback (Section 4.3).
 (b) Refer to Section 4.4 for computation of height.
 (c) For Major Subdivisions receiving Master Plan approval prior to November 16, 2005, recorded plat setbacks for principal buildings shall prevail.

2.6 Rural Residential (RR1)

A. **Purpose and Intent:** The Rural Residential District is intended to accommodate very low-density, rural residential and agricultural uses; and protect natural vistas and landscape features that define our rural heritage.

B. **Specific District Provisions:**

1. **Maximum Development Density:** 1 Unit/Acre (*Gross Acreage*)
2. **Lot and Building Dimensional Requirements:**

Building Type (CH 5):	House	Civic & Institutional
Lot Width (<i>Min</i>)	90 ft	100 ft
Front Setback (<i>c</i>) (<i>Min</i>)	35 ft	40 ft
Front Yard Encroachments (<i>a</i>)	8 ft	8 ft
Side Setback (<i>c</i>) (<i>Min</i>)	10 ft	10 ft
Rear Setback (<i>c</i>) (<i>Min</i>)	30 ft	30 ft
Accessory Structure Side/Rear Setback (<i>Min</i>)	5 ft	5 ft
Maximum Height (<i>b</i>)	35 ft	35 ft

Notes:

- (a) Balconies, stoops, stairs, chimneys, open porches, bay windows, and raised doorways are permitted to encroach into the front setback (Section 4.3).
- (b) Refer to Section 4.4 for computation of height.
- (c) For Major Subdivisions receiving Master Plan approval prior to November 16, 2005, recorded plat setbacks for principal buildings shall prevail.

2.7 General Residential (GR3 and GR8)

A. Purpose and Intent: The General Residential District is intended for Town’s existing predominately-residential neighborhoods as well as provide for new primarily-residential development in accordance with a suburban pattern. These Districts are differentiated only by the density of the overall development relative to the planning goals of the Town as set forth in the *2027 Comprehensive Plan*.

B. Specific District Provisions:

1. Maximum Development Density:

GR3: 3 Units/Acre (*Gross Acreage*)

GR8: 8 Units/Acre (*Gross Acreage*)

2. Permitted Building Type Ratio: The maximum number of Townhouse buildings in a GR development shall not exceed 30% of the total number of units.

3. Lot and Building Dimensional Requirements: On infill lots, the minimum lot width, front and side setbacks shall be equal to the median lot width, average as-built front setback and average as-built side setback dimension, respectively, of lots on the same block face and the opposite block face within 300 feet or one block length (*whichever is greater*). In situations where no block face exists (*no houses facing the street*) for purposes of making average calculations, a Special Use Permit shall be required. Otherwise, the dimensional requirements for new developments shall be as follows:

Building Type (CH 5):	House	Townhouse	Civic & Institutional
Lot Width (a) (Min)	30 ft	n/a	100 ft
Front Setback (g) (Min)	10 ft	0 ft	10 ft
Front Setback (g) (Max)	n/a	25 ft	n/a
Front Yard Encroachment (b)	8 ft	(e)	10 ft
Minimum Driveway Length	35 ft	n/a	n/a
Side Setback (g) (Min)	20% of lot width (d)	10 ft between buildings	15 ft
Rear Setback (g) (Min)	25 ft	n/a	30 ft
Rear Setback from Rear Lane/Alley (c) (Min)	20 ft from centerline	15 ft from centerline	n/a
Accessory Structure Side/Rear Setback (Min)	5 ft	5 ft	5 ft
Maximum Height (f)	3 stories	3 stories	3 stories

Notes:

- (a) For lots less than 80 feet wide, alley/rear lane access to all off-street parking areas is required, except when such lots front onto an approved cul-de-sac, in which case shared driveways shall be required. For in-fill lots less than 80 feet wide where no alley/rear lane access exists, shared driveways shall be required. For lots 80 feet wide or greater, access to off-street parking is permitted from the fronting street or rear lane/alley.
- (b) Balconies, stoops, stairs, chimneys, open porches, bay windows, and raised doorways are permitted to encroach into the front setback (Section 4.3).
- (c) For lots that provide access to off-street parking from a rear lane/alley.
- (d) **For lots 60’ in width or greater:** Side setbacks are calculated as an aggregate setback. However, a five (5) foot minimum setback per side shall be maintained;
For lots less than 60’ in width: Side setbacks are calculated as an aggregate setback. However, a three (3) foot minimum setback per side shall be maintained. Also, in new developments with zero lot line products, the entire 20% side setback may be allocated to one (1) side provided that the side setback condition is identical for all lots along the same block face. In addition, for zero lot line developments, a minimum of six (6) feet of total building separation is required.
- (e) Upper story balconies may encroach into the right-of-way (over sidewalk only) with permission from the Administrator.
- (f) Refer to Section 4.4 for computation of height.

(g) For Major Subdivisions receiving Master Plan approval prior to November 16, 2005, recorded plat setbacks for principal buildings shall prevail.

2.8 Urban Residential (UR12)

A. **Purpose and Intent:** The Urban Residential District accommodates neighborhoods close to commercial centers such as the TC, NMX and HB districts and provides for a variety of compatible housing types and a limited mix of uses within a walkable 1/4 - 1/2 mile context.

B. **Specific District Provisions:**

1. **Maximum Development Density:** 12 Units/Acre (*Gross Acreage*)
2. **Mixed-Use Buildings:** Mixed-Use Buildings are permitted in new developments only (not infill lots).
3. **Lot and Building Dimensional Requirements:** On infill lots, the minimum lot width, front and side setbacks shall be equal to the median lot width, average as-built front setback and average as-built side setback dimension, respectively, of lots on the same block face and the opposite block face within 300 feet or one block length (*whichever is greater*). In situations where no block face exists (*no houses facing the street*) for purposes of making average calculations, a Special Use Permit shall be required. Otherwise, the dimensional requirements for new developments shall be as follows:

Building Type (CH 5):	House	Townhouse	Apartment	Mixed-Use	Civic & Institutional
Lot Width (a) (Min)	30 ft	n/a	n/a	32 ft	50 ft
Front Setback (g) (Min)	10 ft	0 ft	0 ft	0 ft	10 ft
Front Setback (g) (Max)	n/a	25 ft	25 ft	10 ft	n/a
Front Yard Encroachment (b)	8 ft	(e)	(e)	(e)	10 ft
Minimum Driveway Length	35 ft	n/a	n/a	n/a	n/a
Side Setback (g) (Min)	20% of lot width (d)	10 ft between buildings	10 ft between buildings	0 ft within development, otherwise 12 ft	10 ft between buildings
Rear Setback (g) (Min)	25 ft	n/a	n/a	10 ft	30 ft
Rear Setback from Rear Lane/Alley (c) (Min)	20 ft from centerline	15 ft from centerline	15 ft from centerline	5 ft	n/a
Accessory Structure Side/Rear Setback (Min)	5 ft	5 ft	5 ft	0 ft	5 ft
Maximum Height (f)	3 stories	3 stories	3 stories	3 stories	3 stories

Notes:

- (a) For lots less than 80 feet wide, alley/ rear lane access to all off-street parking areas is required except when such lots front onto an approved cul-de-sac, in which case shared driveways shall be required. For in-fill lots less than 80 feet wide where no alley/ rear lane access exists, shared driveways shall be required. For lots 80 feet wide or greater, access to off-street parking is permitted from the fronting street or rear lane/ alley.
- (b) Balconies, stoops, stairs, chimneys, open porches, bay windows, and raised doorways are permitted to encroach into the front setback (Section 4.3).
- (c) For lots that provide access to off-street parking from a rear lane/ alley.
- (d) **For lots 60' in width or greater:** Side setbacks are calculated as an aggregate setback. However, a five (5) foot minimum setback per side shall be maintained;
For lots less than 60' in width: Side setbacks are calculated as an aggregate setback. However, a three (3) foot minimum setback per side shall be maintained. Also, in new developments with zero lot line products, the entire 20% side setback may be allocated to one (1) side provided that the side setback condition is identical for all lots along the same block face. In addition, for zero lot line developments, a minimum of six (6) feet of total building separation is required.

- (e) Upper story balconies may encroach into the right-of-way (over sidewalk only) with permission from the Administrator.
- (f) Refer to Section 4.4 for computation of height.
- (g) For Major Subdivisions receiving Master Plan approval prior to November 16, 2005, recorded plat setbacks for principal buildings shall prevail.

2.9 Residential Mixed-Use (RMX)

- A. Purpose and Intent:** The Residential Mixed-Use District is intended to provide for areas for higher density residential development in close proximity (*within 1/4 - 1/2 mile*) to existing and planned commercial centers such as the TC, NMX and HB districts. The intent is to create higher density residential areas that compliment commercial districts with physical proximity and pedestrian connectivity. Different housing types and lot styles along with a limited mix of neighborhood-friendly uses are encouraged.
- B. Specific District Provisions:**
 - 1. **Maximum Development Density:** 18 Units/Acre (*Gross Acreage*)
 - 2. **Lot and Building Dimensional Requirements:**

Building Type (CH 5):	House	Townhouse	Apartment	Mixed-Use	Civic & Institutional
Lot Width (a) (Min)	30 ft	n/a	n/a	32 ft	50 ft
Front Setback (g) (Min)	10 ft	0 ft	0 ft	0 ft	10 ft
Front Setback (g) (Max)	n/a	25 ft	25 ft	10 ft	n/a
Front Yard Encroachment (b)	8 ft	(e)	(e)	(e)	10 ft
Minimum Driveway Length	35 ft	n/a	n/a	n/a	n/a
Side Setback (g) (Min)	20% of lot width (d)	10 ft between buildings	10 ft between buildings	0 ft within development, otherwise 12 ft	10 ft between buildings
Rear Setback (g) (Min)	25 ft	n/a	n/a	10 ft	30 ft
Rear Setback from Rear Lane/Alley (c) (Min)	20ft from centerline	15 ft from centerline	15 ft from centerline	5 ft	n/a
Accessory Structure Side/Rear Setback (Min)	5 ft	5 ft	5 ft	0 ft	5 ft
Maximum Height (f)	3 stories	3 stories	3 stories	3 stories	3 stories

Notes:

- (a) For lots less than 80feet wide, alley/rear lane access to all off-street parking areas is required except when such lots front onto an approved cul-de-sac, in which case shared driveways shall be required. For in-fill lots less than 80feet wide where no alley/rear lane access exists, shared driveways shall be required. For lots 80feet wide or greater, access to off-street parking is permitted from the fronting street or rear lane/alley.
- (b) Balconies, stoops, stairs, chimneys, open porches, bay windows, and raised doorways are permitted to encroach into the front setback (Section 4.3).
- (c) For lots that provide access to off-street parking from a rear lane/alley.
- (d) **For lots 60' in width or greater:** Side setbacks are calculated as an aggregate setback. However, a five (5) foot minimum setback per side shall be maintained;

For lots less than 60' in width: Side setbacks are calculated as an aggregate setback. However, a three (3) foot minimum setback per side shall be maintained. Also, in new developments with zero lot line products, the entire 20% side setback may be allocated to one (1) side provided that the side setback condition is identical for all lots along the same block face. In addition, for zero lot line developments, a minimum of six (6) feet of total building separation is required.

- (e) Upper story balconies may encroach into the right-of-way (over sidewalk only) with permission from the Administrator.
- (f) Refer to Section 4.4 for computation of height.
- (g) For Major Subdivisions receiving Master Plan approval prior to November 16, 2005, recorded plat setbacks for principal buildings shall prevail

2.10 Neighborhood Mixed-Use (NMX)

A. Purpose and Intent: The Neighborhood Mixed-Use District is intended to provide pedestrian-scaled, higher density residential homes and opportunities for limited scale commercial activities along existing mixed-use corridors, in areas of transition, and at the functional center of new neighborhoods. Development in this district should encourage pedestrian activity through construction of mixed-use buildings and connections to adjacent neighborhoods. Buildings in this district are typically small and detached.

B. Specific District Provisions:

1. **Maximum Development Density:** No Maximum
2. **Lot and Building Dimensional Requirements:**

Building Type (CH 5):	House	Townhouse	Apartment	Mixed-Use	Commercial	Civic & Institutional
Lot Width (a) (Min)	30 ft	n/a	n/a	n/a	32 ft	50 ft
Front Setback (g) (Min)	10 ft	0 ft	0 ft	0 ft	0 ft	0 ft
Front Setback (g) (Max)	n/a	25 ft	25 ft	10 ft	10 ft	n/a
Front Yard Encroachment (b)	8 ft	(e)	(e)	(e)	(e)	n/a
Minimum Driveway Length	35 ft	n/a	n/a	n/a	n/a	n/a
Side Setback (g) (Min)	20% of lot width (d)	10 ft between buildings	10 ft between buildings	0 ft within development, otherwise 5 ft	0 ft within development, otherwise 5 ft	10 ft between buildings
Rear Setback (g) (Min)	25 ft	n/a	n/a	0 ft	0 ft	30 ft
Rear Setback from Rear Lane/Alley (c) (Min)	20 ft from centerline	15 ft from centerline	15 ft from centerline	0 ft	0 ft	n/a
Accessory Structure Side/Rear Setback (Min)	5 ft	5 ft	5 ft	0 ft	0 ft	5 ft
Maximum Height (f)	4 stories	4 stories	4 stories	4 stories	4 stories	4 stories

Notes:

- (a) For lots less than 80 feet wide, alley/rear lane access to all off-street parking areas is required except when such lots front onto an approved cul-de-sac, in which case shared driveways shall be required. For in-fill lots less than 80 feet wide where no alley/rear lane access exists, shared driveways shall be required. For lots 80 feet wide or greater, access to off-street parking is permitted from the fronting street or rear lane/alley.
- (b) Balconies, stoops, stairs, chimneys, open porches, bay windows, and raised doorways are permitted to encroach into the front setback (Section 4.3).

- (c) For lots that provide access to off-street parking from a rear lane/alley.
- (d) **For lots 60' in width or greater:** Side setbacks are calculated as an aggregate setback. However, a five (5) foot minimum setback per side shall be maintained;
For lots less than 60' in width: Side setbacks are calculated as an aggregate setback. However, a three (3) foot minimum setback per side shall be maintained. Also, in new developments with zero lot line products, the entire 20% side setback may be allocated to one (1) side provided that the side setback condition is identical for all lots along the same block face. In addition, for zero lot line developments, a minimum of six (6) feet of total building separation is required.
- (e) Upper story balconies may encroach into the right-of-way (over sidewalk only) with permission from the Administrator.
- (f) Refer to Section 4.4 for computation of height.
- (g) For Major Subdivisions receiving Master Plan approval prior to November 16, 2005, recorded plat setbacks for principal buildings shall prevail.

2.11 Town Center (TC)

A. Purpose and Intent: The Town Center District is intended for the traditional downtown area and the identified new town centers at future commuter rail stations. Individual buildings are encouraged to be multi-story with uses mixed vertically, street level commercial and upper level office and residential. Higher densities of residential development are encouraged. It is the purpose of these regulations to encourage vitality by excluding certain activities which have a negative effect on the public realm through auto-dominated or non-pedestrian oriented design or uses.

B. Specific District Provisions:

1. **Maximum Development Density:** No Maximum
2. **Parking Requirements (per Chapter 10-Vehicle Accommodation Areas):** May achieve compliance with parking requirements by making payments to the Town's Fund 70 Capital Reserve account as provided in Section 10.2B.
3. **Lot and Building Dimensional Requirements:**

Building Type (CH 5):	House	Townhouse	Apartment	Mixed-Use	Commercial	Civic & Institutional
Lot Width (a) (Min)	n/a	n/a	n/a	n/a	16 ft	50 ft
Front Setback (g) (Min)	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft
Front Setback (g) (Max)	25 ft	25 ft	25 ft	10 ft	10 ft	25 ft
Front Yard Encroachment (b)	(e)	(e)	(e)	(e)	(e)	n/a
Minimum Driveway Length	35 ft	n/a	n/a	n/a	n/a	n/a
Side Setback (g) (Min)	20% of lot width (d)	6 ft between buildings	If no partiwall then 10 ft	If no partiwall then 10 ft	If no partiwall then 10 ft	0 ft
Rear Setback (g) (Min)	n/a	n/a	n/a	0 ft	0 ft	0 ft
Rear Setback from Rear Lane/Alley (c) (Min)	20ft from centerline	15 ft from centerline	15 ft from centerline	0 ft	0 ft	0 ft
Accessory Structure Side/Rear Setback (Min)	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft
Maximum Height (f)	5 stories	5 stories	5 stories	5 stories	5 stories	5 stories

Notes:

- (a) For lots less than 80feet wide, alley/rear lane access to all off-street parking areas is required except when such lots front onto an approved cul-de-sac, in which case shared driveways shall be required. For in-fill lots less than

- 80 feet wide where no alley/ rear lane access exists, shared driveways shall be required. For lots 80 feet wide or greater, access to off-street parking is permitted from the fronting street or rear lane/ alley.
- (b) Balconies, stoops, stairs, chimneys, open porches, bay windows, and raised doorways are permitted to encroach into the front setback (Section 4.3).
 - (c) For lots that provide access to off-street parking from a rear lane/ alley.
 - (d) **For lots 60' in width or greater:** Side setbacks are calculated as an aggregate setback. However, a five (5) foot minimum setback per side shall be maintained;
For lots less than 60' in width: Side setbacks are calculated as an aggregate setback. However, a three (3) foot minimum setback per side shall be maintained. Also, in new developments with zero lot line products, the entire 20% side setback may be allocated to one (1) side provided that the side setback condition is identical for all lots along the same block face. In addition, for zero lot line developments, a minimum of six (6) feet of total building separation is required.
 - (e) Upper story balconies may encroach into the right-of-way (over sidewalk only) with permission from the Administrator.
 - (f) Refer to Section 4.4 for computation of height.
 - (g) For Major Subdivisions receiving Master Plan approval prior to November 16, 2005, recorded plat setbacks for principal buildings shall prevail.

2.12 Highway Business (HB)

- A. Purpose and Intent:** The intensity of commercial development in the Highway Business District is established by the traffic of the fronting thoroughfare. The intent of these regulations is to provide and encourage the development of high-intensity offices, services, retailing of durable and convenience goods, facilitate convenient access, minimize traffic congestion, and reduce the visual impact of excessive signage and parking lots.
- B. Specific District Provisions:**
 - 1. **Maximum Development Density:** Not Applicable
 - 2. **Lot and Building Dimensional Standards:**

Building Type (CH 5) :	All Structures – Principal	All Structures – Accessory
Lot Width (at Right-of-Way)	150 ft	n/a
Front Setback (Min)	10 ft	n/a
Front Setback (Max)	90 ft	n/a
Side Setback (Min) (a)	0 ft or 6 ft	5 ft
Corner Side Setback (Min)	10 ft	n/a
Side Setback from RR, GR, UR and RMX districts	50 ft	50 ft
Rear Setback (Min)	10 ft	5 ft
Rear Setback from Rear Lane/Alley	15 ft from centerline	15 ft from centerline
Rear Setback from RR, GR, UR and RMX Districts	50 ft	50 ft
Maximum Height (b)	5 stories	35 ft

Notes: (See Notes in Section 2.13 below)

2.13 Manufacturing and Industrial (MI)

- A. Purpose and Intent:** The Manufacturing and Industrial District is intended to permit the development and operation of industrial and/or flex space uses that are typically too large in scale to fit within a neighborhood environment and should be buffered from surrounding neighborhood uses. In the interest of economic development this District is reserved for non-residential uses only to preserve adequate opportunities for future relocation and expansion of employment-based uses.
- B. Specific District Provisions:**

1. **Maximum Development Density:** Not Applicable
2. **Lot and Building Dimensional Requirements:**

Building Type (CH 5):	Commercial
Front Setback (Min)	10 ft
Side Setback (Min) (a)	0 ft or 6 ft
Corner Side Setback (Min)	10 ft
Rear Setback (Min)	10 ft
Front, Rear and Side Setbacks from OSP, RR, GR, UR, RMX, NMX, TC and HB Districts (Min)	50 ft
Maximum Height (b)	5 stories

Notes:

- (a) If a partwall condition is not provided, then the buildings shall be a minimum of six (6) feet apart.
- (b) Refer to Section 4.4 for computation of height.

2.14 Mining and Quarrying (MQ)

- A. **Purpose and Intent:** The Mining and Quarrying District is intended to recognize the unique characteristics and predominant extractive nature of mines and quarries which do not fit the application of most development standards promulgated in a UDO. Due to this unique nature, however, it is important to establish specific provisions for the protection of the general welfare of adjacent properties and the community at large. As such, development within the MQ District is exempt from the provisions of Chapters 4 through 12 subject to the specific regulations outlined in Subsection B which follows.
- B. **Specific District Provisions:**
 1. **Buffer Yard:** Apart from adjacent parcels and tracts of land used for mine or quarry administrative services, a buffer yard meeting the following specifications shall be maintained around the perimeter of the MQ District to screen mines and quarries against public rights-of-way and private property in surrounding districts:
 - a. **Minimum Yard Width:** 100 feet
 - b. **Performance Standard:** A planted buffer which is 50 feet in width and contains screening materials which at maturity provides opacity from the ground to a height of 30 feet. Vegetative screening materials within opaque areas shall contain no horizontal openings upon the plants' maturity.
 2. **Permitted Buffer Yard Encroachments:**
 - a. **Access Drives:** Access drives are permitted so long as any break in the buffer for said drives does not exceed 60 feet in width.
 - b. **Lighting:** Lighting associated with access drives and meeting the standards of Chapter 11 is permitted within the buffer yard.
 - c. **Signs:** Subject to the standards of Chapter 12, signs are permitted to be located within the buffer yard.

2.15 Planned Development Districts

A. Manufactured Home Development (MHD)

1. **Purpose and Intent:** Manufactured housing is a recognized form of affordable housing. To provide for this type of housing in an organized manner, this district permits two types of development beyond a single manufactured home on a qualifying lot in a GR or RR district; the Manufactured Home Neighborhood and the Mobile Home Park.

The intent is to treat manufactured housing with the same general design considerations applied to homes built to the standards set forth in the North Carolina Building Code and those codified in this UDO.

2. **General District Provisions:**

- a. **Maximum Development Density:** The maximum density of any Manufactured Home Development shall not exceed the maximum density of the underlying district up to a maximum of six (6) units per acre.
- b. **Minimum Area Required:** 3 acres
- c. **Maximum Area Allowed:** 40 acres

3. **Specific District Provisions:**

- a. **Manufactured Home Neighborhood**

- i. **General Description:** The Manufactured Home Neighborhood is a subdivision of land that permits manufactured houses that are aligned on the lots in a manner similar to site built homes with their front doors facing the streets. *(See Section 13.5 for non-conforming single-wide manufactured homes.)*
- ii. Individual homes shall be placed upon separately platted lots.
- iii. The manufactured home shall have the tow assembly and wheels removed and be mounted on and anchored to a permanent, continuous masonry (brick) foundation.
- iv. **Lot and Building Dimensional Specifications:**

House	
Front, Side, Rear and Accessory Structure Side/Rear Setbacks	<ul style="list-style-type: none"> Up to 1 unit/acre, use RR District setbacks <i>(Section 2.5B)</i>; More than 1 unit/acre up to 6 units/acre, use GR District setbacks <i>(Section 2.6B3)</i>

- b. **Mobile Home Parks**

- i. **General Description:** The location of two or more manufactured homes on a parcel of land shall constitute a Mobile Home Park and shall be subject to the provisions of this section.
- ii. **Lot and Dimensional Specifications:**

House	
Property Line Setback	50 ft
Minimum Manufactured Home Space Area	5,000 sq ft
Minimum Distance between Manufactured Home Units	25 ft

- iii. **General Requirements:** The following standards shall be considered the minimum requirements for all new Mobile Home Parks:
 - a) The transfer of title of a manufactured home space or spaces either by sale or by any other manner shall be prohibited within a Mobile Home Park.
 - b) Within a Mobile Home Park, there shall be an administrative office.
 - c) The owner and/or operator of a Mobile Home Park shall not sell manufactured homes on or within a Mobile Home Park unless the manufactured home unit for sale shall be placed individually and separately upon an existing manufactured home space where all design standards and utilities have been completed as specified by this ordinance. This does not prohibit the Mobile Home Park owner and/or operator from owning or operating a retail sales business on adjoining property if zoning permits.
 - d) Any Mobile Home Park with greater than fifty (50) units shall construct a community center, which shall serve the needs of their residents for gatherings and emergency shelter.
 - e) Streets within the Mobile Home Park shall be private and constructed to the standards that would be required of a new Local Street inside the RR District (*Section 17.3A(2) and Section 2.2*), except that the total width of pavement with binder curb may be reduced to 20 feet.

- iv. **Recreational Vehicles (RVs):** Although RVs are not considered suitable as permanent dwelling units, the Town Council has found that a limited number of RVs, otherwise restricted to placement within campgrounds (*Section 2.3C(7)a*), for temporary residents (*i.e. military personnel, college students or persons on temporary business assignments*) within a Mobile Home Park will not essentially change the character of the Park as long as the following conditions are met:
 - a) **Number:** No more than 18 percent (18%) of the manufactured home spaces in any Mobile Home Park may be used for the parking of RVs. In the calculation of allowed spaces, any fractional component of the resulting number shall be disregarded.
 - b) **Type:** RVs must be self-sufficient (*contain a full bathroom, kitchen and sleeping quarters*).
 - c) **Placement:** RVs shall be parked within an assigned manufactured home space, located no closer than 300 feet to any public right-of-way unless screened from the public right-of-way by a Type “B” buffer yard, upon arrival and shall not be moved until the time of departure.
 - d) **Utility Hook-Ups:** RVs must be connected to electric, water and sewer hook-ups for the entire duration of the resident’s stay.
 - e) **Duration of Stay:** As living quarters for a temporary resident, the permitted continuous period of stay for any RV within a Mobile Home Park shall be at least one (1) month, but no more than four (4) years.
 - f) **Annual Submittal of Register:** Each Mobile Home Park engaged in the rental of Mobile Home Park spaces to RVs as specified in this

section, shall file a copy of their register (*Section 2.15A(3)b(vi)*) with the Administrator at least once every twelve months after January 1, 2014.

v. Manufactured Home Space

- a) Each manufactured home space shall be clearly defined by means of concrete or iron pipe markers placed at all corners.
- b) Each manufactured home space shall be located on ground not susceptible to flooding and graded so as to prevent any water from ponding or accumulating on the premises and not located in “A Zones” as identified on FIRMs.
- c) The manufactured home space shall be provided with anchors and tiedowns such as cast-in-place concrete "dead men" eyelets embedded in concrete foundations or runways, screen augers, arrowhead anchors, or other devices securing the stability of the manufactured home. Each manufactured home space shall comply with the above standards or similar standards whichever are higher. Each manufactured home owner shall be responsible for securing his individual manufactured home to anchors provided by the Mobile Home Park operator.
- d) Each manufactured home space shall be serially numbered for mailing address purposes. These numbers shall be displayed on a free-standing post on each manufactured home space.

vi. Registration of Occupants: Every Mobile Home Park owner or operator shall maintain an accurate register. The register shall be available for inspection at all times by authorized town representatives. The register shall contain the following information on forms provided by the Planning Department:

- a) name of owner and/or occupant;
- b) manufactured home space number;
- c) make, model, registration number of manufactured home or permitted RV unit; and
- d) date of arrival and departure of the occupants.

Records shall be maintained for a period of three (3) years.

B. Traditional Neighborhood Development (TND)

1. Purpose and Intent: The intent of this District is to allow for the development of fully integrated, mixed-use, pedestrian-oriented neighborhoods that minimize traffic congestion, suburban sprawl, infrastructure costs, and environmental degradation. TND’s adhere to the following design principles:

- All neighborhoods have identifiable centers and edges.
- Edge lots are readily accessible to retail and/or recreation by non-vehicular means (*a distance not greater than 1/4 - 1/2 mile*).
- Non-residential uses and housing types are mixed and in close proximity to one another.
- Street networks are interconnected and blocks are short (*Section 9.4*).

- Civic uses are given prominent sites throughout the neighborhood.
- Close proximity to open space (*Chapter 7*).

2. Specific District Provisions

a. Maximum Development Density:

	GR3	GR8	UR12	RMX	NMX	TC
Max. Density By Right (units/acre)	3.75	10	15	27.5	No Max.	No Max.
Max. Density as a CD (units/acre)	4.5	12	18	No Max.	No Max.	No Max.

b. Required Distribution of Uses: (*Note: The figures in the table below are to be calculated as the net development area, which excludes street right-of-ways and dedicated open space as defined in Section 7.2G*)

	Minimum	Maximum
Single-Family Uses	15%	75%
Two-Family and Multi-Family Uses	10%	40%
Lodging/Office/Retail Uses	2%	40%
Civic Uses	2%	none

- c. **Lot and Building Dimensional Requirements:** The lot and building dimensional requirements shall be generally consistent with those found in the underlying district and shall exhibit a high level of uniformity for each building type found throughout the development.
- d. **Development Size (Minimum-Maximum):** 40 acres – 200 acres (*Note: Projects in excess of 200 acres should be developed as multiple Traditional Neighborhoods, each individually subject to all such provisions*)
- e. The entire land area of the TND shall be divided into blocks, streets, lots and open space areas.
- f. Similar land categories shall generally front across streets. Dissimilar categories shall abut at rear lot lines. Corner lots which front on streets of dissimilar use shall be set back the same as the adjacent use with the lesser setback.
- g. The long axis of streets exceeding 500 feet in length shall have appropriate termination with either a public monument, specifically designed building facade, or a gateway to the ensuing space.

C. Planned Unit Development

- 1. **Purpose and Intent:** The Planned Unit Development District is designed to encourage master planning of development and to coordinate such development so as to manage the impacts of the development on the provision of Town Services and infrastructure. The Planned Unit Development encourages creativity and innovation in the design of developments, but in return for this flexibility the expectation is for communities to:
 - Provide exceptional design, character, and quality;
 - Provide high quality community amenities;

- Incorporate creative design in the layout of buildings;
- Ensure compatibility with surrounding land uses and neighborhood character;
- Encourage the creation of mixed density neighborhoods, neighborhood nodes, and mixed use centers;
- Further the goals of the Comprehensive Plan including the growth framework and growth and conservation map;
- Provide greater efficiency in the layout and provision of roads, utilities, and other infrastructure.

2. **Specific Provisions:** The following provisions should be addressed through the Planned Unit Development District Master Plan.

- a. Location: A vicinity map should be included with the Planned Residential Development District application.
- b. Project Data
- c. Design guidelines and dimensional standards – Each Planned Unit Development shall provide a comprehensive set of design guidelines that demonstrate the project will be appropriate within the context of the surrounding properties and the larger community.
- d. Landscaping – Tree protection and landscaping shall meet the criteria of Chapter 8, except in cases when variations would meet the general spirit and intent of the UDO.
- e. Signs – Signs shall meet the provisions of Chapter 12, except in cases where variations would meet the general spirit and intent of the UDO.
- f. Public Facilities –Planned Unit Developments require all necessary infrastructure improvements to provide adequate transportation, water, sewer and all other infrastructure improvements required by Chapter 17. All Utility Allocation/Annexation Agreement requirements shall be met and provided for in the Planned Development District Master Plan.
- g. Recreational Open Space – Recreational Open Space shall be provided as required in Chapter 7. Any variation shall provide the same area of Recreational Open Space and shall be consistent with the general spirit and intent of the UDO.
- h. Phasing – A phasing plan shall be required and shall be consistent with the installation of public infrastructure improvements
- i. Comprehensive Plan consistency

2.16 **Conditional Districts (CD)**

- A. **Purpose and Intent:** Conditional Districts provide for orderly and flexible development under the spirit and intent of the general policies of the General District without the constraints of the principal structure dimensional standards. Because Conditional Districts are constructed in a comprehensive manner, they establish their own street, block and lot pattern which may be unique from other surrounding blocks or neighborhoods. It also may provide for greater land use compatibility by allowing

property owners to voluntarily place their property into zoning districts in which a Master Plan is required. A Conditional District allows particular uses to be established only in accordance with specific standards and conditions pertaining to each individual development project. All site-specific standards and conditions must be consistent with the spirit and intent of this Unified Development Ordinance as well as consistent with the goals and objectives of the KnightdaleNext 2035 Comprehensive Plan and adopted area plans. ***This Conditional District may be used in any district but is not intended to relieve hardships that would otherwise be handled using a variance procedure.***

B. Specific District Provisions:

	RR	GR	UR	RMX	NMX	TC	HB	MI	MHD	TND
Min. Area Required (acres)	40	20	2	2	0	0	0	10	3	40

C. District Types:

- 1. Self-Imposed Conditional Districts:** Within a Conditional District, all permitted uses and standards of the corresponding Base District must be met, except to the extent that conditions imposed are more restrictive than those standards. In these cases, conditional districts reduce or narrow the number of permitted uses and/or impose higher level design standards than that which exists within the corresponding Base District, thereby satisfying the applicant’s desire to mitigate any perceived or real impacts on neighboring properties such as installing or constructing additional buffers or other physical features that would serve to increase the protection afforded neighboring properties and/or the appearance of the proposed development.
- 2. Required Conditional Districts:** Some uses as identified in Section 2.3(C) are of a nature or scale that they have significant and/or unique impacts on both the immediate surrounding area and on the entire community and as such are ***required*** to be approved through the Conditional District rezoning process. Uses identified as required Conditional Districts in 2.3(C)(3) “Office/Service” and 2.3(C)(4) “Retail/Restaurants” shall only apply to new construction, substantial redevelopment, or a change of use as defined in Chapter 19.3.

For such uses, petitioners shall promulgate appropriate development standards meeting the spirit and intent of this Ordinance to address potential unique impacts of the intended use. ***If no unique development impact is identified by the petitioner along with an appropriate standard to address the same, the corresponding general zoning district guidelines and standards shall apply.*** Uses with additional standards identified in Chapter 3, shall meet all of these requirements or provide additional conditions to meet the spirit and intent of this Ordinance.

By way of illustration, an applicant may propose a building height unique to our jurisdiction but would also be responsible for establishing appropriate development standards (*such as increased building setbacks, increased emergency vehicle access, etc.*) to protect the public from anticipated impacts associated with the unique height. It shall be within the Town Council’s legislative discretion whether or not to grant approval of the zoning amendment in light of the specific development standards promulgated.

2.17 Overlay Districts

A. Quarry Overlay District (QOD)

1. **Purpose and Intent:** This district is established to acknowledge the unique land use impact of mining and quarrying on neighboring land uses, the need to notify the owners of the presence of neighboring quarry and to reduce potential negative impacts of the quarry on adjacent land uses.
2. **Location:** The QOD shall be located on parcels that otherwise allow residential development and are adjacent to the primary quarry parcel up to a maximum of 1,000 feet from the primary quarry parcel boundary as determined by the Town Council.
3. **Uses Permitted:** The district restricts any form of residential development to a maximum of one (1) dwelling unit per acre. All other uses in the underlying Base, Planned Development or Conditional district are not restricted and permitted according to the Use Matrix (*Section 2.3C*)
4. **Full Disclosure Statement:** For all residential and/or non-residential structures constructed within the QOD, the owner shall disclose in writing to all prospective purchasers that they are located within an area that may be impacted by mining/quarry operations and blasting. Such notification will be accomplished by inclusion of the preceding disclosure in all sales contracts, brochures and promotional documents, including any illustrative site plans on display within any sales related office(s), as well as in homeowners association documents, and displayed on all subdivision and site plans, and within all deeds of conveyance.

B. Special Highway Overlay District (SHOD)

1. **Purpose and Intent:** The Town hereby establishes a SHOD along Interstate 540, U.S. 64 Bypass, and any other such roadway classified on the Capital Area Metropolitan Planning Organization’s (CAMPO) Comprehensive Transportation Plan as a freeway. The intent of the district is to promote the safe movement of traffic, to maintain and enhance the scenic beauty viewed by travelers on the highway, and to reduce potential negative impacts of the highway on adjacent land uses.

SHODs shall be located on both sides of a highway and shall be 50 feet wide in depth measured from the right-of-way line.

2. **Uses Permitted:** The overlay district does not replace or restrict the range of uses permitted in the underlying Base, Planned Development or Conditional district. The overlay district includes additional development requirements that shall be met by any development within the district.
3. **Lot and Dimensional Specifications:**

	All Structures
Building Setback from Highway Right-of-Way	50 feet
Minimum Buffer Adjacent to Highway (<i>Type “D”</i>)	50 feet

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Chapter 3. ADDITIONAL USE STANDARDS

3.1 Purpose and Intent

Certain uses may be constructed, continued, and/or expanded provided they meet certain mitigating conditions specific to their design and/or operation. Such conditions ensure compatibility among building types so that different uses may be located in proximity to one another without adverse effects to either. Special regulation of these establishments is necessary to insure that these adverse effects will not contribute to a downgrading or blighting of surrounding residential districts or neighborhoods, unless otherwise determined by this Section.

Each use shall be permitted upon compliance with all conditions listed for the use in this chapter. Certain uses are classified as **Special Uses** and require a Special Use (SU) Permit and Town Council approval in accordance with Section 15.5E. Certain uses require as **Conditional District** (CD) rezoning and Town Council approval in accordance with Section 15.6C(5).

3.2 Applicability

This Chapter specifies those requirements that must be met by uses in the Use Matrix (*Section 2.3C*) in districts where they are listed as Permitted with Additional Standards (PS) or Special Uses (SU), or Conditional District (CD).

3.3 Additional Standards by Use

A. Adult Establishments (MI*) **Special Use (2.3C(5)a)*

Because of their very nature, adult establishments are recognized as having serious objectionable operational characteristics, particularly when they are located near a residential zoning district or certain existing land uses. The purpose of these additional standards shall be to permit the location of adult establishments within the industrial district of the town provided the proposed business adheres to the guidelines established herein.

1. **Location Standards:** No portion of a lot for an adult establishment may be located within a 1000-foot radius (*determined by a straight line and not street distance*) of the property line of any religious institution, elementary or secondary school, vocational or technical school, college or university, day care home or center, indoor or outdoor recreation center, cultural or community facility, group care facility, hospital, residential dwelling, family care home, live-work unit, manufactured home, housing service for the elderly, any establishment with an on premise ABC license, or any zoning district in which residential uses are permitted. Furthermore, no portion of the lot on which the adult establishment is located shall be situated within a 2000-foot radius of the property line of another adult establishment.
2. General Standards:
 - a. The owner/operator of the adult establishment must have a current, valid business license. Owner/operator and employees must make disclosure of criminal record and consent to a criminal records check. Persons with a record of sex offenses will be denied a business license or employment.
 - b. There shall be no more than one (1) adult establishment business in the same building, structure, or portion thereof. No other principal or

accessory use may occupy the same building, structure, property, or portion thereof with any adult establishment business.

- c. Hours of operation shall be permitted only from 12:00 noon until 2:00 am Monday through Saturday.
- d. If dancers are employed as a feature of the adult establishment, the performing areas for such dancers shall be separated from patrons.
- e. If viewing booths are provided, such booths are to be designed so that the viewing occupant is completely visible from a location on the premises that is open and available to the public.
- f. No printed material, video, photograph, written text, live show, or other visual presentation format shall be visible to the public from outside the walls of the establishment, nor shall any live or recorded voices, music, or sounds be heard from outside the walls of the establishment.

B. Agribusiness (RR, GR, MI) (2.3C(6)a)

Agribusiness uses not meeting exemption requirements for certain farmland as outlined in Section 1.5B must conform to the following additional standards:

- 1. Accessory buildings permitted under Section 4.6 and areas used for sales, storage, the keeping of materials or the care of animals shall not be located within a 200-foot radius of the footprint of any pre-existing adjacent residential dwelling (*other than the owner's*).
- 2. Accessory buildings permitted under Section 4.6 and areas used for storage or keeping of materials and/or animals shall have adequate means of ventilation and shall not create objectionable fumes, odor or dust to the surrounding area.

C. Airport (RR*, MI*) *Special Use (2.3C(8)a)

- 1. Hangers or open storage areas shall be screened from off-site view by a Type-C buffer yard (Section 8.6B(3)).
- 2. No outdoor public address system shall be permitted which can be heard beyond the boundaries of the property.
- 3. Hours of operation shall be permitted only from 6:00 am until 11:00 pm.

D. Amusements, Indoor – 5,000 sf or Less (RR*, GR*, UR*, RMX*) *Special Use (2.3C(5)b)

No additional standards other than approval through a Special Use Permit process (Section 15.5E).

E. Amusements, Indoor – 5,001 sf – 20,000 sf (RMX*, NMX*, TC*) *Special Use (2.3C(5)c)

No additional standards other than approval through a Special Use Permit process (Section 15.5E).

F. Amusements, Outdoor (RR*, RMX, NMX, TC, HB, MI, TND, PUD) *Special Use (2.3C(5)e)

1. No outdoor public address system shall be permitted which can be heard beyond the boundaries of the property.
2. Hours of operation shall be permitted only from 9:00 am until 11:00 pm.

G. Animal Services (RR*, NMX, TC, HB) *Special Use (2.3C(3)a)

1. Except where a requirement of Section 4.7 is more restrictive, an opaque wall or fence, six (6) feet in height and no closer than 10 feet to a property line shall otherwise be required for the outdoor exercise area.
2. Hours of operation for the outdoor exercise area shall be permitted only from 7:00 am until 9:00 pm.
3. No more than 30% of the gross floor area of the principal structure is permitted for use of boarding animals.

H. Auto Parts Sales (TC, NMX*, HB*) *Conditional District (2.3C(4)a)

1. All structures containing uses in this category shall meet the building type: Mixed Use as defined in Chapter 5.10.

I. Automated Teller Machines (ATMs) (RMX, TND, PUD) (2.3C(3)b)

1. In addition to meeting the requirements of Chapter 12, signs shall be limited to a total of eight (8) square feet allocated to a maximum of two (2) permitted signs.
2. Drive-thru ATMs are not permitted.
3. Whether part of a principal building or standing alone as an accessory structure, ATMs shall be enclosed with materials and architectural design elements similar to that of the principal building. Exposed metal and/or plastic casing is not permitted.

J. Banks, Credit Union, Financial Services (TC, NMX*, HB*, TND, PUD) *Conditional District (2.3C(3)c)

1. In the NMX and TC zoning districts only indoor transactions shall be permitted with no drive-thru windows or night drop boxes permitted.
2. All structures containing uses in this category shall meet the building type: Mixed Use as defined in Chapter 5.10.

K. Bar / Tavern / Night Club (TND, PUD) (2.3C(4)b)

1. No customer-accessible entrance shall be located within a 500-foot radius of the property line of any religious institution, primary or secondary school, or rooming or boarding house.

- L. Bed and Breakfast Inns (RR, GR, UR, RMX, NMX, TND, PUD) (2.3C(2)a)**
1. To preserve the residential character of the surrounding area, all bed and breakfast inns must be designed as a House building type as identified in Section 5.10.
 2. In addition to meeting the requirements of Chapter 12, signs shall be limited to one (1) wall sign with a maximum sign area of four (4) square feet and one (1) non-illuminated monument sign with a maximum sign area of two (2) square feet.
- M. Business Support Services (NMX) (2.3C(3)d)**
1. Only indoor transactions shall be permitted with no drive-thru windows or night drop boxes permitted.
- N. Campground (OSP*, RR*, GR*) *Special Use (2.3C(7)a)**
- No additional standards other than approval through a Special Use Permit process (Section 15.5E).*
- O. Cemeteries (OSP, NMX, TC, HB) (2.3C(7)b)**
1. Private family cemeteries or cemeteries in the yards of religious institutions are considered accessory uses and exempt from these additional standards.
 2. Cremation facilities (principal or accessory use) are not permitted except where permitted by right (*Section 2.3C(3)b*).
 3. In addition to meeting the requirements of Section 4.7, decorative walls shall be limited to four (4) feet in height and shall be brick or stone.
 4. In addition to meeting the requirements of Section 4.7, fences shall be limited to six (6) feet in height and shall be wood, wrought iron or cast aluminum.
 5. All decorative walls and grave plots shall be set back from all street right-of-ways and adjacent properties a minimum of 10 ft.
 6. Any internal road system shall be circuitous and at a minimum meet the design standards for alleys as specified in Section 17.3A(1).
 7. A Type-A buffer (*Section 8.6B(1)*) shall be provided along any side or rear property line adjoining a residential district.
- P. Child/Adult Day Care Center (6 or more People) (RR, UR, RMX, NMX, TND, PUD) (2.3C(3)f)**
1. In addition to meeting the requirements of Section 4.8, fencing enclosing any required recreation space shall be a minimum of four (4) feet in height and constructed with gates in such a manner that maximum safety to the person is ensured.
 2. Day care centers shall be located on lots which provide ample outdoor play area. A fenced recreation area of a minimum of 2,250 square feet shall be provided in the rear or side yard. Required buffer yards may not be counted towards this requirement.

3. Hours of operation shall be permitted only from 6:00 am until 9:00 pm.

Q. Child/Adult Day Care Home (Fewer than 6 People) (RR, GR, UR, RMX, NMX, TC, TND, PUD) (2.3C(3)e)

1. Rear yards shall be fenced or walled. In addition to meeting the requirements of Section 4.8, the minimum height for such walls or fences shall be six (6) feet.
2. All equipment shall be stored in the rear yard. Front yards shall not be used as playground areas.
3. Hours of operation shall be permitted only from 6:00 am until 9:00 pm.

R. Cremation Facilities (NMX*) *Special Use (2.3C(3)h)

No additional standards other than approval through a Special Use Permit process (Section 15.5E).

S. Cultural or Community Facility (OSP*, RR*) *Special Use (2.3C(5)f)

No additional standards other than approval through a Special Use Permit process (Section 15.5E).

T. Drive-Thru Retail / Restaurants & Drive-Thru Services (NMX*, HB*, MI) * Conditional District (2.3C(4)c) & (2.3C(3)i)

1. No drive-thru facility, defined as the footprint of associated vehicle accommodation lanes and canopies, shall be located within a 200-foot radius of the property line of any residential use (*Section 2.3C(1)*).
2. Drive-thru service windows, doors and similar building openings may be located and accessed only in the side or rear yards.
3. Drive-thru service windows, doors and similar building openings located and accessed in the side yard shall be limited to one (1) lane in the NMX district, and shall be screened from off-site view from a public right-of-way by a Type-A buffer (*Section 8.6B(1)*). In the HB and MI districts, drive-thru service windows, doors and similar building openings located and accessed in the side yard may be multi-lane, but shall be screened from off-site view from a public right-of-way by a Type-B buffer (*Section 8.6B(2)*).
4. In addition to meeting the requirements of Chapter 10, vehicle accommodation lanes for drive-thru uses shall be located outside of and physically separated from the right-of-way of any street. These lanes shall not interfere with the efficient internal circulation of the site, adjacent property, or adjacent street right-of-way.
5. In the HB & NMX zoning district Drive-Thru Retail/Restaurants & Drive-Thru Services shall be located in structures that meet the building type: Mixed Use as defined in Chapter 5.10.

- U. Dwelling- Multifamily – 4 unit/bldg. or less & Dwelling – Multifamily more than 4 units/bldg. (UR*, RMX*, TC*, MHD*, TND*, & PUD*)**
1. Must be located in a growth activity center or priority investment area around activity centers as designated in the *KnightdaleNext 2035 Comprehensive Plan*.
 2. Must contain a mixture of uses, including but not limited to office, retail, or services with retail and services on the ground level and offices and residences above.
 3. The roof or roof structures are flat, or have a combination of roof types which give a predominantly flat appearance.

V. Dwelling – Single Family (RR) (2.3C(1)a)

Unless exempted under Section 1.5B, the following additional standards shall apply:

1. Accessory buildings permitted under Section 4.6 and areas used for the storage of agricultural products or the care of animals shall not be located within a 200-foot radius of the footprint of any pre-existing adjacent residential dwelling (*other than the owner's*).
2. Accessory buildings permitted under Section 4.6 and areas used for the storage of agricultural products or the care of animals shall have adequate means of ventilation and shall not create objectionable fumes, odor or dust to the surrounding area.

W. Dwelling-Secondary (RR*, TND* PUD*) * *Special Use* (2.3C(1)e)

In addition to meeting the accessory building requirements of Section 4.6, secondary dwelling units shall be designed to meet housing needs and shall comply with the following additional standards:

1. A secondary dwelling unit may only be an accessory use located on a lot with a single-family dwelling.
2. Not more than one (1) secondary dwelling unit may be permitted per lot.
3. A secondary dwelling unit may not exceed 800 square feet or the square footage of the primary dwelling unit, whichever is less.
4. An accessory building housing a secondary dwelling unit shall not exceed two (2) stories in height or the height of the principal building, whichever is less (*see Section 4.4*), and shall be located in the rear yard.
5. In addition to the parking requirements for the primary dwelling unit(s), a minimum of one (1) additional parking space shall be provided for the secondary dwelling unit.
6. Parking spaces for the secondary dwelling unit shall be located in the rear yard or side yard or may be located on-street in front of the principal building.

- X. Equipment Rental (TC, NMX*, HB*) *Conditional District (2.3C(3)i)**
1. No equipment for sale or rent may be displayed in any front yard, nor shall such displays be permitted to encroach on any required landscaping areas or buffer yards.
 2. All vehicle display areas shall conform to the dimensional, design and landscaping standards set forth for parking areas in Chapters 8 and 10.
 3. All equipment shall be stored within an enclosed building, opaque fence or wall and restricted to the rear yard.
 4. All structures containing uses in this category shall meet the building type: Mixed-Use as defined in Chapter 5.10.
- Y. Family Care Home (RR, GR, UR, RMX, NMX, TC, MHD, TND, PUD) (2.3C(1)f)**
1. No portion of the lot for a family care home shall be located within a one-half (1/2) mile radius of the property line of another family care home.
 2. Within 90 days of receipt of zoning compliance permit, applicant must provide proof of State licensure to the Administrator or else the zoning compliance permit will be revoked. With good cause, the Administrator may extend this term for an agreed upon amount of time.
- Z. Gas Station with Convenience Store (NMX*, TC, HB*) *Conditional District (2.3C(4)d)**
1. Pumps, canopies, and associated service areas are prohibited in any front yard.
 2. All canopies shall be set back a minimum of 10 feet from any adjoining public right-of-way or HB or MI zoned property and 20 feet from any adjoining OSP, RR, GR, UR, RMX, NMX or TC zoned property.
 3. All vehicle storage areas shall be considered as parking lots and must comply with the provisions of Chapter 10. These areas shall also be enclosed by an opaque fence or wall that meets the requirements of Section 4.8 and restricted to the rear yard. No overnight vehicle storage shall be permitted in the NMX or TC Districts.
 4. The outdoor service area of a car wash shall be restricted to the rear yard and screened from off-site view from a public right-of-way by a Type-A buffer yard (*Section 8.6B(1)*).
 5. No outdoor public address system shall be permitted which can be heard beyond the boundaries of the property
 6. All structures containing uses in this category shall meet the building type Mixed-Use as defined in Chapter 5.10.

AA. Group Care Facility (More than 6 residents) (RR*, NMX*, TC*) * Special Use (2.3C(3)m)

Group care facilities are classified as institutional buildings and should reflect the character and appearance of surrounding building types. In addition to meeting the design requirements of Section 5.6, the following additional standards apply:

1. The facility shall be screened from any residential use (*Section 2.3C(1)*) by a Type-B buffer yard (*Section 8.6B(2)*).
2. The total indoor common area heated square footage must equal or exceed 25 square feet per permitted resident excluding bathrooms, hallways and other similar areas unsuitable as leisure space.
3. Outdoor recreation space must be at least 500 square feet per person, 100 square feet of which shall be in a well-drained lawn area (*as opposed to woodlands*), and shall be located in rear or side yards and enclosed with a fence or wall that meets the standards of Section 4.7.
4. Total lot area shall exceed 750 square feet per resident permitted.
5. No portion of the lot for a group care facility shall be located within a one-half (½) mile radius of the property line of another group care facility.

BB. Housing Service for the Elderly (GR, UR) (2.3C(1)h)

Facilities that provide housing services for the elderly are classified as institutional buildings and should reflect the character and appearance of surrounding building types. In addition to meeting the design requirements of Section 5.6, the following additional standards apply:

1. All service areas shall be located in the rear yard and shall be screened from any residence or off-site view from a public street by a Type-B buffer yard (*Section 8.6B(2)*).
2. Any development shall front on a collector or arterial street, and the point of primary ingress and egress shall be provided directly onto the fronting collector or arterial.

CC. Home Occupation (RR, GR, UR, RMX, NMX, TC, MHD, TND, PUD) (2.3C(1)g)

A home occupation is permitted as accessory to any dwelling unit in accordance with the following requirements:

1. The home occupation must be clearly incidental to the residential use of the dwelling, may be conducted in a permitted accessory building and must not change the essential residential character of the dwelling and/or lot.
2. The home occupation shall employ no more than one (1) person who is not a resident of the dwelling.
3. Hours of operation shall be permitted only from 7:00 am until 9:00 pm.
4. There shall be no visible outside display of stock in trade which is sold on the premises.

5. There shall be no outdoor storage or visible evidence of equipment or materials used in the home occupation, excepting equipment or materials of a type and quantity that could reasonably be associated with the principal residential use.
6. Operation of the home occupation shall not be visible from any residence on an adjacent lot, nor off-site view from a public street.
7. Only non-commercial vehicles will be permitted in connection with the conduct of the home occupation.
8. The home occupation shall not utilize mechanical, electrical, or other equipment which produces noise, electrical or magnetic interference, vibration, heat, glare, or other nuisances outside the dwelling or accessory structure.
9. Permitted home occupations may include, but are not limited to: professional services, workshops, sewing, hair styling, music instruction or similar uses which do not draw clients to the dwelling on a regular basis.
10. Prohibited home occupations include, but are not limited to: vehicle repair, service or sales, animal services, theaters, massage, storage, manufacturing or fabrication.
11. In addition to meeting the requirements of Chapter 12, signs shall be limited to one (1) wall sign with a maximum sign area of two (2) square feet.

DD. Live-Work Units (UR, RMX, NMX, TC, TND, PUD) (2.3C(1)i)

Live-Work units are unique in that they provide both residential and non-residential space which must each be constructed to different building code standards including, but not limited to, matters of ingress and egress, accessibility by the disabled and fire-rated separation. In addition, the following standards shall be met:

1. The maximum total area of a Live-Work unit is 3,000 square feet
2. The maximum height of a Live-Work unit is three (3) stories.
3. The work area must occupy less than 50% of total unit.
4. The same tenant must occupy the work area and living area.
5. There shall be a maximum of five (5) non-resident worker/employees allowed in the Live-Work unit at any single time.

EE. Manufactured Housing (RR, GR, MHD) (2.3C(1)j)

1. Unless located in a mobile home park (*Section 2.13A(3)b*), manufactured housing shall meet the architectural standards of Section 5.7.
2. Unless located in a mobile home park (*Section 2.13A(3)b*), the minimum width (*the width being the narrower of the two [2] overall dimensions*) of the main body of the manufactured home shall be at least 22 feet for a distance extending along the length (the length being the longer of the two [2] overall dimensions) of at least 40 feet. In general terms, this only permits double-wide or multi-section manufactured housing.
3. Unless located in a mobile home park (*Section 2.13A(3)b*), a continuous, permanent brick, stone or stucco foundation, constructed in accordance with

standards of the North Carolina Residential Building Code, shall be installed under the perimeter of the manufactured home. The foundation shall be unpierced except for required ventilation and access.

4. Unless located in a mobile home park (*Section 2.13A(3)b*), windows shall be set to the inside wall face.
5. Unless located in a mobile home park (*Section 2.13A(3)b*), a covered front porch or covered front stoop shall be provided at the entrance and should project from the primary façade a minimum of four (4) feet and be no less than four (4) feet in width.
6. The manufactured home shall front on a street such that the principal entrance is aligned to the street.
7. All towing apparatus, wheels, axles, and transporting lights shall be removed.
8. Manufactured homes may be used for residential purposes and home occupation uses only.
9. A manufactured home must bear a seal certifying that it was built to the standards adopted on July 1, 1976 that meets or exceeds the construction standards promulgated by the US Department of Housing and Urban Development that were in effect at the time of construction.
10. In the RR and GR districts, the minimum lot width for manufactured homes shall be 100 feet.
11. **In the RR and GR districts, the minimum lot size for manufactured homes shall be one (1) acre.**

FF. Manufacturing, Light (HB) (2.3C(6)d)

1. All materials or equipment shall be stored within an enclosed building, or stored within an outdoor storage area enclosed by an opaque fence or wall that meets the requirements of Section 4.7 and is restricted to the rear yard.
2. Any operation which results in the creation of noxious vibrations, odors, dust, glare or sound is prohibited.

GG. Manufacturing, Neighborhood (NMX, TC) (2.3C(6)e)

1. All materials or equipment shall be stored within an enclosed building.
2. Any operation which results in the creation of noxious vibrations, odors, dust, glare or sound is prohibited.

HH. Meeting Facilities (OSP*, RR*) *Special Use (2.3C(5)g)

No additional standards other than approval through a Special Use Permit process (Section 15.5E).

II. Mini-Warehouses (MI) *Special Use (2.3C(6)i)

1. All areas shall be screened from any adjacent residence or off-site view from a public street by a Type-A buffer yard (*Section 8.6B(1)*).

2. Metal siding is prohibited. All exterior walls shall be brick, stone or decorative masonry.
3. No outdoor storage of goods or materials shall be permitted.

JJ. Neighborhood Retail/Restaurant – 2,000 sf or Less (RMX*) *Special Use (2.3C(4)e)

No additional standards other than approval through a Special Use Permit process (Section 15.5E).

KK. Outdoor Animal Boarding /Equestrian Facilities (RR*, MI*) *Special Use (2.3C(3)o)

1. All open exercise, boarding, training and similar areas shall be enclosed by a perimeter fence or wall no less than four (4) feet in height and screened from any pre-existing adjacent residential dwelling (*other than the owner's*) by a Type-A buffer yard (*Section 8.6B(1)*).
2. No outdoor kennel and/or run shall be located within a 500-foot radius of the footprint of any adjacent residential dwelling (*other than the owner's*).
3. All accessory structures other than outdoor kennels and/or runs related to the care of animals shall not be located within a 200-foot radius of the footprint of any pre-existing adjacent residential dwelling (*other than the owner's*).

LL. Personal Services (RMX, NMX, TC, HB, MI, TND, PUD) (2.3C(3)p)

1. Hours of operation shall be permitted only from 6:00 am until 11:00 pm.

MM. Quarrying and Stone Cutting (MI*) *Special Use (2.3C(6)j)

No additional standards other than approval through a Special Use Permit process (Section 15.5E).

NN. Recreation Facilities, Indoor (RR, GR, UR) (2.3C(5)h)

1. Indoor recreation facilities shall not be located within a 250-foot radius of the property line of any school or church.
2. Accessory restaurant or bar/tavern/nightclub uses are not permitted.
3. The front façade shall not be blocked and permit a clear view into the facility.

OO. Research and Development (HB) (2.3C(6)k)

1. All materials or equipment shall be stored within an enclosed building, or stored within an outdoor storage area enclosed by an opaque fence or wall that meets the requirements of Section 4.7 and is restricted to the rear yard.
2. Any operation which results in the creation of noxious vibrations, odors, dust, glare or sound is prohibited.

PP. Rooming or Boarding House (RMX, NMX, TC, TND, PUD) (2.3C(2)c)

1. All parking areas shall be screened from any residence or off-site view from a public street by a Type-B buffer yard (*Section 8.6B(2)*).
2. On-site staff supervision shall be provided at all times.
3. All guest rooms shall only be accessed from an interior hallway after passing through a supervised lobby area.
4. In addition to meeting the requirements of Chapter 12, signs shall be limited to one (1) wall sign with a maximum sign area of four (4) square feet.

QQ. Schools – Elementary & Secondary (RR*, GR*) *Special Use (2.3C(7)g)

No additional standards other than approval through a Special Use Permit process (Section 15.13).

RR. Storage – Outdoor Storage Yard as a Principal Use (MI) (2.3C(6)l)

1. Outdoor storage areas shall be enclosed by an opaque fence or wall, restricted to the rear yard, and screened from off-site view from a public right-of-way with a Type-B buffer yard (*Section 8.6B(2)*).

SS. Storage - Warehouse, Indoor Storage (RR, HB, MI) (2.3C(6)m)

1. An indoor storage facility is limited to 5,000 square feet per floor in the TC and RR districts.
2. Outdoor storage is not permitted.
3. In the RR District, all areas shall be screened from any pre-existing adjacent residence (other than the owner's) by a Type-A buffer yard (*Section 8.6B(1)*).

TT. Sweepstakes Center (MI*) *Special Use (2.3C(4)l)

1. Hours of operation shall be permitted only from 6:00 am until 11:00 pm.
2. A maximum of 20 machines/terminals/computers for sweepstakes operations are permitted per licensed location.
3. No portion of the lot for a sweepstakes center shall be located within a 500-foot radius of the property line of another sweepstakes center, existing residential dwelling unit, group care facility, day care center, religious institution or school.

UU. Tattoo Shop (HB, MI) (2.3C(3)t)

1. Hours of operation shall be permitted only from 6:00 am until 11:00 pm.
2. A tattoo shop's exterior customer entrance(s) shall not be situated within a 1,000-foot radius of another tattoo shop's exterior customer entrance(s).

VV. Transit, Road and Ground Passenger Services (TC, HB, MI) (2.3C(8)b)

1. Outdoor storage areas shall be enclosed by an opaque fence or wall, restricted to the rear yard, and screened from off-site view from a public right-of-way with a

Type-B buffer yard (*Section 8.6B(2)*). No outdoor storage is allowed in the TC District.

2. Temporary fleet vehicle storage areas shall conform to the dimensional, design, and landscaping standards set forth for parking areas in Chapters 8 and 10.
3. Maintenance of fleet vehicles, related materials and equipment is restricted to the rear yard and shall be within an enclosed building or outdoor storage area enclosed by an opaque fence or wall.
4. All vehicles shall be operable and suitable for driving. Any vehicle not meeting this criterion shall be removed within seven (7) calendar days. Any visibly damaged vehicle or vehicle with missing parts must be removed within three (3) calendar days.
5. Any operation which results in the creation of noxious vibrations, odors, dust, glare or sound is prohibited.

WW. Utilities – Class 3 (RR*, HB*) *Special Use (2.3C(8)f)

No additional standards other than approval through a Special Use Permit process (Section 15.5E).

XX. Vehicle / Heavy Equipment Sales (HB*, MI) *Conditional District (2.3C(4)m)

1. No equipment for sale or rent may be displayed in any front yard, nor shall such displays be permitted to encroach on any required landscaping areas or buffer yards.
2. Vehicle display areas shall conform to the dimensional, design and landscaping standards set forth for parking areas in Chapters 8 and 10.
3. All vehicles shall be operable, suitable for driving and ready for sale. Any vehicle not meeting this criterion shall be removed within seven (7) calendar days. Any visibly damaged vehicle or vehicle with missing parts must be removed within three (3) calendar days.
4. No outdoor public address system shall be permitted which can be heard beyond the boundaries of the property.
5. In the HB zoning district all structures containing uses in this category shall meet the building type: Mixed-Use as defined in Chapter 5.10.

YY. Vehicle Services –Maintenance/Repair/Body Work (HB*, MI) *Conditional District (2.3C(3)u)

1. All vehicles, materials or equipment shall be stored within an enclosed building, or within an outdoor storage area enclosed by an opaque fence or wall that meets the requirements of Section 4.7 and restricted to the rear yard. Outdoor storage is not permitted within the TC District.
2. Any operation which results in the creation of noxious vibrations, odors, dust, glare or sound is prohibited.
3. No vehicle may be kept or used for parts for other vehicles.
4. No vehicle may be stored in an unrepaired state for more than 30 calendar days.

5. In the HB zoning district all structures containing uses in this category shall meet the building type: Mixed-Use as defined in Chapter 5.10.

ZZ. Wholesaling and Distribution (HB*, MI) *Special Use (2.3C(6)n)

1. All vehicle storage areas shall be enclosed by an opaque fence or wall, restricted to the rear yard, and screened from off-site view of a public right-of-way by a Type-A buffer yard (*Section 8.6B(1)*).
2. No outdoor public address system shall be permitted which can be heard beyond the boundaries of the property.

AAA. Wireless Telecommunication Facility – Small Wireless Facilities inside Right-of-Way (RR, GR, RMX, NMX, TC, HB, MI) (2.3C(8)e)

In recognition of NCGS Chapter 160A, Part 3E and particularly NCGS §160A-400.54 “Collocation of small wireless facilities”, the following regulations are created in order to minimize the impacts of new small wireless facilities, encourage the co-location on existing structures to minimize new visual, aesthetic, and public safety impacts, and to reduce the need for additional antenna supporting structures. Further, the Town recognizes the need for small wireless facilities and encourages the practical location of co-located facilities, while minimizing the need for additional antenna supporting structures.

1. The placement of new poles is prohibited by the Town’s undergrounding requirements in Chapter 17.2.
2. Co-location on existing utility poles or light poles is permitted with the issuance of a Zoning Compliance Permit.
3. All antenna and accessory equipment must be shrouded or otherwise concealed.
4. Any cost for pole modification shall be the responsibility of the applicant.
5. Any pole modification or replacement shall not exceed 50’ above ground level in non-residential areas and 40’ above ground level in residential areas.
6. Co-location on existing poles is preferred over modification or replacement and the applicant is required to prove that co-location is not reasonably feasible prior to the issuance of a permit for replacement or modification.
7. The applicant is required to provide plans that include any siting, electrical, elevations and other pertinent information including proving that access by other utilities is not impeded by the installation or co-location of small wireless facilities.

BBB. Wireless Telecommunication Facility – Small Wireless Facilities outside the Right of Way (NMX, TC, HB, MI) (2.3(C)8f)

In recognition of NCGS Chapter 160A, Part 3E and particularly NCGS §160A-400.54 “Collocation of small wireless facilities”, the following regulations are created in order to minimize the impacts of small wireless facilities, encourage the co-location on existing structures to minimize new visual, aesthetic, and public safety impacts, and to reduce the need for additional antenna supporting structures. Further, the Town recognizes the need for small wireless facilities and encourages the practical location of

co-located facilities, while minimizing the need for additional antenna supporting structures.

1. The placement of new poles is prohibited by the Town's undergrounding requirements in UDO Chapter 17.2.
2. Any new small wireless facility shall be co-located on an existing utility pole or wireless support structures.
3. A new small wireless facility shall not extend more than 10 feet above the utility pole or wireless support structure on which it is collocated
4. All antenna and accessory equipment must be shrouded or otherwise concealed.

CCC. Wireless Telecommunication Facility – Stealth/Camouflage (GR, UR, RMX, NMX, TC, HB, MI, MHD, TND, PUD) (2.3C(8)c)

1. All antennas and related mechanical equipment placed on structures other than towers (*a stealth/camouflage facility*) shall be concealed. Antennas located on top of buildings or other structures shall not exceed 30% of the building height. In no event shall an antenna extend beyond the structure in any direction greater than 25 feet.
2. Stealth facilities, including antenna and supporting electrical and mechanical equipment, shall be designed to blend in with the existing structure or buildings with similar colors or other techniques as appropriate so as to make the antenna and related equipment as visually unobtrusive as possible.
3. Applications for co-locations on existing towers shall be classified as “stealth” so long as they do not constitute a substantial modification as defined by N.C.G.S. 160A-400.51 (7a).

DDD. Wireless Telecommunication Facility – Towers (RR*, MI) *Special Use (2.3C(8)d)

In recognition of the Telecommunications Act of 1996, it is the intent of the Town of Knightdale to allow Wireless Telecommunication providers the opportunity to locate towers and related facilities within its jurisdiction in order to provide an adequate level of service to its customers while protecting the health, safety, and welfare of the citizens of Knightdale. Wireless Telecommunication Facilities may be considered undesirable with other types of uses, most notably residential, therefore special regulations are necessary to ensure that any adverse effects to existing and future development are mitigated.

1. Radio, television or similar reception for adjoining properties shall not be disturbed or diminished.
2. No telecommunication tower shall exceed 200 feet in height.
3. Towers shall be sited to contain all on-site ice-fall or debris from tower failure. The minimum distance from the tower's base to the property line shall be equal to the tower's fall radius.
4. Towers must be set back from any residential district a minimum of 200 feet.
5. Towers shall be monopole construction.

6. Tower lighting shall not exceed the minimum standards established by the FAA in Advisory Circular No. 70/7460-1J dated November 29, 1995, and as may be amended from time to time. All towers that require lighting by the FAA shall utilize a dual system consisting of red lights for nighttime hours and high or medium intensity flashing white lights for daytime and twilight hours.
7. A property identification sign (*Section 12.4F*) shall be displayed in a visible location near the tower. The purpose of the sign is for use by law enforcement departments to contact the company operating the equipment in the event of an emergency. The sign shall contain a number to be assigned to the company and a telephone number for 24-hour emergency contact. No other signs shall be permitted on the facility.
8. The base of the tower along with any individual guy wires shall be enclosed by a commercial grade fence of a minimum of eight (8) feet in height.
9. A vegetative screen consisting of two (2) staggered rows of evergreen trees shall surround the perimeter of the property containing the base of the tower and related equipment. Evergreen vegetation shall be of sufficient density to serve the purpose of an opaque screen to keep the tower area itself from being visible from any public right-of-way or adjacent property.
10. If the tower equals or exceeds 100 feet in height, but is less than 150 feet in height, the tower shall be engineered and constructed to accommodate a minimum of two (2) telecommunication users. If the tower equals or exceeds 150 feet in height, but is less than 180 feet in height, the tower shall be engineered and constructed to accommodate a minimum of three (3) telecommunication users. If the tower equals or exceeds 180 feet in height, but is less than 200 feet in height, the tower shall be engineered and constructed to accommodate a minimum of four (4) telecommunication users. For each potential user there shall be a minimum of 600 square feet reserved on the approved plans for associated buildings and equipment, unless the applicant provides evidence that less space is necessary.
11. If the new tower is approved, the owner shall provide written authorization to the Administrator that the tower and its accessories may be shared by other telecommunication antenna(s). The owner shall record in the register of deeds' office a letter of intent prior to the issuance of the building permit. This letter shall bind all subsequent owners of the approved tower.
12. If the town determines that the proposed tower will be situated in a location that will enhance the town's telecommunication system, the permit applicant shall agree to allow the town to, at fair market value, co-locate its telecommunication equipment prior to the issuance of the building permit.
13. The output power from the tower shall not exceed federally-approved levels for exposure to electronic magnetic force (EMF).
14. Towers shall either maintain a galvanized steel finish or, subject to any applicable standards of the FAA, be painted a neutral color so as to reduce visual obtrusiveness. The design of the tower and related structures shall to the extent possible use materials, colors, textures, screening and landscaping that will blend the tower facilities to the natural setting and built environment.
15. The antenna and supporting electrical and mechanical equipment must be of a neutral color that is identical to, or closely compatible with, the color of the

supporting structure so as to make the antenna and related equipment as visually unobtrusive as possible.

16. No antenna shall extend above the highest point of the tower.
17. Evidence must be presented to the Administrator that the proposal complies with all applicable FAA and FCC regulations.
18. The Applicant and the owner of record of any proposed Wireless Telecommunications Facilities property site shall, at its cost and expense, be jointly required to execute and file with the Town a bond, or other form of security acceptable to the Town as to type of security and the form and manner of execution, in an amount of at least \$75,000.00 for a tower and with such sureties as are deemed sufficient by the Town to assure the faithful performance of the terms and requirements of the UDO and conditions of any Special Use Permit issued pursuant to this UDO. The full amount of the bond or security shall remain in full force and effect throughout the term of the Special Use Permit and/or until any necessary site restoration is completed to restore the site to a condition comparable to that, which existed prior to the issuance of the original Special Use Permit.
19. Each calendar year, the antenna owner shall provide the town with a copy of any FCC and FAA license issued.
20. Any wireless telecommunications tower that ceases to be used for a period of at least 365 consecutive days shall be removed at the expense of the property owner or Special Use Permit holder within 30 days of notification by the Administrator. Failure to remove the tower within the specified 30 day period shall constitute a violation of this ordinance, subject to the provisions of Chapter 18.

Chapter 4. GENERAL LOT & STRUCTURE PROVISIONS

4.1 Applicability

The following lot and structure provisions shall apply, regardless of the underlying zoning district provisions, unless otherwise noted.

4.2 Lot and Yard Requirements

- A. All Lots to Front on Public Street or Public Space:** All lots shall front upon a public street. With the provision of rear lane or alley access, lots may front upon a close or a square, but access shall be of sufficient design to allow for the provision of emergency services.
- B. May Not Reduce/Create Lot(s) Below Minimum Requirements:** No yard or lot existing upon adoption of this Ordinance shall be reduced in size or area below the minimum requirements of the district. Yards or lots created after the effective date of this Ordinance shall meet the minimum requirements established by this Ordinance. This prohibition shall not be construed to prevent the required dedication, purchase or condemnation of narrow strips of land or parcels for public utilities, substations, street right-of-way, or similar purposes.
- C. Spike Strips Prohibited:** The creation of “spike” strip lots with the intentional or unintentional purpose of preventing access to adjacent lots from a street right-of-way is prohibited.
- D. Dimensional Standards for Infill Lots:** Front and side yard setbacks for infill lots shall be consistent with or equal to the average setbacks for all principal structures within 300 feet or one (1) block length (*whichever is greater*). If no principal structures exist within 300 feet or one (1) block length (*whichever is greater*) of the infill lot, then the minimum dimensional standards shall be per the district requirements in Chapter 2. In reference to the Old Town Knightdale Plan, the term “infill lot” shall include, but not be limited to, any lot zoned GR3, GR8, UR12, RMX or NMX, and having frontage along any of the following streets: Second, Third or Fourth avenues between Smithfield Road and Pine Street; First Avenue between Smithfield Road and Sixth Street; Maple, Main, Oakwood and Pine streets; the segments of Park Avenue, Harper Street or Ridge Street east of Smithfield Road; Sallinger, Hester, Jutson, House and Keith streets; and Robertson Street between First Avenue and Keith Street. (*For Major Subdivisions receiving Master Plan approval prior to November 16, 2005, see applicable base district setback notes in Sections 2.5 thru 2.10*).
- E. One Principal Building Per Lot:** Only one (1) principal building and its customary accessory building(s) shall be located on any lot, except in appropriate districts that permit a lot to contain multiple residential and/or non-residential uses in one or more principal structures or within the same structure.
- F. Rights-of-Way Not Considered in Yard Requirements:** Areas within street and railroad rights-of-way or easements shall not be considered part of a lot, count towards recreational open space requirements, or be used for the purpose of meeting front, side or rear yard requirements.

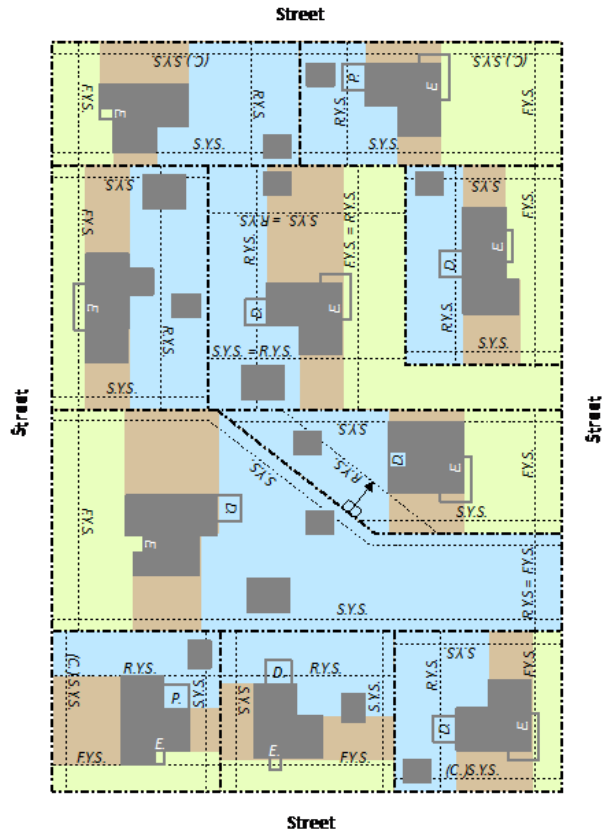
G. Irregular Lot Setbacks: The location of required front, side and rear yards setbacks on irregularly shaped lots shall be determined by the Administrator. The determination will be based on the spirit and intent of this Ordinance to achieve an appropriate spacing and location of buildings and structures on individual lots. Lots which don't have an obvious visual relationship with the fronting street, such as flag lots, shall be evaluated on the basis of having one setback from neighboring properties, which shall be equal to the minimum rear setback for the district.

