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Chapter 7: DEVELOPMENT AND DESIGN STANDARDS

7.1 GENERAL PROVISIONS

7.1.1 Purposes

The purposes of this chapter include:

- (A) To encourage the proper use of the land by promoting an appropriate balance between the built environment and the preservation of open space and natural environmental resources;
- (B) To protect private and public investment through preservation of open space; protection of natural resources including the existing tree canopy and forests; providing buffers between incompatible uses and along roadways; reducing heat and air pollution; capturing carbon; and encouraging the planting of new vegetation as deemed appropriate;
- **(C)** To protect and promote the health and economic values trees, forests, open space and natural lands provide;
- **(D)** To promote water conservation/efficiency through preserving natural areas, encouraging good soil management, and encouraging the use of native and/or drought tolerant plant materials.
- **(E)** To provide proper standards that ensure a high quality appearance for Cary and promote good design while also allowing individuality, creativity, and artistic expression; and
- **(F)** To preserve and protect the identity and character of Cary, and to enhance the business economy.

7.1.2 Applicability

The requirements of this chapter shall apply to all uses for which development plan approval is required pursuant to Section 3.9 of this Ordinance.

7.1.3 Pre-Application Conference

- (A) A pre-application conference is required for most development plans submitted under Chapter 3 of this Ordinance, and thus is required for most development proposals regulated under this chapter. Pre-application conferences are not required for development plans that have already been approved and that request changes which amount to less than fifty (50) percent in non-residential square footage or less than fifty (50) percent increase in the number of lots/units.
- **(B)** At the pre-application conference, the applicant and Planning Department staff shall discuss the requirements of this chapter in order to avoid relocation of major site elements after the plan is submitted for review and approval.

7.1.4 Community Appearance, Site Design Standards, and Other Documents

This chapter contains minimum legal requirements related to site design and layout, appearance, landscaping, and building design. This chapter shall be used in conjunction with other related documents including, but not limited to, those listed in Section 1.4. These documents express Town policy and contain standards, guidelines, examples, and details needed to make this

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chapter easy to understand and apply in various situations. Some of these documents contain minimum requirements that may or may not be included within the text of this Ordinance, or may in some situations differ with this Ordinance; in such cases, the more restrictive of the two (2) requirements shall apply. The requirements of Chapter 7 may be eligible for Minor Modifications. (See Section 3.19 for applicability.)

7.1.5 Limitations on Site Disturbance

(A) Limits of Disturbance

This Section is provided for informational purposes as a general guideline about where land disturbing activities should or should not take place on a development site. On all development sites subject to this chapter, the following areas shall generally be considered to be off-limits to development or land-disturbing activities, unless otherwise specified in this Ordinance:

- (1) The Flood Hazard Area;
- (2) Required streetscape areas as measured from the ultimate right-of-way;
- (3) Undisturbed perimeter buffers, including the Thoroughfare Overlay;
- (4) Zones 1, 2, and 3 of all UTBs;
- (5) Wetlands under the jurisdiction of the Army Corps of Engineers unless otherwise permitted by this agency;
- (6) Conservation easements;
- (7) Preservation areas required by applicable conditional use zoning conditions;
- (8) Champion trees and required protection areas associated with such trees (e.g. root zone); and
- **(9)** Any other areas indicated for protection by the Planning Director.

(B) Limited Disturbance or Construction Outside Limits of Disturbance

In some cases, limited disturbance or land disturbing activities may occur within the areas to be protected provided all necessary approvals are obtained. Such activities include, but are not limited to the following:

- (1) Mitigation of development activities;
- (2) Restoration of previously disturbed or degraded areas;
- (3) Personal gardens not operated on a for-profit basis and maintained by individual homeowners;
- (4) Utility installations and emergency public safety activities;
- (5) Construction of a trail or pedestrian walkway that will provide public access;

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- (6) The enhancement of the habitat values and/or other natural resource values of an identified natural area;
- (7) Landscaping according to an approved landscaping plan; and
- **(8)** Construction of public transit amenities, as required by Section 7.10.6 of this Ordinance.

(Ord. No. 2007-04, 3-22-07; Ord. No. 2010-LDO-05, 12-16-10; Ord. No. 2011-LDO-04, 11-17-11; Ord. No. 2012-LDO-06, 8-9-12; Ord. No. 2017-LDO-01, 1-24-17; Ord. No. 2021-LDO-01, 6-24-21; Ord. No. 2022-LDO-01, 1-13-22)

7.2 LANDSCAPING, BUFFERING, SCREENING, AND TREE PROTECTION

7.2.1 Purpose

The purpose of these provisions is to establish minimum requirements for the provision and maintenance of functionally adequate, attractive screening and buffering of structures, parking areas, driveways, and other facilities and land uses, while providing standards for the protection of existing and new trees and vegetation and their root zones. These requirements are intended to carry out the following objectives:

- (A) To promote and increase design compatibility between different land uses, while ensuring attractive views from streets and adjacent properties;
- **(B)** To assist in delineating separations of spaces, structures, uses, and activities on a site, or between adjacent sites;
- (C) To shield adjacent properties from potentially adverse external impacts of development, and development from potential negative impacts of adjacent land uses and activities;
- (D) To enhance the streetscape by separating the pedestrian from motor vehicles; abating glare and moderating temperatures of impervious areas; filtering air of pollutants, fumes, and dust; providing shade; attenuating noise; and reducing the air temperature, heat, amount and rate of stormwater runoff, and visual impact of large expanses of pavement;
- (E) To promote the preservation of open space; existing tree canopy and vegetation; and natural diversity and wildlife habitat, using supplemental plantings when necessary to meet the performance criteria of this section;
- **(F)** To mitigate adverse grade changes between adjacent properties;
- (G) To improve the quality of the built and natural environments through air quality enhancements; heat reduction; carbon capture; energy conservation; reductions in the amount and rate of stormwater runoff and erosion; stormwater runoff quality improvements; and increase in the capacity for groundwater recharge; the provision of health, economic values, and social benefits; and
- **(H)** To enhance the appearance and value of both residential and non-residential properties.

PRINCIPLES OF INTERPRETATION

The Landscaping, Buffering, Screening, and Tree Protection section contains requirements for the following: perimeter buffers, streetscape and street front landscaping, tree and vegetation protection, vehicular use area landscaping, fences and walls, screening, and miscellaneous landscaping requirements.

7.2.2 General Provisions

(A) Landscaping Plans

- (1) In order to implement the requirements of this section, landscaping plans are required as part of each development plan required under Section 3.9 of this Ordinance. Plans shall be developed by individuals or professional firms having the competence and knowledge to satisfactorily develop plans required by this Section.
- (2) Landscaping plans shall be designed to improve efficiency of irrigated areas (if applicable) through minimizing slopes, preserving topsoil, and retaining stormwater drainage on-site
- (3) Landscaping plans shall meet the standards of this Section 7.2, and shall be consistent with the standards contained in the Community Appearance Manual and the Site Design Standards, which contain standards, guidelines, examples, and details needed to make this section easy to understand and apply in various situations, including examples of required plans, recommended plant species for various applications, and illustrated examples of what Cary considers to be good site design.

(B) Violations

Violations of this section are subject to fines, replacement of damaged vegetation, stop-work orders, or any combination of the penalties listed in Section 7.2.13 or Chapter 11.

7.2.3 Requirements for Perimeter Buffers and Landscape Areas

(A) Applicability

- (1) All uses subject to the requirements of this chapter shall provide an undisturbed buffer to separate that use from adjacent land uses in accordance with Table 7.2-1. The buffer shall have the width, amount of vegetation, and other features to properly mitigate negative effects of continuous land uses. Whenever new landscape material must be used, such material shall consist of native or non-invasive non-native, droughttolerant plantings to reduce the need for irrigation systems and promote restoration of a natural forest.
- (2) Within the area inside the outer perimeter of the Town Center District, including all subdistricts and conditional use districts, and individual Mixed Use Overlay Districts, the requirements of this section shall apply only to boundaries between properties located within the district and properties located outside the districts.
- (3) If an undisturbed buffer does not exist on the site, or has been disturbed as allowed in this section, then a re-vegetated natural buffer may be installed. The intent of the re-vegetated buffer is to restore the natural area (i.e., sufficient upper-story trees to achieve a closed canopy in the future and, preferably, no installation of turf grasses).

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(4) The developer of a site/subdivision development shall install the required landscaping within all streetscapes and buffers when: (1) construction activity is discontinued for more than one hundred eighty (180) days; and/or (2) the area graded exceeds the initial phase of development. In such instances, all required streetscapes and buffers shall be installed following the completion of the installation of site stabilization measures for all areas graded.

(B) Type and Width of Required Buffer

(1) Buffers Based on Land Use Class

Table 7.2-1 specifies the type of undisturbed buffer or landscaped buffer that must be in place. The buffer type is indicated by letter and the total buffer width in feet is indicated by number. Depending on the land use classification of the proposed use and the use of the adjacent property, Table 7.2-1 requires an undisturbed buffer or landscaped area (if permitted) of a particular type and a particular minimum width. Subsection 7.2.3(C) below identifies the land uses that fall within each land use class shown in Table 7.2-1. This information is also listed by use type in Table 5.1-1 of this Ordinance. Subsection 7.2.3(D) below identifies the performance standards for each buffer type (i.e., A, B, or C).

(2) Buffer Adjacent to American Tobacco Trail

A fifty (50) foot wide Type A buffer shall be provided adjacent to the American Tobacco Trail as required by Section 4.4.3(H)(4) of this Ordinance.

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TABLE 7.2-1: REQUIRED UNDISTURBED PERIMETER BUFFER/LANDSCAPED AREAS BY CLASS											
Proposed Use Class					LOPED Jse Clas	IF VACANT Adjacent Property Zoning District					
	1	2	3	4	5	6	7	Residential Zones (See [D][2] below for exceptions)	CT TC OI PDD	GC	ORD I
1	0	20 B	20 B	20 B	25 B	35 B	45 B	20 B	25 B	35 B	45 B
2	20	20	30	40	50	65	80	20	50	65	80
	B	B*	B	A	A	A	A	B	A	A	A
3	20	30	20	30	40	50	65	30	40	50	65
	B	B	B	A	A	A	A	B	B	A	A
4	20	40	30	20	30	40	50	40	30	40	50
	B	A	A	B	B	B	A	A	B	A	A
5	25	50	40	30	20	20	30	50	20	20	30
	B	A	A	B	C	C	B	A	C	C	B
6	30	65	50	40	20	20	25	65	20	20	25
	A	A	A	B	C	C	B	A	C	C	C
7	45	80	65	50	30	25	20	80	30	30	20
	B	A	A	A	B	B	C	A	B	B	C

- (1) No buffer is required between shared public uses (e.g., a park adjacent to a school, library, or other shared public facility).
- (2) * Required landscaping areas to be provided between two Class 2 uses are not subject to the ownership restrictions applied to other buffers, and may be located within the platted portion of a lot.
- (3) Once a detached dwelling has been constructed and occupied, in instances where the landscaping area (planted to a Type B standard) between two (2) type 2 uses is located within the individual building lot, the landowner(s) may remove or supplement vegetation on the lot.

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(C) Land Use Classes

The seven land use classes appearing in Table 7.2-1 include the following uses and structures (refer to Table 5.1-1 for definition of use categories):

TABLE 7.2-2: LAND USE CLASSES					
Class	Uses Included				
Class 1	Uses permitted under the Agricultural Uses category, including produce stands.				
	Cemetery.				
	Uses permitted under the <i>Park and Open Space</i> use category, except athletic fields, amphitheaters, and neighborhood recreation centers.				
	Open space: No buffer is required for any use adjacent to permanent and/or zoned open space unless it is needed to meet the buffer width and type requirements in Table 7.2-2 (e.g., open space that is part of a multifamily development plan). If this open space is not wide enough, or contains insufficient vegetation to meet the buffer type requirements, then the development is required to add additional buffer area and/or vegetation so as to meet the requirements. Buffer width and type are based on the land use on the opposite side of the open space. Setbacks from open space shall be the same as those for buffers since the open space is being used to meet buffer requirements.				
Class 2	Single-unit detached dwellings in residentially zoned districts on lots that are eight thousand (8,000) square feet in area or larger and like uses.				
	Single-unit detached dwellings on lots eight thousand (8,000) square feet in area or larger that are located on non-residentially zoned property shall be classified as vacant non-residential for determining the required buffer.				
	In addition, "underdeveloped" properties (larger size properties greater than ten (10) acres that have the potential for higher density development based on the future growth framework development category designated for the property in the Shape chapter of the Cary Community Plan) that may presently be zoned and/or used for residential uses shall be placed in a class consistent with future growth framework development category.				
Class 3	Single-unit detached dwellings in residentially zoned districts on lots of less than eight thousand (8,000) square feet and like uses (including detached patio dwellings).				
Class 4	Uses permitted under the Animal Service use category, except outdoor kennels.				
	Uses permitted under the Assembly use category.				
	Day Care Centers				
	Athletic fields (public and private).				
	Golf course.				
	Golf driving range.				
	Uses permitted under the Government Services use category, except public utility facilities.				
	Bed & Breakfast.				
	Uses permitted under the <i>Household Living</i> use category, except detached dwellings (including detached patio dwellings) and duplex dwellings.				
	Libraries.				

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TABLE 7.2-2: LAND USE CLASSES					
Class	Uses Included				
Class 4	Museums.				
	Public safety stations.				
	Neighborhood recreation centers, indoor and outdoor (public and private).				
	Nursing homes.				
	Uses permitted under the Office use category with a gross floor area on the property of fifty thousand (50,000) square feet or less when located adjacent to residential uses or zoning.				
	Parking lots as a principal use containing less than fifty (50) parking spaces.				
	Uses permitted under the Religious Assembly use category.				
	Uses permitted under the <i>School</i> use category, including pre-schools when adjacent to residential uses.				
	Uses permitted under the <i>Telecommunications Facilities</i> use category up to seventy-five (75) feet in height from the finished grade elevation to the top of the tower (not including antennae).				
Class 5	Amphitheaters, outdoor (public) seating not more than two hundred fifty (250) persons.				
	Pre-schools and day care centers when located adjacent to non-residential uses.				
	Duplex dwelling.				
	Farm markets.				
	Uses permitted under the Financial Institutions use category.				
	Uses permitted under the Group Living use category, except nursing homes.				
	Hospitals.				
	Uses permitted under the <i>Recreation/Entertainment</i> , <i>Indoor</i> use category, except neighborhood recreation centers.				
	Uses permitted under the <i>Office</i> use category with a gross floor area on the property of more than fifty thousand (50,000) square feet when located adjacent to residential uses or zoning.				
	Parking lots as a principal use containing greater than fifty (50) parking spaces.				
	Uses permitted under the <i>Public Accommodation</i> use category, except guest houses that are not located adjacent to a residential district and that have no more than one hundred fifty (150) rooms.				
	Uses permitted under the <i>Telecommunications Facilities</i> use category up to one hundred fifty (150) feet in height from the finished grade elevation to the top of the tower (not including antennae).				
	Railroad rights-of-way, including lines and/or tracks.				
	Utility substation, minor.				

	TABLE 7.2-2: LAND USE CLASSES
Class	Uses Included
Class 6	Amphitheaters, outdoor (commercial/private).
	Amphitheaters, outdoor (public) seating more than 250 persons.
	Dog kennels, outdoor.
	Uses permitted under the Food and Beverage Service use category.
	Uses permitted under the <i>Public Accommodation</i> use category, except guest houses that have 150 rooms or more and that are not located adjacent to a residential district.
	Uses permitted under the Office use category when located adjacent to a non-residential use or zoning district.
	Recreation, general outdoor (commercial/private).
	Uses permitted under the <i>Retail Sales and Service</i> use category, except farm markets and funeral homes.
	Uses permitted under the <i>Telecommunications Facilities</i> use category up to 225 feet in height from the finished grade elevation to the top of the tower (not including antennae).
	Uses permitted under the Vehicles and Equipment use category.
	Uses permitted under the Warehouse and Freight Movement use category, except outdoor storage and railroad stations and yards.
	Commuter rail transit station.
Class 7	Uses permitted under the Aviation use category.
	Uses permitted under the Industrial Service use category.
	Uses permitted under the Manufacturing and Production use category.
	Motor vehicle raceways.
	Uses permitted under the Non-Governmental Utilities use category, except minor utility substations and rail transit stations.
	Outdoor storage.
	Uses permitted under the <i>Public Accommodation</i> use category, except guest houses, that are located adjacent to a residential district.
	Public utility facilities.
	Railroad stations and yards.
	Uses permitted under the <i>Telecommunications Facilities</i> use category above 225 feet in height from the finished grade elevation to the top of the tower (not including antennae).
	Uses permitted under the Waste-Related Uses category.

(D) Types of Buffers and Landscaped Areas

(1) The three (3) types of landscaped buffers that appear in Table 7.2-1 are as follows. Detailed illustrations and supplemental information on buffer configurations are available in the Community Appearance Manual.

(a) Type A

- 1. This buffer is intended to provide the greatest degree of screening feasible and minimize visual contact between uses, creating a strong impression of total separation from the ground to a height of at least eighteen (18) feet. Vegetative material within this buffer shall meet the following criteria:
 - a) Upper-story trees shall be planted at a density of four (4) trees for every one hundred (100) linear feet of buffer, with a maximum spacing of thirty (30) feet between trees. Upper-story trees shall attain a height at maturity of no less than sixty (60) feet.
 - b) Evergreen understory trees shall be planted at a density of fourteen (14) trees for every one hundred (100) linear feet of buffer, with a maximum spacing of ten (10) feet between trees. Understory evergreen trees shall attain a height at maturity of no less than eighteen (18) feet.
 - c) Type A buffers that are wider than thirty (30) feet shall also incorporate shrubs planted at a density of ten (10) shrubs per one hundred (100) linear feet of buffer. Shrubs shall attain a height at maturity of no less than three (3) feet.
 - **d)** Type A buffers may include a wall, fence, landscaped earthen berm, planted vegetation, existing vegetation, or any appropriate combination of these elements.
- 2. The Planning Director may modify the planting criteria for a Type A buffer pursuant to this section, where shown on any development plan requiring or identifying a Type A or opaque buffer or landscape area, including such plans approved prior to the effective date of this ordinance, and/or pursuant to Section 4.3.5(D)(3) where such buffer is required as a zoning condition, if the Planning Director determines in accordance with established horticultural guidelines that achieving the desired degree of buffer opacity while maintaining existing healthy vegetation within the buffer may not be feasible due to a combination of the factors listed below, provided that the intended performance standard is achieved to the extent practicable:
 - a) type and conditions of significant vegetation remaining within the landscape area or buffer,
 - b) availability of sunlight;
 - c) dimension of required planting area;
 - d) separation between plants;

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- e) impact of installation of new plant material on root zones of any existing material;
- f) topography;
- **g)** proximity of man-made features such as utilities, buildings, sidewalks and retaining walls; and
- h) other unique site factors or conditions affecting plant growth and long-term health of the buffer, streetscape or landscape area.

(b) Type B

This buffer is intended to function as a semi-opaque screen from the ground to at least a height of six (6) feet. Vegetative material within this buffer shall meet the following criteria:

- 1. Mid- or upper-story trees shall be planted at a density of four (4) trees for every one hundred (100) linear feet of buffer, with a maximum spacing of thirty (30) feet between trees. Mid- or upper-story trees shall attain a height at maturity of no less than forty (40) feet.
- 2. Shrubs shall be planted at a density of sixteen (16) shrubs for every one hundred (100) linear feet of buffer, with a maximum spacing of eight (8) feet between shrubs. At least seventy-five (75) percent of the shrubs shall be an evergreen species locally adapted to the area.
- **3.** Type B buffers may include a wall, fence, landscaped earthen berm, planted vegetation, existing vegetation, or any appropriate combination of the elements.

(c) Type C

This buffer area is intended to function as an intermittent visual obstruction from the ground to a height of at least twenty (20) feet, and create the impression of spatial separation without eliminating visual contact between uses. Vegetative material within this buffer shall meet the following criteria:

- Upper-story trees shall be planted at a density of three (3) trees for every one hundred (100) linear feet of buffer, with a maximum spacing of forty (40) feet between trees. Upper-story trees shall attain a height at maturity of no less than sixty (60) feet.
- 2. Understory or ornamental trees shall be planted at a density of five (5) trees for every one hundred (100) linear feet of buffer, with a maximum spacing of twenty-five (25) feet between trees. Understory or ornamental trees shall attain a height at maturity of no less than fifteen (15) feet.
- **3.** Type C buffers may include a wall, fence, earth berm, planted vegetation, existing vegetation, or any appropriate combination of these elements.

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- (2) Buffer plantings shall conform to the following standards:
 - (a) The new plantings comprising the buffer shall be evenly distributed throughout the buffer. In instances where planting in a row or rows is necessary to achieve the desired performance objective, trees shall be planted in staggered rows whenever practicable. In cases where the entire buffer width may not be needed to achieve the desired performance objective of the buffer type, the remainder of the required buffer area should have a minimum spacing of trees as required by the associated buffer type.
 - (b) Buffer performance requirements must be achieved in the quickest time possible (preferably no more than five (5) years).
 - (c) When detailed information regarding existing vegetation is not available at the time of development plan approval, then a Town Zoning Compliance Officer shall determine when existing vegetation may be utilized in-lieu of new plantings prior to the approval of a Certificate of Occupancy.
 - (d) Depending on actual field conditions, additional trees and shrubs may be required in addition to the existing vegetation to meet these buffer requirements.
 - (e) In instances where planting requirement calculations produce a fraction, the plants shall be rounded up to the next whole number (e.g. five and one-tenth (5.1) required shrubs shall equal six (6) provided shrubs).

(E) Determination of Buffer Width and Responsibility for Installation

Buffer widths and installation responsibility shall be in accordance with the following:

- (a) Where a developing parcel is adjacent to a vacant parcel, then the developing parcel may provide one-half of the buffer required adjacent to the vacant land as indicated in Table 7.2-1.
- (b) Where a developing parcel is adjacent to an existing land use, then the developing parcel shall provide the full buffer required adjacent to the existing land use as indicated in Table 7.2-1.
- (c) The developing parcel next to an existing land use shall provide the full buffer required unless the existing use already has a buffer that may be credited towards the required width, or the buffer for an existing non-residential use was reduced or not required with its development plan approval.
- (d) Credit for existing buffers is not given when the existing use is residential and its existing buffer is on the same lot as the residential use; see subsection 7.2.3(J), Ownership of Buffers.

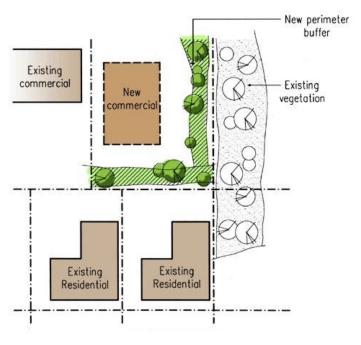
(F) Location of Buffers

(1) The perimeter buffers and/or perimeter landscaped areas required by this Section shall be located along the outer perimeter of the parcel and shall extend to the parcel boundary line or right-of-way line; however, the buffers may be located along shared access easements between parcels in non-residential developments. Within shopping centers or other non-residential centers/developments, the perimeter buffer area

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between outparcels (non-residential uses) may be provided, totally or in part, elsewhere on the site. For example, a twenty (20)-foot buffer between like uses may be shifted elsewhere on the site (preferably within the site's interior) as long as the total area is provided for. The intent of this subsection is to provide for more flexibility in site design and to potentially save large natural areas that may exist elsewhere on the site.

[Text continues on p. LDO 7-23.]



Location of Buffers

(2) Perimeter buffers or landscaped areas shall not include any portion of an existing or proposed public or private street, easement, or right-of-way. Additional buffer area shall be required when easements and other similar features intrude in the buffer.

(G) Existing Vegetation, Fences, Walls, and Berms

- (1) Existing significant vegetation within the required buffer shall be p and credited toward standards for the type of buffer required, unless the existing vegetation is seriously diseased, damaged and treatment would not be practical, or vegetation has or will give rise to a nuisance situation. Wherever practical, vegetation removal will be limited to just those portions of the vegetation area necessary to correct any problems, while the remainder of the vegetation area without problems shall be left intact.
- (2) Existing berms, walls, or fences within the buffer, but not including chain link fencing, may be used in part to fulfill the requirements for the six (6)-foot tall screen where required, provided that these elements are in a condition of good repair. Where fences or walls are used, they shall be screened pursuant to the requirements of Sec. 7.2.7(C). Other existing site features within the required buffer area which do not otherwise function to meet the standards for the required buffer shall be screened from the view of other properties or removed, as determined during review and approval of the development plan.

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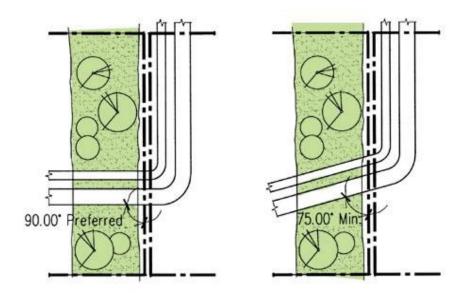
(3) If existing significant vegetation and other site features do not fully meet the standards for the type of buffer required, then additional vegetation and/or site features (including fences) shall be planted or installed within the required buffer area to meet the performance criteria outlined in this section.

(H) Development within Required Buffers

No grading, development, land-disturbing activities, or removal of vegetation shall occur within buffers or associated tree protection areas with exception of the following, unless otherwise explicitly permitted in this Ordinance. Where disturbance within the buffer is allowed, damage to existing vegetation shall be minimized to the extent practicable and supplemental planting shall be provided as necessary to meet the performance standard of the applicable buffer type.

- Sidewalks, street-side trails and public transit amenities;
- (2) Utilities, including but not limited to water and sewer lines, stormwater drainage channels or piping, and similar features, provided that no reasonable alternative location exists; and
 - (a) they are located perpendicular to the buffer or at an angle of at least seventy-five (75) degrees; or
 - (b) they are located at an angle less than seventy-five (75) degrees, and the area contained in the disturbed area is replaced with an equal amount of buffer area meeting the applicable buffer standard, in proximity to the disturbed area.
- (3) Stormwater impoundment areas or other BMPs provided that no reasonable alternative location exists.

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Development within Required Buffers

(I) Zoning Change

A revised plan will be required if changes of use or change in zoning classification occur for an existing use or parcel and such change results in a higher land use classification per criteria listed in subsection 7.2.3(C) above. The proposed use or parcel shall be brought into compliance with the perimeter buffer/landscaped area requirements of this section or as close as existing site conditions permit, as determined by the Planning Director. Compliance with this Section shall require the submittal and approval of a revised plan showing that the development is being brought into compliance to the extent practicable.

(J) Ownership of Buffers

No required buffer in a residential subdivision shall be included within any single-unit residential lot, or be wholly owned (in fee simple absolute) by the owner of an individual residential building lot zoned for residential uses. The buffers shall be owned by a homeowner's association or be owned outright by a third party or shall be otherwise divided so that the buffer is not removed, modified, or damaged.

- (1) Any required buffer (including those required as a zoning condition) for a residential development shall not be credited toward meeting the lot size requirements. The preferred method is that the residential buffer be a separate lot and owned by a separate entity (e.g., a homeowners association).
- (2) Where control and/or ownership of the buffer is through a property owner's association, any modifications, removal, or damage to the buffer by an adjacent homeowner shall be prohibited.

