

LAND DEVELOPMENT ORDINANCE TEXT AMENDMENTS

Round 22A – Site Design Standards

Town Council Action August 9, 2012

Updated August 8, 2012 to specify that the ordinance will become effective upon adoption

This report includes the Land Development Ordinance (LDO) amendments related to the Site Design Standards project. [The Site Design Standards document](#) updates and replaces the Townwide Design Guidelines Manual adopted in 2001. The purpose of the Site Design Standards project is to create specific standards for all new development and re-development in Cary. After extensive research into characteristics of both good and bad examples of various types of development, staff proposed a number of standards for good site design. These standards address vehicular circulation, building placement, pedestrian circulation, and community gathering spaces. The LDO will provide the overall site requirements while the site design standards will illustrate and provide alternative ways to achieve the requirements.

OVERVIEW

SCHEDULE:

Review and Direction by Town Council	April 19
Town Council Public Hearing	May 24
Planning & Zoning Board Work Session	June 11
Planning & Zoning Board Regular Meeting (Note: P&Z Board does not conduct public hearings on LDO text amendments, but Council could direct such a hearing)	July 16
Town Council Action	August 9
Effective	August 9, 2012

Land Development Ordinance Amendments:

Several sections of the LDO are proposed to be amended to provide the legal framework for implementing the site design standards.

Key changes involve the following:

1. Amend Chapter 7 for landscaping standards related to the design of stormwater devices as site amenities.
2. Amend Chapter 7 for building design standards for building placement.
3. Amend Chapter 7 for off-street parking requirements to address lessening visual impact.
4. Amend Chapter 7 for on-site circulation standards by creating an organized and complete street network.
5. Amend Chapter 7 for standards for pedestrian circulation along public right-of-way and within new development and redevelopment.
6. Amend Chapter 12 to add necessary definitions.

Fiscal Impact:

No fiscal impact is anticipated.

Staff Recommendation:

Staff recommends that the Town Council approve LDO Amendment Round 22, Item A (Site Design Standards).

Staff recommends that the Town Council approve Option A or Option B related to consistency and reasonableness of the proposed amendment as stated below:

Option A (recommended if the proposed LDO amendment is approved):

CONSISTENCY AND REASONABLENESS STATEMENT
LDO Amendment Round 22, Item A (Site Design Standards)

THE TOWN COUNCIL OF THE TOWN OF CARY HEREBY STATES:
Section 1: LDO Amendment Round 22, Item A (Site Design Standards) is consistent with the Comprehensive Plan.
Section 2: Based upon information presented at the public hearings, and based upon the recommendations and detailed information developed by staff and/or the Planning & Zoning Board contained in the staff report, and considering the criteria of Section 3.3.3 of the Town of Cary Land Development Ordinance, LDO Amendment Round 22, Item A (Site Design Standards) is reasonable and in the public interest.

Approved: *DATE*

Harold Weinbrecht, Jr.
Mayor

Date

Option B (recommended if proposed LDO amendment is denied):

CONSISTENCY AND REASONABLENESS STATEMENT
LDO Amendment Round 22, Item A (Site Design Standards)

THE TOWN COUNCIL OF THE TOWN OF CARY HEREBY STATES:
Section 1: LDO Amendment Round 22, Item A (Site Design Standards) is consistent with the Comprehensive Plan.
Section 2: Based upon information presented at the public hearings, and based upon the recommendations and detailed information developed by staff and/or the Planning & Zoning Board contained in the staff report, and considering the criteria of Section 3.3.3 of the Town of Cary Land Development Ordinance, denial of LDO Amendment Round 22, Item A (Site Design Standards) is reasonable and in the public interest.

Approved: *DATE*

Harold Weinbrecht, Jr.
Mayor

Date

SUMMARY OF PROCESS AND ACTIONS TO DATE

Town Council Public Hearing May 24, 2012

At the Town Council public hearing, no citizens came forward to speak. Council members had no questions about the proposed Site Design Standards Land Development Ordinance amendments.

Planning and Zoning Board Work Session June 11, 2012

Staff presented the proposed Site Design Standards Land Development Ordinance amendments. There was discussion about what issues/changes were of any concern to the Site Design Focus Group as well as the community at large. There was also discussion about pedestrian circulation to and from transit stops and to and from community gathering spaces.