H. Corner lots: Corner lots shall have a single front yard designated along the street associated with the primary façade of the corner lot's principal structure. Remaining corner lot yards that abut other streets shall be considered side, corner side or rear yards as applicable (see Chapter 2).

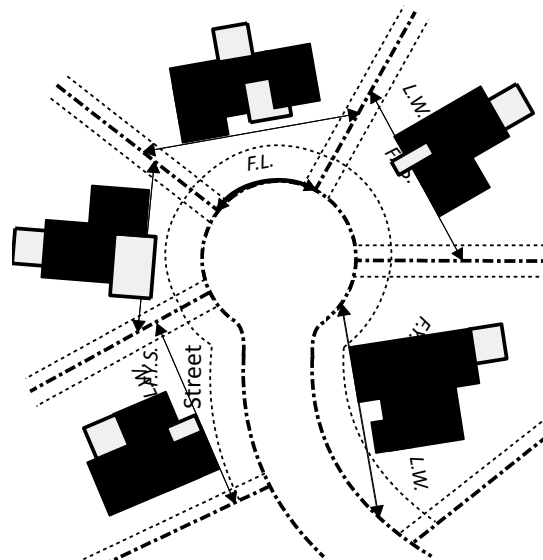
I. Double frontage lots: Excluding corner lots, lots having frontage on two (2) streets shall observe a front yard setback along each street in accordance with the provisions of this ordinance.

J. Right-of-Way Frontage Length: While the minimum lot width must be met at the building line, it is also in the public interest of the Town to ensure that each lot also has a minimal frontage length along the right-of-way:

1. **Minimum Length:** The minimum length of the lot's street right-of-way frontage shall be eighty percent (80%) of the minimum lot width required for the zoning lot with the exception of flag lots which shall be 22 feet or as otherwise provided in this Ordinance.



- Green Shade = Front Yard
- Blue Shade = Back Yard
- Brown Shade = Side Yard
- "F.Y.S." = Front Yard Setback
- "R.Y.S." = Rear Yard Setback
- "S.Y.S." = Side Yard Setback
- "(C.S.Y.S.)" = (Corner) Side Yard Setback
- Gray = Building Footprint
- Gray Outline = Deck, Porch, Patio or Stoop
- P. = Patio D. = Deck E. = Entrance/Front Door
- "F.L." = Frontage Length
- "L.W." = Lot Width



2. **Corner Lots:** Where a zoning lot fronts on two (2) or more streets, minimum right-of-way frontage length requirements shall be considered met if the frontage along any one of such streets meets the minimum right-of-way frontage length requirements of subsection 1.
 3. **Lots Along a Tight Street Radius:** Where a zoning lot fronts on a turning circle of a cul-de-sac or at a point of a street where the radius of the curvature of the right-of-way is less than 90 feet, the minimum right-of-way frontage length requirement shall be 35 feet.
- K. Flag Lot Width at Building Line:** Flag lots shall reach the minimum lot width at a point not to exceed 200 feet from the street right-of-way.
- L. Yard Setback Exceptions:** The following features shall not be subject to the required minimum setback requirements:
- Wall, projecting and under-awning signs, provided such signs comply with the standards established in Chapter 12;
 - Fences and walls not exceeding heights specified in Section 4.8;
 - Flagpoles;
 - Bridges;
 - Utility transmission poles, towers, and cables; and
 - Any satellite dish measuring 18 inches or less in diameter.

4.3 Encroachments

Based on the District provisions in Chapter 2, certain architectural features are permitted to encroach into the front setback. The following standards shall be established for encroachments:

A. Front Yard Setback Encroachments

1. **Arcades:** Arcades or covered walkways should be designed to avoid the swing of car doors parked parallel to the arcade. In addition, the sidewalk within the arcade should be sufficient to accommodate the intended uses (i.e. outdoor seating) while providing suitable clearances per the American with Disabilities Act Accessibilities Guidelines (ADAAG).
2. **Awnings:** Awnings shall be supported by means of a frame attached directly to the structure receiving beneficial use of the awning. In no case shall awnings be supported by a frame attached to a sidewalk or other public right-of-way.
3. **Bay Windows:** Bay Windows shall not exceed a maximum projection of two (2) feet from the primary wall. By their definition, bay windows are suspended projections and do not contain habitable floor space, but may provide seating as an integral element of the interior space.
4. **Balconies, Open Porches, Stoops and Raised Doorways:** Only balconies, open porches, stoops and raised doorways not exceeding an average finished height above grade of 36 inches are permitted as encroachments. To the extent possible, these features are to remain visually permeable so that the front door can be easily seen from the street or sidewalk. While railings required by the

building code are permitted, the screening in of these features constitutes an enclosure which may not encroach into the front yard setback.

5. **Handicapped Ramps:** A ramp installed on a residential structure to provide access for a disabled resident may encroach into the front yard setback, unless a less obtrusive means of access can be provided at another entry point (i.e. the back door).

- B. **Side and Rear Yard Setback Encroachments:** Open decks, porches, patios, and other similar structures not exceeding an average finished height above grade of 36 inches may encroach into the side and rear yard setbacks to within five (5) feet of the property line. When an opaque wall or fence of a minimum six (6) feet in height is provided in accordance with the provisions of Section 4.8, the encroachment may be constructed to the property line. Roofs over such structures are not permitted to encroach into either the side or rear setbacks.

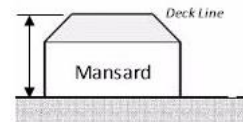
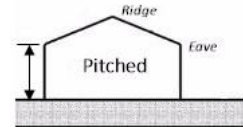
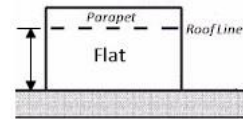
4.4 Building Height

- A. **Computation of Height:** “Building Height” is measured as the vertical distance from a *reference elevation* to:
 - the base of parapet or roof line of a flat roof,
 - the eave of a pitched roof (gable, hip or gambrel), or
 - the deck line of a mansard roof.

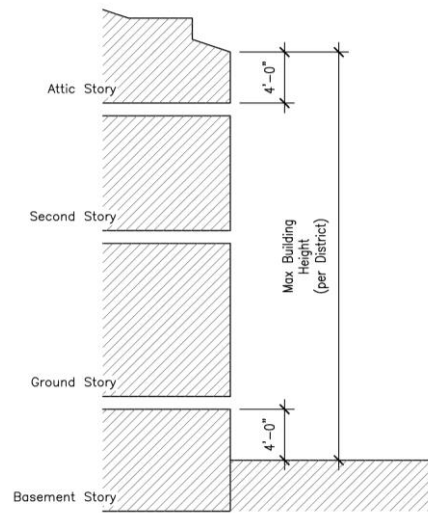
Note: The roof form of the highest level of any terraced or stepped building shall be used in the computation of building height.

The *reference elevation* shall be established by examining the elevation of all sidewalks and ground surface areas within a buffer area extending five (5) feet from all exterior building walls.

1. When the elevation differential within the buffer area is 10 feet or less, the reference elevation shall be the elevation of the highest point within the buffer area.
2. When the elevation differential within the buffer area exceeds 10 feet, the reference elevation shall be set 10 feet higher than the lowest point within the buffer area.



B. Computation of Story(ies): A single story shall consist of the habitable level of a building of no more than 14 feet in height from finished floor to finished floor. When the height from finished floor to finished floor exceeds 14 feet, another story shall be added to the calculation for additional height in 14-foot increments (*14.1 to 28.0 feet equals two [2] stories, 28.1 to 42.0 feet equals three [3] stories, etc.*). Basements with a ceiling height of no more than four (4) feet above the reference elevation or attics whose finished floor is less than four (4) feet below the elevation of the eave shall not constitute a story.



C. Items Not Included in Computation of Height: Provided such building or structure will not interfere with any airport zones or flight patterns; the height limitations of this Section shall not apply to church spires, belfries, cupolas, and domes not intended for human occupancy, as well as monuments, water towers, observation towers, transmission towers, chimneys, smokestacks, conveyors, flagpoles, masts and antennas.

4.5 Containment Areas for Trash and Recyclables

All containment areas for trash and recyclables, including devices such as compactors, dumpsters and commercial roll-out bins, as well as locations for stacking cardboard, pallets and similar items shall be restricted to side or rear yards only and screened from off-site view. All containment areas shall meet the following standards:

- A.** All containment areas shall be enclosed to contain windblown litter.
- B.** The height of the enclosure shall meet or exceed the highest point of any compactor, dumpster or bin.
- C.** The enclosure shall be opaque and finished with materials consistent with those of the principal structure.
- D.** All containment devices shall be placed on a concrete pad with a concrete apron that is large enough to provide adequate support, allow for positive drainage, and conform to the Wake County Health Department regulations governing compactor pads.
- E.** The enclosure shall feature opaque gates made from permitted fence materials (Section 4.7) to allow for access and security.
- F.** All containment devices shall be located as far as possible from sidewalks and other pedestrian facilities and in a location that is accessible to service vehicles.
- G.** Enclosures shall also be screened with landscaping in accordance with the standards of Section 8.7C.

4.6 Ordering Stations for Drive-Thru Facilities

Ordering Stations for drive-thru facilities are incidental uses that are intended to assist in the ordering process. They customarily are made up of menus, speakers, and/or windows. In certain instances the menus may consist of a digital component and shall meet the specific requirements below. All ordering stations shall meet the following standards:

- A. All ordering stations shall be located in the side and rear yards.
- B. A maximum of two menus are permitted not exceeding 32 square feet each.
- C. All speakers and sounds shall not be audible off-premise.
- D. When a digital display is utilized, the menu must be appropriately screened and oriented so as to cause no negative impact, including visible or distracting lights or motions, light trespass or light pollution, to public streets and neighboring properties.

4.7 Accessory Buildings

An accessory building is a roofed structure supported by columns or walls; is built, erected and framed of component structural parts; is designed for the housing, shelter, enclosure and/or support of persons, animals or property of any kind; and is subordinate in height and bulk to the principal building located on the same lot.

- A. **Principal Building Required:** Except as provided for in Subsection E: Cluster Mailbox Units (CBUs), the construction of an accessory building is not permitted unless a principal building is located on the lot. Accessory and principal buildings may be constructed concurrently.
- B. **Customary Uses (Residential):** The following uses are considered customary incidental uses of residential accessory buildings:
 - Home Occupations
 - Secondary Dwelling
 - Leisure Activities
 - Equipment Enclosure
 - Conservatory
 - Storage
 - Animal Shelter*
 - Parking
 - Artist Studio
 - Workshop
 - Pool House

** Subject to any provisions of the Town Code, as may apply.*

C. General Requirements

1. Maximum Allowance

- a. **Districts Permitting Residential Uses:** Accessory buildings on a single lot in a district permitting a residential use (*Section 2.3C(1)*) shall not:
 - i. individually exceed a building footprint of 800 square feet;
 - ii. collectively cover more than 20 percent (20%) of the total combined area of the lot's rear and side yards; nor
 - iii. individually exceed the height of the principal building (*Section 4.4*).
- b. **Districts Not Permitting Residential Uses:** Accessory buildings on a single lot in a district not permitting a residential use (*Section 2.3C(1)*) shall not:

- i. collectively cover more than 30 percent (30%) or the total combined area of the lot's rear and side yards; nor
 - ii. individually exceed the height of the principal building (*Section 4.4*).
- c. **Exceptions:** The following are not subject to the maximum allowance restrictions stated herein:
- i. Property located in the OSP (Open Space Preservation) or RR-1 (Rural Residential) districts along with certain farmland meeting the exemption requirements of Section 1.5B.
 - ii. CBU Shelters (*Subsection E*).
2. **Location:** Unless otherwise specified, accessory buildings are restricted to the side or rear yards and shall meet the district-specific setback requirements for accessory structures as specified in Chapter 2.
3. **Separation:** To ensure proper maintenance of building exteriors, accessory buildings shall be located, if otherwise permitted, a minimum of five (5) feet from any principal building or other accessory building.

D. Specific Requirements for Certain Animal Shelters

1. **Dog House:** All dog houses shall be located in the rear yard.
2. **Chicken Coop:** The keeping of chickens (*hens only*) is permitted as an accessory use in conjunction with single-family dwellings (*Section 2.3C(1)a*) in the GR, UR, RMX, NMX, TC, MHD and TND districts subject to the regulations stated herein.
- a. **Permit Required:** An application for a Livestock, Chicken and Other Domestic Fowl Permit must be filed and approved by the Administrator prior to the keeping of chickens in any area authorized by this subsection. Said permit application shall require the submission of a plot plan showing coop (*hen house and pen*) location, dimensions and distances from property lines.
 - b. **Number and Type of Chickens:** Up to five (5) female domesticated chickens (*no roosters, peafowl, guineafowl or other domestic fowl are permitted*) are allowed per lot.
 - c. **Coop Design:** Each single-family lot permitted and engaged in the keeping of domestic chickens shall:
 - i. provide an enclosed chicken coop of sufficient size to allow for adequate exercise (*minimum ten square feet per chicken*) and room for nesting (*minimum four [4] square feet per chicken*) and all covered by a roof;
 - ii. construct a coop from permitted materials (*see Section 5.7C(5) and (6)*), including hardware cloth (*chicken wire not permitted*) with adequate ventilation; and
 - iii. construct a coop designed to prevent the entry of rodents and predators including an elevated hen house or hen house placed on a hard surface such as concrete slab or patio block.

- d. **Location:** Coops shall be located in the rear yard only and setback at least five (5) feet from the rear property line. The minimum side setback for coops shall be 15 feet or the existing setback of the principal building on the lot, whichever is less. However, under no circumstance shall any coop be located closer than five (5) feet to any side property line.
- e. **Maximum Size:** Coops shall not exceed 100 square feet in area or 12 feet in any dimension.
- f. **Rear Yard Fence Required:** The rear yard in which a coop is located shall be enclosed by an opaque wall or fence. In addition to meeting the requirements of Section 4.7, the wall or fence shall be a minimum of six (6) feet tall.
- g. **Chickens Secured:** Chickens shall be secured within the coop at all times and within the hen house from dusk until dawn.
- h. **Commercial Sale Prohibited:** All products resulting from the keeping of domestic chickens (*chicks, eggs, manure, compost, etc.*) are for personal use only.
- i. **Maintenance:** All areas within the coop shall be kept in a neat and sanitary condition at all times so as to preclude offensive odor and other nuisance violations.

E. Cluster Mailbox Unit Shelters (CBU Shelters): A shelter for any United States Postal Service (USPS)-required CBUs in districts permitting residential units is required and shall meet the following additional requirements:

1. **Type and Size:** Be a principal or accessory building (*open-air or enclosed*) that extends shelter to a minimum of five (5) feet beyond the CBUs' collective footprint.
2. **Location:** Be located on a lot deeded to a homeowners' association, and be no more than 50 feet from an off-street motorized vehicle parking lot as measured from curb to open-air building footprint or enclosed building entrance.
3. **Parking:** In addition to satisfying the minimum and maximum off-street Motorized Vehicle Parking space requirements specified by Section 10.3D for other uses on the lot, the following minimum and maximum off-street short-term (*marked and signed for 10-minute maximum*) motorized vehicle parking space requirements must also be met:

Number of Mailboxes	Minimum Short-Term Parking Spaces	Maximum Short-Term Parking Spaces
48 or fewer	3	3
49 - 304	3 or 1/2 maximum, whichever is greater	3 plus 1 for each additional 32 mailboxes or portion thereof above 48 mailboxes
305 or more	1/2 maximum	11 plus 1 for each additional 48 mailboxes or portion thereof above 304 mailboxes

4.8 Swimming Pool Accessory to Single-Family Dwellings

A swimming pool is a leisure activity space that includes all structures, as well as cement, stone or wood walks and patio areas, at or above grade, built for, and used in conjunction with the pool.

- A. **Location:** Swimming pools, as defined above, whether above-ground or in-ground, are restricted to the rear yard and shall meet the district-specific setback requirements for accessory structures as specified in Chapter 2. Any at-grade patio component meeting the opaque fence or wall requirement of Section 4.3B, has no setback requirements from rear and side lot lines.
- B. **Barrier:** Swimming pools, as defined above, shall be enclosed by a barrier meeting the requirements of the North Carolina Building Code. Any fence or wall components of this barrier shall also meet the requirements of Section 4.8.

4.9 Fences and Walls

A. House and Townhouse Building Types

- 1. **Front Yard Height:** Fences shall not exceed four (4) feet in height, and garden/decorative walls shall not exceed three (3) feet in height.
- 2. **Side/Rear Yard Height:** Fences or garden/decorative walls shall not exceed six (6) feet in height.
- 3. **Materials:**
 - a. Garden/decorative walls and fence piers shall be brick, stone or stucco consistent with those materials of the principal building.
 - b. Retaining walls shall be wood, brick, stone, decorative concrete masonry blocks or stucco.
 - c. Front yard fences shall be wood picket, wrought iron or materials similar in appearance and durability.
 - d. Side and rear yard fences not exceeding four (4) feet in height may be chain link, wood, wrought iron, or materials similar in appearance and durability.
 - e. Side and rear yard fences exceeding four (4) feet in height shall be wood or a material similar in appearance and durability.
- 4. **Exceptions:** Engineered retaining walls necessitated by severe topography (slopes) are not subject to the height limitations of this section.

B. Apartment, Mixed-Use, Civic, Institutional or Commercial (All Districts Except MI) Building Types

- 1. **Front Yard Height:** Fences shall not exceed four (4) feet in height and garden/decorative walls shall not exceed three (3) feet in height.
- 2. **Side/Rear Yard Height:** Fences or garden/decorative walls shall not exceed eight (8) feet in height.
- 3. **Materials:**
 - a. Garden/decorative walls and fence piers shall be brick, stone or stucco consistent with those materials of the principal building.

- b. Retaining walls shall be wood, brick, stone, or stucco.
- c. All fences shall be wrought iron or a material similar in appearance and durability.

4. Exceptions

- a. Engineered retaining walls necessitated by severe topography (slopes) are not subject to the height limitations of this section.
- b. Wireless Telecommunication Facility – Tower (Section 3.3YY) are not subject to the height limitations of this section.

C. Commercial Building Types in MI District

- 1. **Front Yard Height:** Fences shall not exceed six (6) feet in height.
- 2. **Side/Rear Yard Height:** Fences or garden/decorative walls shall not exceed eight (8) feet in height unless topographic conditions necessitate additional height. The Administrator may approve fences or walls not exceeding nine (9) feet in height. Requests for heights exceeding nine (9) feet are subject to approval from the Town Council.
- 3. **Materials:**
 - a. Retaining walls shall be wood, brick, stone or stucco.
 - b. Barbed wire fences are restricted to the rear yard, shall not be visible from a street right-of-way and shall not be adjacent to any lot in or zoned for residential use.
- 4. **Exceptions:** Engineered retaining walls necessitated by severe topography (slopes) are not subject to the height limitations of this section.

4.10 Amateur Radio Antennas

For amateur radio antennas and their supporting structures, the height of the antenna together with the supporting structure may not exceed 90 feet under any circumstances. Furthermore, for the safety of the general public, the height of the antenna and any supporting structure shall be further restricted to no more than the distance from the base of the structure to the nearest property line which may be a public right-of-way or an adjacent property with structures that might otherwise be damaged in the event of an antenna failure and collapse.

4.11 Temporary Uses

Temporary uses may be approved by obtaining a Zoning Compliance Permit (Section 15.4B) from the Administrator subject to the following:

A. General Requirements

- 1. The Administrator may attach any conditions needed to protect the public health, safety, and welfare.
- 2. The use is clearly of a temporary nature, not exceeding 14 calendar days unless otherwise allowed in subsection (B) below.
- 3. Associated structures including but not limited to greenhouses, tents and mobile units, shall be removed from the lot no later than the temporary use's zoning compliance permit expiration date.

4. Any building permits and fire inspections as required by the North Carolina Building Code for general construction or commercial use shall be obtained.

B. Specific Requirements

1. **Carnival or Circus:** A carnival or circus may be permitted for a period not to exceed 21 calendar days.
2. **Seasonal Sales:** Christmas tree, fireworks and other seasonal sales in open lots may be permitted for a period not to exceed 45 calendar days within the NMX, TC, HB, MI and TND districts. Christmas tree sales may also be permitted for a period not to exceed 45 days on a portion of a lot primarily used for agribusiness purposes.
3. **Contractor's Office or Equipment Shed:** A contractor's office or equipment shed is permitted in any district for a period covering the construction phase of the project not to exceed one (1) year, provided that such office be placed on the property to which it is appurtenant.
4. **Other Uses:** The administrator may issue other temporary uses and activities, or special events including specific time limits, if it is determined that such uses are clearly of a temporary nature, and will not jeopardize the health, safety or general welfare, or be injurious or detrimental to properties adjacent to, or in the vicinity of, the proposed location of the activity.

- C. Extensions:** A zoning compliance permit for a temporary use may be extended by the Administrator, provided the combined periods of the original permit and extension do not exceed the maximum period lengths previously specified in subsections (A) and (B), and provided that the temporary use has not been found in violation of any Town code or ordinance.

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Chapter 5. BUILDING TYPES AND ARCHITECTURAL STANDARDS

5.1 Purpose and Intent

The architectural vocabulary of the Town represents a wide variety of traditional forms that avoid a perception of monotony. This UDO has established regulations specific to these forms. Consequently, buildings that are stylized in an attempt to use the building itself as advertising are discouraged, particularly where the proposed architecture is the result of a “corporate” or “franchise” design. The standards in this Chapter are intended to attach the same or greater level of importance to the overall building design as is placed on the use contained within. Buildings are expected to be added to the Town of Knightdale as long-term additions to the architectural vibrancy of the community.

5.2 Applicability

The following building type provisions and architectural standards shall apply, regardless of the underlying zoning district provisions, unless otherwise noted.

5.3 Exceptions

- A. **Innovative Planning and Design:** While it is expected that some new building types will be introduced to the Town, these variations should be based upon the predominant types listed in this Chapter. Subject to the issuance of a Design Exception (Section 15.5B), innovative planning or design ideas for development may be approved in any district.
- B. **Single Family Dwelling Units:** Single family dwellings (Section 2.3C(1)a) are not required to meet the provisions or standards of this Chapter when the use is located within a House Building (Section 5.7) and the lot accommodating the use is either:
 - 1. Greater than ½ acre in lot size and 100 feet in lot width, or
 - 2. Part of a preliminary subdivision plat—a plan prepared in accordance with the requirements of the UDO in force at that time, which delineates the proposed layout of a subdivision and which preceded the final plat preparation—approved prior to the adoption of this UDO (*November 16, 2005*).
- C. **One and Two Family Dwelling Units:** One and Two-Family Dwellings subject to regulation under the North Carolina Residential Code are exempted from meeting “building design elements” as defined in NCGS 160A-381. This exemption is for one and two-family dwellings constructed after June 10, 2015.
- D. **MI District:** Structures located in the MI District are not required to meet the provisions and standards of this Chapter, except those outlined below:
 - 1. **Building Materials:** All building walls shall be brick or decorative concrete masonry unit, or other materials similar in appearance and durability.
 - 2. **Pedestrian Scale and Massing:** All portions of building facades within 100 feet of a public or private street shall not have long, monotonous, uninterrupted walls of 20 feet or more on any floor by utilizing wall offsets, vertically-proportioned windows or spandrel glass, doors, stairwells, pilasters (*minimum 12” width with minimum 1:4 projection to width ratio*), awnings or other architectural elements as may be approved by the DRC.

5.4 General Building Design Requirements

- A. **Architectural Style:** The building design standards of this Chapter intentionally do not mandate a particular style and permit a wide variety of architectural expressions. However, when a design exhibits a known architectural style (i.e Colonial, Victorian, Classical Revival) the details shall be consistent with that style unless the local architectural vernacular in the region provides an alternate precedent for a detail.
- B. **Frontage:** All buildings shall share a frontage line (primary façade) with a street or square. (Exception: Buildings that are interior to a site that has buildings that otherwise meet the frontage requirement)
- C. **Termination of Vistas:** Important street vistas (such as along Town gateways and primary pedestrian streets) should terminate in a focal point, such as a building or other architectural or natural feature.
- D. **Compatibility:** Adjacent buildings should relate in similarity of scale, height, architectural style, and/or configuration. Exceptions to this rule include civic buildings such as churches and school which through their massing and height serve as landmarks for the community.
- E. **Proportions:** Vertically-proportioned windows (*height exceeds width*), doors, columns, eaves, parapets, and other building components shall be proportional to the overall scale of the building.
- F. **Wall Materials:** When two or more materials are used on a façade, the heavier material (i.e. stone, brick) should be placed below the lighter material (i.e. siding, shakes) to give the sense of support and grounding.
- G. **Façade Articulation:** Buildings shall not have long, monotonous, uninterrupted walls of 20 feet or more on any floor of a façade clearly visible from a public right-of-way. Vertically-proportioned windows and spandrel glass, doors, stairwells, porches, pilasters (*minimum 12" width with minimum 1:4 projection to width ratio*), and other architectural elements as approved by the DRC will be used in order to: add architectural interest and variety; relieve the visual effect of a single, long wall; and subdivide a horizontal wall into human scale vertical proportions.
- H. **Underground wiring:** To reduce the visual impact of overhead wiring, utility services shall be located underground.
- I. **Type of Construction:** Except where expressly permitted by this Ordinance, manufactured, mobile, and metal units shall be prohibited.



Knightdale has a history of significant buildings terminating street vistas such as the Beverdam Plantation home at the end of North Smithfield Road.



Wall Material weights (lightest to heaviest) from top: EIFS, Board & Batten Vertical Siding, Shakes, Horizontal Lap Siding, Stone/Brick

J. Roof Finishing

1. Flat roofs and roof pitches less than 3:12 will require a parapet wall along all sides visible from a public street.
2. All pitched roofs shall be profiled by eaves projecting a minimum of 10 inches from the building face which may include gutters.

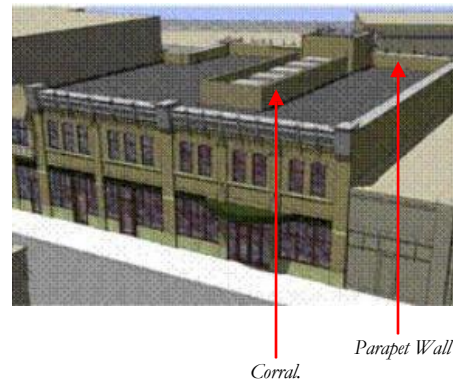


3. Eaves may expose rafters.

K. Rooftop Equipment: All rooftop equipment shall be screened from view from any public right-of-way through the use of parapet walls and/or a central screened corral.

L. Physical Sculpture as Public Art: Sculptural free-standing public art, such as statues, fountains, and other site-specific art are encouraged and shall be permitted in any required front setback area (Section 4.2L).

M. Satellite Dishes: No satellite dish larger than eighteen inches (18") shall be mounted to the front façade of a building or a roof slope facing the street on a gable, hip, gambrel or mansard roof.



5.5 Building Type: CIVIC

A. Description: The Civic Building serves as a landmark and a public gathering place. Such buildings should be constructed as permanent additions to the long-term vibrancy of the Town and should serve to exemplify the very best architectural designs and building practices.

B. Applicability: The Civic Building type covers a range of public and private buildings that includes, but is not limited to: Town halls and libraries, museums and observatories, churches and synagogues.

C. Specific Requirements: Because of the unique characteristics of the Civic Building, it is generally exempt from the standards imposed on other buildings in this Chapter, including Section 5.4, with the following exceptions:

1. A Civic Building should be built so that they terminate a street vista whenever possible;
2. They should be of sufficient design to create an easily recognizable visual anchor for the community;
3. They must adhere to the Type of Construction prohibitions of Section 5.4I;
4. They must adhere to the Wall Material requirements of Section 5.4F; and
5. They must adhere to the Rooftop Equipment requirements of Section 5.4K.



Town Hall



5.6 Building Type: INSTITUTIONAL

A. **Description:** Like Civic Buildings, Institutional Buildings often serve as landmarks and public gathering places. They also should be constructed as permanent additions to the long-term vibrancy of the Town and should serve to exemplify the very best architectural designs and building practices. However, because most Institutional Buildings house specialized populations (i.e. children, elderly, college students, or the infirmed) they have unique characteristics that require design control.

B. **Applicability:** The Institutional Building type includes, but is not limited to: governmental offices, schools, hospitals and long-term care facilities, post offices, and non-profit or charitable clubs and organizations.

C. **Specific Requirements:** In addition to meeting the general requirements of Section 5.4, Institutional Buildings shall meet the following standards;

1. **Sufficient Design** – An Institutional Building should create an easily recognizable visual anchor for the community;
2. **Accessory Structures** – Such structures shall be set back a minimum of 20 ft from the primary facade of the principal structure; and if more than one (1) accessory structure, shall be arranged to create secondary gathering spaces within the lot.
3. **Building Walls** – Institutional Building walls shall be clad in clapboard, stone, stucco, cementious fiber board, brick, or marble. Decorative concrete masonry units (CMU), exterior insulation finishing systems (EIFS) and/or vinyl siding may be used as a secondary element (*less than 50% of the façade area*), or on facades not facing public rights-of-way.
4. **Roofs** – Flat roofs are allowed, but principal buildings adjacent to residential structures (House, Townhouse, Apartment and Mixed-Use building types, Sections 5.7 – 5.10) are encouraged to have similar roofs and other architectural features to ensure compatibility.



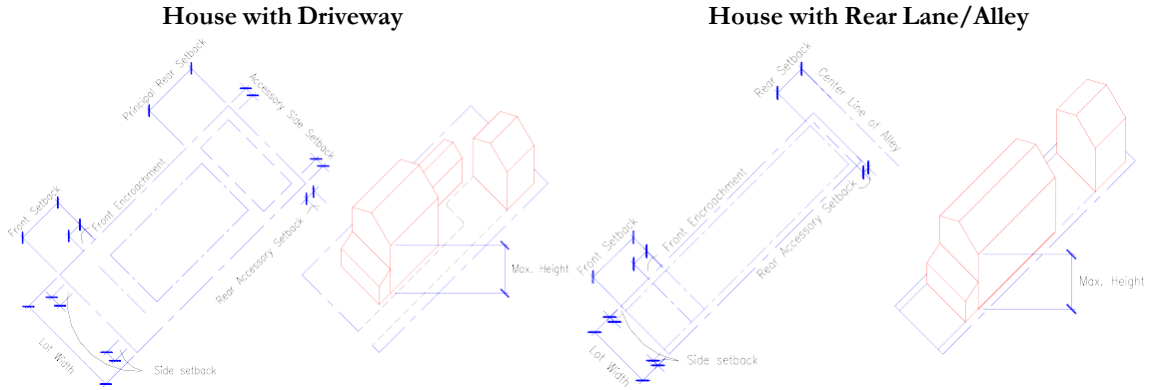
College Campus



School

5.7 Building Type: HOUSE

- A. **Description:** The House Building is the predominant building type found within the Town of Knightdale and typically has four (4) yards (front, two [2] sides, rear), although variations include setting the building a side property line to create a larger side yard on the opposite side (i.e. Charleston Single). In general, within a block, building types should be uniform in their use of driveways or rear lanes/alleys.



- B. **Applicability:** The House Building may accommodate single family uses, multi-family uses up to four (4) units, home occupations, professional offices, and limited retail subject to the District in which it is located. The specific requirements of this Section apply to House Buildings not meeting the exceptions found within Section 5.3 which includes House Buildings placed on lots not meeting the lot size and lot width exception criterion of Section 5.3B1.



Single-Family Home with Alley



Single-Family Homes with Driveway



Duplex



Triplex



Quadruplex



Professional Offices

C. Specific Requirements

1. **Useable Porches and Stoops:** Porches and stoops should be used as a primary architectural element of the building design and be located on the primary façade or other elevation fronting a public right-of-way. Useable porches and stoops are at least six (6) feet deep and extend more than 50% of the facade.

2. Garages:

- a. House Buildings located on lots less than 80 feet wide may not have garage doors located on the primary façade.
- b. Where allowed (i.e. lots equal to or greater than 80 feet wide), garages with loading bays on the primary facade or side loading bays that front a street shall form a building volume secondary to the House and shall:
 - i. Not exceed 45% of the corresponding façade's total width;

ACCEPTABLE



NOT ACCEPTABLE



- ii. Not utilize any single garage door(s) greater than 12 feet in width;

ACCEPTABLE

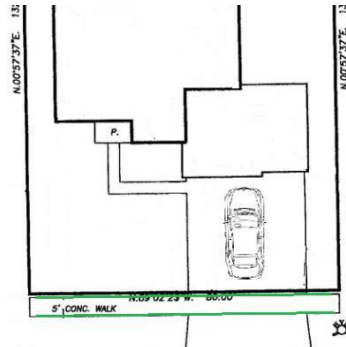


NOT ACCEPTABLE

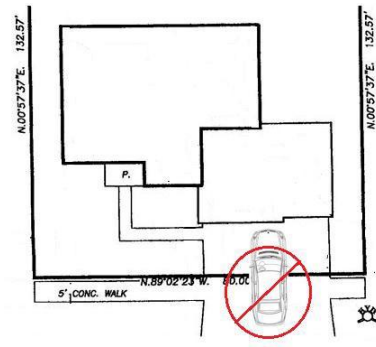


- iii. Be set back a minimum of 25 feet from the street right-of-way;

ACCEPTABLE



NOT ACCEPTABLE



- iv. Utilize garage doors containing window inserts; and

ACCEPTABLE

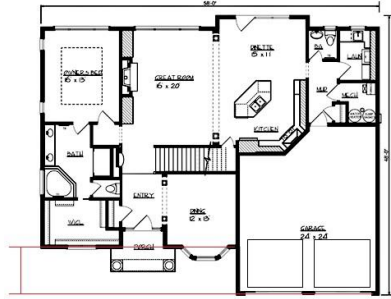


NOT ACCEPTABLE



- v. Be recessed from the primary front façade of the house (not including porches, bay windows or other minor projections) a minimum of one (1) foot or be recessed from an adjacent useable front porch a minimum of eight (8) feet. Alternatively, the requirement of subsection “v.” may be satisfied by meeting all of the following substitute requirements:

NOT ACCEPTABLE, UNLESS (a) – (c) MET



- (a) Utilize a carriage style or similarly stylistic garage door that is architecturally compatible with the housing style (paneled garage doors are not permitted);



- (b) Incorporate a trellis, eyebrow roof, columned projection or other architectural element as may be approved by the Administrator above the garage door(s) that is compatible with the housing style; and



Trellis

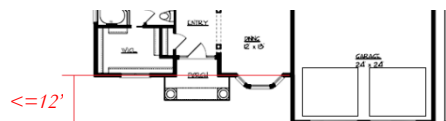


Eyebrow Roof



Columned Projection

- (c) The front wall of the garage shall project no more than 12 feet in front of the remainder of the primary façade.



- 3. **Front Entrances:** To provide privacy, all front entrances shall be raised from the finished grade (at the frontage line) a minimum of 1½ feet. (Exception: Single Family Homes on lots equal to or greater than 60 feet wide and new House buildings intended for non-residential use.)

- 4. **Foundations:** The crawlspace of buildings shall be enclosed with brick, stone, or stucco. Slabs shall be covered on all sides with brick, stone or stucco no less than the height equivalent of three (3) courses of brick (eight [8] inches) visible above grade. Areas under porches may be enclosed with lattice. Areas under manufactured homes in mobile home parks existing at the time of adoption of this ordinance may be enclosed with skirting that matches the existing structure.



8" Min.

- 5. **Wall Materials:** House Building walls shall be clad in wood clapboard, cementitious fiber board, wood shingle, wood drop siding, primed board, wood board and batten, brick, stone, stucco, or vinyl.

6. **Roofs**

- a. **Materials:** House roofs shall be clad in wood shingles, standing seam metal, terne, slate, copper, or asphalt shingles.
- b. **Pitch:** Except for manufactured homes located in mobile home parks that existed at the time of adoption of this ordinance, main roofs on residential buildings shall be symmetrical gables or hips with a pitch between 6:12 and 12:12. Monopitch (shed) roofs are allowed only if they are attached to the wall of the main building. No monopitch roof shall be less than 3:12.

ACCEPTABLE



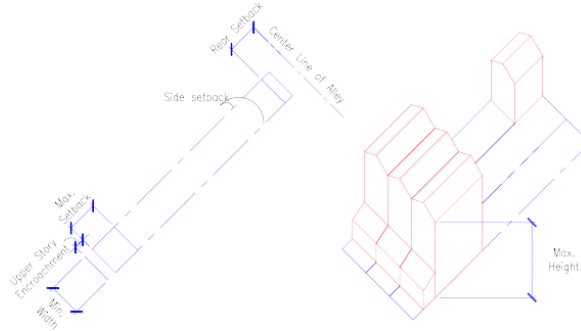
NOT ACCEPTABLE



- 7. **Additional Requirements for Manufactured Housing:** To ensure that manufactured House Buildings are integrated aesthetically into the Town's surrounding neighborhoods, units manufactured to meet or exceed the construction standards promulgated by the US. Department of Housing and Urban Development on or after July 1, 1976, shall refer to Section 2.13A and Section 3.3CC of this UDO for additional location, dimension and appearance requirements.

5.8 Building Type: TOWNHOUSE

- A. **Description:** The Townhouse Building is a building with two (2) or more units on individual lots that are located side-by-side and accessed from a rear lane or alley. As a result, the Townhouse typically only has one (1) yard in the rear, although variations may include a small front setback to provide for landscaping, while the bulk, scale and architectural design of the building(s) reflects that of the surrounding neighborhood or planned development, as may apply.



- B. **Applicability:** Townhouse buildings are suitable for a number of uses, including residential dwellings, live- work units and professional offices. Specific uses permitted within the Townhouse Building are determined by the District in which it is located.



Multi-Family Townhomes with Alley

C. **Specific Requirements**

1. **Garages:** Since Townhouses are accessed from a rear land or alley, garage doors are not permitted on any primary façade.
2. **Front Entrances:** Except for non-residential uses, all front entrances shall be raised from the finished grade (at the building line) a minimum of 1½ feet for privacy.
3. **Façade Articulation:** Townhouse Buildings shall have doors, useable porches and stoops, balconies, terraces and/or windows on any façade clearly visible from a public right-of-way.

The standard percentage of these elements along any full or partial building story is a minimum of 60% on the primary façade, and a minimum of 30% on side and rear building facades, as applicable. The percentage is measured as the horizontal plane (lineal feet) containing doors, porches, balconies, terraces and/or windows divided by the total horizontal plane length.

Useable porches and stoops should form a predominate motif of the Townhouse Building’s design and be located on the primary façade or other elevation fronting a public right-of-way. Useable front porches are at least six (6) feet deep and extend more than 30% of the primary façade.

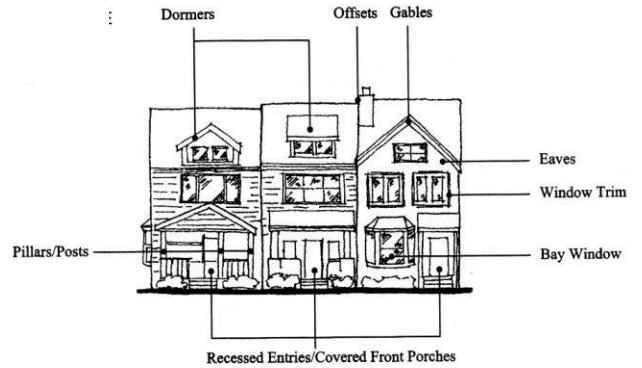


Multi-Family Townhomes with Alley



Live-Work Units

4. **Design Details:** All Townhouse Buildings shall provide detailed design along all facades visible from a public right-of-way. Detailed design shall be provided by using at least one (1) of the architectural features from each of the following four (4) feature categories on all facades as appropriate for the proposed architectural style (may vary features on rear/side/front elevations):

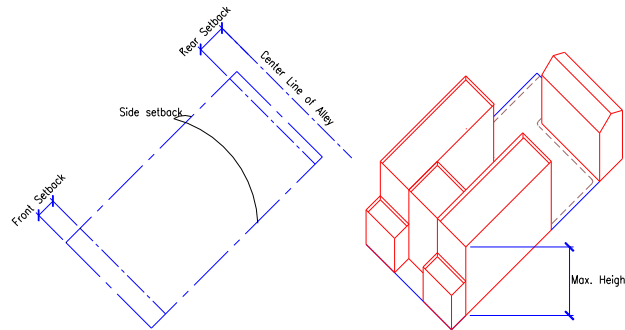


<p>a. Entrance:</p> <ul style="list-style-type: none"> ▪ Recessed Entry with 6” min. width Door Trim ▪ Covered Porch with 6” min. width Pillars/Posts/Columns 	<p>b. Building Off-Set:</p> <ul style="list-style-type: none"> ▪ Façade off-set (16” min) ▪ Roof Line off-set (16” min)
<p>c. Façade:</p> <ul style="list-style-type: none"> ▪ Bay window ▪ Balcony ▪ Window Trim (4” min width) ▪ Patterned finish (scales, shakes, wainscoting, etc.) 	<p>d. Roof</p> <ul style="list-style-type: none"> ▪ Dormer ▪ Gable ▪ Cupola/Tower/Chimney ▪ Decorative cornice or roof line (flat roofs only)

5. **Foundations:** The crawlspace of buildings shall be enclosed with brick, stone, or stucco. Slabs shall be covered with brick, stone or stucco no less than the height equivalent of three (3) courses of brick (eight [8] inches) visible above grade. Areas under porches may be enclosed with lattice.
6. **Wall Materials:** Townhouse Building walls shall be wood clapboard, cementious fiber board, wood shingle, wood drop siding, wood board and batten, brick, stone or stucco. Townhouse Building walls and trim details, excluding soffits and fascia, may be vinyl, provided:
- a. the vinyl is at least nine (9) feet above ground level; and
 - b. all balcony and breezeway ceilings, and all fire/draft stops within attic areas are constructed to achieve a two (2) hour fire rating; and
 - c. all soffits and fascia are constructed of a non-combustible material.
7. **Roofs**
- a. **Materials:** Townhouse Building roofs shall be clad in wood shingles, standing seam metal, terne, slate, copper, or asphalt shingles.
 - b. **Pitch:** Main roofs on residential buildings shall be symmetrical gables or hips with a pitch between 6:12 and 12:12. Monopitch (shed) roofs are allowed only if they are attached to the wall of the main building. No monopitch roof shall be less than 3:12.

5.9 Building Type: APARTMENT

- A. **Description:** The Apartment Building is a multi-unit building with units vertically arranged (generally) and with parking located below or behind the building. These buildings typically have one (1) yard in the rear, though variations include a small front setback to provide some landscaping. Units may be rented or sold (condominium ownership), or they may be designed as continuing care facilities.



- B. **Applicability:** Apartment buildings are suitable for a number of uses including residential dwelling units either for sale or rent, professional offices and some commercial/retail uses. Specific uses permitted within the Apartment Building are determined by the District in which it is located.



Multi-family development

C. Specific Requirements

1. **Garages:** Garage doors are not permitted on the primary façade of any Apartment Building.
2. **Front Entrances:** Except for non-residential uses, all front entrances shall be raised from the finished grade (at the building line) a minimum of 1½ feet for privacy.
3. **Façade Articulation:** All building elevations visible from the street shall provide doors, useable porches and stoops, balconies, and/or windows.

A minimum of 60% of front elevations, and a minimum of 30% of side and rear building elevations, as applicable, shall meet this standard. “Percent of elevation” is measured as the horizontal plane (lineal feet) containing doors, porches, balconies, terraces and/or windows. This standard applies to each full and partial building story.

Useable porches and stoops should form a predominate motif of the building design and be located on the front and/or side of the building. Useable front porches are at least 6 feet deep and extend more than 30% of the facade.



Eight-plex



Multi-Family Development



Multi-Family Development

4. **Design Details:** All Apartment Buildings shall provide detailed design along all facades visible from a public right-of-way. Detailed design shall be provided by using at least one (1) of the architectural features from each of the four (4) feature categories on all facades as appropriate for the proposed architectural style (may vary features on rear/side/front elevations):

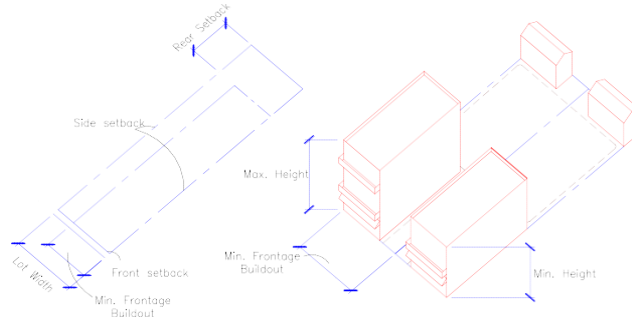


a. Entrance:	b. Building Off-Set:
<ul style="list-style-type: none"> ▪ Recessed Entry with 6” min. width Door Trim ▪ Covered Porch with 6” min. width Pillars/Posts/Columns 	<ul style="list-style-type: none"> ▪ Façade off-set (16” min) ▪ Roof Line off-set (16” min)
c. Façade:	d. Roof
<ul style="list-style-type: none"> ▪ Bay window ▪ Balcony ▪ Window Trim (4” min width) ▪ Patterned finish (scales, shakes, wainscoting, etc.) 	<ul style="list-style-type: none"> ▪ Dormer ▪ Gable ▪ Cupola/Tower/Chimney ▪ Decorative cornice or roof line (flat roofs only)

5. **Foundations:** The crawlspace of buildings shall be enclosed with brick, stone, or stucco. Slabs shall be covered with brick, stone or stucco no less than the height equivalent of three (3) courses of brick (eight [8] inched) visible above grade. Areas under porches may be enclosed with lattice.
6. **Wall Materials:** Apartment Building walls shall be wood clapboard, cementitious fiber board, wood shingle, wood drop siding, wood board and batten, brick, stone or stucco. Apartment Building walls and trim details, but excluding soffits and fascia, may be vinyl, provided:
- a. the vinyl is at least nine (9) feet above ground level; and
 - b. commercial density sprinkler heads are provided and thereafter maintained on all balcony and breezeway corridors; and
 - c. all balcony and breezeway ceilings, and all fire/draft stops within attic areas are constructed to achieve a two (2) hour fire rating; and
 - d. all soffits and fascia are constructed of a non-combustible material.
7. **Roofs**
- a. **Materials:** Apartment Building roofs shall be clad in wood shingles, standing seam metal, terne, slate, copper, or asphalt shingles.
 - b. **Pitch:** Main roofs on residential buildings shall be symmetrical gables or hips with a pitch between 6:12 and 12:12. Monopitch (shed) roofs are allowed only if they are attached to the wall of the main building. No monopitch roof shall be less than 3:12.

5.10 Building Type: MIXED-USE

- A. **Description:** A Mixed-Use Building is a multi-story small scale structure which can accommodate a variety of uses. The Mixed-Use Building typically has one (1) yard in the rear, though some buildings may include a small front plaza or courtyard to provide public space for outdoor seating while others may completely cover a lot where parking is handled in a manner other than on-site surface parking.



- B. **Applicability:** Individual Mixed-Use Buildings may be used to provide some commercial service, such as a neighborhood store in close proximity to homes, while a group of Mixed-Use Buildings may be combined to form a mixed-use neighborhood center. Specific uses permitted within the Mixed-Use Building are determined by the District in which it is located.



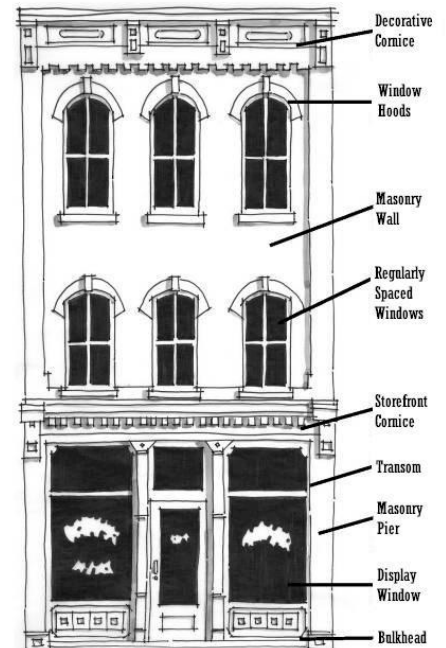
C. **Specific Requirements**

1. **Multi-Story:** A Mixed-Use Building shall have a minimum of two (2) stories.
2. **Building Entrances**
 - a. **Primary Façade Entrance:** The primary façade shall be designed for the pedestrian, have an entrance, and be distinguishable from the rest of the building. Such entrances shall provide a sense of entry and add variety to the streetscape.
 - b. **Other Entrances:** Additional entrances may be oriented toward side or rear parking lots.

- c. **Service Entrances:** Entrances for shipping and receiving not be visible from a public right-of-way.
3. **Façade Articulation:** All Mixed-Use Buildings shall be designed to encourage and complement pedestrian-style interest and activity by incorporating the following elements:
- a. **First Floor:** The ground level of the building must offer pedestrian interest along sidewalks and paths. Therefore, the first floor of the primary facade as well as the facades of buildings internal to a site containing a pedestrian entrance shall include transparent windows and doors arranged so that the uses inside are visible from and/or accessible to the street on at least 40% of the length of the first floor building elevation.
 - b. **Window dimensions:**
 - i. Maximum Sill Height (1st Story): 42 inches (as measured from the finished floor elevation)
 - ii. Minimum Area: 16 sq ft
 - iii. Minimum Width: 3 feet
 - iv. Minimum Height: 4 feet

4. **Design Details:** Mixed-Use Buildings should exhibit a high level of architectural detail, including elements like windows and doors, bulkheads, masonry piers, transoms, cornice lines, window hoods, awnings, canopies, and other similar details shall be used on all facades facing public rights-of-way.

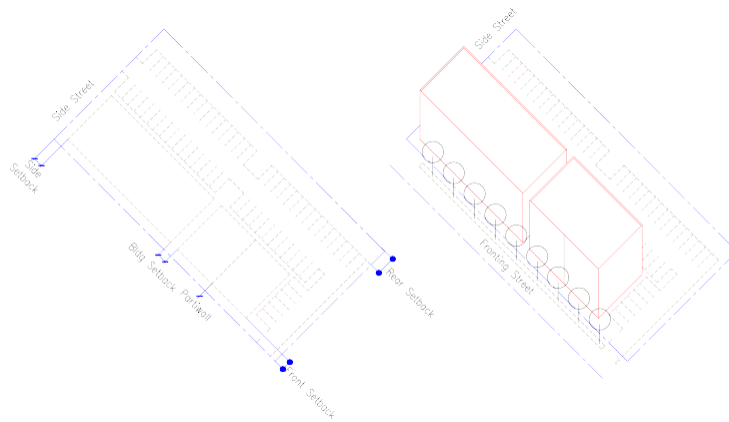
- a. **Awnings:** A building canopy, awning, or similar weather protection, if provided, shall project a minimum of three (3) to five (5) feet from the façade.
- b. **Ventilation Grates and Emergency Exit Doors:** Grates and doors located at the first floor level in the building facade, which are oriented to any public street, shall be decorative.



5. **Wall Materials:** Mixed-Use Building walls shall be brick, stone, cementitious fiber board, EIFS or wood clapboard. Regular or decorative concrete block may be used on building walls not visible from a public street or as an accent material only. All accessory buildings shall be clad in materials similar in appearance to the principal structure.
6. **Roofs**
- a. **Materials:** Pitched roofs shall be clad in wood shingles, standing seam metal, corrugated metal, slate, copper, or asphalt shingles.
 - b. **Relief:** Roofline offsets should be provided to lend architectural interest and variety to the massing of a building and to relieve the effect of a single, long roof line over 50 feet in length.

5.11 Building Type: COMMERCIAL BUILDING

- A. **Description:** The Commercial Building provides convenient automobile access from the fronting thoroughfare, while minimizing the negative impacts of parking lots on an active pedestrian realm. The Commercial Building typically has one (1) yard in the rear, though some buildings may include a small front plaza or courtyard to provide public space for outdoor seating, while others may completely cover a lot where parking is handled in a manner other than on-site surface parking.



- B. **Applicability:** Typically, a single or multi-story medium to large structure which accommodates automobile-oriented uses found along major thoroughfares, although a group of commercial buildings may be combined to form a community center. Specific uses permitted within the Commercial Building are determined by the District in which it is located.



Retail



Grocery Store



Retail along a thoroughfare



Pharmacy with Drive Thru



Fast Food Restaurant



Gas Station

C. Specific Requirements

1. Building Entrances:

- a. **Primary Façade Entrance:** The primary façade shall be designed for the pedestrian, have an entrance, and be distinguishable from the rest of the building. Such entrances shall provide a sense of entry and add variety to the streetscape.

- b. **Other Entrances:** Additional entrances may be oriented toward side or rear parking lots.
- c. **Service Entrances:** Entrances for shipping and receiving shall be oriented away from the public right-of-way.

2. **Façade Articulation:** All Commercial Buildings shall be designed to encourage and complement pedestrian-style interest and activity by incorporating the following elements:

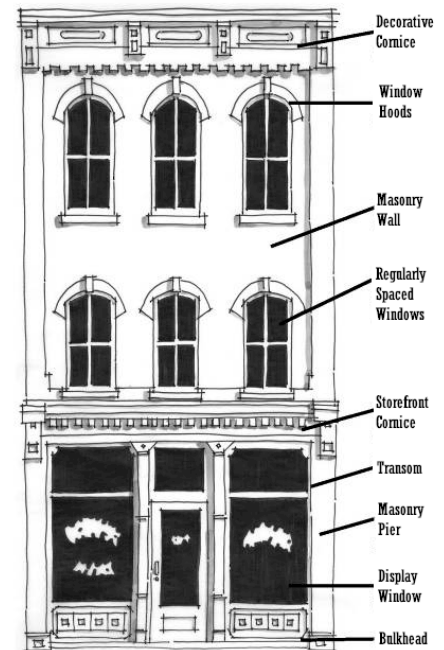
a. **First Floor:** The ground level of the building must offer pedestrian interest along sidewalks and paths. The first floor of the primary façade as well as the façades of buildings internal to a site containing pedestrian entrances shall include transparent windows and doors arranged so that the uses inside are visible from and/or accessible to the street on at least 40% of the length of the first floor building elevation.

b. **Window dimensions:**

- i. Maximum Sill Height (1st Story): 42 inches (as measured from the finished floor elevation)
- ii. Minimum Area: 16 sq ft
- iii. Minimum Width: 3 feet
- iv. Minimum Height: 4 feet

3. **Design Details:** Commercial Buildings should exhibit a high level of architectural detail, including elements like windows and doors, bulkheads, masonry piers, transoms, cornice lines, window hoods, awnings, canopies, and other similar details shall be used on all façades facing public rights-of-way.

- a. **Awnings:** A building canopy, awning, or similar weather protection, if provided, should project a minimum of three (3) to five (5) feet from the façade.
- b. **Ventilation Grates or Emergency Exit Doors:** Grates and doors located at the first floor level in the building façade, which are oriented to any public street, shall be decorative.



4. **Wall Materials:** Commercial Building walls shall be brick, stone, cementitious fiber board, EIFS or wood clapboard. Regular or decorative concrete block may be used on building walls not visible from a public street or as an accent material only. All accessory buildings shall be clad in materials similar in appearance to the principal structure.

5. **Roofs**

- a. **Materials:** Pitched roofs shall be clad in wood shingles, standing seam metal, corrugated metal, slate, copper, or asphalt shingles.
- b. **Relief:** Commercial Buildings shall avoid long, monotonous, uninterrupted horizontal roof planes of 50 feet or more by utilizing roofline offsets that are five (5) feet or more in height, building wall

offsets and matching roof lines that are two (2) feet or more in depth, pitched or raised parapets, towers, etc. that lend architectural interest and variety.

- 6. **Drive-Thru Areas:** These areas must appear as an articulation of the building, not a separate and distinct appendage. Specifically, canopies must:
 - a. Maintain a uniform and consistent roof line with the building to which the drive through facility is a part;
 - b. Have columns, solid walls or semi-solid walls placed so that they are similar in their relation to the roof as that of the exterior walls of the building to which the drive-thru is a part; and
 - c. Be finished with materials consistent with the primary building façade.

Columns/Wall Locations:

ACCEPTABLE



NOT ACCEPTABLE



Roof Lines:

ACCEPTABLE



NOT ACCEPTABLE



Chapter 6. ENVIRONMENTAL PROTECTION

6.1 Purpose and Intent

The purpose of this chapter is to protect, maintain and enhance public health, safety, environment and general welfare by establishing minimum requirements and procedures to control adverse effects of sediment and erosion control, grading, post construction stormwater runoff, illicit discharges, and flood damage. Proper management of stormwater runoff will minimize damage to public and private property and infrastructure safeguard the public health, safety and general welfare and protect water and aquatic life.

6.2 Sediment and Erosion Control

A. General Requirements

All new development and redevelopment shall be required to take measures to minimize erosion during construction and after development. All new development and redevelopment shall comply with the provisions of the latest adopted amendment to Wake County Erosion and Sedimentation Control Ordinance. A Land Disturbance Permit or exemption from the plan requirements of such regulations shall be submitted to the Administrator prior to issuance of a Construction Improvement Permit (CIP) for a subdivision, or part thereof. Furthermore, no infrastructure or individual lot grading shall commence prior to the completion or exemption from the requirements of the Environmental Survey as stated in Section 16.2B.

B. Residential Clearing and Grading

In order to promote land development practices that minimize disturbance to vegetation and soils, limit alteration of the natural topography, minimize surface water and ground water runoff and diversion, minimize the need for additional storm drainage facilities, reduce sedimentation in surrounding waters and promote land development and site planning practices that are responsive to the town's scenic character without preventing the reasonable development of land; the initial clearing and grading of all residential major subdivisions shall be limited to dedicated public rights-of-way and easements for the installation of streets, utilities, and other infrastructure. All grading activities shall be done in accordance with all applicable federal, state and local laws, rules and regulations; including those pertaining to air and water pollution and noise control.

1. **Infrastructure:** Grading for infrastructure improvements (streets, sidewalks, curb, gutter, water, sewer, utilities, stormwater, spoil and borrow areas, etc.) shall be phased according to the Master Plan. Prior to proceeding to another phase, the developer shall stabilize the present phase with adequate ground cover sufficient to restrain erosion and have all infrastructure installed.
2. **Lots:** Grading of individual lots within the major subdivision shall not begin without having first obtained a building permit from the Administrator and shall be limited to those areas comprising the building footprint, driveway and a minimal area surrounding the building footprint to accommodate construction equipment.
3. **Exemptions:** Exemptions to the requirements of Section 6.2B are as follows:
 - a. Residential subdivisions within a Traditional Neighborhood Overlay District (TND) or residential subdivisions with lots less than 60 feet wide.
 - b. Grading and clearing in emergency situations involving immediate danger to life or property or substantial fire hazards.

6.3 Neuse River Basin Riparian Buffers (NRBs)

Both the corporate limits and the ETJ of the Town of Knightdale fall completely within the Neuse River basin and are therefore subject to the riparian buffer rules as governed by North Carolina Administrative Code (NCAC), Title 15A, Chapter 2, SubChapter B as may be amended from time to time.

NRBs are a form of open space, and as such, may only be retained in private ownership if the necessary conservation easements are recorded with the Wake County Register of Deeds in a form approved by the Town. Otherwise, NRBs shall be separately deeded to a homeowner's association, a non-profit land trust or conservancy, Wake County, or the Town of Knightdale (upon approval by the Town Council). NRBs cannot be located on any single-family residential building lot (detached or attached) within a major subdivision as defined in Section 15.4F(6). In general terms, NRBs in major subdivisions must be platted as separate lots where the responsibility of maintaining (in a natural state) said riparian buffers in perpetuity is typically designated to a homeowners association or non-profit land conservation agency. Lots that have received Construction Document approval (*Section 16.6*) prior to March 1, 2010 shall be exempt from this requirement.

6.4 Post Construction Stormwater Management

Development alters the hydrologic response of local watersheds and increases stormwater runoff rates and volumes, flooding, soil erosion, stream channel erosion, nonpoint source pollution, and sediment transport and deposition, as well as reducing groundwater recharge. These changes in stormwater runoff contribute to increased quantities of water-borne pollutants and alterations in hydrology that are harmful to public health and safety as well as to the natural environment. These effects can be managed and minimized by applying proper design and well-planned controls to manage stormwater runoff from development sites.

Further, the Federal Water Pollution Control Act of 1972 (“Clean Water Act”) and federal Phase II Stormwater Rules promulgated under it, as well as rules of the North Carolina Environmental Management Commission promulgated in response to federal National Pollutant Discharge Elimination System (NPDES) Phase II requirements, compel certain urbanized areas, including this jurisdiction, to adopt the minimum stormwater controls such as those included in this ordinance. Therefore, the Town Council establishes this set of water quality and quantity regulations to meet the requirements of state and federal law regarding control of stormwater runoff and discharge.

A. Objectives

This ordinance seeks to meet its general purpose through the following objectives:

1. Establishing decision-making processes for developments that protect the integrity of watersheds and preserve the health of water resources;
2. Requiring that new development and redevelopment maintain the pre-development hydrologic response in their post-development state as nearly as practicable for the applicable design storm in order to reduce flooding, stream bank erosion, nonpoint source pollution and increases in stream temperature, and to maintain the integrity of stream channels and aquatic habitats;
3. Establishing minimum post-development stormwater management standards and design criteria for the regulation and control of stormwater runoff quantity and quality;
4. Establishing design and review criteria for the construction, function, and use of structural stormwater control facilities that may be used to meet the minimum post-development stormwater management standards;
5. Encouraging the use of better management and site design practices, such as the preservation of green space and other conservation areas, to the maximum extent practicable;
6. Establishing provisions for the long-term responsibility for and maintenance of structural and nonstructural stormwater best management practices (BMPs) to ensure that they continue to function as designed, are maintained appropriately, and pose no threat to public safety;
7. Establishing administrative procedures for the submission, review, approval and disapproval of stormwater management plans, for the inspection of approved projects, and to assure appropriate long-term maintenance; and
8. Coordinating site design plans that include open space and natural areas with the *2027 Comprehensive Plan*.

B. Applicability

1. General

Beginning with and subsequent to its effective date, this ordinance shall be applicable to all development and redevelopment, including, but not limited to, site plan applications, subdivision applications, and grading applications, unless exempt pursuant to Section 6.4C(2), Exemptions, below.

2. Exemptions

- a. Development and redevelopment that cumulatively disturbs less than one (1) acre and is not part of a larger common plan of development or sale is exempt from the provisions of this ordinance. However, development and redevelopment that disturb less than one (1) acre are *not exempt* if such activities are part of a larger common plan of development or sale, even though multiple, separate or distinct activities take place at different times on different schedules.
- b. Activities that are exempt from permit requirements of Section 404 of the federal Clean Water Act, as specified in 40 CFR 302 (primarily, ongoing farming and forestry activities) are exempt from the provisions of this ordinance.

3. No Development or Redevelopment Until Compliance and Permit

No development or redevelopment shall occur except in compliance with the provisions of this ordinance or unless exempted. No development for which a permit is required pursuant to this ordinance shall occur except in compliance with the provisions, conditions, and limitations of the permit.

4. Stormwater Map

The provisions of this ordinance shall apply within the areas designated in Appendix E: Phase II Stormwater Map of Knightdale, North Carolina (the “Stormwater Map”). The Stormwater Map shall be kept on file by the Administrator and shall be updated to take into account changes in the land area covered by the ordinance and the geographic location of all structural BMPs permitted under this ordinance. In the event of a dispute, the applicability of this ordinance to a particular area of land or BMP shall be determined by reference to the North Carolina Statutes, the North Carolina Administrative Code, and local zoning and jurisdictional boundary ordinances.

C. Stormwater Best Management Practices Manual

1. Reference to Manual

The Administrator shall use the policy, criteria, and information, including technical specifications and standards in NCDENR’s *Stormwater Best Management Practices Manual* (hereinafter referred to simply as the *Manual*) as the basis for decisions about stormwater permits and about the design, implementation and performance of structural and non-structural stormwater BMPs.

The current *Manual*, as amended from time to time, includes a list of acceptable stormwater treatment practices, including the specific design criteria for each stormwater practice. Stormwater treatment practices that are designed and constructed in accordance with these design and sizing criteria will be presumed

to meet the minimum water quality performance standards of the NPDES Phase II laws.

2. Relationship of Manual to Other Laws and Regulations

If the specifications or guidelines of the *Manual* are more restrictive or apply a higher standard than other laws or regulations, that fact shall not prevent application of the specifications or guidelines in the *Manual*.

3. Changes to Standards and Specifications

If the standards, specifications, guidelines, policies, criteria or other information in the *Manual* are amended subsequent to the submittal of an application for approval pursuant to this ordinance but prior to approval, the new information shall control and shall be utilized in reviewing the application and in implementing this ordinance with regard to the application.

D. Stormwater Management Plan: A stormwater management plan is required for all development and redevelopment unless exempt pursuant to the provisions of 6.4C(2): Exemptions. Please refer to Section 16.8E for stormwater management plan requirements.

E. Development Standards

1. Low-Density Projects

Low-density projects (less than 24% built upon area) shall implement stormwater control measures that comply with each of the following standards:

- a. Stormwater control measures shall control and treat the difference in stormwater runoff volume leaving the project site between the pre- and post-development conditions for, at a minimum, the 1-year, 24-hour storm. Runoff volume drawdown time shall be a minimum of 24 hours, but not more than 120 hours.
- b. All built-upon area shall be at a minimum of 50 feet landward of all perennial and intermittent surface waters (outside all NRBs as defined in Section 6.3). A perennial or intermittent surface water shall be present if the feature is approximately shown on either the most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture (USDA) or the most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geologic Survey (USGS). An exception to this requirement may be allowed when surface waters are not present in accordance with the provisions of 15A NCAC 2B .0233 (3)(a) or similar site-specific determination made using Division-approved methodology.
- c. The approval of the stormwater permit shall require an enforceable restriction on property usage that runs with the land, such as recorded deed restrictions or protective covenants, to ensure that future development and redevelopment maintains the site according to the approved project plans.

2. High-Density Projects

High-density projects (greater than 24% built upon area) shall implement stormwater control measures that comply with each of the following standards:

- a. The measures shall control and treat the difference in stormwater runoff volume leaving the project site between the pre- and post-development conditions for, at a minimum, the 1-year, 24-hour storm. Runoff volume drawdown time shall be between 24 and 120 hours;
- b. All structural stormwater treatment systems used to meet the requirements of the program shall be designed to have a minimum of 85% average annual removal for Total Suspended Solids (TSS);
- c. General engineering design criteria for all projects shall be in accordance with 15A NCAC 2H .1008(c), as explained in the *Manual*;
- d. All built-upon areas shall be at a minimum of 50 feet landward of all perennial and intermittent surface waters (outside all NRBs as defined in Section 6.3). A surface water shall be deemed present if the feature is approximately shown on either the most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the USDA or the most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the USGS. An exception to this requirement may be allowed when surface waters are not present in accordance with the provisions of 15A NCAC 2B .0233(3)(a) or similar site-specific determination made using Division approved methodology; and
- e. The approval of the stormwater permit shall require an enforceable restriction on property usage that runs with the land, such as recorded deed restrictions or protective covenants, to ensure that future development and redevelopment maintains the site according to the approved project plans.

3. Stormwater Control Measures

a. Evaluation According to Contents of *Manual*

All BMPs required under this ordinance shall be evaluated by the Administrator according to the policies, criteria, and information, including technical specifications and standards and the specific design criteria for each stormwater practice, in the *Manual*. The Administrator shall determine whether they will be adequate to meet the requirements of this ordinance.

b. Determination of Adequacy; Presumptions and Alternatives

Stormwater treatment practices that are designed, constructed, and maintained in accordance with the criteria and specifications in the *Manual* will be presumed to meet the minimum water quality and quantity performance standards of this ordinance. Whenever an applicant proposes to utilize a practice or practices not designed and constructed in accordance with the criteria and specifications in the *Manual*, the applicant shall have the burden of demonstrating that the practice(s) will satisfy the minimum water quality and quantity performance standards of this ordinance. The Administrator may require the applicant to provide such documentation, calculations, and examples as necessary for the Administrator to determine whether such an affirmative showing is made.

4. **Nutrient Sensitive Waters (NSW)**

In addition to the standards for stormwater handling set out in the design manual, development and redevelopment that drains in whole or part to class NSW waters shall design and implement the best stormwater practices that reduce nutrient loading, while still meeting the other requirements of this ordinance.

5. **Onsite Wastewater**

a. **Operation and Maintenance Requirements**

New and replaced onsite systems for domestic wastewater installed after the effective date of this ordinance shall be subject to the same requirements for operation and maintenance as are structural BMPs for stormwater, including, at a minimum, annual inspection reports and a recorded operation and maintenance agreement, pursuant to Section 6.4G of this ordinance and Wake County Health Department.

b. **Standards for Operation and Maintenance**

Onsite systems for domestic wastewater covered by this ordinance shall be operated and maintained so as to avoid adverse effects on surface water and groundwater, including eutrophication of surface water and microbial or nitrate contamination of groundwater. Septic tank residuals shall be pumped whenever necessary to assure the proper operation of the system to meet these standards, and the septage shall be reused or disposed of in a manner that does not present significant risks to human health, surface water or groundwater.

6. **Nitrogen Reduction Option**

When chosen as an option under Section 10.3E(2), nitrogen loading for the entire site shall be reduced by a minimum of 30 percent. This reduction can be achieved using any device listed in the *Manual* or any other proprietary device approved by the Town Engineer. For calculating the nitrogen export, refer to the *Neuse River Basin: Model Stormwater Program for Nitrogen Control Manual*.

7. **Performance Security of BMP Installation**

The Town of Knightdale may, at its discretion, require the submittal of a performance security or bond with surety, cash escrow, letter of credit or other acceptable legal arrangement prior to issuance of a permit in order to ensure that the structural BMPs are installed by the permit holder as required by the approved stormwater management plan.

a. **Amount:** The amount of an installation performance security shall be the total estimated construction cost of the BMPs approved under the permit, plus 25%.

b. **Forfeiture Provisions:** The performance security shall contain forfeiture provisions for failure, after proper notice, to:

- complete work within the time specified, or
- to initiate or maintain any actions which may be required of the applicant or owner in accordance with this ordinance or approvals issued pursuant to this ordinance.

- c. **Default:** Upon default of the owner to construct any structural BMP in accordance with the applicable permit, the Administrator shall obtain and use all or any portion of the security to make necessary improvements based on an engineering estimate. Such expenditure of funds shall only be made after requesting the owner to comply with the permit. In the event of a default triggering the use of installation performance security, the Town of Knightdale shall not return any of the unused deposited cash funds or other security, which shall be retained for maintenance (*Section 6.4G*).
- d. **Costs in Excess of Performance Security:** If the Town of Knightdale takes action upon such failure by the applicant or owner, the Town of Knightdale may collect from the applicant or owner for the difference, should the amount of the reasonable cost of such action exceed the amount of the security held.
- e. **Refund:** Within 60 days of receiving a Certificate of Occupancy, the installation performance security shall be refunded to the applicant or terminated, with the exception of any amount attributable to the cost (plus 25%) of landscaping installation covered by the security. Any such landscaping shall be inspected one (1) year after installation with replacement for compliance with the approved plans and specifications and, if in compliance, the portion of the financial security attributable to landscaping shall be released.

F. Maintenance

1. General Standards for Maintenance

a. Function of BMPs As Intended

The owner of each structural BMP installed pursuant to this ordinance shall maintain and operate it so as to preserve and continue its function in controlling stormwater quality and quantity at the degree or amount of function for which the structural BMP was designed.

b. Annual Maintenance Inspection and Report

The person responsible for maintenance of any structural BMP installed pursuant to this ordinance shall submit to the Administrator an inspection report from a qualified registered North Carolina professional engineer, surveyor, or landscape architect performing services only in their area of competence. The inspection report shall contain all of the following:

- i. The name and address of the land owner;
- ii. The recorded book and page number of the lot of each structural BMP;
- iii. A statement that an inspection was made of all structural BMPs;
- iv. The date the inspection was made;
- v. A statement that all inspected structural BMPs are performing properly and are in compliance with the terms and conditions of the approved maintenance agreement required by Section 6.4G(2) of this ordinance; and

- vi. The original signature and seal of the engineer, surveyor, or landscape architect.

All inspection reports shall be on forms supplied by the Administrator. An original inspection report shall be provided to the Administrator beginning one year from the date of as-built certification and each year thereafter on or before the date of the as-built certification.

2. Operation and Maintenance Agreement

a. In General

Prior to the conveyance or transfer of any lot or building site to be served by a structural BMP pursuant to this ordinance, and prior to issuance of any permit for development or redevelopment requiring a structural BMP pursuant to this ordinance, the applicant or owner of the site must execute an operation and maintenance agreement that shall be binding on all subsequent owners of the site, portions of the site and lots or parcels served by the structural BMP. Until the transference of all property, sites or lots served by the structural BMP, the original owner or applicant shall have primary responsibility for carrying out the provisions of the agreement.

The operation and maintenance agreement shall require the owner or owners to maintain, repair and, if necessary, reconstruct the structural BMP, and shall state the terms, conditions, and schedule of maintenance for the structural BMP. In addition, as required by Section 6.4G(7), it shall grant to the Town a right of entry in the event that the Administrator has reason to believe it has become necessary to inspect, monitor, maintain, repair, or reconstruct the structural BMP; however, in no case shall the right of entry, of itself, confer an obligation on the Town to assume responsibility for the structural BMP.

The operation and maintenance agreement must be approved by the Administrator prior to final plat approval. The agreement shall be noted on the final plat and shall be recorded with the county Register of Deeds following final plat recordation. A copy of the recorded operation and maintenance agreement shall be given to the Administrator within 14 days following its recordation.

b. Special Requirement for Homeowners' and Other Associations

For all structural BMPs required pursuant to this ordinance and that are to be or are owned and maintained by a homeowners' association, property owners' association or similar entity, the required operation and maintenance agreement shall include all of the following provisions:

- i. Acknowledgment that the association shall continuously operate and maintain the stormwater control and management facilities;
- ii. Before improvements are accepted for maintenance by the property owner's association or lot Owner, the developer of the developer's engineer or other representative, as authorized by Statute, must certify to the property owners' association or lot Owner and to the town that improvements are complete and function as designed.
- iii. It shall be established in the maintenance agreement and/or documents providing for the establishment of a homeowners'

association or similar legal entity, that the association has clear legal authority to maintain and exercise control over, including the power to compel contributions from subdivision property owners to cover their proportionate share of the costs associated with the maintenance of the BMPs. Such association shall be established prior to approval of the final plat and documents approved by the Administrator or designee.

- iv. Granting to the Town a right of entry to inspect, monitor, maintain, repair, and reconstruct structural BMPs;
- v. Allowing the Town to recover from the association and its members any and all costs the Town expends to maintain or repair the structural BMPs or to correct any operational deficiencies. Failure to pay the Town all of its expended costs, after 45 days written notice, shall constitute a breach of the agreement. The Town shall thereafter be entitled to bring an action against the association and its members to pay, or foreclose upon the lien hereby authorized by the agreement against the property, or both, in case of a deficiency. Interest, collection costs, and attorney fees shall be added to the recovery;
- vi. A statement that this agreement shall not obligate the Town to maintain or repair any structural BMPs, and the Town shall not be liable to any person for the condition or operation of structural BMPs; and
- vii. A statement that this agreement shall not in any way diminish, limit or restrict the right of the Town to enforce any of its ordinances as authorized by law.

3. Inspection Program

Inspections and inspection programs by the Town may be conducted or established on any reasonable basis, including but not limited to routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to, reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in BMPs; and evaluating the condition of BMPs.

Should the owner or occupant of any property refuse to permit such inspection, the Administrator shall proceed to obtain an administrative search warrant pursuant to G.S. 15-27.2 or its successor. No person shall obstruct, hamper or interfere with the Administrator while carrying out his or her official duties.

4. Notice to Owners

a. Deed Recordation and Indications On Plat

Any conservation easement or dedication and acceptance into public maintenance (whichever is applicable) pertaining to every structural BMP shall be referenced on the final plat and shall be recorded with the county Register of Deeds upon final plat approval. Operations and maintenance agreements shall be noted on the final plat as required in Section 6.4F(2)a. If no subdivision plat is recorded for the site, then the operations and

maintenance agreement, conservation easement, or dedication and acceptance into public maintenance (whichever is applicable) shall be recorded with the county Register of Deeds so as to appear in the chain of title of all subsequent purchasers under generally accepted searching principles.

b. Signage

Where appropriate in the determination of the Administrator to assure compliance with this ordinance, structural BMPs shall be posted with a conspicuous sign stating who is responsible for required maintenance and annual inspection. The sign shall be maintained so as to remain visible and legible.