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- (3) The property owner's association or owner shall be responsible for any violation related to the buffers in accordance with Section 7.2.13, *Maintenance Responsibility, Replacement of Damaged Vegetation, and Associated Fines.*
- (4) Buffers may be included within residential lots only when all of the following conditions are met:
 - (a) The subdivision is less than ten (10) acres in size and has no homeowners association; and
 - (b) There is no reason for the formulation of a homeowner's association (e.g. covenant, other common areas or engineered stormwater control structures); and
 - (c) The buffer is placed within a permanent conservation easement or other legal instrument dedicated to the Town (required documents must be provided prior to recording the plat for the impacted area).

(K) Use of Off-Site Landscape Easements

Off-site permanent landscape easements may be used to meet required buffer areas, provided that the size or shape of the parcel significantly restricts the ability to reasonably use the property and meet the buffer requirements. These easements must be recorded prior to or in conjunction with the approval of the development plan. The easement must not be under the same ownership as the developing site.

(L) Distance of Buildings and Structures from Required Buffers

Building, structures, parking lots and vehicular use areas shall be set back from required buffers or streetscapes as specified in Section 6.3.2(C) of this Ordinance.

(Ord. No. 2009-LDO-01, 2-12-09; Ord. No. 2010-LDO-05, 12-16-10; Ord. No. 2011-LDO-04, 11-17-11; Ord. No. 12-LDO-01, 2-23-12; Ord. No. 2021-LDO-01, 6-24-21)

7.2.4 Streetscape Landscaping

(A) Preservation of Existing Vegetation Along Roadways

All uses that require development plan approval shall preserve existing healthy vegetation (as described below) within the streetscape along all existing and proposed streets and thoroughfares.

(1) Residential Development

Natural and dense vegetation along streets is critical to maintain, especially along major collectors and thoroughfares, to mitigate the impact of these roadways. For this

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reason, existing healthy vegetation shall be supplemented, if necessary, to achieve a Type A (opaque) standard.

(2) Non-Residential Development

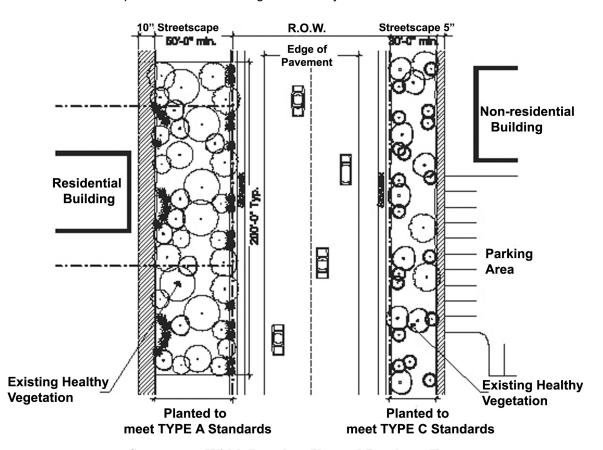
- (a) Selective thinning of trees less than six (6) inches DBH may occur to improve the viability of trees within the streetscape. An evaluation of the existing vegetation and recommendation for thinning shall be prepared by a certified arborist or by a certified forester and submitted in support of any request involving the removal of trees two (2) inches in DBH or larger. Viable ornamental trees two (2) inches in caliper or larger must be saved.
- (b) An applicant may request an exception to remove a portion of existing trees and undergrowth less than two (2) inches DBH to improve the viability of the remaining trees or to allow for greater visibility of the site, unless this vegetation is needed to meet the minimum planting requirements for a streetscape. Viable ornamental trees two (2) inches in caliper or larger must be saved.
- (c) All proposals for thinning streetscapes shall be accompanied by a report from a registered landscape architect, certified arborist, or other such specialist justifying the request and containing a more detailed tree survey showing all plant material two (2) inches in caliper or larger that is located within the area of streetscape to be thinned. The Planning Director may require that a portion of existing saplings be left intact to help ensure that the streetscape can function as a natural tree stand.
- (d) Non-Residential sites containing existing forest vegetation within an area designated as the streetscape that is subsequently removed due to construction-related activity shall be revegetated to partially re-establish a native forest condition meeting the following criteria:
 - 1. Existing vegetation or planted upper-story deciduous and evergreen trees shall attain a height at maturity of no less than sixty (60) feet.
 - 2. At least fifty (50) percent of the required upper-story trees, and at least seventy-five (75) percent of the required shrubs shall be native, evergreen species locally adapted to the area.
 - 3. The re-established forest shall contain rows of upper-story trees with each row spaced at least fifteen (15) feet apart. Within each row of upper-story trees the trees shall be spaced no wider than twenty (20) feet between tree trunks. The new forest shall also contain native ornamental trees spaced no wider than twenty (20) feet, and one shrub six (6) feet high randomly placed for every ten (10) feet of streetscape length.
 - 4. A re-forested streetscape may include a wall, fence, or landscaped earthen berm, but must also include all required plant material required by this section.

(B) Installation of Planted Vegetation Along Roadways

The Director may allow the installation and maintenance of a planted streetscape in lieu of preservation of the existing vegetation along any streets which are adjacent to the site upon sound justification related to topography, drainage, site configuration, quality and quantity of existing healthy vegetation, the road construction requirements, or other similar issue. If a planted streetscape is permitted, then the following requirements shall apply:

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- (1) Any required vegetation shall be installed to reforest the streetscape in an amount comparable to what existed naturally (given time for maturity at a later date).
- (2) Existing healthy vegetation may be removed after review and approval by the Planning Director for the following purposes:
 - (a) to achieve required automobile sight distance triangles at intersections, driveways, or ingress/egress points;
 - (b) to provide drive access to the site;
 - (c) to locate sidewalks, street-side trails and public transit amenities;
 - (d) to locate residential and non-residential monument signs, provided that no trees greater than six (6) inches dbh are removed for such purpose unless there is no alternative sign location of lesser impact to vegetation outside of the sight distance triangle that would provide adequate visibility for the sign;
 - (e) to locate stormwater impoundment areas or other BMPs provided that no reasonable alternative location exists.
- (3) The applicant may appeal the Director's decision by electing to have the development plan forwarded to Zoning Board of Adjustment for consideration.



Streetscape Width Based on Use and Roadway Type

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(C) Required Width of Streetscapes for all Types of Development

- (1) The width of the streetscape for non-residential uses shall be a minimum of thirty (30) feet along thoroughfares and collectors designated on the Cary Comprehensive Transportation Plan or otherwise designated by the Town, as measured from the ultimate right-of-way line, except as provided.
- (2) For residential developments along thoroughfares, the width of the streetscape shall be a minimum of fifty (50) feet, except as provided; along collectors, a minimum of thirty (30) feet shall be provided, except as provided.
- (3) To protect the historic character of the Carpenter community, an historic character preservation streetscape is hereby established. New development (residential and non-residential) located along the following streets shall provide a fifty (50) foot historic character preservation streetscape outside the right-of-way and/or any public access easements:
 - (a) Both sides of Morrisville Carpenter Road from its intersection with Good Hope Church Road to its intersection with Louis Stephens Drive;
 - **(b)** Both sides of existing Good Hope Church Road from its intersection with Morrisville Carpenter Road to a point one thousand one hundred (1,100) feet north;
 - (c) Both sides of Saunders Grove Lane;
 - (d) The west side of Louis Stephens Drive from its intersection with Morrisville Carpenter Road to a point nine hundred (900) feet north; and
 - (e) The west side of Louis Stephens Drive from its intersection with Morrisville Carpenter Road to a point five hundred (500) feet south.
- (4) If existing healthy vegetation is located within the streetscape, a ten (10) foot building/five (5) foot vehicular use area setback from the streetscape is required.
- (5) According to Section 7.2.10, Allowable Modifications and Reductions, the Planning Director may allow averaging of the width of a residential streetscape to no less than thirty (30) feet only if the remaining streetscape effectively mitigates the impact of the adjacent roadway (i.e., through the use of walls or berms with a substantially more intensive landscape plan). Only the Zoning Board of Adjustment may permit other reductions in buffer or streetscape widths.
- (6) Non-residential developments located on local or private streets shall provide a fifteen (15) foot streetscape. In situations where property across the street is zoned or used for residential purposes, the streetscape shall be installed in accordance with the Type A standards.
- (7) The Zoning Board of Adjustment may reduce the prescribed width of streetscape to as little as ten (10) feet at the time of development plan approval. On redeveloped sites or existing non-conforming sites, the staff may reduce the streetscape to no less than the streetscape shown on a previously approved plan for the site to promote redevelopment and reuse of existing sites where it is impractical to meet current requirements (see Section 7.2.10, Allowable Modifications and Reductions). The applicant shall submit a statement justifying the reduction based on the below criteria:

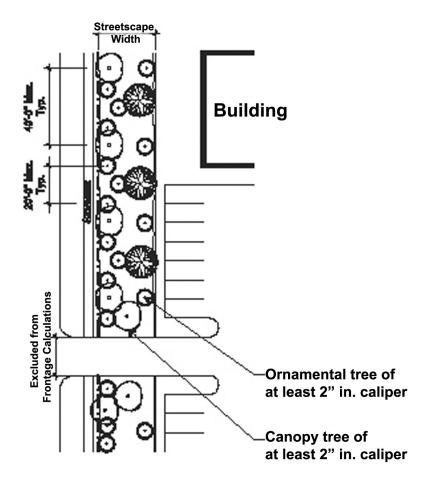
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- (a) The relationship of existing topography to the finished street grades.
- **(b)** The type, amount, and location of existing vegetation within thirty (30) feet of the right-of-way line.
- (8) All streetscapes are to be made up of existing trees and supplemented if necessary, unless approved by the Planning Director (see subsection 7.2.4(A)).

(D) Plantings in Streetscape

(1) General Provisions

- (a) The property owner or developer shall preserve existing healthy trees.
- **(b)** The calculation of road frontage to meet the spacing requirements for trees shall not include driveway widths measured at the right-of-way line.
- (c) In instances where planting requirement calculations produce a fraction, the plants shall be rounded up to the next whole number (e.g. five and one-tenth (5.1) required shrubs shall equal six (6) provided shrubs).



Typical Streetscape Plantings

(2) Upper-story Trees

- (a) The property owner or developer shall install three (3) upper-story trees at least two (2) inches in caliper for each one hundred (100) linear feet of streetscape. The maximum spacing between upper-story trees shall be forty (40) feet.
- **(b)** If existing trees that meet the intent of the upper-story tree requirement are preserved, then the requirement shall be reduced proportionally.
- (c) Upper-story trees shall be planted at appropriate distances from public rights-of-way, sidewalks, and other utilities as required by the Land Development Ordinance and the Community Appearance Manual.
- (d) Within historic character preservation streetscapes, upper-story trees shall be native species, at least fifty percent (50%) of which shall be evergreen. Trees shall be planted at a density of four (4) trees per one hundred (100) linear feet of streetscape, installed in an irregular manner to mimic a natural forest stand.

(3) Understory/Ornamental Trees

- (a) Where the required streetscape is thirty (30) feet or less in width, the property owner or developer shall install or preserve five (5) deciduous understory or ornamental trees at least two (2) inches in caliper for each one hundred (100) linear feet of streetscape. The maximum spacing between understory/ ornamental trees shall be twenty (20) feet except as noted in Section 7.2.4(D)(3)(c).
- (b) Where the required buffer width is greater than thirty (30) feet and less than fifty (50) feet, one (1) additional understory/ornamental tree shall be provided every one hundred (100) linear feet for every four (4) additional feet of buffer width (or portion thereof) beyond thirty (30) feet.
- (c) Where the required buffer is fifty (50) feet or greater in width, the property owner or developer shall install or preserve ten (10) deciduous understory/ornamental trees at least two (2) inches in caliper for each one hundred (100) linear feet of streetscape.
- (d) Sites with streetscapes that meet all LDO requirements and have a minimum width of at least thirty (30) feet, may cluster understory or ornamental trees in accordance with the following requirements:
 - (i) Up to twenty percent (20%) of the required understory or ornamental trees (or a minimum of two (2) along a specific frontage) may be relocated elsewhere in the streetscape along the same frontage;
 - (ii) Gaps that are created between understory or ornamental trees may not exceed eighty (80) feet in length; and there shall be a minimum of two hundred (200) linear feet between gaps.
 - (iii) When understory or ornamental trees are removed from existing streetscapes, at least an equal number of replacement trees shall be provided and the total diameter of all replacement trees shall be a minimum of fifty percent (50%) of the total tree diameter removed.

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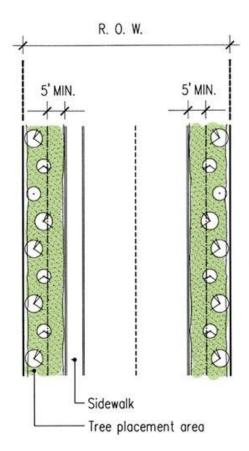
(e) Within historic character preservation streetscapes, understory trees shall be native evergreen species and shall be planted behind the required upper-story trees as viewed from the right-of-way or public access easement. Trees shall be planted at a density of fourteen (14) trees per one hundred (100) linear feet of streetscape, in a single row parallel to the right-of-way or public access easement. The intent is for these plantings to mimic a traditional fenceline planting.

(4) Power Line Encroachment

Where overhead power lines encroach into the streetscape or buffer, each required upperstory tree may be replaced with two (2) understory trees. The selected tree type may reach a maximum height of twenty to twenty-five (20-25) feet at maturity.

(E) Tree Placement

Trees shall be installed on the thoroughfare side of any berm or screen planting, and no less than five (5) feet from a sidewalk or trail, or from back of curb where no sidewalk exists or is planned within the thoroughfare right-of-way. Trees should be installed in a staggered fashion, or in clusters or groupings of upper-story and/or understory trees in combination with associated plantings. Trees may be planted in a linear arrangement parallel to the street, depending upon the area (e.g., downtown areas, neotraditional developments, etc.). In order to prevent conflicts and allow for appropriate maintenance, canopy trees shall be placed at least ten (10) feet from electrical transformers and twenty (20) feet from light poles.



Tree Placement

(F) Pervious Area and Soil Volume for New Trees

A minimum of three hundred (300) square feet of pervious ground area and nine hundred (900) cubic feet of total soil volume for roots per upper-story tree shall be provided, unless two (2) or more upper-story trees are sharing one (1) planting bed, in which case at least seven hundred twenty (720) cubic feet of soil must be provided per upper-story tree. Where possible, smaller individual planting areas should be combined to allow for larger planting areas that contribute to healthier trees. Any planting area bounded by an impervious surface should be at least ten (10) feet wide. No upper-story tree should be planted closer than five (5) feet to a sidewalk, paved areas, or other impervious surface. Modifications to soil volume requirements may be granted pursuant to Section 7.2.10(C).

(G) Stabilizing Steep Slopes

All slopes two to one (2:1) and steeper shall be stabilized with permanent slope retention devices or suitable combination of plantings and retention devices. Slopes greater than three to one (3:1) shall not be stabilized with turf grass (e.g., grasses that need to be mowed), but with other permanent ground cover such as those listed in the Standard Specifications and Details Manual, with preference given to native species. No permanent overhead spray-type irrigation is allowed on slopes greater than two to one (2:1).

(H) Planting Criteria for Steep Slopes Adjacent to Rights-of-Way

Where the right-of-way is bounded by slopes steeper than three to one (3:1) or is otherwise not suitable for the planting of upper-story trees, the following standards shall apply:

- (1) If natural areas are permitted to be removed and/or graded, the streetscape slope shall be somewhat level (no greater than four to one [4:1]) planting strip for upper-story trees at least ten (10) feet wide, located parallel to both sides of the thoroughfare. The planting strip shall be positively drained throughout. Upper-story trees required by this section may only be located closer than five (5) feet to the curb or sidewalk on certain streets, such as those found in neo-traditional developments, or when trees which do not exceed twenty-five (25) feet in height at maturity are used, but in no case shall they be closer than two and one-half (2 1/2) feet. Plantings may be located in the right-of-way only with the prior approval of the authority or agency that controls the right-of-way (e.g., Town of Cary, Department of Transportation, or other agency).
- Existing significant vegetation within thirty (30) feet of and extending to the right-of-way may be used to satisfy the requirements of this section, provided that:
 - (a) The existing vegetation meets the requirements of this section.
 - **(b)** The vertical grade change is less than four (4) feet above or below the existing or proposed permanent features of the thoroughfare.

(I) Ownership of Streetscapes

The ownership of streetscapes shall follow the same requirements as stated in Section 7.2.3(J) Ownership of Buffers.

(Ord. No. 2009-LDO-01, 2-12-09; Ord. No. 2010-LDO-05, 12-16-10)

Supp. No. 53 LDO 7-32.1

7.2.5 Tree Protection, Tree Surveys, and Replacement Trees

(A) Tree Protection and Tree Surveys

(1) Intent and Purpose

It is the intent of the Town Council to preserve trees and other vegetation through buffer (including urban transition buffer), streetscape, and floodplain regulations, and through champion tree preservation requirements, to the extent practical and reasonable. Preserving trees and vegetation on a site should not prevent the reasonable development of a site, given its zoning classification. This section 7.2.5 is designed to recognize unique site conditions and to allow flexibility in meeting the requirements.

The Town Council finds that preserving trees and healthy vegetation on a site during development:

- (a) Maintains and enhances the visual character and aesthetic qualities and appearance of the community and preserves community values;
- (b) Conserves and enhances the value of buildings and land
- (c) Conserves the natural resources and environmental quality of the Town and its environs;
- (d) Screens and softens the impact of construction and buildings and balances the scale of buildings;
- **(e)** Preserves wildlife habitat, controls surface water runoff, and moderates temperatures; and
- (f) Conserves water due to increased absorption ability and reduced heat effects.

(2) Requirement to Protect Champion Trees

No champion tree may be disturbed or removed except as specifically allowed by this Ordinance. Preserved champion trees and their associated tree protection areas must be shown on development plans and reuse/redevelopment plans as located in a buffer, streetscape, private open space, or other designated permanent tree protection area. In addition, champion trees permitted to be included on a residential lot must be shown on plans for the purpose of designating tree protection fencing during the development and prior to the certificate of occupancy for buildings/structures.

(3) Tree Survey Requirements

A tree survey aids in the protection of trees by locating trees on a site before development plans are fully designed so modifications can be made to the plans to protect trees. A tree survey prepared by a licensed surveyor, engineer, or landscape architect is required with the submission of all development plans. Surveys shall have been reviewed and signed by a certified arborist to confirm tree species, especially understory champion trees. A tree survey is required for development plans and reuse/redevelopment plans that propose to disturb areas that contain or are within the critical root zone of champion trees or specimen and significant trees within required buffers, streetscapes, and floodplains.

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The survey shall, at a minimum, provide the following information:

- (a) The number, caliper size, and location of either:
 - All champion and upperstory specimen trees within all areas to be disturbed, all champion trees within one hundred (100) feet of all areas to be disturbed, and all upperstory specimen trees within fifty (50) feet of all areas to be disturbed; or
 - (ii) All champion trees located throughout the development plan boundaries, all upperstory specimen trees located within any buffer or streetscape, and all upperstory specimen trees located within fifty (50) feet of any buffer or streetscape; and
- **(b)** All significant trees within the interior ten (10) feet of all buffers, streetscapes, and floodplains; and,
- (c) A general description of the forest or forest stands on site located outside of buffers, streetscapes, and floodplains, including information on the type of trees and general size ranges.

(4) Incentives and Design Flexibility

Section 7.2.10 provides incentives and design flexibility for preserving existing healthy trees and forest stands and for protecting the critical root zone of specimen trees located outside of buffers, streetscapes, and floodplains. For example, the Planning Director may permit the exchange of trees otherwise required to be preserved for the preservation of trees within certain non-residential buffers and may grant parking reductions if trees or forest stands that are not otherwise required to be preserved or are located outside of buffers, streetscapes, and floodplains, are preserved.

(5) Definitions

For purposes of Sections 7.2.5 and 7.2.10 of this Ordinance, the following definitions apply:

- (a) Adversely impacted means that twenty-five percent (25%) or more of the critical root zone of a champion tree will be, or, within the three (3) years prior to the date of application, was disturbed.
- (b) Disturbed means any use of land that results in a change in the natural cover or topography. This may include the grading, digging, cutting, scraping, compaction, or excavation of soil, placement of fill materials, paving, construction, substantial removal of vegetation, or any activity which bares soil or rock or involves the diversion or piping of any natural or man-made watercourse. Routine maintenance of landscape areas is not included as "land disturbance."
- (c) Grouping means that the critical root zone of two (2) or more champion trees or champion tree(s) and specimen tree(s) overlap.
- (d) Open Space means all buffers, streetscapes, or floodplains; open space required through rezoning conditions; permanent tree protection areas; designated community gathering spaces; bonus open space for conservation residential subdivisions; and other non-regulated permanent open space.

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- (e) Large Champion Tree means any upperstory champion tree forty (40) caliper inches and larger or any understory champion tree fifteen (15) caliper inches and larger.
- (f) Small Champion Tree means any upperstory champion tree less than forty (40) caliper inches or any understory champion tree less than fifteen (15) caliper inches.
- (g) Prominent Location means areas: along any thoroughfare or collector roadway; along a public/private street interior to the site; surrounded by buildings/homes on at least two (2) sides; or immediately adjacent to or within twenty (20) feet of a public greenway easement or public greenway property boundary.
- **(h)** Tree protection area means areas that are required by this ordinance to be encircled and enclosed within a tree protection fence.
- (i) Tree protection fencing means the fencing required by Section 7.2.5(B)(2) of this Ordinance.

(B) Tree Protection During Construction

(1) Owner's Responsibility

During development of the property, the owner, developer, and/or builder shall be responsible for the erection of tree protection fencing to protect existing and/or installed vegetation from damage during development and prior to certificate of occupancy for buildings/structures. Any disturbance within the boundaries of such tree protection areas that is not authorized by the terms of this Ordinance shall result in fines as identified in Section 11.5.2(B)(2)(b), in addition to any other fines and replanting requirements for the removal or damage of vegetation within tree protection areas.

(2) Tree Protection Fencing

(a) Where Required

All existing trees and vegetation that are to be preserved shall be completely encircled and enclosed within a fence that meets the requirements of this Ordinance before grading begins. Additionally, tree protection fencing shall be required around champion trees and shall extend in a circular manner a distance of at least one and one-quarter (1.25) feet from the tree for each inch of caliper (excluding existing and undisturbed non-pervious area on redevelopment/reuse sites). The distance may be reduced if allowed under Section 7.2.10 of this Ordinance. Tree protection fencing of areas adjacent to existing and proposed roadways is also required. Tree protection fencing is required on all Town transportation projects that are adjacent to streetscapes or buffers. Existing site conditions shall be taken into consideration in determining the exact location of any tree protection fencing and staff may authorize field adjustments to the amount of tree protection fencing needed.

(b) Type of Tree Protection Fencing

All tree protection fencing required by this section shall be four (4) feet orange polyethylene laminar fencing a minimum four (4) feet high and of durable construction. Passive forms of tree protection may be utilized to delineate tree

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save areas that are remote from areas of land disturbance at the discretion of the Planning Director.

(c) Signage

Signs shall be installed on the tree protection fence visible on all sides of the fenced-in area (minimum one (1) on each side and/or every three hundred (300) linear feet). The size of each sign must be a minimum of two (2) feet by two (2) feet and shall contain the following language in English and Spanish: "TREE PROTECTION ZONE, KEEP OUT."

(d) When Required

The tree protection fencing shall be clearly shown on the development plan. No construction, grading, equipment or material storage, or any other activity shall be allowed within the tree protection area. Tree protection fencing shall be maintained until the final site inspection prior to the Certificate of Occupancy is scheduled (including any required perimeter buffer for single-unit dwelling construction). The tree protection fencing shall be removed prior to final site inspection for the Certificate of Occupancy.

(3) Disturbance

Disturbance within the area required to be designated as a tree protection area, shall occur only if approved by staff on the development plan. If such a disturbance is permitted for reasons such as location of minor utility lines, the following preventive measures shall be employed:

(a) Clearing Activities

The disturbance of land, including disturbance caused by the removal of trees adjacent to tree protection areas can cause inadvertent damage to the trees in the tree protection area. If trees are being removed adjacent to tree protection areas, a minimum one and one-half (1 1/2)-foot trenches must be cut along the limits of land disturbance, so as to cut, rather than tear, roots. Trenching shall be required for the protection of specimen and/or champion tree critical root zones immediately adjacent to or within the land disturbance area (see Community Appearance Manual for further guidance).

(b) Soil Compaction

Where compaction might occur due to traffic or the transportation of materials through the tree protection area, the tree protection area must first be mulched with a minimum four (4)-inch layer of processed pine bark or wood chips or a six (6)-inch layer of pine straw (see Community Appearance Manual). Equipment or materials storage shall not be allowed within tree protection areas.

(C) Protection of Champion Trees

(1) Intent/Purpose

One purpose of this subsection is to protect healthy champion trees during the development process. This shall be accomplished through the review and implementation of development plans and reuse/redevelopment plans. Trees,

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including champion trees located on existing single-unit lots, that are otherwise not subject to regulation under Chapter 7 of this Ordinance, are not subject to these requirements. Flexibility in site design is provided for in Section 7.2.10 which permits area used to preserve champion trees that is not otherwise required to be preserved to be offset by deducting area from other required landscape/buffer areas. No champion tree may be removed during development, unless the approval criteria of Section 7.2.5(D) are met and the removed champion tree is replaced pursuant to Section 7.2.5(E). In support of any application which requests removal of a champion tree, the applicant must submit a report from a certified arborist that addresses the criteria of Sections 7.2.5(C) (2) and (D).

(2) Priority Order For Preserving Champion Trees

When applicants are designing development plans, champion trees and their critical root zone shall be preserved in the following priority order (which order shall be reviewed when the decision-making authority is making a determination as to whether a plan is in compliance with Section 7.2.5):

- (a) Tier 1 Champion Tree (excludes pine trees):
 - (i) Any champion tree grouping located in a prominent location;
 - (ii) Any single large champion tree located in a prominent location;
 - (iii) Any single small champion tree located in a prominent location;
 - (iv) Any champion tree grouping located in a non-prominent location; and
 - (v) Any single large champion tree located in a non-prominent location.
- **(b)** Tier 2 Champion Tree:
 - Any single small champion tree, excluding pine, located adjacent to other open space areas;
 - (ii) Any single small champion tree, excluding pine, located in a non-prominent location;
 - (iii) Any single champion tree, excluding pine, that is forked (see champion tree definition), located anywhere on site; and
 - (iv) Any single champion pine tree located anywhere on site.