Changes Since Town Council Public Hearing

In response to comments and questions received thus far, the draft regulations are suggested to be revised in a number of ways. These changes are indicated in the attached draft.

1. Correct LDO sections in Table 3.19-1 and clarify related instances.
2. Add proposed amendments to section 7.2.6 Parking Lot Landscaping.
3. Clarify text in section 7.2.8(A) Stormwater Devices.
4. Add proposed amendments to section 7.2.9 Miscellaneous Landscaping Requirements.
5. Clarify text in section 7.7.3(C) Building Placement.
6. Revise proposed amendment for 7.7.3(C)(4) for outparcel building placement.
7. Revise proposed amendment for 7.10.4(A)(6) for linear parking lot islands containing sidewalks.
8. Other miscellaneous clarifications have been made.

Planning and Zoning Board Meeting July 16, 2012

Staff presented the Site Design Standards related Land Development Ordinance Amendments that provide the legal framework for implementing the new site design standards. The proposed amendments for screening stormwater devices and criteria for using visible hardscape transitions were explained.

The board stated that the proposed LDO amendments were well covered and discussed at the work session in June. There were questions about when tiered walls were needed and what the height of these walls should be. Staff noted that clarification about the size of tiered walls would be added to the draft LDO amendments prior to the Town Council's vote in August.

The board unanimously recommended approval of LDO Amendments Round 22(A).

Changes Since Planning and Zoning Board Meeting

In response to additional comments and questions received thus far, the draft regulations are suggested to be revised in a number of ways. These changes are indicated in the attached draft.

1. Define tiered wall height in section 7.2.8(A) Stormwater Devices.
2. Clarify text in section 7.10.3(A)(2)(a) about nonresidential private streets not being required to meet public street standards.
3. Add text to section 7.10.4(A)(1) about the option of shifting sidewalk along a street to an adjacent linear island if better pedestrian circulation can be created.
4. Other miscellaneous clarifications have been made.

PROPOSED LAND DEVELOPMENT ORDINANCE TEXT REVISIONS

Chapter 2 : Review and Decision Making Bodies

TABLE 2.1-1: SUMMARY OF ORDINANCE ADMINISTRATION AND REVIEW ROLES							
Procedure	Section	Town Council	Planning and Zoning Board	Zoning Board of Adjustment	PRCR Advisory Board	Staff Departments	Notes

Minor Modification	3.19	Hearing/ Decision (some)	-	Appeal (some)	-	Review/ Decision (some)	
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3.19.1 MINOR MODIFICATIONS: Minor Modifications to Development and Zoning District Standards

(A) Applicability

PRINCIPLE OF INTERPRETATION

- The Minor Modification process is proposed as a way to address development plans or proposals in the approval process, recently approved, and/or in the construction process. These provisions are only applicable in cases where a proposal requires a reduction or deviation from a required standard.
- The Minor Modification process can also be used as a way to address minor construction errors which have occurred in the past and were not noticed prior to the issuance of a certificate of occupancy. If the error is significant, it may be necessary to rely upon other procedures in the ordinance, like the Variance process (See Section 3.20).
- The Minor Modification process is not available for use in situations when there is an existing nonconforming site or structure.
- Development proposals seeking to deviate from a standard beyond the scope of the Minor Modification process (as listed in Section 3.19.1(B) Exceptions) are required to undergo the typical rezoning and/or site plan review process unless otherwise stated in this Ordinance.

As part of the review and approval of any procedure set forth in this Chapter 3, Town officials may approve a minor modification of any of the development or zoning district standards that are listed in the following table pursuant to the procedures listed in paragraph (C) below. Specifics on allowable modifications may be found in the associated text listed in the table. For properties owned by the Town, the Planning Director shall review all requests for minor modifications listed in the table.