5. Records of Installation and Maintenance Activities

The owner of each structural BMP shall keep records of inspections, maintenance, and repairs for at least five (5) years from the date of creation of the record and shall submit the same upon reasonable request to the Administrator.

6. Nuisance

The owner of each stormwater BMP, whether structural or non-structural BMP, shall maintain it so as not to create or result in a nuisance condition.

7. Maintenance Easement

Every structural BMP installed pursuant to this ordinance shall be made accessible for adequate maintenance and repair by a maintenance easement. The easement shall be recorded by deed and its terms shall specify who may make use of the easement and for what purposes.

8. BMP Maintenance Requirements for Non-Residential Property Associations

As required in Section 6.4F(2), the owner of a stormwater BMP must adhere to the maintenance schedule as dictated in the approved BMP Operations and Maintenance Agreement. Failure of the owner(s) to comply with said schedule shall constitute a violation of this ordinance and shall be subject to the applicable procedures and penalties of Chapter 18.

9. Payment to Stormwater Facility Replacement Fund

- a. At the time of recording a subdivision plat or issuance of a building permit for a lot not established by subdivision, whichever event first occurs, the developer shall pay to the Town a stormwater facility replacement fund payment, which payment shall equal 33% of the estimated cost of construction all stormwater control facilities shown on applicable development plans.
- b. The purpose of the stormwater replacement fund is to ensure that adequate funds are available to the Town for the maintenance, repair, replacement and reconstruction of stormwater control facilities required by this UDO. Funds expended from the stormwater control facility replacement fund shall be used only for the repair, maintenance, reconstruction and/or replacement of stormwater control facilities, together with the costs

incurred by the City associated with any work and /or redesign of the facilities.

- c. The payment of stormwater facility replacement fees is not intended as a substitute for security to ensure the construction and performance as specified.

6.5 Illicit Discharge and Connection to Stormwater

A. Purpose and Intent

The purpose of this ordinance is to provide for the health, safety, and general welfare of the citizens of the Town through the regulation of non-stormwater discharges to the storm drainage system to the maximum extent practicable as required by federal and state law. This ordinance establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process. The objectives of this ordinance are:

1. To regulate the contribution of pollutants to the MS4 by stormwater discharges by any user; and
2. To prohibit Illicit Connections and Discharges to the municipal separate storm sewer system; and
3. To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this ordinance.

B. Applicability

This ordinance shall apply to all water entering the storm drain system generated on any developed and undeveloped lands unless explicitly exempted by an authorized enforcement agency.

C. Ultimate Responsibility

The standards set forth herein and promulgated pursuant to this ordinance are minimum standards; therefore this ordinance does not intend nor imply that compliance by any person will ensure that there will be no contamination, pollution or unauthorized discharge of pollutants.

D. Discharge Prohibitions

1. Prohibition of Illegal Discharges

No person shall discharge or cause to be discharged into the municipal storm drain system or watercourses any materials, including but not limited to pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standards, other than stormwater. The commencement, conduct or continuance of any illegal discharge to the storm drain system is prohibited except as described as follows:

- a. The following discharges are exempt from discharge prohibitions established by this ordinance: water-line flushing or other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising ground water, ground water infiltration to storm drains, uncontaminated pumped ground water, foundation or footing drains (not including active

groundwater dewatering systems), crawl space pumps, air conditioning condensation, springs, non-commercial washing of vehicles, natural riparian habitat or wet-land flows, swimming pools (if dechlorinated - typically less than one (1) PPM chlorine), fire fighting activities and any other water source not containing pollutants.

- b. Discharges specified in writing by the authorized enforcement agency as being necessary to protect public health and safety.
- c. Dye testing is an allowable discharge, but requires a verbal notification to the authorized enforcement agency prior to the time of the test.
- d. The prohibition shall not apply to any non-stormwater discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal Environmental Protection Agency (EPA), provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm drain system.

2. Prohibition of Illicit Connections

- a. The construction, use, maintenance or continued existence of illicit connections to the storm drain system is prohibited.
- b. This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.
- c. A person is considered to be in violation of this ordinance if the person connects a line conveying sewage to the MS4, or allows such a connection to continue (*see Chapter 18: Violations and Penalties*).

E. Suspension of MS4 Access

1. Suspension due to Illicit Discharges in Emergency Situations

The Administrator may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the MS4 or Waters of the U.S. If the violator fails to comply with a suspension order issued in an emergency, the authorized enforcement agency may take such steps as deemed necessary to prevent or minimize damage to the MS4 or Waters of the U.S., or to minimize danger to persons.

2. Suspension due to the Detection of Illicit Discharge

Any person discharging to the MS4 in violation of this ordinance may have their MS4 access terminated if such termination would abate or reduce an illicit discharge. The authorized enforcement agency will notify a violator of the proposed termination of its MS4 access. The violator may petition the authorized enforcement agency for a reconsideration and hearing.

A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this Section, without the prior approval of the authorized enforcement agency.

F. Industrial or Construction Activity Discharges

Any person subject to an industrial or construction activity NPDES stormwater discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the Administrator prior to the allowing of discharges to the MS4.

G. Monitoring of Discharges

1. Applicability

This section applies to all facilities that have stormwater discharges associated with industrial activity, including construction activity.

2. Access to Facilities

- a. The Administrator shall be permitted to enter and inspect facilities subject to regulation under this ordinance as often as may be necessary to determine compliance with this ordinance. If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to the Administrator.
- b. Facility operators shall allow the Administrator ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records that must be kept under the conditions of an NPDES permit to discharge stormwater, and the performance of any additional duties as defined by state and federal law.
- c. The Administrator shall have the right to set up on any permitted facility such devices as are necessary in the opinion of the Administrator to conduct monitoring and/or sampling of the facility's stormwater discharge.
- d. The Administrator has the right to require the discharger to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure stormwater flow and quality shall be calibrated to ensure their accuracy.
- e. Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the operator at the written or oral request of the Administrator and shall not be replaced. The costs of clearing such access shall be borne by the operator.
- f. Unreasonable delays in allowing the Administrator access to a permitted facility is a violation of a stormwater discharge permit and of this ordinance. A person who is the operator of a facility with a NPDES permit to discharge stormwater associated with industrial activity commits an offense if the person denies the Administrator reasonable access to the permitted facility for the purpose of conducting any activity authorized or required by this ordinance.
- g. If the Administrator has been refused access to any part of the premises from which stormwater is discharged, and he/she is able to demonstrate probable cause to believe that there may be a violation of this ordinance, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this ordinance or any order issued hereunder, or to protect the overall public health, safety, and welfare of the community, then the Administrator may seek issuance of a search warrant from any court of competent jurisdiction.

H. Requirement to Prevent, Control and Reduce Stormwater Pollutants by the Use of BMPs

The Administrator will adopt requirements identifying BMPs for any activity, operation or facility which may cause or contribute to pollution or contamination of stormwater, the storm drain system, or waters of the U.S. The owner or operator of a commercial or industrial establishment shall provide, at their own expense, reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses through the use of these structural and non-structural BMPs. Further, any person responsible for a property or premise, which is, or may be, the source of an illicit discharge, may be required to implement, at said person's expense, additional structural and non-structural BMPs to prevent the further discharge of pollutants to the municipal separate storm sewer system. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of stormwater associated with industrial activity, to the extent practicable, shall be deemed compliance with the provisions of this section. These BMPs shall be part of a stormwater pollution prevention plan (SWPP) as necessary for compliance with requirements of the NPDES permit.

I. Watercourse Protection

Every person owning property through which a watercourse passes or such person's lessee, shall keep and maintain that part of the watercourse within the property free of trash, debris, excessive vegetation and other obstacles that would pollute, contaminate or significantly retard the flow of water through the watercourse. In addition, the owner or lessee shall maintain existing privately owned structures within or adjacent to a watercourse, so that such structures will not become a hazard to the use, function or physical integrity of the watercourse.

J. Notification of Spills

Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into stormwater, the storm drain system, or water of the U.S.; said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, said person shall notify the Administrator in person or by phone or facsimile no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the Administrator within three (3) business days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three (3) years.

6.6 Flood Damage Prevention

The flood prone areas within the jurisdiction of the Town are subject to periodic inundation which results in loss of life, property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures of flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare. These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities, and by the occupancy in flood prone areas by uses vulnerable to floods or hazardous to other lands which are inadequately elevated, flood-proofed, or otherwise unprotected from flood damages.

In an effort to avoid potential flood losses special flood hazard areas (SFHAs) cannot be located on any single-family residential building lot (detached or attached) within a major subdivision as defined in Section 15.4F(6). In general terms SFHAs in major subdivisions must be platted as separate lots where the responsibility of maintaining (in a natural state) said SFHA in perpetuity is typically designated to a homeowners association or non-profit land conversation agency. Lots that have received Construction Document approval or part of an approved Planned Residential District (PRD) approved prior to March 6, 2017 shall be exempt from this requirement.

A. Purpose and Intent

It is the purpose of this ordinance to promote public health, safety and general welfare and to minimize public and private losses due to flood conditions within flood prone areas by provisions designed to:

1. restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion, flood heights or velocities; and
2. require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; and
3. control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of flood waters; and
4. control filling, grading, dredging, and all other development which may increase erosion or flood damage; and
5. prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

B. General Provisions

1. Basis for Establishing the Special Flood Hazard Areas

The Special Flood Hazard Areas and Future Conditions Flood Hazard Areas are those identified by the Federal Emergency Management Administration (FEMA) or produced under the Cooperating Technical State (CTS) agreement between the State of North Carolina and FEMA in its Flood Insurance Study (FIS) and its accompanying Flood Insurance Rate Maps (FIRMs), for Wake County dated May 2, 2006, which are adopted by reference and declared to be a part of this ordinance. The Special Flood Hazard Areas and Future Conditions Flood Hazard Areas also include those defined through standard engineering analysis for private developments or by governmental agencies, but which have not yet been incorporated in the FIRM. This includes, but is not limited to, detailed flood data:

- a. generated as a requirement of this ordinance;

- b. preliminary FIRMs where more stringent than the effective FIRM; or
- c. post-disaster Flood Recovery Maps.

2. Establishment of Floodplain Development Permit

A Floodplain Development Permit shall be required in conformance with the provisions of this ordinance prior to the commencement of any development activities within Special Flood Hazard Areas and Future Conditions Flood Hazard Areas determined in 6.6B(1).

3. Compliance

No structure or land shall hereafter be located, extended, converted, altered, or developed in any way without full compliance with the terms of this ordinance and other applicable regulations.

4. Abrogation and Greater Restrictions

This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

5. Interpretation

In the interpretation and application of this ordinance, all provisions shall be:

- a. considered as minimum requirements;
- b. liberally construed in favor of the governing body; and
- c. deemed neither to limit nor repeal any other powers granted under State statutes.

6. Warning and Disclaimer of Liability

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur on rare occasions. Actual flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the Special Flood Hazard Areas and Future Conditions Flood Hazard Areas or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of the Town or by any officer or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

C. Administration

1. Floodplain Development Permit Data Requirements

The following information shall be provided at a minimum on the Floodplain Development Permit to ensure compliance with this code.

- a. A description of the development to be permitted under the floodplain development permit issuance.
- b. The Special Flood Hazard Area or Future Conditions Flood Hazard Area determination for the proposed development per available data specified in Section 6.6B(1).
- c. The regulatory flood protection elevation required for the reference level and all attendant utilities.
- d. The regulatory flood protection elevation required for the protection of all public utilities.
- e. All certification submittal requirements with timelines.
- f. States that no fill material shall encroach into the floodway or non-encroachment area of any watercourse, if applicable.
- g. The flood openings requirements as dictated by FEMA Technical Bulletin 1-93 Opening in Foundation Walls, if in Zones A, AE or X (Future).
- h. State limitations of below base flood elevation (BFE) enclosure uses (i.e., parking, building access and limited storage only).

2. Certification Requirements

a. Elevation Certificates

- i. An Elevation Certificate (FEMA Form 81-31) is required after the reference level is completed. Within 21 calendar days of establishment of the reference level elevation, it shall be the duty of the permit holder to submit to the Administrator a certification of the elevation of the reference level in relation to mean sea level. Said certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. Any work done within the 21 day calendar period and prior to submission of the certification shall be at the permit holder's risk. The Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the certification or failure to make said corrections required shall be cause to issue a stop-work order for the project.
- ii. A Final As-Built Elevation Certificate (FEMA Form 81-31) is required after construction is completed and prior to Certificate of Compliance/Occupancy issuance. It shall be the duty of the permit holder to submit to the Administrator a certification of final as-built construction of the elevation of the reference level and all attendant utilities. Said certification shall be prepared by or under the direct

supervision of a registered land surveyor or professional engineer and certified by same. The Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to Certificate of Compliance/Occupancy issuance. In some instances, another certification may be required to certify corrected as-built construction. Failure to submit the certification or failure to make said corrections required shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy.

- iii. If a watercourse is to be altered or relocated, a description of the extent of watercourse alteration or relocation; an engineering report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream; and a map showing the location of the proposed watercourse alteration or relocation shall all be submitted by the permit applicant prior to issuance of a floodplain development permit.

b. Floodproofing Certificate

If non-residential floodproofing is used to meet the regulatory flood protection elevation requirements, a Floodproofing Certificate (FEMA Form 81-65), with supporting data and an operation plan, is required prior to the start of any new construction. It shall be the duty of the permit holder to submit to the Administrator a certification of the floodproofed design elevation of the reference level and all attendant utilities, in relation to mean sea level. Floodproofing certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The Administrator shall review the certificate data and plan. Deficiencies detected by such review shall be corrected by the applicant prior to permit approval. Failure to submit the certification or failure to make required correction shall be cause to deny a floodplain development permit. Failure to construct in accordance with the certified design shall be cause to withhold issuance of a Certificate of Occupancy.

c. Certification Exemptions: The following structures, if located within Zones A, AE or X (Future), are exempt from the elevation/floodproofing certification requirements specified in 6.6C(2)a and 6.6C(2)b:

- i. Recreational Vehicles meeting requirements of Section 6.6D(3)f;
- ii. Temporary Structures meeting requirements of Section 6.6D(3)g; and
- iii. Accessory Structures less than 150 square feet meeting requirements of Section 6.6D(3)h.

D. Provisions for Flood Hazard Reduction

1. Floodways and Non-Encroachment Areas

Located within the Special Flood Hazard Areas established in Section 6.6B(1) are areas designated as floodways or non-encroachment areas. The floodways and non-encroachment areas are extremely hazardous areas due to the velocity of floodwaters that have erosion potential and carry debris and potential projectiles. The following provisions shall apply to all development within such areas:

- a. No encroachments, including fill, new construction, substantial improvements and other developments shall be permitted unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood. Such certification and technical data shall be presented to the Administrator prior to issuance of floodplain development permit.
- b. If Section 6.6D(1)a is satisfied, all development shall comply with all applicable flood hazard reduction provisions of this ordinance.
- c. No manufactured homes shall be permitted, except replacement manufactured homes in an existing manufactured home park or subdivision provided the following provisions are met:
 - i. the anchoring and the elevation standards of Section 6.6D(3)c; and
 - ii. the no encroachment standards of Section 6.6D(1)a are met.

2. General Standards

- a. All new construction and substantial improvements, where permitted, shall be:
 - i. Anchored to prevent flotation, collapse, or lateral movement of the structure; and
 - ii. Constructed with materials and utility equipment resistant to flood damage; and
 - iii. Constructed by methods and practices that minimize flood damages.
- b. Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding. These include but are not limited to HVAC equipment, water softener units, bath/kitchen fixtures, ductwork, electric meter panels/boxes, utility/cable boxes, appliances (i.e., washers, dryers, refrigerator, etc.), hot water heaters, and electric outlets/switches.
- c. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.
- d. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters.
- e. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.
- f. Any alteration, repair, reconstruction, or improvements to a structure, which is in compliance with the provisions of this ordinance, shall meet the requirements of “new construction” as contained in this ordinance.
- g. Non-conforming structures or other development may not be enlarged, replaced, or rebuilt unless such enlargement or reconstruction is accomplished in conformance with the provisions of this ordinance.

Provided, however, nothing in this ordinance shall prevent the repair, reconstruction, or replacement of a building or structure existing on the effective date of this ordinance and located totally or partially within the floodway, non-encroachment area, or stream setback, provided that the bulk of the building or structure below the regulatory flood protection elevation in the floodway, non-encroachment area, or stream setback is not increased and provided that such repair, reconstruction, or replacement meets all of the other requirements of this ordinance.

- h.** New solid waste disposal facilities, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted in Special Flood Hazard Areas or Future Conditions Flood Hazard Areas. A structure or tank for chemical or fuel storage incidental to an allowed use or to the operation of a water treatment plant or wastewater treatment facility maybe located in a Special Flood Hazard Area or Future Conditions Flood Hazard Area only if the structure or tank is either elevated or floodproofed to at least the regulatory flood protection elevation and certified according to Section 6.6C(2) of this code.

3. Specific Standards

In all Special Flood Hazard Areas where BFE data has been provided and in Future Conditions Flood Hazard Areas where Future Conditions Flood Elevations data has been provided, as set forth in Section 6.6B(1), the following provisions are required:

a. Residential Construction

New construction or substantial improvement of any residential structure (including manufactured homes) shall have the reference level, including basement, elevated no lower than two feet above the regulatory flood protection elevation or established BFE.

b. Non-Residential Construction

New construction or substantial improvement of any commercial, industrial, or other non-residential structure shall have the reference level, including basement, elevated no lower than the regulatory flood protection elevation. Structures located in A, AE and X (Future) Zones may be floodproofed to the regulatory flood protection elevation in lieu of elevation provided that all areas of the structure below the required flood protection elevation are watertight with walls substantially impermeable to the passage of water, using structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the official as set forth in Section 6.6C(2).

c. Manufactured Homes

New or replacement manufactured homes shall be elevated so that the reference level of the manufactured home is no lower than the regulatory flood protection elevation. In no case shall manufactured mobile homes be allowed in an A, AE or X (Future) Zone.

d. Elevated Buildings

New construction or substantial improvements of elevated buildings that include fully enclosed areas that are below the regulatory flood protection elevation shall not be designed to be used for human habitation, but shall be designed to be used only for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises, be constructed entirely of flood resistant materials below the regulatory flood protection level in A, AE or X (Future) zones and meet the following design criteria:

- i.** Measures for complying with this requirement shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. To meet this requirement, the foundation must either be certified by a professional engineer or architect or meet the following minimum design criteria:
 - a)** Provide a minimum of two (2) openings on different sides of each enclosed area subject to flooding.
 - b)** The total net area of all openings must be at least one (1) square inch for each square foot of each enclosed area subject to flooding.
 - c)** If a building has more than one (1) enclosed area, each area must have openings on exterior walls to allow floodwater to automatically enter and exit;
 - d)** The bottom of all required openings shall be no higher than one (1) foot above the adjacent grade; and,
 - e)** Openings may be equipped with screens, louvers, or other opening coverings or devices provided they permit the automatic flow of floodwaters in both directions.
 - f)** Foundation enclosures:
 - i)** Vinyl or sheet metal skirting is not considered an enclosure for regulatory and flood insurance rating purposes. Therefore such skirting does not require hydrostatic openings as outlined above.
 - ii)** Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires hydrostatic openings as outlined above to comply with this ordinance.
- ii.** Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator). The interior portion of such enclosed area shall not be partitioned or finished into separate rooms, except to enclose storage areas.

e. Additions/Improvements

- i.** Additions and/or improvements to pre-FIRM structures whereas the addition and/or improvements in combination with any interior modifications to the existing structure:
 - a)** are not a substantial improvement, the addition and/or improvements must be designed to minimize flood damages and must not be any more non-conforming than the existing structure; and
 - b)** is a substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction.
- ii.** Additions to post-FIRM structures with no modifications to the existing structure shall require only the addition to comply with the standards for new construction.
- iii.** Additions and/or improvements to post-FIRM structures whereas the addition and/or improvements in combination with any interior modifications to the existing structure:
 - a)** are not a substantial improvement, the addition and/or improvements only must comply with the standards for new construction; and
 - b)** are a substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction.
- iv.** Where a fire wall or independent perimeter load-bearing wall is provided between the addition and the existing building, the addition(s) shall be considered a separate building and only the addition must comply with the standards for new construction.

f. Recreational Vehicles

Recreation vehicles shall not be allowed within a Special Flood Hazard Area or a Future Conditions Flood Hazard Area. Furthermore, they shall be on site for fewer than 180 consecutive days and be fully licensed and ready for highway use (A recreational vehicle is read for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and has no permanently attached additions).

g. Temporary Structures

Prior to the issuance of a floodplain development permit for a temporary structure, (i.e. Construction Trailer) the following requirements must be met:

- i.** Applicants must submit to the Administrator a plan for the removal of such structure(s) in the event of a hurricane or flash flood warning notification. The plan must include the following information:
 - a)** a specified time period for which the temporary use will be permitted;

- b) the name, address, and phone number of the individual responsible for the removal of the temporary structure;
- c) the time frame prior to the event at which a structure will be removed (i.e. minimum of 72 hours before landfall of a hurricane or immediately upon flood warning notification);
- d) a copy of the contract or other suitable instrument with a trucking company to insure the availability of removal equipment when needed; and
- e) designation, accompanied by documentation, of a location outside the Special Flood Hazard Area or Future Conditions Flood Hazard Area to which the temporary structure will be moved.

- ii. The above information shall be submitted in writing to the Administrator for review and written approval.

h. Accessory Structures

When accessory structures (sheds, detached garages, etc. *see Section 4.6*) are to be placed within a Special Flood Hazard Area or Future Conditions Flood Hazard Area, the following criteria shall be met:

- i. Accessory structures shall not be used for human habitation (including work, sleeping, living, cooking or restroom areas);
- ii. Accessory structures shall be designed to have low flood damage potential;
- iii. Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters;
- iv. Accessory structures shall be firmly anchored in accordance with Section 6.6D(2)a;
- v. All service facilities such as electrical and heating equipment shall be installed in accordance with Section 6.6D(2)b; and
- vi. Openings to relieve hydrostatic pressure during a flood shall be provided below regulatory flood protection elevation in conformance with Section 6.6D(3)d(i).
- vii. An accessory structure with a footprint less than 150 square feet does not require an elevation or floodproofing certificate. Elevation or floodproofing certifications are required for all other accessory structures in accordance with Section 6.6C(2).
- viii. Accessory structures shall not be temperature-controlled.

4. Subdivisions and Major Developments

All subdivisions and major development proposals located with Special Flood Hazard Areas or Future Conditions Flood Hazard Areas shall:

- a. be consistent with the need to minimize flood damage;
- b. have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;
- c. have adequate drainage provided to reduce exposure to flood hazards; and
- d. have received all necessary permits from those governmental agencies for which approval is required by Federal or State law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.

5. Standards for Floodplains Without Established Base Flood Elevations

Within the Special Flood Hazard Areas designated as Approximate Zone A and established in Section 6.6B(1), where no BFE data has been provided, the following provisions shall apply:

- a. No encroachments, including fill, new construction, substantial improvements or new development shall be permitted within a distance of fifty feet each side from top of bank or five times the width of the stream whichever is greater, unless certification with supporting technical data by a registered professional engineer is provided demonstrating that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- b. The BFE used in determining the regulatory flood protection elevation shall be determined based on one of the following criteria set in priority order:
 - i. If BFE data is available from other sources, all new construction and substantial improvements within such areas shall also comply with all applicable provisions of this ordinance and shall be elevated or floodproofed in accordance with Section 6.6C(2).
 - ii. All subdivision and major development proposals shall provide BFE data if development is greater than five (5) acres or has more than 50 lots/manufactured home sites. Such BFE data shall be adopted by reference per Section 6.6B(1) to be utilized in implementing this ordinance.
 - iii. When BFE data is not available from a Federal, State, or other source as outlined above, the reference level, including basement, shall be elevated at least two (2) feet above the highest adjacent grade.

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Chapter 7. RECREATIONAL OPEN SPACE

7.1 Purpose and Intent

Open spaces are characterized by the fact that the outdoor space has some recreational, ecological and/or aesthetic value. Open space generally includes, but is not limited to: outdoor areas not covered by buildings, structures, parking lots, “dry” stormwater detention facilities, public rights-of-way or required setbacks. Specifically, recreational open space is distinct from those areas that are ecologically significant and must be protected in their pristine state in that it is designed to supplement the human habitat through its use and enjoyment. While Chapter 6 addresses the requirements related to areas of ecological value, the intent of these requirements is to allow for the active or passive usage of centrally located land as neighborhood recreational open spaces available to the public, and not to permit the use of leftover or otherwise unusable land to fulfill the requirements of this Chapter.

7.2 General Provisions.

- A. **Consistency with Parks and Recreation Master Plan:** Areas noted on any adopted Parks and Recreation Master Plan as open space shall be incorporated into developments where applicable.
- B. **Location and Improvement:** Recreational open space shall be planned and improved to provide focal points for a neighborhood and are centrally located so that they are accessible and usable by persons living within a half (1/2) mile walking distance. A central square or green, for example, may comprise a majority of the area required for dedication. Improved shall mean cleared of underbrush and debris and containing active or passive enhancements as described in Section 7.5A
- C. **Preservation of Natural Aesthetic Features:** Significant stands of trees, stream bed areas, and other valuable natural aesthetic features shall be preserved within the recreational open space areas where practical.
- D. **Placement of Amenities:** Recreational open space amenities such as playground equipment, statues, and fountains should be located toward the interior of squares and parks, sufficiently away from the public right-of-way, to provide for the adequate safety of users.
- E. **Ownership:** Dedicated recreational open space may be held in private ownership, provided that the necessary easements are recorded with the Wake County Register of Deeds in a form approved by the Town. Otherwise, dedicated recreational open space shall be separately deeded to a homeowner’s association, a non-profit land trust or conservancy, Wake County, or the Town of Knightdale (upon approval by the Town Council).

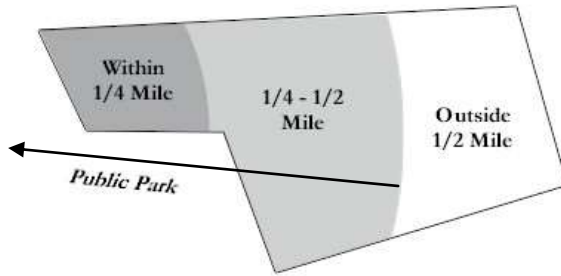
7.3 Recreational Open Space Dedication

All developments with more than eight (8) residential units shall be required to dedicate recreational open space. The amount of recreational open space required for dedication shall be determined using the following Recreational Open Space Dedication Matrix (“*Dedication Matrix*”). The Dedication Matrix is based upon similar dedication requirements throughout the State of North Carolina with a few enhancements:

- A. Proximity to Improved Publicly Dedicated Recreational Open Space Credits:**
The Dedication Matrix accounts for the availability of accessible recreational open space in close proximity to the proposed development. The portion of a development within a half (1/2) mile walk (along sidewalks or other pedestrian access within a public right-of-way or public easement) to existing publicly dedicated recreational open space (parks, greenways, etc.) are granted a reduction in required recreational open space dedication of 25%. Similarly, the portion of a developments that is adjacent (within a quarter (1/4) mile) to existing publicly dedicated recreational open space are granted a 50% reduction in required dedication. Publicly dedicated recreational open space means that the property has been dedicated to the Town of Knightdale or other government agency, is actively maintained through a maintenance agreement or acceptance for maintenance by the government agency, and has been improved as provided for in Section 7.2(B).
- B. Density (Dwelling Units/Acre):** To encourage the preservation of proportional acres of land in higher density developments, the matrix provides for an increasing requirement in the dedication of recreational open space as gross density also increases.
- C. Number of Bedrooms:** In addition to density, the Dedication Matrix was also designed to base recreational open space requirements on the estimated number of bedrooms in a given development rather than the more typical dedication based upon the number of dwelling units, since bedroom counts better represent the actual number of residents for whom an appropriate amount of recreational open space is needed. For the purposes of good faith estimation, all single family developments will dedicate open space at a rate of 3.5 bedrooms per unit unless otherwise stipulated. In the absence of known building specifications, attached homes and apartments will dedicate open space at a rate of 2.5 bedrooms per unit.

RECREATIONAL OPEN SPACE DEDICATION MATRIX					
	Gross Dwelling Units per Acre (7.3B)				Proximity Zone (7.3A)
	0-2	2-6	6-10	+10	
Estimated Number of Bedrooms (7.3C) X	500	520	550	580	Outside 1/2 mile
	375	390	413	435	Between 1/4 and 1/2 mile
	250	260	275	290	Within 1/4 mile
<i>All figures are in square feet</i>					
<i>How to use this matrix:</i>					
1. Estimate average density for each zone of proximity within the development.					
2. Estimate the total number of bedrooms within each zone of proximity.					
3. Multiply the total number of bedrooms within each zone of proximity times the dedication rate (in square feet) for the corresponding average density for each zone of proximity.					
4. If applicable, add the preceding results for each zone of proximity together to determine the total dedication required.					

EXAMPLE:



A developer wants to subdivide a 50 acre tract of land into 120 lots for 120 single-family dwellings. The good faith estimated number of bedrooms per dwelling is 3.5. 8 acres are within 1/4 mile of existing publicly dedicated open space, while another 24 acres are between 1/4 and 1/2 mile. (*Assumption: In the absence of specific information, dwelling units may be equally distributed across entire acreage.*)

How much recreational open space is required for dedication?

Density = 120 units / 50 acres or 2.4 gross dwelling units/acre (*applies to whole site*)

Bedroom Estimate:

Total bedrooms = 120 units * 3.5 bedroom/unit or 420 bedrooms

Total bedrooms within 1/4 mile = 420 bedrooms * (8/50 acres) or 68 bedrooms

Total bedrooms 1/4 - 1/2 mile = 420 bedrooms * (24/50 acres) or 202 bedrooms

Total bedrooms outside 1/2 mile = 420 bedrooms * (18/50 acres) or 152 bedrooms

Open Space Calculations (*square foot multipliers come from chart, 2.4 is between 2 – 6*):

Within 1/4 mile = 68 bedrooms * 260 square feet or 17,680 sf

1/4 - 1/2 mile = 202 bedrooms * 390 square feet or 78,780 sf

Outside 1/2 mile = 152 bedrooms * 520 square feet or 79,040 sf

Total Recreational Open Space = 17,680 sf + 78,780 sf + 79,040 sf or 175,500 square feet (*also 4.03 acres or 8% of the total area*)

D. Variation Permitted from Final Build-Out: Because the open space dedication requirements are based upon preliminary estimations of bedroom units in a given development, changing market conditions and final build-out of a project may yield a different bedroom count. In order to accommodate for variations, this code will allow the number of actual bedrooms to exceed the estimated number of bedrooms as follows:

- Less Than 10% = No further dedication required
- 10% - 25% = Payment in Lieu required for additional bedrooms
- More than 25% = Additional recreational open space dedication required

7.4 Payment in Lieu of Recreational Open Space Dedication

If recreational open space within a development is physically impractical due to unusual topographic conditions, then the Town Council may, at its discretion, accept either an equitable amount of land in another location or a fee paid to the Town in lieu of dedication. A combination of dedication and payments in lieu of dedication are permitted.

Payments in lieu of dedication shall be approved as part of the Development Plan. All payments made in lieu of dedication shall be made in accordance with the Town's Fee Schedule at the time of Final Plat approval. Failure to submit the required fee along with other required Final Plat materials will delay approval of the Final Plat until payment is rendered. All funds received for payment in lieu of dedication shall be used for the acquisition, development, or redevelopment of public open space within the Town.

7.5 Recreational Open Space Criteria

In addition to meeting the general requirements of Section 7.2, land proposed for improved recreational open space shall meet the following criteria:

A. Type

1. **Active:** At least one half (½) of the recreational open space shall be provided for active recreation purposes such as playgrounds, tennis courts, ball fields, volleyball courts, etc., and improved to accepted national or local standards for size and associated amenities. Areas including ponds, wetlands, floodplains, or easements for public utility transmission lines shall not receive credit in the computation for the amount of active recreational open space required. In addition, 10-foot multi-use paths within greenway easements required by *Appendix C: Town of Knightdale Bike Route and Greenway Plan*, while passive in nature, shall be credited as active recreational open space for the area of the public greenway easement (Section 7.5E).
2. **Passive:** Up to one half (½) of the recreational open space shall be provided for passive recreation purposes such as walking, jogging, cycling, relaxation, etc. Preservation of natural resources or cultural resources such as steep slopes, rock outcroppings, mature woodlands or water resources may also be counted provided there is some method approved by the TRC for public enjoyment and appreciation of such resources.

B. Topography

1. **Active:** The average slope of land for active recreation shall not exceed seven and one-half percent (7½ %).
2. **Passive:** The average slope of land for passive recreation shall not exceed the average slope of the entire subdivision or development, and in no case shall the average slope exceed 15% unless otherwise approved by the TRC for the preservation of natural resources.

C. Shape

1. **Active:** The shape of land for active recreation shall be sufficiently square or rectangular to be suitable for, but not limited to, playgrounds, courts, or playfields.

- 2. **Passive:** The shape of land for passive recreation shall be sufficient to encompass the walking or jogging path, natural or cultural resource or other proposed area to be enjoyed.
- D. **Unity:** Land provided for recreational open space shall form a single parcel except where the TRC determines that two (2) or more parcels are more suitable to the accessibility needs (Section 5.7E) of a particular subdivision. The TRC may require that such parcels be connected by a path contained within a strip of recreation area which shall have a minimum width of 30 feet. A maximum width of 50 feet may be required where slope, parallel utility lines or other site conditions warrant additional width.
- E. **Accessibility:** All recreational open space shall have at least 50 feet of frontage on at least one (1) public street within the subdivision. All six (6) foot multi-use asphalt paths, including those within greenway easements, shall be located on an easement of at least 20 feet in width that guarantees access by pedestrians and non-motorized vehicles. 10-foot asphalt multi-use paths within greenway easements required by Appendix C shall be located on an easement of at least 30 feet in width.

7.6 Recreational Open Space Credits

- A. **Parkways:** For each street segment within a development that is single-loaded (buildings fronting on one side only with recreational open space on the other), the area consisting of the length times half of the width of said street segment right-of-way shall be credited at a rate of 100% against the passive recreational open space square foot requirement.
- B. **Historic Resources:** Historic resources determined by the Administrator as candidates for local historic district or local historic landmark designation per Chapter 160A, Article 19, Part 3C of the North Carolina General Statutes, and are identified for preservation as part of a development proposal shall be credited 200% of the area against the passive recreational open space square foot requirement. In the case of historic buildings “preservation” shall constitute active rehabilitation and use of the building or deeded transfer of the building(s) and associated property to a local historic preservation organization enabled to receive such transfers.
- C. **Neighborhood Amenities:** Developments that provide neighborhood amenity facilities will receive a credit of 25% of the required passive open space, and 25% of the required active open space (to be equally divided). The amenities shall contain a resort style pool or equivalent with a minimum of 2,500 square feet in surface water and a clubhouse with a minimum of 1,500 square feet. Such amenity must be open to all residents of the neighborhood and are not subject to private membership separate from any related HOA dues.

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Chapter 8. TREE PROTECTION & LANDSCAPING

8.1 Purpose and Intent

The protection of existing trees and the provision of landscaping are essential components of the built urban form of the Town. The purpose of this section is to regulate the protection, preservation, installation, and long-term management of vegetation within the Town of Knightdale. Landscaping requirements are intended to:

- minimize potential nuisances such as visual impacts from adjacent properties;
- minimize transmission, noise, dust, odor, litter, and glare of lights;
- provide for a separation of space and establish a sense of privacy;
- promote the preservation of open space; and
- mitigate adverse grade changes between adjacent properties.

The appropriate use of existing and supplemental landscaping improves the aesthetic appearance of new development, thereby enhancing the local business economy while preserving and protecting the identity and character of Knightdale. Furthermore, the use of native evergreen and deciduous plant materials blend new construction with the existing natural and built environments while maintaining the aesthetic character of the Town, and the installation of drought tolerant plant materials promotes good soil management and water conservation.

8.2 Applicability

- A. Expansions and Changes of Use:** These regulations shall apply to all newly developed properties as well as changes of use, expansions which increase the gross heated square footage of an existing building by more than 25%, and expansions of vehicle accommodation areas by more than 25% (*Section 13.11*).
- B. Modification of Standards:** Where necessary to accommodate creativity in site design, or where topographic or physical site conditions are not feasible, the Administrator may modify these requirements, provided that the type and amount of landscaping or other features are equivalent in effectiveness.
- C. Emergencies:** In the case of emergencies such as windstorms, ice storms, fire, or other disasters, the requirements of this Ordinance may be waived by the Town during the emergency period so that the requirements of this Ordinance will in no way hamper private or public work to restore order in the Town. This shall not be interpreted to be a general waiver of the intent of this Ordinance.
- D. Exemptions**
1. **Lots Less Than Two (2) Acres:** Any lot less than two (2) acres shall be exempt from the tree protection provisions of this chapter. *Subdivision of property to circumvent these requirements is not permitted.*
 2. **Timbering and Silviculture:** Normal forestry activity on forestland that is taxed on the basis of its present-use value as forestland under Article 12 of Chapter 105 of the General Statutes or that is conducted in accordance with a forest management plan that is prepared or approved by a forester registered in accordance with Chapter 89B of the General Statutes shall be exempt from the tree protection provisions of this Chapter (*Section 8.5*).

If a forest landowner harvests timber and they will be developing the lot within the next three (3) to five (5) years, it is particularly important to maintain any

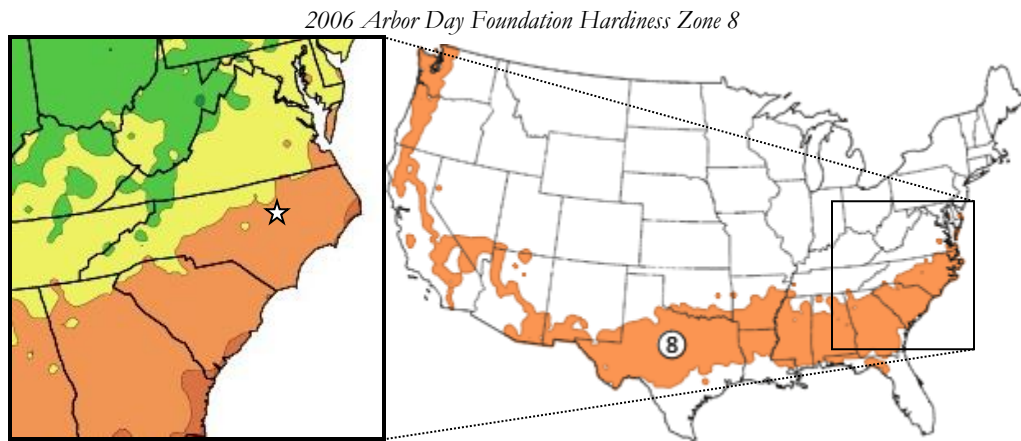
buffers that might be required under current zoning. The landowner should also be reminded in such instances that protected trees as listed in Section 8.5(A) or any canopy required under Section 8.11 will have to be accounted for. Timbering and silviculture may not be used to circumvent the requirements of this chapter for development. Forest land owners should keep a record of when the tract was harvested since that date may come into question should a development plan be submitted to the Town in the future.

In cases where the harvest results in the removal of all or substantially all of the trees that fall within required buffers, or fails to account for protected trees under Town regulations governing development of the tract of land, the Administrator may deny a building permit or refuse to approve a site or subdivision plan for either a period of up to three (3) years if it was not a willful violation of the Town's regulations, or up to five (5) years if it was a willful violation of the Town's regulations.

8.3 Plant Classifications

All measures of plant maturity shall be defined by the "Plant Profiles" promulgated by the NC Cooperative Extension Service (<http://www.ces.ncsu.edu/depts/hort/consumer/factsheets/>).

- A. **Canopy Tree:** Any tree listed on the *Town of Knightdale Approved Canopy Tree List* or other species approved by the Administrator that is hardy to "Zone 8", has an expected mature height of 35 feet or higher and has an expected mature width of at least 30 feet or greater.
- B. **Understory Tree:** Any tree listed on the *Town of Knightdale Approved Understory Tree List* or other species approved by the Administrator that is hardy to "Zone 8" and has an expected mature height of 10 to 15 feet or higher.
- C. **Shrub:** Any shrub listed on the *Town of Knightdale Approved Shrub List* or other species approved by the Administrator that is hardy to "Zone 8" and has an expected mature height of two and a half (2½) feet or higher.
- D. **Groundcover:** Mature groundcover plants are any shrub or grass species approved by the Administrator that is hardy to "Zone 8" and range from a few inches to no more than two and a half (2½) feet in height.



8.4 General Provisions

- A. **Landscape Plan:** Prior to any site disturbance, a Landscape Plan meeting the requirements of Section 16.8A shall be submitted and approved.
- B. **Pre-Construction Conference:** Prior to the commencement of any activities requiring a building or zoning permit, an on-site pre-construction conference shall take place with the developer and the Administrator to review procedures for the protection and management of all landscape elements that are to remain as identified on the Landscape Plan (*see Section 16.8A*).
- C. **Combustible Landscaping Materials Prohibited:** No pine straw or any other material with a fire rate of spread more than 24 inches per minute as determined by the most recent study of the National Institute of Standards and Technology shall be placed, kept or stored within ten feet of buildings with any portion of the exterior wall covered with combustible material. Single-family residential homes are exempt from this prohibition.



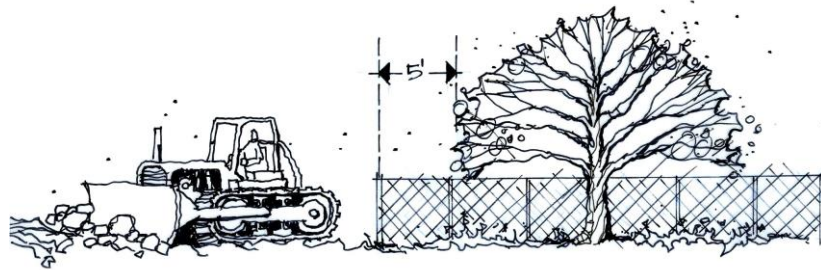
D. Existing Landscaping

1. Vegetation

- a. **Use:** The use of existing trees or shrubs to satisfy the landscaping requirements of this Chapter is strongly encouraged. Existing significant vegetation within a landscaped area required by this Chapter shall be preserved, unless otherwise approved by the Town of Knightdale at the time of Master Plan approval, and shall be credited toward the applicable standard.
- b. **Protection**
 - i. **Planning and Surveying:** Through the protection of trees and existing vegetation, the Town encourages new development to be creative in design and placement of buildings, structures, parking and other impervious surfaces as to preserve natural features and to complement the existing topography when practical. No tree greater than twelve (12) inches in diameter at breast height (DBH: *measured at 4.5 feet above grade*) located on public property or within a required tree protection area (Section 8.5) shall be removed for the purpose of surveying without an approval from the Administrator.
 - ii. **During Construction:** Protective barricades shall be placed around all protected trees designated to be saved prior to the start of development activities or grading in accordance with Standard 2.10 of the Town of Knightdale *Standard Specifications and Details Manual*. Protective barricades shall remain in place until development activities are completed. To prevent unintended compaction of soil, the area within the protective barricade shall remain free of all building materials, dirt or other construction debris, construction traffic, storage of vehicles and materials, and mass grading.

Except for driveway access points, sidewalks curb and gutter; no paving with concrete or other impervious materials within five (5) feet of a tree drip line shall be allowed unless otherwise approved. Where grading within a tree dripline cannot be avoided, cut and fill shall be limited to ¼ to ½ of the area within the dripline, and tree

roots must be pruned with clean cuts at the edge of the disturbed area. No fill shall be placed within the dripline of a tree without venting to allow air and water to reach the roots.



2. **Fences, Walls and Berms:** Existing walls or fences meeting the requirements of Section 4.7 and berms within a landscaped area required by this Chapter may be used to fulfill the standards for the type of buffer and screening required by Section 8.6, provided that these elements are healthy and/or in a condition of good repair.
3. **Other Features:** Other existing site features within a landscaped area required by this Chapter which do not otherwise function to meet the standards for the required landscaping shall be screened from the view of other properties or removed, as determined during review and approval of the Master Plan.

E. Grading and Development in Required Landscaped Areas

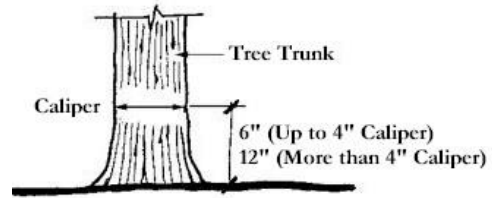
1. **All Areas:** Landscaped areas required by this Chapter shall not contain any development, impervious surfaces or site features that do not function to meet the applicable standards for that area or that require removal of existing significant vegetation.
2. **Buffer Yards:** No grading, development or land-disturbing activities shall occur within area buffer yard if forest canopy, specimen trees or significant vegetation exists within these areas, unless approved by the Administrator. If grading within a buffer yard is proposed, slopes of 1:3 or less are encouraged to ensure the proper transition of grades to the adjacent property and to facilitate landscaping and maintenance.

F. Use of Off-Site Landscape Easements: Permanent off-site landscape easements may be used to meet required buffer yards provided that the size or shape of the parcel significantly restricts the ability to reasonably use the property and meet the buffer yard requirements. These easements must be recorded prior to or in conjunction with the approval of the site or subdivision plan.

G. Installation and Maintenance Standards

1. **Installation of New Vegetation and Landscape Features:** In general, new plant material should complement existing vegetation native to the site. The use of drought tolerant, indigenous, native and/or regionally grown species of trees, shrubs and groundcovers is encouraged in order to make planted areas compatible with existing native habitats and to reduce dependency on irrigation. In addition to the following requirements, all installations shall be in accordance with Town of Knightdale *Standard Specifications & Detail Manual*.

- a. **Minimum Size:** Landscaping should be of sufficient size so that mature appearance will be achieved within three (3) years of installation for shrubs and within five (5) years of installation for trees. Where the following minimum size requirements overlap, the higher standard shall prevail:



- i. **Evergreen trees** of any classification shall not be less than six (6) feet in height with a minimum two (2) inch caliper.
- ii. **Multi-stemmed trees** of any classification shall have at least three (3) stalks and not be less than eight (8) feet in height.
- iii. **Canopy trees** shall not be less than eight (8) feet in height with a minimum two (2) inch caliper.
- iv. **Understory trees** shall be a minimum of one and a quarter (1¼) inch caliper and have a minimum height of six (6) feet.
- v. **Shrubs** shall be at least three (3) gallons in container size, have a minimum height of 18 inches and have a minimum spread of 12 to 15 inches.
- vi. **Groundcovers** shall be a minimum of one-and-a-half (1½) to two-and-a-half (2½) inch pots with a minimum spread of four (4) inches.

b. **Planting Area**

- i. **Canopy Trees:** Each canopy tree shall be provided with a minimum pervious ground area of 300 square feet for root growth (exception: Street Trees) and should be planted on slopes not to exceed 1:4 vertical to horizontal distance.
- ii. **Groundcover:** Groundcover must be planted with on-center spacing equivalent to the average mature spread for each particular species.

- c. **American Standard for Nursery Stock:** All new plant material shall be of good quality, free from disease, installed in sound manner, mulched (3-4 inch layer) and meet the standards set forth in the American Standard for Nursery Stock by the American Nursery & Landscape Association (ANLA). The selection of plants, planting methods, minimum height, root ball and container size, number of branches, and width, shall conform to the American Standard for Nursery Stock published by the ANLA for that type of tree or shrub at the time of installation.



- d. **Guying and Staking:** All new trees shall also be properly guyed and staked at the time of planting.
- e. **Mulch and Drainage:** Adequate drainage and mulching shall be provided in all cases, particularly for medians and islands.
- f. **Soil:** Installation practices shall be utilized which preserve and replace existing topsoil or amend the soil to reduce compaction.

- g. **Bare Earth Prohibited:** All portions of a landscaped area not planted with shrubs and trees or covered by a wall or other screening device shall be planted with ground cover and/or grass, or covered with natural mulch with a minimum depth of two (2) inches.
- h. **Overhead Utility Lines:** Where a canopy tree is required and overhead utility lines exist, two (2) understory trees shall be substituted with the approval of the Administrator.
- i. **Easements & Right-of-Ways:** Nothing shall be planted or installed within an underground or overhead utility easement or a drainage easement without the consent of the Town and the easement holder at the time of Master Plan approval.
- j. **Warranty:** Contractor shall warrant all new plant material for one (1) year from time of installation.
- k. **Certificates of Occupancy and Requests for Delay:** All landscaping, mulching and seeding shall be installed in accordance with the approved site plan and the standards of this Chapter prior to issuance of a Certificate of Occupancy. Requests for a delay in complying with this requirement will be considered following a written request directed to the Administrator. Such request for a delay shall note the timeframe during which the planting shall be completed. Certificates of Occupancy will be issued with the approval of a request for planting delay, if deemed reasonable. Reasonable requests may be granted due to:
 - Unusual environmental conditions such as drought, ice, over saturated soil (deep mud), or inappropriate planting, provided that the developer or the property owner provide the Town with a surety bond in accordance with Chapter 17 ensuring the installation of the remaining landscape materials; or
 - Circumstances beyond the developer's or property owner's control, such as incomplete construction or utility work to occur in a proposed landscaped area within 30 days after expected site completion, provided that the developer or property owner submits a letter from the utility company to the Town stating the estimated installation date, and provides a cash bond in accordance with Chapter 17 to ensure installation of the required landscaping.

In the former case, the Town may issue a Temporary Certificate of Occupancy for a period of 30 to 180 days, relative to the next planting season; while in the latter case, the Town of Knightdale may issue a Temporary Certificate of Occupancy for a period not to exceed 30 days.

2. Maintenance

- a. **General Responsibility:** The owners of property shall be responsible for all natural and physical features required by this Chapter and shall preserve and maintain these features in healthy growing conditions, replace them when necessary, and keep the areas around them free of refuse and debris in a manner that prevents refuse and debris from washing onto public rights-of-way.

b. **Irrigation:** The use of irrigation is permitted in all required landscaping areas as required by this Chapter and may connect to the public water system subject to the requirements of the Town’s *Standards Specifications and Details Manual* and other applicable Town ordinances or policies. The use of moisture metering devices and automatic timers with any irrigation system is required. The use of xeriscape practices and drip irrigation is also encouraged, unless otherwise required.

c. **Pruning:** All vegetation should be allowed to reach and be maintained at its mature size.

i. **Tree “Topping” Prohibited:** Tree “topping”—the removal of more than 25 percent of a tree’s canopy—is considered to be damage and disfigurement (*Section 8.4G(2)d*) and shall be prohibited on all trees on public property, public rights-of-way, required tree save areas and parking lot landscaping areas unless otherwise approved by the LURB. Trees in locations where proper pruning practices are impractical may be exempted from this article at the determination of the Administrator.



ii. **Responsibilities Along Public Rights-of-Way**

a) **Private Property Owners:** The owner of any tree or shrub on private property that overhangs any public right-of-way within the Town shall prune the branches so that such branches shall not obstruct the light from any street lamp or obstruct the view of any street intersection and so that there shall be a clear space of eight (8) feet above the surface of the street or sidewalk.

b) **Town of Knightdale:** The Town of Knightdale Public Works Director is authorized to prune trees and shrubs from public properties and public rights-of-way.

c) **State of North Carolina:** The North Carolina Department of Transportation (NCDOT) is authorized to prune trees and shrubs in the public rights-of-way owned by the State of North Carolina.

d. **Removal**

i. **Public Property and Rights-of-Way:** The removal by any entity of a tree or shrub that is dead, infected by disease, or determined to be a hazard to public safety and welfare and subsequent replacement may be approved by the Administrator. Trees removed must be replaced in accordance with the replacement provisions of this section.

ii. **Private Property:** Owners shall remove all dead, diseased or hazardous trees and shrubs as well as any broken or decayed limbs which constitute a menace to the safety of the public. The Town shall have the right to cause the removal of any dead or diseased trees and shrubs on private property when such tree or shrub constitutes a hazard to life and property, or harbor insects or disease which constitutes a potential threat to other vegetation in the Town. The

Administrator will notify property owner(s) of the requirement to remove such trees, shrubs or limbs. Removal shall be done at the owner(s) expense within sixty (60) days after the date of service of written notice. Failure of the owner(s) to comply with such provisions shall constitute a violation of this ordinance and shall be subject to the applicable procedures and penalties of Chapter 18.

- iii. **Stumps:** When removing trees and shrubs, stumps shall be removed or ground to a minimum depth of four (4) inches.



4" Minimum Depth

- e. **Disturbance, Damage and Disfigurement**

- i. **In General:** All disturbed, damaged or disfigured vegetation within tree protection and landscaping areas identified in this Chapter shall be replaced to meet the standards of this ordinance as well as the approved site plan.
- ii. **Severe Weather and Natural Disasters:** In the event that any required vegetation is severely damaged due to an unusual weather occurrence or natural disaster, the owner shall have one (1) growing season to replace or replant following the event or following the issuance of a Certificate of Occupancy for any event-related site reconstruction, whichever is later.

- f. **Replacement**

- i. **Responsibility:** Vegetation within a required tree protection or landscaped area that dies within one (1) year of construction completion shall be removed and replaced with new vegetation of equal or greater size by the contractor providing the warrant (Section 8.4G(1)j). Should any vegetation required in a tree protection or landscaped area die after the expiration of the warranty, the property owner shall replace it within 180 days with vegetation of equal or greater size.
- ii. **Plan Approval:** A plan denoting the proposed location and species of replacements shall be submitted to the Town of Knightdale for approval. The Administrator may elect to present the plan to the LURB for final approval.

iii. Standards

- a) **Canopy Trees Eight (8) Inch Caliper or Greater:** Any canopy tree with a caliper of at least eight (8) inches (*measured along the trunk at 12 inches above grade*) at the time of damage, disturbance, disfigurement or removal shall be replaced with one (1) or more trees which have a caliper of at least two and one half (2½) inches and a cumulative caliper equal to or greater than the original tree.
- b) **All Vegetation:** All vegetation shall be replaced in a manner that satisfies the applicable type, amount and performance criteria required by this Chapter.
- g. **Inspections:** The Administrator may inspect the site once a year after the issuance of a Certificate of Occupancy in order to ensure compliance with the approved site plan and to ensure that the vegetation and landscaping is properly maintained. The Administrator may issue a Notice of Violation to comply with the provisions of this ordinance if warranted upon an inspection under the provisions of Chapter 18.

8.5 Tree Protection

A. **Required Tree Save Areas:** Trees and existing vegetation shall be preserved in accordance with the table below.

	Tree Save Area	Protection Measures
Priority Tier 1	Floodways Required Stream Buffers Required Buffer Yard Slope Areas Greater than 25% Wetlands	All Vegetation and Soil to Remain Undisturbed <i>In some cases, limited disturbance may occur within the areas to be protected provided all necessary approvals are obtained. Such activities include, but are not limited to the following:</i> <ol style="list-style-type: none"> 1. Mitigation of development activities. 2. Restoration of previously disturbed areas. 3. Utility installations and emergency public safety activities. 4. Construction of a trail or pedestrian walkway that will provide public access. 5. Required Street or Driveway connections.
Tier 2	100 Year Floodplains Front Setback Areas Street Tree Planting Strip Residential Landscaping Areas Required Open Space Slope Areas of 15-25%	All Trees Greater than 12” DBH to Remain Undisturbed, or Replacement trees shall be planted at a rate of 1 tree per 12” DBH, and should be incorporated into open space amenities wherever possible.**
Tier 3	All Other Locations	All Trees Greater than 24” DBH to Remain Undisturbed, or Replacement trees shall be planted at a rate of 1 tree per 12” DBH, and should be incorporated into open space amenities wherever possible.**

** Required street trees, parking lot landscaping, residential landscaping and buffer yard plantings may not be counted towards replacement requirements.

B. **Credits for Preservation of Existing Trees in Parking Lots:** Trees that are saved in a parking lot landscaping area may be credited towards the requirements of Section 8.8. Each tree preserved will require a minimum pervious area around its trunk equal to an area measuring five (5) feet beyond the drip line.

Size of Preserved Tree	Credit Toward Required Plantings
Tree Measuring 6-12” DBH	One (1) Required Parking Lot Tree
Tree Measuring 13-24” DBH	Two (2) Required Parking Lot Trees
Tree Measuring 25” DBH or Greater	Three (3) Required Parking Lot Trees

8.6 Buffers

- A. **Required Buffer Yards:** Required buffer yards are intended to give spatial separation and to decrease visual contact between incompatible uses. To further this intent, at least 40% but no more than 60% each of canopy trees and understory trees, and at least 80% of shrubs must be evergreen. Buffer yards shall be required in accordance with the table below when any use is being established on a property that abuts an existing developed lot or less intense zoning district.

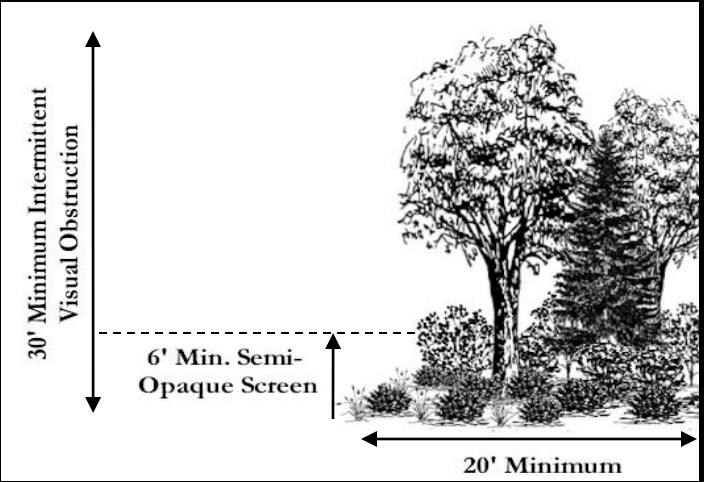
Buffer yards are intended to be constructed along the perimeter of the property; however, when there is irregular topographic conditions such as the perimeter of the property is at a lower grade than the use being screened, the Administrator may require the relocation of the required buffer yard in order to better serve its purpose.

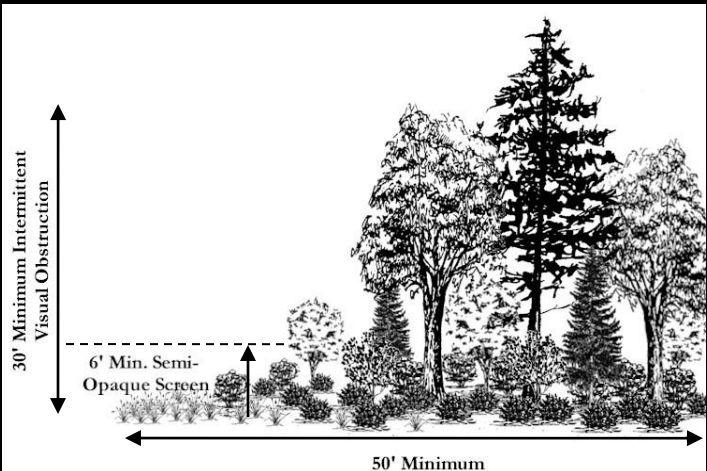
		Adjacent Base District				
		OSP RT RR GR3 GR8	UR12 RMX	NMX TC	HB	MI
Base District of Proposed Development	OSP RT RR GR3 GR8					
	UR12 RMX	B				
	NMX TC	C	A			
	HB	D	C	B		
	MI	D	D	D	C	

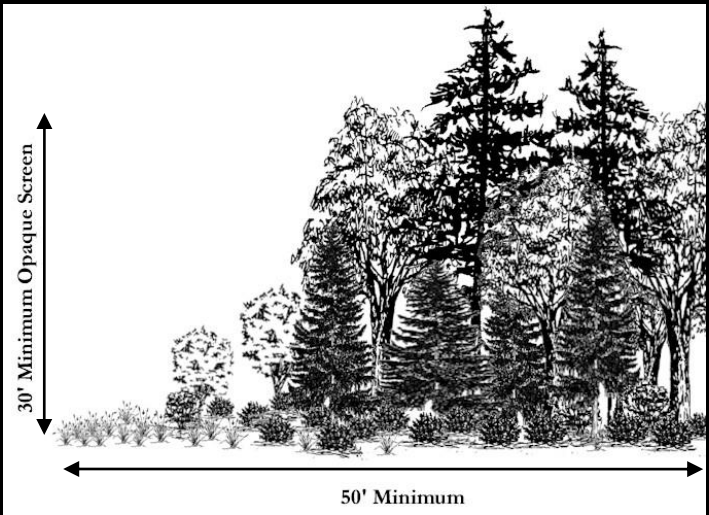
	Buffer Yard not required by Proposed Development
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B. Buffer Yard Types

<p>1. Type A Buffer Yard</p>	<p>The diagram illustrates a Type A Buffer Yard. It shows a 10-foot wide area (indicated by a horizontal double-headed arrow at the bottom right labeled '10' Min.'). On the right side, there is a cluster of trees and shrubs. A vertical double-headed arrow on the left indicates a '30' Minimum Intermittent Visual Obstruction' height. A horizontal dashed line at a height of 4 feet from the ground is labeled '4' Minimum Semi-Opaque Screen'. An upward-pointing arrow from the ground to this dashed line indicates the screen height.</p>
<p>a. Minimum Width</p>	<p>10 feet</p>
<p>b. Minimum Height & Opacity</p>	<p>Ground to Four (4) feet - <i>Semi-Opaque Screen</i> Four (4)-30 feet - <i>Intermittent Visual Obstruction</i></p>
<p>c. Maximum Horizontal Openings</p>	<p>Five (5) feet - <i>Semi-Opaque Screen</i> 20 feet - <i>Intermittent Visual Obstruction</i></p>
<p>d. Performance Standard</p>	<p>A buffer which is 10 feet in width and contains screening materials which at maturity provide semi-opacity from the ground to a height of four (4) feet as well as intermittent visual obstruction from a height of four (4) feet up to a height of 30 feet. Vegetative screening materials within intermittent visual obstruction areas shall contain horizontal openings no greater than 20 feet in width upon the plants' maturity.</p>
<p>e. Required Plantings</p>	<p>For every 100 linear feet, there shall be at least three (3) Canopy Trees, two (2) Understory Trees and 20 shrubs. Depending on the species chosen, additional trees or shrubs may be necessary to meet the performance standard in subsection "d" above.</p>

<p>2. Type B Buffer Yard</p>	 <p>The diagram illustrates a 20-foot wide buffer yard. A dashed horizontal line at a height of 6 feet from the ground is labeled '6' Min. Semi-Opaque Screen'. Above this line, a vertical double-headed arrow indicates a '30' Minimum Intermittent Visual Obstruction' extending to a total height of 30 feet. The ground level is marked with a horizontal double-headed arrow labeled '20' Minimum'.</p>
<p>a. Minimum Width</p>	<p>20 feet</p>
<p>b. Minimum Height & Opacity</p>	<p>Ground to Six (6) feet – <i>Semi-Opaque Screen</i> Six (6)-30 feet – <i>Intermittent Visual Obstruction</i></p>
<p>c. Maximum Horizontal Openings</p>	<p>Five (5) feet – <i>Semi-Opaque Screen</i> 20 feet – <i>Intermittent Visual Obstruction</i></p>
<p>d. Performance Standard</p>	<p>A buffer which is 20 feet in width and contains screening materials which at maturity provide semi-opacity from the ground to a height of six (6) feet, and intermittent visual obstruction from a height of six (6) feet up to a height of 30 feet. Vegetative screening materials within intermittent visual obstruction areas shall contain horizontal openings no greater than 20 feet in width; and vegetative screening materials within semi-opaque areas shall contain horizontal openings no greater than five (5) feet in width upon the plants' maturity.</p>
<p>e. Required Plantings</p>	<p>For every 100 linear feet, there shall be at least three (3) Canopy Trees, five (5) Understory Trees and 20 shrubs. Depending on the species chosen, additional trees or shrubs may be necessary to meet the performance standard in subsection “d” above.</p>

<p>3. Type C Buffer Yard</p>	 <p>The diagram illustrates a 50-foot wide buffer yard. A horizontal line at the bottom is labeled "50' Minimum". A vertical line on the left is labeled "30' Minimum Intermittent Visual Obstruction". A dashed horizontal line at a height of 6 feet is labeled "6' Min. Semi-Opaque Screen". The area between the ground and the 6-foot line contains various shrubs and small trees. The area above the 6-foot line contains taller trees, including a large evergreen and several deciduous trees.</p>
<p>a. Minimum Width</p>	<p>50 feet</p>
<p>b. Minimum Height & Opacity</p>	<p>Ground to Six (6) feet – <i>Semi-Opaque Screen</i> Six (6)-30 feet – <i>Intermittent Visual Obstruction</i></p>
<p>c. Maximum Horizontal Openings</p>	<p>Five (5) feet – <i>Semi-Opaque Screen</i> 20 feet – <i>Intermittent Visual Obstruction</i></p>
<p>d. Performance Standard</p>	<p>A buffer which is 50 feet in width and contains screening materials which at maturity provides semi-opacity from the ground to a height of six (6) feet, and intermittent visual obstruction from a height of six (6) height up to a height of 30 feet. Vegetative screening materials within intermittent visual obstruction areas shall contain horizontal openings no greater than 20 feet in width; vegetative screening materials within semi-opaque areas shall contain no horizontal openings greater than five (5) feet in width upon the plants' maturity.</p>
<p>e. Required Plantings</p>	<p>For every 100 linear feet, there shall be at least three (3) Canopy Trees, five (5) Understory Trees and 20 shrubs. Depending on the species chosen, additional trees or shrubs may be necessary to meet the performance standard in subsection "d" above.</p>

<p>4. Type D Buffer Yard</p>	 <p>The diagram illustrates a buffer yard consisting of a dense line of trees and shrubs. A vertical double-headed arrow on the left indicates a height of '30' Minimum Opaque Screen'. A horizontal double-headed arrow at the bottom indicates a width of '50' Minimum'.</p>
<p>a. Minimum Width</p>	<p>50 feet</p>
<p>b. Minimum Height & Opacity</p>	<p>Ground to 30 feet – <i>Opaque Screen</i></p>
<p>c. Maximum Horizontal Openings</p>	<p>None permitted</p>
<p>d. Performance Standard</p>	<p>A buffer which is 50 feet in width and contains screening materials which at maturity provides opacity from the ground to a height of 30 feet. Vegetative screening materials within opaque areas shall contain no horizontal openings upon the plants' maturity.</p>
<p>e. Required Plantings</p>	<p>For every 100 linear feet, there shall be at least five (5) Canopy Trees, eight (8) Understory Trees and 40 shrubs. Depending on the species chosen, additional trees or shrubs may be necessary to meet the performance standard in subsection “d” above.</p>

C. Berms with a Fence or Wall: Fences or walls with earthen berms may be substituted for half of the shrub requirement in all buffer yard types (Section 8.6B). All berms shall not exceed:

- a slope with maximum rise of one (1) foot to a run of two (2) feet,
- a maximum height of four (4) feet and
- a maximum width of 40% of the required buffer width.

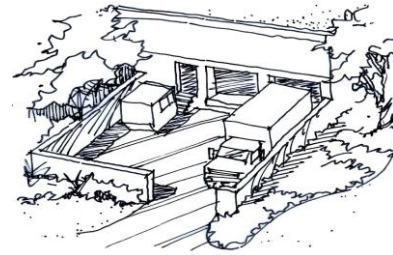
Berms shall be stabilized with a ground cover or other suitable vegetation or permanent slope retention device. Berms taller than four (4) feet shall be approved by the Administrator on a case by case basis, but shall conform to the slope and width restrictions as previously detailed.

D. Special Highway Overlay District (SHOD): The SHOD acts as a buffer yard around freeways within Knightdale’s ETJ (*Section 2.15B*).

8.7 Screening

A buffer yard’s vegetation requirements may also be used where specified as a screening device to mitigate the negative visual impacts of certain site amenities. Unlike buffer yard, screens are intended to be compact and constructed adjacent to the amenity for which the screen is required. A screen shall not exceed the minimum width specified for the buffer yard (*thereby the minimum width now functions as a maximum width*). Where irregular topographic conditions such as steep slopes, the Administrator may require the relocation of the screen in order to better serve its purpose. Effective screening devices may include solid decorative brick walls, or wood fences with an earthen berm or tight evergreen hedges which shall reach the required height within two (2) years of planting, or any combination of the above. Where sight triangles for drives or streets overlap, these requirements are waived and groundcover vegetation shall be used exclusively. (*Exception: Single-family Dwellings and Duplexes*)

A. Vehicle Accommodation Areas: Except for driveways and associated parking pads serving single-family dwellings, the sides of all vehicle accommodation areas (*parking lots, loading docks, drive – thru facilities, circulation drives, etc.*) fronting a public right-of-way and sides not otherwise protected by a buffer yard as determined by the Administrator shall be screened as follows to reduce the negative impacts of automobile headlights and glare on adjacent properties.



1. **Parking Lots:** All sides of parking lots shall be screened with a Type A Buffer Yard (Section 8.6B(1)). Sides adjacent to an arterial shall be screened with a Type B Buffer Yard (Section 8.6B(2))
2. **Other Vehicle Accommodation Areas:** Other vehicle accommodation areas shall be screened from off-site view with a Type B Buffer Yard (Section 8.6B(2)).

B. Open Storage

In addition to meeting any fencing or wall requirements in Chapter 3 or Chapter 4 of this Ordinance, any open storage of merchandise, equipment, tractor trailers, materials or goods other than those on display for retail sales shall be screened from view from any street right-of-way in accordance with the standards prescribed for Type B Buffer Yards in Section 8.6B(2), except for in the MI District where such areas shall be screened from view from any internal street right-of-way with a Type A Buffer yard as prescribed in Section 8.6B(1).

C. Above Ground Utilities and Enclosed Containment Areas for Trash and Recyclables

Above ground utilities and enclosed containment areas for trash and recyclables shall be screened by the elements of a Type B Buffer Yard in Section 8.6B(2) that pertain to Semi-Opaque Screens up to six (6) feet in height or the height of the utility or enclosure, whichever is less.



D. Wireless Telecommunication Facility – Tower: See Section 3.3YY for specific information necessary to meet the required additional screening standards.

Images depicting appropriate screening requirements of loading docks (top) and enclosed dumpsters (bottom) in accordance w/ Section 8.7.

8.8 Parking Lot Landscaping

- A. **Purpose:** Parking lot landscaping functions as a tree ceiling providing shelter from sun and rain and minimizing the impact of runoff by providing “green” surface area on which to collect.
- B. **Applicability:** Parking lots with more than 16 parking spaces shall be landscaped. *(Exception: Single-family Dwellings and Duplexes)*
- C. **Minimum Plantings:** No parking space shall be more than 60 ft from the base of a deciduous canopy tree. In addition, landscape areas shall be provided at the end of each parking row and shall contain a deciduous canopy tree. The use of differing species around the parking lot is encouraged to promote diversity in the overall urban tree canopy.
- D. **Performance Standards:** Deciduous canopy trees shall be planted in a manner that provides shade for the entire parking lot at maturity. Each canopy tree shall be provided with a minimum pervious ground area of 300 square feet for adequate root growth which shall be separated from parking spaces by an 18 inch standard curb and gutter designed to minimize damage by vehicles to plants within the landscaped area.

8.9 Residential Landscaping and Plat Notes

The following paragraphs shall be noted on an approved Preliminary Plat and Final Plat:

Each single-family or duplex lot shall contain a minimum of one (1) canopy tree for every 2,000 square feet of lot area or fraction thereof up to 20,000 square feet in lot area. Any portion of the residential lot occupied by a recorded utility easement shall not be included as part of the total lot area. The location of planting to account for physical conditions may be adjusted by the Administrator.

The use of existing trees meeting the following standards to satisfy this requirement is encouraged. Existing large shade trees measuring more than six (6) inches in DBH may be counted towards fulfilling this requirement.

Required street trees (*Section 8.8*) may not be counted towards the fulfillment of the residential landscaping requirement. Apart from required street trees, all other trees required under this Chapter shall be planted within the private lot.

Foundation plantings consisting of evergreen shrubs shall be installed along the entire foundation wall of the building. Plant installation shall be a minimum of two feet in height planted at four-foot intervals.

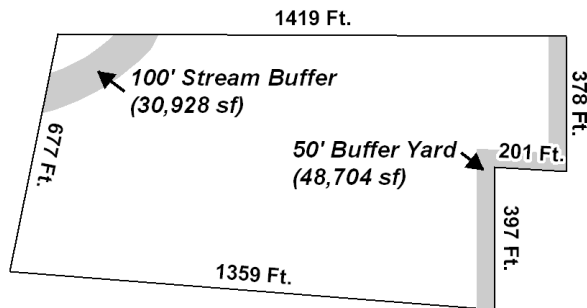
8.10 Street Tree Plantings

- A. All development shall be required to have street trees along all public rights-of-way in accordance with the illustrations of Street Classification and Design found in Chapter 17. Street trees are not required along public rights-of-way in the Open Space Preserve (OSP) or Rural Residential (RR) zoning districts.
- B. Canopy trees shall be installed at a minimum average distance of 40 feet on-center in a planting strip a minimum of five (5) feet in width. Where overhead utilities exist prior to development, understory trees may be substituted.
- C. Street trees shall be placed at least 10 feet from light poles and 12 feet from electrical transformers in order to allow these utilities to be safely serviced (*understory trees may be placed within five [5] feet of such devices*).

- D. Street trees shall be deciduous hardwoods and shall meet the criteria set forth in sections 8.3 and 8.4G.

8.11 Overall Tree Canopy

- A. **Applicability:** To preserve and maintain appropriate undisturbed tree cover, and where needed, require the provision of replacement tree cover on development sites.
- B. **Tree Cover Area:** All new development on lots or parcels over two (2) acres must meet the following tree cover requirement during the initial master plan process. A tree cover area equal to the perimeter of the development in feet multiplied by 20 shall be maintained on site up to a maximum tree cover area consisting of 10 percent of the entire site. Any required landscape buffer yards and NRBs (*see Section 6.3*) may be credited toward this requirement. In the event that the required tree cover area cannot be met with required landscape buffer yards and NRBs, additional space must be set aside.



Example:

1,419+378+201+397+1,359+677 ft. = 4,431 ft. perimeter
 4,431 ft. x 20 ft. = 88,620 square feet of tree cover area
 88,620 ft. / 1,044,132 total square feet = **4.3% of total lot area** (< 10% max)
 88,620 sf – 30,928 sf – 48,704 sf = **8,988 sf additional space required**

In this additional space, preference is given to preserving existing trees rather than utilizing new plantings.

C. Performance Standards for Additional Space:

1. **Mature Forest:** (100% of calculated additional space required) If not directly adjacent to NRBs or landscape buffer yards, each preserved tree cover area of mature forest must be at least 2,500 square feet with no dimension less than 50 feet wide. To qualify, the average tree canopy height must exceed 25 feet.
2. **Maturing Forest:** (110% of calculated additional space needed) If not directly adjacent to NRBs or landscape buffer yards, each preserved tree cover area of maturing forest must be at least 2,500 square feet with no dimension less than 50 feet wide. To qualify, the average tree canopy height must exceed 12 feet.
3. **Re-planted Areas:** (125% of calculated additional space needed) If not directly adjacent to NRBs or landscape buffer yards, each re-planted tree cover area must be at least 2,500 square feet with no dimension less than 50 feet wide. To qualify, trees must meet the standards for new plantings as found in Section 8.4G, and the area must be vegetated with three (3) canopy trees and five (5) understory trees per 500 square feet.

8.12 Replacement of Disturbed and Damaged Vegetation Pursuant to a Notice of Violation (*Section 18.3*): All disturbed (*altered, removed, topped, excessively pruned, etc.*) landscaped areas and vegetation shall be replanted to meet the standards of this section as well as the approved site or Master Plan. Existing vegetation required to be preserved (*buffers, tree protection areas, etc.*) that has been damaged or destroyed during the course of development activity shall be subject to civil penalty and replaced in accordance with the requirements of this section, taking into account any unique site conditions and significant vegetation remaining within the landscaped area.