(D) Administrative Approval of Removal of Champion Trees

- (1) The Planning Director shall administratively approve the removal of any champion tree if the criteria of either (a), (b), (c) or (d) below are met.
 - (a) After exhausting the allowable modifications/reductions in Section 7.2.10, the tree is adversely impacted by one (1) of the following:
 - (i) Required road connections;

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- (ii) Required sanitary sewer or storm drain lines;
- (iii) Public infrastructure improvements made or to be made by others;
- (iv) Required stormwater treatment devices located in geographically and topographically appropriate areas; or
- (v) Town design standards or requirements that limit the reasonable location of new structures and expansions to buildings and/or other features such as parking and private streets on the site (e.g. requirements for the buildings to front on streets, access points, and similar).
- (b) All the following criteria have been met:
 - (i) All allowable modifications in Section 7.2.10 have been exhausted; and
 - (ii) The tree is included in the Tier 2 champion tree list;
 - (iii) The total site consists of at least thirty percent (30%) open space or at least fifteen percent (15%) open space if located in the Town Center Zoning District or on a reuse/redevelopment site.
- (c) After exhausting the allowable modifications/reductions in Section 7.2.10, and due to the site's topography and/or in order to meet town design standards or requirements (e.g., roadway elevations, sidewalks, etc.), the finish site elevation will result in the champion tree critical root zone area being ten (10) feet or more above or below grade on more than one (1) complete side of the tree.
- (d) Based upon a certified arborist's report, a large champion tree has a life expectancy of less than ten (10) years and one (1) or both of the following exist:
 - (i) Twenty-five (25) percent or more of the tree's canopy is dead/dying; and/or
 - (ii) Two (2) or more major limbs are dead/dying.

Replacement pursuant to Section 7.2.5 (E) shall be required if the champion tree meets this criteria and is removed.

(2) The Zoning Board of Adjustment shall review and take action on any other request to remove a champion tree as a Minor Modification pursuant to Section 3.19.

(E) Replacement of Champion Trees

- (1) When a champion tree is removed during construction, or is dying or dies within one (1) year following completion of construction pursuant to a development plan for a site that is not located in the Town Center District and is not a reuse/ redevelopment site, the applicant or developer shall replace such champion tree as follows:
 - a. Trees of similar type must be planted at least thirty (30) feet from any other tree such that the total caliper inches of trees planted is no less than the caliper inches of the tree removed:

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- b. The size of such replacement trees at the time of installation shall be a minimum of two and one-half (2 1/2) inches in caliper;
- c. Tree protection areas that are not in required open space may, if placed in private permanent open space, be credited towards this replacement requirement at one hundred fifty percent (150%) of the caliper inches of the trees preserved for healthy hardwood trees a minimum of two (2) caliper inches in size and healthy evergreen trees a minimum of four (4) caliper inches in size; and
- d. If sufficient area does not exist on the site to plant replacement trees, the applicant or owner must coordinate with Town staff to design and implement a plan to plant the required replacement trees on town properties, town-maintained properties, and/or other public property within the Town's jurisdiction. If the Town determines this is not feasible, fines shall be assessed in accordance with Section 11.5.2(B)(2)(d).
- (2) When a champion tree is removed during construction, or is dying or dies within one (1) year following completion of construction pursuant to a development plan on a site located within the Town Center District or on a reuse/redevelopment site, the applicant or developer shall comply with the requirements of section 7.2.5(E)(1), except that the total caliper inches of trees planted may be less than the diameter of the tree removed if it is not practical to replant the required number and size of trees spaced at least thirty (30) feet from any other tree on the same site or any adjacent property under common ownership. The maximum size of any replacement tree shall be three (3) caliper inches.
- (3) In consultation with the Town staff, acceptable replacement trees shall be determined by a person qualified by training or experience to have expert knowledge of the subject. Alternatively, the valuation of trees removed may be established in accordance with standards established by the International Society of Arboriculture and replaced with trees of equal dollar value.
- (4) Replacement trees shall be maintained through an establishment period of at least three (3) years, except that replacement trees planted in association with development of detached dwellings on an individual lot shall have an establishment period of only one (1) year. The property owner and developer shall execute a landscape agreement guaranteeing the survival and health of all replacement trees during the establishment period and guaranteeing to replace any replacement tree(s) that does not survive the establishment period in good health as determined by a certified arborist.

(F) Preservation and Removal of Trees on Town Property

(1) Preservation on Town Property

- (a) The Town shall have the right to plant, maintain, and remove trees and vegetation on all Town property as may be necessary to ensure public safety or to preserve or enhance the symmetry and beauty of Town property. The Town also may remove any Town-owned tree, shrub, or part thereof that is in an unsafe condition, which by its nature is injurious to sanitary sewers, electrical power lines, gas lines, water lines, or other public improvements, or which is infected with any injurious fungus, insect, or other pest.
- **(b)** This section does not prohibit the planting of upperstory trees or shrubs by adjacent property owners on Town property, provided that the selection and

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location of said trees or shrubs complies with the planting guidelines developed by the Community Appearance Manual or other documents and is approved by the Town.

(2) Injury or Obstruction to Trees on Town Property Prohibited

No person shall, without prior written permission from the Town, place or maintain upon the ground in any public street right-of-way or Town property any stone, cement, or other impervious matter or any fill material in a manner that may obstruct the free access of air and water to the roots of any tree or shrub in any such street right-of-way or Town property. Any person who is erecting, repairing, altering, or removing any building or structure shall place a guard or protector around any tree or shrub on Town property so as to prevent injury to such tree or shrub.

(G) Removal of Unsafe, Injurious, or Infected Trees on Private Property

- (1) The Town may cause to be removed from private property any tree, shrub, or part thereof which is or contributes to a public nuisance.
- (2) The Town or its agent may enter upon private property to trim, treat, or remove any tree or shrub infected by any parasite, insect, or pest, when necessary to prevent the breeding or scattering of any parasite or pest and to prevent danger to persons, property, or trees and shrubs planted in public street rights-of-way or other Town property.

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- (3) Prior to exercising the authority conferred by this section, the Town shall give the owner an opportunity to correct the condition by ordering the corrective action be taken. The order shall be sent by certified or registered mail to the owner of the property in question, and shall be acted upon by the owner or occupant within fourteen (14) days from the date he or she receives the order. If, after fourteen (14) days, the owner or occupant has not corrected the condition or undertaken action that would lead to a timely correction of the condition, then the Town may enter upon the property, perform the work necessary to correct the condition, and bill the owner or occupant for the actual costs incurred in addition to an administrative fee.
- (4) For trees located within open space, the determination of whether a tree or trees are unsafe, injurious, dead, or dying shall be made only by the Town or its recognized representative.

(H) Waivers in Emergencies

During emergencies, such as windstorms, ice storms, fire, or other disasters, the Town Manager may waive the requirements of this section in order to avoid hampering private or public work to restore order in the Town. This section shall not be used, however, to otherwise circumvent the requirements of this Section 7.2.

(I) Clear Cutting of Trees and Other Vegetation

- (1) The removal or clear cutting of trees and other existing vegetation on undeveloped or under-developed sites within the corporate limits or extra-territorial jurisdiction is prohibited except as otherwise permitted in this Ordinance.
- (2) Any clear cutting or vegetation removal on vacant, undeveloped, or underdeveloped sites must be done in accordance with an approved development plan or in accordance with the Tree Clearing Certificate process in Section 3.22.
- (3) Trees and other existing vegetation shall be maintained within existing UTBs consistent with the requirements of this Ordinance and state law. Removal of existing trees and vegetation without approval from the Town and/or the State shall be a violation of this Ordinance, and shall be subject to the requirements and penalties of Sections 7.2.9(H), 7.2.13 and Chapter 11 of this Ordinance.

(Ord. No. 2009-LDO-01, 2-12-09)

7.2.6 Parking Lot Landscaping

(A) Landscaping Requirements in Parking Areas and Vehicular Use Areas

All vehicular use areas shall contain at least one (1) upper-story tree for every seven parking spaces required. If overhead utility lines are present and would impair the growth of an upper-story tree, two (2) understory trees fifteen (15) to twenty-five (25) feet in height at maturity may be used instead of one (1) upper-story tree. All vehicular use areas used for parking shall be screened from the view of adjacent properties and streets by evergreen plantings that will attain a height of three (3) feet within three (3) years of planting. The use of shrubs and ground covers is greatly encouraged in parking area islands and along the borders of parking areas.

(B) Existing Vegetation

Existing healthy, well-formed upper-story trees may be counted toward the requirements of this section, provided that these trees are protected in accordance with Section 7.2.5, *Tree*

Protection and Replacement, before and during development of the site and maintained thereafter in a healthy growing condition.

(C) Design Standards

The design of the vehicular use area with landscaped areas, and the selection of plant materials, shall conform to the following standards:

- (1) Install one (1) upper-story tree for every seven (7) parking spaces as required (see paragraph (A) above).
- (2) Trees shall be selected for their appropriateness based on site conditions from the Standard Specifications and Details Manual.
- (3) All upper-story trees shall not be planted any closer than five (5) feet, to the edge of the parking area pavement or curb.
- (4) A parking lot consisting of fewer than ten (10) spaces may incorporate the required upper-story trees around its perimeter. These parking lot trees shall be located no farther than ten (10) feet from the back of curb.
- (5) Only upper-story trees shall be used for perimeter planting areas and interior parking area islands. For auto sales and rental lots understory trees may be used.
- (6) All trees shall be evenly distributed throughout the parking areas and parking perimeter at the required ratio.
- (7) No more than fourteen (14) continuous parking spaces shall be allowed without a minimum of one (1) landscape island containing an upper-story tree. In developments using double-sided parking bays, a parking lot island measuring no less than eighteen (18) feet square may be provided in a staggered pattern to provide no more than twenty-eight (28) contiguous spaces.
- (8) The size of parking area landscape islands and upper-story tree placement shall be as specified in the Community Appearance Manual.
- (9) All planting medians and/or islands containing a tree shall be at least ten (10) feet long by ten (10) feet wide from back of curb to back of curb, with a minimum of three hundred (300) square feet of space per upper-story tree. Linear planting strips between the lengths of parking isles are strongly encouraged rather than numerous small one (1) tree islands. If a linear strip is used, fifteen (15) shrubs per one hundred (100) linear feet must be planted in addition to the required trees.
- (10) A continuous linear island no less than ten (10) feet in width [fifteen (15) feet in width if sidewalk is included in island] shall be installed in off-street parking areas approximately every one hundred twenty-two (122) linear feet (one (1) linear median to every two (2) double-loaded parking bays) in one (1) direction for vehicular surface areas exceeding forty thousand (40,000) square feet. Other design options may be approved provided that the intent of "visually breaking up" large areas of parking is met. Credit may be given for saving existing trees located interior to the site. This requirement does not apply to vehicular display lots, to vehicular rental lots, or to other similar lots.

- (11) The size of the planting area and size of plant material at maturity shall allow for a two and one-half (2½) foot bumper overhang from the face back of the curb. Barriers, such as curbs or wheel stops, must be provided between vehicular use areas and landscaped areas.
- (12) All sidewalks shall be at least five (5) feet from the trunks of upper-story trees, unless otherwise approved by the Planning Director. For example, when the placement of the sidewalk would require the removal of an existing upper-story tree to meet this requirement or where there is not enough space on the site to accommodate both the tree and the sidewalk, this requirement may be modified.
- (13) Parking lots shall be graded so that landscape islands do not impound water, unless surface impoundment is required as a method of on-site retention of stormwater. Landscape islands should be composed of well-prepared structured soil and thoroughly cultivated and amended so as to support healthy plant growth.
- (14) Preservation of existing groups, stands, or groves of trees, as well as isolated islands with single trees, is strongly encouraged (see Section 7.2.10, *Allowable Modifications and Reductions*).
- (15) Upper-story trees shall be at least two (2) inches in caliper when installed.
- (16) Evergreen shrubs shall be at least two (2) feet in height and minimum three (3) gallon container size at the time of installation.
- (17) The standards for all plants in vehicular use areas shall conform to the American Standard for Nursery Stock published by the American Association of Nurserymen for that type of tree or shrub at the time of installation. (The selection and planting of trees and shrubs shall conform to the standards set forth in this publication or the Town's Community Appearance Manual, whichever is stricter).
- (18) Adequate drainage, mulching, and irrigation shall be provided for landscape medians and islands. If automatic underground irrigation systems are permitted, moisture sensor regulators, soil moisture sensors, or drip irrigation shall be used.
- (19) The property owner or developer shall provide for continuous maintenance of the landscaped areas after occupancy of the building. The property owner shall ensure that performance criteria within this Ordinance and/or included on the approved development plan are met. Failure to correct deficiencies in a timely manner shall result in a citation for violation of this Ordinance in accordance with Chapter 11.

(D) Screening Vehicular Use Areas

Where there is a vehicular use area between the thoroughfare and a permanent non-residential building, an opaque screen shall be provided between the right-of-way and the vehicular use area. The screen may consist of plants, earthen berms, fences, walls, or any combination thereof, which meet the following requirements:

(1) The screen shall be continuous, occupying the full length of the vehicular use area, except for sidewalks and driveways that cut through the screen to connect the vehicular use area to streets and other properties. Shrubs shall be at least two (2) feet in height above finished grade, and healthy at the time of installation. Vehicular use area screening shrubs shall be maintained so as to permit the shrubs to form a continuous evergreen screen.

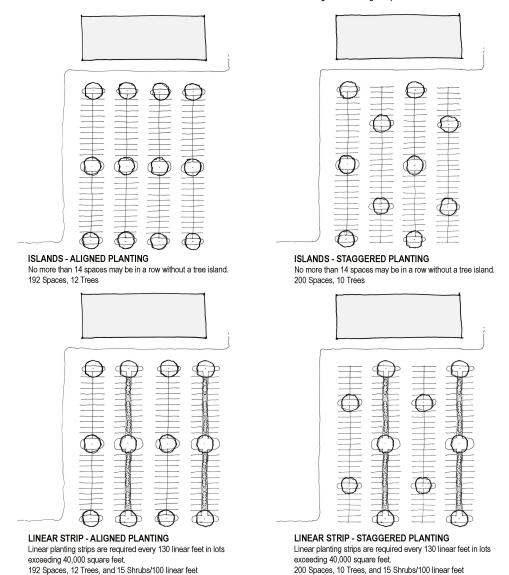
- (2) Berms may be used or installed in lieu or in addition to plantings. If the berm does not meet the performance standards of this section, then plant materials shall be installed which meet these standards. The installation of additional plant materials is encouraged so as to enhance the visual and aesthetic qualities of the streetscape. Plantings should be placed based upon topography of the site, usually at the top of the slope.
- (3) Berms must, at a minimum, be planted and maintained with a groundcover vegetation or grass that will permanently stabilize the soil.
- (4) Shrubs, plantings, hedges, or walls shall provide an opaque screen or barrier for the first three (3) feet of height within three (3) years of planting.
- (5) Vehicular use areas used for the purpose of loading/unloading, and accessways to those areas shall be screened from views of streets and adjacent development.

(E) Exceptions for Underground Parking and Above Ground Parking Structures

When parking is provided underground or within buildings, the above requirements shall not apply. However, if the parking is visible from a public right-of-way or adjacent property, then it shall be screened from views from streets and adjacent properties pursuant to subsection (D) above. Unless they are designed to look like, reflect the architectural style of, and blend in with the adjacent buildings, dense landscaping should visually separate all parking structures from the view of streets and adjacent property. If this is not possible, then the walls of the structure should be softened by the use of terracing, plantings, or other techniques.

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7.2.6 VEHICULAR USE AREA PLANTING STANDARDS - Parking Lot Planting Requirements



(Ord. No. 2009-LDO-01, 2-12-09; Ord. No. 2010-LDO-01, 1-14-10)

Supp. No. 7 LDO 7-40.1

7.2.7 Fences and Walls

Fences and walls are permitted as an accessory use in all zoning districts provided that they meet the following requirements:

(A) Fence and Wall Height Outside of Required Setbacks

Fences and walls located outside of the minimum front, rear and/or side yard setbacks, as shown in Section 6.1, *Tables of Density and Dimensional Standards*, may be erected to any height permitted for buildings in the respective zone district, also indicated in Section 6.1.

(B) Fence and Wall Height within Required Setbacks

Fences and walls located within a minimum roadway, rear and/or side yard setbacks, as shown in Section 6.1, Tables of Density and Dimensional Standards, shall not exceed eight (8) feet in height unless specifically approved as part of a buffer under Section 7.2.3, or approved by the Zoning Board of Adjustment as part of a development plan, Special Use Permit, or variance. Columns and entry features shall not exceed twelve (12) feet in height unless specifically approved as an entry monument alternative to a principal ground sign under Section 9A.3.1(H). These features shall be located outside of required sight distance triangles.

(C) Landscaping and Screening of Fences and Walls

Fences and walls taller than forty-two (42) inches and located within thirty (30) feet of a thoroughfare or collector street right(s)-of-way shall meet the following landscape requirements:

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- (1) One (1) shrub shall be installed for each five (5) feet of property frontage along a thoroughfare or collector street. Shrubs shall be evergreen and shall be a minimum of twenty-four (24) inches tall at time of installation. Shrubs may be installed in a staggered, clustered, grouped or linear fashion, and all plantings shall be installed on the side of the fence that faces the right-of-way.
- (2) Retaining walls that are forty-two (42) inches or more above an established grade are also required to meet the above screening requirements.
- (3) A fence permit shall be obtained for fences adjacent to thoroughfare or collector street right(s)-of-way.

(D) Maintenance

The owner of the property (or other party responsible for maintenance as depicted on the approved development plan) on which the fence or wall is located is required to maintain the fence or wall in a safe and attractive condition. This shall mean the following:

- (1) No fence or wall shall have more than twenty (20) percent of its surface area with disfigured, cracked, ripped or peeling paint or other material; and
- (2) A fence or wall shall not stand with bent or broken supports, including loose or missing appendages; and
- (3) Fences and walls shall be plumb (vertical) to the ground.
- (4) Replacement of non-conforming fences shall comply with all the requirements of this section.

(E) Exposed Framing Toward Interior Yard

Fences and walls that are visible from a thoroughfare or collector street right-of-way shall be constructed such that exposed framing faces the interior yard and not the thoroughfare or collector street right-of-way.

(F) Fences and Walls within Buffers or Streetscapes

Fences and walls shall be installed so as to not disturb or damage existing, significant vegetation or installed plant material.

(G) Setback Requirement

To allow sufficient room for the landscaping to mature, fences and walls located within thirty (30) feet of a thoroughfare or collector street right-of-way shall be installed a minimum of five (5) feet (preferably ten (10) feet to allow room between plants and the sidewalk) from the property line. There shall be no setback for fences not located adjacent to a thoroughfare or collector street right-of-way.

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Where there is a separate property located between the right-of-way and the proposed fence or wall (such as common open space that is owned by a homeowners association or other entity), the setback may be measured from the right-of-way and not from the property line.

(H) Fences Prohibited

Fences that are electrically charged and those constructed of barbed or razor wire shall be prohibited. This prohibition shall not apply to fences used to enclose livestock on bona fide farms and those serving a public or quasi-public institution for public safety or security purposes.

(I) Sight Distance

No fence or wall shall be allowed to obstruct sight distance triangles.

(J) Rails Required for Retaining Walls and Steep Grade Changes

(1) All retaining walls over thirty (30) inches in height and steep grade changes at a one to one (1:1) ratio or greater shall include guards or other acceptable fencing/barricades measuring a minimum thirty-six (36) inches in height on a residential lot with a detached dwelling, townhouse, duplex, bed and breakfast, group home, or a family care home with four (4) or fewer residents. Guards or other acceptable fencing/barricades measuring forty-two (42) inches in height shall be required for all other uses. Guards shall be constructed with no opening greater than four (4) inches.

7.2.8 Screening

(A) Stormwater Devices

Stormwater Best Management Practices (BMPs) shall be designed, constructed, and maintained to contribute to the aesthetic values of development. Visible hardscape transitions or edges (walls) for stormwater devices should not be used outside of Mixed Use Overlay Districts. BMPs should be graded and landscaped to blend with the surrounding landscape to provide better transitions as demonstrated in the Site Design Standards Document. Culverts, outlet structures, level spreaders, and other devices associated with stormwater BMPs shall be landscaped to reduce their visual impacts. All proposed landscaping shall be shown on an approved development plan. The Planning Director may allow the use of hardscape transitions for developments outside of a Mixed Use Overlay District pursuant to Section 3.19.1.

Where used, visible hardscape transitions shall be subject to the following criteria:

- (1) The exterior surface of the wall should consist of decorative material such as stone or brick. Where public visibility is limited, split-face block or other modular design may be used. Poured-in-place concrete walls shall not be used for stormwater device edges.
- (2) The stormwater device shall be located and designed such that it is accessible to the public and intended to serve as an aesthetic amenity to the site. The device shall be incorporated into or located in immediate proximity to pedestrian plazas or other active areas of the site.
- (3) The design of the wall shall be tiered in order to accommodate the plantings installed to soften the mass of the upper half of the wall height. Wall tiers shall not exceed approximately six (6) feet in height and three (3) feet in depth. Draping plant material planted at the top of the wall may be acceptable in circumstances in which the wall height is limited and a tiered structure is not appropriate.

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(B) Mechanical and Utility Equipment

- (1) Heating, ventilation, air conditioning, and other mechanical and utility equipment, including but not limited to hoses, pipes, vents, fans, compressors, pumps, and heating and cooling units, ground based electrical transformers, telephone, or cable junction boxes, which are located on, beside, or adjacent to any building or development, shall be fully screened from the view of streets and adjacent property.
- (2) The screen shall exceed the height of the equipment, shall not interfere with the operation of the equipment, and shall use building materials and design which are compatible with those used for the exterior of the principal building.
- (3) Where mechanical and utility equipment is located on the roof of a structure, all devices shall be fully screened from the view of streets or adjacent property after grading or other improvements are made outside or adjacent to the site.
- (4) The Planning Director may require mufflers or other noise reducing technique on mechanical and utility equipment in developments adjacent to existing or future residential projects to mitigate noise impact (refer to Town Code for noise requirements).
- (5) Utility equipment and facilities associated with on-site electric, cable, telephone, gas or other similar utility, including ground-based electrical transformers and power meters, shall be placed in service areas on the sides or rear of buildings, and shall be screened, to the extent possible, with evergreen plantings or other acceptable alternative approved by the Planning Director. (This requirement applies to both residential and non-residential developments). Areas around this equipment and facilities shall remain clear based on each utility company's guidelines.

(C) Trash Containment Areas

Developments must account for disposal of trash, including trash and recycling containment devices. Restaurants, large retail establishments and other similar businesses must indicate how they plan to address cardboard recycling prior to development plan approval. All trash containment devices, including compactors, dumpsters, and recycling drop-off bins, shall be located and/or screened so as not to be visible from the view of internal travelways, adjacent streets and properties. The type of screening used shall be determined based on the proposed location of the trash containment area, existing site conditions, and the type and amount of existing and proposed vegetation on the site. All such areas shall meet the following standards:

- (1) All trash containment areas shall be enclosed with solid gates to allow for access and security and contain windblown litter. In addition, the Planning Director may require self-closing gates for such enclosures. Gates must be maintained in good working order.
- (2) The enclosure shall be at least eight (8) feet tall or two (2) feet taller than the highest point of the compactor or dumpster, whichever is greater.
- (3) The enclosure shall be made of a material that is opaque at the time of installation and compatible with the design and materials of the principal building. The material shall be masonry or other material that matches the building material; however, wood and other similar material may be used for gates.

- (4) All compactors and dumpsters shall be placed on a concrete pad that is large enough to provide adequate support, allows for positive drainage, and, where applicable, conforms to the Wake County Health Department regulations governing compactor pads.
- (5) The Planning Director may require some uses to install a pad and screening enclosure large enough to accommodate both a trash container as well as a recycling container for cardboard.
- (6) The enclosure shall be kept free of litter, debris, and residue.
- (7) The dumpster or compactor shall be accessible to the handicapped.
- (8) All recycling drop-off containers and storage bins, with the exception of roll-out carts located in townhouse and multi-family developments and recycling containers located on school sites, shall be screened from view to at least fifty (50) percent of the height of the containers and bins in the station. The screen may be fencing or plantings. If plantings are used, the plants must reach the required height within three (3) years of planting. Roll out carts associated with non-residential uses shall be a neutral or earth tone color, not be visible from a public street, and be located within the interior of the development. Drop-off containers and storage bins shall be located no closer than fifty (50) feet to a lot occupied by a dwelling.

7.2.9 Miscellaneous Landscaping Requirements

(A) Required Landscaping on Single-Unit Residential Lots

- (1) Minimum requirements shall be written out on the approved development plan; however, no specific landscape plan is required for individual lots.
- (2) Landscaping for individual lots shall be installed or secured for a future planting date prior to the Certificate of Occupancy permit.
- (3) Existing vegetation on individual lots shall be retained to the maximum extent possible.
- (4) A ten (10) foot wide landscape area meeting the Type B buffer standard shall be provided on each lot where rear yards back up to each other or are visible from other rear yards.

(B) Required Foundation Plantings for Non-Residential Buildings

With the exception of building in the Town Center district, foundation plantings are required on all non-loading and non-service sides of non-residential buildings unless approved through a Statement of Architectural Compatibility (see Section 7.7.4).

(C) Standards for New Planting

(1) All trees shall be at least eight (8) feet high above ground level and a minimum of two (2) inches in caliper at the time of installation, and shall have an expected mature height based on the buffer type.

- (2) All shrubs shall be healthy, at least twenty-four (24) inches in height above ground level and shall reach the height required for performance within five (5) years after installation.
- (3) The standards for all trees and shrubs, including the minimum height, root ball size, number of branches, and width, shall conform with the American Standard for Nursery Stock published by the American Association of Nurserymen for that type of tree or shrub at the time of installation.
- (4) The selection and planting of trees and shrubs shall conform to the standards set forth in the Community Appearance Manual and Standard Specifications and Details Manual. Trees intended for use in areas that are ten (10) feet wide or less and are adjacent to impervious surfaces shall be species that are suited to use in urban environments (i.e., reflected heat, limited pervious area, limited moisture) and are not shallow rooted, so as to avoid future damage to sidewalks and paved areas.

(D) Irrigation

- (1) The use of irrigation systems and lawn turf is generally discouraged, but may be permitted if connected to a private well, other private water source, or public reclaimed water system.
- (2) If automatic irrigation systems are permitted, moisture sensor regulators, soil moisture sensors, or drip irrigation shall be used.
- (3) Irrigation systems may connect to the main water connection for the building unless otherwise restricted through other Town ordinances or policies.
- (4) The above provisions shall also apply to all landscape areas required in parking and vehicular use areas per Section 7.2.6.

(E) Design Standards for Berms

All berms used in a perimeter buffer (or in a streetscape) shall meet the following design standards:

- (1) The slope of all berms shall not exceed a two to one (2:1) ratio (horizontal to vertical), shall have a top width at least one-half (½) the berm height, and a maximum height of four (4) feet above the toe of the berm. The Planning Director shall approve all berms. Berms proposed to be greater than four (4) feet in height may be permitted by the Director if the four (4) foot maximum height is not practicable due to physical site constraints, such as topography, presence of stream buffers or other natural features, or lot dimensions; or due to presence of existing development or infrastructure.
- (2) Proposed berms to be placed over an existing or proposed utility easement(s) shall be approved by the Development Review Committee.
- (3) All berms, regardless of size, shall be stabilized with a ground cover or other suitable vegetation according to the Town's Standard Specifications and Details.

- (4) The Directors of Public Works, Transportation and Facilities, and Planning shall approve all berms proposed to be placed along street right(s)-of-way. Such berms shall be designed and constructed to provide adequate sight distances at intersections and along all other roads.
- (5) Berms proposed to satisfy the buffer requirements specified in subsection 7.2.3 shall be vegetated as required by this section. Berms must be stabilized with ground cover to prevent erosion and sedimentation. Use of berms as a substitute for existing healthy vegetation is strongly discouraged. However, if berms are allowed to replace existing vegetation that already meets the standards contained in this section, then they must also meet the buffer standards and must be approved by the Planning Director.
- (6) Berms shall in no case damage the roots of existing healthy vegetation designated to be preserved.