TABLE 3.19-1: MINOR MODIFICATIONS ALLOWED		
Standard That May be Modified	Decision-Making Body	Modification Allowed (%)
Thoroughfare Corridor buffer width [Section 4.4.4(D)]	Town Council *	Up to 70
Impervious surface limitations within the Swift Creek portion of the Watershed Protection Overlay [Section 4.4.6(I)]	Town Council *	See Section 4.4.6(I)
Building setback requirements (Section 6.1)	Planning Director	10
Building setback requirements (Section 6.1)	Town Council *	More than 10
<u>Development and design standards, numerical (Chapter 7) (however, modifications to landscaping requirements are addressed in Section 7.2.10)</u>	<u>Planning Director</u>	<u>10</u>

<u>Development and design standards, numerical (Chapter 7) (however, modifications to landscaping requirements are addressed in Section 7.2.10)</u>	<u>Town Council *</u>	<u>25</u>
<u>Development and design standards, non-numerical (Chapter 7), limited specifically to the following LDO sections: <u>7.2.8(A), 7.7.3(C), 7.8.2(G), 7.10.3, and 7.10.4.</u></u>	<u>Planning Director</u>	<u>(not applicable)</u>
<u>Subdivision design standards, numerical (Chapter 8)</u>	<u>Planning Director</u>	<u>10</u>
<u>Subdivision design standards, numerical (Chapter 8)</u>	<u>Town Council *</u>	<u>25</u>
* For properties owned by the Town, the Planning Director shall review all requests for minor modifications that would otherwise be reviewed by the Town Council.		

(B) Exceptions to Authority to Grant Minor Modifications

In no circumstance shall any decision-making body approve a minor modification that results in:

- (1) An increase in overall project density;
- (2) A change in permitted uses or mix of uses;
- (3) An increase in building height;
- (4) A deviation from the Use-Specific Standards, set forth in Section 5.2; or
- (5) A change in zoning conditions.

(C) Procedure

(1) Minor Modifications Approved by Planning Director

(a) The Planning Director may initiate or approve a minor modification allowed under this section at any time prior to submittal of the staff report on an application to another decision-making body, if a report is required, or prior to final decision, if no report is required.

(b) Such modification shall be approved if:

- 1.** ~~reviewed for compliance with~~ it otherwise meets all requirements of this Ordinance and applicable Town specifications; and,
- 2.** the applicant establishes that compliance with the provision sought to be modified 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; and,
- 3.** the applicant establishes that the modification requested represents the least deviation required to make compliance practicable.

(c) The Planning Director may not approve a request for a minor modification in cases where the development application must go to the Town Council for approval even in cases where the requested modification is small enough to be granted by the

Director.

(d) The Planning Director's decision on a request for minor modification may be appealed to the Zoning Board of Adjustment pursuant to Section 3.21.

(2) *Minor Modifications Approved by Town Council*

The Town Council may initiate or approve a minor modification allowed under this section at any time before it takes action on a development application. The Town Council may approve the minor modification only if it finds, after conducting a quasi-judicial hearing, that the modification advances the goals and purposes of this Ordinance and either results in less visual impact or more effective environmental or open space preservation, or relieves practical difficulties in developing a site. In determining if "practical difficulty" exists, the factors set forth in Section 3.20.5, "Approval Criteria" (for Variances) shall be considered. In granting a minor modification allowed under this section, the Town Council may require conditions that will secure substantially the objectives of the standard that is modified and that will substantially mitigate any potential adverse impact on the environment or on adjacent properties, including but not limited to additional landscaping or buffering.

(3) *Noted on Pending Application*

Staff shall specify any approved minor modifications and the justifications for such modifications on the pending development application for which the modifications were sought.

CHAPTER 7: DEVELOPMENT AND DESIGN STANDARDS

7.1 GENERAL PROVISIONS

7.1.4 Community Appearance, Site Design Standards, and Other Related 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, the Community Appearance Manual, ~~General Design Guidelines~~ Site Design Standards, and Downtown Design Guidelines, Standards Specifications and Details, Small Area Plans, the Transportation Plan, Policy Statements, and Standard Procedures. These documents express Town policy and contain standards, guidelines, examples, and details needed to make this 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 ~~conflict~~ with this Ordinance; in such cases, the ~~most~~ more restrictive of the two requirements shall apply. The requirements of Chapter 7 may be eligible for Minor Modifications (See Section 3.19 for applicability).