- A. Plan Required:** A revegetation plan shall be submitted that takes into consideration the development condition of the site, significant vegetation remaining within landscaped areas, and the replacement plant materials. The Town of Knightdale may require equal amounts of new vegetation to be installed equal to the size of the vegetation removed. The Administrator may elect to present the replanting plan to the DRC for final approval.
- B. Replacement:** Replacement consists of one (1) or a combination of any of the following measures:
 - 1. Replant according to the requirements of this Chapter.
 - 2. Replace damaged or destroyed significant vegetation in both required landscaping and tree protection areas with an equal amount of new vegetation according to the size of vegetation removed. Any tree with a caliper of at least 15 inches that is damaged or removed shall be replaced with one (1) or more trees that have a caliper of at least two and one half (2½) inches and a cumulative caliper equal to or greater than the original tree. Trees damaged or destroyed less than 15 inches in diameter shall be replaced to satisfy the performance criteria of this section. Understory plantings may also be required to restore the buffer performance criteria for the disturbed area. These measures may be modified by the Administrator based upon site conditions.
 - 3. For all other cases where existing vegetation is damaged or removed, the type and amount of replacement vegetation required shall be of the type and amount that is necessary to provide the type of required landscaping identified in the Notice of Violation or tree protection area identified on the approved landscape plan.
- C. Replanting Area:** Replanting should be located within the vicinity of the violation. If the area is too small for sufficient growth, a more suitable location on the site may be selected as permitted by the Administrator.

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Chapter 9. CIRCULATION AND CONNECTIVITY

9.1 Purpose and Intent

The purpose of this section is to support the creation of a highly connected transportation system within the Town in order to:

- provide choices for drivers, bicyclists, and pedestrians;
- promote walking and bicycling;
- connect neighborhoods to each other and to local destinations such as schools, parks, and shopping centers;
- reduce vehicle miles of travel and travel times;
- increase effectiveness of municipal service delivery; and
- free up arterial capacity to better serve regional long distance travel needs.

It is the intent of this UDO to build streets that are integral components of community design. Streets must be pedestrian in nature and shall be designed with sufficient detail to complement the architectural detail of neighborhoods and commercial centers. In addition to the standards of this Chapter, streets shall also conform to the provisions of Chapter 17.

9.2 Arterial and Collector Plans

- A. Conformity:** The street layout in any development shall conform to the arrangement, width and location of public streets indicated on the regulating Arterial and Collector plans for the area. (*See Arterial Map, Appendix A; Collector Map, Appendix B*). Whenever a tract of land included within any proposed development plan embraces any part of the arterial or collector systems as designated on the Town Arterial or Collector plans, the development shall be required to dedicate and plat the arterial or collector right-of-way, and shall be responsible for the cost and the installation of the improvements in accordance with the Town's standards for streets.

Developments which embrace only one (1) side of an existing or planned arterial or collector right-of-way will only be required to dedicate and plat additional right-of-way for that portion of street with which the development has frontage, and shall be responsible for the cost and the installation of the improvements in accordance with the Town's standards for streets.

- B. Street Stubs:** New developments are required to stub streets to the outer perimeter boundaries of the development based on the criteria below. If the street in question meets at least two (2) of the criteria, then the street must be built to an appropriate collector street standard.
1. The street intersects directly with an arterial street and provides access to an area with an overall density of ten (10) dwelling units per acre, or provides access to more than 150 dwelling units.
 2. The street by its general configuration, in relationship to the existing development of the area, in effect serves a collector function.
 3. The street extends into an undeveloped area in such a manner as to serve a future collector function.
 4. The street serves as primary access to a significant nonresidential, institutional, or recreational land, as well as, an access to a residential area of 20 or more acres.

- C. **Street Design:** New developments that provide new streets that are not identified on the regulating Arterial and Collector plans for the area, but meet any of the following criteria must be built to an appropriate collector street standard.
 1. The street intersects directly with an arterial street and provides access to an area with an overall density of ten (10) dwelling units per acre, or provides access to more than 150 dwelling units.
 2. The street by its general configuration, in relationship to the existing development of the area, in effect serves a collector function.
 3. The street extends into an undeveloped area in such a manner as to serve a future collector function.
 4. The street serves as primary access to a significant nonresidential, institutional, or recreational land, as well as, an access to a residential area of 20 or more acres.

9.3 Conformity to Adopted Plans

All site and subdivision plans shall conform to the arrangement, width and location of public transportation elements indicated in appendices A through C as approved by the LURB and adopted by the Town Council as well as meet the requirements of the Long-Range Transportation Plan for the Capital Area Metropolitan Planning Organization (CAMPO) as adopted by the CAMPO Transportation Advisory Committee and the North Carolina Department of Transportation.

Whenever a tract of land included within any proposed development plan embraces any part of the arterial or collector systems as designated on the Town Arterial or Collector plans (*appendices A and B*), the development shall be required to dedicate and plat the arterial or collector right-of-way, and shall be responsible for the cost and the installation of the improvements in accordance with the Town's standards for streets.

Developments which embrace only one (1) side of an existing or planned arterial or collector right-of-way will only be required to dedicate and plat additional right-of-way for that portion of street with which the development has frontage, and shall be responsible for the cost and the installation of the improvements in accordance with the Town's standards for streets.

9.4 Traffic Impact Analysis (TIA)

- A. **Purpose:** TIAs are used to evaluate whether or not the scale of development is appropriate for a particular site and what improvements may be necessary, on and off the site, to provide safe and efficient access and traffic flow. It is an essential part of the development review process to assist developers and government agencies in making land use decisions involving annexations, subdivisions, rezoning, special land uses, and other development reviews.

As a specialized study that evaluates the effects of a development's traffic on the surrounding transportation infrastructure, the TIA helps identify where the development may have a significant impact on safety, traffic and transportation operations, and provides a means for the developer and government agencies to mitigate these impacts.

- B. **Threshold:** A TIA, meeting the requirements of Section 16.9, is necessary in the following instances:

1. For any proposed rezoning, preliminary subdivision or master plan, if the nature of the proposed rezoning or development is such that the number of trips it can be expected to generate equals or exceeds 150 new peak hour trips; or

2. When the Administrator determines:
 - a. That a new project’s traffic will substantially affect an intersection or a roadway segment already identified as operating at a failing level of service (LOS), or
 - b. That a project may create a hazard to public safety, or
 - c. That a project will substantially change the off-site transportation system or connections to it.

9.5 Vehicular Connectivity

Traffic studies have shown that highly connected street networks provide much greater traffic throughput and mobility for a community, at less cost. A high degree of connectivity should occur not only at the level of arterials, but also on collector, local and other secondary roads. Such connectivity vastly improves a street network's performance. The street pattern should not force short trips of one (1) or two (2) miles onto arterials; it should be possible to make trips of this sort by using collector or other secondary streets. With a highly connected street network, cross-town trips should be possible using fairly direct secondary roads.

A. General Street Layout

In general, streets should be designed and located so that they relate to the topography, preserve natural features such as streams and tree growth and provide for adequate public safety and convenience for motorists, cyclists and pedestrians alike. To accomplish this, local public and private streets may incorporate traffic calming devices in conformance with the Town’s “Traffic Calming Policy” as most recently adopted by the Town Council.

The proposed street layout shall also be coordinated with the existing street system of the surrounding area. Where a through street or a series of streets establishes a connection between two (2) public streets, such street shall be a public street.

B. Street Classification

The Town shall make the final determination of the classification of streets in a proposed development based on guidance from the Comprehensive Plan. Street classifications are defined in Section 17.3.

C. Street Stubs

1. **Continuation of Adjoining Street Systems:** Vehicular connections from adjacent property (*street stub-outs*) must be utilized unless the Administrator deems the connection impractical due to topographic conditions, environmental constraints, property shape or property accessibility.
2. **New Street Stubs**
 - a. **Development Perimeter and Surrounding Parcels:** New developments are required to stub streets to the outer perimeter boundaries of the development so as to ensure access of surrounding properties to a public right-of-way and in accordance with appendices A and B.
 - i. Whenever connections to existing or proposed streets on adjoining property are required, the street right-of-way shall be extended and the street developed to the property line of the subdivided property (*or to the edge of the remaining undeveloped portion of a single tract*) at the

point where the connection to the existing or proposed street is expected.

- ii. Where land is subdivided into parcels and tracts larger than ordinary building lots, such parcels and tracts shall be arranged in a phasing plan so as to allow for the opening of future streets and logical further subdivision.
 - iii. The Town may require temporary turnarounds to be constructed at the end of such streets pending their extension. Where a temporary turnaround is required that precludes the completion of street right-of-way improvements to the property line, please see Section 17.2B2.
 - iv. The Town may require extension of a stub or connection where necessary to permit the convenient movement of traffic between residential neighborhoods or to facilitate access to neighborhoods by emergency service vehicles or for other sufficient reasons.
- b. If the street being stubbed meets at least two (2) of the following criteria, then the street must be built to an appropriate collector street standard:
- i. The street intersects directly with an arterial street and provides access to an area with an overall density of ten (10) dwelling units per acre, or provides access to more than 150 dwelling units.
 - ii. The street by its general configuration, in relationship to the existing development of the area, in effect serves a collector function.
 - iii. The street extends into an undeveloped area in such a manner as to serve a future collector function.
 - iv. The street serves as primary access to a significant nonresidential, institutional, or recreational land, as well as an access to a residential area of 20 or more acres.

D. Block Length

Maximum block lengths inside proposed developments shall be in accordance with lengths shown in the following table. Short block lengths are intended to create a better pedestrian-scaled environment. The Administrator may allow a deviation from this requirement if it is determined that this requirement is impractical due to topographic conditions, environmental constraints, property shape or property accessibility.

	OSP	RT RR	GR-3 GR-8	UR-12 RMX	NMX	TC	HB MI
Block Length <i>(Maximum)</i>	n/a	1500 ft	1000 ft	800 ft	660 ft	660 ft	n/a

E. Cul-de-sacs

Permanent cul-de-sac streets and dead-end streets are discouraged in the design of street network systems, and they should only be used when topography, the presence of natural features, and/or vehicular safety factors make a vehicular connection impractical. Where cul-de-sacs or dead-end streets are unavoidable, developments shall incorporate provisions for future vehicular connections to adjacent, undeveloped properties, and to existing adjacent developments where existing connections are poor. No system of multiple branching cul-de-sacs from a single junction with a connected

street network is permitted, unless the Administrator deems it allowable due to environmental constraints.

Any permanent dead-end streets or cul-de-sac shall comply with the length limits (*as measured along the street centerline*) shown in the following table, and shall be provided with a turnaround at the closed end of the street as set forth in the Town’s *Standard Specifications and Details Manual*.

	OSP	RT RR	GR-3 GR-8	UR-12 RMX	NMX	TC	HB MI
Cul-de-Sac Length <i>(Maximum)</i>	n/a	500 ft	300 ft	200 ft	Not Allowed	Not Allowed	n/a

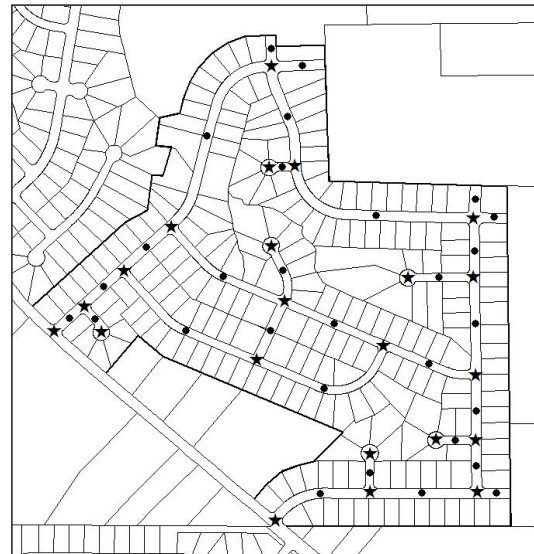
F. Second and Additional Points of Access Required for Residential Developments

At a minimum, a second point of open and functioning vehicular access from the existing public street system (*not a stub-out*) is required for developments that exceed 100 residential units, and a third shall be required for developments that exceed 500 residential units. These second and third points shall be open and functioning prior to the issuance of the 101st and 501st Certificate of Occupancy respectively for the development. The number of further open and functioning vehicular access points shall be controlled and determined by the development’s Town-approved TIA (Section 16.9). If a TIA should establish a higher standard for the number of open and functioning vehicular access points from the existing public street system, the requirement of the TIA shall prevail. The requirements herein shall not preclude a development from also meeting the following connectivity index required in Section 9.4(E). For purposes of this section, a median-divided vehicular access point counts as a single vehicular access point. This section does not preclude developments from connecting to existing street stubs and/or street stub right-of-ways abutting their property.

G. Connectivity Index

A Connectivity Index shall be used to determine the adequacy of street layout design. This is calculated as the ratio of the number of street **links** (*road sections between intersections*) in the project’s street layout divided by the number of street **nodes** (*intersections and cul-de-sac heads*). For comparison purposes, a perfect grid has a Connectivity Index of 2.00 or higher, while a conventional cul-de-sac subdivision is often 1.00 or less.

The accompanying illustration exhibits a connectivity index of 1.32 (*links are shown as circles and nodes are shown as stars*). Street links on existing adjacent streets that are not part of the proposed subdivision are not included in the connectivity index calculation. The illustration has 29 links and 22 nodes for an index of $29 / 22 = 1.32$



Any development shall be required to achieve a Connectivity Index as shown in the following table.

	OSP	RT RR	GR-3 GR-8	UR-12 RMX	NMX	TC	HB MI
Connectivity Index (Min.)	n/a	1.30	1.40	1.40	1.50	1.60	n/a

Administrator-Awarded Modifications: The Administrator may award reductions to the minimum index value if it is determined that more than 60 percent of any “side” of a development (*four [4] sides total*) faces impracticalities for connectivity to adjacent properties due to the presence of controlled-access highways, railroad rights-of-way, NRBs or existing developments that have not provided street stub-outs for connection purposes. In addition, the Administrator may award bonuses to a development’s index score where pedestrian greenways are provided to link any cul-de-sac to another street or cul-de-sac within the development.

Administrator-Awarded Reductions		Value	Administrator-Awarded Bonuses		Value
Controlled-Access Highway, Railroad Right-of-Way or Adjacent Developments with No Street Stub-Outs		- 0.05	Pedestrian Greenway (A minimum of a 20’ easement with a 6’ path)		+ 0.03
Neuse River Buffer (NRB)		- 0.03			

H. Cross Access

All developments featuring on-site parking lots shall be designed to allow for cross-access to adjacent properties to encourage shared parking (*Section 10.3D(2)*). When cross access is deemed impractical by the Administrator on the basis of severe topography, environmental constraints or vehicular safety factors, the requirement may be deviated from provided that appropriate bicycle and pedestrian connections are provided between adjacent developments or land uses. Development plans shall provide cross-access easement and complete the connection if completing the link can derive an immediate benefit. If no immediate benefit can be derived, development plans shall provide cross access and construction easements and arrange the site design so when the adjoining property owner extends the connection to the property line, the link will be completed. If the link is to be completed in the future, the grade of the connection, parking, landscaping, and other improvements must be set to allow for extension into the adjacent property.

I. Bicycle Amenities

In North Carolina, a bicycle has the legal status of a vehicle and is permitted to operate on any roadway where NC Board of Transportation policy does not expressly prohibit non-motorized vehicles (*i.e. interstates and other fully-controlled, limited access highways*). In addition to the preceding requirements of this Section:

1. Except for Main Street cross-sections with on-street parking (*see Section 17.3A(3)*), bicycle amenities in the form of bike lanes—four (4) feet in width (*excluding curb and gutter*) and five (5) feet when adjacent to on-street parking—or wide outside lanes (*15-foot minimum*) with sharrow pavement markings shall be incorporated in the design of all arterials, collector streets and roads with bicycle routes identified on *Appendix C: Town of Knightdale Bike Route and Greenway Plan*; and
2. Bicycle parking shall be provided according to the requirements established in sections 10.3C and 10.7.



9.6 Pedestrian Circulation & Connectivity

In order for walking to be a viable transportation choice for local trips, circulation routes must be safe, convenient and highly connected. Pedestrian circulation and connectivity should primarily take place adjacent to planned streets within the right-of-way; however, a considerable amount of pedestrian activity also takes place on site, where vehicle speeds are lower but the numbers of potential conflict points are much higher. As such, the following standards shall be met when designing a connected pedestrian circulation system:

- A. All pedestrian walkways shall be designed to comply with the design standards outlined in Chapters 10 and 17.
- B. Pedestrian crossings shall be made safer for pedestrians whenever possible by shortening crosswalk distances with roadway designs including, but not limited to, curb extensions, reduced curb radii, and the elimination of free right-turn lanes. Traffic calming devices may only be installed according to the Town’s “Traffic Calming Policy” as most recently adopted by the Town Council.
- C. Pedestrian walkways shall form an on-site circulation system that minimizes the number of points of conflict (*where pedestrian networks and bicycle/vehicle networks intersect*) between pedestrians and vehicles, particularly where pedestrians access on-site parking and building entrances.
- D. Pedestrian walkways shall connect building entrances to one another and from building entrances to public sidewalk connections and existing or planned transit stops.
- E. All developments that contain more than one (1) building shall provide walkways between the principal entrances of the buildings.
- F. Multi-purpose paths, whether required by Appendix C or built to satisfy the recreational requirements of Chapter 7, shall connect to the street system in a safe and convenient manner. These paths should be used to enhance pedestrian and bicycle travel where the existing circulation system does not serve these patrons well.

9.7 Access Management

A. Number of Driveway Access Points

1. Single-Family Residential Lots In General:

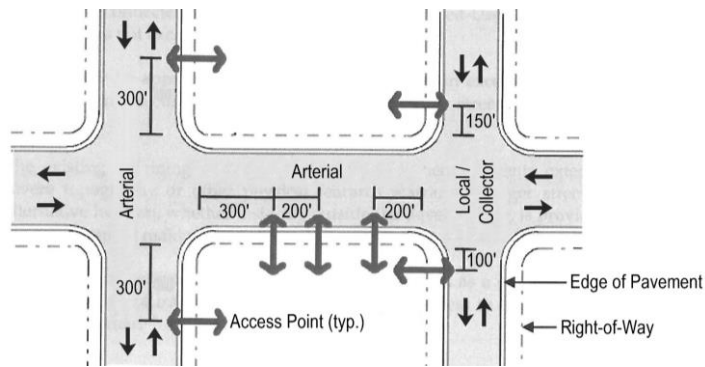
Parcel Frontage	Number of Access Points Allowed
<= 100 ft	1
> 100 ft	2

- 2. **Along Arterials and Collectors:** Developments should minimize or eliminate curb cuts along arterials and collectors. Single Family lots, attached or detached, shall not have access to a collector or arterial street, unless the collector is designed to the modified avenue section to include on-street parking on one-side and a landscaped median divide. In this instance rear loaded alley access is permitted on one side of the street section. Where possible, vehicular access drives should be shared with the adjacent properties and/or alleys should be utilized for access. All lots, parcels, or any other division of land adjacent to an arterial or collector may be allowed driveways or street connections in accordance with the following.

Parcel Frontage	Number of Access Points Allowed
< 500 ft	1
501 – 1200 ft	2
>1200 ft	3

B. Location of Driveway Access Points

- In General:** Except for shared drives, all driveways shall be a minimum of three-and-a-half (3½) feet from the property line.
- Along Arterials:** Location guidelines for driveway access points along arterials are shown in the illustration below in relation to the direction of traffic flow. If access to a lot, parcel, or other lawful division of land is physically unobtainable under the provisions illustrated below, driveway access points shall be located the greatest distance possible from one another and from other streets.



9.8 Median Cross-Over Spacing

In general, if the left turn lane storage requirements for adjacent intersections overlap, the minimum spacing specified below shall be increased to provide adequate left turn lane storage in both directions. Additionally, where the NC DOT Driveway Manual or Median Crossover Guide conflicts, the stricter of the two (2) standards should prevail.

Median Divided Street Type	Minimum Spacing Between Cross-Overs
Arterial	1,200 ft.
Collector / Local	660 ft.

Chapter 10. VEHICLE ACCOMMODATION AREAS

10.1 Purpose and Intent

Vehicle accommodation areas such as parking lots, loading areas and circulation drives are necessary elements in the urban environment. However, these areas are known to increase stormwater volume and velocity, increase the levels of surface pollutants, increase surface level heat and glare, reduce the efficiency of the connecting street system, and increase the number of potential conflict points with the surrounding pedestrian network. This chapter regulates the construction, expansion, and renovation of vehicle accommodation areas in a manner that seeks to minimize and mitigate these known impacts.

10.2 Applicability

The standards of this Chapter are applicable across all zoning districts, except as described in this section.

A. Town Center (TC) District

1. Developments which do not involve an increase of more than 25 percent (25%) in the building floor area are exempt from the standards of this Chapter;
2. Developments which involve only a change of use and which will not increase the number of parking spaces required under this chapter by more than 10 percent (10%) are exempt from the standards of this Chapter; and
3. Required loading areas must still be provided, but may be designated on-street and/or within public alleys.

- B. Old Town Area:** For uses located within the study area boundary of the *Old Town Knightdale Plan (January 2007)*, compliance with parking requirements may be achieved by making payments in accordance with the Town of Knightdale Fee Schedule adopted by the Town Council to the Fund 70 Capital Reserve account. The payment shall be based upon a dollar amount per parking space, and all parking payment moneys shall be used to acquire, maintain, administer, and/or improve public parking.

10.3 Off-Street Parking and Loading Area Requirements

A. Loading Areas

1. Off-street loading space available for the loading and unloading of vehicles shall be provided for all retail, wholesale and industrial uses, as well as for any expansion of such uses or change in use requiring the regular delivery or shipment of goods, merchandise or equipment to the site.
2. Loading areas may not otherwise be used for conducting the operations and activities of the permitted use, including, but not limited to, the display or storage of vehicles or materials.
3. Loading areas may not be included for meeting the requirements of section 10.3B, C or D.

B. Park & Ride/Transit Accommodations

1. Shopping centers which provide 100 or more motorized vehicle parking spaces shall designate at least five percent (5%) of the required spaces as “Park and Ride” spaces; however, no more than 100 spaces shall be required.

2. A sign or signs shall be used to designate that the spaces are reserved for park and ride use during non-holiday weekdays between 6AM and 6PM.
3. Park and ride spaces should be located adjacent to one another in a cohesive manner.
4. Bus shelters, transit easements, or other transit-oriented accommodations may be required to be installed by the developer in the vicinity of the Park and Ride area if the Administrator determines that Wake County Transportation and Rural Access (TRACS), Triangle Transit, or another publicly-sponsored transit provider would benefit from the improvements.

C. Bicycle Parking

1. Multi-family residential uses shall provide bicycle parking at a rate of one (1) bicycle parking space for every 20 motorized vehicle spaces; however, no more than 100 total bicycle parking spaces shall be required for any single development.
2. Nonresidential uses with off-street parking for motorized vehicles of at least 15 spaces and not more than 40 spaces shall provide a minimum of two (2) bicycle parking spaces.
3. Nonresidential uses with off-street parking for motorized vehicles of more than 40 spaces shall provide bicycle parking at a rate of one (1) bicycle parking space for every 10 motorized vehicle spaces; however, no more than 100 total bicycle parking spaces shall be required for any single development.

D. Motorized Vehicle Parking: Parking for motorized vehicles shall be provided according to the following table of ratios:

Use Type	Minimum Parking Spaces	Maximum Parking Spaces
1. Residential		
a. Dwelling-Single Family	1.0 per bedroom up to 2.0 per unit	n/a
b. Dwelling-Duplex	1.0 per bedroom up to 2.0 per unit	n/a
c. Dwelling-Multifamily 4 units/bldg or less	1.0 per bedroom up to 2.0 per unit	n/a
d. Dwelling-Multifamily more than 4 units/bldg	1.0 per bedroom up to 2.0 per unit	n/a
e. Dwelling-Secondary	1.0 per bedroom up to 2.0 per unit	n/a
f. Family Care Home (6 or Less residents)	1.0 per bedroom up to 2.0 per unit	n/a
g. Home Occupation	1.0 per bedroom up to 2.0 per unit	n/a
h. Housing Service for the Elderly	½ maximum	0.5 per unit
i. Live-Work Units	1.0 per bedroom up to 2.0 per unit, plus ½ max.	1.0 per bedroom or 2.0 per unit, plus 3.5 per ksf work space GFA
j. Manufactured Housing	1.0 per bedroom up to 2.0 per unit	n/a
2. Lodging (all)	½ maximum	1.25 per guest room + 10 per ksf restaurant/lounge + 25 per ksf conference room

(table continued on next page)

CHAPTER 10: VEHICLE ACCOMMODATION AREAS

3. Office/Service		
a. Animal Services	½ maximum	6.0 per ksf GFA
b. ATM	n/a	3.0 per machine
c. Banks, Credit Unions, Financial Services	½ maximum	5.5 per ksf GFA
d. Business Support Services	½ maximum	4.0 per ksf GFA
e. Child/Adult Day Care Home (Fewer than 6 people)	1.0 per bedroom up to 2.0 per unit	n/a
f. Child/Adult Day Care Center (6 or more people)	½ maximum	0.35 per person licensed cap.
g. Community Service Organization	½ maximum	4.0 per ksf GFA
h. Cremation Facilities	½ maximum	4.0 per ksf GFA
i. Drive Thru Service	½ maximum	4.0 per ksf GFA
j. Equipment Rental	½ maximum	2.0 per ksf GFA
k. Funeral Homes	½ maximum	0.25 per person permitted cap.
l. Government Services	*	*
m. Group Care Facility (More than 6 residents)	½ maximum	1.0 per room
n. Medical Services	½ maximum	5.5 per ksf GFA
o. Outdoor Animal Boarding/Equestrian Facilities	½ maximum	0.5 per run/stable
p. Personal Services	½ maximum	2.0 per station or 4.3 per ksf GFA whichever greater
q. Post Office	½ maximum	4.0 per ksf GFA
r. Professional Services	½ maximum	4.0 per ksf GFA
s. Studio – Art, dance, martial arts, music	½ maximum	4.0 per ksf GFA
t. Tattoo Shop	½ maximum	2.0 per station or 4.3 ksf GFA whichever greater
u. Vehicle Services – Maintenance/Body Work/Repair	½ maximum	2.7 per ksf GFA sales area, plus 2.0 per service bay, plus 1.5 per ksf balance of GFA
4. Retail/Restaurants		
a. Auto Parts Sales	½ maximum	2.7 per ksf GFA sales area, plus 2.0 per service bay, plus 1.5 per ksf balance of GFA
b. Bar/Tavern/Night Club	½ maximum	22.5 per ksf GFA
c. Drive-Thru Retail/Restaurants	½ maximum	15.0 per ksf GFA
d. Gas Station with Convenience Store	½ maximum	3.5 per ksf GFA
e. Neighborhood Retail/Restaurant – 2,000 sf or less	½ maximum	3.5 per ksf GFA retail; 16.0 per ksf GFA restaurant
f. General Retail – 10,000 sf or less	½ maximum	3.5 per ksf GFA
g. General Retail – 10,001 sf – 50,000 sf	½ maximum	6.0 per ksf GFA
h. General Retail – Greater than 50,000 sf	½ maximum	6.0 per ksf GFA
i. Restaurant	½ maximum	22.5 per ksf GFA
j. Shopping Center – Community Center	½ maximum	4.5 per ksf GLA
k. Shopping Center – Neighborhood Center	½ maximum	4.0 per ksf GLA
l. Sweepstakes Center	½ maximum	2.0 per machine
m. Vehicle/Heavy Equipment Sales	½ maximum	2.7 per ksf GFA sales area, plus 2.0 per service bay, plus 1.5 per ksf balance of GFA
5. Entertainment/Recreation		
a. Adult Establishment	½ maximum	1.0 per 3 persons permitted cap.
b. Amusements, Indoor – 5,000 sf or less	½ maximum	1.0 per 3 persons permitted cap.
c. Amusements, Indoor – 5,001 sf – 20,000 sf	½ maximum	1.0 per 3 persons permitted cap.
d. Amusements, Indoor – Greater than 20,000 sf	½ maximum	1.0 per 3 persons permitted cap.
e. Amusements, Outdoor	½ maximum	1.0 per 3 persons permitted cap.
f. Cultural or Community Facility	½ maximum	1.0 per 3 persons permitted cap.
g. Meeting Facilities	½ maximum	0.25 per person permitted cap.
h. Recreation Facilities, Indoor	½ maximum	1.0 per 3 persons permitted cap.
i. Recreation Facilities, Outdoor	½ maximum	1.0 per 3 persons permitted cap.
j. Theater, Live Performance	½ maximum	0.4 per seat
k. Theater, Movie	½ maximum	Single screen; 0.5 per seat, 2-5 screens: 0.33 per seat, 6 -10 screens: 0.3 per seat, Over 10 screens: 0.27 per seat

(table continued on next page)

6. Manufacturing/Wholesale/Storage		
a. Agribusiness	½ maximum	4.0 per ksf GFA
b. Laboratory - medical, analytical, research & development	½ maximum	1.5 per ksf GFA
c. Laundry, dry cleaning plant	½ maximum	2.0 per ksf GFA
d. Manufacturing, Light	½ maximum	1.5 per ksf GFA
e. Manufacturing, Neighborhood	½ maximum	1.5 per ksf GFA
f. Manufacturing, Heavy	½ maximum	2.0 per ksf GFA
g. Media Production	½ maximum	1.5 per ksf GFA
h. Metal Products Fabrication, machine or welding shop	½ maximum	2.0 per ksf GFA
i. Mini-Warehouses	½ maximum	0.25 per ksf GFA
j. Quarrying and Stone Cutting	½ maximum	2.0 per ksf GFA
k. Research and Development	½ maximum	1.5 per ksf GFA
l. Storage - Outdoor storage yard as a primary use	½ maximum	4.0 per ksf GFA
m. Storage - Warehouse, indoor storage	½ maximum	0.7 per ksf GFA
n. Wholesaling and Distribution	½ maximum	2.0 per ksf GFA
7. Civic/Institutional		
a. Campground	1.0 per campsite	n/a
b. Cemeteries	½ maximum	4.0 per ksf GFA
c. Colleges/Universities	*	*
d. Hospital	*	*
e. Public Safety Facility	*	*
f. Religious Institutions	½ maximum	0.6 per seat
g. Schools – Elementary & Secondary	½ maximum	0.35 per student
h. Schools – Vocational/Technical	*	*
8. Infrastructure		
a. Airport	*	*
b. Transit, Road & Ground Passenger Services	½ maximum	4.0 per ksf GFA
c. Wireless Telecommunication Facility-Stealth	n/a	n/a
d. Wireless Telecommunication Facility-Tower	n/a	n/a
e. Utilities-Class 1 & 2	n/a	n/a
f. Utilities-Class 3	n/a	n/a

* To be determined by a parking study specific to the use.

Note: ksf = 1000 square feet; GFA = Gross Floor Area; GLA = Gross Leasable Area.

E. Adjustments to Motorized Vehicle Parking Ratios

1. **Adjustments to Parking Ratio Minimums for Tree Preservation:** The minimum number of spaces required by Section 10.3D 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 DBH) from being damaged or removed, and where the site plan provides for the retention of said tree or trees.
2. **Exceeding Parking Ratio Maximums:** To minimize the impacts of stormwater runoff and urban heat created by excess parking surfaces, the stated parking ratio maximums in Section 10.3D may only be exceeded according to the following provisions:
 - a. If the stated maximum number of spaces is exceeded by no more than 15 percent, the exceeding spaces (those above the stated maximum in the preceding table) must be no more than 30 feet from the base of a large shade tree as opposed to the 60-foot requirement specified in Section 8.8C.
 - b. If the stated maximum number of spaces is exceeded by more than 15 percent, a development shall:

- i. Meet the tree requirement for the exceeding spaces as stated in the preceding subsection “a”; and either
- ii. Construct the exceeding spaces (those above the stated maximum in the preceding table) of a permeable material such as “pervious concrete”, “porous asphalt”, brick/stone pavers, engineered turf pavers or other permeable material approved by the TRC; or
- iii. Adjust the site’s stormwater retention system to provide a minimum 30 percent reduction in total nitrogen loading for the entire site (*see Section 6.4F(6)*).

F. Additional Standards for Motorized Vehicle Parking

- 1. **Disabled Parking:** Parking for the disabled shall be provided in accordance with the North Carolina State Accessibility Code.
- 2. **Use of Parking Areas:** Required parking areas shall be available for the parking of operable vehicles of residents, customers, and employees, and shall not be used for the storage of vehicles or materials, or for the parking of vehicles used for loading or unloading, or in conducting the use.

G. Alternatives to Provision of On-Site Parking

In lieu of actual on-site construction of off-street parking spaces, all or any portion of the off-street parking required by sections 10.3C and 10.3D may be provided as follows:

1. Remote Parking

Remote parking (*a dedicated off-site satellite parking lot*) may be permitted, subject to certification by the Administrator that the following requirements have been met:

- a. The use being served by the remote parking shall be a permitted principal use, as established in Chapter 2, in the zoning districts within which the lot containing such parking is located;
- b. A safe, direct, paved, lighted and convenient pedestrian route shall exist or be provided between the remote parking and the use being served;
- c. At least one (1) parking space within each remote parking lot shall be within 660 feet (*1/8 mile*) of a public entrance to the structure housing the use being served (*or to the lot housing the use being served in cases where no structure exists*) as measured along the route provided in accordance with subsection (b); and
- d. The continued availability of remote parking spaces necessary to meet the requirements of this section shall be ensured by an appropriate condition that the continued validity of the zoning compliance or special use permit shall be dependent upon the permit holder's continued ability to provide the requisite number of parking spaces.

2. Combined Parking

Up to one-half ($1/2$) of the parking spaces required for one (1) use may be used to satisfy the parking requirements for a second use on the same zoning lot, subject to certification by the Administrator that such joint usage of the combined parking complies with either:

- a. The peak usage of the parking facility by one use will be at night or on Sundays (such as with theaters, assembly halls, or churches), and the peak usage of the parking facility by the second use will be at other times; or
- b. The second use is an accessory use to the first use, such as restaurants and meeting rooms to hotels and motels.

3. Shared Parking

Up to one-half (1/2) of the parking spaces required for one (1) use may be used to satisfy the parking requirements for a second use on an adjacent lot, subject to certification by the Administrator that such joint usage of the shared parking complies with both:

- a. The peak usage of the parking facility by one (1) use will be at night or on Sundays (such as with theaters, assembly halls, or churches), and the peak usage of the parking facility by the second use will be at other times; and
- b. The joint use of shared off-street parking between two (2) uses is made by contract between two (2) or more adjacent property owners.

- 4. On-Street Parking:** Where parking on-street is permitted, a use may count the marked spaces directly along the parcels frontage toward the parking requirement.

10.4 General Off-Street Vehicle Accommodation Design Standards

- A. Location:** No off-street vehicle accommodation area is permitted within any required setback, except that driveways providing access to the area may be installed across said setback. It is the intent that these driveways be as nearly perpendicular to the street right-of-way as possible.
- B. Surfacing and Curbing:** All vehicle accommodation area surfacing shall be constructed in accordance with the *Knightdale Standard Specifications & Construction Details*.
 - 1. Exemptions:** The following situations are exempted from the prepared hard pavement surfacing and curbing requirements of this section, except that they must comply with the requirements of Section 10.4B(4) for un-surfaced areas:
 - a. Single family dwellings in the RR1 District.
 - b. A parking lot used only for occasional use (*Use that occurs on two [2] or fewer days per week*) or is temporary in nature (*not exceeding 24 months*); and
 - c. Whenever a proposed development involves only one (1) of the following:
 - i. An accessory structure; or
 - ii. A change in use which will not increase the number of required parking spaces by more than 10 percent (10%) and the existing parking lot does not comply with the requirements of Section 10.4B(1).
 - d. The Administrator may exempt up to 75 percent (75%) of the required employee parking spaces in the MI District from the paving requirements of the Section. To qualify for the exemption, the parking spaces may not be visible, either by effective buffer screening or because of the grade of the site, from any public right-of-way or a residentially or commercially zoned property.

2. **Prepared Hard Surfacing Required**

- a. **Materials:** All vehicle accommodation areas including drives connecting such areas with the public street rights-of-way shall be surfaced with a prepared hard surface treatment including, but not limited to: asphalt, concrete or unit pavers. Prepared hard surfaces do not include those finished with gravel, dirt or mulch.
- b. **Permeable Hard Surface Permitted:** The Administrator may permit and/or require that permeable hard surface materials such as pervious concrete, porous asphalt, brick/stone pavers or engineered turf pavers be used in some portion of a vehicle accommodation area where it finds it is necessary to protect the root system of an existing tree or trees from damage or reduce the amount of impervious surface.

3. **Curbing Required:** All vehicle accommodation areas shall be curbed using standard curb and gutter with a minimum width of one-and-a-half (1½) feet. Landscape islands, aisles and areas shall be similarly curbed to protect vegetation.

4. **Un-surfaced Areas:**

- a. Except for single family dwellings in the RR1 District, landscape aisles or spatial separations shall be provided to ensure that the parking spaces will be readily identifiable to the users;
- b. Except for single family dwellings in the RR1 District, the area must be dust-free, and covered with a maintained pervious ground cover such as grass or mulch (*no bare earth*); and
- c. Except for single family dwellings in the RR1 District, the perimeter of the vehicle accommodation area encompassing the parking spaces and the side of any un-surfaced drive or aisle leading to said spaces shall be edged with one (1) of the following materials, including but not limited to: brick, pressure treated timbers, or cast in place concrete. All such edge treatments shall be anchored into place and be a minimum dimension of six (6) inches square.

C. **Screening:** Vehicle accommodation areas shall be screened in accordance with Section 8.7A.

D. **Containment:** Off-street vehicle accommodation areas shall be designed so that parked vehicles do not encroach upon or extend onto public rights-of-way, sidewalks or strike against or damage any wall, vegetation, utility or other structure.

E. **Pedestrian Walkways:** Vehicle accommodation areas shall be designed to allow pedestrians to safely move from their vehicles to the building. For lots of 36 parking spaces or greater, sidewalk corridors shall be provided within the parking lot or along the perimeter to provide safe access to buildings for pedestrians.

10.5 **Specific Circulation Drive Design Standards**

A. **Location:** A circulation drive may be permitted around the front of the building but may not encroach into the front setback or any required landscape area.

B. **Width:** Circulation drives shall not exceed 10 feet in width, except that they may be up to 20 feet wide when adjacent to an arterial **and** located in an MI or HB district.

- C. **Paving Treatments:** Circulation drives shall be enhanced with alternative paving treatments such as unit pavers, stamped concrete or stamped asphalt. At a minimum, two (2) 10-foot long treatments must be included at the beginning and the terminus of the drive as an indicator to the driver that they are entering and leaving a pedestrian area. Additional treatment locations will be required if and where pedestrian crossings of the circulation drive are anticipated.

10.6 Specific Motorized Vehicle Parking Area Design Standards

- A. **Location:** Parking areas are prohibited from being located in the front yard of a lot as well as from in front of a building's primary façade. The following uses are exempt from this provision:
 - 1. Single-family dwellings (*detached only*) in any District; and
 - 2. All uses in the MI District.
- B. **Landscaping:** Parking lots are to be treated as enclosures; therefore, parking lot landscaping (*Section 8.8*) and screening (*Section 8.7A(1)*) shall be placed in a manner that breaks the lot into parking modules of not more than 36 spaces.
- C. **Connectivity:** Each parking lot that features cross access with a parking lot on an adjacent property per the provisions of Section 9.4F may reduce their minimum parking requirement by five percent (5%).
- D. **Parking Space Dimensions:** Parking spaces should be dimensioned in accordance with *Architectural Graphics Standards*, latest edition.
- E. **Special Event Parking:** Off-street areas used for special event parking (*to accommodate occasional overflow volumes*) may be constructed of a dust-free, compacted, pervious ground cover such as grass or mulch. The owner of the property shall be responsible for the maintenance of such parking in a clean and dust-free condition.
- F. **Structured Parking:** When above-ground structured parking is located at the perimeter of a building, it should be screened in such a way that cars are not visible from the street. Locating structured parking at the interior of the block, surrounded by buildings, is the preferred method of screening.

10.7 Specific Bicycle Parking Design Standards

- A. **Location**
 - 1. Bicycle parking shall be made available within 50 feet of a building's main entrance(s).
 - 2. Where there is more than one building on the site, or parking is shared with an adjacent site, bicycle parking must be distributed equally to serve all buildings and main entrances.
- B. **Conversion from Motorized Spaces:** During the site plan approval process, the TRC may allow a new or a pre-existing development to convert up to five percent (5%) of its motorized vehicle spaces to non-required additional bicycle parking, as long as the spaces are conveniently located near a building entrance. Converted parking spaces shall yield at least four (4) bicycle parking spaces per motorized vehicle space.

Chapter 11. LIGHTING

11.1 Purpose and Intent

The purpose of this Chapter is to define practical and effective measures by which the obtrusive aspects of outdoor light usage may be reduced; while preserving safety, security, and the nighttime use and enjoyment of property. Poorly designed lighting contributes to excessive light trespass, strong glare and poor color rendering that can adversely impact adjacent properties, neighboring areas and motorists. These measures are intended to:

- curtail the degradation of the nighttime visual environment;
- reduce light trespass and glare by encouraging lighting practices that direct appropriate amounts of light where and when it is needed and prohibiting the use of poorly shielded or inappropriately directed lighting fixtures; and
- reduce energy waste by increasing the use of energy-efficient sources.

11.2 Applicability

A. The standards of this Chapter are applicable for new development across all zoning districts, except as described in subsection 'B' below. Changes to existing non-conforming lighting are subject to the provisions of Section 13.9.

B. Exemptions

1. **Outdoor Recreational Lighting:** Because of their unique requirements for nighttime visibility and limited hours of operation, the lighting of active recreation areas, such as ball fields and tennis courts, are not considered in this Chapter. However, lighting fixtures for such uses shall be mounted and aimed so that the illumination falls within the primary playing area and immediate surroundings and so that no direct light illumination is directed off site. Under all circumstances, lighting used for active recreational purposes shall be extinguished no later than 11:00 p.m.
2. **Flags:** Lighting of the United States of America or State of North Carolina flags and other non-commercial flags expressing constitutionally protected speech.
3. **Temporary Needs:** Circus, fair, carnival or other similar civic/community event lighting; and construction and emergency lighting; provided said lighting is temporary and is discontinued immediately upon the end of the event, completion of construction work or abatement of the emergency necessitating said lighting.
4. **Underwater:** Underwater lighting used for illumination of swimming pools and fountains.
5. **Gas Lighting:** Ornamental gas lights and lanterns.
6. **Holiday Displays:** Holiday lighting displays so long as said lighting does not produce light trespass.
7. **Low-Voltage Landscape Lighting:** Low-voltage lighting systems so long as said lighting is shielded to not produce glare or light trespass.

11.3 Prohibited Lighting

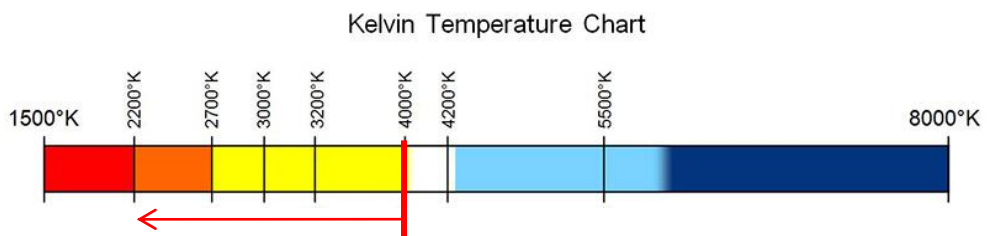
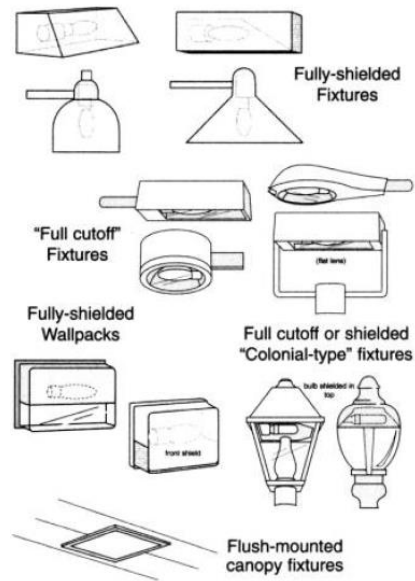
The following lighting is prohibited unless otherwise expressly permitted by this ordinance:

- A. Flickering, rotating, blinking, flashing lights or lights that change in intensity or color.
- B. Search lights, laser lights or any similar high-intensity lights.
- C. Unshielded accent, building-mounted luminous tubes. Shielded neon, argon, LED, fluorescent or similar luminous tubes shall not be used as a source of lighting except as provided for signs in Chapter 12.
- D. Light strings utilizing lamps greater than 15 lumens.
- E. Lighting that could be confused for a traffic control device, or any other fixture or device operated in such a manner as to constitute a hazard or danger to persons or safe vehicular operation.
- F. Wall-mounted fixtures (*e.g. wall packs*) are generally prohibited as they are not intended to provide general building, parking area or site lighting; but they may be permissible as accent lighting (*Section 11.5C*) or security lighting (*Section 11.5E2*).

11.4 General Outdoor Lighting Standards

Outdoor lighting shall meet the following general standards as well as any additional standards in Section 11.5 as may apply.

- A. **Plan Required:** Any person submitting a site plan or applying for a building, electrical, or sign permit to install outdoor lighting fixtures shall submit a lighting plan (*Section 16.8B*) providing evidence that the proposed lighting work will comply with the standards of this Chapter.
- B. **Fixture Classification:** Unless otherwise expressly permitted, all exterior lighting fixtures shall either have a fixture cutoff classification of “Full Cutoff” or be fully shielded (*no light at or above horizontal*) as depicted in the sample graphics to the right.
- C. **LED Fixtures:** All street and site lighting utilizing an LED fixture shall:
 - 1. **Color Rendering:** Be rated a minimum Color Rendering Index (CRI) value of 70 or better.
 - 2. **Color Temperature:** Have a ‘white light’ correlated color temperature not exceeding 4,000 K (*degrees Kelvin*).



- D. Pole Placement:** All pole-mounted outdoor lighting shall be located outside of utility easements, designed in coordination with the landscaping plan (*Section 16.8A*), located outside of landscaping islands and located as far from large shade trees as the landscaping plan will allow.
- E. Maximum Pole Height:** Unless otherwise restricted, all pole-mounted fixtures shall be mounted at heights no greater than 37 feet above grade.
- F. Maximum Light Level at Property Line:** All outdoor lighting fixtures shall be designed and located such that the maximum light level shall be 0.5 maintained FC at any property line unless otherwise permitted by this Chapter or where the required by the NC Building Code as a component of the minimum requirements for a means of egress system.
- G. Severe Changes in Elevation:** In cases of elevated and non-elevated commercial sites that adjoin residential property where lighting installation causes offensive light trespass or glare, the Administrator may require the shielding of fixtures at the time of installation or at any point thereafter. If the installation of shields does not alleviate the offense, the Administrator may require additional mitigation measures including, but not limited to:
- Changing the aim;
 - Re-locating perimeter light fixture(s) to the interior of the site;
 - Changing the mounting height;
 - Changing the light distribution pattern; or
 - Removing the pole and fixture from the site.

11.5 Additional Outdoor Lighting Standards for Specific Lighting Types

In addition to meeting the general lighting standards in Section 11.4, the following types of lighting shall also meet the additional specific standards listed below.

A. Street Lighting

Street lighting shall be placed on all streets by the developer to allow for the safe use of streets by cars, cyclists and pedestrians. Developer placed lighting shall also include all improved frontages on local and NCDOT streets. Developers requesting upgrades from the Town's minimum street light specification of a fiberglass pole with a fully-shielded, arm-mounted LED fixture shall pay the Town up front the difference in the costs of maintenance for the desired LED fixture and pole covering a period of 10 years. Developers interested in pursuing this option should consult with the Administrator concerning the Town's "Premium Lighting Policy". All street lighting shall conform to the specific standards for LED lighting in subsection 'B' as well as the following design standards:

1. **Average Spacing Maximums:** The following maximum average spacing requirements between street lights shall apply to all local, collector and arterial street classifications according to the use context of the adjacent land as listed below, except alleys (*Section 17.3A1*) which are exempt from said requirements.
 - a. **Local & Collector Streets:**
 - i. Residential at less than three (<3) unit per acre - 500 feet
 - ii. Residential from three (3.0) to eight (8.0) units per acre - 250 feet

- iii. Residential over eight (>8.0) units per acre - 150 feet
 - iv. All other uses - 300 feet
- b. **Arterial Streets:** All uses - 150 feet
2. **Minimum Initial Delivered Lumen Levels:**
- a. Local Streets - 4,800 lumens
 - b. Collector Streets in Residential Areas - 12,500 lumens
 - c. Collector Streets in Other Areas - 12,500 lumens
 - d. Arterial Streets - 18,500 lumens
3. **BUG Rating:** All street lights shall be fully-shielded (*no light at or above horizontal*) and shall not exceed the following BUG ratings established for each type of street:
- a. Local Streets - B1, U1, G1
 - b. Collector Streets in Residential Areas - B2, U2, G2
 - c. Collector Streets in Other Areas - B3, U3, G3
 - d. Arterial Streets - B3, U3, G3
4. **Placement:**
- a. Although the primary purpose of street lighting is to provide adequate lighting for the roadway, street lighting should also promote pedestrian safety. Therefore, lighting should be placed in a manner to minimize the casting of shadows on sidewalks.
 - b. Lighting shall be placed as far from street trees as the landscaping plan will allow.
 - c. Lights on newly constructed streets shall be alternately staggered on each side of the street wherever possible.
 - d. Lighting shall be placed at all street intersections, in street curves and at the end of any street or cul-de-sac.

(Note: For additional information on the connectivity and circulation of streets, please refer to Chp. 9)

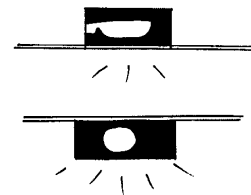
- B. Post-Top Pedestrian Lighting:** Unless otherwise expressly permitted, decorative post-top fixtures may only be used for the lighting of pedestrian walkways and plazas and shall also meet the following standards:
- 1. Mounting Height:** Shall not be mounted at a height greater than 18 feet;
 - 2. BUG Rating:** LED or other BUG-rated fixtures shall not exceed a rating of B3, U1, G1;
 - 3. Lumens:** Shall not exceed 7,250 initial delivered lumens (*LED*) or 9,000 source lumens as may apply; and
 - 4. Permitted Locations:** Shall only be utilized in the following locations:
 - In commercial and mixed-use area street rights-of-way where sidewalk, utility and planting strips have been combined (*see Sections 17.3A3, 4, 5 & 7*), or
 - Along pedestrian facilities located outside the street right-of-way, or
 - Along pedestrian facilities located more than 20 feet from any vehicular accommodation area.
- C. Accent Lighting - Building, Landscaping and Signs:** All accent lighting, except for low-voltage lighting systems (*Section 11.2B7*) shall meet the following additional standards:
- 1. Lamp Output:** Accent lighting should be integrated with the architectural character of the building, and shall use low-luminosity lamps (*2,000 source lumens or less*) unless otherwise justified
 - 2. Maximum Vertical Illuminance:** The illumination on any vertical surface shall not exceed 0.5 FC maintained, and shall not spill over roof lines or building edges.
 - 3. Signs:** Light fixtures used to illuminate signs shall be mounted on the top of the sign structure whenever possible.
 - 4. Residential Post Lights:** All residential post top lights shall:
 - a.** Not exceed eight (8) feet in height; and
 - b.** Have a translucent lens covering the light source.
- D. Vehicular Accommodation Area and General Site Lighting:** General site lighting and lighting for vehicular accommodation areas shall have an average horizontal illumination as specified in the tables in Section 11.6 “Lighting Levels”, and shall meet the following additional standards:
- 1. BUG Rating:** LED or other BUG-rated fixtures exceeding 7,250 initial delivered lumens or 9,000 source lumens as may apply, shall not exceed a rating of B3, U0, G2
 - 2. Circumstances Requiring Forward Throw:** Parking area lighting fixtures within 25 feet of any public street right-of-way or a commercial to residential/group care facility property line must be a forward throw fixture (*type IV light distribution as defined by IESNA*).

E. Security Lighting

1. **Flood/Spot Lights:** Spot lights shall not be used as general site lighting, but may be permissible for added security provided the following standards are met.
 - a. Spot lights shall be aimed so that the main beam from the light source is not visible from a neighboring property.
 - b. Spot lights shall be installed such that the fixture shall be aimed down at least 45 degrees from horizontal.
 - c. Fixtures shall use low luminosity lamps (*2,000 source lumens or lower*).
 - d. Shields shall be added as needed for conformity to this Section.
2. **Wall-Mounted Lights:** Wall-mounted fixtures are not intended to provide general building or site lighting, but may be used at building entrances for added security. Wall-mounted fixtures shall:
 - Use low luminosity lamps (*2,000 source lumens or lower*) unless justified otherwise through the planning approval process.
3. **Dawn to Dusk Security Lights:**
 - a. Each lamp shall not exceed 7,250 initial delivered lumens (*LED*) or 9,000 source lumens as may apply.
 - b. Each lamp shall be mounted at heights no greater than 27 feet above grade.

F. Vehicular Canopies and Gas Station/Convenience Store Aprons: Areas under a vehicular canopy and the approach to the canopy shall have an average horizontal illumination as specified in the table in Section 11.6B “Other Outdoor Areas”, and shall meet the following additional standards:

1. Lighting under vehicular canopies shall be designed so as not to create glare off site. Acceptable methods include one or more of the following:
 - a. Recessed fixture incorporating a lens cover that is either recessed or flush with the bottom surface of the vehicular canopy; or
 - b. Surface mounted fixture incorporating a flat lens that provides a fully shielded light distribution.
2. Lights shall not be mounted on the top or sides (fascia) of the canopy, and the sides of the canopy shall not be externally illuminated.



11.6 Lighting Levels

The following standards shall be required of all exterior lighting with the exception of public street lighting which is exempt.

The quantity of fixtures to be provided shall be based upon the desired level of uniform illumination as established by the following table and current standards of the IESNA. Fixture locations should be chosen to minimize glare, trespass and conflicts with the landscaping plan as stated in Section 11.2(B). If a lighting installation causes offensive light trespass or glare, the Administrator may require the shielding of fixtures at the time of installation or at any point thereafter.

The level of illumination shall be based upon the primary activity in each area to be lighted as outlined below.

A. Open Parking Facilities

For lighted parking lots, the minimum light level shall be no less than 0.2 FC. All light levels are measured at ground level. The light level requirements for individual parking lots vary depending on the activity classification.

The specified minimum FC value above 0.2 FC as outlined in the following table means that the lowest light level point or location in the parking lot must not exceed the minimum stated FC value in the table (*i.e. 0.9 FC for large shopping centers*). An average to minimum uniformity ratio of 4:1 means that the average FC to minimum FC ratio cannot be worse (*higher*) than 4:1. See the following table:

Light Levels for Open Outdoor Parking Facilities*		
Activity	Maintained Footcandles	Uniformity Avg/Min
1. Parking, residential, multi-family <ul style="list-style-type: none"> ▪ Low to medium activity 	0.6 FC Min	4:1
2. Parking, industrial/commercial/institutional/municipal <ul style="list-style-type: none"> ▪ High activity, i.e. large shopping centers/ fast food facilities, major athletic/civic cultural events 	0.9 FC Min	4:1
<ul style="list-style-type: none"> ▪ Medium/low activity, i.e. community shopping, office parks, hospitals, commuter lots, cultural/civic/recreational events, residential neighborhood shopping, industrial employee parking, schools, churches 	0.6 FC Min	4:1

* Source: IESNA 8th Edition Lighting Handbook with modifications

Notes: 1. Illumination levels are horizontal on the task, e.g. at grade or area surface.

2. Uniformity ratios dictate that average illuminance values shall not exceed minimum values by more than the product of the minimum value and the specified ratio. For example, for commercial parking medium/ low activity, the average footcandles shall not be in excess of 2.8 (0.7 x 4).

3. The Administrator shall be responsible for determining the activity level of a development. Applicants may appeal this decision to the Land Use Review Board.

B. Other Outdoor Areas

Use	Maximum Illumination Allowed (Avg. Footcandles Maintained) *
Service Stations: Approaches/Pump Islands	7/30
Outdoor Display Areas (i.e. Car Lots)	30
Tractor Trailer and Other Outdoor Storage Areas	20
Building Exteriors	3
Public Entrances	5
Employee or Other Entrances	3
Building Surroundings	2
Vital Locations or Structures	5

** Footcandles are for a "typical application" per IESNA 9th Edition Handbook. Adjustments may be required depending on specific circumstances and would require approval from the Administrator.*

11.7 Measurement

- A. Location:** Light level measurements shall be made at the property line of the property upon which the light to be measured is being generated. If measurement on private property is not possible or practical, light level measurements may be made at the boundary of the public street right-of-way that adjoins the property of the complainant or at any other location on the property of the complainant. Measurements shall be made at finished grade (*ground level*), with the sensor in the horizontal position and not mounted more than six (6) inches above ground level, and with the light-registering portion of the meter held parallel to the ground and pointing upward.
- B. Light Meter Specifications:** Lighting levels are to be measured in FCs with a direct-reading portable light meter. The meter shall:
1. have cosine and color correction;
 2. have an accuracy tolerance of no greater than plus or minus five percent (5%); and
 3. have been calibrated within the last two (2) years.

Chapter 12. SIGNS

12.1 Purpose and Intent

It is the intent of this chapter to authorize the use of signs whose types, sizes and arrangements are:

- compatible with their surroundings;
- preserve the natural beauty of the area;
- protect existing property values in both residential and non-residential areas;
- prevent the endangerment of public safety;
- express the identity of the community as a whole or individual properties or occupants;
- legible in the circumstances in which they are seen; and
- appropriate to traffic safety.

The following regulations are designed and intended to improve the overall aesthetic of the community by preventing over-concentration, improper placement, and excessive height, bulk and area of signs.

12.2 Applicability

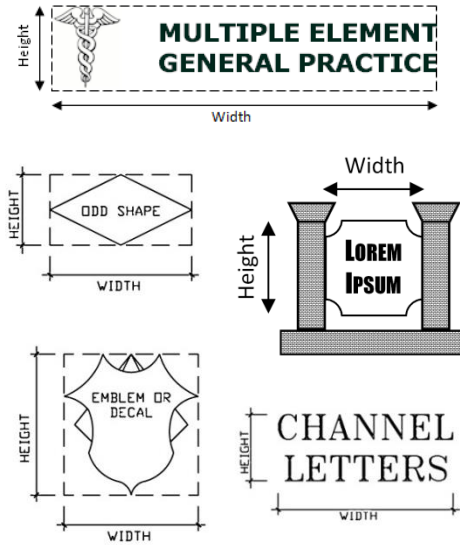
- A. Except as provided in Section 12.4, no sign shall be erected, altered, constructed, moved, converted or enlarged except in accordance with the provisions of this chapter and pursuant to the issuance of a Sign Permit (*Section 15.4C*).
- B. Notwithstanding sub-section “A” above, changing or replacing the permanent copy of an existing conforming sign shall not require a permit, provided the copy does not change the nature of the sign so as to render it in violation of this ordinance.

12.3 General Provisions

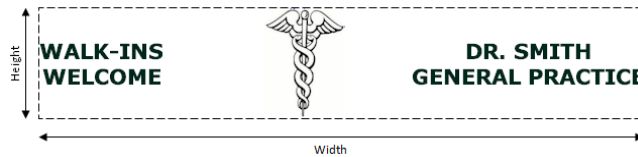
- A. **Scale:** The scale of the sign(s) should be appropriate for the building on which they are placed. Signs should reflect the proportional and dimensional relationships of the structure. Signs near pedestrian walkways such as pedestrian entrances and arcades should be pedestrian in scale.
- B. **Placement:** Except for government-installed signs, all signs are prohibited from being placed in an easement or public right-of-way, and no sign shall be located within a sight triangle area or so as to impair traffic visibility.
- C. **Maintenance:** Any structurally unsafe sign that endangers the public safety shall be immediately removed unless it is repaired and made otherwise to comply with the requirements of this Ordinance.
- D. **Lighting:** All wall or monument signs, if internally lit, must be covered with an opaque acrylic or similarly opaque surface. Exposed neon, argon, LED or similarly sized tube lighting is allowed; however, each tube must be individually recessed within a channel not exceeding four (4) inches in width that fully cuts off the casting of glare on all sides.

E. Computation of Signage Area:

- In General:** The area of a sign face (which is also the sign area of a wall sign or other sign with only one [1] face) shall be computed by means of the smallest rectangle that will encompass the extreme limits of the writing, representation, emblem, other display, and any material or color forming an integral part of the background of the display or used to differentiate the sign from the backdrop or structure against which it is placed. Sign area does not include any supporting framework, base, bracing or decorative fence or wall when such fence or wall otherwise meets the regulations of this Ordinance and is clearly incidental to the display itself.



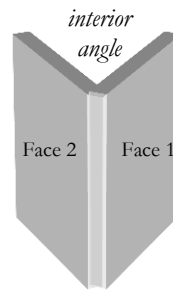
- Single-Tenant Buildings and Multi-Tenant Buildings with Separate Tenant Entrances:** All pieces of information or other graphic representations on any wall of a single-tenant building or a single tenant wall of a multi-tenant building with individual tenant entrances shall be measured as though part of one (1) sign, encompassed within one (1) rectangle (unless the parts are separated by a distance greater than 100 feet), which may not exceed the permitted sign area for the wall to which the sign is affixed.



- Multi-Tenant Buildings with Common Entrances:** For a single wall on a multi-tenant building with common entrances, the area of each sign shall be computed using the general computation methods found in subsection 1, and the aggregate sign area shall not exceed the permitted wall area (Section 12.5) to which the signs are affixed.



4. **Double-Faced Signs:** Where the two (2) faces of a double-faced sign are parallel or the interior angle formed by the faces is 60 degrees or less, only one (1) display face shall be measured in computing sign area. If the two (2) faces of a double-faced sign are of unequal area, the area of the sign shall be measured on the larger face.

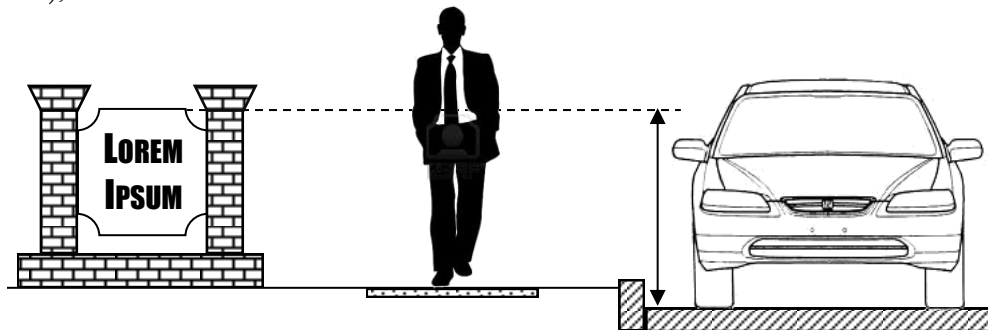


Sign area of multi-faced signs is calculated based on the principle that all sign elements that can be seen at one (1) time or from one (1) vantage point should be considered in measuring that side of the sign. Consequently, where the interior angle formed by the two (2) faces exceeds 60 degrees, the areas of all faces of a multi-faced sign shall be added together to compute the area of the sign.

5. **Three-Dimensional Signs:** Spherical, cylindrical or other three-dimensional signs not having conventional sign faces shall be computed from the smallest shape or shapes which will best approximate the actual surface area of such faces.

F. Computation of Sign Height

The maximum height shall be as measured from street grade or the sidewalk (where one exists), whichever is lower.



12.4 Signs Not Requiring a Zoning Compliance/Sign Permit

The following types of signs do not require a zoning compliance/sign permit as outlined in Section 15.4C and may be placed in any zoning district subject to the provisions of this Ordinance and, if required, the issuance of a building permit. There shall be no limit as to the number of such signs on any lot, except as herein prescribed. Signs (except government signs) are prohibited from being located within a public right-of-way unless permission has been otherwise granted by the Town of Knightdale, NCDOT or the General Assembly of North Carolina, as may apply.

- A. **Ballpark Signage:** Signage within ballfields and sports stadiums that is directed within the facility including, but not limited to, banners, fixed placards and scoreboards.
- B. **Flags:** Flags include those of the United States of America, the State of North Carolina, Wake County, the Town of Knightdale, or foreign nations having diplomatic relations with the United States, or any other flag adopted or sanctioned by an elected legislative body of competent jurisdiction, as well as flags bearing a logo of corporate, nonprofit, or religious origin. Any flag not meeting the standards of this section shall be considered a banner and shall be subject to the regulations in Section 12.7.
 1. **Pole Height:** Flags shall not be flown from a pole the top of which is more than 40 feet in height.

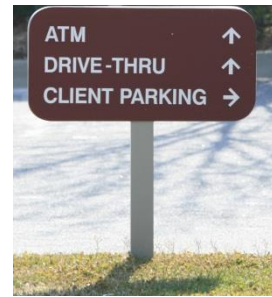
2. **Number:** A total of three (3) flags may be flown per site only when the flags of the United States of America and the State of North Carolina are flown along with the third flag.



3. **Flags of the United States of America:** Flags shall be flown in accordance with protocol established by the Congress of the United States for the Stars and Stripes. Flags of the United States of America, regardless of size or number, may be flown and are exempt from these regulations.

- C. **Government Signs:** Signs posted by various local, state, and federal agencies, such as regulatory signs, welcome signs, seasonal signs/ banners/ decorations, legal notices, identification and informational signs, and traffic control signs.

- D. **Incidental Signs:** On non-residential lots, signs that carry no advertising message; are incidental to other signs on the site; are not internally or indirectly illuminated; and direct or guiding certain activities to certain areas (*i.e. handicapped parking, drive-thrus*), prohibit parking of unauthorized vehicles or provide other incidental information; are subject to the following standards:



1. **Front Yard:** A maximum of four (4) incidental signs not exceeding four (4) square feet each may be located in the front yard. Incidental traffic control signs erected in accordance with the Federal Highway Administration's *Manual for Uniform Traffic Control Devices* (MUTCD) are exempt from the four (4) square foot area requirement.
2. **Side and Rear Yards:** A maximum of two (2) signs not exceeding 32 square feet each whose copy does not face the fronting street.
3. **Signs on Buildings:** Signs up to three (3) square feet not otherwise regulated by this Ordinance are permitted. (*Includes Home Occupations*)
4. **Exemptions:** Incidental signs not visible from a public street or neighboring residence.

- E. **Memorial Signs & Date Blocks:** Memorial signs or tablets, and names and construction dates of buildings only when etched into a masonry surface or affixed to a permanent metal plaque.



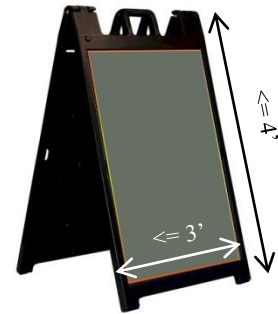
- F. **Property Identification Signs:** Signs bearing only property identification numbers and names, post office box numbers, names of occupants of the premises on which the signs are located, or other identification of premises not of a commercial nature.



1. **Illumination:** Property identification signs may not be illuminated.
2. **Number:** Two (2) signs are permitted per lot.
3. **Area:** Each sign may not exceed two (2) square feet

G. Sandwich Board Signs: Portable A-frame sign constructed with two (2) faces back-to-back and resting on the ground at an angle to each other not exceeding 45 degrees.

1. **Districts:** Sandwich board signs are permitted along pedestrian ways in the Residential Mixed-Use (RMX), Neighborhood Mixed-Use (NMX), Town Center (TC) and Highway Business (HB) districts subject to standards two (2) through five (5) that follow.
2. **Location:** A sandwich board must be located within eight (8) feet of a doorway or under the roof line, and shall maintain a minimum five (5) foot wide pedestrian clearance zone along the pedestrian way.
3. **Hours:** Sandwich boards may only be displayed during the associated business' hours of operation.
4. **Area:** Neither face shall exceed three (3) feet in width or four (4) feet in height.
5. **Materials:** The sandwich board frame shall be constructed of a non-reflective material and/or color.



H. Street Graphics: Flags and banners with limited copy usually attached to light poles or similar fixtures within public rights-of-way or public buildings and approved by the Public Works Director in accordance with the Town's adopted Street Graphics Policy. Similar graphics may be mounted on private property but may not exceed 12 square feet each in area.



I. Temporary Signs: To prevent the promulgation of temporary signs that are not designed to be long-term additions to the aesthetic environment and which often become unsightly and create visual clutter after exposure to weather and landscape maintenance, all temporary signs including, but not limited to real estate signs, political campaign signs, and yard or garage sale signs, shall not be located in any right-of-way or attached to structures in any right-of-way such as power poles and street signs, and shall be subject to the following specific provisions:

1. **Non-Commercial Message Signs: Temporary signs of a non-commercial nature,** provided such signs:
 - a. Do not exceed one (1) sign per candidate or issue per lot;
 - b. Do not exceed six (6) square feet in sign area;
 - c. Are not erected more than 30 days before the corresponding voting period begins; and
 - d. Shall be removed within seven (7) days after the election date.
 - e. **Exemption:** Signs placed along NCDOT-maintained rights-of-way are exempt from the preceding local requirements, but must comply with the



One (1) sign per candidate per lot, placed outside the right-of-way. Example above taken from the 2008 US Presidential election between then candidates and senators Barack Obama and John McCain

provisions of §136-32 of the North Carolina General Statutes as may be amended from time to time.

2. Construction Identification Signs:

- a. Individual single family or duplex construction lot identification signs shall:
 - i. Not exceed one (1) sign per lot for which a building permit has been issued;
 - ii. Not exceed four (4) square feet in area;
 - iii. Not be erected prior to issuance of a building permit; and
 - iv. Be removed within 30 days following the issuance of the CO.
- b. Major residential subdivisions, multifamily, mixed-use or non-residential construction site identification signs shall:
 - i. Not exceed two (2) signs per construction site;
 - ii. Not exceed 32 square feet in area per sign;
 - iii. Not be erected prior to issuance of a CIP; and
 - iv. Be removed within 30 days following the issuance of the last CO.
- c. For purposes of this section only, “construction site” shall mean the following:
 - i. A major residential subdivision (inclusive of all lots and phases);
 - ii. A multi-family development approved as a single development (inclusive of all lots and phases);
 - iii. Mixed-use or non-residential development approved as a single development (inclusive of all lots and phases).

3. Real Estate Signs:

- a. **For Sale/Rent/Lease:** Real estate signs advertising the sale, rental, or lease of the premises on which the signs are located shall:
 - i. Not exceed one (1) sign per zoning lot or one (1) sign per each separately owned individual residential or commercial unit on a single zoning lot;
 - ii. Not exceed four (4) square feet of sign area for property zoned residential and 32 square feet for property zoned non-residential; and
 - iii. Be removed no later than seven (7) days after sale, rental, or lease of the premises.
- b. **Sales Office Identification:** A sales office identification sign shall:
 - i. Not exceed one (1) sign per subdivision or apartment complex;
 - ii. Not exceed 16 square feet in area; and
 - iii. Not exceed five (5) feet in height.

- c. **Off-Premise Directional:** Directional real estate signs shall:
 - i. Be limited to a maximum of three (3) directional signs;
 - ii. Not exceed four (4) square feet in area;
 - iii. Be allowed off the subject premises only with the permission of the owner on whose property the sign is being placed; and
 - iv. Be removed no later than seven (7) days after sale, rental, or lease of the premises.

- 4. **Yard and Garage Sales Signs:** Yard or garage sale signs announcing yard or garage sales shall:
 - a. Not exceed one (1) sign per site of such sale;
 - b. Not exceed four (4) square feet in sign area; and
 - c. Be removed within seven (7) days after being posted.

5. **Banners:** For regulations concerning banners, refer to Section 12.7

- J. **Murals or Wall Art:** Murals or similar wall art shall:
 - 1. Not be located on a building’s primary façade; and
 - 2. Limit the area of commercial copy to no more than 10 percent (10%) of the total façade area.

K. Window Signs

- 1. **In General:** Signs placed or painted on the interior or exterior of glass windows or doors shall not cover more than 30 percent (30%) of the glass area of any building façade. Window Signs that cover more than 30 percent (30%) of the glass area of a building façade shall be considered as Wall Signs and shall meet requirements for Wall Signs as outlined in sections 12.5 and 12.6B.
- 2. **Neon Tube Signs/LED Signs:** These signs may only be located on the inside of a window and shall be limited to two (2) per business and cover no more than 10 percent (10%) of the corresponding façade’s glass area.

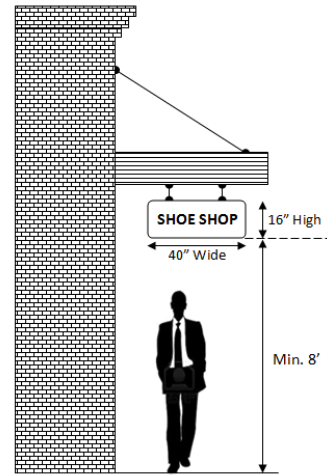
“WINDOW SIGN” – NO PERMIT



“WALL SIGN” – PERMIT REQUIRED

L. Under Awning Signs

1. **Maximum Dimensions:** 16 inches high and 40 inches wide.
2. **Sign Clearance:** Eight (8) feet



12.5 Signs Requiring a Permit by District

A. Primarily Residential Districts (OSP, RR, GR, UR)

Permitted Sign Type(s)	Specific Applicability	Maximum Area	Maximum Height	Maximum Number
Suspended Shingle Post Sign	For Home Occupation Uses Only	6 sq ft	5 ft	1
Monument or Yard Wall	Neighborhood/Campus Entrance Sign	16 sq ft	7 ft	2 per entrance

B. Mixed-Use, Primarily Commercial, and Industrial Districts (RMX, NMX, TC, HB, MI)

Permitted Sign Type(s)	Specific Applicability	Maximum Area	Maximum Height	Maximum Number
Monument	Lots Less than 2 Acres	50 sq ft	6 ft	2 *
Monument	Lots Equal to or Greater than 2 Acres	70 sq ft	7 ft	2 *
Building Wall	Front Facades	10% of wall **	n/a	n/a
Building Wall	All other facades	5% of wall **	n/a	n/a

C. Civic/Institutional Uses (All Permitted Districts)

Permitted Sign Type(s)	Specific Applicability	Maximum Area	Maximum Height	Maximum Number
Monument	Lots Less than 2 Acres	50 sq ft	6 ft	2 *
	Lots Equal to or Greater than 2 Acres	70 sq ft	7 ft	2 *
Building Wall		5% of wall **	n/a	n/a

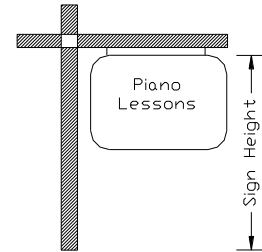
* Only one monument sign allowed per lot per street frontage.

** No individual wall sign may exceed 150 square feet if sign is within 150 feet of a public right-of-way.

12.6 Signage Types

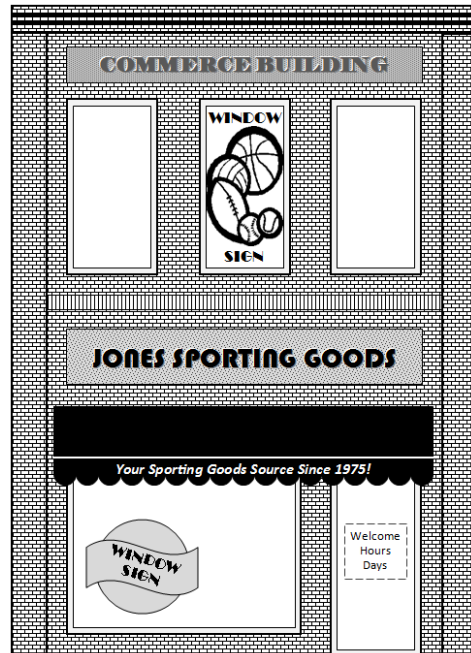
A. Suspended Shingle Post Signs

1. All Suspended Shingle Post Signs shall be located a minimum of five (5) feet behind the street right-of-way.
2. Suspended Shingle Post Signs shall not be internally illuminated.
3. Suspended Shingle Post Signs and their supporting posts shall be of a color and material which are similar or complimentary to those of the structure housing the subject establishment.