(F) Easements

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 development plan approval.

(G) Designated Utility Corridors

In order to reduce the damage to root systems of existing vegetation within streetscapes, buffers or any other tree save areas, designation of planned utility connection corridors is required to be shown on all development plans to coordinate the location of electrical, telephone, cable, and other similar utilities.

(H) Additional Requirement for Clear-Cut Sites or Sites with Removed Vegetation in Required Vegetation Protection Areas

Larger trees up to four (4) inches in caliper and/or up to double the amount of the required number of trees and shrubs may be required by the Planning Director if the site and/or the required vegetation protection areas specified in this Ordinance were clear cut within five (5) years prior to submittal of a development plan.

(I) It is recommended that all common areas and similar areas used as general unspecified open space be stabilized using warm season grasses or planted with trees to increase canopy cover.

(J) Variety of Plant Species Required

No single species of tree shall constitute more than twenty-five (25) percent of the plant material of its type installed on a single development site. This restriction may be modified by the Planning Director on sites smaller in size than two (2) acres provided that an acceptable variety of plant material is proposed.

(K) Soil Amendments Required

Soil amendments shall be specified and used to improve the quality of soil used as planting media for trees. This requirement applies to all development, except for residential single-unit lots. Common areas of subdivisions and townhouse developments are subject to the requirements of this section.

- (1) A registered Landscape Architect shall provide a recommended soil amendment schedule based on the existing soils found on-site and the type of plant material proposed. This schedule shall be included as part of the required landscape plan submitted as part of a development plan.
- (2) Prior to the issuance of a Certificate of Occupancy, a certified statement shall be provided to town staff Cary Site Inspector attesting to the fact that the soil amendment schedule was followed as specified in the approved development plan. This statement shall be certified by a registered landscape architect, certified arborist, or other such specialist.

(L) Reforestation of Cut and Fill Slopes

Where portions of a site have been graded due to, but not limited to, topography, cut and fill slopes associated with road and/or parking lot construction; with transitional perimeter grading; or with the installation of major utilities, and other similar areas, the development plan shall contain a reforestation plan prepared by a landscape architect, a certified arborist, a registered forester, or another such professional specialist. The reforestation plan shall conform to the following standards:

- (1) Loblolly Pine (Pinus taeda) seedlings shall be installed on a staggered grid with a spacing of ten (10) feet within a row and fifteen (15) feet between rows.
- (2) Alternate tree species or planting arrangements may be approved by the Planning Director in response to site-specific characteristics that dictate such a change.
- (3) The plantings required by this subsection shall not be subject to the requirements of subsections (J) and (K) above.

(M) Separation from Utility Appurtenances

In order to prevent conflicts and allow for appropriate maintenance, canopy trees shall be placed at least ten (10) feet from electrical transformers and twenty (20) feet from light poles.

7.2.10 Allowable Modifications and Reductions

- (A) This Section 7.2.10 provides flexibility and presents alternative ways to meet the standards set forth in this Ordinance, while encouraging the preservation of existing healthy vegetation and innovation in site design.
 - (1) Existing healthy vegetation and the area of land used to maintain the vegetation may be counted toward meeting the performance criteria for buffers, streetscapes, and vehicular use areas set out in Sections 7.2.3, 7.2.4, and 7.2.6.
 - (2) Up to a twenty (20) percent reduction in the number of parking spaces required on the site shall be allowed to the extent that the reduction in the amount of required pavement will preserve existing healthy trees in an undisturbed, natural condition.
 - (3) Reduction of the buffer width may be approved, as provided below.
 - (a) The Zoning Board of Adjustment may reduce the width of required streetscapes and buffers to no less than ten (10) feet pursuant to this section. Buffer reductions between uses may be considered based on the use of innovative site/building design concepts. The Zoning Board of Adjustment may make exceptions to this minimum width for development within the Town Center

District and for reuse/redevelopment sites. Reductions in the width of streetscapes and buffers should only be allowed when:

- (1) At least one (1) of the following conditions exists:
 - a. meeting the required width prevents reasonable use of the property based on the zoning; or
 - b. additional open space beyond that already required is provided elsewhere on the site; and
- (2) The modification advances the goals and purposes of the LDO.

The Planning Director may allow reuse/redevelopment sites to maintain their existing buffer and streetscape widths even if such width is less than current ordinance requirements so long as the proposed development plan does not reduce the existing buffer or streetscape width on the site. If existing pavement, curbs, and/or buildings are being removed from the required buffer and streetscape widths, the Planning Director may require plantings to reasonably meet the intent of the landscape requirements (i.e., parking lot screening, streetscape/buffer and parking lot trees).

- (4) An average buffer/streetscape width that equals the width of the required buffer/streetscape may be approved, provided that all of the following requirements are met:
 - (a) The buffer/streetscape average equals the required width {for example, a required fifty (50) foot buffer could average a minimum of fifty (50) feet in width.}
 - (b) In no case shall a buffer/streetscape that is adjacent to single-unit residential development be less than thirty (30) feet in width.
 - (c) All buffer/streetscape areas that are less than the required minimum width must include additional vegetation, walls/fencing, and/or other measures.
- (5) Where spacing of required streetscape trees evenly across the frontage of the property or existing vegetation would interfere with the visibility of features or landscapes intended specifically for public or civic purposes such as art, monuments, memorials, and historic structures, the required number of trees may be staggered, clustered and otherwise arranged as deemed appropriate in order to promote optimal growth and health of the vegetation. In addition, existing vegetation may be removed from the streetscape for visibility of features provided that an area equal to the area of vegetation being removed is preserved elsewhere on the site (in addition to required buffers).
- (6) The area used for preserving existing healthy non-champion trees within the site may be used as credit for required perimeter non-residential buffers and interior buffers, at a rate of one and one-half (1.5) times. For example, if the area taken up by the preserved vegetation is one thousand two hundred (1,200) square feet, then the applicant may deduct an area equal to one thousand eight hundred (1,800) square feet from other required landscape/buffer areas. However, the application of this subsection is subject to the limits provided under Section 7.2.10. In addition, the area removed from required perimeter buffers should not contain specimen tree stands. For purposes of this section, "area taken up by preserved vegetation" includes the area under the tree canopies.

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- (7) Interior buffer areas may be relocated provided that the square footage of area is relocated elsewhere on the site (preferably to save more existing vegetation).
- (8) The required streetscape along thoroughfares and collectors may be reduced to ten (10) feet, and building setbacks from the streetscape to zero (0) when buildings are placed close to the street inside Mixed Use Overlay Districts.
- (B) In addition to subsection (A) above, and in order to provide for flexibility in site design and landscape requirements to preserve champion trees, the Planning Director shall administratively approve the below modifications in the order listed and only to the extent necessary to preserve champion trees. Specifically, the area preserved in association with saving champion trees may be exchanged for area used to meet the other LDO requirements referenced below. Refer to Section 7.2.5(A) for definitions applicable to this subsection.
 - (1) The required number of parking spaces may be reduced by up to twenty-five (25) percent;
 - (2) Linear parking lot islands may be reduced and/or eliminated;
 - (3) The area encompassed by the critical root zone of preserved champion trees may be used to meet the community gathering space requirements;
 - (4) The area encompassed by the critical root zone of preserved champion trees and designated as common open space may be used to meet the bonus open space requirements within the conservation residential overlay district without being contiguous or meeting the area size requirements;
 - (5) Residential lot lines may be created at other than substantially right angles to other lot lines provided the lot meets all other dimensional requirements of this ordinance and permits a reasonable building envelope for a dwelling;
 - (6) Residential lot setbacks may be reduced up to fifty percent (50%) when the setback is adjacent to a champion tree critical root zone area.
 - (7) The connectivity index, primary circulation standards, and the cross-access requirements within Section 7.10.3 (A) and (C) may be modified provided the circulation pattern shall continue to provide for the safe, controlled, and orderly flow of pedestrians and vehicles;
 - (8) Champion trees and their critical root zones or a portion thereof may be included within residential lots provided such inclusion permits a reasonable building envelope for a dwelling and designated as tree protection areas on the development plan:
 - (9) Interior non-residential buffers and interior buffers within non-residential centers/subdivisions may be reduced to no less than ten (10) feet or the width required to meet the planting requirements of the buffer type, whichever is greater, provided specimen hardwood tree stands are not adversely impacted;
 - (10) Total perimeter buffers widths adjacent to non-residential uses or zoning districts may be reduced to no less than twenty (20) feet, provided specimen hardwood tree stands are not adversely impacted and there is sufficient room to plant the required buffer type;

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- (11) Buffers and streetscape areas may be used for bio-retention, provided specimen hardwood tree stands are not adversely impacted and the buffer is adjacent to a non-residential use or zoning district.
- (12) Critical root zone measurement and tree protection area may be reduced to one (1) foot from the champion tree for each inch of caliper.

For the purpose of the allowable modifications above, the "area encompassed by the critical root zone of preserved champion trees" also includes the area needed to preserve an existing structure on a site, the demolition of which would have adversely impacted the critical root zone of one (1) or more champion trees.

(C) Soil Volume

The Planning Director shall administratively approve modifications to soil volume requirements (section 7.2.4(F)) where soil volume requirements cannot be met due to unusual planting conditions, provided the developer or property owner provides the Town with a certification from a certified arborist on a form approved by the Planning Department that the modifications will not decrease the viability of the trees.

7.2.11 Time for Installation of Required Landscaping

(A) Time Limit

All landscaping, including mulching and seeding, shall be completed in accordance with the approved development plan prior to issuance of a Certificate of Occupancy for the site, unless the Planning Director grants an exception to meeting this requirement due to extreme heat or cold conditions. The installation of these requirements shall comply with the required planting standards set forth in the Town's Community Appearance Manual and the soil erosion and sedimentation control provisions in Section 7.4. Installation of required landscaping (i.e., trees and shrubs) shall be strongly discouraged during the months of April through September. The use of alternative water source (other than public water) is encouraged to ensure plantings are healthy after first growing season. Projects which require installation of landscaping between April and September are required to have a landscape agreement in place prior to the issuance of a Certificate of Occupancy.

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(B) Extensions and Exceptions

The Planning Director may grant exceptions and extensions to the above time limit in the following circumstances and under the following conditions:

- (1) Exceptions may be granted due to unusual environmental conditions, such as drought, ice, over-saturated soil (deep mud), or inappropriate planting season for the plant species (plantings between April through September are strongly discouraged), provided that the developer or property owner provides the Town with a certification on a form approved by the Planning Department ensuring the installation of the remaining landscape materials. In such cases, the Planning Director may issue a conditional Certificate of Occupancy for a period of thirty (30) to one hundred eighty (180) days, depending on the Director's recommendation for the next earliest planting season.
- (2) Exceptions may be granted due to the substitution or unavailability of plant species or acceptable plant size as specified on the development plan, provided that the developer or property owner provides the Town with a certification on a form approved by the Planning Department to ensure that the unavailable plants will be installed on the property. In such cases, the Director may issue a temporary Certificate of Occupancy for a term of up to one hundred eighty (180) days or to the next planting season, whichever comes first. Only twenty (20) percent of the plant materials to be installed on the property may be delayed under this exception. All such substitutions shall be marked on the "as-built" landscaping plans submitted to the Planning Director, and must be signed, dated, and approved by that Director prior to installation.
- (3) Exceptions may be granted due to 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 thirty (30) days after expected site completion, provided that the developer or property owner submits a letter from the utility company stating the estimated installation date, and provides certification on a form approved by the Planning Department to ensure installation of the required landscaping. In such cases, the Inspections and Permits Department may issue a temporary conditional Certificate of Occupancy.

7.2.12 Implementation of Landscape Plan; Inspections

(A) Inspections Prior to Certificate of Occupancy

The Planning Department shall inspect the site prior to the issuance of a permanent Certificate of Occupancy for the development and the Inspections and Permits Department shall not issue the permanent Certificate of Occupancy if the landscaping required under this section is not living or healthy or is not installed in accordance with the standards set forth in this section and in accordance with the approved development plan.

(B) Inspections After First Year

The Planning Department shall inspect the site one (1) year after the issuance of a permanent Certificate of Occupancy in order to ensure compliance with the approved development plan and to ensure that the landscaping is properly maintained. Failure to maintain required landscape areas (trees and shrubs) shall result in fines according to Chapter 11 of this Ordinance.

7.2.13 Maintenance Responsibility, Replacement of Damaged Vegetation, and Associated Fines

(A) General Maintenance Responsibility

The owners of the property shall be responsible for the installation, preservation, and maintenance of all planting and physical features (installed or vegetated natural areas) in all buffers, streetscapes, vehicular use areas, and other landscaped areas required under Sections 7.2.1 through 7.2.12 and Section 7.2.15, by zoning condition(s) or by an approved development plan or final plat, including areas labeled on such plans or plats as undisturbed, (hereinafter, in this Section 7.2.13, referred to collectively as "required landscape areas"), as provided below:

- (1) Required landscape areas shall be free of refuse and debris, shall be treated for pest/diseases in accordance with the approved development plan, and shall be maintained so as to prevent mulch, straw, dirt, or other materials from washing onto streets and sidewalks.
- (2) The owner shall take actions to protect vegetation in required landscape areas from unnecessary damage during all facility and site maintenance operations, including preventing parking or intrusion of equipment or vehicles and storage of any materials in root zones.
- (3) Plants shall be maintained in a way that does not obstruct sight distances at roadway and drive intersections, obstruct traffic signs or devices, and/or interfere with the use of sidewalks or pedestrian trails (see Community Appearance Manual). Shrubs within existing vehicle use areas, streetscapes, and street fronts may be pruned, but must maintain a height of at least three (3) feet.
- (4) Any dead, unhealthy, or missing vegetation, or vegetation disfigured by severe pruning, shall be replaced with locally adapted vegetation that conforms to the standards of this Ordinance and the approved development plan.

(B) Removal, Damage and Pruning of Vegetation

(1) Removal, Disturbance, Damage and Severe Pruning Prohibited

Vegetation in required landscape areas may not be removed, disturbed, damaged, or severely pruned except as allowed in accordance with Section 7.2.13(B)(2). For purposes of this Section 7.2.13, "disturbance" shall be defined as any action that results in injury or harm to required trees, shrubbery, or other vegetation. Plants shall be considered severely pruned if pruned in such a manner that growth of their natural form is impaired.

(2) Exceptions

Vegetation within required landscape areas may be removed or modified with approval of a tree clearing certificate or with approval of the Planning Director as provided below:

(a) Upper-story and understory trees may be pruned in accordance with Section 7.2.4, Streetscape Landscaping to prevent damage to utilities or buildings, and to maintain sight distance requirements.

- (b) Where vegetation poses an immediate or imminent threat to improved structures on private or public property, severe pruning and/or removal of the vegetation is allowed, provided the performance standard of the required landscape area is maintained consistent with this Ordinance.
- (c) Where vegetation or a physical element functioning to meet the standards of this Ordinance is severely damaged due to an unusual weather occurrence or natural catastrophe, or other natural occurrence such as natural death or damage by wild or domestic animals, the owner may be required to replant if the required landscape area no longer achieves the required performance standards of this Ordinance. The owner may have one (1) growing season to replace or replant after reconstruction is complete. The Planning Director shall consider the type and location of the landscape buffer or required vegetation area as well as the propensity for natural revegetation in making a determination on the extent of replanting requirements.
- (d) Trees may be removed after approval of a tree clearing certificate pursuant to Section 3.22 of this Ordinance.

(C) Replacement of Disturbed and Damaged Vegetation

Where existing required vegetation has been removed, disturbed, or damaged in violation of this Ordinance, the Planning Director shall require revegetation of the affected area consistent with the provisions of Section 11.5.2(B)(1).

(D) Fines

Fines for unauthorized removal or disturbance of, damage to, or severe pruning of vegetation shall be assessed pursuant to Section 11.5.2(B)(2).

7.2.14 Reserved

7.2.15 Highway Corridor Buffer

(A) Purpose and Intent

The purpose of the Highway Corridor Buffer is to provide orderly development along US 1, I-40, I-440 and NC-540, to encourage the most appropriate use of adjacent lands, to maintain the scenic natural beauty of the area visible from such fully-controlled-access highway and adjacent lands, to provide open space, and to promote the safe and efficient movement of traffic. These highways commonly establish an image of the quality of life in the Town for visitors and residents alike. Preservation of this natural beauty is required to enhance trade, capital investment, tourism, and the general welfare. All development within this buffer shall comply with the regulations of this Section.

(B) Applicability

The Highway Corridor Buffer is established along both sides of existing and planned fully-controlled-access highways. Such highways include US 1, I-40, I-440, and NC-540. The Highway Corridor Buffer covers all lands adjacent to the right-of-way along both sides of each such fully-controlled-access highway.

(C) Buffer Requirements

(1) General Requirement

A buffer strip, with a width extending one hundred (100) feet from and parallel to the right-of-way boundary of the fully-controlled-access highway, shall be maintained.

(2) Interchange Requirements

A buffer strip width extending fifty (50) feet from and parallel to the right-of-way for interchange ramps shall be maintained.

(3) Reductions

(a) Town Council

The Town Council may reduce the required width of this buffer strip as part of its approval of a concept plan or preliminary development plan as a component of a rezoning request, taking into consideration: the topography of the area; surrounding land uses, particularly residential uses; the actual location of the controlled/limited access highway; the size and shape of land parcels affected by the buffer; and whether the buffer requirement would render the entire property unusable. In reducing the width of the buffer strip, the Town Council shall ensure that the applicant and/or developer will provide appropriate landscaping meeting the requirements of Section 7.2.15(C)(4) below. In no event, however, shall the Town Council reduce the required width of the buffer strip to less than thirty (30) feet.

(b) Zoning Board of Adjustment

Pursuant to the procedure in Section 3.19.1, the Zoning Board of Adjustment may consider a reduction of the required width of this buffer strip as a component of a development plan, taking into consideration: the topography of the area; surrounding land uses, particularly residential uses; the actual location of the controlled/limited access highway; the size and shape of land parcels affected by the buffer; and whether the buffer requirement would render the entire property unusable. In reducing the width of the buffer strip, the Zoning Board of Adjustment shall ensure that the applicant and/or developer will provide appropriate landscaping meeting the requirements of Section 7.2.15(C)(4) below. In no event, however, shall the Zoning Board of Adjustment reduce the required width of the buffer strip to less than thirty (30) feet pursuant to this section.

(4) Maintenance of Existing Vegetation

Within the required buffer strip, all existing vegetation shall be maintained in a natural, undisturbed state and, unless the existing natural vegetation provides such a buffer, the applicant and/or developer shall install and maintain an Opaque Type A buffer meeting the requirements of Section 7.2.3(D) and (G) of this Ordinance. The owners of the property are responsible for maintenance of the buffer and the consequences resulting from disturbance to the buffer in accordance with Section 7.2.13, Maintenance Responsibility, Replacement of Damaged Vegetation, and Associated Fines. If the developer caused or is responsible for such disturbance of the buffer, and the developer is not the owner of the buffer, then the developer shall also be responsible for the consequences of such disturbance in accordance with Section 7.2.13.

(5) Development within Buffer

No development shall be allowed within the required buffer strip except as provided for in Section 7.2.3(H)(1) and (H)(2).

(D) Variances

The required width of the buffer strip may be reduced to less than thirty (30) feet pursuant to Section 3.20 (Variances).

(E) Actions of Government or Public Utilities

The law may permit the width of this buffer strip to be reduced through the action(s) of a unit of government or Public Utility (as such term is defined by G.S. 62-3), or may permit development within the buffer by a unit of government or Public Utility, such as but not limited to construction of highways or utility transmission facilities. In such situations, the action to reduce the buffer width or engage in development within the buffer by the government or Public Utility may not be subject to requirements of the LDO, including review or approval by the Zoning Board of Adjustment. See LDO Section 1.6.

(Ord. No. 04-001, 1-8-04; Ord. No. 04-007, 7-15-04; Ord. No. 05-001, 1-13-05; Ord. No. 06-009, adopted 4-27-06; eff. 4-27-06; Ord. No. 2007-04, 3-22-07; Ord. No. 2007-21, 12-13-07; Ord. No. 2008-LDO-01, 9-25-08; Ord. No. 2009-LDO-01, 2-12-09; Ord. No. 2010-LDO-01, 1-14-10; Ord. No. 2010-LDO-02, 1-28-10; Ord. No. 2011-LDO-01, 1-11-11; Ord. No. 2011-LDO-03, 7-14-11; Ord. No. 2011-LDO-04, 11-17-11; Ord. No. 2011-LDO-05, 12-15-11; Ord. No. 12-LDO-01, 2-23-12; Ord. No. 2012-LDO-06, 8-9-12; Ord. No. 2013-LDO-02, 6-13-13; Ord. No. 2013-LDO-04, 9-26-13; Ord. No. 2013-LDO-07, 12-19-13; Ord. No. 2014-LDO-01, 1-9-14; Ord. No. 2014-LDO-03, 8-14-14; Ord. No. 2014-LDO-04, 8-28-14; Ord. No. 2015-LDO-001, 4-21-15; Ord. No. 2015-LDO-003, 7-23-15; Ord. No. 2015-LDO-006, 12-10-15; Ord. No. 2016-LDO-01, 7-25-16; Ord. No. 2017-LDO-01, 1-24-17; Ord. No. 2017-LDO-02, 3-30-17; Ord. No. 2018-LDO-01, 5-3-18; Ord. No. 2019-LDO-01, 9-26-19; Ord. No. 2019-LDO-03, 10-10-19; Ord. No. 2022-LDO-01, 5-7-20; Ord. No. 2022-LDO-01, 6-24-21; Ord. No. 2022-LDO-01, 1-13-22; Ord. No. 2023-LDO-04, 11-16-23)

7.3 STORMWATER MANAGEMENT

7.3.1 Purpose and Definitions

- (A) This section is intended to protect water quality for present and future residents of the Town and surrounding regions by limiting the amount of pollutants, including but not limited to nitrogen and phosphorus, in stormwater runoff. Specific objectives include: control of nitrogen and phosphorus export from development, control of peak stormwater runoff, and the use of best management practices.
- **(B)** For the purpose of this section 7.3, the following definitions shall apply:

LARGER COMMON PLAN OF DEVELOPMENT OR SALE

A site where multiple separate and distinct development activities may be taking place at different times on different schedules but governed by a single development plan regardless of ownership of the parcels. Information that may be used to determine a "common plan of development" include plats, blueprints, marketing plans, contracts, building permits, public notices or hearings, zoning requests, and infrastructure development plans. Common Plan of Development is synonymous with "Larger Common Plan of Development".

REDEVELOPMENT

Any development on previously-developed land.

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7.3.2 Nutrient Reduction Requirements

(A) Nitrogen and Phosphorus Control Plan Required

For purposes of this section, nitrogen and phosphorus control plans shall be required for the following:

- (1) Any activity that, alone or as part of a larger common plan of development or sale, disturbs greater than one (1) acre of land in order to establish, expand, or modify a single-unit or duplex residential development or a recreational facility.
- (2) Any activity that, alone or as part of a larger common plan of development or sale, disturbs greater than twelve thousand (12,000) square feet of land in order to establish, expand or modify a multifamily residential development or a commercial, industrial or institutional facility.
- (3) Any redevelopment alone or as part of a larger common plan of development or sale in order to establish, expand, or modify a multifamily residential development or a commercial, industrial or institutional facility that increases built upon area and has an existing Stormwater Management Plan is subject to this rule regardless of disturbed area.
- (4) Any grubbing, stump removal, and/or grading activity that disturbs greater than twelve thousand (12,000) square feet.
- (5) Demolition and subsequent construction upon a previously developed site.

(B) Exemptions

- (1) For purposes of this section, development or land disturbance shall not include agriculture, mining, or forestry activities.
- (2) Existing development as of March 1, 2001 in the Neuse River Basin, is not subject to the requirements of this Section. Expansions to existing development must meet the requirements of this Section. The impervious surface area of the existing development is not required to be included in the nitrogen load attributed to the site expansion. All calculations must use the approved accounting tool.
- (3) Redevelopment and/or rebuilding activity which results in no net increase in the built-upon area from that that previously existed and which provides equal or greater stormwater control than that provided by previous development.
- (4) In the Cape Fear River Basin any proposed new development that would replace or expand structures or improvements that existed as of December 1, 2001, and that would not result in a net increase in built-upon area shall not be required to meet the nutrient loading targets or high-density requirements, in accordance with Section 4.4.6(D), except to the extent that it shall provide stormwater control at least equal to the previous development.

(C) Nitrogen and Phosphorus Export Standards

- Any activity that is required to submit a nitrogen control plan in the Neuse River Basin must achieve a nitrogen export of less than or equal to three and six-tenths (3.6) pounds per acre per year. Any activity that is required to submit a nitrogen and phosphorus control plan in the Cape Fear River Basin must achieve an export rate of less than or equal to two and two-tenths (2.2) pounds per acre per year of nitrogen and eighty-two hundredths (0.82) pounds per acre per year of phosphorus in the Upper New Hope and four and four-tenths (4.4) pounds per acre per year of nitrogen and seventy-eight hundredths (0.78) pounds per acre per year in the Lower New Hope. If the development contributes greater than three and six-tenths (3.6) pounds per acre per year of nitrogen in the Neuse River Basin, greater than two and two-tenths (2.2) pounds per acre per year of nitrogen and/or eighty-two hundredths (0.82) pounds per acre per year of phosphorus in the Upper New Hope, or greater than four and fourtenths (4.4) pounds per acre per year of nitrogen and/or seventy-eight hundredths (0.78) pounds per acre per year of phosphorus in the Lower New Hope, then the table below explains the options available depending whether the development is residential or non-residential.
- (2) Notwithstanding the foregoing, in the Cape Fear River Basin, redevelopment that would replace or expand existing structures or improvements and would result in a net increase in built-upon area shall have the option of either meeting the loading standards identified in section 7.3.2 (D)(1) or meeting a loading rate that achieves the following nutrient loads compared to the existing development: in the Upper New Hope Watershed, thirty-five (35) percent reduction in nitrogen and five (5) percent reduction in phosphorus; and in the Lower New Hope Watershed, no increase for nitrogen or phosphorus.
- (3) Development subject to this section 7.3 shall attain a maximum nitrogen loading rate on-site of six (6) pounds per acre per year for single-unit, detached and duplex residential development and ten (10) pounds per acre per year for other development, including multi-family residential, commercial and industrial and shall meet any requirements for engineered stormwater controls otherwise imposed by the LDO. An applicant may achieve the additional reductions in nitrogen and phosphorus loading required by this section by making offset payments to the North Carolina Division of Mitigation Services contingent upon the acceptance of payments by that program. An applicant may propose other offset measures, including providing his or her own offsite offset or utilizing a private seller. All offset measures permitted by this ordinance shall meet the requirements of 15A NCAC 02B .0273 (2) through (4) and 15A NCAC 02B .0714.