7.2 LANDSCAPING, BUFFERING, SCREENING AND TREE PROTECTION

7.2.6 Parking Lot Landscaping

(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:

- (3) All upper-story trees shall not be planted ~~any farther than ten (10) feet, nor~~ 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.
- (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.
- (9) All planting medians and/or islands ~~containing a tree in vehicular use areas~~ 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 ~~where these trees are proposed consistent with 7.2.4(E) above. This dimension must be measured from the back of the curbs.~~ Linear planting strips between the lengths of parking isles are strongly encourage 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 ~~minimum ten (10) foot wide~~ continuous planted median no less than five (5) feet in width shall be installed in off-street parking areas approximately every one hundred twenty-two (122) linear feet (one (1) ~~planted 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.

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. ~~Non-structural stormwater devices shall be used unless the site has no pervious surface to accommodate devices to achieve the required water quality and quantity requirements in this ordinance (e.g., Town Center zoning district, redeveloped sites).~~ Visible hardscape transitions or edges (walls) for stormwater devices should not be used outside of Mixed Use (Activity) Centers. BMPs ~~shall~~ should be graded and landscaped to blend with the surrounding landscape to provide better transitions ~~between uses~~ as demonstrated in the Site Design Standards Document. Culverts, outlet structures, level spreaders, and other devices associated with stormwater BMPs ~~other stormwater related devices must~~ shall likewise be landscaped to reduce their visual impacts. This landscape screening must consist of evergreen plantings and be part of the approved landscape plan. All proposed landscaping shall be shown on an approved development plan. Placement of these structures must allow adequate width for the installation of plantings on all sides of the structure. Vegetation shall be provided along the shorelines of lakes or ponds to prevent erosion and provide for an aesthetically appropriate environment, particularly when the shore is accessible to pedestrians. The Planning Director may allow the use of hardscape transitions for developments outside of a Mixed Use Center ~~based on the location and public visibility of the proposed stormwater device 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.

7.2.9 Miscellaneous Landscaping Requirements

(C) Standards for New Planting

- (2) All shrubs shall be healthy, at ~~least eighteen (18)~~ twenty-four (24) inches in height above ground level, ~~a minimum three (3) gallon container size at time of installation,~~ and shall reach the height required for performance within five (5) years after installation.

7.7 BUILDING DESIGN STANDARDS

7.7.3 General Requirements

(C) Building Placement

~~Non-residential buildings that are placed close to public streets to provide a more urban appearance will be permitted, especially within designated mixed use centers as recommended in the Comprehensive Land Use Plan. Buildings shall comply with the following standards and those provisions that address building orientation, arrangement, mass, and other elements. Such developments All development plans must also follow the provisions in the Town's Community Appearance Manual and Design Guidelines Manual Site Design Standards, including, but not limited to: building orientation, arrangement, mass, elements, and materials.~~

- (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. ~~Although not preferred, buildings with one double-loaded bay of parking between them and a street count as being sited to address front a street. Buildings may also front on parks, open space, or pedestrian ways in lieu of streets.~~ In addition, in non-residential centers, ten (10) acres or more in size within activity centers shown in the Land Use Plan, a majority of the ~~buildings~~ tenant spaces ~~50,000~~ 40,000 square feet or less must be located on a double fronted street with no ~~less~~ 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.
- (4) Buildings on adjacent outparcels must be grouped adjacent to one another in groups of two or more. Grouped outparcel buildings must be sited no more than one hundred (100) feet apart. ~~There shall be no vehicular use area between outparcel buildings. A minimum fifteen (15) foot wide pedestrian and/or landscape corridor is required between outparcel buildings.~~

7.7.4 Statement of Architectural Compatibility (SAC)

(C) Building Height and Placement

7.7.5 Criteria for Review of SAC

(F) Setbacks and Building Placement

Setbacks 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.

7.8 OFF-STREET PARKING AND LOADING

7.8.2 Off-Street Parking Space Requirements

(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 Engineering may allowed parking on public streets within the Town Center, Mixed Use 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 significant safety issue. Pedestrian pathways shall be provided within parking areas in accordance with Section 7.10.4(A)(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.
- (3) Parking facilities shall be continually maintained in compliance with the approved site and/or subdivision 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 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) ~~To the extent possible, the~~ The visibility of parking areas shall be reduced by placing at least ~~20 to 40 percent~~ thirty (30) percent of the parking to the rear or side of buildings ~~facing public streets~~ for all non-residential developments greater than 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 ~~located at the~~ intersection of thoroughfares and/or collectors unless the building floor elevation is ten (10) feet or more below the grade of the adjacent roadway. ~~Ideally, no more than one two-sided bay of nose-in parking should shall be placed between the building(s) and the street.~~
- ~~(7) All stacking lanes for day care centers shall be located at least ten feet from the principal building with either an on-site turnaround or separate points for ingress and egress.~~
- (8) For residential uses requiring designated visitor parking and consisting of more than one 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 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 Engineering 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.~~