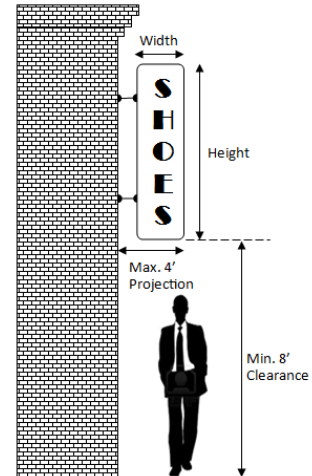


B. Wall Signs: Signs erected parallel to the façade of any building or yard wall (Section 4.7) to which it is attached and supported throughout its entire length by the building or yard wall face shall:

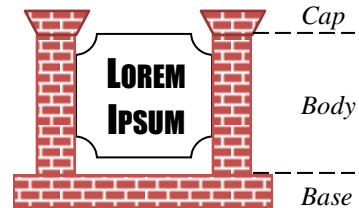
1. Preferably be located between the top of the first floor window and the sill of the second floor window, or on a sign frieze area (Exception: Building identification which is an integral part of the building's design and architectural character shall not be considered a sign for the purposes of this Standard);
2. Project no more than 12 inches from the building wall;
3. Not obscure architectural features;
4. Be integrated with the design of the building;
5. Not cover any window or part of a window; and
6. Not extend beyond the highest point of a roofline, parapet or mansard roof.
7. **Alternatives:** The following alternatives are considered as Wall Signs and shall be counted against a façade's maximum permitted area for Wall Signs (Section 12.5):
 - a. **Window Signs:** The area of Window Signs (Section 12.4L) that in aggregate exceed 30 percent (30%) of the glass area on any building façade. At no time shall the opacity (*visibility into the building*) be less than 50 percent (50%) of the total window area.
 - b. **Awning Signs:** Signs located on an awning are considered Wall Signs and shall be limited to no more than 50 percent (50%) of the awning area.
 - c. **Projecting Signs:** A Projecting Sign is considered a Wall Sign, but it may not extend above the soffit, parapet or eave line, as appropriate, of the building to which it is attached; and shall be limited by the following additional standards:



- i. **Minimum Width of Façade:** 20 feet (not applicable in the TC District);
- ii. **Maximum Dimensions:** Projecting signs may not exceed either eight (8) feet in height or three (3) feet in width.
- iii. **Maximum Area:** 10 square feet;
- iv. **Maximum Projection from Wall:** Four (4) feet; and
- v. **Sign Clearance:** Eight (8) feet.



- C. **Monument Signs:** Monument Signs are monolithic structures in which the bottom (*base*) of the sign is flush with the ground. These signs shall:
1. Not be permitted between any building façade and right-of-way where the distance between the building façade and right-of-way is 30 feet or less;
 2. Be located a minimum of 12 feet from any building façade;
 3. Be located a minimum of five (5) feet behind the street right-of-way;
 4. Not be located closer than 10 feet to any adjacent lot line if the Monument Sign is greater than five (5) square feet in area;
 5. Maintain a 15-foot side yard setback if the side lot line abuts a residential district and
 6. Have a base at least 10 percent (10%) wider than the body of the sign and be finished (*sign base and surrounding structural components*) with materials consistent with those of the principal structure.
 7. **Alternatives:**
 - a. Up to an additional 15 feet of sign area is permitted for a monument sign that is routed or sandblasted.
 - b. A Suspended Shingle Post Sign (*Section 12.6.A*) may be substituted for a Monument Sign but shall meet all height and area requirements as provided in Section 12.5A.



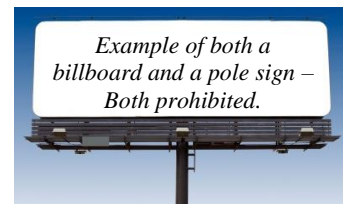
12.7 Banners

Banners may be permitted via the submission of a Temporary Banner Permit form to the Land Use Administrator.

- A. **Maximum Area:** 32 square feet.
- B. **Maximum Number:**
 - 1. **Commercial Event:** One (1) banner.
 - 2. **Non-Commercial Event:** Two (2) banners.
- C. **Location:**
 - 1. **Generally:** Except for those banners erected by a governmental agency, a banner shall not be placed in any public right-of-way.
 - 2. **Commercial Event:** Banners for commercial events (*sales, promotions, grand openings, going-out-of-business, liquidations, etc.*) shall be attached to the building façade of the unit to which the message of the banner is applicable
 - 3. **Non-Commercial Event:** Banners for non-commercial events shall be mounted on the ground and located a minimum of five (5) feet behind the street right-of-way, provided the event sponsor has secured the permission of the property owner to post the banner.
- D. **Time Period:** For both commercial and non-commercial events, banners shall be permitted for no more than four (4) events per calendar year with a maximum time period for each event of 14 calendar days.

12.8 Prohibited Signs & Devices

- A. **Animated Signs:** signs with flashing or reflective disks, and signs with flashing lights or lights of changing degree of intensity or color and animated, rotating, moving, or apparently moving signs.
- B. **Billboards.**
- C. **Pole Signs.**
- D. **Portable Signs:** (*except Sandwich Board Signs as permitted in Section 12.4G*), including any sign whose sign face was initially constructed and designed to be placed and/or transported on wheels, regardless if said sign face is removed from its base and placed on or in the ground so as to otherwise classify said sign as a "free-standing" sign as herein defined.
- E. **Vehicular Signs,** except identification signs painted on or permanently attached to commercial vehicles.
- F. **Roof Signs:** signs that extend above or placed upon any roof surface.
- G. **Off-Premise Signs,** except banners as permitted in Section 12.7.



H. Obstructive Signs:

1. Any sign that obstructs the view of bicyclists or motorists using any street, approach to any street intersection, or which interferes with the effectiveness of or obscures any traffic sign, device or signal.
2. Any sign (*other than a government sign*), banner or display placed on any curb, sidewalk, post, pole, hydrant, bridge, tree or other surface located on, over or across any public street or right-of-way.
3. Any sign located in such a way as to intentionally deny an adjoining property owner visual access to an existing sign on their property.



I. Specific Devices:

1. **Lighter-Than-Air:** Sign devices consisting of balloons, blimps, or similar types of lighter-than-air objects, shall be prohibited, except those which are subject to Federal Aviation Administration (FAA) regulations.
2. **Windblown:** Sign devices consisting of streamers, pennants, windblown propellers, strung light bulbs, flutter/feather flags, sun blades and similar installations.
3. **Imitative:** Signs which contain lights, rotating disks, words and other devices not erected by a public authority which may be erroneously construed as government signs or emergency warning signs.



- J. All other signs not expressly permitted in this Ordinance.

12.9 Sign Illumination

- A. All lighting shall be in conformance with Chapter 11.
- B. All lighted signs shall have their lighting directed in such a manner as to illuminate only the face of the sign. Lighting fixtures used to illuminate an outdoor advertising sign either shall be by directed ground lighting or mounted on the top of the sign, and shall comply with shielding requirements. All lighted signs shall meet all applicable Electrical Codes.
- C. No sign within 100 linear feet of a pre-existing residential building footprint may be illuminated between the hours of 12:00 midnight and 6:00 a.m. A residence shall be deemed "pre-existing" for purposes of this Chapter if it has a valid building permit in effect for construction of said structure or if construction of said structure was complete on or prior to the effective date of this provision.

Chapter 13. NONCONFORMITIES

13.1 Purpose and Intent

The purpose of this Chapter is to regulate and limit the continued existence of uses and structures established prior to the effective date of this Ordinance (*or any subsequent amendment*) that do not conform to this Ordinance. Many nonconformities may continue, but the provisions of this Chapter are intended and designed to limit substantial investment in nonconformities and to bring about eventual elimination and/or lessen their impact upon surrounding conforming uses in order to preserve the integrity of the area in which it is located.

13.2 Applicability

Any nonconformity created by a change in the classification of property or the text of these regulations shall also be regulated by the provisions of this Chapter.

13.3 Nonconforming Lots

- A. Except as provided in Section 13.3B, a nonconforming vacant lot may be developed for any of the uses permitted by these regulations in the District in which it is located (*Section 2.3C*), provided that the use meets all applicable yard and setback requirements for the District in which the lot is located.
- B. A nonconforming lot may be developed if, at the effective date of this Ordinance, the lot is located in a subdivision that at a minimum had received preliminary plat approval prior to the adoption of this Ordinance.

13.4 Nonconforming Principal Structures

- A. A nonconforming principal structure containing a use permitted in the District is allowed to remain subject to the following provisions:
 - 1. Normal repair and maintenance of nonconforming principal structures is permitted.
 - 2. Nonconforming principal structures may be enlarged or altered; however, the enlargement or alteration must not increase the structure's nonconformity.
 - 3. If a nonconforming principal structure is damaged to an extent greater than 50 percent (50%) of its assessed value, it may be rebuilt only after the issuance of a building permit from the Administrator. A building permit for reconstruction of such structure must be secured no later than 60 days after the date the structure sustained the damage. The building permit shall expire six (6) months after issuance unless substantial progress shall have occurred and thereafter diligently pursued. In the issuance of the building permit, the following standards shall apply:
 - a. **All Uses**
 - i. If the principal structure can be reconstructed on the same lot and meet all District and building type requirements, it shall be.
 - ii. If the principal structure cannot be reconstructed at the same size (*ground floor area*) in accordance with the minimum standards of the

District in which it is located or building type, then it shall be placed on the lot in as conforming a manner as possible.

- iii. The reconstructed nonconforming principal structure shall not be rebuilt in a manner which increases its nonconformity.

- b. **Non-Residential Uses:** In all circumstances, the reconstruction of a nonconforming non-residential principal structure (at the same or smaller size) shall be required to meet the standards of chapters 8 and 10 of this Ordinance.

- B. If a nonconforming structure is moved on the lot upon which it is located, it shall be placed on the lot in as conforming a manner as possible.
- C. Also, a nonconforming use may be re-established in case of damage to the structure in which it is located (*to an extent of less than 50 percent of its assessed value*) due to fire or other disaster event pursuant to the issuance of a permit by the Administrator. This shall include, as well, the repair or reconstruction of any structure or on-site utility, parking or street infrastructure in support of said nonconforming use. If said structure was also nonconforming, the reconstruction shall meet the requirements of the applicable District.

13.5 Nonconforming Principal Uses

- A. Nonconforming principal uses of land or structures may continue only in accordance with the following provisions:
 - 1. **All Uses**
 - a. Normal structural repair and maintenance may be performed to allow the continuation of a nonconforming principal use.
 - b. A nonconforming principal use may be re-established within a structure damaged to an extent of more than 50 percent [50%] of its assessed value, subject to the issuance of a building permit by the Administrator. In the case of a non-conforming structure, refer to Section 13.4. An application must be filed for such building permit no later than 60 days after the date the structure sustained the damage, otherwise the use shall not be re-established. The building permit shall expire six (6) months after issuance unless substantial progress shall have occurred and thereafter diligently pursued.
 - c. Where a nonconforming use exists, the intensity of the use may be altered and the equipment or processes used at the property may change, provided that these or similar changes amount only to a change in the degree of activity rather than the kind of activity or change of use (*Section 2.3C*).
 - 2. **Non-Residential Uses**
 - a. A nonconforming non-residential use may only be expanded, changed or enlarged if the expansion, change or enlargement can be accomplished within the existing structure, and the Administrator determines that the interior expansion, change or enlargement will not have a negative impact upon surrounding conforming uses.

- b. A nonconforming non-residential use shall not be enlarged by additions to the structure in which the nonconforming non-residential use is located (*either attached or detached*).
 - c. Any occupation of additional lands beyond the boundaries of the lot on which the nonconforming non-residential use is located is prohibited.
3. **Residential Uses:** An existing nonconforming residential use may be enlarged or altered as long as the enlargement or alteration complies with all yard requirements and other applicable District regulations.
- B. Once a nonconforming principal use of land or a structure has been changed to a conforming use, a nonconforming use shall not be re-established upon said land or within said structure.
 - C. If a nonconforming principal use of land or a structure has been terminated for 180 consecutive calendar days or more, the use shall not be allowed to be re-established. All new uses subsequently established on said land or within said structure shall be conforming.

13.6 Nonconforming Accessory Uses and Structures

- A. A nonconforming accessory use or accessory structure may be expanded only if the expansion does not increase the nonconforming condition of the structure.
- B. No nonconforming accessory use or accessory structure shall continue after the principal use or structure is abandoned, damaged, destroyed or otherwise terminated unless such accessory use or accessory structure is made to conform to the accessory standards for the District in which it is located.
- C. A nonconforming accessory use or structure shall not become or replace any abandoned, damaged, destroyed or otherwise terminated principal nonconforming use or structure.

13.7 Nonconforming Wireless Telecommunication Towers:

Towers existing at the time this Ordinance was adopted may be reviewed for approval by the Administrator and replaced with a taller tower, provided that the tower shall conform to the standards detailed in Section 3.3YY, as well as the following:

- A. Subject to the provisions of Section 3.3YY(2), the height of the replacement tower may not exceed the height of the original tower by more than 50 feet, and the addition of up to 50 feet may occur only once.
- B. The fall and debris radius requirement and setback requirement in Section 3.3YY(3) and Section 3.3YY(4) may be exempted provided that:
 - 1. A registered professional engineer certifies that the proposed replacement tower and debris would fall within the boundary lines of the property on which the tower is located; and
 - 2. This certification is reviewed and verified by a third-party registered professional engineer of the Town's choosing.
- C. The replacement tower must be located in as close proximity to the base of the original tower as reasonably possible, but in no event more than 50 feet from the base of the original tower.

- D. The owner of the replacement tower must provide the Administrator with an affidavit stating that at least one (1) other wireless communications carrier needs a wireless communications facility within 1,250 feet of the subject site and that such carrier has agreed to co-locate on the replacement tower.

13.8 Nonconforming Manufactured Homes

- A. A nonconforming manufactured home used as a principal residential structure may only be replaced in accordance with the criteria found in sections 2.13, 3.3CC and 5.7 of this Ordinance.
- B. A manufactured home may continue to be placed or replaced within a nonconforming manufactured home neighborhood or mobile home park on previously platted lots or previously approved spaces, as well as make any necessary improvements to the neighborhood or park infrastructure, but shall not be permitted to expand the area or number of units contained within the boundary of the neighborhood or park.

13.9 Nonconforming Landscaping, Screening, and Lighting

- A. If there is a change of use, or if there is an expansion to the heated square footage of an existing use by more than 25 percent (25%), the lot shall fully comply with all applicable street yard landscaping and screening requirements of Chapter 8.
- B. Expansions to the vehicle accommodation areas which increase the total area by more than 25 percent (25%) shall be required to comply with all applicable vehicle accommodation area screening and parking lot landscaping requirements of Chapter 8.
- C. Changes in the use of a nonconforming light fixture, replacement, or structural alterations of outdoor light fixtures shall require that the fixture conform to the applicable requirements of Chapter 11.

13.10 Nonconforming Signs

- A. The ordinary maintenance or repair of an on-site nonconforming sign is allowed. The copy of an on-site nonconforming sign may be altered, replaced, or modified if the following two (2) conditions are met:
 - 1. There is no change in the supporting structural components of the said on-site non-conforming sign; and
 - 2. Only the existing on-site tenants operating a business on the related site at the time of the original sign construction, and whose name already appears on the non-conforming sign are permitted to locate copy on the non-conforming sign.

New tenants may be permitted to locate on the related site; however, if they wish to add their tenant name to the existing non-conforming sign, the sign shall be immediately brought into compliance with all the requirements of Chapter 12. Under no circumstance however, shall the nonconforming condition of any nonconforming sign be increased. Any other alteration, replacement, conversion or change will require the entire sign to be immediately brought into compliance with all the requirements of Chapter 12.

- B. Nonconforming signs which are destroyed or damaged by 50 percent (50%) or more of their value shall not be rebuilt or repaired except in conformance with the requirements of Chapter 12.

- C. When the establishment to which a sign is related ceases or is vacated, the sign shall be classified as 'obsolete', and such sign, including all of its attendant supports, frames, and hardware, shall be removed within 180 days of the cessation or vacating of the use or establishment unless such sign is used by a new use or establishment on the premises in accordance with all of the other requirements of Chapter 12.
- D. If there is an expansion of the heated square footage of an existing business, or a change in use to an existing building (*except multi-tenant buildings*), and there were one (1) or more on-premise nonconforming signs which advertised the former or current business or use, any new signs and all new sign faces for the new use or business must meet all the requirements of Chapter 12.
- E. Residential neighborhood identification signs which exist prior to the adoption of this Ordinance may be replaced with new signs in the same location as the existing signs as long as the sign will comply with the sign area and height limitations of Chapter 12.

13.11 Nonconforming Street Frontages

- A. **Nonconforming Street Frontages and Site Plan Review:** In any of the following situations, projects shall submit site plans for review in accordance with Chapter 15, and be required to comply with all street improvement requirements of Chapter 17 along the fronting public streets, including but not limited to; turning and storage lanes, access management, sidewalks, bike lanes, and curb and gutter:
 - 1. New developments, including new principal structures on a previously developed site;
 - 2. A change of use to the building or site that requires an expansion to the existing parking area by more than 10 percent (10%) of the maximum parking spaces permitted for the proposed use as determined by Section 10.3D, or by more than 10 spaces, whichever is less; or
 - 3. An expansion to the square footage of an existing non-residential or multi-family building that increases the total area by more than 25 percent (25%).
- B. **Nonconforming Street Frontages and Redevelopment Site Plan Review:** In any of the following situations, projects shall be required to comply with the redevelopment site plan requirements found in Subsection C:
 - 1. If there is a change of use to the building or site that requires an expansion to the existing parking area of no more than 10 percent (10%) of the maximum parking spaces permitted for the proposed use as determined by Section 10. 3D, or 10 spaces, whichever is less; or
 - 2. If there is an expansion to the square footage of an existing non-residential or multi-family building that increases the total area by no more than 25 percent (25%).
- C. **Administrative Review of a Redevelopment Site Plan**
 - 1. The Administrator may approve a redevelopment site plan subject to all of the following standards:
 - a. For change of uses, the proposed use is permitted within the zoning district and for an expansion to an existing use, the existing use is permitted within the zoning district;

- b. The proposed use will occupy existing building(s) on the site;
 - c. Any proposed expansions or additions are no more than 25 percent (25%) of the floor area of the existing building to which the expansion or addition is being made;
 - d. The proposed use or expansion does not expand existing encroachments into required setbacks, buffers, easements, rights-of-way or other similar features;
 - e. The existing structure is not a manufactured home;
 - f. A residential structure which is converted to a non-residential structure complies with all applicable Federal, State and local standards; and
 - g. The applicant submits a redevelopment site plan that complies with all the requirements in this section. If the Administrator determines that a request for a change of use or expansion warrants a full TRC review in order to address community concerns or potential project impacts, he/she may require the request to go through the full site development plan review process as described in Section 15.4E.
2. Property owners shall submit a site plan signed and sealed by a professional engineer or landscape architect licensed in NC. At a minimum, this plan shall comply with the applicable requirements of this Ordinance for the following:
- a. Rights-of-way dedication to meet the applicable specifications in the Town's Comprehensive Plan;
 - b. Sidewalk installation, if the sidewalk can be placed in the final location for the applicable road section, as specified in the Town's Comprehensive Plan or a fee-in-lieu of the sidewalk installation if the sidewalk cannot be located in its final location;
 - c. Access roads, entrance drives, and/or exit drives added and/or removed to ensure vehicular and pedestrian safety and traffic flow;
 - d. ADA accessible route(s);
 - e. Off-street parking location and design;
 - f. Vehicle accommodation area surface;
 - g. At a minimum, all portions of a building façade within 100 feet of a public or private street shall avoid long, monotonous, uninterrupted walls of 20 feet or more on any floor by utilizing wall offsets, windows, doors, stairwells, pilasters, spandrel glass, awnings or other architectural elements.
 - h. Any additional, voluntary exterior building improvements proposed by the property owner shall comply with the requirements of Chapter 5 or be heard before the TRC if alternative exterior improvements are proposed and meet the spirit and intent of said requirements;
 - i. Street trees, parking and loading area landscaping and vehicle accommodation screening and/or fencing;
 - j. Screening for dumpsters, storage areas, mechanical equipment, and other similar equipment; and
 - k. Lighting (*parking lot, building and streets*).

13.12 Nonconforming Plans (*Approved Prior to the Adoption of this Ordinance*)

Any site specific plan, including but not limited to: master plans, preliminary plats, final plats, conditional district plans and site plans, for the development of property and/or construction of a building which has received approval by the Town of Knightdale for development and/or construction, but does not conform to this Ordinance, may be developed and/or constructed in accordance with the rules, regulations and conditions that were in effect at the time of approval, so long as a vested right established by common law, ordinance or statute is maintained (*Section 15.6D*).

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Chapter 14. ADMINISTRATIVE AGENCIES AND BOARDS

14.1 Purpose and Intent

For the efficient and effective administration of this Ordinance, the agents, boards and committees described herein are established along with their respective rules, procedures, duties and responsibilities.

14.2 Administrator

The authority to establish an Administrator for the Town of Knightdale is granted under the provisions of N.C.G.S. 160A §§ 361 and 373. The various provisions of this Ordinance shall be administered by the Knightdale Planning Department under the primary direction of the Planning Director. Administrative decisions may be appealed to the Land Use Review Board (*see Section 15.11*). For the purposes of the administration of this Ordinance, the Planning Director and subordinate staff are collectively referred to as the Administrator. In addition to any general actions necessary for the administration of the requirements of this Ordinance, the Administrator shall have the following specific duties and responsibilities:

- A. **Record and File Management:** To maintain records in accordance with municipal records retention laws adopted by the General Assembly;
- B. **Planning Process Applications:** To establish application requirements and schedules for submittal and review of applications and appeals;
- C. **Plan Review:** To review and approve, approve with conditions, or disapprove plan applications submitted pursuant to this Ordinance;
- D. **Recommendations:** To review and make recommendations to the Town Council on applications involving legislative matters;
- E. **Professional Assistance:** To provide expertise and technical assistance to the Town Council, upon request;
- F. **Ordinance Interpretation:** To make determinations and render interpretations of this Ordinance;
- G. **Code Enforcement:** To enforce the provisions of this ordinance in accordance with Chapter 18: *Violations and Penalties*
- H. **Board and Committee Staff:** To serve as staff to the boards and committees established herein; and
- I. **Delegation of Certain Duties:** To designate appropriate other person(s) who shall carry out the powers and duties of the Administrator.

14.3 Board of Adjustment Responsibilities and Duties

- A. **Town Council:** The Town Council shall serve as the Board of Adjustment in cases of Appeals of decisions by the DRC (*Section 15.5C*) and Special Use Permits (*Section 15.5E*). Hearings shall be conducted in accordance with the provisions of the UDO and N.C.G.S. §160A.388 as may be amended from time to time.
- B. **Land Use Review Board (LURB):** The LURB shall serve as the Board of Adjustment in cases of Design Exceptions (*Section 15.5B*), Appeals of decisions by the Administrator (*Section 15.5C*), Variances (*Section 15.5E*) and any other matters the LURB is required to act upon in a quasi-judicial manner as directed by any other town

ordinance or state law. Hearings shall be conducted in accordance with the provisions of the UDO and N.C.G.S. §160A.388 as may be amended from time to time.

14.4 Boards and Committees

The authority to establish various boards and committees is found throughout Chapter 160A of the General Statutes, including N.C.G.S. 160A §§ 19, 361, 387, 388 and 456(c). The Town has established the following boards and standing committees which shall follow the rules of procedure as adopted by the respective board or committee:

- Land Use Review Board (LURB)
- Development Review Committee (DRC)

A. Land Use Review Board (LURB): For the purposes of this Ordinance, the LURB shall serve as the Town's Planning Board, the Community Appearance Commission and the Tree Board. Furthermore, a portion of the LURB membership shall serve as the Board of Adjustment for cases identified in Section 14.3.

1. Appointment and Terms

- a. **Number:** There shall be a LURB consisting of nine (9) members.
 - i. **Town Members:** Six (6) members, appointed by the Town Council, shall reside within the corporate limits. Three (3) of the Town Council appointees shall also be named as quasi-judicial voting members of the Board of Adjustment.
 - ii. **ETJ Members:** Three (3) members appointed by the Wake County Board of Commissioners, shall reside within the Town's extra-territorial jurisdiction. Two (2) of the Wake County Board of Commissioners appointees shall also be named as quasi-judicial voting members of the Board of Adjustment. If despite good faith efforts, enough residents of the ETJ cannot be found to fill the seats reserved for residents of such area, then the Wake County Board of Commissioners may appoint other residents of the county (including residents of the Town) to fill these seats. If the Wake County Board of Commissioners fails to make these appointments within 90 days after receiving a resolution from the Town Council requesting that they be made, the Town Council may make them.
- b. **Board of Adjustment Alternates:** The remaining four (4) LURB members not named as quasi-judicial voting members of the Board of Adjustment in subsections 1(a)(i) and 1(a)(ii) above shall serve as voting alternates. When not filling in as an alternate for absent or excused named voting members of the Board of Adjustment, the remaining LURB members may participate in the quasi-judicial deliberations and fact finding efforts; however, they may not vote.
- c. **Citizen Planning Academy:** Prior to being seated with full voting rights, newly appointed members shall be required to attend and complete the Town's Citizen Planning Academy or its training equivalent. The Academy is a function of the Town's Planning Department and is also open to the general public. It shall be offered at least once each year to ensure that any LURB appointee will have the opportunity to take the class prior to attending their first LURB meeting.

- d. **Staggered Terms:** LURB members shall be appointed for two-year (2 year) staggered terms. Members shall continue to serve until their successors have been appointed.
- e. **Term Limits:** No person, either appointed or re-appointed by the Town Council, may serve more than three (3) consecutive full terms on LURB. A person who has served three (3) consecutive full terms shall be eligible for re-appointment after a lapse in service of at least 12 months.
- f. **Attendance:** In-town members of the LURB may be removed by the Town Council at any time for failure to attend three (3) consecutive meetings or for failure to attend 75 percent (75%) or more of the meetings within any 12-month period or for any other good cause related to performance of duties. ETJ members who fail to attend three (3) consecutive meetings or who fail to attend 75 percent (75%) or more of the meetings within any 12-month period or for any other good cause related to performance of duties shall be recommended for removal to the Wake County Board of Commissioners.
- g. **Relocation:** If a town member moves outside the town, or if an ETJ member moves outside the extra-territorial planning jurisdiction, that shall constitute a resignation from the board.

2. **Officers**

- a. **Elections and Terms:** At the first regularly scheduled meeting following the annual appointment of members, the LURB shall select from among its members a Chair and Vice-Chair. These officers shall serve for a period of not more than two (2) consecutive 1-year terms in the same capacity.
- b. **Responsibilities and Duties:** The Chair shall preside over the LURB as a non-voting member (except in the case of breaking a tie), decide all points of order or procedure using the latest edition of "*Robert's Rules of Order*", and transmit reports and recommendations of LURB to the Town Council. The Vice-Chair shall assume the duties of the Chair in his/her absence. The Chair and Vice-Chair may take part in all deliberations during the legislative segment.
- c. **Board Clerk Assigned:** The clerk to the LURB shall be a Town staff member assigned by the Administrator.

3. **Meetings**

- a. **Schedule:** The LURB shall establish a regular meeting schedule and shall meet frequently enough, at least monthly if necessary, so as to take action as expeditiously as possible on the items of business.
- b. **Open Meetings:** All LURB meetings shall be open to the public, and whenever feasible, the agenda for each meeting shall be made available in advance of the meeting
- c. **Rules of Procedure:** All meetings shall be conducted using the latest edition of "*Robert's Rules of Order*". The LURB may adopt rules of procedure governing its quasi-judicial procedures and operations not inconsistent with the provisions of this Ordinance.

- d. **Board of Adjustment Items:** The meetings of the LURB shall include a segment dedicated to the Board of Adjustment, including but not limited to final quasi-judicial decisions on appeals, variances, interpretations and other items as required by this Ordinance. This portion of the meeting shall precede legislative action items on the LURB's agenda. A separate record of minutes and attendance shall be kept of all segments of LURB meetings dedicated to the Board of Adjustment.

4. **Responsibilities and Duties**

- a. **Board of Adjustment:** See Section 14.3
- b. **Planning Board:** Subject to authorization, referral or budget appropriation by the Town Council the LURB shall have the following legislative responsibilities and duties related to planning and zoning:
 - i. To develop plans and prepare studies for the orderly growth and development of the Town of Knightdale and its environs. Such plans shall set forth goals, objectives and policies designed to manage the quantity, type, cost, location, timing and quality of development and redevelopment in the Knightdale community;
 - ii. To seek to coordinate the activities of individuals and public or private agencies and organizations whose plans, activities and programs bear on the general development of the community;
 - iii. To formulate and recommend to the Town Council the adoption or amendment of ordinances that, in the opinion of the LURB will serve to promote the orderly development of the community in accordance with the Comprehensive Plan;
 - iv. To conduct public meetings and hearings, giving reasonable notice to the public thereof;
 - v. To review and make recommendations to the Town Council on proposed amendments to the zoning map, UDO, or Comprehensive Plan.
 - vi. To exercise such other powers and to perform such other duties as are authorized or required elsewhere in this Ordinance, the N.C.G.S., or by the Town Council;
 - vii. To review and make recommendations to the Town Council on proposed applications for Conditional Districts, and Vested Rights.
- c. **Community Appearance Commission:** Subject to authorization, referral or budget appropriation by the Town Council the LURB shall have the following legislative responsibilities and duties related to the appearance and beautification of the Town:
 - i. To initiate, promote and assist in the implementation of programs for general community beautification within the Town's corporate limits and ETJ;
 - ii. To seek to coordinate the activities of individuals and public or private agencies and organizations whose plans, activities and programs bear on the appearance of the community;

- iii. To provide leadership and guidance in matters of community design and appearance to individuals and public or private agencies and organizations;
 - iv. To direct the attention of appropriate Town officials to needed enforcement of any ordinance that may affect the appearance of the community;
 - v. To seek voluntary adherence to the standards and policies of its plans.
 - vi. To formulate and recommend to the Town Council the adoption or amendment of ordinances (*including the UDO and other local ordinances regulating the use of property*) that will, in the opinion of the commission, serve to conserve the Town's natural beauty, visual character and charm by insuring that structures, signs and other improvements are properly related to their sites, and to surrounding sites and structures, with due regard to the aesthetic qualities of the natural terrain and landscaping, and that proper attention is given to the exterior appearance of structures, signs and other improvements.
- d. **Tree Board:** Subject to authorization, referral or budget appropriation by the Town Council the LURB shall have the following legislative responsibilities and duties related to the protection and planting of trees within the Town:
- i. To develop, implement and update a written plan for the care, preservation, growth, planting, protection and removal of trees within street rights-of-way, public parks and other municipal properties;
 - ii. To support and facilitate the planting, growth and protection of trees within the Town, organizing and enlisting both public and private resources;
 - iii. To conduct periodic surveys of street trees and other trees within the community to determine the composition and condition;
 - iv. To provide, sponsor and facilitate the organization of workshops, the preparation of publications and the dissemination of information to the public, tree companies and public utilities concerning the proper care, pruning, protection, planting and removal of trees, particularly street trees and other trees on municipal property; and
 - v. To provide advisory assistance to private property owners concerning the appropriate care and planting of trees.

5. Quorum and Voting

a. Legislative Items

- i. **Quorum:** A quorum shall be the simple majority of the LURB membership excluding vacant seats. A quorum is necessary to take official action.
- ii. A member who has withdrawn from the meeting without being excused shall be counted as present for the purposes of determining whether a quorum is present.
- iii. All actions of the LURB during the legislative portion shall be taken by simple majority vote of those present and voting, a quorum being present.
- iv. All members of the LURB shall serve as voting members during the legislative portion except the Chair as noted in subsection “2b” above.
- v. Once a member is physically present during the legislative portion of a LURB meeting, any subsequent failure to vote shall be recorded as an affirmative vote unless the member has been excused.
- vi. Since the legislative portion of the LURB has advisory authority, it need not conduct its meetings strictly in accordance with quasi-judicial procedures. However, it shall conduct its meetings so as to obtain necessary information and to promote the full and free exchange of ideas.
- vii. During the legislative portion of the LURB meeting, the entire Board shall formulate recommendations on matters referred to it by the Town Council. Such matters shall include but not be limited to: zoning map amendments, zoning text amendments, and amendments to the Comprehensive Plan.

b. Board of Adjustment Cases

- i. **Quorum:** A quorum for the quasi-judicial segment involving Board of Adjustment cases shall consist of a super-majority (*four-fifths*) of the Board of Adjustment membership (*excluding vacant seats or disqualified members in the absence of qualified alternates*) for Variance cases and equal to a simple majority of the Board of Adjustment membership for all others. A quorum is necessary for the LURB to take action.
- ii. A member who has withdrawn from the meeting without being excused shall be counted as present for purposes of determining whether a quorum is present.
- iii. Concurring vote of a super-majority (*four-fifths*) of the regular voting membership (*excluding vacant seats or disqualified members in the absence of qualified alternates*) shall be necessary to grant any Variance. All other actions during the quasi-judicial segment shall be taken by simple majority vote of the eligible voting members.
- iv. Once a member is physically present during the quasi-judicial segment of a LURB meeting, any subsequent failure to vote shall be

recorded as an affirmative vote unless the member has been excused in accordance with subsection “v” below. If a quasi-judicial voting member is either absent from the LURB meeting or has been excused in accordance with this Ordinance, he or she shall be replaced by an alternate at any time during the quasi-judicial portion.

- v. A member shall be excused from voting on a particular issue by majority vote of the remaining quasi-judicial voting members present under the following circumstances:
 - a) If the member has a direct financial interest in the outcome of the matter at issue; or
 - b) If the matter at issue involves the member's own official conduct; or
 - c) If participation in the matter might violate the letter or spirit of a member's code of professional responsibility; or
 - d) If a member has such close personal ties to the applicant that the member cannot reasonably be expected to exercise sound judgment in the public interest; or
 - e) If a member has had undisclosed ex parte communications; or
 - f) If a member has a fixed opinion prior to hearing that matter that is not susceptible to change.
- vi. A roll call vote shall be taken upon the request of any member.

- 6. **Annual Report:** At least once a year, the Chair of the LURB shall submit to the Town Council an annual report summarizing its activities during the previous year.

B. Development Review Committee (DRC)

- 1. **Responsibilities and Duties:** The Development Review Committee shall have the following duties and responsibilities:
 - a. **Preliminary Plat/Site Plan Approval:** Upon reviewing the plans for adherence to the UDO, the DRC may take the following action with regard to preliminary plat subdivisions and site plans:
 - Approve or deny the preliminary plat subdivision or site plan; or
 - Recommend major and/or minor changes to the preliminary plat or site plan to be considered by the developer; or
 - Conditionally approve preliminary plats or site plans subject to final review by the Administrator; or
 - Table the preliminary plat or site plan for further study or additional information; or
 - Forward the preliminary plat or site plan to the Town Council for further consideration.

Any of the preceding actions taken that involves a final decision by the DRC may be appealed to the Town Council (*see Section 15.11*).

- b. **Schedule:** The DRC shall establish a regular meeting schedule and shall meet frequently enough, at least monthly if necessary, so as to take action as expeditiously as possible on the items of business.
 - c. **Planning Process Application Technical Requirements:** The DRC shall establish the technical requirements for all applications including submission schedules, size and number of drawings, type of media, etc.
2. **Membership:** The DRC shall be chaired by the Planning Director and consist of the following additional members:
- Two (2) Planning Department Representatives
 - Two (2) Town Council members as non-voting, ex officio members
 - Town Fire Chief or Designee
 - One (1) Public Works Department Representative
 - One (1) Parks and Recreation Department Representative
 - Town Engineer or Designee
 - Town Manager

Chapter 15. DEVELOPMENT PROCESS

15.1 Purpose and Intent

In order to provide a clear and comprehensible development process that is fair and equitable to all interests, including the petitioners, affected neighbors, Town staff and related agencies, the LURB and the Town Council; this Chapter establishes guidelines and procedures for the development of land within the jurisdiction of the Town of Knightdale. These guidelines and procedures are specifically intended:

- To ensure that land, parcels, and lots are subdivided in a manner that supports the compliance of future land uses and development with all applicable requirements of this Ordinance;
- To ensure that development is generally harmonious with surrounding properties and does not endanger the health, safety and general welfare of existing, prospective or future owners or users of surrounding and adjoining properties, or of the public; and
- To provide for the adequate and efficient construction of facilities and infrastructure; including but not limited to, buildings, utilities, streets, sidewalks, landscaping and recreational open space; as well as the provision of dedicated land, rights-of-way and easements in such a manner so as not to burden the fiscal resources of the Town.

15.2 Applicability

The provisions of this Chapter shall be applicable to all development activity under the jurisdiction of the Town of Knightdale. No building, sign or other structure (*except as otherwise provided in this Ordinance*) shall be erected, moved, extended, enlarged or structurally altered, nor shall the use conducted within the building change, nor shall any excavation or filling of any lot for the construction of any building be commenced, nor shall any change in the use of a property be commenced until the Administrator has issued an applicable permit for such work. Failure to obtain the applicable permit(s) shall be considered a violation of this Ordinance and shall be enforced in accordance with the provisions of Chapter 18.

15.3 General Provisions

A. Names

1. **Development and Subdivision Names:** shall be assigned by the developer subject to the approval by resolution of the Town Council.
2. **Street Names:** shall be assigned by the developer subject to the approval of both the Town Council and Wake County, and shall adhere to the rules that follow.
 - a. Proposed streets which are continuations of existing streets shall be given the same name.
 - b. New street names shall not duplicate or be phonetically similar to existing street names in Wake County.

B. Completeness Review

1. **Authorized Representative:** Applications may only be submitted by persons having the legal authority to take such action, and the Administrator shall require an applicant to provide evidence of said authority to submit the specified application.

2. **Preliminary Review of Application:** Prior to formal submission of an application, the Administrator may review the application and confer with the applicant as appropriate to ensure:
 - a. that the applicant understands the interpretation of the applicable requirements of this Chapter;
 - b. that the applicant has submitted all of the information intended for submission; and
 - c. that the application represents precisely and completely what the applicant proposes to do.
 3. **Applications to be Complete before Processing:** No application shall be accepted by the Administrator unless it contains all of the information that is necessary for the permit-issuing authority to determine whether or not the development, if completed as proposed, will comply with all of the requirements of this Chapter. Applications which are not complete shall be returned forthwith to the applicant with a notation of deficiencies in the application.
- C. Neighborhood Meetings:** Where pre-submittal neighborhood meetings are required they shall meet the following criteria:
1. The required neighborhood meeting must be conducted prior to submittal of the application. The meeting may not occur more than 6 months prior to submittal of the application. Notice of the neighborhood meeting must be made by the applicant in accordance with Section 15.3(D)1.b.
 2. The meeting shall be held at a time and place that is generally accessible to neighbors that reside in close proximity to the land subject to the application.
 3. A report of the meeting, made by the applicant, shall be included with the application. The report shall include, a list of those persons and organizations contacted about the neighborhood meeting, the date, time and location of the meeting, a roster of the persons in attendance at the meeting, and a summary of issues discussed at the meeting; including a description of how the applicant propose to respond to neighborhood concerns or changes made as a result of the meeting.
- D. Public Notification Requirements**
1. **In General:** Notification of all public hearings required by this Ordinance shall be as follows:
 - a. **Newspaper Notice:** A notice shall be published in a newspaper having general circulation in the Town once a week for two (2) successive weeks, the first notice to be published not less than ten (10) days nor more than 25 days prior to the date established for the hearing. The notice shall indicate the nature of the public hearing, as well as the date, time and place at which the hearing is to occur.
 - b. **First-Class Mail Notice:** A notice of the proposed action shall be sent by first class mail, as applicable, from the Administrator to the affected property owner and to all contiguous property owners within 200 feet of the affected property. Person(s) mailing the notices shall certify to the

Town Council that fact, and the certificate(s) shall be deemed conclusive in the absence of fraud.

- c. **Sign Posted:** A prominent sign shall be posted on the subject property(ies), as applicable, beginning not less than ten (10) days nor more than 25 days prior to the date established for the hearing. Such posting shall list a phone number to contact during regular business hours for additional information. The sign shall remain posted until after the decision-making authority has rendered its final decision.

2. **Re-Zoning More than 50 Properties:** When a zoning reclassification action directly affects more than 50 properties owned by a total of at least 50 different property owners, the preceding general public hearing notice requirements may be altered as follows:

- a. **Newspaper Notice:** The Town shall publish a notice once a week for two (2) successive calendar weeks in a newspaper having general circulation in the area with a map showing the boundaries of the area affected by the proposed re-zoning. The map shall not be less than one-half (1/2) of a newspaper page in size. The notice shall only be effective for property owners who reside in the area of general circulation of the newspaper which publishes the notice.
- b. **First-Class Mail Notice:** Property owners who reside outside of the Town's jurisdiction or outside of the newspaper circulation area, according to the address listed on the most recent property tax listing for the affected property, shall be notified by mail pursuant to this subsection "1b" above. Person(s) mailing the notices shall certify to the Town Council that fact, and the certificate(s) shall be deemed conclusive in the absence of fraud.
- c. **Sign(s) Posted:** In addition to the published and mailed notices, the Town shall post one (1) or more prominent signs on or immediately adjacent to the subject property area reasonably calculated to give public notice of the proposed re-zoning. These signs shall remain posted until after the decision-making authority has rendered its final decision.

E. Modification of Application at Hearing

In response to questions or comments from persons appearing at the hearing or to questions or comments from the Town Council or LURB, the applicant may offer to modify the application, including the submitted plans and specifications. Unless modifications are deemed to be so substantial or extensive that the board may not reasonably be expected to perceive the nature and impact of the modifications without having revised plans submitted, the board may approve an application with a condition that the permit shall not be issued until plans reflecting the agreed upon modifications are submitted to the Administrator.

F. Written Decision

Any decision made by the Town Council or the LURB regarding an appeal, variance, Special Use Permit, Special Use Permit modification, Zoning Map Amendment or Zoning Text Amendment shall be reduced to writing, signed by the board Chair or other duly authorized board member, and served upon the applicant and all other persons who make a written request for a copy. Decisions are deemed as served when delivered in person, or when sent via electronic mail or first-class mail. Unless

otherwise stated, all decisions shall be effective upon filing with the clerk to the board. As applicable, the written decision shall include:

- a statement of the ultimate disposition of the case by the board;
- findings and conclusions of the board;
- supporting reasons or facts; and
- other information deemed appropriate.

G. Compliance and Violations

Permits are issued on the basis of approved dimensional plans that authorize only the use, arrangement and construction set forth in such approved plans and applications. Use, arrangement or construction which differs from that authorized by any permit or approval process enumerated in this Chapter shall be deemed a violation of this Ordinance and shall be subject to civil penalties as specified in Chapter 18.

H. As-Built Drawings

Prior to the issuance of a Certificate of Occupancy associated with a Site Development Approval or prior to the acceptance of public infrastructure for maintenance in Major Subdivisions, as-built drawings of all water, sewer and stormwater management facilities illustrating their layouts and connections to existing systems. Such plans shall show all easements and rights-of-way to demonstrate that the facilities are properly placed and shall indicate the locations of all fire hydrants, blow-off valves, manholes, pumps, force mains and gate valves. They shall also show the field location, size, depth and planted vegetation of all stormwater measures, controls and devices. A copy of all as-built pages must be submitted at the same time using the open Portable Document Format (pdf) standard on a Compact Disc (CD) or Digital Versatile Disc (DVD).

15.4 Administrative Permits and Approvals

Administrative permits and approvals are those that may typically either be granted by the Administrator or the DRC as enabled by the Town Council.

A. General Provisions

1. Permit or Approval Not Required

Notwithstanding any other provisions of this Ordinance, including the possibility of zoning violations and penalties (*Chapter 18*), an administrative permit is not required for the following uses and/or activities:

- a. Street construction or repair by NCDOT or the Town of Knightdale.
- b. Electric power, telephone, telegraph, cable television, gas, water and sewer lines; wires or pipes, together with supporting poles or structures located within a public right-of-way for maintenance or non-development-related capital expansions.
- c. Specific signs exempted in Chapter 12.
- d. Mailboxes, newspaper boxes, walls, fences, birdhouses, flag poles, pump covers and doghouses.

2. Review of Applications

- a. **In General:** The Administrator shall approve, approve with conditions or deny the application. Applications that are denied shall have the reasons for denial, in writing, attached to the application. All administrative permits shall:
 - i. Be issued in the name of the property owner;
 - ii. Identify the property involved and the proposed use;
 - iii. Incorporate by reference the plans submitted; and
 - iv. Contain any special conditions or requirements lawfully imposed by the permit-issuing authority.

- b. **Master Plan Applications:**

Within 90 days from the submittal of a Master Plan Application, the DRC shall review the Site Development Permit (*Section 15.5*) or Major Subdivision Plan (*Section 15.8*), the comments and recommendations of the Administrator, and the necessary criteria for Master Plan requirements as laid out in Section 16.5. The DRC shall either approve or deny the Master Plan application within this time period unless the applicant has caused additional delay by failing to provide necessary or accurate information. Failure to act by the DRC within the described time period shall be deemed a denial.

The DRC may defer the decision on the Master Plan Application to the Town Council when any two (2) members (*voting or non-voting*) deem that one (1) or more of the necessary criteria for Master Plan requirements may not be met by the proposed plan. In such event, the Town Council shall proceed as set forth in Section 15.11.

Once the DRC takes action, the reasons for the denial, approval or deferral to the Council shall be stated in the record of action on the Master Plan Application.

3. Right of Appeal

If a request for an administrative permit is denied, or if a ruling of the Administrator or DRC is questioned, any aggrieved party may appeal such ruling to the LURB and Town Council, respectively, in accordance with Section 15.5C.

4. Certificate of Occupancy

No structure shall be erected, moved, structurally altered, used or occupied until a Certificate of Occupancy (CO) has been issued by the Town of Knightdale. Any CO issued shall state that the structure or portion of a structure has:

- a. Complied with the information stated on the permit;
- b. Complied with all applicable provisions of this Ordinance; and
- c. Received final inspections approval for compliance with the N.C. Building Code, as applicable.

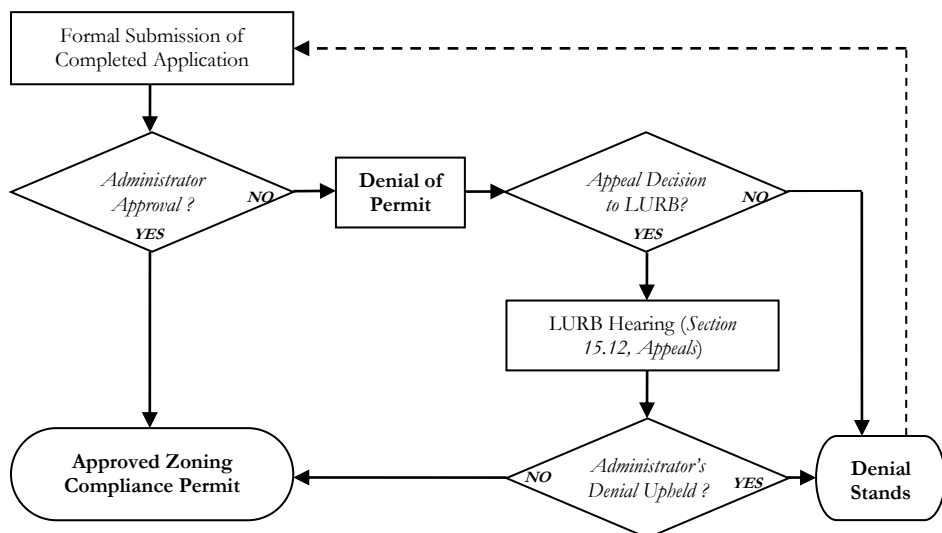
Where certain infrastructure elements have not been installed (*i.e. landscaping due to time of year*), a Temporary CO may be issued by the Administrator (*Section 17.5*).

B. Zoning Compliance Permits

1. Applicability: A Zoning Compliance Permit (ZCP) is required for the approval of all applications for single-family homes, home occupations, and all other development not otherwise covered by other procedures in this Chapter.

2. Procedure:

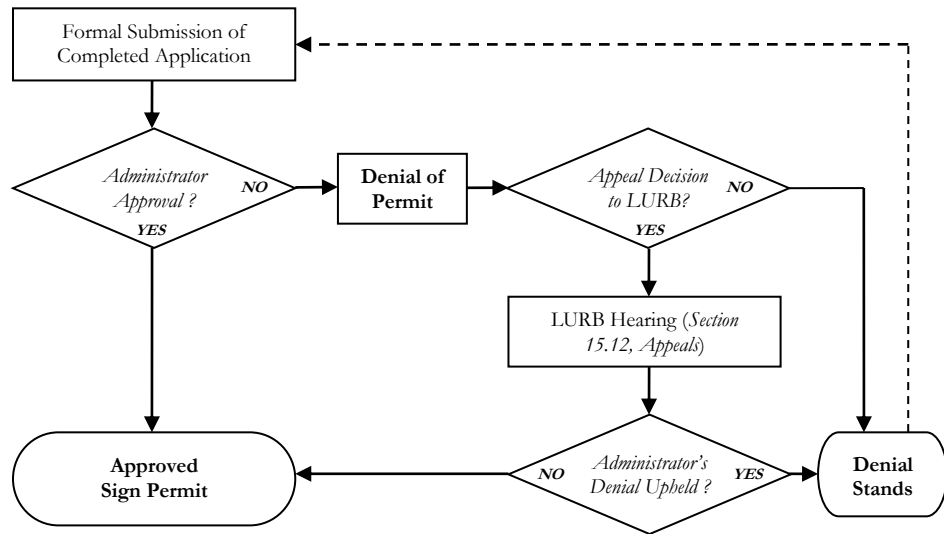
SUBMITTAL REQUIREMENTS	REVIEWING AUTHORITY	ACTION TO BE TAKEN	APPEAL PROCESS
ZCP Application Sketch Plan (16.4) As Needed	Administrator	ZCP Issued -or- Denied	LURB



C. Sign Permits

1. **Applicability:** A Sign Permit (SP) is required for the erection, alteration, construction, re-location, conversion or enlargement of any sign, except as may be provided in Section 12.4.
2. **Procedure:**

SUBMITTAL REQUIREMENTS	REVIEWING AUTHORITY	ACTION TO BE TAKEN	APPEAL PROCESS
SP Application* Sketch Plan (16.4) As Needed * Note: Commercial Building Permit Application also required for most signs, except for those in which only the sign face is being replaced.	Administrator	SP Issued -or- Denied	LURB



D. Floodplain Development Permits

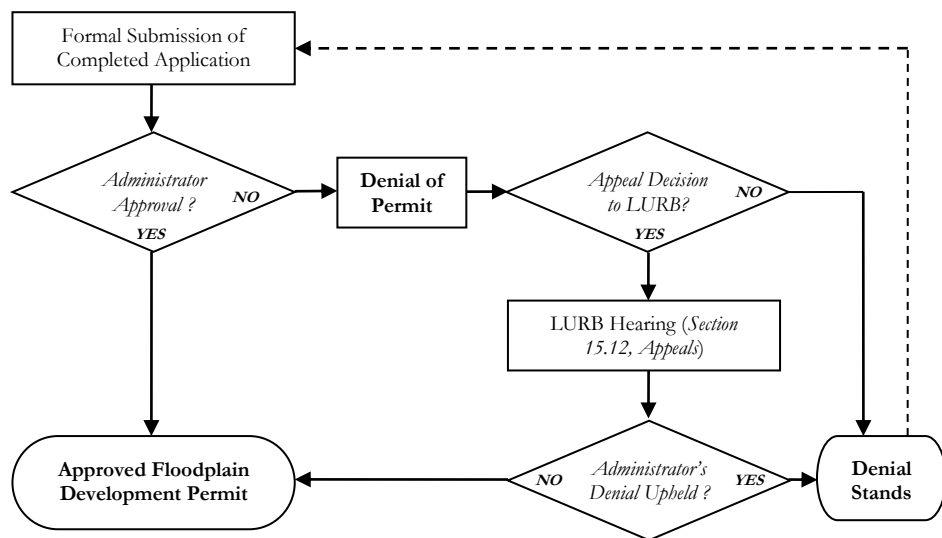
- 1. Applicability:** A Floodplain Development Permit (FDP) with an accompanying Elevation Certificate shall be submitted for any proposed development within 100 feet of a flood hazard area. FDPs shall be approved by the Administrator.

No structure or land shall be located, extended, converted or structurally altered without full compliance with the term of this Chapter and Section 6.6. In addition to those federal, state and local government agency approvals, the applicant must also be in compliance with the Wake County Soil Erosion and Sedimentation Control Ordinance, as amended.

Any activity which differs from that authorized by the FDP shall be deemed a violation of this Ordinance and shall be subject to civil penalties as specified in Chapter 18.

- 2. Procedure:** Review will specifically verify the actual elevation (*in relation to mean sea level*) of the lowest floor (*including basement*) and the actual elevation to which the new or substantially improved buildings have been flood-proofed. Certification from the property owner’s or developer’s NC-licensed Professional Engineer or Surveyor must accompany this application.

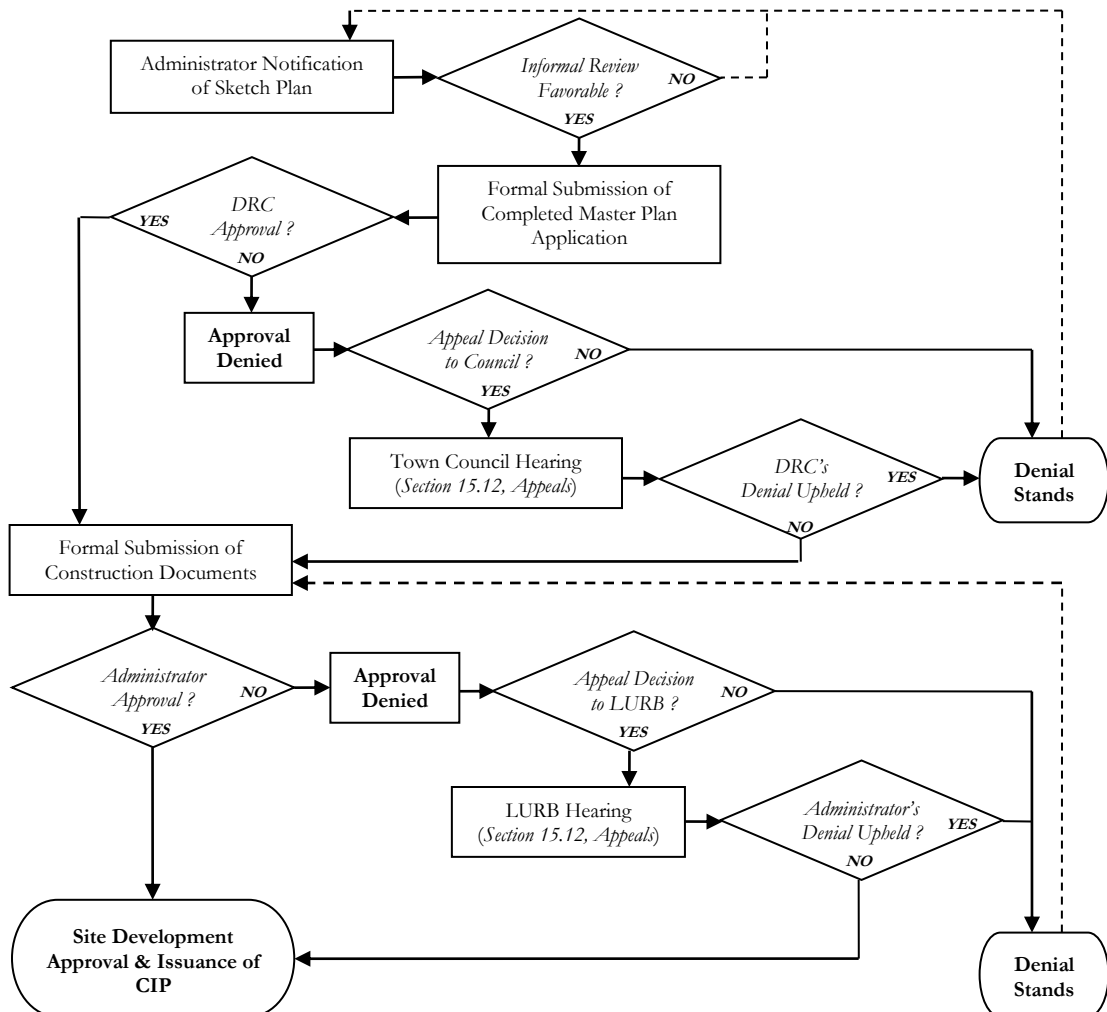
SUBMITTAL REQUIREMENTS	REVIEWING AUTHORITY	ACTION TO BE TAKEN	APPEAL PROCESS
FDP Application (16.3)	Administrator	FDP Issued -or- Denied	LURB



E. Site Development Approval

1. **Applicability:** A Site Development Approval (SDA) and associated Construction Improvement Permit (CIP) are required for an individual building or buildings on previously platted lots.
2. **Procedure:** To receive SDA and a CIP, a completed Master Plan Application must be submitted for review.

SUBMITTAL REQUIREMENTS	REVIEWING AUTHORITY	ACTION TO BE TAKEN	APPEAL PROCESS
Sketch Plan (16.4) w/Environmental Survey (16.2A)	Administrator	For Non-Binding Review Only	n/a
Master Plan (16.6) w/Environmental Survey (16.2A)	DRC	Review for Completeness & Ordinance Compliance; Master Plan Approved -or- Denied	Town Council
Construction Documents (16.7) w/Environmental Survey (16.2B)	Administrator	Review for Completeness & Ordinance Compliance; SDA & CIP Issued -or- Denied	LURB



F. Subdivision Approvals

1. **Applicability:** Subdivisions shall include all divisions of a tract or parcel of land into two (2) or more lots, building sites, or other divisions when any one (1) or more of those divisions is created for the purposes of sale or building development, whether immediate or future, and shall include all division of land involving the dedication of a new street or a change in existing streets.
2. **Exempt Plats:** An Exempt Plat involves the dedication of easements or rights-of-way, or meets the standards for exempt plats as stated in G.S. 160A-376(a)(1)-(5) which include recombination plats. Exempt plats are reviewed according to the following procedure:

SUBMITTAL REQUIREMENTS	REVIEWING AUTHORITY	ACTION TO BE TAKEN	APPEAL PROCESS
Final Plat (16.8)	Administrator	Review for Completeness & Ordinance Compliance; Final Plat Issued -or- Denied	LURB

A Sketch Plan and review is not required, but can be scheduled with the Planning Department if it is desired.

3. General Provisions

- a. **Notice to Proceed with Construction Activity:** Only after receiving Final Plat approval for a Family/Minor Subdivision or Construction Document approval for Major Subdivisions as prescribed by this Chapter and other written approval and necessary permits from the appropriate regulating agencies, shall the developer begin tree clearing, grading, soil erosion and infrastructure construction for the development.
- b. **Construction Documents:**
 - i. **Approval Duration:** Approved Construction Documents are valid for one (1) year from the date of approval by the Town of Knightdale. Reasonable and necessary extensions may be granted at the Town Council’s sole discretion if a written request by the developer is made to the Town Council 45 days prior to the 1-year anniversary of Construction Document approval. A 1-year extension may be granted from the date when the approved Construction Documents would otherwise expire.
 - ii. **New Application Required:** Should Construction Document approvals expire, a new application for subdivision approval will be required in accordance with the processes outlined within this Chapter before development may re-commence and any Final Plats be approved and/or recorded.
 - iii. **Multiple Phases Not Approved:** Approval of Construction Documents constituting an individual phase of a multi-phase project which has not been entirely approved, does not constitute approval by the Town of any remaining phases.
 - iv. **Infrastructure Required within One (1) Year:** All required infrastructure improvements within the Construction Documents shall be in place within one (1) year of issuance of a CIP unless the improvement has been guaranteed in accordance with Section 17.4.

If circumstances beyond the control of the developer do not allow for the commencement of the required work within the 1-year period, or the size of the phase is such that one (1) year is insufficient time to commence all required work, then the developer may file a written request for an extension with the Administrator no later than 45 days prior to the 1-year anniversary of CIP approval by the Town as provided above. If infrastructure work is not commenced within one (1) year and/or no extension request is filed with the Administrator and approved, CIP approval becomes null and void on the day of the one (1) year anniversary and a new application will be required.

c. Final Plats:

- i. Review Period:** The developer shall initiate the final subdivision plat approval process by submitting the Final Plat and copies of any required surety or improvement guarantees (*as specified in Section 17.4*) to the Administrator or other departments as required. The Administrator will then have 45 calendar days to approve or deny the Final Plat. During the review period, the Administrator will confirm the accuracy of the Final Plat. If substantial errors are found, including inconsistencies with the approved Construction Documents, the Final Plat shall not be approved and the review period suspended until the applicant has corrected such errors. A list of the needed corrections and/or conditions shall be provided to the applicant. Any corrections and/or conditions placed by the Town on the approval of the Final Plat shall be addressed by the developer within 45 days. Failure of the developer to meet the 45 day response period shall cause the conditional approval of the Town to be null and void. Once complete, the Final Plat shall be approved or denied by the Administrator within 30 calendar days of the date of final completed submission.
- ii. Improvements Required:** The Final Plat shall constitute all portions of the approved Construction Documents. No Final Plat shall be approved unless and until the developer has installed in that area all improvements required by this Ordinance or has posted any required improvement guarantees approved by the Town Council and prescribed by this Ordinance in Section 17.4.
- iii. Plats to be Recorded:** Approved Final Plats must be filed by the applicant for recording with the Wake County Register of Deeds within 30 days of the date of approval by the Administrator; otherwise, such approval shall be null and void. After recordation, the developer shall provide prints (*number to be determined by the Administrator*) of the registered plat to the Town for distribution to the various state and local government agencies and public utilities along with one (1) certified mylar copy and one (1) electronic copy in Portable Document Format (PDF) for permanent file in the Planning Department.

4. **Family Subdivisions:**

- a. **Purpose & Definition:** The specific purpose of a family subdivision is to allow the creation of lots from larger tracts where lots are conveyed to or developed for building purposes by members of the lineal family. A family subdivision shall be defined as the division of land into not more than five (5) parcels (*or lots*) from the original tract as it existed on January 1, 2000 for the purpose of conveying the resultant parcels or lots to the grantee or grantees who are in any degree of lineal kinship to the grantor.
- b. **Procedure:** The request for family subdivision approval shall be filed by submitting an application for Final Plat to the Administrator. This application shall include a prescribed statement satisfying the Administrator that such subdivision is in fact a “family subdivision” not meant to circumvent the provisions of this Ordinance, and shall meet the standards of subsection “c” that follows.

SUBMITTAL REQUIREMENTS	REVIEWING AUTHORITY	ACTION TO BE TAKEN	APPEAL PROCESS
Final Plat (16.8)	Administrator	Review for Completeness & Ordinance Compliance; Final Plat Issued or Denied	LURB

A Sketch Plan and review is not required, but may be scheduled with the Planning Department if desired.

c. **Minimum Standards:**

- i. **Parent Tract:** The original tract as it existed on January 1, 2000 must be a minimum of 10 acres, and a plat of the original tract is required to be on file with the Administrator so that the department can determine the number of lots subdivided.
- ii. **Conveyance:** Only lineal family members acting personally or through their legal representatives, including but not limited to: estate executors, trustees, attorneys-in-fact or legal guardians; may be grantees of the land from the grantor as stated in the definition of family subdivision in subsection “a” above. Any immediate transfer of land from the grantee to a non-lineal family member is considered a violation, which is subject to any and all penalties, including the requirement of the subdivision to come into compliance with any or all minor or major subdivision requirements.
- iii. **Deeds:** The deed for each lot in a family subdivision must contain an express statement that the conveyance is a conveyance of a lot within a family subdivision and must contain an express grant of a public or private right of way to a public street.
- iv. **Zoning Conformity:** All lots proposed under the family subdivision section shall conform to the zoning requirements of the zoning district in which the subdivision is located, including, but not limited to, minimum lot size and width.
- v. **Street Frontage:** All lots proposed for subdivision, including the original tract, shall front on a dedicated private or public right of way of at least 54 feet in width which connects to a public street. The final plat is required to show this right of way.

- vi. **Street Standards:** All lots proposed for subdivision, including the original tract, shall front on a street built to the following standards:
 - a) If determined by the Town to be a logical location for a street, a 54-foot public or private right-of-way is required.
 - b) If determined by the Town to be an area where the future street location is not determined a 54-foot private easement or right-of-way is required.
 - c) All access streets shall be constructed to a minimum NCDOT standard with base course, but are not required to be constructed with pavement, curb, gutter or sidewalk.
 - d) A note is to be added to the plat that maintenance is to be the responsibility of all adjacent property owners of said right of way and unimproved street. A maintenance agreement is required to be recorded at the Wake County Register of Deeds and approved by the Town Attorney.

- vii. **Public Utilities:** If any lot proposed by the family subdivision is within 300 feet from the public water line and/or public sewer system, the lot shall connect to the public water system and/or public sewer system if a residence is proposed. A voluntary annexation petition is required to be submitted if connecting to Town water and/or sewer.

- viii. **Development Fees:** Family subdivision lots shall be exempt from paying development fees as outlined in the Town's Fee Schedule. The subdivider shall be responsible for payment to the Town of all fees and charges required by the Town including, but not limited to, the costs of permits, inspections, utility taps, and acreage fees, at such times as payments are specified under the various codes, fee schedules, or resolutions of the Town.

- ix. **Additional Right-of-Way Dedication:** Family subdivision lots fronting on an existing public street, which is identified as a thoroughfare or collector street as identified on the Town's Arterial and Collector Street Plan and which are not currently constructed to the ultimate cross section shall not be required to build the street to the standard section and shall not be required to pay a fee in lieu of such street construction, but shall be required to dedicate the ultimate required right-of-way.

- x. **Right-of-Way Reservation:** Where a planned NCDOT or Town of Knightdale street is located within the boundaries of the family subdivision land, a reservation of the right of way is required to be shown on the plat to reserve the land for the future street.

5. **Minor Subdivisions:**

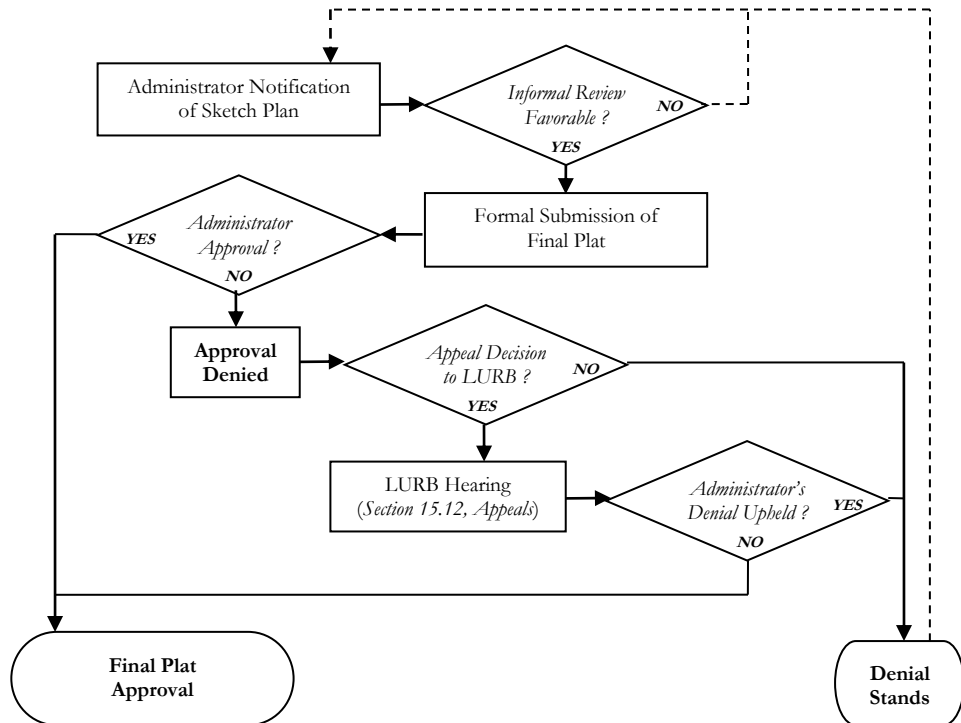
- a. **Purpose & Definition:** Minor subdivisions are those that involve the creation of not more than four (4) lots fronting on an existing approved street; and do not involve any of the following:
 - i. the construction of any new street or prospectively requiring any new street for access to interior property; or
 - ii. the extension of public sewage or water lines to serve properties at the rear; or
 - iii. the creation of any new or residual parcels not conforming to the requirements of these regulations and related ordinances.

- b. **Procedure:** The request for a minor subdivision approval shall be filed by submitting an application for Final Plat to the Administrator.

- c. **Expedited Review:** Except as regulated above the following subdivisions should be exempt from the sketch plan requirements and may only be required to submit a plat for recordation:
 - i. The tract or parcel to be divided is not exempt under subsection 15.4(F).2 of this ordinance.
 - ii. No part of the tract or parcel to be divided has been divided under this subsection in the 10 years prior to division.
 - iii. The entire area of the tract or parcel to be divided is greater than five acres.
 - iv. After division, no more than three (3) lots result from the division.
 - v. After division, all resultant lots comply with all of the following:
 - a. Any lot dimension size requirements of the applicable land-use regulations,
 - b. The use of the lots is in conformity with the applicable zoning requirements, and
 - c. A permanent means of ingress and egress is recorded for each lot.

d.

SUBMITTAL REQUIREMENTS	REVIEWING AUTHORITY	ACTION TO BE TAKEN	APPEAL PROCESS
Sketch Plan (16.4) w/Environmental Survey (16.2A)	Administrator	For Non-Binding Review Only	n/a
Final Plat (16.8)	Administrator	Review for Completeness & Ordinance Compliance; Final Plat Issued -or- Denied	LURB



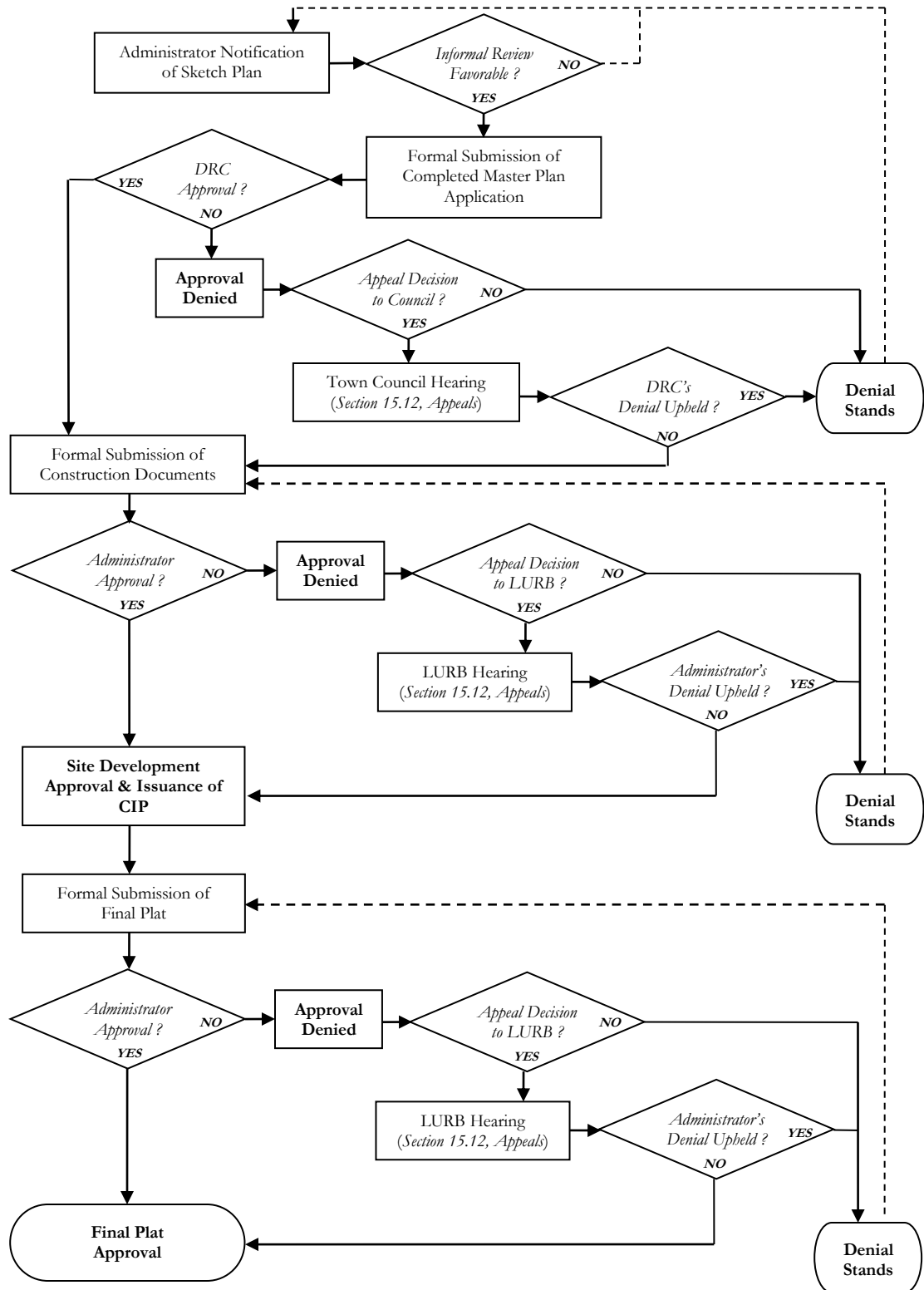
6. Major Subdivisions

- a. **Purpose & Definition:** A Major Subdivision is a subdivision of land that does not meet the definition of an Exempt Plat, Family Subdivision or Minor Subdivision.
- b. **Procedure:** To receive Major Subdivision approval and a CIP, a completed Master Plan Application must be submitted to the Administrator for review
- c. **Special Use Permit:** A Special Use Permit granted in accordance with Chapter 15.5(E) is required for any major residential subdivision (5 or more lots) granted after September 21, 2016.

i. Approvals in lieu of a Special Use Permit/Exceptions

- a. **Conditional District Rezoning** – A major subdivision approved as part of a Conditional District Rezoning in accordance with 15.6(C)6 and accompanied by a site specific development plan is exempt from a Special Use Permit requirement in Chapter 15.4(F)6c.
- b. **Planned Development District** – A major subdivision approved in conjunction with a Planned Development District accompanied by a site specific development plan and Planned Development District Master Plan is exempt from the Special Use Permit requirement in Chapter 15.4(F)6c.

SUBMITTAL REQUIREMENTS	REVIEWING AUTHORITY	ACTION TO BE TAKEN	APPEAL PROCESS
Sketch Plan (16.4) w/Environmental Survey (16.2A)	Administrator	For Non-Binding Review Only	n/a
Master Plan (16.6) w/Environmental Survey (16.2A)	DRC	Review for Completeness & Ordinance Compliance; Master Plan Approved -or- Denied	Town Council
Construction Documents (16.7) w/Environmental Survey (16.2B)	Administrator	Review for Completeness & Ordinance Compliance; CIP Issued -or- Denied	LURB
Final Plat (16.8)	Administrator	Review for Completeness & Ordinance Compliance; Final Plat Issued -or- Denied	LURB



15.5 Quasi-Judicial Procedures

This Section provides for the evaluation of certain applications by requiring that certain decisions be made using a quasi-judicial procedure with the right of the parties to offer evidence, have sworn testimony and have findings of fact supported by competent, substantial and material evidence.

A. General Provisions

1. Re-hearings

- a. **Applicability:** An application for a re-hearing shall be made in the same manner as provided for an original hearing within a period of 15 days after the date of the LURB or Town Council decision. In addition, specific information to enable the applicable board to determine whether or not there has been a substantial change in facts, evidence or conditions in the case, shall be presented in writing or graphically.
- b. **Procedure:** A re-hearing shall be denied by the applicable board if, in its judgment, such change in facts, evidence or conditions has not been proven. A public hearing shall not be required to be held to consider holding such a re-hearing. Approval of said consideration shall, however, require an affirmative vote of at least four-fifths (4/5) of the voting members. In the event that the applicable board finds that a re-hearing is warranted, it shall proceed as in the original hearing except that the application fee shall be waived.