TABLE 7.3-1: NITROGEN/PHOSPHORUS EXPORT REDUCTION OPTIONS	
Residential	Commercial/Industrial/Institutional/Local Government/Multifamily Residential
If the computed export is less than 6.0 lbs/ac/yr, then the owner may either:	If the computed export is less than 10.0 lbs/ac/yr, then the owner may either:
Install SCMs to remove enough nitrogen to bring the development down to 3.6 lbs/ac/yr in the Neuse River Basin. Install SCMs to bring the nitrogen down to 2.2 lbs/ac/yr and phosphorus to 0.82 lbs/ac/yr in the Upper New Hope and the nitrogen down to 4.4 lbs/ac/yr and the phosphorus to 0.78 lbs/ac/yr Lower New Hope in the Cape Fear River Basin.	Install SCMs to remove enough nitrogen to bring the development down to 3.6 lbs/ac/yr in the Neuse River Basin. Install SCMs to bring the nitrogen down to 2.2 lbs/ac/yr and phosphorus to 0.82 lbs/ac/yr in the Upper New Hope and the nitrogen down to 4.4 lbs/ac/yr and the phosphorus to 0.78 lbs/ac/yr Lower New Hope in the Cape Fear River Basin.
Pay a one-time offset payment to bring the nitrogen down to the 3.6 lbs/ac/yr in the Neuse River Basin. Pay a one-time offset payment to bring the nitrogen down to 2.2 lbs/ac/yr and phosphorus to 0.82 lbs/ac/yr in the Upper New Hope and the nitrogen down to 4.4 lbs/ac/yr and the phosphorus to 0.78 lbs/ac/yr Lower New Hope in the Cape Fear River Basin.	Pay a one-time offset payment to bring the nitrogen down to the 3.6 lbs/ac/yr in the Neuse River Basin. Pay a one-time offset payment to bring the nitrogen down to 2.2 lbs/ac/yr and phosphorus to 0.82 lbs/ac/yr in the Upper New Hope and the nitrogen down to 4.4 lbs/ac/yr and the phosphorus to 0.78 lbs/ac/yr Lower New Hope in the Cape Fear River Basin.
Do a combination of SCMs and offset payment to achieve a 3.6 lbs/ac/yr export in the Neuse, 2.2 lbs/ac/yr nitrogen and 0.82 lbs/ac/yr phosphorus in the Upper New Hope and 4.4 lbs/ac/yr nitrogen and 0.78 lbs/ac/yr phosphorus in the Lower New Hope.	Do a combination of SCMs and offset payment to achieve a 3.6 lbs/ac/yr export in the Neuse, 2.2 lbs/ac/yr nitrogen and 0.82 lbs/ac/yr phosphorus in the Upper New Hope and 4.4 lbs/ac/yr nitrogen and 0.78 lbs/ac/yr phosphorus in the Lower New Hope.
If the computed nitrogen export is greater than 6.0 lbs/ac/yr, the owner must use on-site or regional SCMs to bring the development's export down to 6.0 lbs/ac/yr. Then, the owner may use one of the three options above to achieve the reduction between 6.0 and 3.6 lb/ac/yr in the Neuse River Basin, 2.2 lbs/ac/yr in the Upper New Hope or 4.4 lbs/ac/yr in the Lower New Hope of the Cape Fear River Basin.	If the computed nitrogen export is greater than 10.0 lbs/ac/yr, the owner must use on-site or regional SCMs to bring the development's export down to 10.0 lbs/ac/yr. Then, the owner may use one of the three options above to achieve the reduction between 10.0 and 3.6 lb/ac/yr in the Neuse River Basin, 2.2 lbs/ac/yr in the Upper New Hope or 4.4 lbs/ac/yr in the Lower New Hope of the Cape Fear River Basin.

Once it has been determined that an offset payment is forthcoming, the owner shall furnish the Town with evidence that the payment for the reductions in nitrogen and/or phosphorus has been made prior to the Town's issuance of a grading permit.

(4) The nitrogen and phosphorus export standards in this ordinance are supplemental to, not replacements for, stormwater standards otherwise required by federal, state or local law, including without limitation any riparian buffer requirements applicable to the location of the development. This includes, without limitation, the riparian buffer protection requirements of 15A NCAC 2B .0267, .0268 and .0714.

(D) Calculation of Nitrogen and Phosphorus Export

- The developer shall determine the need for engineered stormwater controls to meet the loading rate targets in the Cape Fear River Basin and Neuse by using the most current approved accounting tool for nutrient loading.
- (2) Neuse River buffers and Jordan Lake Buffers required by the Department of Environmental Quality may not be used for compliance with nutrient reduction requirements; however, any portion of Zone 1, Zone 2, or Zone 3 UTB may be claimed as Protected Forest in the approved accounting tool if all the following are met:
 - (a) No easements, including but not limited to Public or Private Utilities, Retaining Walls, Access, Greenway, Drainage, or Stormwater Control Structure and Access easements, may be located within the area claimed as protected forest.
 - **(b)** The area claimed as protected forest must be recorded as Permanently Protected on the plat.
 - (c) Allowable activities within the Protected Forest are limited to those related to removal of nuisance and invasive and diseased or dying vegetation or in the interest of protecting human safety or property damage.

7.3.3 Town of Cary NPDES Phase II Post Construction Runoff Controls

To meet the requirements of the Town of Cary NPDES Phase II Permit any new development or redevelopment as of July 1, 2005, not exempted pursuant to Section 7.3.2(B) must meet either the low density or high density option requirements described below and in the Neuse Rules. New development or redevelopment in the Swift Creek or Jordan Lake Watersheds must meet the requirements of Section 4.4.6 of the LDO. For purposes of this Section 7.3.3, impervious surface area shall be calculated pursuant to Section 4.4.6(D)(2) of the LDO and the provisions of Section 4.4.6(G) of the LDO shall apply to all engineered stormwater control measures.

- (A) Low Density Projects, having no more than two (2) dwelling units per acre or no more than twenty-four (24) percent impervious surface area for all residential and non-residential development, shall transport stormwater runoff by vegetated conveyances to the maximum extent practicable.
- (B) High Density Projects, having more than two (2) dwelling units per acre or more than twenty-four (24) percent impervious surface area for all residential and non-residential development, shall implement stormwater control measures that comply with each of the following standards:
 - (1) The stormwater control measures shall control and treat the difference between the pre-development and post-development conditions for the one (1) year twenty-four (24) hour storm. Runoff volume drawdown shall be a minimum of twenty-four (24) hours, but not more than one hundred twenty (120) hours.
 - (2) Stormwater control measures shall be designed to achieve a minimum of eighty-five (85) percent average annual removal for Total Suspended Solids (TSS).

7.3.4 Peak Runoff Control

There shall be no net increase in peak stormwater run-off flow leaving a development from pre-development conditions for the one (1)-year design storm. New developments are required to minimize damage to subject streams caused by storm flows.

(A) Calculation of Peak Flow

Acceptable methodologies for computing pre- and post-development conditions for the one (1)-year design storm include:

- (1) The Rational Method (used when the drainage area is two hundred (200) acres or less)
- (2) The Peak Discharge Method as described in USDA Technical Release Number 55 (TR-55) (drainage area is two thousand (2,000) acres or less)
- (3) The Putnam Method (drainage area is greater than two thousand (2,000) acres)
- (4) USGS Regression Equations, where applicable

The same method must be used for both the pre- and post-development conditions.

(B) Exceptions to Peak Flow Control

Developments with less than ten (10) percent net increase in peak flow of the one (1)-year design storm are not required to control peak flow for the one (1)-year storm from the site. However, if the net increase in peak flow from the new development is greater than ten (10) percent, the entire net increase from pre-development one (1)-year design storm peak flow must be controlled.

7.3.5 Maintenance of Stormwater Control Measures

All best management practices that are implemented to achieve nitrogen or phosphorus reduction and flow attenuation will require complete legal documentation and a maintenance plan and must comply with all requirements of Section 4.4.6(G), Engineered Stormwater Control Measures.

7.3.6 Variance

To the extent any state or federal law or regulations requires the Town to establish a variance procedure for any requirement of this section 7.3, the variance procedure established in Section 4.4.6(I) of the LDO shall be utilized.

(Ord. No. 05-001, 1-13-05; Ord. No. 05-015, 9-8-05; Ord. No. 06-009, adopted 4-27-06; eff. 4-27-06; Ord. No. 2007-04, 3-22-07; Ord. No. 2008-LDO-01, 9-25-08; Ord. No. 2010-LDO-01, 1-14-10; Ord. No. 2012-LDO-08, 10-11-12; Ord. No. 2013-LDO-02, 6-13-13; Ord. No. 2014-LDO-03, 8-14-14; Ord. No. 2019-LDO-03, 10-10-19; Ord. No. 2019-LDO-02, 11-21-19; Ord. No. 2022-LDO-02, 4-28-22; Ord. No. 2022-LDO-03, 10-27-22; Ord. No. 2023-LDO-02, 3-23-23)

7.4 RESERVED

7.5 RESERVED

7.6 NUISANCE AND HAZARD CONTROL STANDARDS

7.6.1 Purpose and Applicability

This section is intended to ensure that industrial, research, and other business activities are established and maintained with proper appearance from streets and adjoining properties, and to ensure that such activities are good neighbors to adjoining properties by controlling the emission of noise, odors, glare, vibration, smoke, dust, liquid wastes, radiation, radioactivity, and similar pollutants. Accordingly, this section states the performance standards and conditions with which the Town expects the construction and operation of industrial, research, and other business activities to comply. These performance standards, like all other provisions of this Ordinance, are continuing obligations, and all industrial, research, and other business uses will be expected to operate in compliance with these standards. Any land use that fails to comply with these standards shall be in violation of this Ordinance.

7.6.2 General Standards and Measures for Compliance

- (A) All uses shall be conducted so as to preclude any nuisance, hazard, or commonly-recognized offensive condition or characteristics of the use, including the creation or emission on other properties of dust, gas, smoke, noise, fumes, odors, vibrations, particulate matter, chemical compounds, toxic matter, fire, explosions, electrical disturbance, heat, glare, or excessive night illumination. At any time before or after a building is used or occupied, the Planning Director may require that adequate control measures be provided in accordance with the requirements or standards of the appropriate state or federal government agency responsible for regulating that condition or pollutant, in order to protect the public health, safety, comfort, convenience, and general welfare from any such nuisance, hazard, condition, or pollutant.
- (B) Federal and State environmental regulations may also apply to one or more of the features governed by the standards in Section 7.6.3 below. The intent is for the standards of this section to supplement and complement, not supersede or replace, any applicable Federal and State regulations. If any standard herein conflicts with an applicable Federal or State standard, then the Federal or State standard shall control.

7.6.3 Performance Standards

(A) Landscaping

All required front yards, side yards, and rear yards shall be open, landscaped green areas or left in their natural state. Where landscaped, such yards shall be planted attractively with lawn, trees, shrubs, and the like in accordance with the development plan which the Town has approved for the use. Any areas left in their natural state shall be properly maintained in a sightly and well-kept condition. Parking areas also shall be maintained in a sightly and well-kept condition.

(B) Noise

Noise shall be muffled so as not to become objectionable at or beyond the property line due to intermittent beat frequency, shrillness, or intensity.

(C) Odors

Odors from any use shall not exceed the standards established by the State of North Carolina.

(D) Glare

Direct or reflected glare, such as from floodlights or high temperature processes, and as differentiated from general illumination, shall not be visible at or beyond any property line.

(E) Smoke

Smoke emissions shall not exceed the maximum limits established by the State of North Carolina.

(F) Dust and Other Particulate Matter

Solid or liquid particulate matter shall not be emitted at any point in a concentration exceeding three-tenths (0.3) grains per cubic foot of the conveying gas or air.

[Text continues on p. LDO 7-109.]

(G) Gases

Fumes or gases shall not be emitted at any point in concentrations or amounts that are noxious, toxic, corrosive, or in excess of any applicable maximum limits established by State or Federal regulations.

(H) Fire and Explosion Hazards

All operations shall be carried out in accordance with the Town Fire Code and with reasonable precautions against fire and explosive hazards.

(I) Radiation and Radioactivity

Operations shall cause no radiation or radioactivity at or beyond any property line that exceeds any applicable standards or regulations established by the U. S. Nuclear Regulatory Commission or by other federal or state agencies or laws.

(J) Electrical Radiation

Any electrical radiation shall not at any point adversely affect or interfere with any operations or equipment other than those of the person, company, or other entity emitting the radiation. Avoidance of adverse effects or interference from electrical radiation by appropriate single or mutual scheduling of operations is permitted.

(K) Wastewater and Industrial Wastes

All wastewater and industrial wastes shall be treated and disposed in such a manner as to comply with the water quality standards applicable to the classification assigned to the receiving waters by the State of North Carolina. Approval by the State of North Carolina of all plans for waste disposal facilities shall be required before the issuance of any building permit. All uses connected to the Town's sanitary sewer system also shall comply with all applicable requirements established in Chapter 19, Article IV of the Code of Ordinances of the Town of Cary.

(L) Underground and Above-Ground Storage Tanks

All storage tanks which are placed above or below the ground shall be designed and installed so as to prevent the infiltration of their contents into groundwater or surface waters, and to comply with all applicable State regulations promulgated by the North Carolina Department of Health, Environment and Natural Resources.

7.6.4 Effects of Concurrent Operations on Different Properties

The sum total of the effects of concurrent operations on two (2) or more parcels measured at any property line shall not be greater or more offensive to the senses than the standards contained in this section. Compliance with the provisions of this section may occur by independent or mutual changes in operational levels, scheduling of operations, and other adjustments.

7.6.5 Determination of Violation of Performance Standards

(A) The Planning Director shall have the authority to determine violations of the standards set forth in this section. The procedures set forth in this section shall be followed prior to the initiation of any enforcement action under Chapter 11 of this Ordinance.

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- (B) Where determination of a violation of these standards requires the use of personnel or instruments not available to the Town, and a violation exists in the opinion of the Planning Director, the following procedures shall be followed:
 - (1) The Planning Director shall give written notice of the alleged violation by registered or certified mail, return receipt requested, to the owner or occupant of the property. The notice shall describe the alleged violation, state the reasons why the Director believes there is a violation, and require that the owner or occupant answer the allegation within thirty (30) days of receiving the notice.
 - (2) After the thirty (30)-day period passes, if a dispute still exists between the Director and the alleged violator regarding the existence of violation, then the alleged violator may appeal to the Zoning Board of Adjustment. The Director shall then transmit to the Zoning Board of Adjustment a copy of the notice given to the alleged violator, along with any recommendations as to alterations, modifications, or securing the services of a consultant to determine whether a standard has been violated. The Zoning Board of Adjustment then shall make a determination as to whether a violation exists.
 - (3) If the Zoning Board of Adjustment finds the alleged violation to exist, then the costs of making that determination shall be charged to the owner or occupant of the property responsible for the violation. If the Zoning Board of Adjustment determines that no violation exists, then the Town shall cover the costs of making the determination.
 - (4) If a violation is not removed or corrected as directed by the Zoning Board of Adjustment, then the Director may:
 - (a) Recommend to the Zoning Board of Adjustment that any occupancy permits previously issued to the violator be voided and that the operator be required to cease operation until the violation is removed, corrected, or otherwise remedied; and/or
- (b) Initiate further enforcement actions under Chapter 11 of this Ordinance. (Ord. No. 2011-LDO-01, 1-11-11; Ord. No. 2021-LDO-01, 6-28-21; Ord. No. 2023-LDO-04, 11-16-23)

7.7 BUILDING DESIGN STANDARDS

7.7.1 Purpose and Intent

The review and approval of building design is critical to upholding and promoting high quality development throughout the Town. The purpose of this section is to ensure that proposed developments are designed in a way that promotes compatibility throughout the Town, including within residential developments, within non-residential centers, and between residential and non-residential areas. Specifically, the intent of this Section is as follows:

- (A) To encourage high quality appearance for developments, thoroughfares, and streets;
- **(B)** To provide proper standards that ensure a high quality appearance for Cary, and promote good design while also allowing individuality, creativity, and artistic expression;
- (C) To encourage the proper use of the land by promoting an appropriate balance between the built environment and preservation/conservation of open space (note that some places may be appropriate for more urban type development and less open space, such as the downtown and other areas designated in the Comprehensive Plan);

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- (D) To preserve and improve property values and protect private and public investment; and
- **(E)** To preserve and protect the identity and character of Cary, and to enhance the business economy.

7.7.2 Applicability

Except for structures subject to regulation under the North Carolina Residential Code for One- and Two-Family Dwellings, all projects requiring submission of a development plan under Section 3.9 of this Ordinance shall comply with the requirements of this Section. Such projects also must comply with the Town's Community Appearance Manual and the Site Design Standards which provide examples and illustrations of concepts discussed in this Section.

7.7.3 General Requirements

(A) Development within Non-Residential Centers

All proposed buildings within non-residential centers shall be designed to be consistent within the center in terms of architectural design, exterior building materials, colors, and arrangement of buildings and other features. A Statement of Architectural Compatibility (SAC) shall be required prior to the approval of the first development plan within the development; see Section 7.7.4.

(B) Development Outside of Non-Residential Centers

For all other non-residential development located outside of non-residential centers (e.g., subdivisions, buildings on "stand alone" parcels, modifications to existing developments, and infill development), the building design(s) shall be compatible within the subdivision or with adjacent buildings in close proximity to the proposed building. In such cases, a Statement of Architectural Compatibility is not required.

(C) Building Placement

Buildings shall comply with the following standards and those provisions that address building orientation, arrangement, mass, and other elements. All development plans must also follow the provisions in the Town's Community Appearance Manual and Site Design Standards.

- (1) All buildings must front a street, park, open space, or pedestrian way. A street may be an external roadway adjacent to a property, or a public or private street within a site. Buildings with one (1) double-loaded bay of parking between them and a street count as being sited to front a street. In addition, in non-residential centers, ten (10) acres or more in size within Mixed Use Overlay Districts, a majority of the tenant spaces forty thousand (40,000) square feet or less must be located on a double fronted street with no more than one hundred eighty (180) feet between buildings. For infill or redevelopment sites, buildings may front adjacent public streets in lieu of the double-loaded requirement.
- (2) Drive-throughs with roof structures or canopies shall be oriented away from major roadways. Cantilevered awnings or metal canopies are acceptable as part of a drive through.
- (3) Infill development should have the same predominate setbacks and orientation of adjacent existing buildings, unless there is an opportunity to establish a new predominate street-front orientation.

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(4) Buildings on adjacent outparcels must be grouped adjacent to one another in groups of two (2) or more. Grouped outparcel buildings must be sited no more than one hundred (100) feet apart.

(D) Review Considerations

The approval authority may consider alternative colors and designs for buildings provided that they meet the intent of this section. The approval authority should consider criteria such as the intensity of the colors, the extent of the design difference and the spatial separation of each building.

7.7.4 Statement of Architectural Compatibility (SAC)

A Statement of Architectural Compatibility (SAC) shall be included with all development plans for buildings within a non-residential center, and shall be submitted with the first development plan submission (see Section 3.9) on the application form specified in the Community Appearance Manual. The Planning Director shall consider the SAC as part of the development plan review. The SAC shall include:

- (A) Primary physical characteristics including predominant color(s), exterior materials and architectural features;
- (B) Primary landscape theme (general, not specific);
- (C) Building height and placement;
- (D) Lighting elements (general);
- **(E)** Other elements which may be relevant to a specific development and how they are compatible with the adjacent sites; and
- (F) Master Sign Plan (general).

The SAC shall designate the unifying elements that are to be incorporated within the entire project (including any outparcel) and specifically how these elements are to be used.

7.7.5 Criteria for Review of SAC

(A) Primary Color(s)

A maximum of three (3) predominant colors shall be designated as a primary unifying element (this does not include accent colors). Flexibility may be used to allow additional colors and/or a range of predominant colors provided that these colors are in the same family of colors (similar to each other). Any color specified as a primary unifying element shall be dominant in the building facade. Color "samples" shall be provided to the staff at the time of development plan review. Colored renderings may be required, but shall not be a substitute for this requirement. In addition to listing the color(s), the SAC shall also describe how and where the color will be used. It is recognized that the same color on a different material may not match exactly.

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(B) Accent Colors

These colors may be used as a secondary unifying element provided they are used throughout the development. Non-illuminated accent bands (e.g. canopies with gas stations and the roof of fast food buildings) on roofs, canopies, or other features shall be one (1) of the primary colors of the development or be white or earth tone in color.

(C) Exterior Materials

The dominant material or combination of materials shall be defined. For each building material selected, the color of that material shall also be defined.

(D) Architectural Features

Architectural features refer to a number of building elements that are repeated throughout the development. These include, but are not limited to: roof lines, canopies, building ornamentation, patterns, and building form. Any architectural feature designated as a unifying element throughout all buildings shall contribute to the identity of the development and not be just a minor architectural detail.

(1) Use of Awnings

No awnings/canopies shall be internally lit. All awnings/canopies shall utilize the same design and color throughout the development.

(2) Roof Type

Outparcels may use a different roof type (e.g., pitch vs. flat) than the main buildings within centers provided that the building on the outparcel is a size where the different roof type does not dominate the center and/or the roof type has a tie to the other buildings (e.g., mansard roofs).

(3) Detached Canopies

Detached canopies are subject to the provisions of the Community Appearance Manual, including color and roof pitch requirements.

(E) Landscaping

Plant materials may be used in such a way as to reinforce compatibility depending on the type of plant materials selected and their placement on the site. This previous statement is not intended to limit creative landscape designs within the center, but to promote general compatibility in materials. Drought tolerant or native species (including trees, shrubs, and turf grasses) that do not require extensive watering are strongly recommended.

(F) Setbacks and Building Placement

The use of common setbacks and building orientation from a street right-of-way may be an appropriate unifying element where a number of freestanding buildings occur within the development.

(G) Building Height

A standard height among a group of buildings can usually tie the buildings together visually.

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(H) Lighting

A consistent type of lighting fixture repeated throughout the development as well as a similar wattage, height, type of light produced and/or color of light are to serve as a unifying element. Light pole height, wattage, pole/fixture/light color should all be the same.

7.7.6 Recording Requirements

Where non-residential development plans or residential multi-family development plans are approved, no lots shall be recorded without noting the general requirements for architectural compatibility on the maps for recordation. Owners of properties with non-residential development plans which include outparcel lots are strongly recommended to record architectural compatibility covenants which refer to these requirements on record in the Planning Department. These covenants shall run with the land and be administrated by a property owners' association or similar organization.

7.7.7 Amendment Process

- (A) The SAC may be amended if the amendments are signed by the owner of the non-residential center or overall project and approved by the Planning Director. The Director shall review the amendments based on their ability to meet the intent of this Ordinance. The SAC for the main structures of the development shall be approved as part of the first development plan within a development.
- (B) Any revision to the SAC that involves a change in the primary characteristics of an existing development (such as a change in color or addition of a canopy) shall be reviewed and approved by those with the authority to approve plans and all owners of property falling under the SAC governance. Any change in primary or secondary characteristics shall be implemented comprehensively throughout the entire development including outparcels within a reasonable time frame (i.e., less than one (1) year unless otherwise approved by the Planning Director). Any approved changes shall meet the criteria of Section 7.7.5.

(Ord. No. 06-009, adopted 4-27-06; eff. 4-27-06; Ord. No. 2008-LDO-01, 9-25-08; Ord. No. 2012-LDO-06, 8-9-12; Ord. No. 2013-LDO-02, 6-13-13; Ord. No. 2017-LDO-01, 1-24-17; Ord. No. 2021-LDO-01, 6-24-21; Ord. No. 2023-LDO-03, 6-22-23; Ord. No. 2023-LDO-04, 11-16-23)

7.8 OFF-STREET PARKING AND LOADING

7.8.1 Purpose

In order to relieve traffic congestion in the streets, to minimize any detrimental effects of off-street parking areas on adjacent properties, to ensure the proper and uniform development of parking areas throughout the Town, and to support opportunities for development and redevelopment of businesses in the portions the town center with the most intensive development potential, off-street parking and loading spaces for each land use shall be provided in accordance with the standards established in this section.

7.8.2 Off-Street Parking Space Requirements

(A) Applicability

(1) Except as provided in Section 7.8.2(A)(2) below, each use or establishment within the Town shall initially and continually provide sufficient off-street parking spaces, in compliance with the requirements of this section, for all residents, employees, customers, visitors, and others who may spend time at the use or establishment.

Supp. No. 61 LDO 7-114

(2) Off-street parking shall not be required for existing and new non-residential uses within the HMXD sub-district of the Town Center zoning district. However, where off-street parking spaces are provided, they shall be considered "Required Parking Spaces" for the purpose of determining the proportionate number of required handicapped parking spaces per Section 7.8.2(F).

(B) Effect on New and Existing Uses

(1) Parking Spaces Required

Permanent off-street parking spaces shall be provided as specified by this section for all uses occupying land or facilities (or portions thereof). Such parking spaces may be provided in a parking garage. The requirements of this section shall be met:

- (a) At the time a Certificate of Occupancy is issued for a building or structure in which an approved use takes place;
- (b) At the time any principal or ancillary use or building is enlarged or increased in capacity, such as by adding dwelling units, guest rooms, seats, floor area, or other units of measurement used in Table 7.8-1, which follows; or
- (c) Before conversion from one (1) type of use or occupancy to another, or any change in the manner in which the use is constructed that would result in additional parking requirements.

(2) Certification

Each development plan that is submitted for approval shall include information as to the number, location, and dimensions of all off-street parking and loading spaces and the means of ingress and egress to such spaces. This information shall be illustrated in sufficient detail to indicate whether the requirements of this Section are met. In those cases where no development plan is required, the applicant must show that the number of parking spaces and the design and construction of all parking areas meet the requirements of this Section in order to receive a Certificate of Occupancy.

(3) Timing of Construction

- (a) Except as provided in paragraph (B)(2) above, all parking areas required under this Section shall be completed prior to the issuance of a Certificate of Occupancy for the use or uses that they serve.
- (b) Parking areas for phased development projects shall be provided in accordance with Table 7.8-1.

(C) Computation of Off-Street Parking Requirements

(1) Calculations

When measurements of the number of required spaces result in fractions, the space requirements shall be rounded upward to the next highest whole number.

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Supp. No. 20 LDO 7-114.2

(2) Different Use Areas

Except as provided for in this chapter, parking shall be calculated separately for each different use area in a building or on a site, including all ancillary uses.

(3) On-Street Parking

Except as provided for in this chapter, on-street parking within public or private streets, driveways, or drives, shall not be used to satisfy the off-street parking requirements prescribed by this section, except for townhouse developments. Townhouses may count delineated, on-street parking spaces within the development towards their visitor parking requirements.

(4) Commercial Parking Maximums

- (a) For uses classified as commercial, the number of spaces shown in Table 7.8-1 shall be considered the maximum number of surface spaces allowed for such uses for the purpose of reducing unnecessary/rarely-used parking and decreasing the amount of impervious surface on sites.
- (b) Parking spaces provided within a parking deck or other parking structure shall not count toward the maximum parking requirement. For the purposes of this subsection, a parking structure includes any structure that provides parking vertically on more than one (1) level or that provides parking underneath a building that has occupied floor(s) above the parking level.
- (c) As part of the review and approval of any procedure set forth in Chapter 3, the Planning Director may approve an increase in the maximum number of surface parking spaces of up to thirty (30) percent only if the additional surface parking is necessary to satisfy the parking expected for the use, based on factors including, but not limited to, the number of employees per square foot; the number of trips generated by the use, and the time of day when the use generates the most trips.
- (d) The Zoning Board of Adjustment may approve an increase in the maximum number of surface parking spaces above thirty (30) percent only if it finds, after conducting a quasi-judicial hearing, that the increase advances the goals and purposes of this Ordinance and is necessary to satisfy the demand for parking expected for the use based on factors including, but not limited to, the number of employees per square foot; the number of trips generated by the use; and the time of day when the use generates the most trips.