7.10 CONNECTIVITY

7.10.3 STANDARDS FOR STREETS/ON-SITE VEHICULAR CIRCULATION

The following standards shall be met ~~in for all new residential new or major site and subdivision plans and for redevelopment of sites. in order to increase connectivity:~~

(A) Street Connectivity

- (1) Any residential development shall be required to achieve a connectivity index of 1.2 or greater ~~unless the Planning Director and/or Engineering Director determines that this requirement is impractical due to topography, existing development, and/or natural features.~~ In the event that this requirement is ~~waived~~ modified pursuant to Section 3.19.1, 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 ~~waived~~ 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 any 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. On small sites, roughly five acres or less, a complete street network may not be possible; however, these smaller sites 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 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.

(B) Street Arrangement

(1) The proposed public or private street system shall be designed to provide vehicular 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 plan between the development site and its adjacent properties with approximately one roadway interconnection every 1,250 to 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 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. When the Planning Director deems a vehicular connection not possible due to topographical and/or environmental constraints, impractical, he/she can may increase the length requirement and/or require pedestrian connections. The Planning Director may delay the interconnection if such interconnection requires state approval or will result in significant hardship to the property owner. The intent of this standard is to improve access/egress for Town neighborhoods, provide faster response time for emergency vehicles, and improve the 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 access to at least two (2) public streets unless such provision is deemed not possible by the Planning Director or Town Engineer due to topography,

~~natural features, or the configuration of adjacent developments modified pursuant to Section 3.19.1.~~

- (3) Where new development is adjacent to vacant land likely to be subdivided or redeveloped in the future, or adjacent to property that is likely to be redeveloped in the future, all streets, bicycle paths, and access ways in the development's proposed street system shall continue through to the boundary lines of the area under the same ownership as the subdivision, as determined by the Planning Director or the Town Engineer, to provide for the orderly subdivision 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.
- (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, site and/or subdivision plans shall incorporate provisions for future vehicular 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 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. ~~When cross access is deemed not possible impractical by the Planning Director on the basis of topography, the presence of natural features, or vehicular safety factors, †~~This requirement may be waived 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.

7.10.4 Standards for Pedestrian Facilities

All sidewalks, greenways and multi-use trails shall be designed to comply with the standards provided by in the Design Guidelines Manual Site Design Standards, the Downtown Design Guidelines, the Standard Specifications and Details Manual, the Comprehensive Transportation Plan, and the Parks, Recreation and Cultural Resources Facilities Master Plan. 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 ~~in new residential and non-residential development:~~

(A) Sidewalks

- (1) Sidewalks shall be installed on both sides of all ~~arterials, collector streets~~ thoroughfares and collector streets. In non-residential developments and property designated located within activity mixed-use centers on the Land Use Plan, 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. ~~and non-residential cul-de-sacs, and within and along the frontage of all new development or redevelopment.~~ 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 travelway street in cases where a street is single-loaded and the opposite side of the street ~~will not~~ is not expected to develop in the future. Sidewalk shall be required on one (1) side of ~~the street along~~ all local and private streets in residential developments outside of a mixed-use center. ~~Where the Parks, Recreation & Cultural Resources Master Plan indicates a multi-use trail, a paved trail no less than ten (10) feet wide shall be constructed in lieu of standard sidewalk and in accordance with Town standards and section (C) below.~~ On local streets, sidewalks shall be required on only one (1) side of the street. Loop streets and/or residential cul-de-sacs are not required to have sidewalks, unless the street is located within on and on-half (1.5) miles of a school, or on-half (0.5) miles of a greenway, park, or shopping area, in which case a sidewalk shall be required on one (1) side of the street only.