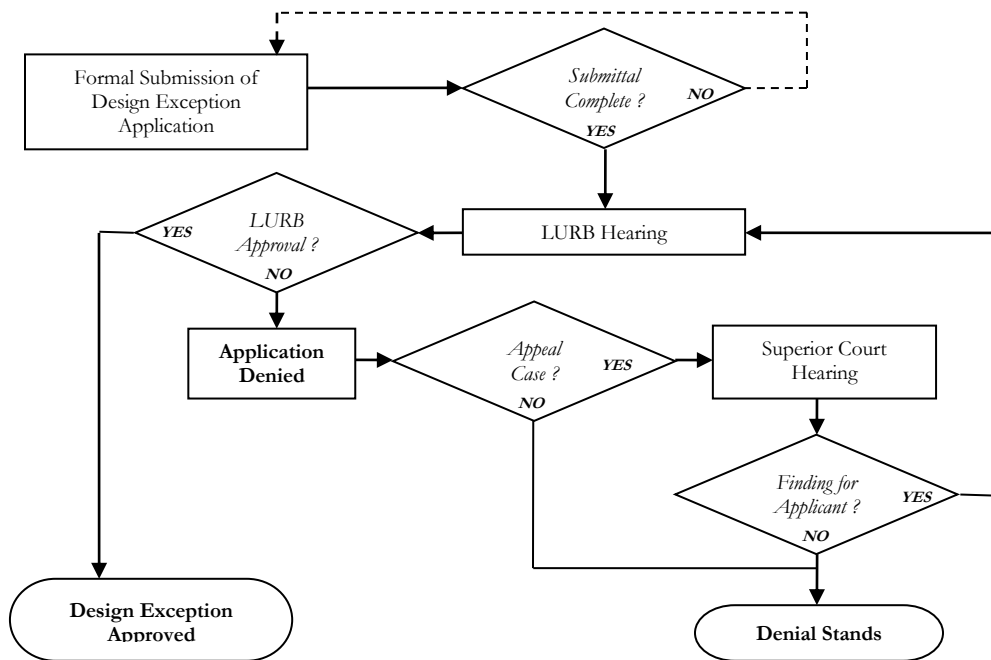
2. **Right of Judicial Appeal:** Every quasi-judicial decision of the LURB or the Town Council shall be subject to review by the Superior Court Division of the General Courts of Justice of the State of North Carolina by proceedings in the nature of certiorari. Any petition for review by the Superior Court shall be duly verified and filed with the Clerk of Superior Court within 30 days after the effective date of the decision, or after a written copy is served in accordance with the provisions of Section 15.3E, whichever is later. In the event any decision is served via first-class mail, three (3) days shall be added to the allowed time in which to file a petition for review.

B. Design Exceptions

1. **Applicability:** In order to accommodate innovative planning or design ideas for development in any District, the Design Exception process has been created for the LURB to offer flexibility in the administration of the design provisions of this Ordinance (*Chapters 5-12*). This process may be initiated only by the owner of the affected property, an agent authorized in writing to act on the owner's behalf or a person having a written contractual interest in the affected property upon the submission of a completed application in accordance with the application schedule adopted by the LURB.
2. **Decision:** The LURB may grant a Design Exception based on one (1) or more of the following findings:
 - a. The provisions enumerated in Chapter 5 preclude the appropriate detailing of a specific recognized architectural style either present or proposed; or
 - b. Changes in technology, building materials, and/or construction techniques make adherence to the stated details impractical or infeasible; or

- c. The building design presented is worthy of architectural merit and deserves recognition; or
 - d. The historic qualities of the building, due to variations in construction technique and applications, are inconsistent with the general vernacular.
3. **Conditions to Motion:** The LURB in granting a Design Exception may prescribe appropriate conditions and safeguards in conformity with this Ordinance. Violation of such conditions and safeguards, when made a part of the terms under which a Design Exception is granted, shall be deemed a violation of this Ordinance and shall be subject to civil penalty as prescribed in Chapter 18 of this Ordinance.
4. **Procedure:**

SUBMITTAL REQUIREMENTS	REVIEWING AUTHORITY	ACTION TO BE TAKEN	APPEAL PROCESS
Design Exception Application	Administrator	Review for Completeness & Ordinance Compliance	n/a
	LURB	Public Hearing	Superior Court



C. Administrative Appeals

1. **Applicability:** The LURB or Town Council shall hear and decide appeals from and review any order, requirement, decision, interpretation or citation made by the Administrator or DRC, respectively, and apply such interpretation to particular fact situations.
2. **Applicant with Standing:** The following persons and entities shall have standing to file an appeal under this section:
 - a. Any person meeting any of the following criteria:
 - i. Has an ownership interest in; a leasehold interest in; or an interest created by easement, restriction or covenant in the property that is the subject of the decision being appealed; or
 - ii. Has an option or contract to purchase the property that is the subject of the decision being appealed; or
 - iii. Was an applicant before the decision-making authority whose decision is being appealed.
 - b. Any other person who will suffer special damages as the result of the decision being appealed.
 - c. An incorporated or unincorporated association to which owners or lessees of property in a designated area belong by virtue of their owning or leasing property in that area, or an association otherwise organized to protect and foster the interest of the particular neighborhood or local area, so long as at least one (1) of the members of the association would have standing as an individual to challenge the decision being appealed, and the association was not created in response to the particular development or issue that is the subject of an appeal.
 - d. The LURB or Town Council when it believes the Administrator or DRC, respectively, has been inconsistent with the proper interpretation of the Ordinance.
3. **Filing:** An appeal by the property owner to the appropriate board shall be made within 30 days of receipt of the written notice stating the decision, order, determination or interpretation made by the Administrator or DRC. An appeal by any other person with standing shall be made within 30 days of the receipt of any actual or constructive notice regarding the decision, order, determination or interpretation made by the Administrator or DRC.
 - a. **Timely Hearing and Decision:** An appeal must be placed on the appropriate board agenda within 30 days of filing, and a decision shall be reached within a reasonable amount of time.
 - b. **Enforcement Proceedings Stayed:** The filing of any application stays all enforcement proceedings unless the Administrator certifies by facts stated in an affidavit that a stay in his/her opinion will cause imminent peril to life or property, or that because the violation charged is transitory in nature, a stay would seriously interfere with the enforcement of the Ordinance. In that event, enforcement proceedings shall not be stayed except by a restraining order granted by a judicial court of law.

D. Variances

1. Applicability:

- a. In General:** When unnecessary hardships would result from carrying out the strict letter of this Ordinance and the required findings of fact set forth in Section 15.5D(4)a are made, the LURB shall vary any of the regulations or provisions of this Ordinance.
- b. Flood Damage Protection:** Variances related to Flood Damage Protection may be issued for:
 - i.** The repair or rehabilitation of historic structures upon the determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and that the variance is the minimum necessary to preserve the historic character and design of the structure; or
 - ii.** Functionally dependent facilities as defined in Chapter 19 provided provisions of Section 15.12(D)(6) and (7) have been satisfied, and such facilities are protected by methods that minimize flood damages; or
 - iii.** Any other type of development, provided it meets the requirements stated in this section.
- c. Items Not Cause for Variance:**
 - i.** The request for a particular use expressly, or by inference, prohibited in the District involved.
 - ii.** Hardship resulting from personal circumstances.
 - iii.** Hardship resulting from conditions that are common to the neighborhood or the general public.
 - iv.** Any request that will cause a structure to be in violation of other Federal, State, or local laws, regulations or ordinances.
 - v.** Any request within any designated floodway or non-encroachment area where the variance would result in any increase in flood levels during the base flood discharge.

2. Applicant with Standing: A petition for a variance may be initiated only by the owner of the affected property, an agent authorized in writing to act on the owner's behalf or a person having a written contractual interest in the affected property upon the submission of a completed application.

3. Enforcement and Other Proceedings Stayed: The filing of any application stays all proceedings unless the Administrator certifies by facts stated in an affidavit that a stay in his/her opinion will cause imminent peril to life or property, or that because the violation charged is transitory in nature, a stay would seriously interfere with enforcement of the Ordinance. In that event, proceedings shall not be stayed except by a restraining order granted by a judicial court of law.

4. Board Powers and Responsibilities

- a. **Required Findings of Fact:** The LURB, after having held a public hearing on the matter, may grant or deny a variance based on the following:
 - i. **General Required Findings of Fact:** The LURB must make the following determinations of fact for all variance requests:
 - a) Unnecessary hardship would result from the strict application of the Ordinance;
 - b) The identified hardship is the result of conditions peculiar to the property, such as location, size and/or topography;
 - c) The identified hardship did not result from actions taken by the applicant or property owner; and
 - d) The variance is consistent with the spirit, purpose and intent of this Ordinance, such that public safety is secured and substantial justice is achieved.
 - ii. **Flood Damage Prevention:**
 - a) **Specific Procedures:** Variances to flood damage prevention requirements shall only be issued prior to development permit approval. To assure that any such variance is consistent with the spirit, purpose and intent of the Ordinance, in passing upon variances to flood damage prevention requirements, the LURB shall consider all technical evaluations, all relevant factors and all standards specified in other sections of this Ordinance including:
 - the danger that materials may be swept onto other lands to the injury of others;
 - the danger to life and property due to flooding or erosion damage;
 - the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - the importance of the services provided by the proposed facility to the community;
 - the necessity to the facility of a waterfront location, where applicable;
 - the availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
 - the compatibility of the proposed use with existing and anticipated development;
 - the relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
 - the safety of access to the property in times of flood for ordinary and emergency vehicles;
 - the expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and

- the costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.

Any applicant to whom a variance is granted shall be given written notice specifying the difference between the BFE and the elevation to which the structure is to be built and a written statement that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced reference level elevation. Such notification shall be maintained with a record of all variance actions. The Administrator shall maintain the records of all appeal actions and report any variances to the FEMA and the State of North Carolina upon request.

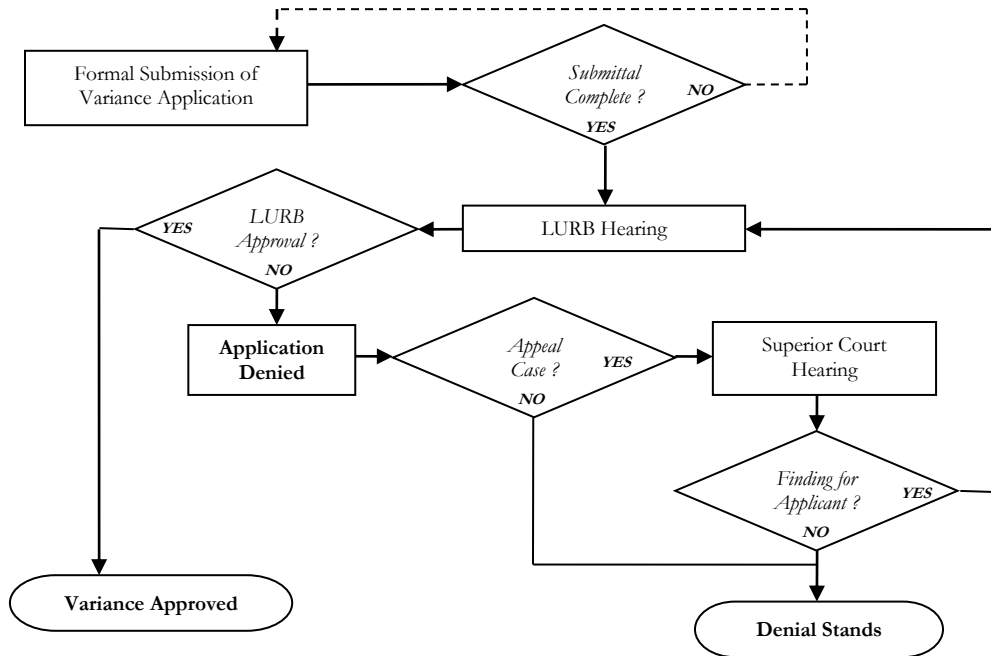
- b) **Additional Required Findings of Fact:** To assure that any such variance is consistent with the spirit, purpose and intent of the Ordinance, Flood Damage Prevention variances shall only be issued upon the LURB determining the following findings of fact, in addition to those findings enumerated in Section 15.5D(4)a:
 - i) that the variance is the minimum necessary, considering the flood hazard, to afford relief;
 - ii) that there is a showing of good and sufficient cause; and
 - iii) that the granting of a variance will not result in increased flood heights, additional threats to public safety, or extraordinary public expense, create nuisance, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.
- iii. **Adult Establishments and Sweepstakes Centers:** To assure that any such variance is consistent with the spirit, purpose and intent of the Ordinance, variances to the minimum distance between adult establishments and/or sweepstakes centers shall only be issued upon the following findings of fact, in addition to those findings enumerated in Section 15.5D(4)a:
 - a) The proposed use will not be injurious to property or improvements in the affected area;
 - b) The proposed use will not enlarge or encourage the development of a blighted condition within an area; and
 - c) The permitting of an adult establishment in the area will not be contrary to any governmental program of neighborhood conservation, rehabilitation, improvement or revitalization.
- b. **Conditions to Motion:** The LURB in granting a variance may impose appropriate conditions and safeguards in conformity with this Ordinance, provided such conditions are reasonably related to the variance. Violation of such conditions and safeguards, when made a part of the terms under

which a variance is granted, shall be deemed a violation of this Ordinance and shall be punishable as prescribed in Chapter 18.

- c. **Supermajority Required for Decision:** The concurrent supermajority vote of four-fifths ($\frac{4}{5}$) of the voting members of the LURB shall be necessary to grant a variance. In all matters coming before the LURB, the applicant shall have the burden of providing clear, competent and material evidence in support of the application.
 - d. **Other Considerations:** It shall not be necessary for the applicant to demonstrate that, in the absence of a variance, no reasonable use can be made of the property. Additionally, the act of purchasing property with knowledge that circumstances exist that may justify the granting of a variance shall not be regarded as a self-created hardship.
 - e. **Time for Decision:** The LURB shall hold a public hearing on an application no later than 60 days after a complete application has been filed with the Administrator. The LURB shall decide on the matter which was presented at the public hearing within 45 days of the close of the public hearing.
5. **Time Limit on Approval:** If an application for a variance is approved by the LURB, the owner of the property shall have the ability to (i) develop the use in accordance with the stipulations contained in the variance or (ii) develop any other use listed as a "permitted use" for the District in which it is located. Unless otherwise authorized by the LURB and included in its decision to grant a variance, an order of the LURB in granting a variance shall expire if a building permit or CO (*for a use for which a building permit is not required*) has not been obtained within two (2) years from the date of its decision.
6. **Effect of Denial/Time to Resubmit:** Upon the denial of an original application, or upon the denial of an application from which a re-hearing has been conducted, a similar application may not be filed for a period of one (1) year after the date of denial of the original application.

7. Procedure:

SUBMITTAL REQUIREMENTS	REVIEWING AUTHORITY	ACTION TO BE TAKEN	APPEAL PROCESS
Variance Application	Administrator	Review for Completeness & Ordinance Compliance	n/a
	LURB	Public Hearing	Superior Court



E. Special Use Permits – Major Residential Subdivisions (5 or more lots)

1. **Applicability:** A Special Use Permit (SUP) for a major residential subdivision (5 or more lots) allows individual consideration of their location, design, configuration, and/or operation at the particular location proposed in order to mitigate and prepare for potential impacts on the neighborhood and/or town as whole.
2. **Neighborhood Meeting:** A pre-submittal neighborhood meeting is required as outlined in 15.3(C).
3. **Board Powers and Responsibilities:** The processing of a SUP shall conducted by the Town Council. During the public hearing, all parties presenting evidence shall be duly sworn.
 - a. **Required Findings of Fact:** The burden of proof of producing evidence to support these Findings of Fact and to overcome any challenges that approval of the plan would be contrary to one or more of these Findings of Fact shall rest entirely with the applicant or landowner. The evaluation and approval of the SUP shall be based upon the sworn testimony and evidence both in favor and against the SUP application presented at the hearing relevant to the following Findings of Fact:
 - i. The proposed special use conforms to the character of the neighborhood, considering the location, type and height of buildings or structures and the type and extent of vegetation on the site.
 - ii. The proposed use will not cause undue traffic congestion or create a traffic hazard.
 - iii. Adequate utilities (water, sewer, drainage, electric, etc.) are available for the proposed use.
 - iv. The establishment of the proposed use shall not impede the orderly development and improvement of surrounding property for uses permitted within the zoning districts.
 - v. The public health, safety, and welfare will be assured to not substantially injure the value of adjoining property and associated uses if located where proposed.
 - vi. The application will not substantially injure the value of adjoining or abutting property.
 - vii. The proposal meets all required principles and specification of the UDO, unless excepted, and adopted land use plans, is in harmony with the general purpose and intent and preserves its spirit.
 - b. **Conditions to Motion:** In approving an application for a SUP, the Town Council may attach fair and reasonable conditions on the location, nature and extent of the proposed use which support the required Findings of Fact, including those voluntarily consented to or proposed by the applicant or property owner. The Town Council may not require the landowner to waive a vested right as a condition of the SUP approval. The applicant shall have up to 30 calendar days to consider and respond to any additional requirements prior to approval or denial by the Town Council.
 - c. **Variation:** The various provisions of Chapters 4-12 may be varied if specifically requested by the petitioner and is substantiated by material

competent evidence during the public hearing.

4. **Effect of Approval:** If an application is approved, the SUP that is established and all conditions which may have been attached to the approval are binding on the property. All subsequent development and use of the property must be in accordance with the approved plan and conditions. The applicant must record at the Wake County Register of Deeds office the approved SUP and submit a copy of the recorded document(s) to the Town.
5. **Substantial Changes:** Any substantial change to a SUP that results in the increase of the intensity, density or character of the use shall be approved or denied by the Town Council as an amended SUP. Minor field alterations or minor revisions to approved SUPs may be approved by the Administrator if the special use still meets the intent of the standards established with the original approval.
6. **Time Limit on Approval:** The applicant must record a final plat within a 24-month period from date of approval of the SUP unless otherwise specified.
7. **Rescission or Extension of Special Use Permits:** The Town Council may completely rescind or extend for a specified period of time a SUP after notice by the Administrator and subsequent hearing upon one (1) or more of the following grounds:
 - a. The project is not complete or a final plat is not in place at the end of the 24-month approval period; or
 - b. Failure to comply with the additional standards specified in Section 3.3; or
 - c. Substantial change to Local, State, or Federal law that may affect the ability to complete the subdivision as proposed or affects the validity of the Special Use Permit.

8. **Procedure:**

SUBMITTAL REQUIREMENTS	REVIEWING AUTHORITY	ACTION TO BE TAKEN	APEAL PROCESS
Sketch Plan (16.4) w/ Environmental Survey (16.2A)	Administrator	For Non-Binding Review Only	n/a
Special Use Permit w/ Master Plan (16.6)	Administrator	Review for Completeness & Ordinance Compliance; Issue Staff Report	n/a
	Town Council	Evidentiary Public Hearing; SUP Approved – or – Denied	Superior Court
Construction Documents (16.7) w/Environmental Survey (16.2B)	Administrator	Review for Completeness & Ordinance Compliance; CIP Issued - or - Denied	LURB

F. Special Use Permits

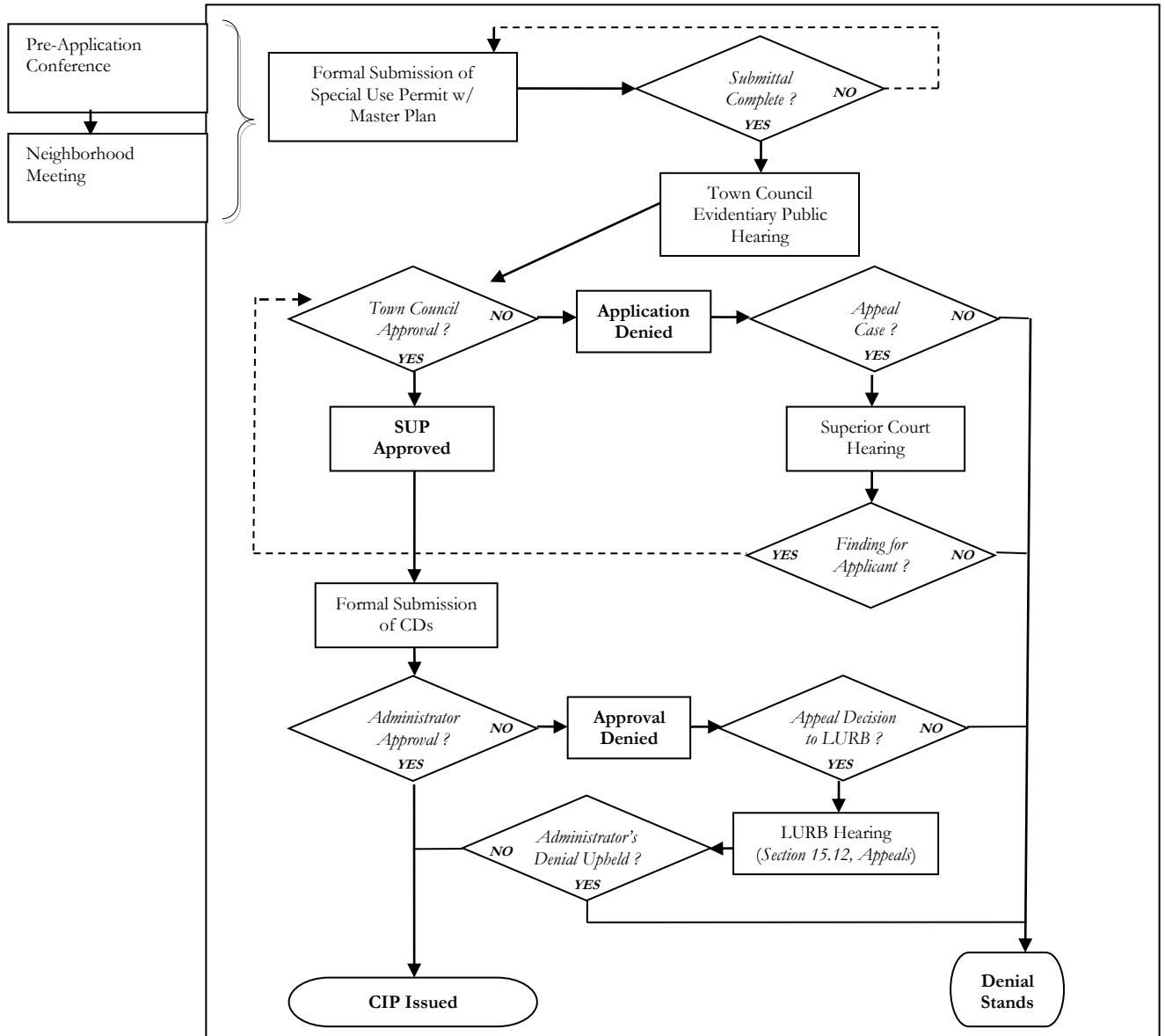
1. **Applicability:** A Special Use Permit (SUP) ensures the appropriateness of the use at a particular location within a given District. Special Uses are generally compatible with the land uses permitted by right in a District, but which require individual review of their location, design and configuration so as to evaluate the potential for adverse impacts on adjacent property and uses. Only those uses enumerated (*Section 2.3C*) as required SUPs in a District may be authorized by the Town Council.
2. **Neighborhood Meeting:** A pre-submittal neighborhood meeting is required as outlined in 15.3(C).
3. **Board Powers and Responsibilities:** The processing of a SUP shall be conducted by the Town Council. During the public hearing, all parties presenting testimony and evidence shall be duly sworn.
 - a. **Required Findings of Fact:** The burden of proof of producing evidence to support these Findings of Fact and to overcome any challenges that approval of the plan would be contrary to one or more of these Findings of Fact shall rest entirely with the applicant or landowner. The evaluation and approval of the SUP shall be based upon the sworn testimony and evidence both in favor and against the SUP application presented at the hearing relevant to the following Findings of Fact:
 - i. The use meets all required principles and specifications of the UDO and any adopted land use plans, is in harmony with the general purpose and intent and preserves its spirit;
 - ii. The proposed plan as submitted and approved will be visually and functionally compatible with the surrounding area; and
 - iii. The public health, safety and welfare will be assured to not substantially injure the value of adjoining property and associated uses if located where proposed.
 - b. **Conditions to Motion:** In approving an application for a SUP, the Town Council may attach fair and reasonable conditions on the location, nature and extent of the proposed use which support the required Findings of Fact. The Town Council may not require the landowner to waive a vested right as a condition of the SUP approval. The applicant shall have up to 30 calendar days to consider and respond to any additional requirements prior to approval or denial by the Town Council.
4. **Effect of Approval:** If an application is approved, the SUP that is established and all conditions which may have been attached to the approval are binding on the property. All subsequent development and use of the property must be in accordance with the approved plan and conditions. The applicant must record at the Wake County Register of Deeds office the approved SUP and submit a copy of the recorded document(s) to the Town.
5. **Substantial Changes:** Any substantial change to a SUP that results in the increase of the intensity, density or character of the use shall be approved or denied by the Town Council as an amended SUP. Minor field alterations or minor revisions to approved SUPs may be approved by the Administrator if the

special use still meets the intent of the standards established with the original approval.

6. **Time Limit on Approval:** The applicant must secure a valid building permit within a 24-month period from date of approval of the SUP unless otherwise specified.
7. **Rescission or Extension of Special Use Permits:** The Town Council may completely rescind or extend for a specified period of time a SUP after notice by the Administrator and subsequent hearing upon one (1) or more of the following grounds:
 - a. The project is not complete or a valid building permit is not in place at the end of the 24-month approval period; or
 - b. Failure to comply with the additional standards specified in Section 3.3; or
 - c. Operating an establishment disruptive of peace and good order as evidenced by lack of sufficient on-premises security and specifically by a conviction of a criminal offense, a material element of which occurred on the premises; or
 - d. Excessive criminal activity on or near the premises if the Town Council finds that the operation of the establishment is related to such criminal activity or attracts transients or other persons who have been involved or are likely to be involved in such criminal activity.

8. **Procedure:**

SUBMITTAL REQUIREMENTS	REVIEWING AUTHORITY	ACTION TO BE TAKEN	APPEAL PROCESS
Sketch Plan (16.4) w/ Environmental Survey (16.2A)	Administrator	For Non-Binding Review Only	n/a
Special Use Permit w/ Master Plan (16.6)	Administrator	Review for Completeness & Ordinance Compliance; Issue Staff Report	n/a
	Town Council	Evidentiary Public Hearing; SUP Approved – or - Denied	Superior Court
Construction Documents (16.7) w/Environmental Survey (16.2B)	Administrator	Review for Completeness & Ordinance Compliance; CIP Issued -or- Denied	LURB



15.6 Legislative Procedures

This Section establishes uniform procedures for processing matters requiring a legislative approval process before the Town Council.

A. General Provisions

1. **Town Council Decision:** Once the public hearing has been conducted, the Town Council shall refer the matter to the LURB for a recommendation. If no comments have been received from the LURB within 30 days of referral from the Town Council, the Council may proceed with consideration of the proposal and render a decision.
2. **Compliance with Comprehensive Plan:** Zoning text and map amendments shall be made in accordance with a comprehensive plan. The LURB shall have advised and commented on whether the proposed amendment is consistent with any comprehensive plan that has been adopted and any other officially adopted plan that is applicable. The LURB shall have provided a written recommendation to the Town Council that addresses plan consistency and other matters as deemed appropriate by the LURB, but a comment by the LURB that a proposed amendment is inconsistent with the comprehensive plan shall not preclude consideration or approval of the proposed amendment by the Town Council. Prior to adopting or rejecting any zoning amendment, the Town Council shall adopt a statement describing whether its action is consistent with an adopted comprehensive plan and explaining why the Town Council considers the action taken to be reasonable and in the public interest. That statement is not subject to judicial review.
3. **Re-hearing**
 - a. **Applicability:** An application for a re-hearing shall be made in the same manner as provided for an original hearing within a period of 15 days after the date of the Town Council decision. In addition, specific information to enable the Town Council to determine whether or not there has been a substantial change in facts, evidence or conditions in the case, shall be presented in writing or graphically.
 - b. **Procedure:** A re-hearing shall be denied by the Town Council if, in its judgment, such change in facts, evidence or conditions have not been proven. A public hearing shall not be required to be held by the Town Council to consider holding such a re-hearing. Approval of said consideration shall, however, require an affirmative vote of at least four-fifths (4/5) of the voting members. In the event that the Town Council finds that a re-hearing is warranted, it shall then proceed as in the original hearing except that the application fee shall be waived.
4. **Effect of Denial/Time to Resubmit:** Upon the denial of an original application, or upon the denial of an application from which a re-hearing has been conducted, a similar application may not be filed for a period of one (1) year after the date of denial of the original application.
5. **Appeals:** Every legislative decision of the Town Council shall be subject to review by the Superior Court Division of the General Courts of Justice of the State of North Carolina by proceedings in the nature of certiorari. Any petition for review by the Superior Court shall be duly verified and filed with the Clerk of Superior Court within 30 days after the decision of the Council is filed in the

office of the Town Clerk, or after a written copy is delivered to every aggrieved party who has filed a written request for such copy with the Administrator at the time of the hearing of the case by the Town Council, whichever is later.

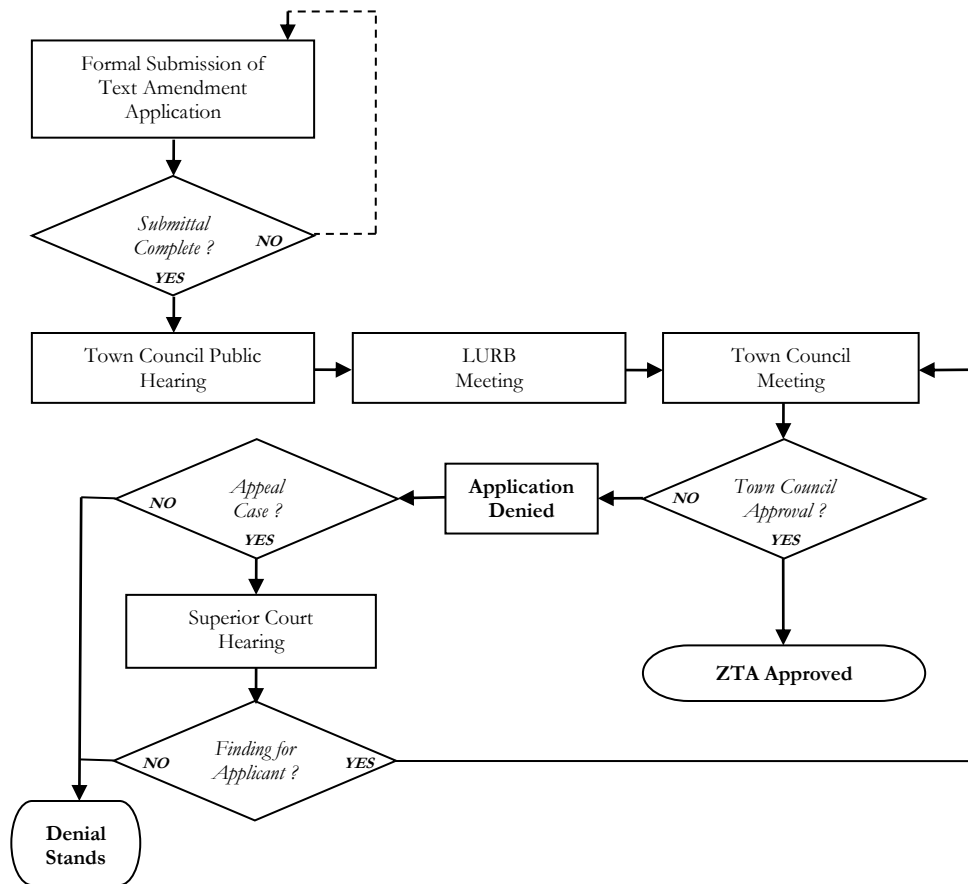
6. **Application Withdrawal:** The applicant may withdraw a legislative application by providing written notice to the Administrator in accordance with the following:
 - a. The petitioner may withdraw his/her application before submission of the public notice to the newspaper announcing the public hearing.
 - b. After submission of such notice, an application may be withdrawn at the discretion of the Town Council at the public hearing.
 - c. No more than two (2) withdrawals may occur on the same parcel or portion of land within a one (1) year period.
 - d. No application shall be filed on the same parcel or portion of land within a one (1) year period after the date of the second withdrawal.

B. Zoning Text Amendment

1. **Applicability:** A zoning text amendment (ZTA) may be initiated by the Town Council, the LURB, the Administrator or any private citizen by filing an application with the Administrator.
2. **Citizen Comments:** In addition to comments provided in person at public hearings and public meetings, any resident or property owner in the town may submit a written statement regarding a proposed amendment, modification, or repeal to a zoning ordinance to the clerk to the board at least two (2) business days prior to proposed vote. If submitted according to the preceding condition, the Town Clerk shall submit said written statements to the Town Council, prior to such hearing.
3. **Decision:** A decision concerning the petition to amend the text of this Ordinance shall be as follows:
 - a. Adoption of the amendment as written; or
 - b. Adoption of the amendment as revised by the Administrator, LURB or Town Council; or
 - c. Rejection of the amendment.

4. **Procedure:**

SUBMITTAL REQUIREMENTS	REVIEWING AUTHORITY	ACTION TO BE TAKEN	APPEAL PROCESS
Text Amendment Application	Administrator	Review for Completeness & Ordinance Compliance. Issue Staff Report	n/a
	Town Council	Public Hearing Refer to LURB	n/a
	LURB	Review and Recommendation	n/a
	Town Council	ZTA Approved – or – Denied	Superior Court

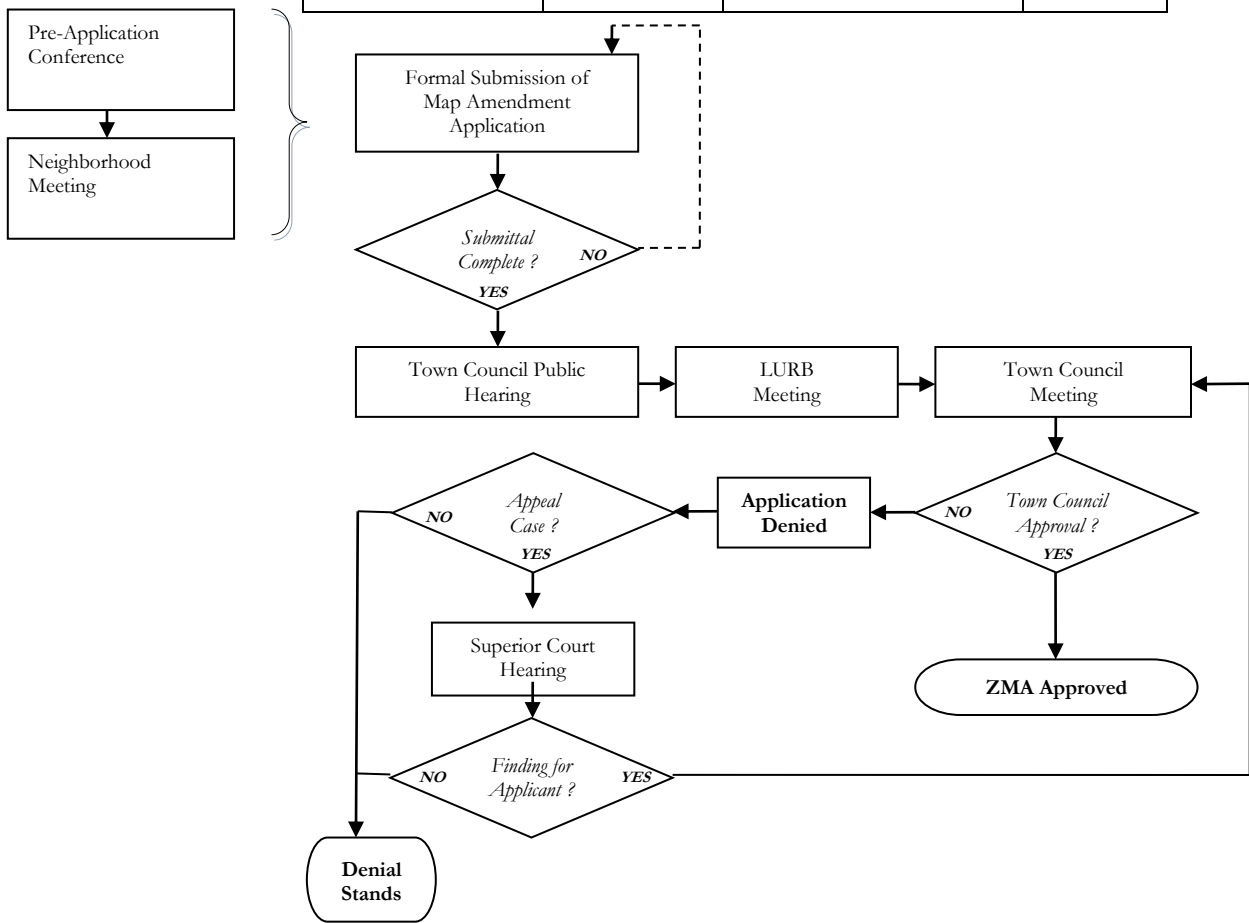


C. Zoning Map Amendments (Re-zonings)

1. **Applicability:** An amendment to the Official Zoning Map, or “Zoning Map Amendment” (ZMA) may be initiated by the Town Council, the LURB, the Administrator or any private citizen by filing an application with the Administrator.
2. **Neighborhood Meetings:** A pre-submittal neighborhood meeting is required for all applications for a Zoning Map Amendment as outlined in 15.3(C).
3. **Citizen Comments:** In addition to comments provided in person at public hearings and public meetings, any resident or property owner in the town may submit a written statement regarding a proposed amendment, modification, or repeal to a zoning ordinance to the clerk to the board at least two (2) business days prior to the proposed vote. If submitted according to the preceding condition, the Town Clerk shall submit said written statements to the Town Council, prior to the hearing. If the proposed change is the subject of a quasi-judicial proceeding the clerk shall provide only the names and addresses of the individuals providing written comment.
4. **General Re-zoning**
 - a. **Decision:** A decision concerning a petition for re-zoning shall be as follows:
 - i. Grant the re-zoning as requested; or,
 - ii. Grant the re-zoning with a reduction in the area requested; or,
 - iii. Grant the re-zoning to a more restrictive general zoning district; or,
 - iv. Grant the re-zoning with a combination of “ii” and “iii” above; or,
 - v. Deny the application.

b. Procedure:

SUBMITTAL REQUIREMENTS	REVIEWING AUTHORITY	ACTION TO BE TAKEN	APPEAL PROCESS
Map Amendment Application	Administrator	Review for Completeness & Ordinance Compliance. Issue Staff Report	n/a
	Town Council	Public Hearing Refer to LURB	n/a
	LURB	Review and Recommendation	n/a
	Town Council	ZMA Approved – or – Denied	Superior Court



5. Conditional District Re-zoning: The Conditional District (ZMA-CD) re-zoning process provides a procedure for the re-zoning of property based upon the recognition that certain types of zoning districts would be inappropriate at particular locations in the absence of special conditions. This process affords a degree of certainty in land use decisions not possible when re-zoning to a general category allowing many different uses.

a. Specific Requirements:

- i. Applicant:** Conditional District classification shall only be considered upon the request of the owners and/or their representatives of all the property to be included.
 - ii. Standards of Corresponding General District to be Met:** All standards and requirements of the corresponding General District shall be met, except to the extent that the conditions imposed are more restrictive than those standards. However, when a Conditional District is a requirement of Section 2.3(C), petitioners may also ask that certain standards identified be decreased. Within an approved Conditional District, no use shall be permitted except pursuant to the conditions imposed on the Conditional District in the approval of the re-zoning.
 - iii. Content of Application:** The Master Plan, as a site specific Conditional Zoning Plan, is itself a condition of the ZMA-CD. In addition to the Master Plan, the applicant shall provide the exact land use classifications proposed for the Conditional District. Such use classifications may be selected from any of the uses, whether permitted by right or special use, allowed in the General District upon which the Conditional District is based. Uses not otherwise permitted within the General District shall not be permitted within the Conditional District.
 - iv. Fair and Reasonable Conditions:** At the request of the applicant, the LURB may recommend and the Town Council may attach reasonable and appropriate conditions including but not limited to the location, nature, hours of operation and extent of the proposed use. The applicant will have a reasonable opportunity to consider and agree to any additional requirements proposed by either the LURB or the Town Council prior to final action.
- b. Substantial Changes:** Any substantial change to a Master Plan that results in a net increase to the number of lots or to the heated floor area shall be reviewed by the LURB and approved or denied by the Town Council as an amended Conditional District.
- c. Time Limit on Approval:** The Applicant must secure a valid building or construction permit(s) within a 24-month period from date of approval of the ZMA-CD unless otherwise specified.
- d. Rescission of Conditional Districts:** If such project is not complete and a valid building or construction permit is not in place at the end of the 24-month period, the Administrator shall notify the applicant of either such finding. Within 60 days of notification, the Administrator shall make a recommendation concerning the rescission of the ZMA-CD to the Town

Council. The Town Council may then rescind the ZMA-CD or extend the life of the ZMA-CD for a specified period of time.

e. **Procedure:**

SUBMITTAL REQUIREMENTS	REVIEWING AUTHORITY	ACTION TO BE TAKEN	APPEAL PROCESS
Sketch Plan (16.4) w/ Environmental Survey (16.2A)	Administrator	For Non-Binding Review Only	n/a
Map Amendment Application w/Master Plan (16.6)	Administrator	Review for Completeness & Ordinance Compliance. Issue Staff Report	n/a
	Town Council	Public Hearing Refer to LURB	n/a
	LURB	Review and Recommendation	n/a
	Town Council	ZMA-CD Approved - or - Denied	Superior Court
Construction Documents (16.7) w/Environmental Survey (16.2B)	Administrator	Review for Completeness & Ordinance Compliance; CIP Issued - or - Denied	LURB

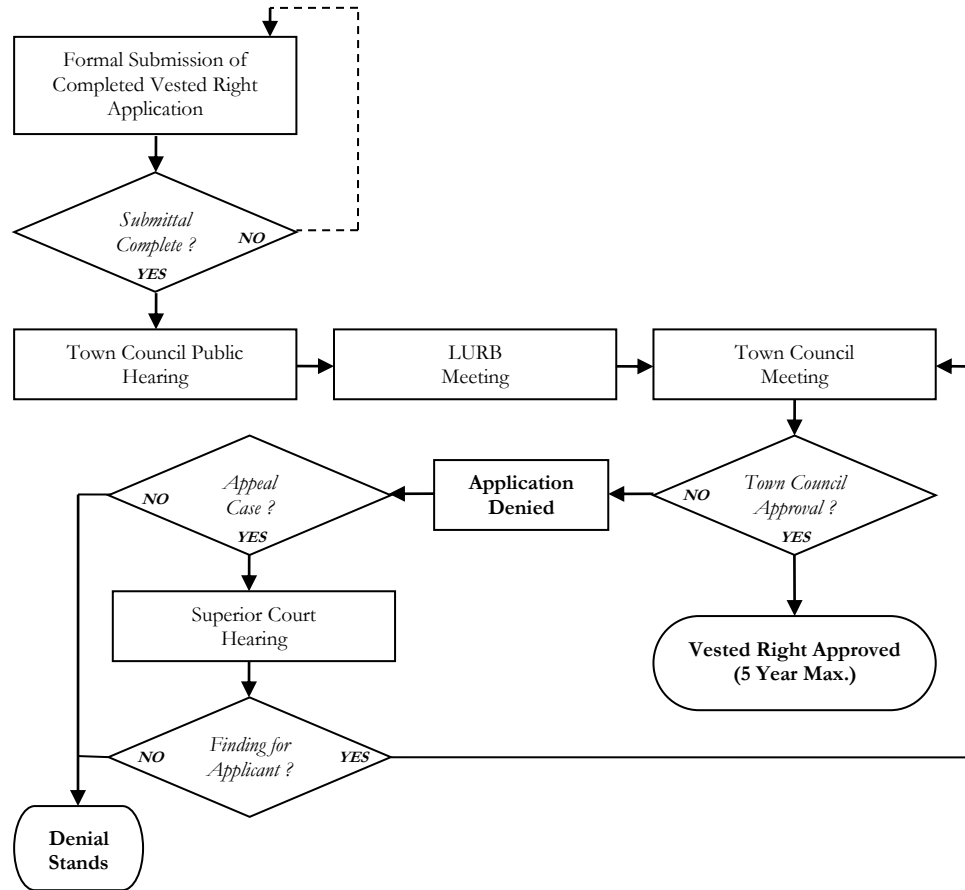
D. Vested Rights

1. **Applicability:** Pursuant to G.S.160A-385.1 and not withstanding any other provision or amendment, a landowner may apply for approval of a Site-Specific Development Plan (*Master Plan*) as defined in the statute that shall entitle said landowner to develop property over a period beyond the original two (2) year approval duration in accordance with the previously approved plan . All requests for Vested Rights shall be accompanied by a copy of the approved Site-Specific Development Plan (*Master Plan*) in accordance with the provisions of this Chapter.
2. **Board Powers and Responsibilities:** A request to extend Vested Rights to a previously approved Site-Specific Development Plan (*Master Plan*) shall be reviewed and approved by the Town Council after notice and public hearing.
 - a. **Decision:** The Town Council shall determine whether or not to grant or establish a Vested Right after the review and consideration of the LURB. The Town Council may not require the landowner to waive his Vested Right as a condition of development approval.
 - b. **Required Determinations:** The Town Council may approve the Vested Right for a period greater than two (2) years where it is determined that due to (i) the sizing and phasing of the development; (ii) the level of investment; (iii) the need for the development; (iv) economic cycles; or (v) due to market conditions, building permits for all phases of the development cannot be secured within the initial two (2) year approval duration period.
 - c. **Time Limit on Vested Right:** The maximum vesting term that may be granted by the Town Council may not exceed five (5) years from the date of original Master Plan approval.
3. **Effect of Approval of Vesting:** A Vested Right shall confer upon the landowner the right to undertake and complete the development and use of said property under the terms and conditions of the approved Site-Specific Development Plan (*Master Plan*). The establishment of a Vested Right on a piece of property for a Site-Specific Development Plan shall not preclude the Town from establishing and enforcing on the property any additional regulations (*adopted during the time the Vested Right was in effect*) which are general in nature and applicable to all property subject to the regulations of this Ordinance. A Vested Right, once established shall preclude any zoning action by the Town which would change, alter, impair, prevent, diminish or otherwise delay the development or use of the property in accordance with the approved Site-Specific Development Plan (*Master Plan*), except under the conditions in subsection “5” below where such rights are terminated and revoked.
4. **Establishment of Common Law Vesting Plans:** Previously approved Site-Specific Development Plans (*Master Plans*) shall be reviewed for compliance and consistency and subsequently approved by the Administrator or designee in accordance with the provisions of this Chapter, providing the proposed CDs for the SDA or Subdivision do not deviate from, and is subdivided/developed in accordance with the previously approved Site-Specific Development Plan (*Master Plan*). Substantial financial investment must be determined and a good faith effort made to develop proportionate to the approved statutory vested plan.

5. **Revocation of Vested Rights:** Once a Vested Right is granted to a particular Master Plan, nothing in this Section shall preclude the Town from conducting subsequent reviews and approvals to ensure compliance with the terms and conditions of the original approval, provided such reviews and approvals are consistent with the original approval. Failure to abide by the terms and conditions placed upon such approval or with any other applicable portion of this Ordinance will result in the forfeiture of the previously granted or established Vested Right. As prescribed under the provisions of G.S.160A-385.1, the Vested Right shall otherwise expire at the end of the approval period established by the Town Council. A building permit issued by the permit-issuing authority pursuant to G.S. 160A-417 may not expire or be revoked because of the running of time on a piece of property while a plan has been approved and the Vested Right period has not otherwise expired. As noted in subsection “3” above, the presence of any of the following conditions shall cause such vested rights to be terminated and revoked:
- a. The affected landowner provides written consent to the Town of his/her desire to terminate the Vested Right;
 - b. The Town determines, after having advertised and held a public hearing, that natural or man-made hazards exist on or in the immediate vicinity of the property which pose a serious threat to the public health, safety and welfare if the project were to proceed as indicated in the plan;
 - c. Compensation is made by the Town to the landowner for all costs, expenses and other losses incurred, including but not limited to: all fees paid in consideration of financing; and all architectural, planning, marketing, legal and any other consultant's fees incurred after approval together with interest thereon at the legal rate until paid;
 - d. The Town determines, after having advertised and held a public hearing, that the landowner or his representative intentionally supplied inaccurate information or made material misrepresentations which made a difference in the approval by the Town Council of the plan; or
 - e. Upon the enactment of a State or Federal law or regulations which precludes development as shown in plan. In such case the Town may, after having advertised and conducted a public hearing, modify the affected provisions upon a finding that this change in State or Federal law has a fundamental effect on the plan.

6. **Procedure:**

SUBMITTAL REQUIREMENTS	REVIEWING AUTHORITY	ACTION TO BE TAKEN	APPEAL PROCESS
Vested Right Application w/Master Plan (16.6)	Administrator	Review for Completeness & Ordinance Compliance; Issue Staff Report	n/a
	Town Council	Public Hearing	n/a
	LURB	Review and Recommendation	n/a
	Town Council	Vested Right Approved - or - Denied	Superior Court



Chapter 16. DEVELOPMENT PLAN REQUIREMENTS

16.1 Purpose and Intent

This Chapter describes the information required for all development activity to ensure compliance with the standards found in this Ordinance. The submission of a complete application in accordance with this Chapter is necessary prior to any review being undertaken as described in Chapter 15 by the Administrator, DRC, LURB and/or Town Council.

16.2 Environmental Survey

An environmental survey is intended to identify historic buildings, areas and landscapes; to identify forest stands or trees of a uniform size and species; specimen trees of varying sizes and species, particularly free standing or open-grown or field grown trees; a distinctive tree line or forest edge; existing watercourses and previously documented endangered species' habitats. Identification of existing trees, understory vegetation, endangered species and their supporting habitat, wetlands, perennial streams, floodplains, topographical features such as steep slopes and unique geologic features, and historic resources on a site prior to the advanced preparation of development plans enables the reasonable and practical planned preservation of environmentally sensitive areas. This requirement provides the Town and the applicant the ability to:

- evaluate the proposed development in order to preserve vegetation;
- improve the appearance of the proposed development;
- encourage the use of the existing forest and tree canopy, specimen trees and significant vegetation; and
- encourage the preservation of cultural resources.

Elements of this requirement may be waived by the Administrator if the site lacks qualifying natural features.

- A. Sketch Plan and Master Plan Submittal:** The use of digital geographic data obtained from the Town of Knightdale or Wake County is deemed to be sufficient for the Sketch Plan and Master Plan phases of submittal requirements.
- B. Construction Document Submittal:** For Construction Documents, the Environmental Survey requirements are as follows:
1. Provide a general written description of the significant vegetation, which includes specimen trees as well as any tree stand containing canopy trees 12 inches DBH or greater and/or understory species two (2) inches or greater in caliper (*e.g. dogwood, holly, redbud, etc.*). For this significant vegetation, identify the species or general species composition, the general size and height, the average spacing (*in tree stands*) and the overall health and vigor of the tree(s).
 2. Denote the dripline of any existing tree stand, as measured between existing tree trunks six (6) inches or greater located at the edge of the stand.
 3. Identify all open grown or field-grown specimen trees *see Chapter 19*) standing alone in a field or on the edge of a tree stand that are located on the site 12" or greater DBH.
 4. Identify any tree on the site 24" DBH or greater.

5. Denote the presence of any historic resources identified for preservation under Section 7.6.
6. Show all other important natural features influencing site design such as the location of wetlands, rock outcroppings, site topography at two-foot (2') contour intervals, slopes steeper than 15%, perennial streams, natural drainage ways, lakes, other water bodies and floodplains indicating both the flood fringe and the flood way. USGS and FEMA data shall be used to determine the location of perennial streams unless stream data determination has already been obtained from the North Carolina Division of Water Quality or from a licensed engineering firm.
7. Denote the presence of any known endangered species' habitats indicated in any surveys completed by Wake County, the State of North Carolina, or other governmental agency.
8. Show all NRB delineations as follows:
 - a. NRB boundaries including all undisturbed buffer zones must be clearly delineated on all Development Plans submitted for approval by the Town, including all Construction Documents sets and specifically on grading and clearing sheets, erosion and sediment control plan sheets, and site plan sheets.
 - b. NRB boundaries for all required undisturbed buffer zones must be clearly delineated on-site in the field prior to any land disturbing activities. Where existing trees are to be preserved in a buffer zone, limits of grading shall maintain a minimum 20-foot separation from the base of each tree on the upland side of the buffer or to the dripline, whichever is greater.
 - c. NRB boundaries including all buffer zones as well as all buffer requirements must be specified on the final plat of record, on individual deeds, and in property association documents for lands held in common.

16.3 Floodplain Development Permit Requirements

Whenever a FEMA designated floodplain crosses a development site, a Floodplain Development Permit is required. Application for a Floodplain Development Permit shall be made to the Administrator on furnished forms prior to any development activities proposed on site. All plans shall be submitted at a scale not less than 1 inch = 60 feet unless otherwise authorized by the Administrator. The following items/information shall be presented to the Administrator to apply for a floodplain development permit:

- A.** A plot plan drawn to scale which shall include, but shall not be limited to, the following specific details of the proposed floodplain development:
 - 1. The nature, location, dimensions, and elevations of the area of development/disturbance; existing and proposed structures, the location of utility systems, proposed grading/pavement areas, fill materials, storage areas, drainage facilities, and other proposed development;
 - 2. The boundary of the Special Flood Hazard Area as delineated on the FIRM or other flood map as determined in Section 6.6C(1) or a statement that the entire lot is within the Special Flood Hazard Area;
 - 3. Flood zone(s) designation of the proposed development area as determined on the FIRM or other flood map as determined in Section 6.6C(1);
 - 4. The boundary of the floodway(s) or non-encroachment area(s) as determined in Section 6.6C(1);
 - 5. The Base Flood Elevation (BFE) where provided as set forth in Section 6.6C(1); or 6.6E subsections 3e, 4, and 5;
 - 6. The old and new location of any watercourse that will be altered or relocated as a result of proposed development; and
 - 7. Preparation of the plot plan for the original development of property by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. Additions to an existing structure such as a deck are exempt.
- B.** Proposed elevation, and method thereof, of all development within a Special Flood Hazard Area including but not limited to:
 - 1. Elevation in relation to mean sea level of the proposed reference level (including basement) of all structures;
 - 2. Elevation in relation to mean sea level to which any non-residential structure will be flood-proofed;
 - 3. Elevation in relation to mean sea level to which any proposed utility systems will be elevated or flood-proofed;
- C.** If flood-proofing, a flood-proofing certificate and back-up plans from a registered professional engineer or architect certifying that the non-residential flood-proofed development will meet the flood-proofing criteria in sections 6.6E(3)b and 6.6E(5).
- D.** A foundation plan drawn to scale, which shall include details of the proposed foundation system to ensure all provisions of this ordinance are met. These details include but are not limited to:
 - 1. Proposed method of elevation, if applicable (*i.e., fill, solid foundation perimeter wall, solid backfilled foundation, open foundation on columns/piers*); and

- 2.** Should solid foundation perimeter walls be used in floodplains, details of sufficient openings to facilitate the unimpeded movements of floodwaters in accordance with 6.6E, Subsection 3d;
- E.** Usage details of any enclosed space below the regulatory flood protection elevation.
- F.** Plans and/or details for the protection of public utilities and facilities such as sewer, gas, electrical, and water systems to be located and constructed to minimize flood damage;
- G.** If floodplain development permit is issued for placement of recreational vehicles and/or temporary structures, documentation to ensure sections 6.6E(3)f and 6.6E(3)g of this code are met.
- H.** If a watercourse is proposed to be altered and/or relocated, a description of the extent of watercourse alteration or relocation; an engineering report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream; and a map (if not shown on plot plan) showing the location of the proposed watercourse alteration or relocation.

16.4 Sketch Plan Requirements

Prior to submitting a Sketch Plan for Administrative review, the applicant shall schedule a pre-application submittal (“*pre-app*”) meeting with the Administrator. In addition to information required by the Environmental Survey (*Section 16.2*), the Sketch Plan shall show the proposed layout of streets, lots, buildings, public open spaces and other features in relation to existing conditions based upon the size of the tract proposed for development.

The size and number of completed applications shall be set by the Administrator. All plans shall be submitted at a scale not less than 1 inch = 60 feet unless otherwise authorized by the Administrator.

Generally, a Sketch Plan will include the following information:

- A sketch vicinity map, including north arrow, showing the location of the subdivision or site in relation to neighboring tracts, subdivisions, roads, and waterways;
- The name, address, and telephone number of the property owner;
- The name of the proposed subdivision;
- The boundary lines of the property;
- The total acreage;
- The existing and proposed land uses and the existing land uses of adjacent properties;
- The existing topographic and planimetric conditions of the property and a surrounding 300-foot buffer area around the property including contours not exceeding five-foot (5') intervals (*Wake County or Town of Knightdale topographic information may be used to fulfill this requirement*);
- The location, names, and right-of-way width of any existing streets on or within 300 feet of the land to be subdivided;
- Lots of adjacent developed or platted properties;
- Zoning classification of the land and adjacent properties;
- Illustrative building elevations denoting general design elements and materials;
- Watershed classification, if any;
- A general graphic inventory of the natural resources (*wetlands, lakes, ponds, forest cover, stream buffers, geologic features, native vegetative areas, etc.*) at the site and surrounding area out to a radius of 300 feet around the subject subdivision or site as they exist prior to the commencement of development activities; and
- A graphic concept plan of the proposed post-development stormwater management system including but not limited to swales, low-impact designs elements, structural stormwater controls, flow paths, stream channel modifications, bridges and culvert crossings.
- A statement and any supporting documentation regarding how the proposed development will meet the Town of Knightdale Water Allocation Policy; thereby securing connection to the public water and sewer infrastructure.

Additional information may be required by the Administrator prior to formal submittal of further development applications.

16.5 Planned Development District (PDD) Plan Requirements

All Planned Development District's shall have a corresponding plan to include the following elements.

- A. **Zoning Designation:** The Planned Development District master plan shall include a request for a zoning designation that matches the proposed density.
- B. **Boundary & Significant Feature Survey:** The boundary, as determined by survey, of the area to be developed with all bearings and distances shown and the location within the area, or contiguous to it, of any existing streets, railroad lines, perennial streams, wetlands, easements or other significant features of the tract;
- C. **Scale & North Arrow:** Scale denoted both graphically and numerically with north arrow;
- D. **Vicinity Map:** A vicinity map at a scale no smaller than 1 inch equals 1,200 feet showing the location of the PDD with respect to adjacent streets and properties;
- E. **Site Data:** Site calculations shall include total acreage, acreage in parks and other non-residential uses, total number and acreage of parcels, and the total number of housing units.
- F. **General Layout Map:** A map delineating the boundaries of proposed uses and building types. This map should include descriptive conditions indicating the use, density, and building type of each distinct area of the proposed district.
- G. **Dimensional Standards:** Description of dimensional standards and any modifications to the general use regulations.
- H. **Transportation:** Major streets and any collector/arterials required shall be shown on the PDD Plan. Any modifications to street sections or request for modified street sections shall be included.
- I. **Open Space:** Recreational Open Space areas shall be shown and descriptive conditions shall be utilized to indicate the type of improvements contemplated.
- J. **Phasing Plan:** If more than one phase is proposed the PDD shall establish a general phasing plan. In mixed-use proposals the non-residential component shall be phased in association with a percentage of the total residential units not to exceed 75%.
- K. **Design Guidelines:** Architectural elevations representative of the proposed structures and any proposed design guidelines shall be included in the PDD plan.
- L. **Stormwater Management:** A generalized stormwater management plan.
- M. **Comprehensive Plan Consistency:** A statement of consistency with the adopted Comprehensive Plan.
- N. **UDO Consistency:** A statement of consistency with the Unified Development Ordinance. Any section of the UDO that is proposed to be modified shall be included as an additional section of the PDD plan.

16.6 Master Plan Requirements

All plans shall be submitted at a scale not less than 1 inch = 60 feet unless otherwise authorized by the Administrator. The size and number of completed applications shall be set by the Administrator. In addition, a copy of all plan pages must be submitted at the same time using the open Portable Document Format (pdf) standard on a Compact Disc (CD) or Digital Versatile Disc (DVD).

No processing or review of a Master Plan will proceed without all of the following information:

- A. Boundary & Significant Feature Survey:** The boundary, as determined by survey, of the area to be developed with all bearings and distances shown and the location within the area, or contiguous to it, of any existing streets, railroad lines, perennial streams, wetlands, easements or other significant features of the tract;
- B. Scale & North Arrow:** Scale denoted both graphically and numerically with north arrow;
- C. Vicinity Map:** A vicinity map at a scale no smaller than 1 inch equals 1,200 feet showing the location of the subdivision with respect to adjacent streets and properties;
- D. Site Data Table:** Site calculations shall include total acreage of tract, acreage in parks and other non-residential uses, total number and acreage of parcels, and the total number of housing units.
- E. General Site Information:** The proposed name of the development, street names, the owner's name and address, the names of adjoining subdivisions or property owners, the name of the Township, county, and state in which the development is located, the date of plan preparation, and the zoning classification of the tract to be developed, and of adjoining properties.
- F. Environmental Survey:** See Section 16.2.
- G. Topography:** Original contours at intervals of not greater than 2 feet for the entire area to be subdivided and extending into adjoining property for a distance of 300 feet at all points where street rights-of-way connect to the adjoining property and 50 feet at all other points of common project boundaries. Wake County or Town of Knightdale digital topography may be used to satisfy this requirement but should be field-verified to ensure accuracy. This requirement may be waived for developments smaller than one (1) acre or where insufficient topographic changes warrant such information.
- H. Natural Development Constraints:** The location of any building restriction areas such as flood hazard areas, buffer locations, watershed protection districts and/or jurisdictional wetlands;
- I. Municipal & ETJ Boundaries:** Corporate limits and extra-territorial jurisdiction boundaries where applicable.
- J. Site Improvements & Dimensions:** The location of proposed buildings, parking and loading areas, streets, alleys, easements, lots, parks or other open spaces, site reservations (*i.e. school sites*), property lines, street dimensions and tentative lot dimensions;
- K. Recreational Open Space Calculations:** Calculations for required and proposed recreational open space.
- L. Street Cross-Sections:** Typical cross-sections of proposed streets. Where a proposed street is an extension of an existing street, the profile of the street shall include 300 feet

of the existing roadway, with a cross section of the existing street. Where a proposed street within the development abuts a tract of land that adjoins the development and where said street may be expected to extend into said adjoining tract of land, the profile shall be extended to include 300 feet of the said adjoining tract.

- M. Two-Dimensional (2-D) Utility Plans:** Two-dimensional (2-D) utility plan showing location of sanitary sewer lines, water distribution lines, storm sewer lines, manholes, clean-outs, fire hydrants, fire lines, valves, underground private utilities, backflow prevention devices showing make and model, meters and pipe sizes. If applicable, also show well and septic locations, force mains and pump stations.
- N. Construction Limits:** The proposed limits of construction for all proposed development activity.
- O. Phasing Plan & Timetable:** A phasing plan, including a timetable for estimated project completion for each phase proposed.
- P. Water Allocation Policy:** A statement and any supporting documentation regarding how the proposed development will meet the Town of Knightdale Water Allocation Policy; thereby securing connection to the public water and sewer infrastructure.
- Q. Specific Plan Sheets:** Unless otherwise exempted by the Administrator, the following specific plan sheets are also required:
 - 1. **Landscape Plan** in accordance with Section 16.9A;
 - 2. **Lighting Plan** in accordance with Section 16.9B;
 - 3. **Signs & Markings Plan** in accordance with Section 16.9C;
 - 4. **Architectural Plans** in accordance with Section 16.9D; and
 - 5. **Stormwater Management Plan** in accordance with Section 16.9E.

In addition to the above required information, the following additional information may be required by the Administrator, the Land Use Review Board, or the Town Council on a site-specific basis:

- R. Traffic Impact Analysis** (if required) in accordance with Section 16.9.
- S. Environmental Impact Statement:** An Environmental Impact Statement, pursuant to Article 113A of the North Carolina General Statutes, may be required if: the development exceeds two (2) acres in area, and; if the Town Council deems it necessary due to the nature of the land or peculiarities in the proposed design.
- T. Floodplain Development Permit:** FDP application with supporting documentation as may be required by the Knightdale Flood Damage Prevention Ordinance in Section 6.6.

16.7 Construction Drawing Requirements

All plans shall be submitted at a scale not less than one (1) inch = 60 feet unless otherwise authorized by the Administrator. The size and number of complete application submittal copies required shall be set by the Administrator. In addition, a copy of all plan pages must be submitted at the same time using the open Portable Document Format (pdf) standard on a Compact Disc (CD) or Digital Versatile Disc (DVD).

No processing or review of Construction Documents/Preliminary Plats will proceed without all of the following information:

- A. Boundary & Significant Feature Survey:** The boundary, as determined by survey, of the area to be subdivided or built upon with all bearings and distances shown and the location and the location within the area, or contiguous to it, of any existing streets, railroad lines, water courses, easements, bridges or other significant features of the tract. One corner of the tract shall be tied to the NC State Plane 1983 Coordinate System.
- B. Scale & North Arrow:** Scale in feet denoted both graphically and numerically with north arrow and declination.
- C. Vicinity Map:** A sketch vicinity map at a scale no smaller than one (1) inch equals 1,200 feet showing the relationship between the proposed subdivision or building site and surrounding area.
- D. Site Data Table:** Site calculations shall include total acreage of tract, acreage in parks and other non-residential uses, total number and acreage of parcels, the total number of housing units, area of all mixed-use and non-residential buildings, gross project density per acre, linear feet of streets and the accurate locations and descriptions of all monuments, markers and control points.
- E. General Site Information:** The proposed names of the Development and streets, the owner's name and address, signature of the owner or owner's duly authorized agent, the surveyor's name, the names of existing and proposed adjoining subdivisions or property owners, the names of the township, county, and state in which the development is located, the date of preparation, and the zoning classification of the tract to be developed and of adjoining properties, and the names, widths, right-of-way dimensions, pavement design, utility and storm drainage locations of adjoining streets.
- F. Environmental Survey:** See Section 16.2.
- G. Topography:** Existing topography and finish grading with contours drawn at two (2) foot intervals. This requirement may be waived for developments smaller than one (1) acre or where insufficient topographic changes warrant such information. Elevations to be based on North American Vertical Datum of 1988 (NAVD 88) with benchmark indicated.
- H. Natural Development Constraints:** The location of any building restriction areas such as flood hazard areas, watershed protection districts, and/or jurisdictional wetlands.
- I. Municipal & ETJ Boundaries:** Corporate limits and extra-territorial jurisdiction boundaries where applicable.
- J. Lots & Numbering:** Proposed lot lines, lot dimensions, lot and block numbers and exact dimensions (*for Major Subdivisions only*).
- K. Dedications & Reservations:** The future ownership and location of common and public areas (*dedication or reservation for public use to a governmental body; for owners to duly constituted homeowners' association, for tenants remaining in subdivider's ownership of recreation and open space lands*).

- L. Water Allocation Policy:** A statement including an estimated calculation of sewer capacity requested in gallons per day along with the methodology for how such calculation was derived, and any supporting documentation regarding how the proposed development will meet the Town of Knightdale Water Allocation Policy; thereby securing connection to the public water and sewer infrastructure.
- M. Three-Dimensional (3-D) Utility Plans:** The plans and profiles for utility layouts including sanitary sewers, storm sewers and water lines, illustrating connections to existing systems. Specific data includes, but is not limited to:
- pipe material, size, length and slope;
 - drainage areas and run-off for each storm drain pipe;
 - invert elevations and top elevations for structures;
 - water meter locations and size;
 - sewer service lateral locations and size;
 - detailed pump station plans;
 - volume and cycle time calculations, total discharge head calculations, pump selection curve, and hydrostatic uplift calculations for pump stations and force mains;
 - easements;
 - fire hydrant locations;
 - valve, fittings and blow-off locations;
 - details for borings;
 - temporary and permanent sampling station locations; etc.

All systems shall conform to current Town standards and the *Knightdale Standards Specifications and Construction Details Manual*.

- N. Easements:** Easements shall be provided on all Construction Documents as follows:
1. **Utility Easements:** Easements for underground or above ground utilities shall be provided for and centered along rear or side lot lines, and shall be a minimum of 10 feet in width. Easements for water lines, sanitary sewers, and storm drains shall be centered on the pipe and a minimum of 20 feet in width or as required by the *Knightdale Standard Specifications and Construction Details Manual*.
 2. **Drainage Easements:** Where a development is crossed by a stream or drainage way, an easement shall be provided conforming to the lines of such stream and of sufficient width as shall be adequate to maintain the overall integrity of the drainage area and provide for its periodic maintenance.
 3. **Public Access Easements:** Public Access Easements shall be provided for sidewalks, trails, greenways, and other pedestrian and bicycle facilities that provide connections other than within public rights-of-way.
- O. Off-Street Parking & Loading Areas:** The number, location and dimensions of all off-street parking and loading spaces and the location and dimensions of all walkways indicating the type of surfacing, size, angle of stalls and width of aisles.
- P. Recreational Open Space Amenities:** The location and dimensions of proposed recreation areas, parks, open space, and required amenities and improvements including the calculated area of all required open space dedications in accordance with Chapter 7.

- Q. Street Improvements:** The location and dimensions of any sidewalks, curb and gutters to be installed along public street frontages, and other required street improvements designated in chapters 9 and 17 of this Ordinance. Required right-of-way shall be drawn in the location shown on any official plan at the width specified in this Ordinance.
- R. Street Cross-Sections:** Typical cross sections of proposed streets showing rights-of-way, pavement widths, grades, and design engineering data for all corners and curves. Where a proposed street is an extension of an existing street the profile of the street shall include 300 feet of the existing roadway, with a cross section of the existing street. Where a proposed street within the subdivision abuts a tract of land that adjoins the subdivision and where said street may be expected to extend into said adjoining tract of land, the profile shall be extended to include 300 feet of the said adjoining tract.
- S. Demolition Landfills:** The location of any existing or proposed demolition landfills in the site. Such sites shall not be used for building.
- T. Erosion & Sedimentation Control Permit:** A copy of the full soil erosion and sedimentation permit application including forms, plans and calculations to be submitted to the NCDENR-Erosion Control Office along with copies of all other local, State and Federal floodplain development permits required (*i.e. Wetlands, Riparian Buffers, Mining, etc.*); and a copy of all approval letters prior to Site Plan or Construction Drawing approval.
- U. Specific Plan Sheets:** Unless otherwise exempted by the Administrator, the following specific plan sheets are also required:
1. **Landscape Plan** in accordance with Section 16.9A
 2. **Lighting Plan** in accordance with Section 16.9B
 3. **Signs & Markings Plan** in accordance with Section 16.9C
 4. **Architectural Plans** in accordance with Section 16.9D
 5. **Stormwater Management Plan** in accordance with Section 16.9E
- V. Additional Information:** In addition to the preceding required information, the following additional information may be necessary for specific sites as determined by the Administrator or the DRC:
1. **Traffic Impact Analysis** (if required) in accordance with Section 16.9.
 2. **Private Community Utilities:** Where a proposed water and sewer system does not contemplate the use of publicly owned and operated facilities, the proposed facility plans as approved by the appropriate agency shall be submitted with the Constructions Documents.
 3. **Individual Well & Septic:** Where public or community water supply and/or sewerage systems are not available or to be provided, a written statement from the Wake County Health Department shall be submitted with the Construction Documents indicating that each lot has adequate land area and soil conditions suitable to accommodate the proposed methods of water supply and sewage disposal.

W. Certification Statements

1. **Cover Sheet:** The following certifications must appear on the **cover sheet** for Construction Drawings for Site Plans and Major Subdivisions:

a. Town Approved Standards Shall Control. In the event of a conflict or inconsistency between these construction drawings and the Town of Knightdale's Approved Standards for this project, the Approved Standards shall control. Town of Knightdale Approved Standards shall mean all development documents necessary for approval for the Property including, but not limited to, any special use permit, subdivision plan, site plan, subdivision plat(s), phasing schedule, Development Agreement, Utility Allocation Agreement, Annexation Agreement, the Town of Knightdale Standard Specification and Details Manual and applicable provisions of the North Carolina State Building Code.

b. Professional Design Engineer Certification. These improvements shall be constructed in accordance with the following drawings and with the Standard Specifications of the Town of Knightdale.

I, _____, PE, certify that the Standard Specifications of the Town of Knightdale have been thoroughly checked and found to be applicable to this project. All exceptions to the applicable Town standards have been previously approved by the Town of Knightdale and said exceptions are shown on Sheet(s) _____ of these drawings.

Seal By: _____, PE
Date: _____

2. **Each Sheet:** The following certification must appear on **each sheet** containing drawings for Construction Drawings for Site Plans and Major Subdivisions:

a. Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Administrator

3. **Landscape Plan Sheet(s):** The Administrator may allow the following Certificate to be placed on the Landscape Plan sheets for Construction Drawings for Site Plans and Major Subdivisions if a reasonable amount of time has passed, and a Lighting Plan has not yet been able to be procured from the lighting utility provider:

a. **Lighting Plan Certification:** I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Planning Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with sections 8.10 and 16.8B as well as Chapter 11 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

_____ Applicant

I (officer authorized to take acknowledgments) do hereby certify that _____ personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand and (where an official seal is required by law) official seal this ___ day of _____, A.D., ____ (year).

Official Seal _____ Notary

_____ Commission Expires

16.8 Final Plat Requirements

The final plat shall be prepared by a registered land surveyor, licensed to practice in the State of North Carolina and shall constitute all portions of the site, which the subdivider proposes to record, and develop at the time. Final Plats must be drawn to a scale of not more than 1 inch = 60 feet unless otherwise authorized by the Administrator, and shall meet the requirements of the Wake County Register of Deeds Office. The size and number of completed applications shall be set by the Administrator. In addition, a copy of all plan pages must be submitted at the same time using the open Portable Document Format (pdf) standard on a Compact Disc (CD) or Digital Versatile Disc (DVD).

No Final Plat shall be approved unless and until the subdivider has installed in the platted area all improvements required by this Ordinance and has submitted As-Built Drawings in accordance with Section 15.3G or has posted Improvement Guarantees in accordance with Chapter 17. Furthermore, submittal of any payment in lieu of dedicated recreational open space shall also be made prior to the approval of any Final Plat.

The Final Plat shall be drawn in black ink on mylar and shall contain the following:

- A. **Title Block Information:** The name of the township in which the subdivision is located, the name of the subdivision, the name of the owner, the name, registration number, and seal of the registered surveyor under whose supervision the plat was prepared, the date of the plat, and the words "Final Plat."
- B. **Boundary Survey:** The exact boundary of the tract of land being subdivided showing clearly the disposition of all portions of the tract. One corner of the tract shall be tied to the NAD83 State Plane Coordinate System.
- C. **Scale & North Arrow:** Scale denoted both graphically and numerically with north arrow and declination.
- D. **Vicinity Map:** A vicinity map showing the location of the subdivision with respect to adjacent streets and properties.
- E. **Survey Points:** The accurate locations and descriptions of all monuments, markers, and control points.
- F. **Adequate Data & Dimensions:** Sufficient data to determine readily and reproduce accurately on the ground the location, bearing, and length of every street, alley line, lot line, building footprint, easement line, and setback line. All dimensions shall be measured to the nearest one-hundredth of a foot and all angles to the nearest second.
- G. **Street and Lot Information:** The centerlines and names of all streets, alley lines, lot lines, lot and block numbers, lot addresses.
- H. **Delineated Public Purpose Areas:** Easements, reservations, on-site demolition landfills, and areas dedicated to public purpose with notes stating their purposes.
- I. **Utility Easements:** Underground and aerial utility easements shall be shown and indicated with dimensions and widths.
- J. **Environmental Protection Boundaries:** The exact location of stream corridor buffer boundaries including all buffer zones as well as all buffer requirements and required tree cover areas must be specified on the record plat, on individual deeds, and in property association documents for land held in common.
- K. **Residential Landscaping Notes:** All residential landscaping notes as required in Section 8.9.

- L. Finished Floor Elevations:** Minimum floor finish elevations shall be shown for each lot which wholly or partly lies within any floodplain boundary. All lots subject to flooding shall be noted with the following statement:

"Any construction or use within the areas delineated as floodway are subject to the restrictions imposed by the Knightdale Flood Damage Prevention Ordinance."

M. Certification Statements

1. All Final Plats:

a. Certificate of Survey and Accuracy. I, _____, certify that this map was (drawn by me)(drawn under my supervision) from (an actual survey made by me)(an actual survey under my supervision)(deed description recorded in Book____, Page____, Book____, Page____, etc)(other); that the error of closure as calculated by latitudes and departures is 1:____, that the boundaries not surveyed are shown as broken lines plotted from information found in Book____, Page____; that this map was prepared in accordance with G.S. 47- 30 as amended. Witness my hand and seal this ___ day of _____, A.D., _____ (year).