(5) Parking Based on Seating

When requirements use seating as a unit of measurement, all calculations shall be based on the design capacity of the areas used for seating.

(6) Parking Based on Floor Area

Except as provided for in this Section, when requirements use amount of square footage in buildings as a unit of measurement, all calculations shall be based on gross floor area.

(7) Parking Based on Students, Staff, and Occupants

Except as provided for in this chapter, when requirements use number of students, staff, or occupants as a unit of measurement, all calculations shall be based on the maximum enrollment, the largest number of persons working on any single shift, or the maximum fire-rated capacity, whichever is applicable and results in the greater number of required spaces.

(8) Residential Parking

- (a) Driveways may be used to satisfy minimum on-site parking requirements, provided that sufficient space is available to prevent vehicle encroachment onto sidewalk and/or into adjoining vehicular travel lanes.
- (b) All parking required by Table 7.8-1 shall be located directly at the dwelling unit for which the parking is intended, or not more than two hundred (200) feet away from the dwelling unit. Adequate off-street pedestrian access shall be provided between the required parking space(s) and the dwelling unit. With appropriate justification, this distance may be increased by the Planning Director.
- (c) Visitor Parking. Visitor parking shall be installed in accordance with Section 7.8.2(G).

Visitor parking for townhouses shall not be more than three (300) feet from the dwelling unit(s) for which it is provided to serve. These spaces may be provided via delineated on-street or off-street parking spaces.

(d) Parking for single-unit and duplex dwelling units shall be considered an accessory use subject to requirements of Section 5.3.4(K).

(9) Parking for Unlisted Uses

Parking requirements for uses not specifically listed in Table 7.8-1 shall be determined by the Planning Director based on the requirements for the closest comparable use, as well as on the particular parking demand and trip generation characteristics of the proposed use. The Planning Director may alternately require the submittal of a parking demand study that justifies estimates of parking demand based on the recommendations of the Institute of Traffic Engineers (ITE), and includes relevant data collected from uses or combinations of uses that are the same or comparable to the proposed use in terms of density, scale, bulk, area, type of activity, and location.

(10) Unimpeded Parking

Generally, no parking spaces shall be located so as to require the moving of any vehicle on the premises in order to enter or leave any other space. Notwithstanding the above, the Planning Director may allow stacking spaces provided for auto-related uses to count toward the minimum required parking, as long as such spaces are not part of areas required for site ingress or egress, or areas intended for fueling.

(D) Required Off-Street Parking Spaces

(1) Schedule "A"

Unless otherwise expressly stated in this Ordinance, off-street parking spaces shall be provided in accordance with Table 7.8-1. Off-street parking spaces for uses within the Town Center District shall be provided according to Section 6.1.3 of this Ordinance. For uses classified as commercial, the number of motor vehicle spaces shown on the table shall be considered the maximum allowed for such uses. Exceptions to the maximum parking allowed may be approved if justified in accordance with Section 7.8.2(C)(4).

TABLE 7.8-1: OFF-STREET PARKING SCHEDULE "A" ("du" = dwelling unit; "sf" = square feet)			
RESIDENTIAL USES			
Household Living	Boarding house	1.5 per guest room	1 rack, or 1 rack per 40 guests
Household Living	Caretaker's residence	2 per du	N/A
Household Living	Detached dwelling	2 per du	N/A
Household Living	Duplex dwelling	2 per du	N/A
Household Living	Manufactured home	2 per du	N/A
Household Living	Multi-family dwelling (including mid-rise)	0-1-bedroom unit: 1 per du 2-bedroom unit: 2 per du 3 or more bedroom unit: 2.5 per du + 0.5 per bedroom over 3 bedrooms All units: 0.15 per du designated for visitor parking {See 7.8.2(C)(8)}	1 rack per building, or 1 per 50 units*
Household Living	Patio dwelling	2 per du	N/A
Household Living	Residential use in non-residential building	2 per du + 0.5 per bedroom over 2 bedrooms	N/A
Household Living	Semi-detached/attached dwellings	2 per du + 0.5 per bedroom over 2 bedrooms	N/A
Household Living	Townhouse	2 per du + 0.5 per bedroom over 2 bedrooms, + 0.25 per du designated for visitor parking {See 7.8.2(C)(8)}	N/A
Household Living	Accessory dwelling unit	1 per accessory dwelling unit	N/A
Group Living	Dormitory	1.5 per guest room	1 rack per building, or 1 per 50 units*
Group Living	Family care home	0.25 per resident + 1 per each staff person	1 rack per building
Group Living	Group home	0.50 per resident	1 rack per building
Group Living	Life care community	0.25 per resident + 1 per each staff person	1 rack per building
Group Living	Nursing home, congregate care, dependent living units	0.25 per resident + 1 per each staff person	1 rack per building

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TABLE 7.8-1: OFF-STREET PARKING SCHEDULE "A"				
	("du" = dwelling unit; "sf" = square feet)			
	Land Use	Number of Motor Vehicle Spaces	Number of Bike Spaces	
PUBLIC/INSTITUTIONAL	USES			
Aviation	Airport/landing strip	See Schedule "C"	N/A	
Aviation	Heliport	See Schedule "C"	N/A	
Cemetery	All	See Schedule "C"	N/A	
Day Care	Child day care center	1 per each 200 sf	N/A	
Day Care	Day care home, large	4 per home + 1 additional space if there is an employee who does not reside in the home	N/A	
Day Care	Day care home, small	3 per home + 1 additional space if there is an employee who does not reside in the home	N/A	
Government Services	Governmental offices	1 per every 200 sf of gross floor area used by the public + 1 per each 600 sf of gross floor are not used by the public	1 rack per building, or 1 rack per 50,000 sf *	
Government Services	Public safety station	1 per each 500 sf	1 rack	
Government Services	Public utility facilities	See Schedule "C"	N/A	
Hospital	All	1 per patient bed + 1.25 per full-time employee (total number of full time employees regardless of shift size)	1 rack per building, or 1 rack per 50,000 sf *	
Library	All	1 per each 200 sf	3 racks, or 1 rack per 50 auto spaces*	
Museum	All	1 per each 500 sf	3 racks, or 1 rack per 50 auto spaces*	
Park and Open Space	Athletic field, public	1 per 5,000 sf of land area	3 racks, or 1 rack per 50 auto spaces*	
Park and Open Space	Community Garden	0.1 per each acre	3 racks, or 1 rack per 50 auto spaces*	
Park and Open Space	Outdoor amphitheater, public	1 per every 3 fixed seats or 1 per each 35 sf of non-fixed seating*	3 racks, or 1 rack per 50 auto spaces*	
Park and Open Space	Park, public	See Schedule "C"	3 racks, or 1 rack per 50 auto spaces*	
Park and Open Space	Neighborhood recreation center, public	1 per each 250 sf	3 racks, or 1 rack per 50 auto spaces*	
Park and Open Space	Resource conservation facility	See Schedule "C"	3 racks, or 1 rack per 50 auto spaces*	

TABLE 7.8-1: OFF-STREET PARKING SCHEDULE "A"				
	("du" = dwelling unit; "sf" = square feet)			
	Land Use	Number of Motor Vehicle Spaces	Number of Bike Spaces	
PUBLIC/INSTITUTIONAL US	ES (Cont.)			
Passenger Terminal	Bus, air, or rail terminal	1 per each 200 sf	2 racks	
Religious Assembly	All	1 per every 3 persons of maximum fire-rated capacity in the assembly area or sanctuary	1 rack, or 1 rack per 100 auto spaces*	
Educational Use (public or private)	College	1 per classroom + 1 per every 2 students	1 rack per 40 students above 2nd grade and all employees	
Educational Use (public or private)	Elementary, middle	2.25 per classroom	1 rack per 40 students above 2nd grade and all employees	
Educational Use (public or private)	Pre-school	1 per each 200 sf + 1 stacking lane for at least 4 cars	1 rack per 40 students above 2nd grade and all employees	
Educational Use (public or private)	Senior high	1.5 per classroom + 1 per every 5 students	1 rack per 40 students above 2nd grade and all employees	
Non-Governmental Utilities	Utility facility, major	See Schedule "C"	N/A	
Non-Governmental Utilities	Transportation facility	See Schedule "C"	N/A	
Non-Governmental Utilities	Utility substation, minor	See Schedule "C"	N/A	
	COMMERCIAL USES (NOTE: Motor vehicle spaces listed for commercial uses are maximums. Refer to Section 7.8.2[C][4] for exceptions to this requirement.)			
Agricultural Uses	Farming, general	None	N/A	
Agricultural Uses	Forestry	None	N/A	
Agricultural Uses	Produce stand	See Schedule "C"	N/A	
Animal Service	Veterinary hospital/office with indoor kennels	1 per each 300 sf	1 rack	
Animal Service	Kennel, indoor only	1 per each 400 sf	1 rack	
Animal Service	Kennel, indoor/outdoor	1 per each 400 sf of indoor space	1 rack	

Supp. No. 43 LDO 7-119

TABLE 7.8-1: OFF-STREET PARKING SCHEDULE "A" ("du" = dwelling unit; "sf" = square feet)			
COMMERCIAL USES (Cont.)			
Animal Service	Veterinary hospital/office with outdoor kennels	1 per each 300 sf	1 rack
Assembly	General assembly	1 per every 3 persons of maximum fire-rated capacity	1 rack, or 1 rack per 100 auto spaces*
Assembly	Special Event Center	1 per each 50 sf of indoor and outdoor assembly space	1 rack, or 1 rack per 100 auto spaces*
Assembly	Dance, Rental	1 per each 50 sf or 1 per every 4 persons of maximum fire- rated capacity*	1 rack, or 1 rack per 100 auto spaces*
Assembly	Club or lodge	1 per every 3 persons of maximum fire-rated capacity + parking required for other uses as may be necessary.	1 rack, or 1 rack per 100 auto spaces*
Financial Institution	Bank, without drive-through service	1 per each 200 sf	1 rack, or 1 rack per 100 auto spaces*
Financial Institution	Bank, with drive-through service	1 per each 200 sf + one lane per each drive-up window and/or ATM with stacking spaces per Table 7.8-3	1 rack, or 1 rack per 100 auto spaces*
Financial Institution	Stand alone ATM	2 per machine	N/A
Food and Beverage Service	Nightclub, bar indoor operation	1 per each 50 sf or 1 per every 4 persons of maximum fire- rated capacity*	1 rack, or 1 rack per 100 auto spaces*
Food and Beverage Service	Nightclub, bar with outdoor operation	1 per each 50 sf, including outdoor waiting/seating/dining areas, or 1 per every 4 persons of maximum fire-rated capacity*	1 rack, or 1 rack per 100 auto spaces*
Food and Beverage Service	Restaurant, indoor operation	1 per each 150 sf, including outdoor waiting/seating/dining areas, or 1 per every 3 persons of maximum fire-rated capacity*	1 rack, or 1 rack per 100 auto spaces*

Supp. No. 43 LDO 7-120

	TABLE 7.8-1: OFF-STREET PARKING SCHEDULE "A"		
("du" = dwelling unit; "sf" = square feet)			
	Land Use	Number of Motor Vehicle Spaces	Number of Bike Spaces
COMMERCIAL USES (Cont.)			
Food and Beverage Service	Restaurant, with outdoor operation	1 per each 150 sf, including outdoor waiting/seating/dining areas, or 1 per every 3 persons of maximum fire-rated capacity*	1 rack, or 1 rack per 100 auto spaces*
Office	Office, business or professional	1 per each 300 sf	1 rack per building, or 1 rack per 50,000 sf *
Office	Office, health care	1 per each 250 sf	1 rack per building, or 1 rack per 50,000 sf *
Office	Wellness Center	1 per each 200 sf	1 rack, or 1 rack per 100 auto spaces *
Office	Radio and television broadcasting studios	1 per each 500 sf	1 rack per building, or 1 rack per 50,000 sf *
Public Accommodation	Guest house	2 per guest house + 1 per sleeping room	1 rack
Public Accommodation	Hotel or motel	1 per sleeping room + 1 per 4 seats in meeting or assembly rooms	1 rack
Recreation/Entertainment, Indoor	Amusement establishment	1 per each 200 sf or 1 per every 3 persons of maximum fire-rated capacity*	3 racks, or 1 rack per 100 auto spaces*
Recreation/Entertainment, Indoor	Commercial indoor/outdoor recreational facilities, general	1 per every 3 persons of maximum fire-rated capacity	3 racks, or 1 rack per 100 auto spaces*
Recreation/Entertainment, Indoor	Swimming pool	1 per each 75 sf of water surface	3 racks, or 1 rack per 100 auto spaces*
Recreation/Entertainment, Indoor	Tennis courts	3 per court	3 racks, or 1 rack per 100 auto spaces*
Recreation/Entertainment, Indoor	Neighborhood recreation center, indoor/outdoor (private)	1 per each 200 sf (this may be reduced by one space for every single-unit dwelling which is located within 400 feet of direct pedestrian access from the facility)	3 racks, or 1 rack per 100 auto spaces*

TABLE 7.8-1: OFF-STREET PARKING SCHEDULE "A"			
("du" = dwelling unit; "sf" = square feet)			
	Land Use	Number of Motor Vehicle Spaces	Number of Bike Spaces
COMMERCIAL USES (Cont	i.)		
Recreation/Entertainment, Indoor	Pool or billiard hall	1 per each 50 sf or 1 per every 4 persons of maximum fire- rated capacity*	1 rack, or 1 rack per 100 auto spaces*
Recreation/Entertainment, Indoor	Theater (large & small), excluding drive-in theater	1 per every 4 seats	1 rack, or 1 rack per 100 auto spaces*
Recreation/Entertainment, Indoor	Electronic Gaming Operation	1 per each 200 sf or 1 per every 3 persons of maximum fire-rated capacity or one per electronic gaming machine*	3 racks, or 1 rack per 100 auto spaces*
Recreation/Entertainment, Outdoor	Athletic field, private	1 per every 5,000 sf of land area	3 racks, or 1 rack per 100 auto spaces*
Recreation/Entertainment, Outdoor	General outdoor recreational facility commercial, general	1 per every 3 persons of maximum fire-rated capacity	3 racks, or 1 rack per 100 auto spaces*
Recreation/Entertainment, Outdoor	Swimming pool	1 per each 75 sf of water surface	3 racks, or 1 rack per 100 auto spaces*
Recreation/Entertainment, Outdoor	Tennis courts	3 per court	3 racks, or 1 rack per 100 auto spaces*
Recreation/Entertainment, Outdoor	Golf course (public or private)	6.6 per hole	3 racks, or 1 rack per 100 auto spaces*
Recreation/Entertainment, Outdoor	Golf driving range (public or private)	3 per hole or tee	3 racks, or 1 rack per 100 auto spaces*
Recreation/Entertainment, Outdoor	Motor vehicle raceway	1 per every 4 persons of maximum fire-rated capacity	3 racks, or 1 rack per 100 auto spaces*
Recreation/Entertainment, Outdoor	Outdoor amphitheater, commercial	1 per every 3 fixed seats or 1 per each 35 sf of non-fixed seating	3 racks, or 1 rack per 100 auto spaces*
Retail Sales and Service	Convenience store	1 per each 150 sf	1 rack
Retail Sales and Service	Crematorium	1 per each 500 sf	1 rack, or 1 rack per 100 auto spaces *
Retail Sales and Service	Farm market	3 per each vendor stall or unit	1 rack
Retail Sales and Service	Funeral home	1 per each 200 sf	1 rack
Retail Sales and Service	ABC store	1 per each 300 sf	1 rack, or 1 rack per 100 auto spaces*

Supp. No. 33 LDO 7-122

TABLE 7.8-1: OFF-STREET PARKING SCHEDULE "A"			
("du" = dwelling unit; "sf" = square feet)			
	Land Use	Number of Motor Vehicle Spaces	Number of Bike Spaces
COMMERCIAL USES (Cont.)			
Retail Sales and Service	Postal center, private	1 per each 300 sf + 1 per employee + 1 additional space for each delivery vehicle generally maintained on the premises	1 rack, or 1 rack per 100 auto spaces*
Retail Sales and Service	Personal service establishment	1 per each 200 sf	1 rack, or 1 rack per 100 auto spaces*
Retail Sales and Service	Retail store	1 per each 250 sf	1 rack, or 1 rack per 100 auto spaces*
Retail Sales and Service	Adult business	1 per each 200 sf	1 rack, or 1 rack per 100 auto spaces*
Retail Sales and Service	Shopping center, general	1 per each 250 sf	1 rack per building, or 1 rack per 50,000 sf *
Retail Sales and Service	Shopping center, small	based on each tenant, except in the Town Center District, where parking is 1 per each 250 sf	1 rack per building, or 1 rack per 50,000 sf *
Retail Sales and Service	Trade school	2 per classroom + 1 per every 2 students	1 rack, or 1 rack per 100 auto spaces*
Vehicles and Equipment	Automobile sales/rental	1 per each 300 sf of enclosed floor area + 1 per each 5,000 sf of outdoor display area	1 rack
Vehicles and Equipment	Vehicle filling station	1 per each 250 sf of retail + 4 per service bay + 0.5 per pump + 2 lanes per pump island with stacking spaces per Table 7.8-3	1 rack
Vehicles and Equipment	Car wash, self service and automatic	2 per bay + 1 lane per each bay with stacking spaces per Table 7.8-3	N/A
Vehicles and Equipment	Car wash, full service	1 per each 150 sf + 1 lane per each bay with stacking spaces per Table 7.8-3	N/A
Vehicles and Equipment	Heavy equipment sales/rental	1 per each 400 sf of enclosed floor area + 1 per each 5,000 sf of outdoor display area	N/A
Vehicles and Equipment	Towing and storage	1 per each 300 sf + storage area	N/A

Supp. No. 18 LDO 7-123

TABLE 7.8-1: OFF-STREET PARKING SCHEDULE "A"			
	("du" = dwelling unit;	"sf" = square feet)	
	Land Use	Number of Motor Vehicle Spaces	Number of Bike Spaces
COMMERCIAL USES (Cont.)			
Vehicles and Equipment	Vehicle service, light	1 per each 300 sf + 2 per bay	N/A
Vehicles and Equipment	Vehicle repair, heavy	1 per each 200 sf + 4 per bay	N/A
INDUSTRIAL USES			
Industrial Service	General industrial services	See Schedule "B"	1 rack
Industrial Service	Research laboratory	1 per each 500 sf	1 rack
Manufacturing and Production	Manufacturing, heavy	See Schedule "B"	1 rack
Manufacturing and Production	Manufacturing, light	See Schedule "B"	1 rack
Manufacturing and Production	Prototype process and production plants	1 per each 500 sf	1 rack
Manufacturing and Production	Brewery, distillery, or winery with a tasting room or restaurant	1 per 100 SF for indoor and outdoor tasting room or restaurant areas.	1 rack, or 1 rack per 100 auto spaces*
Manufacturing and Production	Brewery, distillery, or winery without a tasting room or restaurant	1 per 5000 SF for production areas and indoor storage area.	1 rack, or 1 rack per 100 auto spaces*
Manufacturing and Production	Resource extraction	See Schedule "C"	N/A
Telecommunications Facilities	Antenna, co-location on existing tower	None	N/A
Telecommunications Facilities	Concealed (stealth) antennae and towers	None	N/A
Telecommunications Facilities	Other building mounted antennae and towers	None	N/A
Telecommunications Facilities	Other freestanding towers	See Schedule "C"	N/A
Warehouse and Freight Movement	Mini-storage	1 per each 5,000 sf + 2 loading spaces	N/A
Warehouse and Freight Movement	Outdoor storage	See Schedule "B"	N/A
Warehouse and Freight Movement	Railroad stations and yards	See Schedule "C"	N/A
Warehouse and Freight Movement	Warehousing and distribution establishment	See Schedule "B"	N/A
Warehouse and Freight Movement	Wholesale establishment	See Schedule "B"	N/A
Waste-Related Uses	Recycling and salvage operations	1 per each 300 sf + 1 per each 10,000 sf of gross yard area	N/A

^{*}whichever number is greater

Supp. No. 45

(2) Schedule "B"

Uses subject to off-street parking schedule "B" shall provide the following minimum number of off-street parking spaces:

TABLE 7.8-2: OFF-STREET PARKING SCHEDULE "B"		
Activity	Number of Spaces Required	
Office or administrative area	1 per 300 square feet	
Indoor sales area	1 per 200 square feet	
Outdoor sales or display area (3,000 square feet or less)	1 per 750 square feet	
Outdoor sales or display area (over 3,000 square feet)	1 per 1,000 square feet	
Cluster box unit - mailbox		
0-20 mailboxes	0	
21-60 mailboxes	2	
61-80 mailboxes	3	
81-100 mailboxes	4	
101 mailboxes or more	4 plus 1 per each additional 50 mailboxes or portion thereof above 100	
Indoor storage/warehousing/vehicle service/manufacturing area:		
1-3,000 square feet	1 per 250 square feet	
3,001-5,000 square feet	1 per 500 square feet	
5,001-10,000 square feet	1 per 750 square feet	
10,001+ square feet	1 per 1,250 square feet	

(3) Schedule "C"

Uses that reference Schedule "C" have widely varying parking and loading demand characteristics, making it impossible to specify a single off-street parking or loading standard. Upon receiving a development application for a use subject to "Schedule C" standards, the Planning Director shall apply the off-street parking and loading standard specified for the listed use that is deemed most similar to the proposed use or establish minimum off-street parking requirements on the basis of a parking and loading study prepared by the applicant. Such a study shall include estimates of parking demand based on recommendations of the Institute of Traffic Engineers (ITE), or other acceptable estimates as approved by the Planning Director, and should include other reliable data collected from uses or combinations of uses that are the same as or comparable with the proposed use. Comparability will be determined by density, scale, bulk, area, type of activity, and location. The study shall document the source of data used to develop the recommendations.

Supp. No. 30 LDO 7-125

(4) Standards for Bicycle Parking

Consistent with the recommendations of the Comprehensive Transportation Plan, developments shall provide appropriate bicycle amenities to encourage cycling. Acceptable rack elements, rack location and access, rack area and site conditions such as protection from the elements and visibility shall conform to the Association of Pedestrian and Bicycle Professionals Bicycle Parking Guidelines adopted in spring of 2002. The guidelines are available at http://www.bicyclinginfo.org/de/parkguide.htm. Should a topographical or other site constraint create a situation in which the bicycle parking requirements require reduction, modification, or deletion, the Planning Department Director will have the ability to approve such changes.

(5) Bicycle Related Signage

Signs restricting bicycle travel in vehicular areas at retail sites will be prohibited.

(E) Stacking Spaces for Drive-Through Uses

(1) In addition to meeting the off-street parking requirements of this section, drive-through facilities specified in Table 7.8-3 shall comply with the following minimum stacking space standards:

TABLE 7.8-3: SCHEDULE OF STACKING SPACES			
Type of Use	Minimum Stacking Spaces	Measured From	
Bank, teller lane	4	Teller window	
Bank, ATM	3	Teller machine	
Restaurant, with drive through	8	Order box*	
Car Wash, automatic	6	Bay entrance	
Car Wash, self-service	3	Bay entrance	
Car Wash, full service	4	Bay entrance	
Auto Service Station, gas pump island	30 feet from each end of island		
Unlisted	**		

^{*}A minimum 4-vehicle queue shall be provided from the order box to the pick-up window.

(F) Handicapped Parking Requirements

(1) Residential Uses

Handicapped-accessible parking for residential uses shall be provided at the rate of one (1) space per each dwelling unit that is designed for occupancy by the handicapped.

Supp. No. 30 LDO 7-126

^{**}Requirements for uses not specifically listed may be determined by the Planning Director based upon the requirements for comparable uses and upon the particular characteristics of the use. Alternately, the applicant may submit a parking demand study per 7.8.2 (C)(9).

(2) Non-Residential Uses

Handicapped-accessible parking spaces shall be provided for uses other than residential, at the rate shown in Table 7.8-4 below:

TABLE 7.8-4: HANDICAPPED PARKING FOR NON-RESIDENTIAL USES		
Total Number of Required Parking Spaces	Number of Required Handicapped Spaces	
1-25	1	
26-50	2	
51-75	3	
76-100	4	
101-150	5	
151-200	6	
201-300	7	
301-400	8	
401-500	9	
501-1,000	2 percent of total spaces	
Above 1,000	20 spaces, plus one space for each 100 over 1,000 spaces or fraction thereof.	

(3) Relationship to General Off-Street Parking Requirements

Handicapped parking required by this section shall count towards the fulfillment of the general off-street parking requirements of this section.

(4) Compliance with North Carolina Building Code

In addition to meeting the requirements of this Section, all handicapped parking shall comply with the NC State Building Code Volume 1C (as amended); but the more restrictive of the two (2) shall apply.

(G) Design and Location of Parking Areas/Stacking Spaces

- (1) All parking areas shall be located and designed so as to avoid undue interference with the use of public streets and alleys. Parking areas shall provide suitable maneuvering room so that all vehicles may enter an abutting street in a forward direction. The backing of a motor vehicle onto a public street from a parking area shall be prohibited, except for residential parking. The Director of Transportation and Facilities may allow parking on public streets within the Town Center and Mixed Use Overlay Districts provided that the design is consistent with the Site Design Standards or other applicable policies and plans and does not create a safety issue. Pedestrian pathways shall be provided within parking areas in accordance with Section 7.10.4 of this ordinance and consistent with the Site Design Standards.
- (2) All parking areas shall be designed, constructed, and drained in accordance with the Town's Standard Specifications and Details Manual.

Supp. No. 41 LDO 7-127

- (3) Parking facilities shall be continually maintained in compliance with the approved development plan and shall be free of litter and debris at all times.
- (4) Each parking area shall meet all applicable landscaping, screening, and buffering requirements set forth in Section 7.2 of this Ordinance.
- (5) All parking areas shall be separated at least ten (10) feet from buildings, in order to allow room for sidewalks, landscaping, and other plantings between the building and the parking area. This separation may be eliminated in the rear of buildings in areas designed for unloading and loading of materials; this applies primarily to industrial and warehousing buildings.
- (6) The visibility of parking areas shall be reduced by placing at least thirty (30) percent of the parking to the rear or side of buildings for all non-residential developments greater than five (5) acres. An alternative to this requirement is to screen the parking from the public roadway with a Type A streetscape and/or berm. No parking is allowed between non-residential buildings and the right-of-way for individual buildings located on sites at the intersection of thoroughfares and/or collectors designated on the Cary Comprehensive Transportation Plan unless the building floor elevation is ten (10) feet or more below the grade of the adjacent roadway.
- (7) [Reserved]
- (8) For residential uses requiring designated visitor parking and consisting of more than one (1) building, the total number of required visitor parking spaces shall be provided in small groups evenly dispersed throughout the entire site.
- (9) Each parking pod/bay shall not exceed two hundred (200) spaces without being separated by streets, primary travel ways, and/or pedestrian plazas (see Site Design Standards for examples and additional guidance). Exceptions can be made by the Planning Director for single tenant spaces forty thousand (40,000) square feet and over.
- (10) Parking in front of main building entrances along private streets and/or primary travel ways is required with the exception of those areas used for loading and unloading, fire lanes, outdoor display of merchandise, and pedestrian access from the main entrance to parking areas. Parking on public streets may be provided if approved by the Transportation and Facilities and Planning Directors, and depending on anticipated vehicular speeds, traffic volumes, pedestrian conflicts, and the particular design and geometry of parking. The intent of these streets is to provide the primary circulation network through and within a development.