- (2) Site design techniques such as Pedestrian crossings shall be made safer for pedestrians whenever possible by 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 shopping districts mixed use centers, mid-block crossings in high-pedestrian use areas (if well marked and traffic speeds are low), and, raised crosswalks, and pedestrian refuges in medians shall be provided as appropriate.
- (3) Within residential and/or non-residential developments, sidewalks or crosswalks no less than five (5) feet in width shall be constructed every nine hundred (900) linear feet to provide adequate pedestrian circulation or access to schools, churches, retail stores, personal service establishments, recreational areas, or transportation facilities. 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 at all points of pedestrian access to on-site parking and building entrances. 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, multi-use trails and/or greenways. Sidewalks shall be provided to any pedestrian access point or any parking space that is more than fifty (50) feet from the building entrance or principal on-site destination. All developments that contain more than one (1) building shall provide walkways between the principal entrances of the buildings. All Non-residential buildings set back located more than one hundred (100) feet from the public right-of-way shall provide for direct pedestrian access from the building to buildings located on adjacent lots.
- (5) Where residential and non-residential developments have cul-de-sacs or and dead-end streets, such 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 multi-use trail, ~~except where deemed impractical by the Planning Director.~~

- (6) ~~Sidewalk shall be provided in linear parking lot islands where it will connect pedestrians to buildings or groups of buildings. Where linear islands align with principal building entrances, sidewalk shall be provided.~~ 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 multi-use trails and sidewalk connectors. The plan for the town wide 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 ~~site and/or subdivision~~ 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 8.2.3(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 widths of easements may be reduced to twenty (20) feet in those cases where the developer is constructing the greenway trail. 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.).
- (4) ~~Adequate~~ 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 required to be constructed at least every nine hundred (900) feet along the adjacent greenway corridor with the location and number of connections shall details being determined by Town staff during the site and/or subdivision development plan review process. Exceptions to the minimum width may be provided by the PRCR Director if it is determined that there are significant topographic constraints. These connections shall meet the Town of Cary standards and specification as provided by the Parks, Recreation and Cultural Resources Department.
- (5) ~~The costs of constructing~~ Public greenways trail construction and dedicating ~~dedication of easements shall be credited towards park land dedication and payment-in-lieu requirements in accordance with LDO Section 8.2.3.~~

- (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 site perimeter buffers ~~must be approved by Town staff and~~ shall meet the requirements of LDO Section 7.2.3(H)(3). Greenway easements may be required outside of the perimeter buffer ~~may be required~~ in order to meet Town standards for both the buffer and greenway.
- (8) In those cases where the Town has approved special area plans which require 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:
 - (a) 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;
 - (b) 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 site and subdivision 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) Multi-Use Trails

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

- (1) ~~Wherever~~ the Parks, Recreation and Cultural Resources Facilities Master Plan calls for a multi-use trail, a paved multi-use trail no less than ten (10) feet wide 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 multi-use trail construction or easements.
- (2) All multi-use trails shall be designed and constructed according to Town of Cary standards and specifications as provided by the Parks, Recreation and Cultural Resources Department. Paving material shall be determined by the Parks, Recreation and Cultural Resources Department.
- (3) A Town of Cary Greenway Easement, centered on the trail (easement width to be determined by Parks, Recreation and Cultural Resources staff), shall be recorded. Multi-use 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 Parks, Recreation and Cultural Resources staff.

(D) Community Gathering Spaces and Plazas

Provide at least one public gathering space such as a pedestrian plaza or park-like space for new development and redevelopment sites that are two 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, ~~options for the~~ community gathering space shall include such things as a central plaza/green, outdoor dining areas, fountains/water features, and/or public art.

CHAPTER 12: RULES OF CONSTRUCTION, USE CLASSIFICATIONS, AND DEFINITIONS

12.4 OTHER KEY TERMS DEFINED

DRIVE AISLE:

An area in a parking lot in between parking spaces so that vehicles can drive into and out of the spaces.

PRIMARY TRAVEL WAY:

Vehicular route that connects a street (public and/or private) to a drive aisle. Vehicles access drive aisles from primary travel ways.

STREET, PRIVATE

A way of access to two or more properties which is open to vehicular ingress and egress, owned and maintained by affected property owners, but which is not considered to be a driveway.
A road owned and maintained by a private individual, organization, or company rather than by a government.