Surveyor

Official Seal

License or Registration Number

b. Certificate of Ownership and Dedication. I hereby certify that I am the owner of the property shown and described, which is located in the subdivision jurisdiction of the Town of Knightdale and that I hereby adopt this plan of subdivision with my free consent, establish minimum building setback lines, preserve and protect all soils and vegetation in the tree protection areas as required in Section 8.5 of the Town of Knightdale Unified Development Ordinance, plant supplementary or replacement trees as required, and dedicate all streets, alleys, walks, parks, and other sites and easements, to public or private uses as noted. Furthermore, I hereby dedicate all sanitary sewer and water lines that are located in public utility easements or rights-of-way to the City of Raleigh, and I hereby dedicate all storm sewer lines that are located in public utility easements or rights-of-way to the Town of Knightdale

Date

Owner(s)

I (officer authorized to take acknowledgments) do hereby certify that _____ personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand and (where an official seal is required by law) official seal this ___ day of _____, A.D., _____ (year).

Official Seal

Notary

Commission Expires

c. Certificate of Approval of the Design and Installation of Streets and Other Required Improvements. I hereby certify that all streets and other required improvements have been installed in an acceptable manner and according to the Town of Knightdale's *Standard Specifications and Details Manual* or that guarantees of the installation of the required improvements in an amount and manner satisfactory to the Town of Knightdale has been received.

Date

Town Engineer, Town of Knightdale

d1. Certificate of Approval for Recording. I hereby certify that the subdivision plat shown hereon has been found to comply with the Unified Development Ordinance for the Town of Knightdale, North Carolina, and that this plat has been approved by the Town of Knightdale for recording in the Office of the Register of Deeds of Wake County.

Date

Administrator, Town of Knightdale

OR

(The following certificate shall appear on all plats which do not meet the definition of subdivision as defined in this Ordinance, but which need approval from the Town for recording at the Wake County Register of Deeds Office. This Certificate is to be used in lieu of d1. above.)

d2. Certificate of Approval for Recording. I hereby certify that the subdivision plat shown is exempt from the subdivision provisions of the Unified Development Ordinance for the Town of Knightdale, North Carolina, and is therefore exempt from its provisions. The plat has been found to comply with the zoning regulations of the Unified Development Ordinance for the Town of Knightdale, North Carolina, and has been approved by the Town of Knightdale for recording in the Office of the Register of Deeds of Wake County.

Date

Administrator, Town of Knightdale

e. Review Officer Certification. State of North Carolina, County of Wake I, _____, Review Officer of Wake County, certify that the map or plat to which this certification is affixed meets all the statutory requirements for recording.

Date

Review Officer
Town of Knightdale, Wake County

16.9 Specific Plan Sheet Requirements

A. Landscape Plan

Prior to any site disturbance, a landscaping plan sheet(s) shall be required on all non-residential and multi-family uses in a residential district. The plan sheet(s) shall at a minimum contain the following information:

1. **Title Block:** Name of the project, name and address of owner, name and address of engineer, scale, date, legend, and north arrow;
2. **Boundary Survey:** An accurate drawing of property boundaries;
3. **Building & Vehicle Accommodation Area Locations:** The location of proposed buildings, driveways, parking areas, required parking spaces, and traffic patterns;
4. **Utility Locations:** The location of all overhead and underground utilities, including utility easements;
5. **Existing Conditions:** See Section 16.2 “Environmental Survey”;
6. **Undisturbed Areas:** Identify existing plant materials and areas to be left in natural state such as qualifying buffers and tree cover areas;
7. **Tree Protection Devices:** Methods and details for protecting the critical root zone of existing plant materials during construction such as tree protections fences, etc.;
8. **New Plant Material:** Locations, size and labels for all proposed plants;
9. **Plant List Table:** Plant lists with common name, botanical name, quantity, and spacing and size of all proposed landscape material at the time of planting;
10. **Other Landscape Improvements:** Location and description of other landscape improvements, such as earth berms (*with two-foot [2'] topography*), walls, fences, screens, sculptures, fountains, lights, courtyards, walks or paved areas; and
11. **Planting Details:** Planting and installation details as necessary to ensure conformance with all required standards as referenced in chapters 8, 10 and 17.

B. Lighting Plan

Any person submitting an application that involves the installation of outdoor lighting fixtures shall submit evidence that the proposed work will comply with Chapter 11 in the form of a lighting plan sheet(s). The lighting plan sheet(s) shall at a minimum contain the following information:

1. **Title Block:** Name of the project, name and address of owner, name and address of engineer, scale, date, legend, and north arrow;
2. **Boundary Survey:** An accurate drawing of property boundaries;
3. **Building & Vehicle Accommodation Area Locations:** A site plan drawn to scale showing the building(s), driveways, parking areas, required parking spaces and traffic patterns;
4. **Landscaping Plan Elements:** The location of all undisturbed areas (*Section 16.8A[6]*), new plant material (*Section 16.8A[8]*), and other landscape improvements (*Section 16.8A[10]*);

5. **Exterior Lighting Fixtures:** Locations of all pole-mounted and building-mounted exterior lighting fixtures;
6. One (1) of the following:
 - a. **Footcandle Grid:** A numerical point-by-point FC grid (*photometric report*) maximum of 10 feet by 10 feet for small and medium size projects (*less than two [2] acres*) and 25 foot by 25 foot grid for large projects that indicates the minimum, maximum and average FC levels within the lighted area of the site and the average to minimum ratio* for the determination of uniformity;

OR
 - b. **Isolux Diagram:** An isolux lighting plan is also permitted in fulfillment of this Section, provided that it indicated the FCs at grade by contour diagram or grid points that cover the site and indicates the minimum, maximum and average FCs as well as the average to minimum uniformity ratio*; and

* *The minimum (lowest number) is usually at the outer edges of the illuminated area or between two fixtures. The average light level is determined by adding the FC values of all points in the grid and dividing by the total number of points. This information is usually calculated by a computer program and is available from the manufacturer of the specified fixture.*
7. **Lighting Details:** Specifications that may include, but are not limited to: manufacturers catalog cuts enlarged or reduced to the correct scale of the site plan, and drawings including sections where required; of the illuminating devices, lamps, supports and other devices, including the IESNA cut-off classification of the fixture(s) used.

C. Traffic Signs and Markings Plan

A traffic signs and markings plan shall depict traffic sign and marking details of the proposed development and shall at a minimum contain the following information:

1. **Title Block:** Name of the project, name and address of owner, name and address of engineer, scale, date, legend, and north arrow;
2. **Boundary Survey:** An accurate drawing of property boundaries;
3. **Sign Location & Details:** Location of all traffic and directional signs within the public right-of-way as well as private parking lots and drives, including sign and pole materials, text and dimensions; and
4. **Pavement Marking Locations & Details:** Location of all pavement markings and striping within the public right-of-way as well as private parking lots and drives, including materials and dimensions.

D. Architectural Plans

Architectural plans do not include full construction drawings and interior arrangements are not considered as part of this review. Architectural plans shall depict architectural details of the proposed development and shall at a minimum contain the following information:

1. **Title Block:** Name of the project, name and address of owner, name and address of architect, scale, date and legend;

2. **Building Elevations:** At Master Plan - preliminary color renderings of building elevations plus typical cross sections to clearly define the character of the project as required by the Administrator, and at Construction Drawings - final proposed elevations of all non-single-family;
3. **Cross-Sections:** A cross-section elevation plan depicting all buildings, structures, monuments, and other significant natural and man-made features of the proposed development; and
4. **Materials Board:** An exterior building materials board.

E. Stormwater Management Plan

Prior to the issuance of a CIP, a stormwater management plan for all development and redevelopment must be properly submitted and reviewed, pursuant to this Section, unless otherwise exempted according to Section 6.3C(2).

1. **Purpose:** The stormwater management plan shall govern the design, installation and construction of stormwater management and control practices on the site, including structural BMPs and elements of site design for stormwater management other than structural BMPs. The plan is intended to provide a mechanism for the review, approval and inspection of the approach to be used for the management and control of stormwater for the development or redevelopment site consistent with the requirements of this ordinance, whether the approach consists of structural BMPs or other techniques such as low-impact or low-density design.
2. **Preparer:** A qualified registered North Carolina professional engineer, surveyor or landscape architect shall prepare the stormwater management plan. The engineer, surveyor or landscape architect shall perform service only in their area of competence, and shall verify that the design of all stormwater management facilities and practices meets the submittal requirements for complete plans, that the designs and plans are sufficient to comply with applicable standards and policies found in the *Manual*, and that the designs and plans ensure compliance with this ordinance.
3. **Authority to File Stormwater Management Plans:** All stormwater management plans required pursuant to the Knightdale UDO shall be submitted to the Administrator by the landowner or the landowner's duly authorized agent.
4. **Establishment of Plan Requirements and Fees**
 - a. **Plan Contents and Form**

The Administrator shall establish requirements for the content and form of all stormwater management plans and shall amend and update those requirements from time to time. At a minimum, the stormwater management plan shall describe in detail how post-development stormwater runoff will be controlled and managed, the design of all storm water facilities and practices, and how the proposed project will meet the requirements of this ordinance, including Section 6.3F, Development Standards. Incomplete submittals shall be treated pursuant to Section 15.3B: Completeness Review.

b. Approval

If the Administrator finds that the stormwater management plan complies with the standards of this ordinance, the Administrator shall approve the plan. The Administrator may impose conditions of approval as needed to ensure compliance with this ordinance. The conditions shall be included as part of the approval.

c. Fails to Comply

If the Administrator finds that the stormwater management plan fails to comply with the standards of this ordinance, the Administrator shall notify the applicant and shall indicate how the plan fails to comply. The applicant shall have an opportunity to submit a revised application.

d. Revision and Subsequent Review

A complete revised stormwater management plan shall be reviewed by the Administrator after its re-submittal and shall be approved, approved with conditions or disapproved. Any re-submittal shall be made in accordance with the adopted Fee Schedule.

16.10 Traffic Impact Analysis (TIA)

A Traffic Impact Analysis (TIA) is required for any proposed Zoning Map Amendment (*Section 15.6C*) or Master Plan submittal (*Section 16.6*), if the nature of the proposed re-zoning or development is such that the number of trips it can be expected to generate equals or exceed 150 new peak hour trips. Trips are those occurring on peak days on the adjacent roadway(s).

- A. Preparer:** A traffic-engineering consultant licensed as a professional engineer shall prepare the TIA.
- B. Procedure:**
 - 1. Pre-Submittal Conference:** The applicant shall arrange for a Pre-Submittal Conference to discuss the project with the Town and the developer's traffic-engineering consultant. The applicant shall supply the following information for consideration and discussion at the Conference: traffic analysis base information, site location map, site layout, data on existing and proposed land uses, projected timing of construction and build-out year, and description of project. The Pre-Submittal Conference will determine the appropriateness and extent of the individual TIA requirements as outlined in Subsection E below.
 - 2. Submittal of TIA:** Three (3) copies of the study shall be submitted to the Administrator who shall notify the applicant if additional studies or analyses are necessary. In addition, a copy of the document must be submitted at the same time using the open Portable Document Format (pdf) standard on a Compact Disc (CD) or Digital Versatile Disc (DVD). Once a report is determined to be complete, a finding of such completion shall be made by the Administrator on the TIA and proceedings on any application that were stayed pending completion of the TIA may resume.
 - 3. Post-Submittal Conference:** After the completion of the study, the town and/or consultant may arrange a time to meet with the Applicant to discuss the study's findings and recommendations.
- C. Study Area Boundaries:** The extent of the study for the TIA depends upon the location and size of the proposed project and the prevailing conditions of the surrounding area as determined by the Administrator. The study area should include an analysis of all major intersections, site drives and adjacent roadways, plus off-site intersections where site traffic will constitute 10% or more of any intersection approaching volume during the peak hour. Controlled access roadways are not included in the study area or analysis; however, controlled access ramp intersections with non-controlled access roadways are subject to analysis.
- D. Contents:** The following is a general outline of issues to be addressed by the TIA. Specific components will be determined for each project during the Pre-Submittal Conference:
 - 1. Site Description:** A detailed report, containing illustrations and narrative, shall describe the site's characteristics, adjacent land uses, as well as any anticipated development within the site's vicinity influencing future traffic conditions.
 - 2. Study Area:** The report shall indicate the geographic location of the study area, roadway segments, critical intersections, and access points to be analyzed.
 - 3. Existing Traffic Conditions:** An analysis of the existing traffic conditions, including all data used for the analysis shall be provided in the report, including:

- a. Traffic count and turning movement information, including the date and source from which this information was obtained;
- b. Correction factors used to convert collected traffic data into representative average daily traffic volumes; and
- c. Roadway characteristics, including:
 - i. Design configuration of existing or proposed roadways;
 - ii. Existing traffic control measures;
 - iii. Existing driveways and turning movement conflicts in the vicinity of the site; and
 - iv. Existing Level of Service (LOS) for roadways and intersections without project development traffic (*LOS shall be calculated for the weekday peak hour, and in the case of uses generating high levels of weekend traffic, the Saturday peak hour*).

4. **Horizon Year(s) and Background Traffic:** The report shall identify the horizon year(s) that were analyzed in the study, the background traffic growth factors for each horizon year, and the method and assumptions used to develop the background traffic growth. Unless otherwise approved, development impacts shall be examined for the first and tenth years after the development is completed.

5. **Trip Generation, Trip Reduction, and Trip Distribution**

A summary of projected a.m. and p.m. peak hour and average daily trip generation for the proposed development shall be provided in addition to projected trip distribution to and from the site. The factors used to determine trip generation, reduction, and distribution are also to be included in the summary.

Trip generation shall be measured based on the current edition of the Institute for Transportation Engineers (ITE) *Trip Generation Manual*. In the case of a rezoning where the uses are not known, trip generation calculations shall assume the permitted use that generates the highest number of peak hour trips or a likely mix of uses agreed upon by the Administrator.

6. **Traffic Assignment:** The report shall identify the projected roadway segment, intersection or driveway traffic volumes, with and without the proposed development, for the horizon year(s) of the study.

7. **Impact Analysis:** The report shall address the impact of projected horizon year(s) traffic volumes. It shall identify the methodology used to evaluate the impact. The weekday peak hour impact shall be evaluated as well as the Saturday peak hour for those uses exhibiting high levels of weekend traffic generation.

8. **LOS Standards, Mitigation and Alternatives:** The study shall clearly indicate those recommended improvements and associated costs that are necessary to achieve a LOS “C” along new/planned roadway segments and LOS “D” along existing roadway segments. In addition, where the existing roadway segment LOS is currently below LOS “D”, improvements must also be recommended that, at a minimum, attain or maintain the associated existing at-grade intersection levels of service as measured at each intersection approach along and adjacent to said

roadway segment. Only the Town Council may grant exceptions to the LOS standards. If the recommended improvements do not meet the applicable LOS standards, one (1) or more of the following actions may be necessary:

- Reduce the size, scale, scope, or density of the development to decrease traffic generation.
- Divide the project into phases, allowing for only one phase at a time until traffic capacity is adequate for the next phase of development;
- Dedicate right-of-way for street improvements;
- Construct new streets;
- Expand the capacity of existing streets;
- Redesign ingress and egress to the project to reduce traffic conflicts;
- Alter the use and type of development to reduce peak hour traffic;
- Reduce existing traffic;
- Eliminate the potential for additional traffic generation from undeveloped properties in the vicinity of the proposed development;
- Integrate non-vehicular design components (i.e. pedestrian and bicycle and transit improvements) to reduce trip generation;
- Recommend denial of the application for which the TIA is submitted.

9. **Other Factors to Include in Study:** In each case, the issue as to whether adequate service levels will be maintained will be resolved by evaluating the projected impact of the proposed development on the public facilities in question at the time occupancy is expected to occur. This analysis will take into account, not only the status of existing facilities and the impact of the proposed development, but also the project impact of the following on the capacity of those facilities:

- a. Projected capital improvements either by the Town or NCDOT that will increase the capacity of the facilities in question;
- b. Traffic from other nearby approved developments shall be included in the analysis; and
- c. Those improvements related to other approved development projects.
- d. Consideration should be given for improvements related to pedestrian, bicycle, and public transportation modes.

E. **Revisions:** If the Administrator determines that a significant change (*including, but not limited to: new connectivity patterns or higher-intensity uses*) in the project proposal has occurred that will possibly lead to different findings and mitigation measures, a revised TIA shall be required.

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Chapter 17. INFRASTRUCTURE IMPROVEMENT REQUIREMENTS

17.1 Purpose and Intent

It is hereby declared to be the policy of the Town that the subdivision and development of land shall be guided and regulated in such a manner as to meet the following requirements for orderly and harmonious growth:

- Land to be subdivided shall be of such character that it can be used safely without danger to health, or peril from fire, flood, erosion, excessive noise, air and/or water pollution, or other menace, and in accordance with a Town approved phasing plan (*Section 16.50*);
- Proper provisions shall be made for drainage, water supply, sewerage, and other appropriate utility services;
- The proposed streets shall provide a safe, convenient and functional system for vehicular circulation and shall be properly related to the land use plan of the area;
- Streets shall be of such width, grade, and location as to accommodate prospective traffic, as determined by existing and probable future land uses;
- Streets shall be detailed to compliment neighborhoods and commercial centers and shall be pedestrian in scale;
- Buildings, lots, blocks, and streets shall be so arranged as to afford adequate light, view, and air, and to facilitate fire protection; and
- Land shall be subdivided and developed with due regard to topography so that the natural beauty of the land and vegetation shall be protected and enhanced.

17.2 Required Improvements for all Development Plans

A. Improvement Types

- | | |
|--|---|
| 1. Water Supply Distribution System | 8. Street Lights |
| 2. Sanitary Sewer Collection System | 9. Underground Wiring |
| 3. Stormwater Collection System | 10. Dedicated Open Space |
| 4. Public Streets (Paved) and other Public Rights-of-Way | 11. Landscaping |
| 5. Utility Easements | 12. Traffic Control Signs & Pavement Markings |
| 6. Sidewalks and Greenways | 13. Street Signs |
| 7. Curb and Gutter | |

- B. Payments in Lieu of Construction:** The Town Council has determined that it is in the best interest of the citizenry for the Town to accept a payment in lieu of constructing the following according to the standards set forth herein. All fee payments made in lieu of constructing the improvements stated herein shall be made at the time of Construction Document approval. Failure to submit the required payment along with Construction Document applications will delay approval of such submissions until payment is rendered.

1. Payment in Lieu of Street Right-of-Way Improvements: A payment in lieu of street right-of-way improvements (*i.e. roadway, curb and gutter, sidewalk(s)*) may be accepted when the Administrator determines that one of the following conditions exists:

- a. a new street stub may not practically be extended to the property line due to the need for a culvert, bridge or other structure(s) which prevents the roadway from being completed within the bounds of the subject property;
- b. a Town infrastructure project for the same improvements has received a commitment of funding through the Town's Capital Improvement Plan or through Federal and/or State grant programs; or
- c. a temporary turnaround has been required by the Fire Marshal.

The fee shall be equal to the full present cost estimate for construction of the street right-of-way improvements with said estimate having been found acceptable by the Town Engineer. All fees received for payments in lieu of street right-of-way improvements shall be used exclusively toward the construction of transportation improvements within the Town of Knightdale.

17.3 General Infrastructure Design Guidelines

A. Street Classification & Design

In an effort to protect this investment, the Town views streets as the most important public space and therefore has developed a set of principles which permit this space to be used by automobiles, pedestrians and bicyclists. New development with frontages on existing and new publicly maintained streets shall be required to upgrade all their frontages to meet the standards of this Chapter.

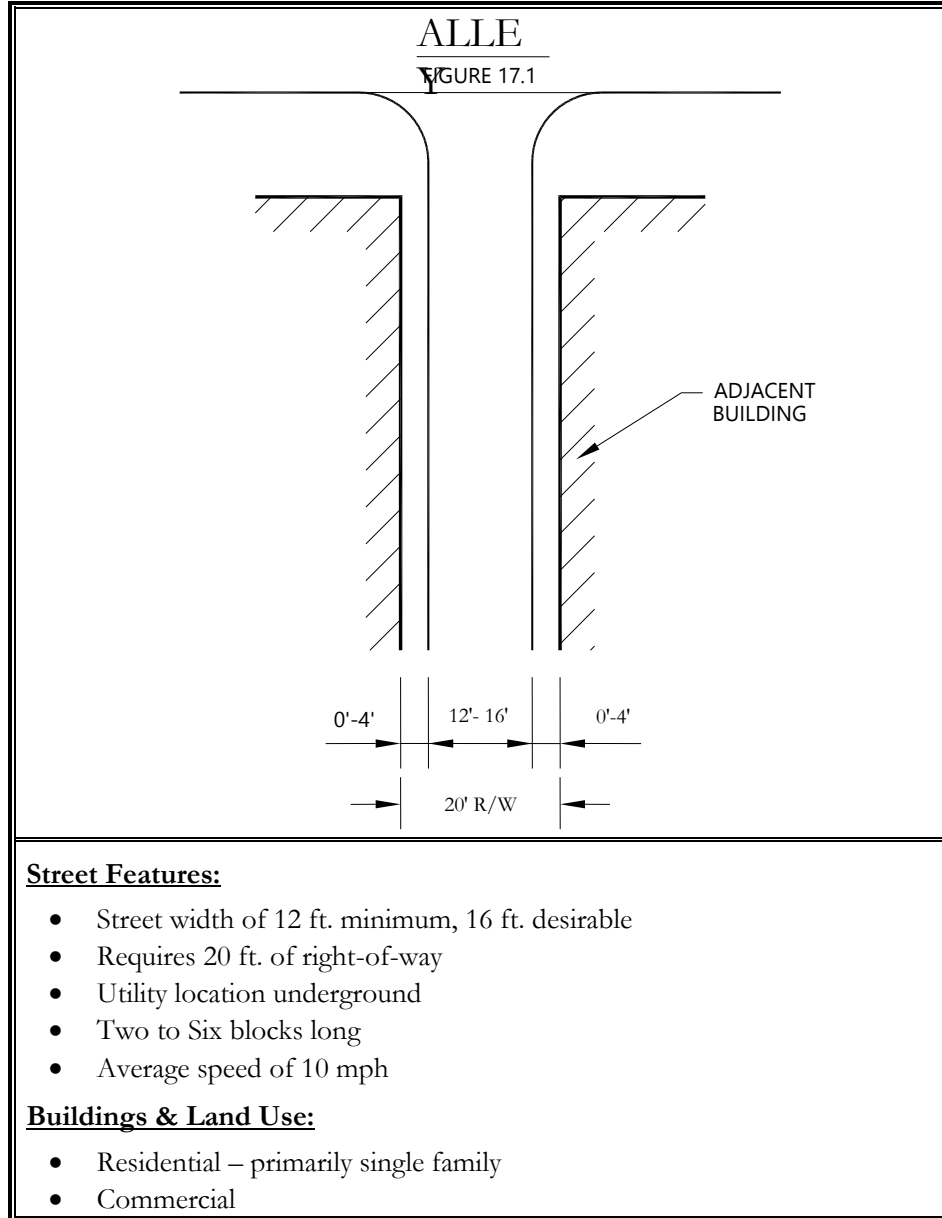
Healthy, traditional streets are categorized by the work they perform for the neighborhood. For simplicity, street types can be broken down into three (3) groups.

- **Category One - Alleys and Local Streets:** Category One connectors, which form the heart of quiet neighborhood streets, function primarily to provide access to neighborhood destinations and make numerous connections within neighborhoods. These connectors – alleys and streets- provide access, utility and walking infrastructure. Traffic speeds of 10-25 mph are appropriate to such functions. Neighborhoods work best with many connections from the edges. Connections to the centers of neighborhoods are appropriate too, but they should not move significant amounts of traffic, nor move that traffic too quickly. People entering neighborhoods should feel rewarded by ease of access to specific locations, but also encouraged to travel by foot or bicycle.
- **Category Two – Avenues and Main Streets:** Category Two roadways connect neighborhoods to commercial centers. Avenues and Main Streets are “transitional” roadways: in addition to providing access, they carry large and more diverse amounts of traffic. Avenues and Main Streets host deliveries and efficient emergency responses. They anchor neighborhood commerce, serve pedestrians and bicyclist, and improve transit operations. Category Two streets must operate at low to moderate speeds, since many people live, work, shop, and play within these street environments. Parking is found on many, but not all avenues and main streets.
- **Category Three – Boulevards and Freeways:** Category Three boulevards and freeways connect town centers to the greater region. On these streets, car traffic, delivery trucks, emergency responders, and transit must operate with high levels

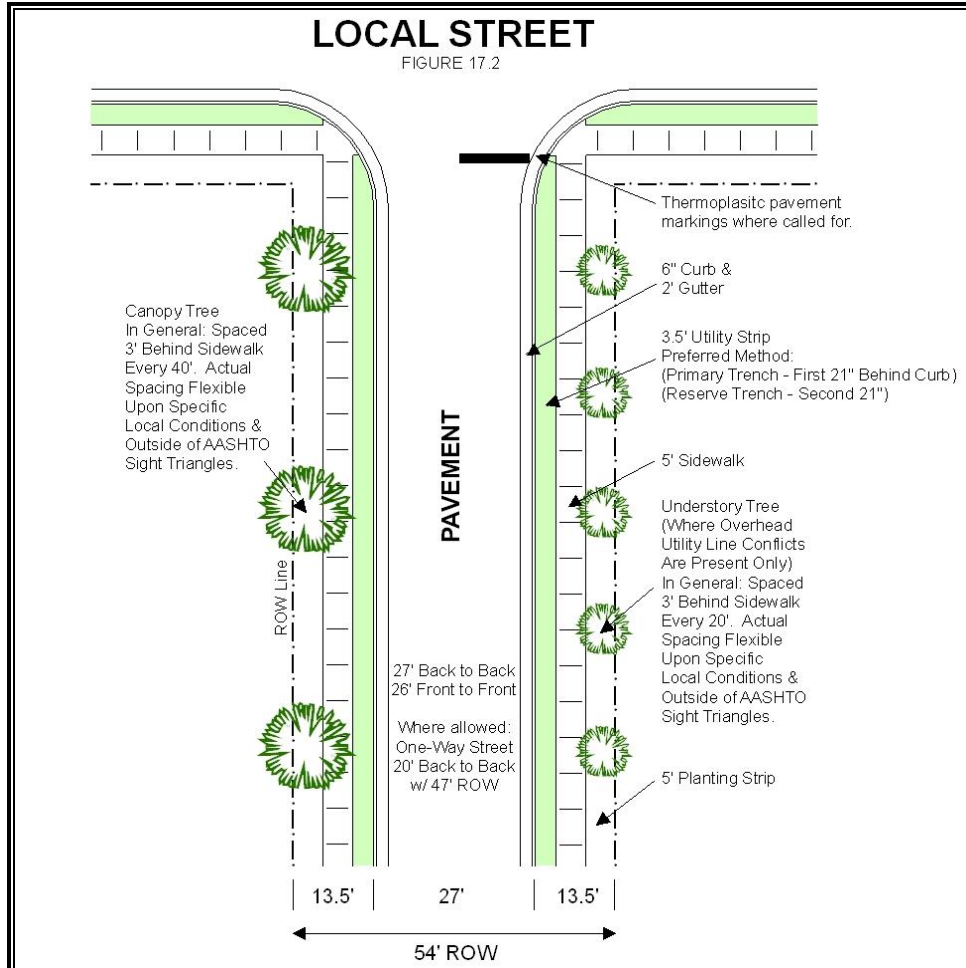
of efficiency. Freeways are generally Interstate or US Highway Routes maintained by NCDOT where the main purpose of the roadway is to provide mobility. Access is generally controlled and speeds are high (45-65 mph). Three roadways are classified as Freeways in the town – Interstate 540, and US Highway 64/264.

General illustrations of each street type (*except freeways*) are shown in sections 17.3A(1) thru 17.3A(7). For internal streets in MI Districts, please refer also to Section 2.12.B.4. Although the general illustrations have been designed with NCDOT planting guidelines in mind; whenever a street is to be maintained by NCDOT, NCDOT's *Guidelines for Planting within Highway Right-of-Way* shall supersede the general illustrations provide herein in the case of a conflict between the two (2) sets of guidelines. Where private streets are allowed, all private streets shall be constructed to the same standards as stated in Chapter 9 and as depicted in the following illustrations.

1. **Alley:** Alleys are low speed (10-mph) service easements running behind and sometimes between rows of houses. Alleys provide public service workers easy access to utilities and sanitation, and resident's easy access to garages, backyards, and accessory units. Alleys also offer second or third approaches for fire response.



2. **Local Street:** Local streets are the most common type of access road in healthy neighborhoods. Streets provide access to single- or multi-family housing and should be low speeds (20-25 mph). Parking is allowed on both sides of the street. Streets are short, terminating in two to six blocks. They can also encircle a square or other public space. On-street parking should be encouraged. If on-street parking is light or non-existent, or limited to one side, streets fail to properly slow traffic. Landscaping and sidewalks should fill the remainder of the public right-of-way. In some special circumstances, streets may be narrowed (typically 20 feet wide) if parking is allowed on one side only, and the street can operate one-way around parks or nature preserves.



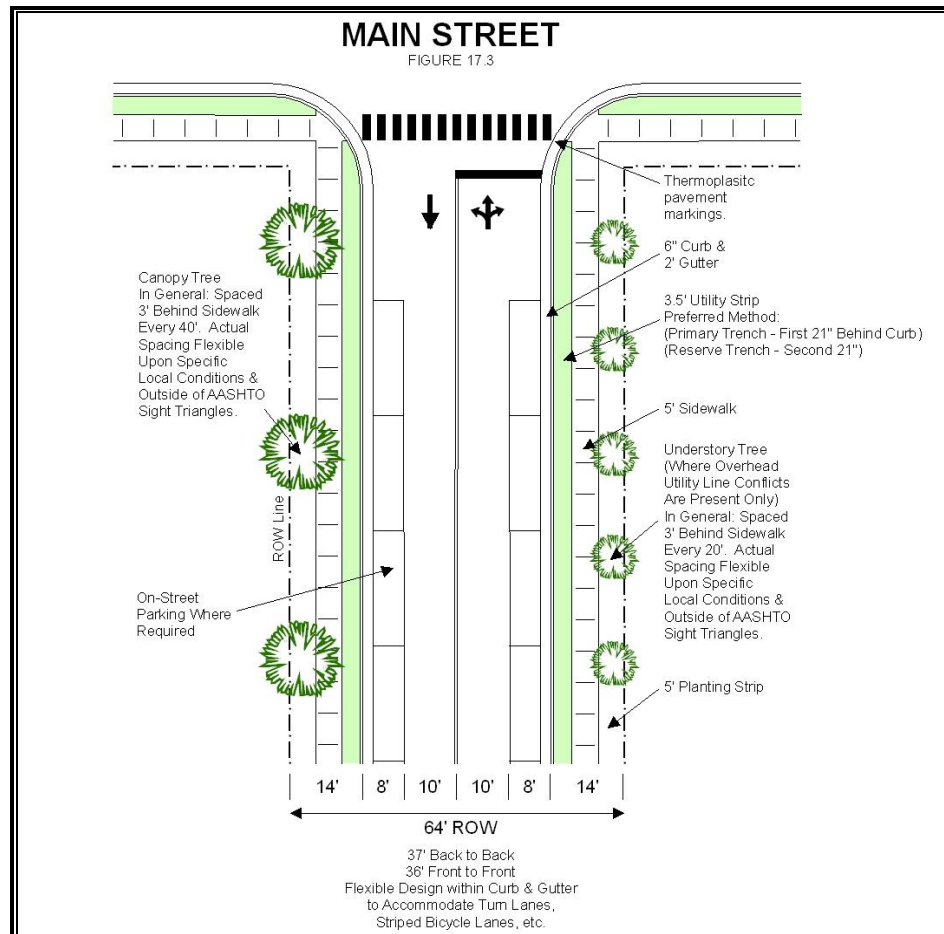
Common Street Features (Section 2.2):

- Curb & Gutter and Informal Parking
- Street Tree Planting strips – 5 ft. (see introduction of Section 17.3.A for further notes about NCDOT maintained streets)
- Sidewalks – 5 ft. on each side

Buildings & Land Use:

- Residential Land Use
- Many residential types brought close to sidewalk with a consistent building line recommended and front porches encouraged.

3. **Main Street:** Main streets are “transitional” roadways that provide access to neighborhoods, as well as, places for neighborhood commercial and mixed-use buildings. On street parking is very desirable, so a low speed environment is preferred (20-25 mph). Main streets usually do not have medians, but medians with low shrubs are acceptable if they do not detract from terminating vista and attractive storefronts. To help pedestrians across the street and calm traffic, “bulbouts” – wider sidewalks that extend into the roadway – should be provided at intersections and, if blocks are long, at mid-block crossings.



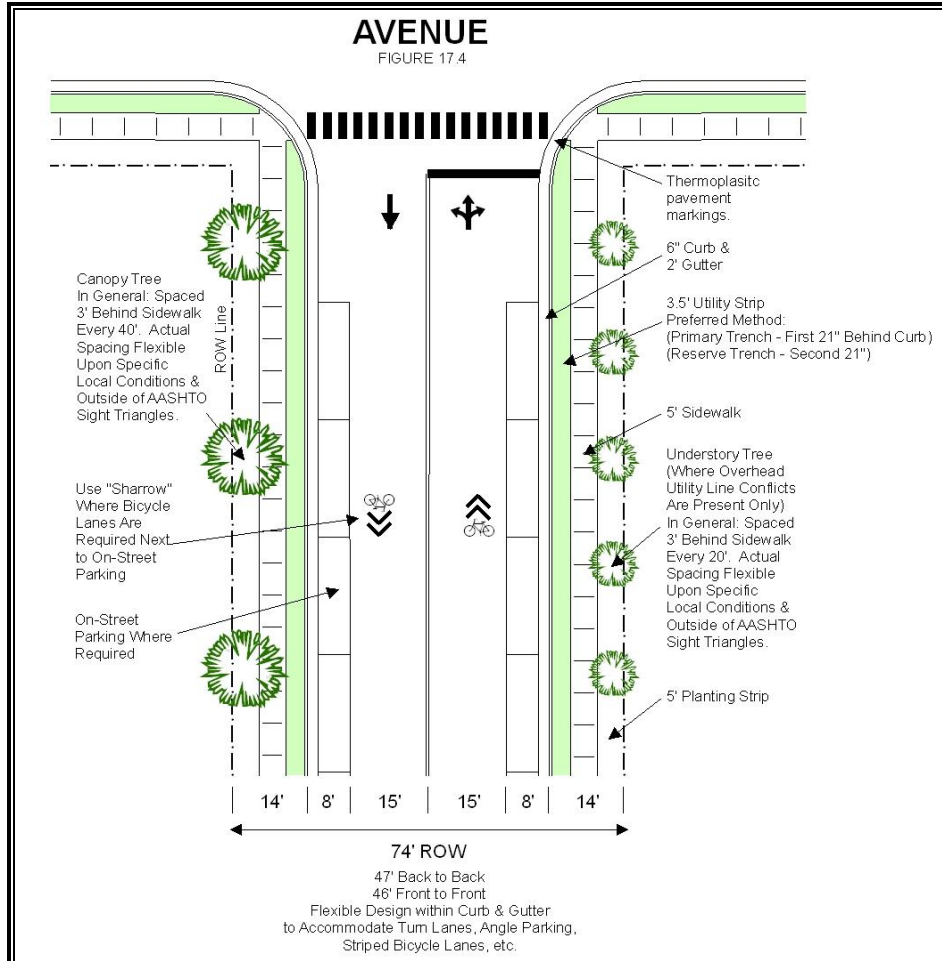
Common Street Features (Section 2.2):

- Curb & gutter with striped parking in mixed use and commercial areas
- Street Tree Planting strips – 5 ft. minimum on each side (see introduction of Section 17.3.A for further notes about NCDOT maintained streets)
- Sidewalks – 5 to 13.5 ft. on each side (Where sidewalk, utility and planting strips combined in commercial use areas, approved tree grates must be used and trees planted according to standard specification location.)
- Bicycle Markings: (If no on-street parking is required and this section is identified for use with a designated bikeway, a minimum 4-foot striped outside bicycle lane excluding gutter shall be provided – see Appendix C)

Buildings & Land Use:

- Commercial and mixed use street or a major roadway in neighborhoods
- Consistent building line recommended with buildings next to sidewalk
- Pedestrian awnings and arcades recommended except in MI District

4. **Avenue:** Avenues connect neighborhoods to town centers, and as such can extend up to one mile. Two-lane roadways contain sufficient pavement for bicyclists and motorists. On-street parking is available. Avenues are richly landscaped, since they are civic spaces that serve as gateways to the town center. Avenues should have the tallest tree canopies. Since avenues serve as the transition between the town and the neighborhoods, speeds should be kept low, typically 30-35 mph. Avenues may also serve as major transit routes.



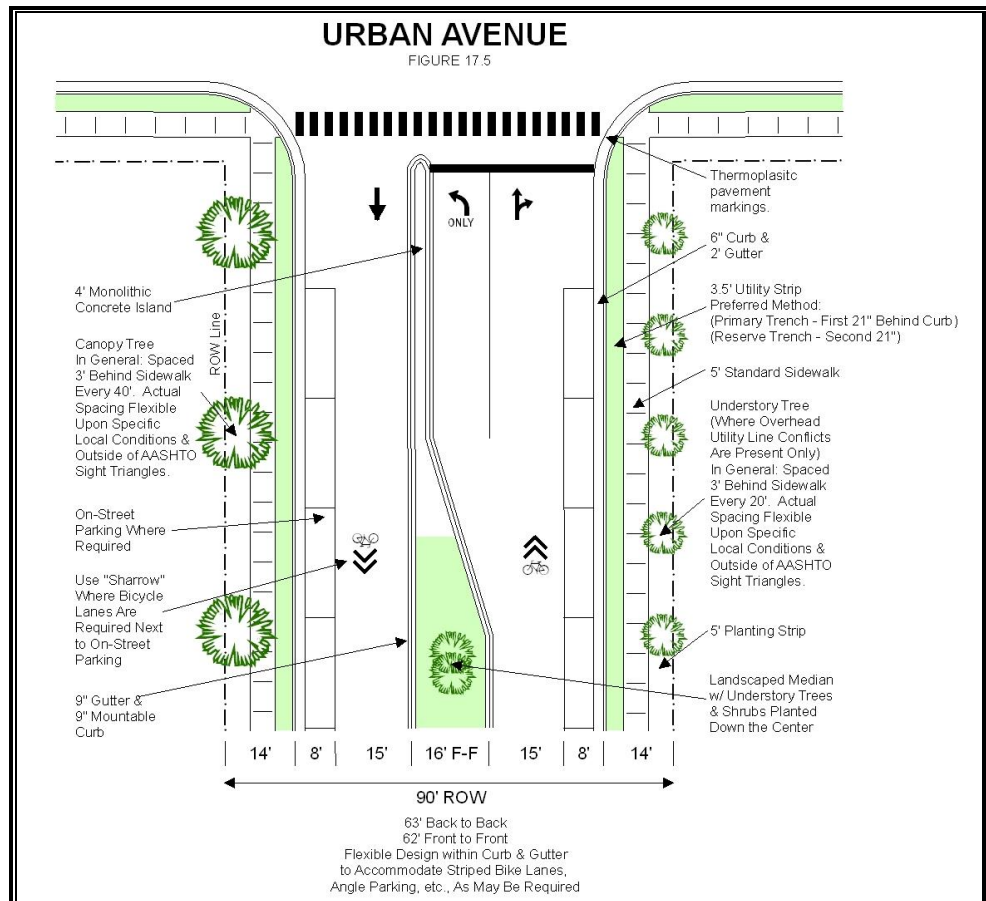
Common Street Features (Section 2.2):

- Bicycle Markings – (*Sharrow pavement markings to be included on designated bikeways where on-street parking is provided – see Appendix C; otherwise if on-street parking is not required, a minimum 4-foot striped outside bike lane on designated bikeways excluding gutter shall be provided*)
- Curb & gutter with striped parking in commercial and mixed use areas
- Street Tree Planting strips – 5 ft. minimum on each side (*see introduction of Section 17.3.A for further notes about NCDOT maintained streets*)
- Sidewalks – 5 to 13.5 ft. on each side (*Where sidewalk, utility and planting strips combined in commercial use areas, approved tree grates must be used and trees planted according to standard specification location.*)

Buildings & Land Use:

- Residential, Industrial, and Commercial areas
- Consistent building line recommended with buildings next to sidewalk
- Place prominent public buildings and plazas at end of vista

5. **Urban Avenue:** Avenues connect neighborhoods to town centers, and as such can extend up to one (1) mile. Two-lane roadways contain sufficient pavement for bicyclists and motorists – with raised medians in the center. On-street parking is available. Canopy landscaping, bike lanes and sidewalks are provided. Avenues are richly landscaped, since they serve as civic spaces and gateways to the town center, and they should have the tallest tree canopies. Since avenues serve as the transition between the town and the neighborhoods, speeds should be kept low, typically 30-35 mph. Avenues may also serve as major transit routes.



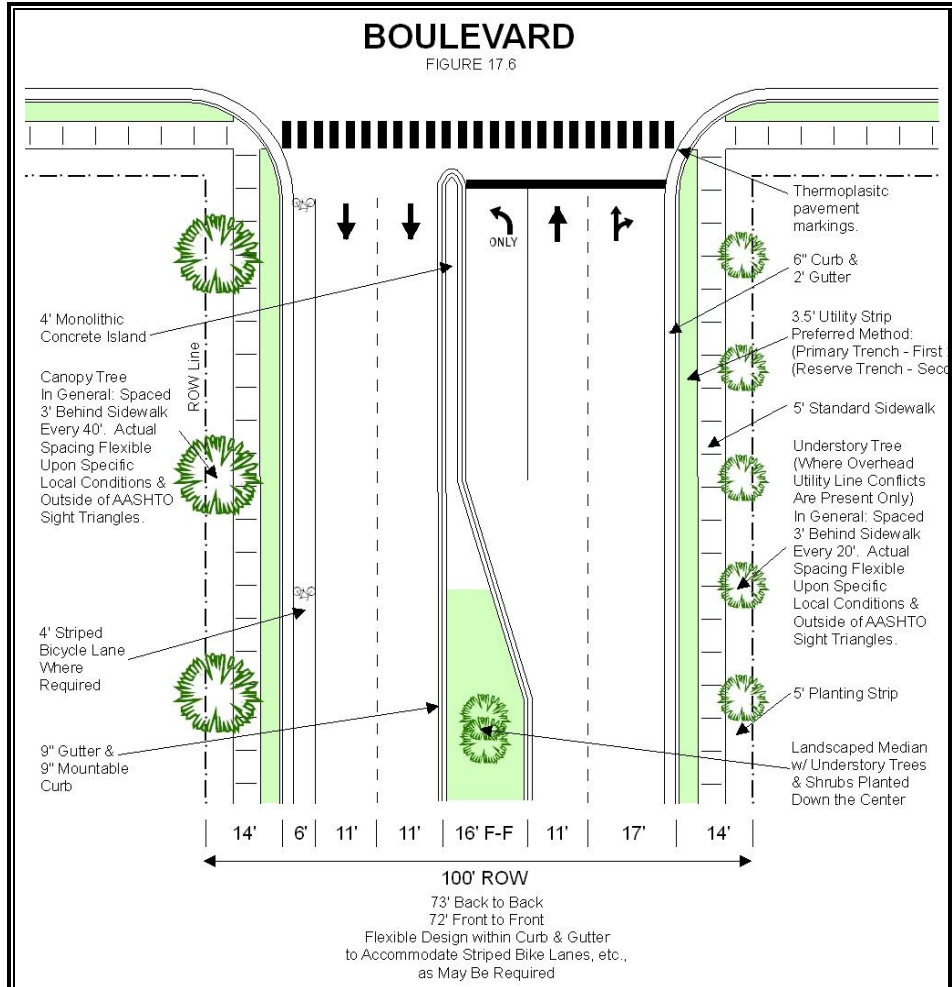
Common Street Features (Section 2.2):

- Travel lanes of 15 ft. to accommodate bicyclists (*Sharrow pavement markings to be included on designated bikeways where on-street parking is provided – see Appendix C; otherwise if on-street parking is not required, a minimum 4-foot striped outside bike lane on designated bikeways excluding gutter shall be provided*)
- Curb & gutter with on-street parking in commercial use areas
- Landscaped Medians– 16 ft. minimum in width
- Street Tree Planting strips – 5 ft. minimum on each side (*see introduction of Section 17.3.A for further notes about NCDOT maintained streets*)
- Sidewalks – 5 to 13.5 ft. on each side (*Where sidewalk, utility and planting strips combined in commercial use areas, approved tree grates must be used and trees planted according to standard specification location.*)

Buildings & Land Use:

- Residential and commercial use areas
- Consistent building line recommended with commercial buildings close to the sidewalk
- Place prominent public buildings and plazas at the end of vistas

6. **Boulevard:** Boulevards also bring people into Town, or they carry traffic through natural areas. They are not designed to accommodate adjoining development. Roadway speeds are usually 45 mph. When boulevards enter the town, they become urban boulevards, and speeds are reduced to 30-35 mph. Bike facilities are found on the edge of boulevards.



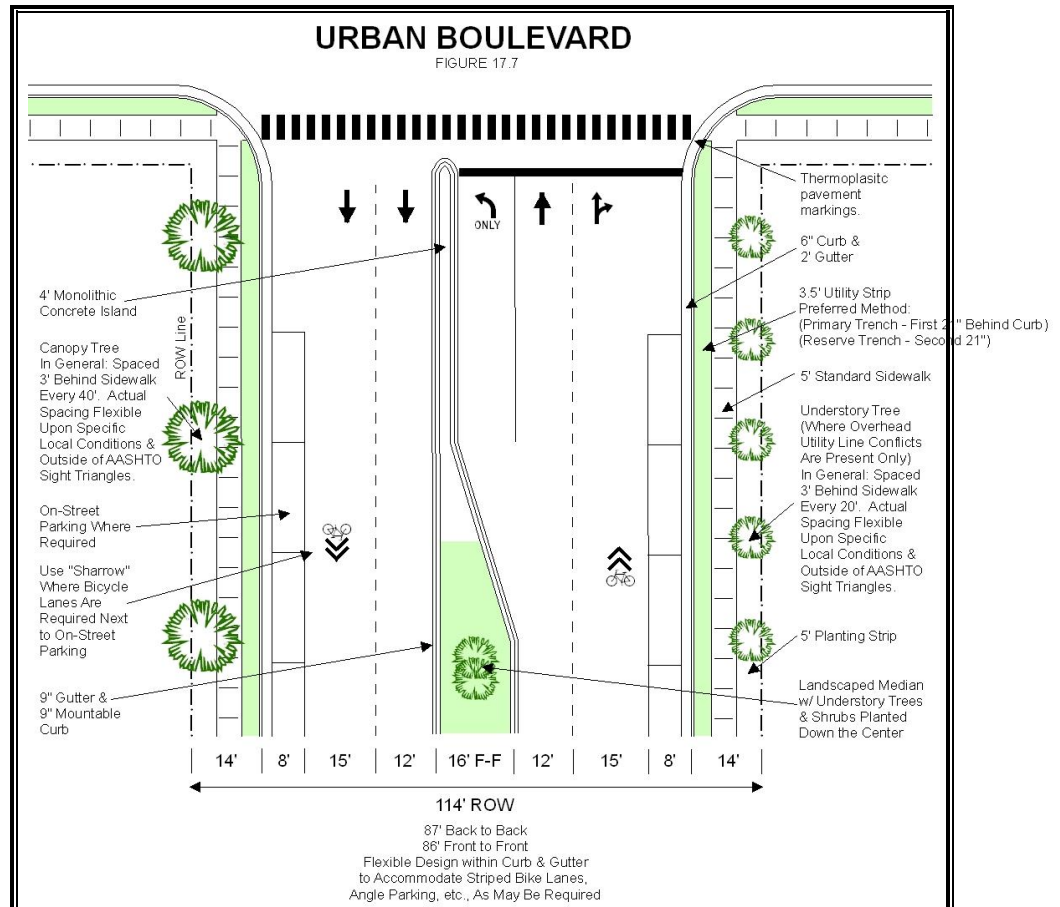
Common Street Features (Section 2.2):

- Wide outside travel lanes of 15 ft. to accommodate bicyclists (*otherwise, on designated bikeways, a minimum 4-foot striped outside bicycle lane excluding gutter shall be provided – see Appendix C*)
- Curb & gutter
- Landscaped Medians– 16 ft. minimum in width
- Street Tree Planting strips – 5 ft. minimum on each side (see introduction of Section 17.4A for further notes about NCDOT maintained streets)
- Sidewalks – 5 ft. on each side

Buildings and Land Use:

- Mixed residential and commercial use areas

7. **Urban Boulevard:** Urban Boulevards can provide multi-lane access to commercial and mixed-use buildings, and they carry regional traffic. For these reasons, speeds on these streets are generally 30-35 mph. In these commercial or mixed-use areas, boulevards have bike lanes, sidewalk, and provide sections of parking to support commerce, parks, schools, and other attractors along their routes.



Common Street Features (Section 2.2):

- Wide outside travel lanes of 15 ft. to accommodate bicyclists (*Sharrow pavement markings to be included on designated bikeways where on-street parking is provided – see Appendix C; otherwise, a minimum 4-foot striped outside bike lane on designated bikeways excluding gutter shall be provided*)
- Curb & gutter with striped parking in mixed use and commercial areas
- Landscaped Medians– 16 ft. minimum in width
- Street Tree Planting strips – 5 ft. minimum on each side (*see introduction of Section 17.3A for further notes about NCDOT maintained streets*)
- Sidewalks – 5 to 13.5 ft. on each side (*Where sidewalk, utility and planting strips combined in commercial use areas, approved tree grates must be used and trees planted according to standard specification location.*)

Buildings & Land Use:

- Mixed residential and commercial uses
- Consistent building line recommended with buildings next to sidewalk
- Place prominent public buildings and plazas at end of vista

B. General Roadway Design Criteria

1. Horizontal Curve Street Design Criteria

Design Criteria for design speed centerline radius, reverse curve tangent distance and maximum rate of superelevation rates for streets are summarized in Table 17.1. Superelevation rates, minimum runoff lengths and methods of distribution should be in accordance with AASHTO guidelines.

The minimum tangent length approach an intersection should be at least 50 feet for alleys and streets. All other streets shall have a tangent section no less than 100 feet approaching an intersection.

Table 17.1

Street Type	Design Speed (mph)	Minimum Centerline Radius (feet)	Maximum Rate of Superelevation for Minimum Centerline Radius (foot per foot)	Minimum Tangent Distance Between Reverse Curves (feet)
Alley	10	50	N/A	0
Street	25	150	N/A	0
Main Street	30	300	N/A	0
Avenue	40	533	0.04	250
Boulevard	50	833	0.06	350
Freeway	Shall Meet NCDOT Roadway Standards & Specifications			

2. Vertical Curve Street Design Criteria

Whenever practical, streets should follow the existing contours of a site so as to avoid excessive grading and removal of vegetation. Street grades shall not be less than 0.75%. Standards for vertical street design are listed in Table 17.2.

At signalized intersections, the maximum grade approaching the intersection should not exceed two percent (2%) and extend a minimum distance of 100 feet in each direction. For intersections not controlled by a traffic signal, the maximum grade approaching the intersection should not exceed five percent (5%) and extend a minimum distance of 50 feet in each direction.

Table 17.2

Street Type	Design Speed (mph)	Maximum Gradient (%)	Minimum Vertical Curve Length, L (feet)	Minimum Rate of Vertical Curvature, K	
				Crest	Sag
Alley	10	12	25	10	10
Street	25	12	50	12	26
Main Street	30	9	50	19	37
Avenue	40	8	125	44	64
Boulevard	50	7	150	84	96
Freeway	Shall Meet NCDOT Roadway Standards & Specifications				

Note: The rate of vertical curvature, K, is the length of curve (feet) per percent algebraic difference in intersecting grades (A). $K = L/A$

3. **Roadway Sight Distance**

All sight distance lengths and methods of measuring sight distance along a roadway shall be in accordance with AASHTO guidelines. Sight distance is the length of roadway visible to the driver. The minimum sight distance available on the roadway shall be sufficiently long to enable a vehicle traveling at or near the design speed to stop before reaching a stationary object in its path.

Minimum stopping sight distances shall be provided in both the horizontal and vertical planes for planned roadways as related to assumed driver's eye height and position. Where there are sight obstructions (*such as walls, cut slopes, buildings, and other hazards*) on the inside of curves, changes in roadway alignment may be required to obtain adequate stopping sight distance if the sight obstruction cannot be removed.

C. **Intersection Design Criteria**

1. **Corner Radii**

- a. **Curbs:** Curb radii shall be designed to reduce pedestrian crossing times along all streets requiring sidewalks. In general, curb radii should be approximately 20 feet except along NCDOT-maintained roads, where larger radii may be required. In all cases, curb radii shall be sufficiently large to accommodate large commercial or fire trucks.
- b. **Property Lines:** Property lines at street intersections shall be rounded with a minimum radius of 20 feet. At an angle of intersection of less than 90 degrees, a greater radius may be necessary.

2. **Angles and Offsets**

- a. All streets shall intersect at right angles as nearly as possible and no street shall intersect at less than 75 degrees.
- b. Offset intersections for Category 1 streets (*Alleys and Local Streets*) should be at least 125 feet apart measured from centerline to centerline. A larger spacing in accordance with AASHTO standards may be required for other street categories.

3. **Intersection Sight Distance**

- a. **Measurements:** Sight distance lengths and methods of measuring intersection sight distance along a roadway shall be in accordance with AASHTO guidelines. Intersections should be planned and located to provide as much sight distance as possible. A basic requirement for all controlled intersections is that drivers must be able to see the control device well in advance of performing the required action. Stopping sight distance on all approaches is needed as a minimum.
- b. **Sight Triangles:** Obstruction-free sight triangles shall be provided in both the horizontal and vertical planes, as related to assumed driver's eye height and position. Within the area of a defined sight triangle, there shall be no sight obstructing or partly obstructing wall, fence, sign, foliage, berming, or parked vehicles between the heights of twenty-four (24) inches and eight (8) feet above the curb line elevation or the nearest traveled way if no curbing exists. Objects, which may be located in the sight distance triangle,

are items such as: hydrants, utility poles, utility junction boxes, and traffic control devices provided these objects are located to minimize visual obstruction.

- D. Other Design Criteria:** Design standards not specifically addressed in this ordinance must comply with the minimum design and construction criteria of the NCDOT.
1. **Turning Lanes:** Lanes for right and left turning movements into a driveway or cross-street shall be constructed by the developer as required by the Town of Knightdale, North Carolina Department of Transportation and/or a TIA. Such requirements may be necessary for safety and capacity reasons, where roadway speeds and traffic volumes are high, or where there are any substantial turning volumes.
 2. **Traffic Calming Devices:** The use of traffic calming devices such as raised intersections, landscaping bulb-outs, and traffic circles are encouraged as alternatives to conventional traffic control measures.
 3. **Street Markers and Traffic Control Signs:** All street markers and traffic control signs posted in accordance with the *Manual of Uniform Traffic Control Devices* shall be installed by the developer prior to the issuance of any certificates of occupancy for any building on that street.
- E. Posted Speeds:** Unless otherwise established by the Town Council, the posted speeds for Town-maintained streets within the Town of Knightdale shall be as follows:
1. **Alleys:** 10 miles per hour
 2. **Local Streets:** 25 miles per hour
 3. **Main Streets:** 25 miles per hour
 4. **Avenues:** 35 miles per hour
 5. **Urban Avenues:** 25 miles per hour
 6. **Boulevards:** 45 miles per hour
 7. **Urban Boulevards:** 35 miles per hour
- F. Street Names:** Street names shall be assigned by the developer subject to the approval of the Town of Knightdale and Wake County. Proposed streets which are continuations of existing streets shall be given the same name. In assigning new street names, names shall not duplicate or be phonetically similar to existing street names in Wake County. Upon Final Plat approval, the Town shall cause the developer to erect the street name signs.
- G. Lights & Utilities**
1. **Street Lights:** The developer shall install street lights on all streets, local and NCDOT, in accordance with the requirements of Chapter 11.
 2. **Underground Location:** All utilities, other than lines used only to transmit electricity between generating stations or substations and three-phase electric power distribution lines shall be placed underground, and all ground or surface disruptions required for installation shall be rehabilitated to the original or an improved condition. Underground utilities except water and sewer should be located in alleys preferably. If no alley is provided, then those utilities shall be

located along the roadway in accordance with the street classification drawings in Section 17.3A.

3. Public Water and Sewer

- a. **Water Allocation:** In order to preserve and enhance property values, manage its limited water supply as a vital natural resource, promote economic development and incentivize smart growth practices, the allocation of Knightdale’s potable water capacity shall be granted in accordance with the *Town of Knightdale Municipal Water Allocation Policy* (the “Policy”) as amended from time to time. The goals and procedures contained in the policy are reviewed in May of each year and when appropriate readjusted by the Town Council. The Town’s overall progress on policy goals are considered and the multipliers and/or point thresholds readjusted accordingly.
- b. **Connection to Public System:** Every lot proposed for subdivision within the Knightdale corporate limits or ETJ shall have connection to the public water and sewer systems if the subdivision of which it is a part, or any part thereof, is (*without resorting to crossing a ridge line such that the pumping of wastes would be necessary*) within the distances set out for the size of the entire subdivision as provided below:

Max. # of Dwellings	Distance from System
Up to 5 units	300 feet
6 to 14 units	450 feet
15 to 24 units	600 feet
25 or more units	1000 feet

All non-residential development within the Town’s Urban Service Area, as designated by Wake County, shall connect to the public water system whenever it is practicable in terms of distance and in accordance with Town Council policy on water and sewer extensions. In the case of family subdivisions, extensions of water shall be in accordance with the standards in Section 15.4F(4).

- c. **Water and Sewer Mains:** All water and sewer main extensions and distribution/collection facilities which connect to the water distribution/sewerage collection systems of the Town shall be designed, constructed and installed in accordance with the *City of Raleigh Public Utilities Handbook*.
 - i. **Distribution and Collection Plans:** A water distribution plan shall be designed to create a complete circuit without dead-ends. Water mains shall be extended to the termination of the street right-of-way or where the street right-of-way intersects the boundaries of another phase of the same subdivision or another tract for subdivision. A sewerage collection plan shall be designed to extend sewer mains to the termination of the street right-of-way or natural drainage way where the street right-of-way intersects the boundaries of another phase of the same subdivision or another tract for subdivision.
 - ii. **Sizing:** In determining line sizes, the engineer for the public system and the Project Engineer shall consider the zoning classification of adjacent tracts which could also be served by the mains if extended,

the potential type and density of development which might be served, and the Town's water distribution/sewer collection network plans.

iii. **Avoiding Street Tree Conflicts:** Water and sewer utilities should not be located near required street tree planting areas, and service lines must be laid perpendicular to those planting areas.

d. **Fire Hydrants:** Fire hydrants shall deliver sufficient water to provide adequate fire protection. Hydrants shall be located in accordance with the Town of Knightdale Standard Specifications and Construction Details.

17.4 Acceptance of Public Infrastructure

If the developer submits an application to the Town for Final Plat approval prior to the completion of the required improvements, the developer shall provide security for said improvements in the amount of 125% of the cost of construction, engineering, and installation for the improvements of the approved Construction Drawings which have not been completed by the developer nor approved by the Town at the time of Final Plat submission.

A. **Surety Performance Bond(s):** The Administrator shall determine which improvements shall be covered by the security. The developer shall provide the Town Engineer with a list and description including unit cost and total cost for improvements to be covered, and engineering services. The amount of security shall be approved by the Town Engineer.

1. **Cash or Equivalent Security:** The security shall be in a form acceptable to the Town and may include, (a) Surety bond issued by any company authorized to do business in this State, (b) letter of credit issued by any financial institution licensed to do business in this State, (c) other form of guarantee that provides equivalent security to a surety bond or letter of credit.
2. **Guarantee Period:** The performance security guarantee shall remain in effect for a period of one (1) year, and may be renewed only one time for a period up to, but no more than, one (1) year.
3. **Release of Security:** Upon completion of the improvements and other actions guaranteed by the security arrangement, and the acceptance and approval of the same, the Town shall release the security to the developer with written confirmation from the Administrator.

B. Warranty Period

1. **Security for Completed Improvements:** Whenever all improvements intended for dedication are completely installed, the developer shall provide security in one of the forms set out in Section 17.4A(1), guaranteeing to the Town, against defects for one (1) year, all utility taps, curbs, gutters, street pavement, sidewalks, drainage facilities, water and sewer lines and other improvements. The amount of security shall be approved by the Town Engineer and shall be not less than 25% of the cost for construction or installation of the improvements based upon unit costs and total costs provided by the Project Engineer. If the developer shall correct and rectify all defects arising within one (1) year, then the security shall be released; otherwise the Administrator shall notify the Town Council, the developer and surety that a default has occurred, and the Administrator shall proceed in accordance with defaults in security arrangements as set forth in subsection 2 below.

2. **Defaults for Incomplete Improvements and Warranty Period:** If any portion of the required improvements for which security was given as set out in the above section shall fail to be completed, repaired, accepted or dedicated in accordance with the Preliminary and Final Plat and the terms and conditions for allowing the improvements to be completed subsequent to Final Plat approval and pursuant to a surety arrangement, then the Town shall notify the developer and the surety of the default and seek a formal explanation of the reason for the default. Except as noted in subsection 3 below, the Administrator shall report to the Town Council that the security is in default, and the Administrator may take such actions as it deems necessary to enforce and collect the security, and shall use the proceeds to finance the completion of the improvements or the rebuilding and repairing of such improvements to proper specifications, and the completion of such other actions as may have been contemplated under said surety arrangements. Unused portions of the proceeds, if any, shall be returned to the surety.
3. **Modification of Terms for Good Cause:** If the Administrator finds that there is good cause for the improvements not being made on time, or that only a small delay in completing the improvements appears likely, then, upon a showing that the existing surety arrangement is still in effect or has been extended, the terms for the completion of the improvements may be modified.

C. Final Acceptance of Improvements

1. **Developer Responsibilities:** The developer shall be responsible for:
 - a. Providing all engineering services (including the cost of testing materials and performance of soil compaction tests) and furnishing plans and specifications consistent with those in this chapter and the *Standard Specifications and Construction Details Manual*;
 - b. Paying the entire initial cost of all improvements required under this chapter; and
 - c. Payment to the Town of all fees and charges required by the Town including, but not limited to, the costs of permits, inspections, utility taps and acreage fees, at such times as payments are specified under the various codes, fee schedules or resolutions of the Town.
2. **Town Responsibilities:** The Town or its designee shall be responsible for the inspection and approval of all construction work.

D. Maintenance of Dedicated Areas until Acceptance

All facilities and improvements with respect to which the developer makes an offer of dedication to public use, shall be maintained by the developer, his successors and assigns, until such offer of dedication is accepted by the Town Council or other appropriate authority.

No street shall be maintained by the Town, no street dedication shall be accepted for ownership and maintenance, no CIP shall be issued, nor shall water, sewer or other Town facilities or services be extended to or connected with any development for which a Final Plat is required to be approved unless and until such Final Plat has been approved by the Town of Knightdale.

17.5 Incomplete Improvements Guarantee

In cases when weather conditions would make it unreasonable for the developer to comply with all of the non-life/safety requirements of the UDO prior to commencing the intended use(s) or occupying any buildings, the developer shall provide security for such improvements in an amount not less than 125% of the cost to construct or install the improvements.

- A. Surety Performance Bond(s):** The specific improvements requested to be covered and the amount of security shall be approved by the Administrator. The developer shall provide the Administrator with a list and description including unit cost and total cost for improvements to be covered.
- B. Cash or Equivalent Security:** The security shall be in a form acceptable to the Town and may include:
 - a deposit of U.S. currency with the Town; or
 - a deposit of a certified check with the Town; or
 - a deposit of a money order with the Town.
- C. Guarantee Period:** The performance security guarantee shall remain in effect for a period determined by the Administrator. The time period may range from a few days up to, but no more than, one (1) year. Such performance security guarantees shall not be renewable under any circumstance.

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Chapter 18. VIOLATIONS AND PENALTIES

18.1 Purpose and Intent

This Chapter outlines the typical procedure for the most common violations of this Ordinance. Any or all of the remedies and powers available to the Administrator in Section 18.4 may be utilized if a violation of the Knightdale UDO is identified.

18.2 Responsible Persons/Entities

Any person who erects, constructs, reconstructs, alters (whether actively or passively); or fails to erect, construct, reconstruct, alter, repair or maintain any building, structure, BMP, practice or condition in violation of this Ordinance shall be subject to the remedies, penalties and/or enforcement actions in accordance with this Chapter. For the purposes of this Chapter, responsible persons(s) shall include but not be limited to:

A. Person(s) Maintaining Condition Resulting In or Constituting Violation

An architect, engineer, builder, contractor, developer, agency or any other person who participates in, assists, directs, creates, causes or maintains a condition that constitutes a violation of this Ordinance, or fails to take appropriate action, so that a violation of this ordinance results or persists.

B. Person(s) Responsible for Land or Use of Land

The owner of the land on which the violation occurs, any tenant or occupant of the property, any person who is responsible for stormwater controls or practices pursuant to a private agreement or public document, or any person who has control over, or responsibility for, the use, development or redevelopment of the property.

18.3 General Procedure

A. Initiation/Complaint/Investigation

Whenever a violation of this Ordinance occurs, or is alleged to have occurred, any person may file a written or verbal complaint. Any written or verbal complaint made to the Administrator stating fully the cause and basis of the complaint shall be documented by the Administrator, investigated in a timely manner with appropriate actions taken as provided herein.

B. Notice of Violation and Order to Correct (NOV)

- 1. Issuance:** Whenever the Administrator finds that a person has violated a provision or failed to meet a requirement of this Ordinance, the Administrator may order compliance by written notice of violation to the responsible person. If abatement or correction of a violation is required, the NOV shall set forth a 15-day compliance period during which such abatement or correction must be completed. Said notice shall further advise that, should the violator fail to abate or correct the violation within the established compliance period or any extension of time that may be granted (*Section 18.3D*), the Administrator may take appropriate actions, as provided in Section 18.4, to correct and abate the violation and ensure UDO compliance, with any expenses thereof charged to the violator.

2. **Service:** The Administrator may serve the NOV by any one of the following methods:
 - a. By delivery in person or by leaving the notice at the usual place of abode of the owner or responsible party with a person who is over the age of 16 years of age and a member of the family of the owner or responsible party;
 - b. By the deposit of first class mail, postage prepaid, to the owner or responsible party at his or her last known mailing address, as listed by the Wake County Revenue Department; or
 - c. By the posting of a placard in a conspicuous place on the premises on which the violation exists in conjunction with first class mail notice to the owner or responsible party.

Service shall be deemed sufficient if the first class mail is not returned by the post office within 10 days of deposit. Service by posting shall be deemed sufficient if the first class mail is returned and notice of the pending proceedings was posted in a conspicuous place on the property affected on the day the first class mail notice was deposited.

3. **Extension of Time**
 - a. **Written Request Required:** A person who receives a NOV, or the owner of the land on which the violation occurs, may submit to the Administrator a written request for an extension of time for correction of the violation.
 - b. **Initial Extension:** On determining that the request includes enough information to show that the violation cannot be corrected within the original 15-day compliance period for reasons beyond the control of the person requesting the extension, the Administrator may extend the time limit as is reasonably necessary to allow timely correction of the violation, up to, but not exceeding 60 days.
 - c. **Subsequent Extensions:** The Administrator may grant 30-day extensions in addition to the foregoing extension if the violation cannot be corrected within the permitted time due to circumstances beyond the control of the person violating this ordinance.
 - d. **Administrator Responsibilities:** The Administrator may grant an extension as provided in subsections (2) and (3) above only by written notice of extension. The notice of extension shall state the date prior to which correction must be made, after which the violator will be subject to the penalties described in the original notice of violation and correction order (*Section 18.3C*).
4. **Specific Corrective Measures for Landscaping Violations:** Corrective orders issued as part of any landscaping NOV shall state that any disturbed landscaped areas and vegetation shall be replanted to meet the standards of Section 8.12 as well as the specifications of the approved site or master plan.

C. Emergency Enforcement

If a violation or the delay in correcting or abating said violation poses an immediate danger to the public health, safety or welfare, the Administrator may seek immediate enforcement, without prior written notice, through any remedy or penalty authorized by this Ordinance. Any person so ordered shall cause the violation to cease immediately.

D. Appeals

Any appeal of the Administrator’s actions to the LURB in its capacity as the Board of Adjustment shall be filed within 10 days of the NOV being served upon the violator in accordance with Section 15.5C.

E. Enforcement Measures After Appeal

If the violation has not been corrected pursuant to the requirements set forth in the NOV, or in the event of an appeal, within 30 days of the appellate decision, then the Administrator may take any and all measures necessary as provided by law to abate the violation and/or restore the property.

F. Specific Procedural Modifications

- **Lighting Violations:** Property owners that install lighting fixtures after the effective date of this ordinance and are found to be in non-compliance shall receive a NOV providing them with 90-day initial compliance period for bringing the lighting system into compliance.

18.4 Penalties for Violation

Failure to comply with any provision of this Ordinance is hereby declared unlawful. The following remedies and enforcement powers may be used to administer and enforce this Ordinance immediately upon the expiration of the compliance period identified in the NOV and as may be extended by the Administrator (*Section 18.3C*):

A. Judicial Penalties

1. **Criminal:** Pursuant to N.C.G.S. §14-4, any person, firm, or corporation convicted of violating the provisions of this Ordinance shall, upon conviction, be guilty of a misdemeanor and shall be fined in accordance with the general statute.
2. **Equitable Remedy:** The Administrator may apply to a judicial court of law for any appropriate equitable remedy to enforce the provisions of this Ordinance. It is not a defense to the Administrator’s application for equitable relief that there are other remedies provided under general law or this Ordinance.
3. **Injunction:** When a violation occurs, the Administrator may, either before or after the initiation of other authorized action, apply to the appropriate division of the court for a mandatory or prohibitory injunction commanding the defendant to correct the unlawful condition or cease the unlawful use of the property. If the defendant fails or refuses to comply with an injunction within the time allowed by the court, the defendant may be cited for contempt.
4. **Order of Abatement:** In addition to an injunction, the Administrator may apply for and the court may enter into an order of abatement as part of the judgment in the case. An order of abatement may direct any of the following actions:
 - Buildings or other structures on the property be closed, demolished, or removed;

- Fixtures, furniture or other moveable property be moved or removed entirely; or
- Improvements alterations, modifications or repairs be made; or
- The elimination of illicit connections, discharges, practices or operations; or
- The abatement or remediation of storm water pollution or contamination hazards and the restoration of any affected property; or
- Any other action be taken that is necessary to bring the property into compliance with this Ordinance.

If the defendant fails or refuses to comply with an order of abatement within the time allowed by the court, the defendant may be cited for contempt. The Administrator may execute the order of abatement and will have a lien on the property in the nature of a mechanic's and materialman's lien for the cost of executing the order. The defendant may secure cancellation of an order of abatement by paying all costs of the proceedings and by posting a bond for compliance with the order. The bond must be given with sureties approved by the Clerk of Superior Court in an amount approved by the judge before whom the matter was heard and shall be conditioned for the defendant's full compliance with the terms of the order of abatement within the time fixed by the judge. Cancellation of an order of abatement does not suspend or cancel an injunction (*Section 18.4A(3)*) issued in conjunction with the order.

B. Administrative Penalties

1. **Stop Work Order Issuance:** Whenever a building, structure or part thereof is being constructed, demolished, renovated, altered, or repaired in material violation of any applicable provision of this Ordinance, the Administrator may order the specific part of the work that is in violation, or would be when the work is completed, to be immediately stopped. The stop work order shall be in writing, directed to the person doing the work, and shall state the specific work to be stopped, the specific reasons for cessation and the action(s) necessary to lawfully resume work.
2. **Revocation of Permits:** The Administrator may withhold or revoke any permit (*e.g. Building Certificate of Occupancy*) by written notification to the permit holder when violations of this Ordinance have occurred. Permits may be revoked when false statements or misrepresentations were made in securing the permit, work is being or has been done in substantial departure from the approved application or plan, there has been a failure to comply with the requirements of this Ordinance, or a permit has been mistakenly issued in violation of this Ordinance.
 - a. **Use Discontinued:** No person may continue to make use of land or buildings in the manner authorized by any zoning compliance, sign, special use or conditional use permit after such permit has been revoked in accordance with this section.
 - b. **Permits Revoked Until Violation Cured:** Certificates of Occupancy or other permits may continue to be withheld until the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise cured the violations described therein.

- c. **Special Use Permits:** Before a SUP may be revoked, all of the notice and public hearing requirements of Section 15.5E(6) of this Ordinance shall be complied with. The notice shall inform the permit recipient of the alleged grounds for the revocation. The burden of presenting evidence sufficient for the permit-issuing authority to conclude that a permit should be revoked for any of the reasons set forth in Section 18.4B(2) shall be upon the party advocating that position. The burden of persuasion shall also be upon that party. A motion to revoke a permit shall include, insofar as practicable, a statement of the specific reasons or findings of fact that support the motion.
 - d. **Zoning Compliance and Sign Permits:** Before a ZCP or Sign Permit may be revoked, the Administrator shall give the permit recipient 30 day notice of intent to revoke the permit and shall inform the recipient of the alleged reasons for the revocation and of his right to submit a written request for an administrative hearing on the allegations. If the permit is revoked, the Administrator shall provide to the permittee a written statement of the decision and the reasons therefore. Any appeal of the Administrator's decision to the LURB in its capacity as the Board of Adjustment shall be filed within 10 days of the date of the administrative hearing in accordance with Section 15.5C.
3. **New Permit Requests and Approvals Withheld:** As long as a violation of this ordinance continues and remains uncorrected, the Administrator may withhold, and the LURB or Town Council may disapprove any request for permit or development approval or authorization provided by this ordinance for the land on which the violation occurs.
4. **Civil Citations:** In addition to the other remedies cited in this Ordinance for the enforcement of its provisions, and pursuant to N.C.G.S. 160A-175, the regulations and standards in this Ordinance may be enforced through the issuance of civil penalties by the Administrator. If the offender fails to pay the civil penalties within 10 days after having been cited, the Town may recover the penalties in a civil action in the nature of debt.
- a. **Initial Citation:** The initial citation for civil penalties shall be issued upon the expiration of the compliance period identified in the Notice of Violation and Order to Correct. Fines for the specific citation are as follows:
 - i. **Signs:** \$100 per violation or per offense; \$250 if violation occurs within 6 months of a previous offense; and \$25 per violation per day thereafter.
 - ii. **Landscaping:** \$50 per violation or per offense (May be applied per tree or shrub for landscaping installation violations) and \$2 for every square foot area of vegetation damaged or destroyed; and \$50 per violation per day thereafter.
 - iii. **Lighting:** \$50 per violation or offense; and \$50 per violation per day thereafter.
 - iv. **Environmental Protection Violations:** \$250 per violation or offense; and \$250 per violation per day thereafter.

- v. **Occupancy of Building without CO or Expiration of Temporary CO:** \$500 per violation or offense; and \$100 per violation per day thereafter.
 - vi. **All Other UDO Violations:** \$250 per violation or offense; and \$50 per violation per day thereafter.
- b. **Subsequent Citations:** Each day that a violation continues shall constitute a separate and distinct violation or offense for which additional citations may be issued. Subsequent citations for the same violation may be issued by the Administrator if the offender does not pay the initial citation after it has been issued unless the offender has sought an appeal to the actions of the Administrator through the Board of Adjustment.

Note that willful violation of this ordinance in a manner similar to the original violation within a six (6) month period following the initial citation is regarded as a continuation of the original violation or offense regardless of whether the original violation or offense was abated or corrected. (*e.g., An illegal sign erected and properly cited as a violation and issued a citation can not be removed for a day and then re-erected simply to restart the enforcement and compliance actions of the Administrator.*)

18.5 Specific Penalties for Transferring Lots in Unapproved Subdivisions

A. Judicial

1. **Criminal:** Any property owner or owner's agent of any land located within the planning and zoning jurisdiction of the Town of Knightdale, subdivides land in violation of this Ordinance or transfers or sells land by reference to, exhibition of, or any other use of a plat showing a subdivision of the land before the plat has been properly approved under this Ordinance and recorded in the Wake County Register of Deeds, shall be guilty of a misdemeanor. The description by metes and bounds in the instrument of transfer or other document used in the process of selling or transferring land shall not exempt the transaction from this penalty.
2. **Injunction:** The Town of Knightdale may bring an action for injunction of any illegal subdivision, transfer, conveyance or sale of land, and the court shall, upon appropriate findings, issue an injunction and order requiring the offending party to comply with this Ordinance.