(H) Reduction in Number of Required Off-Street Parking Spaces

(1) As part of the review and approval of any procedure set forth in Chapter 3, the Planning Director may approve a reduction of up to fifteen (15) percent in the number of designated parking spaces only if the reduced number of parking spaces will be sufficient to satisfy the demand for parking expected for the use, based on the nature of the use, the number of trips generated by the use, the times of day when the use generates the most trips, and the extent to which other establishments are located on the same property and may reduce the number of vehicle trips required between different establishments.

- (2) As part of the review and approval of any procedure set forth in Chapter 3, the Zoning Board of Adjustment may allow the following reductions. Review of a parking reduction request does not change the applicable approval authority for the development plan as a whole. Any request for parking reduction in excess of the reductions permitted here shall be processed as a variance request (Section 3.20).
 - (a) The Zoning Board of Adjustment may allow a reduction of up to thirty (30) percent in the number of designated parking spaces upon holding a quasi-judicial hearing and finding that the such reduced number advances the goals and purposes of the Ordinance and will be sufficient to satisfy the demand for parking expected for the use, based on the nature of the use, the number of trips generated, the times of day when the use generates the most trips, and the extent to which other establishments are located on the same property and may reduce the number of vehicle trips required between different establishments.
 - (b) The Zoning Board of Adjustment may allow a reduction of up to fifty (50) percent in the number of designated parking spaces for a development in the Town Center (TC) zoning district upon holding a quasi-judicial hearing and finding that such reduced number advances the goals and purposes of the Ordinance and will be sufficient to satisfy the demand for parking expected for the use, based on the following:
 - 1. Nature of the use;
 - **2.** The number of trips generated;
 - **3.** The times of day when the use generates the most trips;
 - 4. The extent to which other establishments are located on the same property and may reduce the number of vehicle trips required between different establishments; and
 - 5. The availability of nearby on-street spaces or public parking facilities.

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Supp. No. 20 LDO 7-128.2

(3) In cases where no development plan is required, or where a previously approved plan remains in effect for the property, the Planning Director may grant a reduction of up to fifteen (15) percent of the requirements of subsection 7.8.2(D) above only if the reduced number of parking spaces will be sufficient to satisfy the demand for parking expected for the use, based on the nature of the use, the number of trips generated by the use, the times of day when the use generates the most trips, and the extent to which other establishments are located on the same property and may reduce the number of vehicle trips required between different establishments.

(I) Violation Resolution

In cases where no plan previously approved remains in effect for the property, the Planning Director may grant reductions from the requirements of subsection 7.8.2(D) above only upon finding that the reduced number of parking spaces will be sufficient to satisfy the demand for parking expected for the use, based on the nature of the use, the number of trips generated by the use, the times of day when the use generates the most trips, and the extent to which other establishments are located on the same property and may reduce the number of vehicle trips required between different establishments. This section shall apply only when reducing the required number of parking spaces is necessary to resolve a violation of this Ordinance or of the previously approved plan.

7.8.3 Parking Alternatives

The Planning Director shall be authorized to approve alternatives to providing the number of off-street parking spaces required by Table 7.8-1 in accordance with the following standards:

(A) Shared Parking

The Planning Director may approve shared parking facilities for developments or uses with different operating hours or different peak business periods if the shared parking complies with all of the following standards:

(1) Location

- (a) Where the principal use is located in the Town Center Zoning District, shared parking facilities shall be located within one thousand two hundred (1,200) feet of the main entrance of the principal use for uses classified as Public/Institutional in Table 5.1-2, and eight hundred (800) feet from the main entrance of the principal use for all other uses in the Town Center unless remote parking shuttle bus service is provided.
- (b) Where the principal use is located in any zoning district other than the Town Center District, shared parking facilities shall be located within five hundred (500) feet of the main entrance of the principal use unless remote parking shuttle bus service is provided. In addition, adequate and safe pedestrian access must be provided from and to the shared parking areas.

(2) Zoning Classification

Shared parking areas must be located on a site with the same or a more intensive zoning classification than required for the primary uses served.

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(3) Shared Parking Study

Those wishing to use shared parking as a means of satisfying off-street parking requirements must submit a shared parking request to staff that justifies the feasibility of shared parking. Justification should include information on the size and type of the proposed development, the composition of tenants, the anticipated rate of parking turnover, and the anticipated peak parking and traffic loads for all uses that will be sharing off-street parking spaces.

- (a) The maximum reduction in the number of parking spaces required for all uses sharing the parking area shall be thirty-five (35) percent.
- **(b)** Directional signage which meets the requirements of this Ordinance must be added to direct the public to the shared parking spaces. It is preferable for the employees of an establishment to utilize these spaces.

(4) Agreement for Shared Parking

A shared parking plan will be enforced through written agreement among all owners of record. An attested copy of the agreement between the owners of record must be submitted to the Planning Director for recordation. Recordation of the agreement must take place before issuance of a building permit for any use to be served by the shared parking area. A shared parking agreement may be revoked only if all required off-street parking spaces will be provided in accordance with the requirements of Table 7.8-1.

(B) Off-Site Parking

If some or all of the off-street parking spaces required by this section cannot reasonably be located on the same lot as the principal use, then such spaces may be located on a separate parcel(s) as follows:

(1) Location

- (a) Where the principal use is located in the Town Center Zoning District, off-site parking shall be located within one thousand two hundred (1,200) feet of the main entrance of the principal use for uses classified as Public/Institutional in Table 5.1-2, and eight hundred (800) feet from the main entrance of the principal use for all other uses in the Town Center.
- **(b)** Where the principal use is located in any zoning district other than the Town Center District, off-site parking shall be located within five hundred (500) feet of the main entrance of the principal use.

(2) Measurement

The separation of the use from the parking shall be measured from the main entrance to the nearest parking lot space following a reasonable and safe walking route.

(3) Approval Criteria

(a) The land on which the parking facilities are provided shall be owned by the same person or persons as the principal use.

- (b) Such land shall not be separated from the principal use by a thoroughfare or collector street unless both the use and the parking area shall be located within the Town Center District or are specifically approved by the Transportation Director based on safe pedestrian crosswalks linking the parking with the principal use.
- (c) Such land shall be located in a zoning district within which the principal use would be allowed as a permitted or special use.
- (d) Such land shall be used for no other purpose than to provide parking for the principal use, unless a shared parking study is submitted per Section 7.8.3(A)(3) and a shared parking plan is approved and recorded per Section 7.8.3(A)(4).
- (e) There shall be a pedestrian walkway or sidewalk connecting the parking area to the use it serves.
- (f) The provision for off-site parking, whether the spaces are new or existing, shall be indicated and reviewed as part of the development plan approval process.

(C) Parking Structures

The off-street parking required by or provided under this section may be located in a parking structure, whether on the same or on a different lot than the uses which it serves. Ground floor parking provided in a parking structure shall be screened, insofar as practicable, from surrounding uses and from public view. In addition, for uses located on the same lot as the structure, the conditions required under subsection 7.8.3(A) above shall apply. For uses located on a different lot as the structure, the conditions required under subsection 7.8.3(B) shall apply.

(D) Valet and Tandem Parking

- (1) The Planning Director may approve an off-street parking program utilizing limited tandem parking for commercial and industrial uses provided that the development requires seventy-five (75) or more parking spaces. No more than thirty (30) percent of the total number of spaces shall be designated as tandem. In addition, a valet parking attendant must be on duty during business hours.
- (2) Tandem parking may be utilized for up to twenty (20) percent of the on-site or off-site fleet-parking component of a private transportation service use. Provisions of (D)(1) above shall not apply to such fleet-parking component.

(E) Other Eligible Alternatives

The Planning Director may approve any other alternative to providing off-street parking spaces on the site of the subject development if the applicant demonstrates that the proposed plan will protect surrounding neighborhoods, maintain traffic circulation patterns, and promote quality urban design to at least the same extent as would strict compliance with otherwise applicable off-street parking standards. The Planning Director may approve different parking requirements for mixed use projects. The different parking requirement must be based on studies and documentation validated by national studies and/or research and recommendations from nationally accredited institutions.

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7.8.4 Dimensional Requirements for Parking Spaces and Aisles

- (A) All parking spaces, aisles between parking spaces, and parking space modules shall meet the minimum dimensional requirements set forth in the Town's Standard Specifications and Details Manual.
- (B) Compact parking spaces may be provided in addition to the required minimum number of spaces on a case-by-case basis. The design of such spaces shall be consistent with the requirements of the Town's Standard Specifications and Details Manual.
- (C) Parking structures may be subject to dimensional adjustments based on utilization, but in no case shall the standard space width be less than eight and one-half (8 1/2) feet. Reduction in design standards shall be subject to approval by the Planning Director.

7.8.5 Use and Identification of Parking Areas

Where parking lots for more than five (5) cars are permitted or required under this Ordinance, the following requirements shall apply:

- (A) The parking lot may be used only for parking and not for any type of loading, sales, dead storage, repair work, dismantling, or service of vehicles. Notwithstanding the above, the Planning Director may allow the use of a portion or portions of a parking lot for such uses on a case-by-case basis, provided that such spaces are not part of areas required for site ingress or egress.
- (B) All entrances, exits, and drainage plans shall be reviewed and approved by the Town Director of Transportation and Facilities in accordance with the Town's Standard Specifications and Details Manual and shall be constructed before occupancy of the use.

7.8.6 Loading Space Requirements

(A) Number of Required Off-Street Loading Berths

At least the number of berths specified in Table 7.8-5 below, depending on the gross floor area of the land use, shall be provided on the property. The developer shall evaluate his or her own needs to determine if the use requires a greater number of spaces than those required by this section.

TABLE 7.8-5: REQUIRED OFF-STREET LOADING BERTHS		
Gross Floor Area (in square feet) Minimum Number of Bertl		
Less than 40,000	1	
40,000-100,000	2	
100,000-160,000	3	
160,000-240,000	4	
240,000-320,000	5	
320,000-400,000	6	
Above 400,000	1 per each 90,000 above 400,000 gsf of area	

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(B) Minimum Dimensions

Each loading berth required by this section shall be at least twelve (12) feet wide by twenty-five (25) feet long, with at least fourteen (14) feet of overhead clearance. Each required loading berth shall have adequate, unobstructed means for the ingress and egress of vehicles.

(C) Waiver or Modification of Requirements

As part of the review and approval of a development plan, the Planning Director may waive or modify the requirements of this section if the use does not require loading spaces of a number or size required by this section, given the particular operational characteristics of the use and its need or lack thereof for the delivery or shipments of goods to and from the site.

(D) Location and Screening of Loading Areas

To the maximum extent possible, all loading berths shall be located between the building and the rear lot line of the property, and/or shall be screened from the view of the street and adjacent properties. All loading areas shall meet the applicable landscaping, screening, and buffering requirements set forth in Section 7.2. The details of such location and screening shall be reviewed and approved as part of the development plan.

(Ord. No. 04-001, 1-8-04; Ord. No. 05-001, 1-13-05; Ord. No. 06-009, adopted 4-27-06; eff. 4-27-06; Ord. No. 2007-04, 3-22-07; Ord. No. 2007-21, 12-13-07; Ord. No. 2008-LDO-01, 9-25-08; Ord. No. 2010-LDO-01, 1-14-10; Ord. No. 2010-LDO-02, 1-28-10; Ord. No. 2010-LDO-03, 2-25-10; Ord. No. 2011-LDO-01, 1-11-11; Ord. No. 12-LDO-01, 2-23-12; Ord. No. 2012-LDO-04, 5-24-12; Ord. No. 2012-LDO-06, 8-9-12; Ord. No. 2013-LDO-02, 6-13-13; Ord. No. 2014-LDO-03, 8-14-14; Ord. No. 2015-LDO-001, 4-21-15; Ord. No. 2016-LDO-01, 7-25-16; Ord. No. 2017-LDO-01, 1-24-17; Ord. No. 2017-ACT-01, 10-26-17; Ord. No. 2017-ACT-02, 12-14-17; Ord. No. 2018-LDO-01, 5-3-18; Ord. No. 2019-LDO-01, 9-26-19; Ord. No. 2020-LDO-01, 5-7-20; Ord. No. 2021-LDO-01, 6-24-21; Ord. No. 2022-LDO-01A, 2-24-22; Ord. No. 2022-LDO-02, 4-28-22; Ord. No. 2023-LDO-04, 11-16-23; Ord. No. 2025-CODE-01, 4-10-25)

7.9 EXTERIOR LIGHTING

7.9.1 General Requirement

Detail standards and requirements for lighting are included within the Community Appearance Manual. All exterior lighting, such as that used in and around buildings, recreation areas, parking lots, and signs, shall be designed to meet the following general requirements:

- (A) Protect against the spillover of light to adjacent properties;
- **(B)** Protect against glare onto public rights-of-way thereby impairing the vision of motorists and adjoining properties;
- (C) Shield adjacent properties by thick evergreen vegetated buffers, berms, walls, or fences, and/or the use of directional lighting, lighting shields, special fixtures, timing devices, appropriate light intensities, luminaries, and mountings at appropriate heights, in accordance with the Town's Community Appearance Manual.

Single-unit-attached and -detached development is exempt from the requirements of this Section 7.9.

7.9.2 Lighting Plan Required

(A) A point-by-point lighting plan is required for development plan approval that indicates the foot-candles at grade grid points that cover the site. The Planning Director may waive this

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requirement for projects on less than an acre if the fixture types are specified on the plan and will comply with the Community Appearance Manual.

(B) Any changes to the lighting plan must be approved by the Planning Director through a development plan revision.

7.9.3 Standards

All outdoor lighting shall conform to the standards and provisions found in the Community Appearance Manual as well as the standards listed below:

(A) Maximum Lighting Height

Outdoor lighting shall be designed, located and mounted at heights no greater than:

- (1) Eighteen (18) feet above grade for non-cut-off lights;
- (2) Thirty-five (35) feet above grade for cut-off lights, unless a raised foundation is required to protect the poles, in which case the maximum height shall not exceed thirty-seven (37) feet above grade.

(B) Maximum Light Levels at the Property Line

All outdoor lighting and/or indoor lighting visible from outside shall be designed and located such that the maximum illumination measured in foot-candles at a property line shall not exceed the standards in the following table. Cut-off lighting shall be designed to direct light downward (e.g., shoe box style).

TABLE 7.8-6: MAXIMUM ILLUMINATION VALUES* (REGARDLESS OF LIGHT TYPE)	
Property Line	Maximum Illumination (in Foot-Candles)
Residential	0.5
Commercial	2.5
Industrial/Edge of right-of-way	2.5
*These standards may be modified only by the Zoning Board of Adjustment.	

(C) Parking Lot Lighting Standards

For parking lots the minimum light level shall be no less than two-tenths (0.2) foot-candles. The average foot-candle maintained to the minimum foot-candles ratio shall be no greater than four to one (4:1) (upper to lower limits). All foot-candles are to be measured at ground level.

(D) Location and Separation Requirements

All outdoor lighting fixtures shall be located a minimum of ten (10) feet from a property or five (5) feet from a right-of-way line and should not be located within a required perimeter buffer or streetscape unless it is located at the interior edge. Where located within a streetscape or buffer, light poles shall be placed a minimum of twenty (20) feet from existing or proposed canopy trees.

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(E) Lighting for Canopies

- (1) Lighting for canopies shall be restricted to lighting fixtures (including lenses) that do not project below the bottom of the canopy. Lighting for canopies for service stations and other similar uses shall not exceed an average of twelve (12) foot-candles as measured at ground level at the inside of the outside edge of the canopy.
- (2) Canopies used for building accents over doors, windows, etc. shall not be internally lit (i.e., from underneath or behind the canopy).

(F) Floodlights and Spotlights

Lighting fixtures shall be selected, located, aimed, and shielded so that direct illumination is focused exclusively on a portion of the building facade or other intended site feature and away from adjoining properties or the right-of-way. On-site lighting may be used to accent architectural elements but shall not be used to illuminate entire portions of building(s). Such lighting shall be installed in a fixture that is shielded such that no portion of the light bulb extends below the bottom edge of the shield, and that the main beam from the light source is not visible from adjacent properties of the adjacent right-of-way. Floodlights or other type of lighting attached to light poles that illuminate the site and/or building(s) are prohibited.

(G) Wall Pack Lights

Wall packs on buildings may be used at entrances to a building to light unsafe areas. They are not intended to draw attention to the building or provide general building or site lighting. "Wall Packs" on the exterior of the building shall be fully shielded (true cut-off type bulb or light source not visible from off-site) to direct the light vertically downward and be of low wattage (preferably one hundred (100) watts or lower).

(H) Illumination of Outdoor Sports Fields and Performance Areas

Lighting of outdoor sports fields and performance areas shall be installed in accordance with the Town's Community Appearance Manual and the following requirements:

- (1) All such lighting fixtures shall be equipped with a glare control package (e.g., louvers, shields, or similar devices), and the fixtures shall be aimed so that their beams are directed and fall within the primary playing or performance area; and
- (2) The hours of operation for the lighting system for any game or event shall not exceed one (1) hour after the end of the game or event.

(I) Sign Lighting

Lighting fixtures illuminating signs shall comply with the requirements of Chapter 9 of this Ordinance, and such fixtures shall be aimed and shielded so that direct illumination is focused exclusively on the sign face.

(J) Lights in Landscaping and Around Open Sales Area

Within the Town Center and Mixed Use Overlay Zoning Districts, strings or strands of non-blinking single-point white lights may be installed in landscaping. Perimeter down-lighting that is shielded to illuminate open sales areas, but no land outside those areas is also permitted.

(Ord. No. 2010-LDO-03, 2-25-10; Ord. No. 2013-LDO-02, 6-13-13; Ord. No. 2013-LDO-03, 6-13-13; Ord. No. 2015-LDO-006, 12-10-15; Ord. No. 2021-LDO-01, 6-24-21; Ord. No. 2022-LDO-02, 4-28-22; Ord. No. 2023-LDO-03, 6-22-23; Ord. No. 2023-LDO-04, 11-16-23)

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7.10 CONNECTIVITY

7.10.1 Purpose and Scope

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, public transit passengers, and pedestrians; promote walking, bicycling and public transit; connect neighborhoods to each other and to local destinations such as schools, parks, and shopping centers; reduce vehicle miles of travel and travel times; improve air quality; reduce emergency response times; increase effectiveness of municipal service delivery; and free up arterial capacity to better serve regional long distance travel needs. Any additional pedestrian connections required under this section do not have to address handicap accessibility standards.

7.10.2 Consistency with Other Documents

The design and evaluation of vehicular, bicycle, and pedestrian circulation systems built in conjunction with new residential and non-residential development shall adhere to applicable provisions of the plans, ordinances and manuals listed in Section 1.4, in addition to meeting the requirements of this section.

7.10.3 Standards for Streets/On-Site Vehicular Circulation

The following standards shall be met for all development plans and for redevelopment of sites.

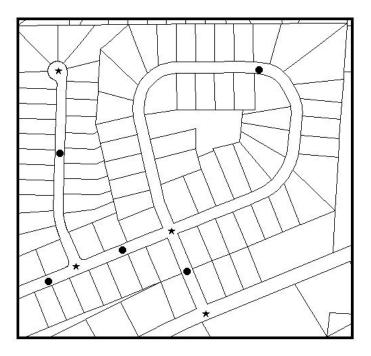
(A) Street Connectivity

- (1) Any residential development shall be required to achieve a connectivity index of 1.2 or greater. In the event that this requirement is modified pursuant to Section 7.10.3(D)(2), a six (6)-foot pedestrian trail shall be provided to link any cul-de-sacs within a residential development in which the required connectivity index has been modified. A connectivity index is a ratio of the number of street links (road sections between intersections and cul-de-sacs) divided by the number of street nodes (intersections and cul-de-sac heads). The following illustration provides an example of how to calculate the index. Street links on existing adjacent streets that are not part of the proposed subdivision are not included in the connectivity index calculation.
- (2) For non-residential, multi-family, or mixed used developments of greater than five (5) acres, an organized and complete street network must be provided with an emphasis on connectivity throughout the development and for future adjacent development. Sites, five (5) acres or less, must provide street connections with adjacent properties (i.e., taking into account the future development/redevelopment of these properties).
 - (a) All access points from public thoroughfares and collectors shown on the Comprehensive Transportation Plan shall be connected with each other through a continuous network of public or private streets. (Non-residential private streets are not required to meet public street standards.) Connections between thoroughfares and collectors shall be direct while maintaining a functional and

organized street network. Limited parking in front of buildings along these streets may be provided.

Primary circulation through a development shall meet the following standards:

- 1. Vehicular access spacing on the street is limited to no less than one hundred fifty (150) feet;
- 2. Intersections, driveway, or drive aisle connections with the streets shall be substantially perpendicular to the street;
- **3.** Access points shall align with opposing access points on the street or shall be offset by at least one hundred fifty (150) feet; and
- 4. Adjacent lots or outparcels must share access drives.



Street Connectivity

Note: The measure of connectivity is the number of street links divided by the number of nodes. Nodes exist at street intersections as well as cul-de-sac heads. Links are the stretches of road that connect nodes. Stub outs shall also be considered as links. In this example, there are five (5) links (circles) and four (4) nodes (stars); therefore, the connectivity index is 1.25.

(B) Street Arrangement

(1) The proposed public or private street system shall be designed to provide vehicular and pedestrian interconnections to facilitate internal and external traffic movements in the area. In addition to the specific connectivity requirements described above, roadway interconnections shall be provided during the initial phase of any development

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plan between the development site and its adjacent properties with one (1) roadway interconnection every one thousand two hundred fifty (1,250) to one thousand five hundred (1,500) linear feet for each direction (north, south, east, west) in which the subject property abuts. If the common property boundary in any direction is less than one thousand two hundred fifty (1,250) linear feet, the subject property will be required to provide an interconnection if it is determined by the Planning Director that the interconnection in that direction can best be accomplished through the subject property due to physical site constraints, such as topography, presence of stream buffers or other natural features, or lot dimensions; or due to presence of existing development or infrastructure, on the subject property or other properties in the area. When the Planning Director deems a vehicular connection not practicable due to topographical and/or environmental constraints, he/she may increase the length requirement and/or require pedestrian connections. The Planning Director may delay the interconnection if such interconnection requires state approval. The intent of this standard is to improve access/egress for Town neighborhoods, provide faster response time for emergency vehicles, and improve the vehicular and pedestrian connections between neighborhoods.

- (2) Any development of more than one hundred (100) residential units or additions to existing developments such that the total number of units exceeds one hundred (100) shall be required to provide for vehicular and pedestrian access to at least two (2) public streets unless such provision is modified pursuant to Section 3.19.1.
- (3) Where new development is adjacent to vacant land likely to be developed in the future, or adjacent to property that is likely to be redeveloped in the future, all streets, bicycle paths, sidewalks or pedestrian pathways, and access ways in the new development's proposed street system shall continue through to the boundary lines of the new development and any area under the same ownership as the new development, as determined by the Planning Director or the Director of Transportation and Facilities, to provide for the orderly development of such adjacent land and/or the transportation and access needs of the community. In addition, all redevelopment and street improvement projects shall take advantage of opportunities for retrofitting existing streets to provide increased vehicular and pedestrian connectivity, such as sidewalks, crosswalks, and pedestrian signals.
- (4) In general, permanent cul-de-sacs are discouraged in the design of street systems, and 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 are unavoidable, development plans shall incorporate provisions for future vehicular and pedestrian connections to adjacent, undeveloped properties, and to existing adjacent development where existing connections are poor.
- (5) Permanent cul-de-sacs shall comply with the length limits and design standards set forth in the Town's Standard Specifications and Details Manual, and shall be provided with a turnaround at the closed street end.

(C) Cross Access

All non-residential development shall be designed to allow for both vehicular and pedestrian cross-access to adjacent properties to encourage shared parking and shared access points on public or private streets. A minimum distance of one hundred (100) feet shall be required between a cross-access way and an intersection or driveway entrance. This requirement may be modified pursuant to Section 3.19.1 provided that appropriate bicycle and pedestrian connections are provided between adjacent developments or land uses. A cross access easement must be recorded prior to issuance of a Certificate of Occupancy for the development.

(D) Exceptions

New developments adjacent to existing neighborhoods classified as Tier 2 or Tier 3 Neighborhoods are exempt from portions of Section 7.10.3(A) - (C), as provided below:

(1) Classification of Existing Neighborhood Adjacent to Proposed Development

(a) Tier 1 Neighborhood

A Tier 1 neighborhood is defined as any residential neighborhood not otherwise classified as Tier 2 or Tier 3.

(b) Tier 2 Neighborhood

A Tier 2 neighborhood is defined as a residential neighborhood that meets all of the following criteria:

- 1. The neighborhood was developed pursuant to a development plan approved at any time by a jurisdiction other than the Town of Cary, or approved by the Town of Cary prior to January 14, 1999; and
- **2.** The neighborhood meets the following criteria:
 - a) A public street right-of-way in the existing neighborhood extends to the common property line, however the street itself does not extend to the common property line; or, no existing right-of-way or street extends to the common property line; and
 - b) There are no factors present to indicate the intent, at the time of approval or construction of the Tier 2 neighborhood, that a street would be connected at a later time, such as recordation of construction easements; or physical constraints such as stream buffers or topographic issues are present that would have made extension of the street to the property line infeasible at the time of construction of the neighborhood and
- Potential public safety issues such as inadequate fire and police protection, are present, or are likely to be created in the future, if a proposed new development does not connect to the adjacent existing development. Potential safety issues may be indicated by factors including but not limited to, a single vehicular access point, and/or the major street serving the neighborhood exceeding one thousand (1,000) feet in length.

(c) Tier 3 Neighborhood

A Tier 3 neighborhood is defined as a residential neighborhood that meets all of the following criteria:

- 1. The neighborhood was developed pursuant to a development plan approved at any time by a jurisdiction other than the Town of Cary, or approved by the Town of Cary prior to January 14, 1999; and
- 2. The neighborhood meets the following criteria:

- a) A public street right-of-way in the existing neighborhood extends to the common property line, however the street itself does not extend to the common property line; or, no existing right-of-way or street extends to the common property line; and
- b) There are no factors present to indicate the intent, at the time of approval or construction of the Tier 3 neighborhood, that a street would be connected at a later time, such as recordation of construction easements; or physical constraints such as stream buffers or topographic issues are present that would have made extension of the road to the property line infeasible at the time of construction of the neighborhood, and
- 3. There are no apparent public safety issues such as inadequate fire and police protection or response capability present, or likely to be created in the future, if a proposed new development does not connect to the adjacent existing development.
- (d) Neighborhood Classification

The Director of the Transportation and Facilities Department shall determine the classification of existing neighborhoods.

(2) Exceptions to Connectivity Requirements for New Development

- (a) Adjacent to a Tier 1 Neighborhood, all requirements of Section 7.10.3(A) (C) shall apply.
- **(b)** Adjacent to a Tier 2 Neighborhood, all requirements of Section 7.10.3(A) (C) shall apply, with the following exceptions or modifications:
 - Construction of a road connection to the property line of the Tier 2
 Neighborhood is allowed but not required. If no connection is made, a
 connectivity index less than 1.2 may be approved by the Planning Director
 if such reduction results from the lack of connection to the Tier 2
 Neighborhood.
 - 2. If no road connection is made, an emergency access connection to the Tier 2 neighborhood must be provided. Such connection may include a paved street connection with removable obstructions to prevent non-emergency access, raised curb treatment, turf stone with grass, or other methods approved by the Director of Transportation and Facilities and the Fire Chief.
 - Pedestrian and bicycle connections, and utility stubs and connections shall continue to be required.
- (c) Adjacent to a Tier 3 Neighborhood, all requirements of Section 7.10.3(A) (C) shall apply, with the following exceptions or modifications:
 - Construction of a road connection to the property line of the Tier 3
 Neighborhood is allowed but not required. If no connection is made, a
 connectivity index less than 1.2 may be approved by the Planning Director
 if such reduction results from the lack of connection to the Tier 3
 Neighborhood.

2. Pedestrian and bicycle connections, and utility stubs and connections shall continue to be required.

7.10.4 Standards for Pedestrian Facilities

All sidewalks, greenways and street-side trails shall be designed to comply with the standards provided in plans, ordinances and manuals listed in Section 1.4. In addition to the general provisions of Section 7.10.3 above, the following specific standards shall be met in designing and achieving a pedestrian circulation system:

(A) Sidewalks

- (1) Sidewalks shall be installed on both sides of all thoroughfares and collector streets. In non-residential developments and property located within Mixed Use Overlay Districts, sidewalk shall also be provided on both sides of all local and private streets as well as along one (1) side of all primary travelways. Shifting the sidewalk to an adjacent linear island is permitted if it creates better pedestrian connectivity. The Planning Director may approve sidewalk on one (1) side of the street in cases where a street is single-loaded and the opposite side of the street is not expected to develop in the future. Sidewalk shall be required on one (1) side of all local and private streets in residential developments outside of a mixed-use center.
- (2) Site design techniques such as shortening crosswalk distances with curb extensions, reducing sidewalk curb radii, and eliminating free right-turn lanes shall be used to improve pedestrian safety at pedestrian roadway crossings. Signals that allow longer crossing times in Mixed Use Overlay Districts, raised crosswalks, and pedestrian refuges in medians shall be provided as appropriate.
- (3) Pedestrian access from the public right-of-way into a site shall be every nine hundred (900) feet along long block frontages.
- (4) Within a development, sidewalks and/or greenways shall form an on-site circulation system that provides pedestrian access to all public building entrances, on-site amenities, and adjacent parks and greenways, minimizing conflict between pedestrians and vehicular traffic. Where building frontages exceed six hundred (600) feet in length, a building break or pedestrian pass-thru shall be provided to facilitate pedestrian circulation between areas in front of and behind the building mass. Such a break shall not be required if there is no current, proposed, or future development, pedestrian destination, or point of interest (e.g., a parking lot, greenway, plaza, etc.) located to the rear of the building. Sidewalks and/or greenways shall connect building entrances to one another and from building entrances to public sidewalk connections and existing or planned transit stops, street-side trails and/or greenways. Non-residential buildings located more than one hundred (100) feet from the public right-of-way shall provide for direct pedestrian access to buildings located on adjacent lots.
- (5) Cul-de-sacs and dead-end streets shall be connected to the closest local or collector street and/or to cul-de-sacs in adjoining residential subdivisions, commercial development, or similar compatible land uses including schools, parks, recreation facilities, libraries, and greenways, via a sidewalk or street-side trail.

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(6) A linear parking lot island containing a sidewalk shall be provided to align directly with the principal entrance. Additional sidewalk shall be provided in linear islands as necessary to provide adequate and convenient pedestrian access, but shall not be required in all such islands. Linear islands containing sidewalks shall be a minimum of fifteen (15) feet in width to allow adequate space for the sidewalk and plantings.

(B) Greenways

The Town of Cary's greenway trail system consists of a series of interconnected pedestrian trails located off-road and tied together by on-road street-side trails and sidewalk connectors. The plan for the townwide trail system is outlined, and trail types are defined, in the Parks, Recreation and Cultural Resources Facilities Master Plan.

- (1) All public greenways shall be located based upon the Parks, Recreation and Cultural Resources Facilities Master Plan with final alignments to be determined during the development plan review process.
- (2) Construction of all public greenway trails shall meet Town of Cary standards and specifications as provided by the Parks, Recreation and Cultural Resources Department.
- (3) A Greenway Easement shall be dedicated to the Town of Cary in accordance with LDO Section 8.2.1(D)(3). The developer shall demonstrate that the easement to be conveyed is usable for trail construction to Town standards (in terms of topography, wetlands, buffers, etc. The width of easements may be reduced to twenty (20) feet where the developer is constructing the greenway trail.
- (4) Development plans shall provide private, paved trail connections to existing and planned public greenways located within or adjacent to the development. Such private trail connections shall be constructed at least every nine hundred (900) feet along the adjacent greenway corridor with the details being determined by Town staff during the development plan review process. These connections shall meet the Town of Cary standards and specification as provided by the Parks, Recreation and Cultural Resources Department.
- (5) Public greenways and dedication of easements shall be credited towards park land dedication and payment-in-lieu requirements in accordance with LDO Section 8.2.1.
- (6) All trails shall be constructed as development occurs, and phasing must be approved by Parks, Recreation and Cultural Resources staff.
- (7) Greenway trails located within required perimeter buffers shall meet the requirements of LDO Section 7.2.3(H)(3). Greenway easements may be required outside of the perimeter buffer in order to meet Town standards for both the buffer and greenway.
- (8) In those cases where the Comprehensive Plan requires the use of greenways instead of sidewalks, the greenways shall be constructed in accordance with Town of Cary standards and specifications as provided by the Parks, Recreation and Cultural Resources Department, and shall meet the following criteria:
 - these trail systems shall be designed to provide adequate pedestrian circulation internal to the development, as well as connections to existing or planned adjacent pedestrian systems and other developments, and alignments shall be approved by Town staff;

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- these trails shall be privately maintained by the Homeowners' Association (HOA) and shall be open to the public, and this must be noted on the approved development plans, as well as recorded plats;
- (c) trails shall be eight (8) feet wide asphalt;
- (d) a private pedestrian trail easement, minimum fourteen (14) feet in width, centered on the trail, shall be recorded on the subdivision plat.

(C) Street-side Trails

Street-side trails are pedestrian trails located adjacent to roadways (on-road) and provide supporting linkage to the off-road greenway system.

- (1) Where the Parks, Recreation and Cultural Resources Facilities Master Plan calls for a street-side trail, a street-side trail shall be constructed in lieu of sidewalk required in the same location. No park land dedication or payment-in-lieu credit will be granted for street-side trail construction or easements.
- (2) All street-side trails shall be designed and constructed according to Town of Cary standards and specifications as provided by the Transportation and Facilities Department.
- (3) A Town of Cary Greenway Easement, centered on the trail (easement width to be determined by Transportation and Facilities staff), shall be recorded. Street-side trail locations and the location of the required Town of Cary Greenway Easements relative to current road widths and rights-of-way, shall be determined by the Transportation and Facilities staff.

(D) Community Gathering Spaces and Plazas

Provide at least one (1) public gathering space such as a pedestrian plaza or park-like space for new development and redevelopment sites that are two (2) acres or greater in size. These spaces shall be centrally located and/or located so to encourage its use by pedestrians and patrons of the development. Minimum sizes for the community gathering space are as follows:

- (1) 2 to 5 acre site 600 square feet
- (2) 5.1 to 10 acre site 1,200 square feet
- (3) 10.1 to 15 acre site 2,400 square feet
- (4) 15.1 to 20 acre site 4,000 square feet
- (5) Greater than 20.1 acre site 5,000 square feet
- (6) For developments fifteen (15) acres or greater, community gathering space shall include such things as a central plaza/green, outdoor dining areas, fountains/water features, and/or public art.

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7.10.5 Standards for Bicycle Facilities

- (A) Wide outside lanes shall be incorporated into the design of all new and/or improved arterial streets. Bicycle lanes and/or wide outside lanes shall be incorporated in the design of all minor collectors. On local streets low traffic speeds and volumes allow bicyclists and motorists to safely share the road. Sidewalks are not acceptable as substitutes for bike lanes. Bike lanes shall be a minimum of four (4) feet in width (excluding adjacent curb and gutter).
- (B) Consistent with the recommendations of the Cary Comprehensive Transportation Plan, development shall provide appropriate bicycle amenities to encourage cyclists. Signage indicating the presence and location of such amenities shall be scaled for easy reading by bicyclists and pedestrians as well as motorists. Bicycle parking shall be provided as part of all high density residential, commercial, retail, office, industrial, and mixed use development where appropriate (see bicycle parking requirements sections 7.8.2(D)).

7.10.6 Standards for Public Transit Access and Infrastructure

(A) Applicability

The requirements of this Section 7.10.6 apply to all development plans and reuse/redevelopment plans for sites with frontage along corridors identified in the Comprehensive Transportation Plan, Cary Community Plan, or Wake Transit Plan for current or planned transit service. Previously developed sites are exempt from these requirements unless the proposed redevelopment of the site consists of alterations of existing transit access locations. Regardless of whether the LDO requires transit improvements, all development must comply with Americans with Disabilities Act (ADA) requirements and other applicable federal, state and local regulations.

(B) Requirements

(1) Transit Infrastructure

All sites subject to the requirements of this Section shall install at least one (1) transit access location. All transit access locations shall meet the requirements of the Town's Standard Specifications and Details Manual. When the transit access location is located outside of the right-of-way, a permanent transit easement is required.

(2) Exemption

A new transit access location shall not be required if there is a nearby alternate transit stop or facility that serves the same function as a transit access location and that satisfies a transit stop spacing pattern of approximately one thousand (1,000) feet along the same side of the street on the subject corridor. This exemption shall not apply to major transit trip generators.

(Ord. No. 06-009, adopted 4-27-06; eff. 4-27-06; Ord. No. 2007-04, 3-22-07; Ord. No. 2007-21, 12-13-07; Ord. No. 2008-LDO-01, 9-25-08; Ord. No. 2010-LDO-05, 12-16-10; Ord. No. 2012-LDO-06, 8-9-12; Ord. No. 2013-LDO-02, 6-13-13; Ord. No. 2014-LDO-03, 8-14-14; Ord. No. 2015-LDO-001, 4-21-15; Ord. No. 2015-LDO-005, 11-19-15; Ord. No. 2017-LDO-01, 1-24-17; Ord. No. 2018-LDO-03, 11-15-18; Ord. No. 2021-LDO-01, 6-24-21)

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7.11 TRANSPORTATION DEVELOPMENT FEES

7.11.1 Purpose

The purpose of this section is to establish a procedure to impose and collect fees to finance additional road improvements within the Town limits and extraterritorial jurisdiction as authorized by NC Session Law 1987-801. This road project fee, or transportation development fee, shall be imposed on all new construction within the Town limits and extraterritorial jurisdiction. It is not the intent of this section to require the developer to pay for all new road construction.

7.11.2 Authority

This section is adopted pursuant to the powers conferred by the General Assembly of North Carolina and set forth in NC Session Law 1987-801 and incorporated in Section 7.4 of the Charter of the Town of Cary.

7.11.3 Findings

- (A) The Town continues to experience rapid population and employment growth, in part, because of its proximity to regional employment facilities such as the Research Triangle Park and Raleigh Durham International Airport.
- **(B)** The anticipated population and employment growth in the Town creates demand for additional capital improvement funds for roadway facilities, which include but are not limited to, streets, intersection improvements, culverts and road-related drainage improvements, turn lanes, and signalization.
- (C) The Town is committed to the provision of such road-related improvements at a level of service necessary to support anticipated residential and employment growth.
- (D) The Town has adopted a Comprehensive Transportation Plan (CTP), which addresses long-term road improvements. The Planned Roadway Widths map of the CTP identifies additional road capital improvements necessary to serve new construction.

- (E) The General Assembly of North Carolina has authorized the Town to impose a regulatory or development fee defined as a road project fee, and known within the Town as a transportation development fee, on new construction within the Town limits and extraterritorial jurisdiction.
- **(F)** The transportation development fee herein established is roughly proportional to the need for new capacity-related road improvements generated by new construction and reasonably benefits the construction that pays the fee.

7.11.4 Applicability

This section shall apply to all new construction within the Town's corporate limits and extraterritorial jurisdiction.

7.11.5 Condition of Approval

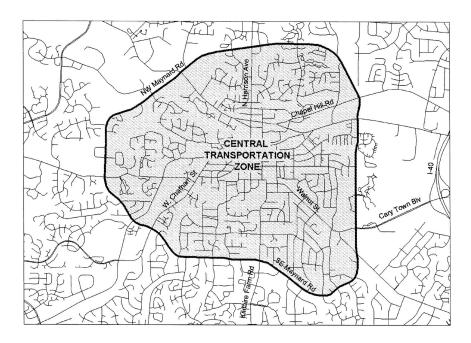
No building permit shall be issued for construction within the Town's jurisdiction unless and until the required transportation development fee has been paid in full.

7.11.6 Transportation Zones

Two Transportation Zones have been established for the purpose of assessing transportation development fees. The purposes of the transportation zones are to help ensure that adequate funding is available in different areas of the Town to pay for road improvements needed to maintain adequate levels of service appropriate to each area. The transportation fees paid by new development in each zone represent the cost of replacing the roadway capacity that traffic from the new development will consume on the major roadway system. Fees collected must be used for road improvements within Cary's town limits and extraterritorial jurisdiction.

The Central Zone encompasses all land within the innermost right-of-way boundary of Maynard Loop and excluding Maynard Road itself. This includes all of the downtown area. This zone's primary focus is to encourage redevelopment and infill. The Level of Service standard is "F" based upon a ninety (90)-minute average peak. The Base Zone contains the remainder of the Town's corporate limits and extraterritorial jurisdiction not within the Central Zone. The Level of Service standard is "D" based upon the standard Institute for Transportation Engineers (ITE) average peak hour. Boundaries of the central zone are shown on the following map.

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Central Transportation Zone

7.11.7 Fees

- (A) Every person seeking a building permit for construction for which a transportation development fee is due but has not been paid shall pay such transportation development fee prior to the issuance of the building permit.
- (B) The transportation development fee shall be computed by proposed building use and based on the construction plans submitted for approval, according to the schedule set forth in the annual Town of Cary operating budget (TDF Schedule), except for fees computed by an individual assessment in accordance with Section 7.11.8, Individual Assessments, below.
- (C) The transportation development fee for proposed new commercial or industrial construction that is speculative construction shall be computed in conjunction with the application for a building permit for the expected use. An additional transportation development fee may be due for the fit-up to be constructed within the shell; however, no refunds will be given. This additional fee will be calculated as the difference in fees between what was paid at the time of speculative construction and what the new use would pay under the TDF Schedule, and shall be paid prior to issuance of the building permit for the fit-up.
- (D) If the proposed new construction contains a mix of building uses, the transportation development fee shall be calculated separately for each use according to the TDF Schedule. If the building has a single primary use, the transportation development fee shall be calculated for a single use, according to the TDF Schedule.

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- (E) The transportation development fee shall be collected for additions to and remodeling of existing structures and shall be calculated based on that portion of the structure that represents an increase above the number of dwelling units or the floor area of the building, as it exists prior to the addition or remodeling. If the addition or remodeling results in a use change that increases trip generation, the transportation development fee will be calculated as the difference in fees between what the existing and new use would pay under the TDF Schedule. If the addition or remodeling results in a use change that decreases trip generation, no transportation development fee will be charged. No refunds will be given.
- **(F)** The following shall be exempt from the terms of this Section 7.11.
 - (1) Alteration or expansion of an existing building where no additional dwelling units are created, the use is not changed, and where no additional vehicle trips will be produced over and above that produced by the existing use.
 - (2) The construction of accessory buildings or structures that will not produce additional vehicle trips over and above that produced by the principal building or use of the land.
 - (3) The replacement of a destroyed or partially destroyed building or structure with a new building or structure of the same size and use, provided that no additional trips will be produced over and above that produced by the original use of the land.
 - (4) Private recreational facilities provided that such facilities are restricted for use by residents and their guests without charge and no additional vehicle trips will be produced over and above that produced by the principal residential use.

7.11.8 Individual Assessments

- (A) If any person believes that his or her proposed construction is unique in the traffic impacts that it will generate, such person may request that the Town perform an individual assessment of the traffic impacts of the proposed construction. Such person shall pay to the Town, in escrow, a sufficient fee to pay the cost of obtaining such assessment from a professional engineer selected and hired by the Town. The Town shall then obtain the services of the professional engineer to perform the assessment, paying the engineer from the escrow account and remitting the balance, if any, to the person requesting the assessment. The Zoning Board of Adjustment shall, at a quasi-judicial public hearing, consider the request of the applicant to pay the transportation development fee based on the individual assessment. The Town shall assess the transportation development fee based on the individual assessment if the Board finds that:
 - (1) The proposed construction is in fact so unique that the application of the TDF Schedule adopted by the Town would result in the collection of a fee that is not proportionate to the traffic impact of the proposed construction; and
 - (2) There is a difference between the fees computed under the TDF Schedule and the fees computed in accordance with the individual assessment of at least five thousand dollars (\$5,000.00) or five (5) percent of the total fees, whichever amount is greater.
- (B) The professional engineer to perform each individual assessment shall be selected by the Transportation and Facilities Director from a list of qualified engineers maintained by the Town. The list shall contain the names of at least three (3) engineers or engineering firms, and shall be updated regularly. The Zoning Board of Adjustment reserves the right to dispute

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the assumptions, methodology, or conclusions of individual assessments. An individual assessment may take into consideration such factors as internal capture of trips in mixed use projects and higher rates of pass by trips than indicated by ITE if supported by reliable local data.

(C) Transportation development fees computed under this section shall be computed in dollars per dwelling unit (for residential uses) or typically dollars per one thousand (1,000) square feet of non-residential floor area (for non-residential uses), using the following consumption based system formula(e):

TRANSPORTATION DEVELOPMENT FEE FORMULA

FEE = VMT x NET COST/VMT

VMT = TRIPS x % NEW x LENGTH ÷ 2

NET COST/VMT = COST/VMT - CREDIT/VMT

COST/VMT = COST/VMC x VMC/VMT x TDF SHARE

CREDIT/VMT = Revenue credit per VMT

Where:

TRIPS = Trip ends during the evening peak-hour on a weekday

% NEW = Percent of trips that are primary, as opposed to pass-by or

diverted-link trips

LENGTH = Average length of a trip on the major roadway system

÷ 2 = Avoids double-counting trips for origin and destination

COST/VMC = Average cost to add a new peak hour vehicle-mile of capacity

VMC/VMT = System-wide ratio of vehicle-miles of capacity to vehicle-miles of

travel on major roadway system (assumed 1:1)

TDF SHARE = % of cost not covered by developer frontage improvement

requirements

7.11.9 [Reserved]

7.11.10 Fund Accounting

(A) The Town shall establish an account into which the transportation development fees collected shall be credited. Interest at the actual rate of return on invested funds of the Town shall be credited in accordance with the accounting policies of the Town.

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7.11.11 Use of Funds

- (A) The revenues from transportation development fees and accrued interest on such revenues shall be spent on qualifying road improvements.
- (B) Qualifying road improvements include improvements to thoroughfares shown on the Planned Roadway Widths map of the Comprehensive Transportation Plan anywhere within the Town's corporate limits or extraterritorial jurisdiction.
- (C) Transportation development fees may be used to finance direct project costs of qualifying road improvements, including:
 - (1) The acquisition cost of rights-of-way;
 - (2) The construction cost of improvements, and drainage improvements (excluding pedestrian facilities);
 - (3) Signalization and intersection improvements at major thoroughfare intersections; and
 - (4) The principal sum and interest and other financing costs on bonds, notes, or other obligations issued by or on behalf of the Town to finance qualifying road improvements.
- (D) Transportation development fees shall not be used to pay for any of the following:
 - (1) Construction, acquisition, or expansion of public facilities other than road improvements;
 - (2) Repair, operation, or maintenance of existing or new road improvements.
- (E) Up to thirty (30) percent of all transportation development fees collected shall be reserved for payment of eligible cash reimbursement to developers for qualifying road improvements established through an approved TDF agreement entered into prior to November 17, 2022.

7.11.12 Refunds

- (A) Any transportation development fee or portion thereof which has not been expended within ten (10) years from the last day of the fiscal year in which it was paid, shall be refunded to the record owner of the property for which the transportation development fee was paid, upon written application by the record owner, with accrued interest at the rate of return on investments earned by the Town on such amount.
- **(B)** The Town may charge a reasonable administrative fee, not to exceed five (5) percent of the refund due, for verifying and computing the refund.

7.11.13 Updates and Revisions

The Town shall evaluate the TDF Schedule as part of the annual budget process. The frequency of any updates to the TDF Schedule may be influenced based upon growth in residential and non-residential construction, road improvements actually constructed, changing levels of service, inflation, revised cost estimates for road improvements, changes in the availability of other funding sources, and such other factors as may be relevant.

7.11.14 Offsets; TDF Agreements

The Town shall grant offsets to transportation development fees for eligible qualifying road improvements that exceed the requirements for a collector road in accordance with this section. There shall be no other offsets to transportation development fees.

- (A) Where a development includes an eligible qualifying road improvement, the Town and the developer, by mutual consent, may enter into a TDF Agreement regarding the terms of the participation of the developer in the construction or financing of such improvement. Such agreement may provide for offsets to the developer for his or her participation in the financing and/or construction of the road. Offsets granted for qualifying road improvements shall be eligible up to the maximum amount of TDF fees for the development or eligible construction costs, whichever is least. Offsets shall be granted for a development only after a TDF agreement has been executed, and the offsets may not be transferred to another development project.
- **(B)** The TDF Agreement shall be on a form approved by the Town Council and shall include:
 - (1) The estimated eligible excess costs of right-of-way acquisition and the estimated eligible excess construction costs;
 - (2) An estimated offset amount;
 - (3) The land development project for which the offset may be used;
 - (4) A requirement that the developer must solicit bids in accordance with Article 8 of Chapter 143 of the N.C. General Statutes;
 - (5) A requirement that the qualifying road improvement be designed and completed to Town standards; and
 - (6) Such other terms and conditions as deemed necessary by the Town Council.
- (C) The amount of any offset is calculated by adding the eligible excess costs of right-of-way acquisition and the eligible excess construction costs.
 - (1) Eligible excess costs of right-of-way means the value of the road right-of-way dedicated by the developer to the Town that is required by the Comprehensive Transportation Plan in excess of a collector street for a qualifying road improvement. The value of the road right-of-way to be used in this calculation shall be the actual sale value of the land, if the land has been sold within the last three (3) years before dedication; if the land has not sold within the last three (3) years before the dedication, the applicable value shall be determined by professional appraisal. The appraisal shall be performed in accordance with the Town's Standard Procedures.
 - (2) Eligible excess construction costs means the actual construction costs in excess of those for a collector street and equal to the lowest responsible, responsive bid amount plus or minus the cost of any change orders approved by the Town. Final eligible excess construction cost may not be determined until after acceptance of the qualifying road improvements by the Town.

(D) Offsets will not be credited for any road construction that exceeds the standards of the Town's Standard Specifications and Details Manual.

7.11.15 Use of Offset

- (A) The Transportation and Facilities Director shall compute the final amount of the offset credited to a developer.
- (B) Any offset may be used by the registered owner of such offset against a transportation development fee imposed on construction of a building in the designated land development project. Offsets may not be used for payment of any other fees, taxes, or amounts due the Town, and shall not have any intrinsic value. The Town shall have no obligation to the holder of any offset who, for any reason, owes no development fees during the life of the offset and thus has no use for the offset.
- (C) Each offset shall be valid from the date of issuance until ten (10) years after the effective date of the TDF Agreement, unless an extension not to exceed ten (10) years is granted by the Town Council prior to the termination of the earlier of these periods.
- (D) An offset shall be credited in dollars against the applicable transportation development fees in effect on the date when such fees become due under this Section 7.11.
- (E) When the TDF Schedule is revised, holders of active offsets may apply to the Transportation and Facilities Director for recalculation within one (1) year from the effective date of fee changes. The amount eligible for offset will be determined under the revised offset provisions in effect when the fees are modified. The applicant requesting recalculation shall be responsible for providing the information needed to recalculate the offset.

7.11.16 Reserved

7.11.17 Other Financing Methods

The Town may finance road improvements through the issuance of bonds, through the formation of assessment districts, or through any other authorized mechanism, in such manner and subject to such limitations as may be provided by law, in addition to the use of transportation development fees. Except as otherwise provided herein, the collection of a transportation development fee shall be additional and supplemental to, and not in substitution of, any other tax, fee, charge, or assessment which is imposed on and due against the property under the authority granted by the State of North Carolina.

7.11.18 Fee as Supplemental Regulation

The transportation development fee established by this chapter is additional and supplemental to, and not in substitution of, any other requirements imposed by the Town on the development of land or the issuance of building permits or certificates of occupancy. Such fee is intended to be consistent with and to further the policies of the Town's comprehensive plan, capital improvements plan, other chapters of this Ordinance, and other policies, ordinances, and resolutions.

7.11.19 Reserved

7.11.20 Relief Procedures

- (A) The developer or owner of property for which a transportation development fee is owed may appeal the assessment of the fee to the Zoning Board of Adjustment. After a quasi-judicial hearing, the Board shall take one of the following actions:
 - (1) If the Board finds that there has been an error by the Town in assessing the transportation development fee, then the Board shall correct the error;
 - (2) The Board may modify or waive the requirements of this Section 7.11, but only upon finding that a strict application of such requirement would result in confiscation of the property, taken as a whole;
 - (3) The Board may, upon recommendation of the Town Manager, authorize the Town to pay, on behalf of the developer, the transportation development fee for a project of public interest, where the Board finds that such is in the best interest of the Town.
- **(B)** Unless the Zoning Board of Adjustment makes one of the findings set forth in subsection (A) above, the Board shall confirm the transportation development fee assessed.
- **(C)** If the Zoning Board of Adjustment modifies or waives the amount of the transportation development fee, the Town shall cause to be appropriated from other Town funds the amount of the reduction in the transportation development fee.

7.11.21 Hearings

- (A) The hearings described in Sections 7.11.8 and 7.11.20 shall be governed by the procedure of this section.
- **(B)** The date of the hearing may be set by the Town Manager or his or her designee without prior action by Council.
- (C) The hearing shall not take place without prior notice, given in accordance with LDO Section 3.1.6(A), (B), (C)(2), and (D).

(Ord. No. 05-006, adopted 5-12-05, eff. 7-1-05; Ord. No. 2008-07, adopted 5-8-08, eff. 7-1-08; Ord. No. 2009-LDO-05, adopted 7-23-09, eff. 7-23-09; Ord. No. 2011-LDO-01, 1-11-11; Ord. No. 2014-LDO-03, 8-14-14; Ord. No. 2015-LDO-002, 6-25-15; Ord. No. 2019-LDO-01, 9-26-19; Ord. No. 2022-LDO-04, 11-17-22)