- B. **Administrative:** The Town may refuse to issue any permits.

Chapter 19. INTERPRETATION & DEFINITIONS

19.1 Intent

For the purpose of interpreting this Ordinance, certain words, concepts, and ideas are defined herein. Except as defined herein, all other words used in this Ordinance shall have their everyday meaning as determined by their dictionary definition.

19.2 Interpretation

- A. Words used in the present tense include the future tense.
- B. Words used in the singular number include the plural, and words used in the plural number include the singular.
- C. Any word denoting gender includes the female and the male.
- D. The word "person" includes a firm, association, organization, partnership, corporation, trust and company as well as an individual.
- E. The word "lot" includes the word "plot" or "parcel" or "tract".
- F. The word "shall" is always mandatory and not merely directory.
- G. The word "structure" shall include the word "building."
- H. The word "Zoning Map," "Knightdale Zoning Map," or "Official Zoning Map" shall mean the Official Zoning Map of Knightdale, North Carolina.
- I. The term "Planning Director" shall mean the "Planning Director of the Town of Knightdale, North Carolina" or "Designee."
- J. The term "Administrator" shall collectively mean "Planning Director of the Town of Knightdale, North Carolina and subordinate staff."
- K. The term "Town Council" shall mean the "Town Council of the Town of Knightdale, North Carolina."
- L. The term "Land Use Review Board" shall mean the "Land Use Review Board of the Town of Knightdale, North Carolina."
- M. The term "Planning Department" shall mean the "Planning Department of the Town of Knightdale, North Carolina."
- N. The terms "Ordinance", "UDO" and "Unified Development Ordinance" shall be synonymous and refer to the "Town of Knightdale Unified Development Ordinance."
- O. **Fractional Requirements:** Unless otherwise indicated, when calculations for any requirement of this Ordinance, including the determination of the number of dwelling units permitted on a lot, result in a fraction of a unit, a fraction of one-half or more shall be considered a whole unit and a fraction of less than one-half shall be disregarded.

19.3 Definitions of Terms

Access Easement: See “Easement, Access”.

Accessory Building: See “Building, Accessory”.

Accessory Structure: See “Structure, Accessory”.

Adult Establishment 2.3C(5)a: Any establishment having a substantial portion of materials or entertainment characterized by an emphasis on sexual activities, anatomical genital areas, or the female breast as defined in NCGS §14-202.10 (or any successor thereto).

Agribusiness 2.3C(6)a: These establishments grow crops, raise animals, harvest timber, and harvest fish and other animals from a farm, ranch, or their natural habitats. They may be described as farms, bona fide farms, ranches, dairies, greenhouses, nurseries, orchards; or hatcheries. A farm, as an establishment, may be one or more tracts of land, which may be owned, leased, or rented by the farm operator. Farms may hire employees for a variety of tasks in the production process. Subcategories in this dimension differentiate establishments involved in production versus those that support agricultural production. Therefore, agribusiness does not include agricultural research establishments administering programs for regulating and conserving land, mineral, wildlife, and forest use. Said establishments are classified under the relevant institutional or research and development categories. Agribusiness also does not include swine farms as defined in N.C.G.S. §106-802. See Section 1.5B and Section 8.2D for agribusiness related exemptions (LBCS F9000 and S8000).

Airport 2.3C(8)a: Establishments that provide air transportation for passengers or cargo using aircraft, such as airplanes and helicopters. This subcategory includes scenic and sightseeing air transportation establishments, which may involve local departure and same-day return. (LBCS F4110, S3920 and S5600)

Alley or Alleyway: A strip of land, owned publicly or privately, set aside primarily for vehicular service access to the back or side of properties otherwise abutting a street.

Amusements, Indoor 2.3C(5)b-d: Establishments that provide commercial recreation activities completely within an enclosed structure such as pool halls, arcades, movie theaters, skating rinks, roller rinks, and bowling alleys. May also include no more than three (3) non-server based, non-internet connected sweepstakes center games as a customary accessory use for those indoor amusement establishments maintaining an “on-premises” retail ABC permit. (LBCS F5320, F5380, F5390 and S3200)

Amusements, Outdoor 2.3C(5)e: Establishments that provide commercial recreation activities primarily outdoors such as miniature golf establishments; go-cart facility; theme parks, carnivals, fairgrounds, and midways; paintball parks; and water rides. (LBCS F5310 and S4440)

Animal Services 2.3C(3)a: Establishments that include services by licensed practitioners of veterinary medicine, dentistry or surgery for animals; indoor boarding services for pets; and grooming. (LBCS F2418 and F2720)

Animated Sign: See “Sign, Animated”.

Arm: A mounting device which projects from a wall and attaches to a sign.

Arterial: Those streets which generally serve through-traffic and are designated on the current edition of the officially adopted Arterial Plan (*Appendix A*).

Arterial Plan: A plan, adopted by the Town Council, for the development of existing and proposed major streets that will adequately serve the future travel needs of an area in an efficient and cost-effective manner.

Automated Teller Machines (ATM)

2.3C(3)b: Computerized, self-service machines used by banking customers for financial institutions, including deposits, withdrawals and fund transfers, without face-to-face contact with financial institution personnel. These machines may be located at or within banks, or in other locations.

Auto Parts Sales 2.3C(4)a: Establishments selling new, uses, or rebuilt automotive parts and accessories. Examples include parts and supply stores, automotive stereo stores, speed shops, truck cap stores, and tires and tube shops. (LBCS F2115)

Awning Sign: See “Sign, Awning”.

BUG (Backlight, Uplight and Glare)

Rating: A luminaire classification system that classifies backlight (B), uplight (U) and glare (G) ratings to evaluate luminaire optical performance related to light trespass, sky glow and high angle brightness control.

Ballast: A device used with an electric-discharge lamp to obtain the necessary circuit conditions (*voltage, current and waveform*) for starting and operating.

Banks, Credit Unions, Financial Services

2.3C(3)c: Establishments that engage in financial transactions that create, liquidate, or change ownership of financial services. Banks, credit unions, and savings institutions may perform central banking functions, accept deposits, and lend funds from these deposits. In addition to banks and credit unions, financial services institutions may include: credit agencies, trust companies, holding companies, lending and thrift institutions, securities/commodity contract brokers and dealers, security and commodity exchanges, vehicle finance (*equity*) leasing agencies, and investment companies. (LBCS F2200 and F2210)

Banner: See *Sign, Banner*.

Bar/Tavern/Nightclub 2.3C(4)b:

A business where alcoholic beverages are sold for on-site consumption, which are not part of a larger restaurant. Includes bars, taverns, pubs, and similar establishments where any food service is subordinate to the sale of alcoholic beverages. May also include live entertainment (*music, dancing, comedy, etc.*); beer brewing as part of a microbrewery and other beverage testing facilities as well as not more than three (3) non-server based, non-internet connected sweepstakes center games. (LBCS F2540)

Base Flood: The flood having a one percent (1%) chance of being equaled or exceeded in any given year.

Base Flood Elevation (BFE):

A determination of the water surface elevations of the base flood based on current conditions hydrology as published in the FIS. When the BFE has not been provided in a Special Flood Hazard Area, it may be obtained from engineering studies available from a Federal or State source using FEMA approved engineering methodologies. This elevation, when combined with the freeboard, established the Regulatory Flood Protection Elevation in Special Flood Hazard Areas.

Bay Window: A window assembly whose maximum horizontal projection is not more than two (2) feet from the plane of an exterior wall and is elevated above the floor level of the home.

Bed and Breakfast Inn 2.3C(2)a:

Establishments primarily engaged in providing short-term lodging in facilities known as bed-and-breakfast inns. These establishments provide short-term lodging in private homes or small buildings converted for this purpose. Bed-and-breakfast inns are characterized by highly personalized service and inclusion of a full breakfast in a room rate. (LBCS F1310)

Berm: A mound of earthen material where the slope, height and width do not exceed the standards established by this Ordinance, the purpose of which is to divert the flow of runoff water and/or to act as a visual and sound buffer to nearby properties.

Best Management Practices (BMP): In a stormwater management program, a structural or nonstructural management based practice used singularly or in combination to reduce non-point source inputs to receiving waters in order to achieve water quality protection goals.

Bicycle Facilities: A general term denoting improvements and provisions made to accommodate or encourage bicycling, including parking, bicycle lanes and shared roadways.

Billboard: A common term for certain types of off-premise signs. Also, sometimes referred to as an “outdoor advertising sign”.

Block Face: One side of a street between two consecutive intersections, having at least one principal building on a lot facing the street. For a corner lot having frontage along more than one street, the block face shall consist of that side of the block that has the more numerous parcels or lots fronting the street. An “opposite block face” is the block face across the street from a given block face.

Boarding House: See “Rooming or Boarding House”.

Buffer Yard: A landscaped area intended to give spatial separation between incompatible land uses.

Building: Any structure having a roof supported by columns or by walls, and intended for shelter, housing, or enclosure of persons, animals, or property. The connection of two buildings by means of an open porch, breezeway, passageway, carport, or other such open structure, with or without a roof, shall not be deemed to make them one (1) building.

Building, Accessory: A roofed structure supported by columns or walls; built, erected and framed of component structural parts; designed for the housing, shelter, enclosure and/or support of persons, animals or property of any kind; and subordinate in height and bulk to the principal building located on the same lot.

Building, Principal: A building in which the principal use of the associated lot, on which said building is situated, is conducted.

Building Coverage: The amount of land covered or permitted to be covered by a building(s), usually measured in percentage of a lot (*or percentage of a yard in the case of accessory buildings*).

Business Support Services 2.3C(3)d: These establishments provide any of the following: document preparation, telephone answering, telemarketing, mailing (*except direct mail advertising*), court reporting, and steno typing. They may operate copy centers, which provide photocopying, duplicating, blueprinting, or other copying services besides printing. They may provide a range of support activities, including mailing services, document copying, facsimiles, word processing, on-site PC rental, and office product sales. (*LBCS 2424*)

Caliper: The trunk diameter for nursery grown trees measured at a height of six (6) inches above the ground for all trees up to and including a reading of four (4) inches in diameter, and at 12 inches above the ground for those trees larger than four (4) inches in diameter.

Campground 2.3C(7)a: Establishments, including parks, that may accommodate campers and other individuals along with their equipment, including tents, tent trailers, travel trailers and recreational vehicles (RVs). Includes facilities and services such as cabins, washrooms, food services, recreational facilities and equipment, and organized recreational activities. (*LBCS F5400*)

Campus Entrance Sign: See “Sign, Neighborhood/Campus Entrance”.

Candela: The metric unit luminous intensity (*that is, power emitted by a light source in a particular direction, with wavelengths weighted by the luminosity function, a standardized model of the sensitivity of the human eye*).

Cemetery 2.3C(7)b: A parcel of land used for internment of the dead in the ground or in mausoleums. (*LBCS S4700*)

Certificate of Occupancy: A certificate issued by the Administrator certifying that all structures, their land uses, and land restrictions conform with all the requirements of the Knightdale UDO. This certificate is issued prior to occupying any structure or commencing a use for which a building permit is issued.

Change of Use: 1) A new, different, or additional use of a structure or land which required or requires a certificate of occupancy. 2) Change of Use includes without limitation any new, different, or additional use within the list of permitted uses for the underlying property, any purported use outside the list of permitted uses. 3) When any prior use of a structure or land has ceased for a period greater than 180 days.

The Land Use Administrator may grant a 180-day extension to part (3) if the property and/or building owner provides sufficient evidence of actively recruiting a use that would not constitute a change of use under either part (1) or (2) above. Thereafter, if any prior use of the structure or land has ceased for a period greater than 360 days, any subsequent use shall be considered a change of use.

Multi-tenant structures shall not be considered a change of use when individual uses change unless the essential character (*more than 50% of structure’s square footage*) of the activity conducted in the entire structure (*e.g. shopping center, professional service office building*) has changed as defined in part (1), (2) or (3) above.

Chicken Coop: A single accessory building for the housing of female chickens consisting of a hen house for sleeping and the laying of eggs in conjunction with an open air pen or run.

Child/Adult Day Care Home 2.3C(3)e: Supervision or care provided on a regular basis as an accessory use within a principal residential dwelling unit, by a resident of the dwelling, for five (5) or fewer children/adults who are not related by blood or marriage to, and who are not the legal wards or foster children of, the supervising adult.

Child/Adult Day Care Center 2.3C(3)f: An individual, agency, or organization providing supervision or care on a regular basis for children/adults who are not related by blood or marriage to, and who are not the legal wards or foster children of, the supervising adults; designed and approved to accommodate six (6) or more children/adults at a time; not an accessory to residential use.

Collector: Those streets which generally provide access into or out of a neighborhood, commercial or industrial area and are designated on the current edition of the officially adopted Collector Plan (*Appendix B*). Emphasizing balance between mobility and access, a collector is designed to better accommodate bicycle and pedestrian activity while still serving the needs of the motoring public.

Collector Plan: A plan, adopted by the Town Council, for the development of existing and proposed collectors that will adequately serve the future travel needs of a neighborhood, commercial or industrial area in an efficient and cost-effective manner.

Colleges/Universities 2.3C(7)c: These establishments furnish academic or technical courses and grant degrees, certificates, or diplomas at the associate, baccalaureate, or graduate levels. They include junior colleges, colleges, universities and professional schools. (*LBCS F6130*)

Community Service Organization

2.3C(3)g: A public or quasi-public establishment providing social and/or rehabilitation services, serving persons with social or personal problems requiring special services, the handicapped, and the otherwise disadvantaged such as counseling centers, welfare offices, job counseling and training centers, vocational rehabilitation agencies, and community improvement and neighborhood redevelopment, but does not include any services providing on-site residential or accommodation services. (*LBCS F6560*)

Comprehensive Plan: A document or series of documents setting forth policies for the future of a community. It is normally the result of considerable study and analysis of existing physical, economic, and social conditions, and a projection of future conditions. When adopted by a public body, it serves as a guide for many public decisions, especially land use changes.

Condominium: Real estate, portions of which are designated for separate ownership and the remainder of which is designated for common ownership solely by the owners of those portions.

Conservation Easement: See “*Easement, Conservation*”.

Construction Identification Sign: See “*Sign, Construction Identification*”.

Copy: Any message consisting of words, letters, numbers, characters and/or symbols, that is displayed on a sign.

Corner Lot: See “*Lot, Corner*”.

Cremation Facilities 2.3C(3)h: These establishments operate sites or structures reserved for the interment of human or animal remains (except for cemeteries), or for cremating the dead. (*LBCS F6720*)

Critical Root Zone (CRZ): A circular region measured outward from a tree trunk representing the essential area of the roots that must be maintained in order for the tree’s survival. The CRZ is one (1) foot of radial distance for every inch of tree DBH, with a minimum of eight (8) feet.

Cul-de-sac: See *Street, cul-de-sac*

Cultural or Community Facility 2.3C(5)f: Facilities designed to promote cultural advancement and serve the community such as live theater, dance, or music establishments; art galleries, studios and museums; non-profit civic or fraternal organizations; museums, exhibition, or similar facility; libraries; and community centers, such as the YMCA and YWCA. (*LBCS S3800, S4400, F5110, F5210, and FS6830*)

Cutoff Fixture: See “*Fixture, Cutoff*”.

Diameter at Breast Height (DBH): The diameter of a tree measured in inches at a height of 4.5 feet above the ground.

Deciduous: Those plants that annually lose their leaves.

Density: The number of dwelling units on the entire area of a tract or parcel of land.

Development: Any land disturbing activity which adds to or changes the amount of impervious or partially impervious cover on a land area or which otherwise decreases the infiltration of precipitation into the soil. Also, any action such as subdividing that is undertaken for the purpose of making land more useful, or any area of a site where clearing, grading, parking, structures, walks or related work takes place for the construction, operation and maintenance of a site.

Direct Light: Light emitted directly from the lamp, off of the reflector or reflector diffuser, or through the refractor or diffuser lens, of a luminaire.

Directional Fixture: See “*Fixture, Directional*”.

Drainage, Sheet Flow (dispersed):

Drainage spread out, as opposed to collected in channels.

Drainage Easement: See "Easement, Drainage".

Drainageway: Any natural or manmade channel or drainage structure that carries surface runoff from precipitation.

Drip Line: A vertical line extending from the outermost edge of the tree canopy or shrub branch to the ground.

Drive-Thru Retail/Restaurants 2.3C(4)c: A facility where food and other products may be purchased by motorists without leaving their vehicles. Examples include fast-food restaurants, drive-thru coffee, dairy product, photo stores, pharmacies, etc.

Drive Thru Service 2.3C(3)i: A facility where services may be obtained by motorists without leaving their vehicles. These facilities include drive-through bank teller windows, dry cleaners, etc. Does not include: Automated Teller Machines (ATMs), gas stations or other vehicle services, which are separately defined.

Drive-Thru Window: A window or other fenestration or other device for the delivery of goods or products from a principal or accessory structure to a vehicle or pedestrian and through which compensation for such may be exchanged, including the making of change, and the order for such goods is made from a remote on-site station rather than at a window or other fenestration of other device. (*This definition includes the term "drive-in window."*)

Dry Cleaning Plant: See "Laundry, Dry Cleaning Plant".

Duplex: See "Dwelling-Duplex".

Dwelling/Dwelling Unit: A building designed, arranged, or used for permanent living quarters for one (1) or more persons.

Dwelling-Duplex 2.3C(1)b: Generally a two-unit building that is divided horizontally, and each unit has a separate entrance from the outside or through a common vestibule. Buildings are typically under common ownership. (*LBCS F 1100 and S1121*)

Dwelling-Multifamily (2 to 4 units/bldg) 2.3C(1)c: A dwelling unit that is part of a structure containing more than one (1) but less than five (5) units. Each unit has a separate entrance from the outside or through a common vestibule. Multi-family dwellings may include duplexes, triplexes and quadplexes (*buildings under common ownership with two [2], three [3] or four [4] dwelling units in the same structure*), as well as a condominium complex containing only three (3) or four (4) units. (*LBCS S1121 and S1140*)

Dwelling-Multifamily (more than 4 units/building) 2.3C(1)d: A dwelling unit that is part of a structure containing more than four units. Each unit has a separate entrance from the outside or through a common vestibule. These structures may include apartments (*five [5] or more units in a single building under common ownership*); and condominium complexes containing five (5) or more units. (*LBCS S1121 and S1140*)

Dwelling-Single Family 2.3C(1)a: A free standing building designed for and/or occupied by one family. These residences may be individually owned as residences or residences owned by rental or management companies. Also includes factory-built, modular housing units that comply with the National Manufactured Housing Construction and Safety Standards Act of 1974. (*LBCS F1100 and S1100*)

Dwelling-Secondary 2.3C(1)e: A detached dwelling unit, such as a garage apartment or cottage, designed for occupancy by one or two persons, not exceeding 800 square feet and located on a lot with an existing single-family dwelling.

Easement: A grant by the property owner for use of a strip of land by the public, a corporation, or person(s) for a specified purpose.

Easement, Access: An easement which grants the right to cross property.

Easement, Conservation: A restriction placed on a piece of property to protect the resources (*natural or man-made*) associated with the parcel. The easement is either voluntarily sold or donated by the landowner, and constitutes a legally binding agreement that prohibits certain types of development (*residential or commercial*) from taking place on the land.

Easement, Drainage: An easement which recognizes and documents the presence of a drainageway, guarantees the passage of stormwater runoff, and may grant the right to maintain, relocate, or in such other manner utilize the easement for the improvement of drainage and stormwater flow.

Easement, Utility: An easement which grants to the Town or other utility providers the right to install and thereafter maintain any and all utilities including, but not limited to, water lines, sewer lines, storm sewer lines, electrical power lines, telephone lines, natural gas lines, and community antenna television systems.

Eaves: The part of a roof that projects beyond the exterior wall; including the lower edge of a sloped roof as well as the sloping edge of a gable.

Election Sign: See “*Sign, Election*”.

Elementary School: See “*School, Elementary & Secondary*”.

Equipment Rental 2.3C(3)j: Establishments renting or leasing:

(a) office machinery and equipment, such as computers, office furniture, copiers, or fax machines;

(b) heavy equipment without operators used for construction, mining, or forestry, such as bulldozers, earthmoving equipment, etc.;

(c) other non-consumer machinery and equipment, such as manufacturing equipment; metalworking; telecommunications, motion picture, or theatrical equipment; institutional (*i.e. public building*) furniture; or, agricultural equipment without operators.

(LBCS F233A)

Erosion: The wearing away of land surface by the action of wind, water, gravity, or any combination thereof.

Evergreen: Those plants that retain foliage throughout the year.

Existing development: Those projects that are built or those projects that at a minimum have established a vested right under North Carolina zoning law as of the effective date of this ordinance based on at least one of the following criteria:

(a) Substantial expenditures of resources (*time, labor, money*) based on a good faith reliance upon having received a valid local government approval to proceed with the project, or

(b) Having an outstanding valid building permit as authorized by the General Statutes (*N.C.G.S. §160A-385.1*), or

(c) Having expended substantial resources (*time, labor, money*) and having an approved site specific or phased development plan as authorized by the General Statutes (*N.C.G.S. §160A-385.1*).

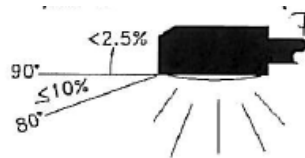
Extraterritorial Jurisdiction (ETJ): That land lying beyond the municipal limits of the Town of Knightdale and within the extraterritorial jurisdiction boundary as delineated on the official zoning map of the Town of Knightdale in accordance with N.C.G.S. §160A-360. The authority is granted to a locality to exercise zoning powers for a specified distance outside its boundaries. It is intended to protect activities on the edge of communities from being encroached on by incompatible adjacent activities.

Family: An individual, or two (2) or more persons related by blood, marriage, adoption, foster care or guardianship, together with incidental domestic servants and temporary, non-compensating guests; or a group of not more than four (4) unrelated persons living together as a single housekeeping unit.

Family Care Home 2.3C(1)f: A home with support and supervisory personnel that provides room and board, personal care and habilitation services in a family environment for not more than six (6) resident “persons with disabilities”. (N.C.G.S. §168-21)

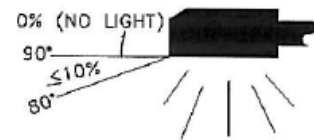
Fixture: The assembly that houses the lamp or lamps and can include all or some of the following parts: a housing, a mounting bracket or pole socket, a lamp holder, a ballast, a reflector or mirror, and/or a refractor or lens.

Fixture, Cutoff: A luminaire light distribution where the candela per 1,000 lamp lumens does not exceed 25 (2.5%) at or above an angle of 90 degrees above nadir, and does not exceed 100 (10%) at or above a vertical angle of 80 degrees above nadir. This applies to all lateral angles around the luminaire.



Fixture, Directional: An assembly that holds the lamp along with any globe, shade, or other covering surrounding the lamp that may be adjusted to concentrate or throw light in a specific direction.

Fixture, Full Cutoff: A luminaire light distribution where zero candela intensity occurs at or above an angle of 90 degrees above nadir. Additionally, the candela per 1,000 lamp lumens does not numerically exceed 100 (10%) at or above a vertical angle of 80 degrees above nadir. This applied to all lateral angles around the luminaire.



Fixture, Fully Shielded: A light fixture constructed, installed and maintained in such a manner that all light emitted from the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the fixture, is projected below the horizontal plane through the fixture’s lowest light emitting part.

Fixture, Non-Cutoff: A fixture light distribution where there is no light intensity limitation in the zone above the maximum distribution of light intensity.

Fixtures, Post-Mounted: Fixtures that are mounted on a post (*typically an 18 foot mounting height or less*) and decorative in style and appearance for the enhancement of the pedestrian experience.

Flag Lot: See “Lot, Flag”.

Flashing Sign: See “Sign, Animated”.

Flood fringe: The land area located between the floodway and maximum elevation subject to inundation by the base flood.

Flood Insurance Rate Map (FIRM): An official map of a community, issued by the FEMA, on which the Special Flood Hazard Areas, the Future Conditions Flood Hazard Areas, and the risk premium zones applicable to the community are delineated.

Flood Insurance Study (FIS): An examination, evaluation and determination of flood hazards, corresponding water surface elevations (*if appropriate*), flood hazard risk zones, and other flood data in a community issued by the FEMA. The FIS report includes FIRMs, Flood Boundary and Floodway Maps, if published.

Floodplain: The relatively flat area or low land adjacent to the channel of a federally designated watercourse which has been or may be covered by floodwater during a Base Flood event.

Floodway: The channel of a federally designated watercourse and the adjacent land area that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot.

Flood Lamp: See “*Lamp, Flood*”.

Flood Light: See “*Light, Flood or Spot*”.

Footcandle (FC): A unit of illuminance amounting to one (1) lumen per square foot.

Footcandles, Horizontal: A quantity of illumination (*footcandles*) at a given point that is measured or calculated at a specific height in a plane parallel to the line of sight when looking at the brightest light source in the field of view.

Footcandles, Vertical: A quantity of illumination (*footcandles*) at a given point that is measured or calculated at a specified height in a plane perpendicular to the line of sight when looking at the brightest light source in the field of view.

Freeboard: The height added to the BFE or Future Conditions Flood Elevation to account for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings and the hydrological effect of urbanization on the watershed. The BFE plus the freeboard establishes the Regulatory Flood Protection Elevation.

Front Yard: See “*Yard, Front*”.

Frontage: See “*Street Frontage*”.

Full Cutoff Fixture: See “*Fixture, Full Cutoff*”.

Fully Shielded: See “*Fixture, Fully Shielded*”.

Funeral Homes and Services 2.3C(3)k: Establishments for preparing the dead for burial or interment and conducting funerals (*i.e. providing facilities for wakes, arranging transportation for the dead, and selling caskets and related merchandise*). (LBCS F6700-6702)

Future Conditions Flood: The flood having a one percent (1%) chance of being equaled or exceeded in any given year based on future conditions hydrology.

Future Conditions Flood Elevation: A determination of the water surface elevations of the one percent (1%) annual chance flood based on future conditions hydrology as published in the FIS. This elevation, when combined with the freeboard, established the Regulatory Flood Protection Elevation in Future Conditions Flood Hazard Areas.

Future Conditions Flood Hazard Area: The land area that would be inundated by the one percent (1%) annual chance flood based on future conditions hydrology as determined in Section 6.5C(1) of this ordinance.

Future Conditions Hydrology: The flood discharges associated with projected land-use conditions based on Wake County's June 2003 Equivalent Zoning Classification and without consideration of projected future construction of flood detention structures or projected future hydraulic modifications within a stream or other waterway such as bridge and culvert construction, fill, and excavation. Future conditions flood discharges are published in the FIS.

Gas Station with Convenience Store 2.3C(4)d: Establishments that primarily retail automotive fuels. These establishments may further provide services such as automotive repair, automotive oils, and/or replacement parts and accessories. Gas stations include structures that are specialized for selling gasoline with storage tanks, often underground or hidden. Bays for car washes may also be included. (*LBCS F2116 and S2270*)

General Retail-10,000 sf or Less 2.3C(4)f: Premises available for the commercial sale of merchandise and prepared foods, but excluding manufacturing. Ranging in size of 10,000 square feet or less. For sizes 2,000 square feet or less, also see "Neighborhood Retail/Restaurant" (*LBCS F2100*)

General Retail-10,001 sf – 50,000 sf 2.3C(4)g: Premises available for the commercial sale of merchandise and prepared foods, but excluding manufacturing. Ranging in size between 10,001 square feet and 50,000 square feet. (*LBCS F2100*)

General Retail-Greater than 50,000 sf 2.3C(4)h: Premises available for the commercial sale of merchandise and prepared foods, but excluding manufacturing. Greater than 50,000 square feet. (*LBCS F2100*)

Glare: The effect produced by a light source within the visual field that is sufficiently brighter than the level to which the eyes are adapted, to cause annoyance, discomfort or loss of visual performance and ability.

Government Services 2.3C(3)l: Includes federal, state and local government agencies that administer, oversee and manage public programs. Does not include Cemeteries, Colleges/Universities, Hospitals, Public Safety Facilities, Schools or Utilities. (*LBCS F6210 and F6221*)

Government Sign: See "Sign, Government".

Greenway: Public open space owned and maintained by the Town which has been designated on the current edition of the officially adopted Greenway and Bicycle Route plan (*Appendix C*).

Greenway and Bicycle Route Plan: A plan, adopted by the Town Council illustrating current and future greenways and bike routes.

Ground Cover: A prostrate plant growing less than two (2) feet in height at maturity that is grown for ornamental purposes and may help control erosion on slopes.

Group Care Facilities 2.3C(3)m: A facility with support and supervisory personnel that provides room and board, personal care and habilitation services in a group environment to more than six (6) resident persons with disabilities of whom one or more are unrelated. This category includes facilities licensed (*in whole or in part*) by the North Carolina Department of Health and Human Services. Examples include but are not limited to group dwellings (*all ages*), day treatment facilities, halfway houses, nursing homes, resident schools, resident facilities, skilled nursing, adult care homes, and foster or boarding homes. Such facility may also include the care of 6 or fewer persons who are not covered by the N.C.G.S. §168-21 definition of a person with disabilities, but excludes housing services for the elderly as defined within this Ordinance.

Hazardous Material: Any substance listed as such in: SARA Section 302 - Extremely Hazardous Substances; CERCLA Hazardous Substances; or Section 311 of the Clean Water Act (*oil and hazardous substances*).

Heavy Manufacturing: See “*Manufacturing, Heavy*”.

Home Occupation 2.3C(1)g: An occupation or profession conducted within a dwelling unit by a residing family member that is incidental to the primary use of the dwelling as a residence. Home Occupations are small and quiet non-retail businesses generally invisible from the frontage, are seldom visited by clients, require little parking, have little or no signage, and have no more than one (1) employee who is not also a resident of the dwelling. They include, but are not limited to, professional services, workshops, sewing, music instruction, and hair styling. Home Occupations include Day Care Homes where daytime care is provided to five (5) or fewer children who are not the legal wards or foster children of the attendant adult within an owner-occupied residence. Home occupations do not include those occupations such as vehicle repair, service or sales; animal services; theaters; massage; storage; manufacturing or fabrication.

Hospital 2.3C(7)d: A health care facility the purpose of which is to provide for care, treatment, testing for physical, emotional, or mental injury, illness, or disability, and overnight boarding of patients, either on a for-profit or not-for-profit basis; but not including group homes. (*LBCS F6530 and S4110*)

Hotels/Motels/Inns 2.3C(2)b: Establishments providing lodging and short-term accommodations for travelers. They may offer a wide range of services including, overnight sleeping space, food services, convention hosting services, and/or laundry services. Entertainment and recreation activities may also be included. Extended-stay hotels are included in this category. (*LBCS F1300 and F1330*)

Housing Services for the Elderly 2.3C(1)h: Establishments that offer housing services for the aged, not requiring a license from the North Carolina Department of Health and Human Services, such as independent retirement housing, multi-unit assisted housing with services (MAHS) and continuing care retirement centers.

Illuminance: The amount of light (*luminous flux incident*) at a point on a surface (*measured in lux or footcandles*).

Impervious Surface: Improvements including street pavement, driveways, gravel areas, buildings, and other structures which cover the soil surface and prevent infiltration of water into the soil.

Incidental Sign: See “*Sign, Incidental*”.

Indirect Light: See “*Light, Indirect*”.

Indoor Recreation Facilities: See “*Recreation Facilities, Indoor*”.

Infill Lot: See “*Lot, Infill*”.

Internal Street: See “*Street, Internal*”.

Isolux Lighting Plan – a demonstration or topographic map of light distribution over a given area.

Laboratory-Medical, Analytical, Research, & Development 2.3C(6)b: A facility for testing, analysis, and/or research. Examples of this include medical labs, soils and materials testing labs, and forensic labs.

Lamp: The component of a luminaire that produces the actual light (*bulb or diode*).

Lamp, Flood: A form of lighting designed to direct its output in a specific direction with a reflector formed from the glass envelope of the lamp itself. Such lamps are so designated by the manufacturers and are typically used in residential outdoor area lighting.

Land Disturbing Activity: Any use of the land by any person(s) in residential, industrial, educational, institutional, or commercial development, highway or road construction or maintenance, that results in a change in natural cover or topography that may cause or contribute to sedimentation.

Land Use Review Board (LURB): The Town of Knightdale Land Use Review Board, an appointed board that serves as the Town's Planning Board, the Community Appearance Commission and the Tree Board. Furthermore, a portion of the LURB membership shall serve as the Board of Adjustment.

Landfill: See *Utility, Class 3*.

Landscaping: The act of changing, rearranging or adding to a site's original vegetation. It may include reshaping the land by moving the earth, as well as preserving the original vegetation or adding vegetation.

Laundry, Dry Cleaning Plant 2.3C(6)c: A service establishment engaged primarily in high volume laundry and garment services, including: carpet and upholstery cleaners; diaper services; dry-cleaning and garment pressing; commercial laundries; and linen supply. These facilities may include customer pick-up but do not include coin-operated laundries or dry cleaning pick-up stores without dry cleaning equipment.

Light, Flood or Spot: Any fixture or lamp that incorporates a reflector or a refractor to concentrate the light output into a directed beam in a particular direction.

Light, Indirect: Light that has been reflected or scattered off of other surfaces.

Light Manufacturing: See *"Manufacturing, Light"*.

Light Trespass: The portion of light from a luminaire that illuminates areas beyond the boundaries of the property on which the luminaire is located and measures above the permissible level regulated at the boundary line.

Live Performance Theater: See *"Theater, Live Performance"*.

Live-Work Unit 2.3C(1)i: An attached residential building type with small commercial enterprises on the ground floor and a residential unit above or behind with a common tenant in both spaces (no dual occupancy is permitted).

Loading Area: A vehicle accommodation area, separate and distinct from any parking area, that is delineated on a plan and used for the regular and intermittent loading and unloading of supplies, equipment or materials.

Local Street: See *"Street, Local"*.

Logo: A type of "copy" that is a design displayed on a sign. The design may incorporate insignia, symbols, characters, letters, words and figures in order to represent a good, identity or service.

Lot: A portion of a subdivision or a parcel of land intended as a unit for transfer of ownership, for development or both. The word "lot" includes the word "plot" or "parcel."

Lot, Corner: A lot which has continuous frontage at two (2) intersecting streets.

Lot, Flag (*may also be known as a pipestem lot or panhandle lot*): A lot which contains a relatively narrow strip that provides street access.

Lot of Record: A lot which is a part of a subdivision, a plat of which has been recorded in the office of the register of deeds of Wake County; or a lot described by metes and bounds, the description of which has been so recorded.

Lot, Infill: A vacant parcel of land located within Old Town (*Appendix B of the 2027 Comprehensive Plan*). The term “infill lot” shall include, but not be limited to, any lot zoned GR3, GR8 or UR12, and having frontage along any of the following streets: Second, Third, or Fourth avenues between Smithfield Road and Pine Street; First Avenue between Smithfield Road and Sixth Street; Maple, Main, Oakwood and Pine streets; the segments of Park Avenue, Harper Street, or Ridge Street east of Smithfield Road; Sallinger, Hester, Jutson, House and Keith streets; and Robertson Street between First Avenue and Keith Street.

Lot, Nonconforming: See “*Nonconforming*”.

Lot Width: The distance between side lot lines measured at the building line.

Low Luminosity Lighting: Lighting fixtures whose lumen output does not exceed 2,000 lumens.

Low Voltage Lighting: Lighting systems powered through a transformer such as a cable conductor that lowers the voltage supplied to the luminaires to 25 volts or less.

Lumen: A unit of luminous flux. The total quantity of light emitted from a light source. For the purposes of this Ordinance, the lumen output values shall be the initial lumen output ratings of a lamp.

Luminaire: A complete lighting unit consisting of a lamp or lamps together with the parts designed to distribute the light, to position and protect the lamps and to connect the lamps to the power supply.

Lux: A unit of illuminance. One (1) lux equals one (1) lumen per square meter. One (1) footcandle equals 10.76 lux (*often rounded to 10 lux for ease of use*).

Maintained Foot-candle: Illuminance of lighting fixtures adjusted for a maintenance factor accounting for dirt build-up and lamp output depreciation. The maintenance factor used in the design process to account for this depreciation cannot be lower than 0.72 for high-pressure sodium and 0.64 for metal halide and mercury vapor.

Manufactured Housing 2.3C(1)j: A dwelling unit, other than a modular home, fabricated in an off-site manufacturing facility for installation or assembly on the building site, which bears a seal certifying that it was built to the standard adopted pursuant to the National Manufactured Housing Construction and Safety Standards Act of 1974, 42 U.S.C. Sec 5401 et seq., which is placed upon a permanent foundation which meets the installation and foundation requirements adopted by the N.C. Commissioner of Insurance, but which is not constructed or equipped with a permanent hitch or other device allowing it to be moved other than for the purpose of moving to a permanent site, and which does not have permanently attached to its body or frame any wheels or axles. (*LBCS S1150*)

Manufacturing, Light 2.3C(6)d: A non-residential use that requires a National Pollutant Discharge Elimination System (NPDES) permit for an industrial or stormwater discharge or involves the use or storage of any hazardous materials or substances or that is used for the purpose of manufacturing, assembling, finishing, cleaning or developing any product or commodity. Facilities are typically designed to look and generate impacts like a typical office building, but rely on special power, water, or waste disposal systems for operation. Noise, odor, dust, and glare of each operation are completely confined within an enclosed building, insofar as practical. (*LBCS S2613*)

Manufacturing, Neighborhood 2.3C(6)e:

The assembly, fabrication, production or processing of goods and materials using processes that ordinarily do not create noise, smoke, fumes, odors, glare, or health or safety hazards outside of the building and are visually undifferentiated from an office building. This includes, but is not limited to, medical and testing laboratories, small woodworking shops, craftsman shops and artisan shops. This use shall not include those that require frequent deliveries by truck with more than two (2) axles. (LBCS S2610)

Manufacturing, Heavy 2.3C(6)f: A non-residential use that requires a NPDES permit for an industrial or stormwater discharge or involves the use or storage of any hazardous materials or substances or that is used for the purpose of manufacturing, assembling, finishing, cleaning or developing any product or commodity. Typically the largest facilities in a community which have complex operations, some of which may be continuous (24 hours a day/ 7 days per week). (LBCS S2620)

Marquee: See “Sign, Marquee”.

Media Production 2.3C(6)g: Facilities for motion picture, television, video, sound, computer, and other communications media production. These facilities include the following types:

1. Back lots/outdoor facilities;
2. Indoor support facilities
3. Soundstages: Warehouse-type facilities providing space for the construction and use of indoor sets, including supporting workshops and craft shops. (LBCS F4212, F4220, F4231 and F4232)

Medical Services – Doctor Office

2.3C(3)n: These establishments include physician offices, dentists, chiropractors, optometrists, etc. (LBCS F6511)

Medical Services – Outpatient/Urgent

Care Center 2.3C(3)o: Ambulatory or outpatient care establishments offer health care services directly to patients without providing inpatient services. Such facilities also include outpatient family planning services; laboratories that provide analytic or diagnostic services, and other services, such as medical imaging, and forensics; and blood and organ banks. (LBCS F6510, F6512, F6513 and F6514)

Meeting Facilities 2.3C(5)g:

Meeting/conference facilities that include room(s) or space(s) used for assembly purposes by 50 or more persons including fraternal halls (*VFW lodges, etc*) and banquet facilities. (LBCS S3800)

Metal Products Fabrication, Machine or Welding Shop 2.3C(6)h:

An establishment engaged in the production and/or assembly of metal parts, including the production of metal cabinets and enclosures, cans and shipping containers, doors and gates, duct work forgings and stampings, hardware and tools, plumbing fixtures and products, tanks, towers, and similar products. Examples of these include:

1. Blacksmith and welding shops
2. Plating, stripping, and coating shops
3. Sheet metal shops
4. Machine shops and boiler shops (LBCS F3340 and F3350)

Mini-Warehouses 2.3C(6)i: A building containing separate enclosed storage spaces of varying sizes leased or rented on an individual basis. (LBCS F2710 and F2720)

Monument Sign: See “Sign, Monument”.

Movie Theater: See “Theater, Movie”.

Multi-use Path: A pathway, often found in conjunction with a greenway, usually intended for the use of bicycles, pedestrians and other non-motorized means of conveyance. Usually a 10 to 12-foot wide (*for two-way travel*) paved surface or a surface graded with a material suitable for the types of users.

Mural: A painting on a building wall with any commercial copy limited to no more than 10 percent (10%) of the façade area.

Nadir: The point directly below the luminaire.

Neighborhood Manufacturing: See *“Manufacturing, Neighborhood”*.

Neighborhood Retail/Restaurant 2.3C(4)e: A “General Retail” or “Restaurant” use that is of a size of 2,000 square feet or less. (*LBCS F2100, F2510, F2520 and F2530*)

Neighborhood Sign: See *“Sign, Neighborhood/Campus Entrance”*.

Neuse River Buffer (NRB): An area of natural or planted vegetation through which stormwater runoff flows in a diffuse manner so that the runoff does not become channelized and which provides for infiltration of the runoff and filtering of pollutants. The buffer is measured landward from the normal pool elevation of impounded structures and from the bank of each side of streams or rivers.

Nonconforming: A lot, structure (*including buildings, wireless telecommunication towers, manufactured homes*), sign, plan, street frontage, landscaping, screening, lighting, or use of land or structure, which does not meet the regulations and requirements of this Ordinance (*either by adoption of this Ordinance or a subsequent amendment*) but was lawful at the date on which it was established or became lawful at some later date.

Non-Cutoff Fixture: See *“Fixture, Non-Cutoff”*.

Non-Encroachment Area: The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot as designated in the FIS report.

Non-Residential Use: See *“Use, Non-Residential”*.

Official Maps or Plans: Any map or plan officially adopted by the Town Council as a guide for the development of the Town, its ETJ or its Urban Service Area as so designated by Wake County.

Off-Premise Directional Sign: See *“Sign, Off-Premise Directional”*.

Off-Premise Sign: See *“Sign, Off-Premise”*.

On-Premise Sign: See *“Sign, On-Premise”*.

Ornamental Tree: See *“Tree, Understory”*.

Outdoor Display Area: The portion of a commercial establishment identified for the outdoor display and sale of items such as heavy equipment, recreational vehicles, automobiles, manufactured homes and building materials.

Outdoor Animal Boarding/Equestrian Facilities 2.3C(3)o: A use or outdoor structure such as a kennel or run intended and used for the breeding or accommodation of small domestic animals for sale or for the training or overnight boarding of animals for persons other than the owner of the lot, but not including a veterinary clinic in which the overnight boarding of animals is necessary for or accessory to the testing and medical treatment of the physical disorders of animals. This use also includes equestrian-related leisure activities including riding, mounting, horsemanship, and equestrian games, such as polo, hurdles, dressage training and show jumping; as well as the facilities for maintaining stables, feeding, caring, and housing horses. (*LBCS F2700 and LBCS A7120*)

Outdoor Lighting: The nighttime illumination of an outdoor area or object by any man-made device located outdoors that produces light by any means.

Outdoor Recreation Facilities: *See "Recreation Facilities, Outdoor".*

Outparcel: A parcel of land designated on an approved commercial group development site plan or determined as such by the Administrator. An outparcel shall be secondary in nature to the primary commercial development. It shall contain a single building and be independent of the total development in that its parking requirement for the use meets the standard set forth in Section 10.3 and its driveways, walkways, landscaping and lighting are also unique to the building on the site.

Overlay District: A set of zoning requirements that is described in the ordinance text, is mapped, and is imposed in addition to those of the underlying district. Developments within the overlay district must conform to the requirements of both zones or the more restrictive of the two. It usually is employed to deal with special physical characteristics such as flood plains or steeply sloping areas, but it has other applications as well.

Park and Ride Spaces: A parking lot and/or spaces designated for drivers to leave their cars and use mass transit facilities beginning, terminating, or stopping within immediate walking distance of the park and ride facility.

Parkway: A street bounded on one (1) side by structures and on the other by a greenway, park, or open space.

Pedestrian Walkway: A separate, delineated, and protected path for the safe movement of pedestrians between sites or within a given site, including but not limited to sidewalks, crosswalks, multi-use paths, arcades and pedestrian bridges.

Permeable Surface: Although considered by this ordinance as an "Impervious Surface", permeable surfaces possess a characteristic that allows the movement of some water and/or air around the surface material to infiltrate sub-surface areas such as a series of concrete pavers.

Permitted Use: *See "Use, Permitted".*

Person with Disabilities: A person with a temporary or permanent physical, emotional, or mental disability including but not limited to mental retardation, cerebral palsy, epilepsy, autism, hearing and sight impairments, emotional disturbances and orthopedic impairments but not including mentally ill persons who are dangerous to others as defined in N.C.G.S. §122C-3(11)b. (*N.C.G.S. §168-21*)

Personal Services 2.3C(3)p: These establishments offer a wide range of personal services. Uses include but are not limited to tailor/seamstress shops, nail salons, hair salons, barbershops and tanning salons; which may include permanent makeup tattooing (*color enhancement of eyebrows, eyeliner and lips*) as an ancillary use. This definition does not allow tattooing of the body except as identified herein for permanent makeup. (*LBCS F2600*)

Pilaster: For the purposes of façade articulation (*Section 5.4G*), a decorative feature that imitates engaged piers but is not a supporting structure. May be a rectangular or semi-circular projection of at least 12 inches in width and a minimum 1:4 projection to width ratio, and typically contains a base, shaft and capital.

Planned Development District: A zoning designation, functioning as a floating overlay district, that may be applied for by a developer as part of a re-zoning request (*Section 15.6C*). These districts establish their own uses (*Section 2.3C*), but are otherwise subject to the requirements and regulations of the underlying district as well as any additional standards enumerated for them.

Planting Area: The area prepared for the purpose of accommodating the planting of trees, shrubs, and groundcovers.

Point-by-Point Footcandle Grid: A graphical representation of points placed onto a grid or layout where each point identifies the amount of luminance (*light*) in footcandles or lux (*one-tenth of a footcandle*). The spacing between points can vary depending on the size of the area to be lighted. For many typical outdoor layouts, a 10' x 10' spacing grid layout is used. Larger areas may utilize a 15' or 20' grid spacing. This type layout can also indicate luminance or reflected light instead of luminance.

Pole Sign: See "*Sign, Pole*".

Porous Surface: Although considered by this ordinance as an *impervious surface*, porous surfaces possess a characteristic that allows the movement of some water and/or air through the surface material to infiltrate sub-surface areas such as porous asphalt or concrete.

Portable Sign: See "*Sign, Portable*".

Post-Mounted Fixtures: See "*Fixtures, Post-Mounted*".

Post Office 2.3C(3)q: Establishments conducting operations of the United States Postal Service. (*LBCS F4170*).

Preliminary plat: A draft plat used to determine if the proposed development is in general conformance with Town standards and ordinances.

Primary Façade: The building façade that shares a frontage line with a street or square. In cases where a building fronts on more than one street or square, the primary façade will be determined by the Administrator.

Principal Building: See *Building, Principal*.

Principal Structure: See *Structure, Principal*.

Private Street: See "*Street, Private*".

Professional Services 2.3C(3)r: Services provided that make available the knowledge and skills of their employees to sell expertise and perform professional and technical services to others such as legal services; accounting, tax, bookkeeping, and payroll services; architectural, engineering, and related services; graphic, industrial, and interior design services; consulting services; advertising, media, and photography services; real estate services; investment banking, securities, brokerages; and insurance-related services (*LBCS F2230, F2240, F2300, and F2410-2417*).

Projecting Sign: See "*Sign, Projecting*".

Projection: Any component, member or part which juts out a minimum of two (2) feet from a building, or any jog in a wall that results in the wall being set forward a minimum of two (2) feet.

Property Identification Sign: See "*Sign, Property Identification*".

Protected Area: The area adjoining and upstream of the critical area in a WS-IV water supply in which protection measures are required. The boundaries of the protected areas are defined as extending five (5) miles upstream and draining to water supply reservoirs (*measured from the normal pool elevation*) to the ridge line of the watershed (*whichever comes first*); or 10 miles upstream and draining to the intake located directly in the stream or river (*run-of-the-river*), or to the ridge line of the watershed (*whichever comes first*).

Public Safety Facility 2.3C(7)e: A facility operated by a public agency including fire stations, other fire prevention and fire fighting facilities, police and sheriff substations and headquarters, including incarceration facilities. (*LBCS F6222 and F6400*)

Public Street: See "*Street, Public*".

Quarrying and Stone Cutting 2.3C(6)j:

This category comprises establishments that dredge, quarry, mine, or develop the mine site for crushed and broken stones, sand, gravel, mining clay (e.g., china clay, paper clay and slip clay), or other stones and nonmetallic minerals. Broken and crushed stones include granite and related rocks, such as gneiss, syenite, and diorite; and other stones (except dimension stone and limestone.) Establishments that mine or quarry bituminous limestone and bituminous sandstone are included in this category. Also included are preparation plants that beneficiate stones (e.g., by grinding and pulverizing); and that beneficiate gravel, clay, and ceramic and refractory minerals (e.g., by washing, screening, and grinding.) (LBCS F8400 and F8500)

Real Estate Sign: See “Sign, Real Estate”.

Rear Yard: See “Yard, Rear”.

Recessed Wall: Any depression or jog in a wall that results in the wall being set back a minimum of two (2) feet.

Recreation Facilities, Indoor 2.3C(5)h:

Uses or structures for active recreation including gymnasiums, natatoriums, athletic equipment, indoor running tracks, climbing facilities, court facilities and their customary accessory uses. This definition is inclusive of both non-profit and for-profit operations, but exclusive of government services.

Recreation Facilities, Outdoor 2.3C(5)i:

Parks and other open space used for active or passive recreation such as ball fields, playgrounds, greenway trails, tennis courts, riding stables, campgrounds, and golf courses and their customary accessory uses including, but not limited to, maintenance sheds, clubhouses, pools, restrooms, and picnic shelters. This definition is inclusive of both non-profit and for-profit operations, but exclusive of government services.

Religious Institution 2.3C(7)f: Any facility such as a church, temple, monastery, synagogues, or mosque used for worship by a non-profit organization and their customary related uses for education (*pre-schools, religious education, etc.*), recreation (*gymnasiums, activity rooms, ball fields, etc.*), housing (*rectory, parsonage, elderly or disabled housing, etc.*) and accessory uses such as cemeteries, mausoleums, soup kitchens, and bookstores. (LBCS F6600 and S3500)

Required Yard Area: That space between the required yard setback lines and the lot lines from which the required yard setbacks are measured.

Research and Development (R&D)

2.3C(6)k: A facility for scientific research, and the design, development, and testing of electrical, electronic, magnetic, optical and computer and telecommunications components in advance of product manufacturing, and the assembly of related products from parts produced off-site, where the manufacturing activity is secondary to the research and development activities. Includes pharmaceutical, chemical, and biotechnology research and development. (LBCS F2416)

Residential Development: Buildings for residence such as attached and detached single-family dwellings, apartment complexes, condominiums, townhouses, cottages, etc. and their associated outbuildings such as garages, storage buildings, gazebos, etc. and customary home occupations.

Residential Use: See “Use, Residential”.

Restaurant 2.3C(4)i: A retail business selling ready-to-eat food and/or beverages for on or off-premise consumption. Customers may be served from an ordering counter (*i.e. cafeteria or limited service restaurant*); at their tables (*full-service restaurant*); and, at exclusively pedestrian-oriented facilities that serve from a walk-up ordering counter (*snack and/or nonalcoholic bars*). May also include no more than three (3) non-server based, non-internet connected sweepstakes center games as a customary accessory use for those restaurant establishments maintaining an “on-premises” retail ABC permit. For sizes 2,000 square feet or less, also see “Neighborhood Retail/Restaurant” (*LBCS F2510, F2520, and F2530*)

Rezoning: See “*Zoning Amendment*”.

Right-of-way: A strip of land whose legal title has been offered for public access and is occupied or intended to be occupied by a travelway and is also available, with the consent of the appropriate governmental agency, for installation and maintenance of traffic control devices, regulatory and information signs, water lines, sanitary sewer lines, storm sewer lines, gas lines, power lines, and communication lines.

Roof Sign: See “*Sign, Roof*”.

Rooming or Boarding House 2.3C(2)c: Short or long-term accommodations that serve a specific groups or membership such as a dormitory, fraternity or sorority house, youth or adult hostel or similar tourist accommodations, or single room occupancy units that provide a number of related services including, but not limited to housekeeping, meals, and laundry services. (*LBCS F1320, S1320, and S1340*)

SA Waters: The highest classification of estuarine and marine waters. This classification is applied to waters that are outstanding natural resources and that should be preserved because of their ecological, social, scenic, economic or recreational importance. No domestic discharges are permitted in these waters.

Sandwich Board Sign: See “*Sign, Sandwich Board*”.

School, Elementary & Secondary 2.3C(7)g: A public or private institution for education or learning, including associated athletic or recreational facilities, which does not include lodging. This institution includes any school licensed by the state and that meets the state requirements for elementary and secondary education. (*LBCS F6100*)

School, Vocational/Technical 2.3C(7)h: A public or private institution for education or learning, including associated athletic or recreational facilities, which does not include lodging. These schools offer vocational and technical training in a variety of technical subjects and trades. Training may lead to job-specific certification. (*LBCS F6100 and F6140*)

Seasonal Lighting: Holiday/temporary lighting displays that are utilized less than a total of 60 days in any one year.

Secondary School: See “*School, Elementary & Secondary*”.

Sediment: Solid particulate matter, both mineral and organic, that has been or is being transported by water, air, gravity, or ice from its site of origin.

Sedimentation: The process by which sediment resulting from accelerated erosion has been or is being transported off the site of the land-disturbing activity or into a lake or natural water course.

Setback: A line parallel to the property line in front of which no structure shall be erected.

Sharrows: A shared lane marking that assists bicycles with lateral positioning within a travel lane as identified by the most recent Manual on Uniform Traffic Control Devices.

Shield: A device that is attached onto a fixture or inserted into a luminaire to alter the direction of light being emitted.

Shopping Center-Community Center

2.3C(4)j: Usually configured as a strip center. Sizes vary from 100,000 to 350,000 square feet on sites ranging in size from 10 to 40 acres and have a three (3) to six (6) mile primary trade area radius. Serves a wider market than neighborhood and also offers wider range of goods, especially apparel goods. Anchors include supermarkets, super drug stores, and discount department stores. Some centers may also contain off-price retail stores selling toys, electronics, sporting goods, and home improvement and furnishings. (LBCS S2520)

Shopping-Neighborhood Center 2.3C(4)k:

Sizes vary from 30,000 to 150,000 square feet on sites ranging from three (3) to 15 acres, and have a three (3) mile primary trade area radius. Typically serves immediate neighborhood with convenience shopping. Often anchored by a supermarket or drugstore. (LBCS S2510)

Shrub: An upright plant growing one (1) to 20 feet in height at maturity that is planted for ornamental or screening purposes.

Side Yard: See “*Yard, Side*”.

Sight Triangle: A triangular area formed by the intersection of the projected street lines (right-of-way lines) and a straight line connecting points on said street lines at distances specified by AASHTO guidelines, or in the absence of such guidelines, at a minimum distance of 25 feet along each street line from the point of intersection.

Sign: Any form of publicity or advertising which is visible from any public way, directing attention to an individual, business, commodity, service, activity, or product, by means of words, lettering, parts of letters, figures, numerals, phrases, sentences, emblems, devices, trade names or trademarks, or other pictorial matter designed to convey such information and displayed by means of paint, bills, posters, panels, or other devices erected on an open framework, or attached or otherwise applied to stakes, posts, poles, trees, buildings, or other structures or supports.

Sign, Animated: A sign depicting action, motion, light or color changes through electrical or mechanical means, as well as those with flashing or reflective disks, flashing lights, lights with changing degrees of intensity.

Sign, Awning: A type of wall sign that is printed on or similarly attached to a window or door awning, or mounted on top of and supported by a window or door canopy (See “*Marquee*”).

Sign, Banner: A sign of a business or organization which is temporary in nature and not part of its normal activities. Such a sign shall be limited to business events such as grand openings, going-out-of-business sales, promotions, liquidations and sales; as well as fund-raising membership drives or events of civic, philanthropic, educational, religious and other non-profit organizations.

Sign, Construction Identification: A sign giving the name of names of building owners, architects, engineers, and/or lending institutions and principal contractors responsible for construction on the site where the sign is placed, together with other appropriate development information included thereon.

Sign, Election: A sign advertising a candidate or an issue that is to be decided in an upcoming election or referendum.

Sign, Flashing: See “*Sign, Animated*”.

Sign, Government: A sign posted by a local, state or federal agency, including, but not limited to, regulatory signs, welcome signs, seasonal signs, legal notices, identification signs, informational signs and traffic control signs.

Sign, Incidental: A sign which carries no advertising message, is clearly incidental to other major signs on site, and is used to do one or more of the following:

- (a) Direct certain activities to certain areas; e.g., handicapped parking.
- (b) Prohibit the parking of unauthorized vehicles.
- (c) Provide other incidental information.

Sign, Marquee: A type of wall sign mounted to the top of a canopy, but not extending above the roof line. The area of a marquee is calculated independently of other wall signs, but is counted against the total wall signage area permitted.

Sign, Monument: Any monolithic sign in which the bottom (*base*) of the sign is flush with the ground, and the base itself is at least 10 percent (10%) larger, in both width and depth, than the body of the sign.

Sign, Neighborhood/Campus Entrance: A sign for a subdivision, group housing project, or a school, college, building, park, church, or other public or quasi-public facility, bearing information pertaining only to the premises on which such sign is located and not of a commercial nature.

Sign, Nonconforming: See “*Nonconforming*”.

Sign, Off-Premise: Any sign or structure, pictorial or otherwise, regardless of size or shape, which directs attention to a business, commodity, attraction, profession, service, or entertainment conducted, offered, sold, manufactured, existing, or provided at a location other than on the premises where the sign is located or to which it is affixed.

Sign, Off-Premise Directional: A real estate sign containing limited information pertaining to the consumer’s ability to locate the facility for sale, rent, lease or development.

Sign, On-Premise: Any sign or structure, pictorial or otherwise, regardless of size or shape, which directs attention to a business, commodity, attraction, profession, service, or entertainment conducted, offered, sold, manufactured, existing, or provided at a location on the premises where the sign is located or to which it is affixed.

Sign, Pole: A free-standing sign with a visible support structure such as a pole(s) or pylon, or with a support structure hidden by a pole cover.

Sign, Portable: A sign designed or intended to be relocated from time to time, whether or not it is permanently attached to a building or structure, or is located on the ground. The term includes signs on wheels or on portable structures, such as tent signs, A-frame, or T-shaped signs and similar devices, and airborne signs.

Sign, Projecting: A specific type of wall sign which extends outward for more than 12 inches from the facade of any building, but does not extend above the soffit, parapet or eave line of the building to which it is rigidly affixed.

Sign, Property Identification: A sign bearing information pertaining only to the premises on which such sign is located (*property identification/ address numbers, post office box numbers, names of occupants, etc.*) and not of a commercial nature.

Sign, Real Estate: A sign located on the premises and offering the premises for sale, rent or lease.

Sign, Roof: A sign erected, constructed, placed, or maintained upon the roof of any building.

Sign, Sandwich Board: A portable A-frame sign constructed with two faces which rest on the ground at an angle less than 45 degrees to each other.

Sign, Special Event: A sign of a business or organization which is not part of its normal activities. Such a sign shall be limited to a business “Grand Opening” or “Going Out of Business Sale,” as well as fund-raising membership drives or events of civic, philanthropic, educational, or religious organizations.

Sign, Temporary: A sign not permanently mounted or otherwise requiring the issuance of a permit in accordance with this Ordinance displayed for a short period of time in connection with a circumstance, situation, or event that is designed or intended to occur or to be completed within a defined time period.

Sign, Under Awning: A sign which is suspended from the under-side of a canopy or awning.

Sign, Wall: A sign erected parallel to and extending not more than 12 inches from the facade of any building or yard wall (*Section 4.7*) to which it is attached, and supported throughout its entire length by the building or yard wall face. It may not extend above the roof line. This type is also known as a flat sign or flat wall sign.

Sign, Window: A sign placed or painted on the interior or exterior of a building’s glass windows or doors.

Sign Face: The part of the sign that is or can be used to identify, advertise or communicate information; or is used for visual representation which attracts the attention of the public for any purpose. Sign face includes any background material, panel, trim, color and direct or self-illumination used that differentiates that sign from the building, structure, backdrop, surface or object upon which or against which it is placed. The sign structure shall not be included as a portion of the sign face provided that no identifying/advertising message, symbol or any of the aforementioned sign face criteria are displayed on or designed as part of the sign structure, whether structurally necessary or not.

Site Plan: A diagram to scale showing the development plans for a project.

Special Event Sign: See “*Sign, Special Event*”.

Special Flood Hazard Area: The land in the floodplain subject to a one percent (1%) or greater chance of being flooded in any given year based on current conditions hydrology, as determined in Section 6.5C(1) of this ordinance.

Special Use: See “*Use, Special*”.

Specimen Tree: See “*Tree, Specimen*”.

Spot Light: See “*Light, Flood or Spot*”.

Standard Brick: A brick that is eight (8) inches in length, two and one quarter (2¹/₄) inches in height and three and three quarter (3³/₄) inches in depth.

Storage-Outdoor Storage Yard 2.3C(6): The open storage of various materials outside of a structure other than fencing, as a principal use.

Storage-Warehouse, Indoor Storage 2.3C(6)m: Facilities for the storage of furniture, household goods, or other commercial goods of any nature. Includes cold storage. Does not include warehouse, storage, or mini-storage facilities offered for rent or lease to the general public; warehouse facilities primarily used for wholesaling and distribution; or terminal facilities for handling freight. (*LBCS F3600*)

Stormwater Runoff: The direct runoff of water resulting from precipitation in any form.

Stream: A watercourse that collects surface runoff.

Street: A dedicated and accepted public right-of-way for vehicular traffic which affords the principal means of access to abutting properties.

Street, Cul-de-sac: A short local street having one end open to traffic and the other end permanently terminated by a vehicular turnaround.

Street, Internal: In the MI District, any road or road segment that is not an arterial or collector as identified in Appendix A or B of the UDO, is not a through street with connectivity to a neighboring site, and is completely inside (*not on the perimeter of*) a proposed manufacturing and industrial development.

Street, Local: A street whose primary function is to provide access to abutting properties.

Street, Private: A vehicular travelway not dedicated or offered for dedication as a public street but resembling a cul-de-sac or a local street and providing the principal means of access to abutting properties or buildings.

Street, Public: A dedicated and accepted public right-of-way for vehicular traffic. In the town limits, a public street shall be maintained by the Town of Knightdale or NCDOT. In the Town's extraterritorial jurisdiction, a public street shall be designed and constructed to NCDOT standards, and may, or may not, have been accepted for state maintenance.

Street Frontage: That portion of a single lot directly abutting a public right-of-way or private street.

Street Tree: See "Tree, Street".

Structure: Anything constructed or erected, the use of which requires more or less permanent location on the ground or which is attached to something having more or less permanent location on the ground.

Structure, Accessory: A detached, subordinate structure, the use of which is customarily incidental to that of the principal structure and which is located on the same lot as the principal structure.

Structure, Nonconforming: See "Nonconforming".

Structure, Principal: A structure in which the principal use(s) of the associated lot, on which said structure is situated, is conducted.

Stucco: An exterior finishing system composed of Portland cement, lime and sand that is sprayed or hand applied in three (3) layers, the first layer being applied to a wire/metal lath, and the third layer sometimes containing an acrylic base.

Studio-Art, Dance, Martial Arts, Music, etc. 2.3C(3)s: Small facilities, typically accommodating one (1) group of students at a time, in no more than one (1) instructional space. These establishments may include: individual and group instruction and training in the arts; production rehearsal photography, and the processing of photographs produced only by users of the studio facilities; martial arts training studios; gymnastics, yoga, and similar instruction; and aerobics and gymnastics studios with no other fitness facilities or equipment.

Subdivider: Any person, firm or corporation who subdivides or develops any land deemed to be a subdivision as herein defined.

Subdivision: A "subdivision" shall include all divisions of a tract or parcel of land into two (2) or more lots, building sites, or other divisions when any one or more of those divisions is created for the purposes of sale or building development (*whether immediate or future*) and shall include all division of land involving the dedication of a new street or a change in existing streets.

Sweepstakes Center 2.3C(4)l: A business enterprise, whether principal or accessory (*except where expressly permitted as a customary accessory use and according to the qualifying conditions laid out by the use definitions within this Chapter—see “Amusements, Indoor”, “Bar/Tavern/Nightclub” and “Restaurant”*), where persons may play games on on-site machines/terminals/computers that reveal the results of sweepstakes or similar contests associated with the on-site purchase of internet time, phone time, office supply or other retail good; and where redeemable cash sweepstakes awards (*government issued coins and bills in hand*) in amounts of 10 dollars (\$10.00) or more may be received. This definition does not apply to any game or process prohibited by NCGS §§ 14-304 through 14-309 or to any game regulated by the North Carolina Education Lottery Commission.

Tattoo: An indelible mark, figure or decorative design introduced by insertions of dyes or pigments into or under the subcutaneous portion of the skin or by the production of scars upon the body of a live human being.

Tattoo Shop: An establishment which is engaged to any extent in providing tattoos to customers beyond that permitted as permanent makeup within the definition of Personal Services.

Temporary Sign: See “*Sign, Temporary*”.

Theater, Live Performance 2.3C(5)j: Includes concert halls and other structures with fixed seats arranged on a sloped or stepped floor; may seat 300 to 3,000 people. (*LBCS S3110*)

Theater, Movie 2.3C(5)k: A specialized theater for showing movies or motion pictures on a projection screen. This category also includes cineplexes and megaplexes, complex structures with multiple movie theaters, each theater capable of an independent performance. (*LBCS S3120*)

Town: The Town of Knightdale, North Carolina.

Town Council: Town Council of the Town of Knightdale, North Carolina.

Townhouse: A building type consisting of units attached to one another in which each unit is located on an individually owned parcel, generally within a development containing drives, walks and open space in common areas.

Tract: A lot, or contiguous group of lots in single ownership or under single control, and usually considered a unit for purposes of development.

Transit, Road and Ground Passenger Services 2.3C(8)b: Services including but not limited to taxi cabs, limousines, charter buses, interurban buses, towing companies and mass transit. Also includes but is not limited to dispatch centers, stations and maintenance facilities. (*LBCS F4120 and S3900*)

Tree, Specimen: Any healthy, existing tree over 12 inches DBH found in a field or open grown condition, or along the edge of a forest stand or tree stand and displaying the root zone, canopy, and structure characteristic of the particular species, excluding Sweet Gum, Catalpa, Wild Cherry, Wild Elm, Princess, Hackberry and Tree-of-Heaven.

Tree, Street: A tree planted along the street, within a public right-of-way or public easement, and usually in a planting strip or tree well.

Tree, Understory: A deciduous or evergreen tree or shrub planted primarily for its ornamental value or for screening purposes. Also known as an ornamental tree.

Under Awning Sign: See “*Sign, Under Awning*”.

Uninterrupted Wall: A façade section that does not contain any features such as transparent windows, doors, stairs or similar exterior features such as spandrel glass that may be approved by the TRC, or any articulations such as pilasters, projections, recesses or other vertical architectural elements as may be approved by the TRC.

Uplight: The portion of luminous flux (*light*) from a luminaire emitted at angles above the horizontal.

Use, Change of: See “*Change of Use*”.

Use, Nonconforming: See “*Nonconforming*”.

Use, Non-Residential: All uses not expressly included under the definition of “Use, Residential”. For the purposes of watershed or flood protection: All development other than residential development, agriculture and silviculture.

Use, Permitted: A use permitted in a given district as a permitted use and so authorized by being listed, or referenced as a permitted use, by district, in Chapter 2, District Provisions.

Use, Residential: All uses under Section 2.3C(1), including single-family dwellings, duplexes, multifamily dwellings, secondary dwellings, family care homes, live-work units, manufactured home dwellings, home occupations, housing services for the elderly, along with any accessory buildings and structures thereof.

Use, Special: A use permitted in a given district as a special use to be approved only by the Knightdale Town Council and so authorized by being listed as such in Chapter 2, District Provisions. If property exists such that an existing use which was previously allowed by right would be allowed only as a special use, that use shall become nonconforming unless and until a special use permit is issued.

Utilities: Publicly or privately owned facilities or systems for the distribution of gas, electricity, steam, or water, the collection and disposal of sewage or refuse; the transmission of communications; of similar functions necessary for the provision of public services. Radio transmission facilities for use by ham radio operators or two-way radio facilities for business or governmental communications shall be deemed accessory uses and not utilities, provided no transmitter or antenna tower exceed 180 feet in height. Utilities are divided into three (3) classes:

Class 1 - 2.3C(8)e: Transmission lines (*above and below ground*) including electrical, natural, gas, and water distribution lines; pumping stations, lift stations, and telephone switching facilities (*to 200 sq. ft*).

Class 2 - 2.3C(8)e: Elevated water storage tanks; package treatment plants, telephone switching facilities (*over 200 sq. ft*), substations, or other similar facilities in connection with telephone, electric, steam, and water facilities.

Class 3 - 2.3C(8)f: Generation, production, or treatment facilities such as power plants, water and sewage plants, and landfills.

Utility Easement: See “*Easement, Utility*”.

Variance: An authorization granted by the LURB to vary or modify any of the regulations or provisions of the UDO, apart from the list of permitted uses established in Section 2.3C, so that the spirit of the UDO shall be observed, public safety and welfare secured, and substantial justice done; only when practical difficulties or unnecessary hardships would result from carrying out the strict letter of the UDO.

Vehicle Accommodation Area: Any portion of a lot that is used by vehicles for access, circulation, parking, storage, stacking while awaiting services, loading and unloading.

Vehicle/Heavy Equipment Sales

2.3C(4)m: Establishments which may have showrooms or open lots for selling vehicles or heavy equipment. May include dealers for light trucks, buses, trucks, mobile homes, bicycles, motorcycles, ATVs, or boat and marine craft dealers. (*LBCS F2110, F2111, F2112, F2113 and F2114*)

Vehicle Services – Maintenance/Body

Work/Repair 2.3C(3)t: The repair, servicing, alteration, restoration, towing painting, cleaning, or finishing of automobiles, trucks, recreational vehicles, boats and other vehicles as a primary use, including the incidental wholesale and retail sale of vehicle parts as an accessory use. This includes major repair and body work which encompasses towing, collision repair, other body work and painting services, and tire recapping.

Vehicular Canopy: A roofed, open, drive-through structure designed to provide temporary shelter for vehicles and their occupants while making use of a businesses' services.

Vested Right: The right to undertake and complete the development and use of property under the terms and conditions of an approved site specific development plan or an approved phased development plan.

Vocational/Technical School: See “*School, Vocational/Technical*”.

Wall Art: See “*Mural*”.

Wall Sign: See “*Sign, Wall*”.

Water Surface Elevation: The height, in relation to mean sea level, of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

Watercourse: A lake, river, creek, stream, wash, channel or other topographic feature on or over which waters flow at least periodically. Watercourse includes specifically designated areas in which substantial flood damage may occur.

Watershed: The entire land area contributing surface drainage to a specific point (*e.g. the water supply intake.*)

Wetlands: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, under normal conditions, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Wholesaling and Distribution 2.3C(6)n:

Establishments engaged in selling merchandise to retailers; to contractors, industrial, commercial, institutional, farm or professional business users; to other wholesalers; or acting as agents or brokers in buying merchandise for or selling merchandise to such persons or companies. Examples of these establishments include:

1. Agents, merchandise or commodity brokers, and commission merchants;
2. Assemblers, buyers and associations engaged in the cooperative marketing of farm products;
3. Merchant wholesalers;
4. Stores primarily selling electrical plumbing, heating, and air conditioning supplies and equipment.
(*LBCS F3500*)

Window Sign: See “*Sign, Window*”.

Wireless Telecommunication Facility:

Equipment constructed in accordance with Section 332(c)(7) of the Communications Act at a single location by a private business user, governmental user, or commercial wireless service provider to transmit, receive, or relay electromagnetic signals (*including microwave*). Such facilities includes antennas or antenna arrays, wireless telecommunication towers, support structures, transmitters, receivers, base stations, combiners, amplifiers, repeaters, filters, or other electronic equipment; together with all associated cabling, wiring, guy anchors, equipment enclosures, and other improvements.

Stealth/Camouflage 2.3C(8)c:

Antenna and related telecommunication equipment designed as an integral part of a permitted existing structure and unobtrusive in its appearance. Such existing structures may include, but are not limited to: flagpoles, buildings, silos, water tanks, signs, lighting standards, steeples, and electric transmission towers. This use also includes co-located facilities on a permitted existing tower not meeting the definition of “substantial modification” as defined in N.C.G.S. 160A-400.51 (7a).

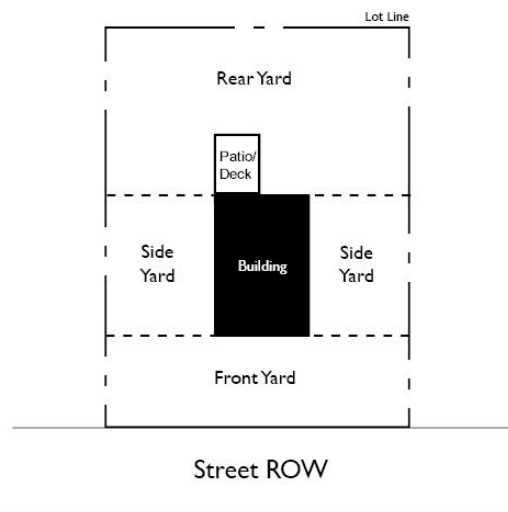
Tower 2.3C(8)d: Any free-standing structure up to 200 feet in height designed and constructed to primarily support one (1) or more telecommunication antennas, or an attachment to a building or structure designed and constructed for previous said purpose where the attachment extends more than 20 feet above the normal height of the building or structure on which it is placed. The following shall not be included in this definition as a tower:

- Amateur radio facilities with antennas mounted on supporting structures less than 90 feet in height;
- Residential antennas for receiving television or AM/FM radio broadcasts;
- Residential satellite dishes; or

- Commercial or industrial satellite dishes that are less than 20 feet in height.

Xeriscape: A landscaping method that employs drought-resistant plants in an effort to conserve resources, especially water.

Yard: A space on the same lot with a principal building open, unoccupied and unobstructed by buildings or structures from ground to sky except where encroachments and accessory buildings are expressly permitted.



Yard, Front: An open, unoccupied space on the same lot with a principal building, extended the full width of the lot, and situated between the street and that front line of the building, projected to the side lines of the lot.

Yard, Rear: An open, unoccupied space on the same lot with a principal building, extending the full width of the lot and situated between the rear line of the lot and the rear line of the building projected to the side lines of the lot.

Yard, Side: An open, unoccupied space on the same lot with a principal building, situated between the building and the side lot line and extending from the rear line of the front yard to the front line of the rear yard.

Zero Lot Line. A development approach in which a building is sited on one (1) or more lot lines with no yard. Conceivably, three (3) of the four (4) sides of the building could be on the lot lines. The intent is to allow more flexibility in site design and to increase the amount of usable open space on the lot. Virtually all zoning ordinances retain yard requirements; where zero lot line developments have been permitted, they have been handled through group development procedures, or other processes which allow for site plan review. The few ordinances which specifically authorize the zero lot line approach do so as an exception to prevailing regulations and under clearly defined circumstances. In Knightdale, GR, UR, RMX, NMX, TC and HB districts allow for zero lot line development.

Zoning: A police power measure, enacted via ordinance and including both text and a map by general purpose units of local government, in which the community is divided into districts or zones within which permitted and special uses are established, as well as regulations governing lot size, building bulk, placement and other development standards. Zoning requirements vary from district to district.

Zoning Amendment: An amendment to or a change in the zoning ordinance. An amendment can take three (3) forms:

- a comprehensive revision or modification of the zoning text and map; or
- a text change in zone requirements; or
- a change in the map, i.e., the zoning designation of a particular parcel or parcels.

Zoning amendments, like enactment of the original ordinance, are legislative acts that cannot be delegated to administrative officials. According to state law, planning boards make recommendations and town councils approve or deny zoning amendments.

Zoning District: A section of a town designated in the zoning ordinance text and delineated on the zoning map, in which requirements for the use of land and building and development standards are prescribed.

Zoning Map: The map delineating the boundaries of zoning districts which, along with the zoning text, comprises the zoning ordinance.

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