

Cluster Development and Village Design

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Wendell C. Lawther
Department of Public Administration
University of Central Florida
lawther@mail.ucf.edu

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The following analysis and example design regulations and characteristics are taken largely verbatim from Randall G. Arendt, *Conservation Design for Subdivisions* and from the Orange County, Florida zoning ordinances for villages and other documents. They are intended to provide examples of what language and design specifications can be used to create villages that incorporate cluster development principles and mixed use design.

Cluster development is the grouping of a particular development's residential structures on a portion of the available land, reserving a significant amount of the site as protected open space. The three basic goals of cluster development are: preserving open space, protecting critical ecological habitat and preserving agricultural land. The challenge becomes in identifying what type of development should be allowed that adheres to these principles or goals. Villages are one prime example.

In Orange County, Florida, community villages are planned for southwest Orange County, now known as Horizon West. The traditional means of development would be an inefficient and environmentally unsound way to grow. Each planned village will consist of a series of integrated, urban neighborhoods surrounding a neighborhood school and park. The villages will also contain a diversity of housing types and densities with a full complement of neighborhood retail and service shops and offices, and civic facilities, schools, and parks. The neighborhood facilities are all located within walking distance of most residences. Each village will contain ample open space in the form of town squares, greens and parks, and have a well defined village boundary edge created by a greenbelt or wildlife corridor permanently protected from development.

Each village will consist of two to four neighborhoods. Over the years, planners in Orange County have used the neighborhood unit concept as the building block for the development of future land use plans. With the adoption of the Public Schools Facilities Element, Orange County is committed to the policy that for all residential development, elementary schools will be the cornerstone for community planning and design. Ideally, an elementary school, in conjunction with a neighborhood park, will be located at the approximate center of each distinct neighborhood planning unit. Each neighborhood should also be approximately one square mile in area with its boundaries defined by principal arterial streets at a one-mile spacing. Lower density residential should be adjacent to and near the combined school and park with higher densities located at the periphery of the neighborhood.

Village Characteristics and Regulations

I. Greenway

Definition: that portion of a tract that is set aside for the protection of sensitive natural features, farmland, scenic views, and other unique features. Greenway land may be accessible to the residents of the development and/or the municipality, or it may contain areas of conservancy lots which are not accessible to the public. The required greenway land shall be located and designed to add to the visual amenities of villages by maximizing the visibility of internal open space as terminal vistas at the ends of streets (or along the outside edges of street curves), and by maximizing the visibility of external open space as perimeter greenbelt land. Greenbelt land shall be designated to provide buffers and to protect scenic views as seen from existing roadways and from public parks.

A. Uses Permitted On Greenway Lands

The following uses are permitted in greenway land areas:

1. Conservation of open land in its natural state
2. Agricultural and horticultural uses, including raising crops or livestock, wholesale nurseries, associated buildings, excluding residences that are specifically needed to support an active, viable agricultural or horticultural operation.
3. Pastureland for horses used solely for recreational purposes. Equestrian facilities shall be permitted but may not consume more than half of the minimum required greenway land.
4. Neighborhood open space uses such as village greens, commons, picnic areas, community gardens, trails, and similar low-impact passive recreational uses.
5. Active non-commercial recreation areas, such as playingfields, playgrounds, courts, and bikeways, provided such areas do not consume more than half of the minimum required greenway land or five acres, whichever is less. Playingfields, playgrounds, and courts shall not be located within 100 feet of abutting properties. Parking facilities for the same shall also be permitted, and they shall generally be gravel-surfaced, unlighted, properly drained, provide safe ingress and egress, and contain no more than ten parking spaces.

6. Golf courses, including their parking areas and associated structures, may comprise up to half of the minimum required greenway land.
7. Water supply and sewage disposal systems, and stormwater detention areas designed, landscaped, and available for use as an integral part of the Greenway.
8. Easements for drainage, access, sewer or water lines, or other public purposes;
9. Underground utility rights-of-way. Above-ground utility and street rights-of-way may traverse conservation areas but shall not count toward the minimum required greenway land.

B. Dimensions/Restrictions of Greenway Land

1. Greenway land must include at least 70 percent of the Tract
2. Not less than one-sixth of this greenway land shall be in a form usable to and accessible by the residents
3. No more than fifty percent of the minimum required greenway land may be comprised of active recreation facilities.
4. Villages shall include multiple greens or commons measuring a total of at least 1,000 square feet for each dwelling unit.

II. Design Standards For Villages

A. New Dwelling Setback Requirements

1. From all external road ultimate right-of-way - 100 feet
2. From all other tract boundaries - 50 feet
3. From cropland or pasture land - 100 feet
4. From buildings or barnyards housing livestock - 300 feet
5. From active recreation areas such as courts or playingfields - 150 feet

B. Other General Village Standards

1. Views of houselots from exterior roads and abutting properties shall be minimized by the use of changes in topography, existing vegetation, or additional landscaping which meets the landscaping requirements of the Subdivision and Land Development Ordinance.
2. At least one-half of the lots shall directly abut or face greenway land across a street.

III. Residential Lot Characteristics

1. Average Minimum Lot Area: 6,000 square feet. Up to twenty (20) percent of the lots may be reduced to a minimum of 5,000 square feet.
2. Minimum Lot Width at Building Line: 40 feet.

3. Yard Regulations: The builder or developer is urged to consider variations in the principal building position and orientation, but shall observe the following minimum standards:

a. Front yard:

Principal buildings: 12 feet minimum (6 feet to front porches /steps)
 Attached Garages (front-loaded): min. 10 feet behind plane of house
 Attached Garage (side-loaded): min. 10 feet from street R.O.W.
 Detached Garages (front-loaded): min. 40 feet from street

b. Rear yard:

30 feet minimum for principal buildings and 5 feet for accessory buildings (excluding garages);
 Detached Garages (rear-loaded): min. 10 feet from alley or lane.

c. Side yard: 20-foot separation for principal buildings, no side yard < 5 feet.

4. Maximum Impervious Coverage: 50 percent limit on each lot.
 5 Minimum Street Frontage: Lots must have frontage either on a street or on a back lane or shared driveway. Houses served by rear lanes may front directly onto parks or greens, which shall be designed with perimeter sidewalks.
 6. Maximum Height Regulations: 35 feet

IV. Dimensions, Intensity, and Design Standards for Village Mixed Use/Commercial Areas

The Village Mixed Use/Commerical Area shall be located generally at the center of the village adjacent to a collector road which serves that particular village. Commercial development within the village center should be primarily oriented to serve the residents of the immediate neighborhood. The total maximum size of all development within the village center district shall be sixty (60) acres. The maximum total floor area for first floor nonresidential uses shall be four hundred thousand (400,000) square feet. The maximum floor area ratio shall be four-tenths (0.4).

A. Development standards.

The following development standards shall apply to all development within the village center district.

Use	Minimum Land Area Required	Maximum Land Area Permitted
Residential*	25%	40%
Commercial	20%	60%
Retail and services	20%	60%

Office	10%	25%
Overall nonresidential	30%	60%
Public and civic	10%	no maximum
Public parks and green space	5%	no maximum

*Residential dwellings are permitted above ground floor commercial and office uses.

B. Use Intensity Standards

1. New commercial buildings in the Mixed Use/Commercial Area and their associated parking spaces shall not occupy more than 5% of the net developable land area of the entire Village. However, they may occupy up to 10% if they include second-story office uses, and up to 15% if they include second-story residential units. In order to qualify for the 15% figure, at least half of the new commercial building coverage (foundation footprint) shall be of two-story construction, and at least 25% of the second-story space shall be designed for residential uses.

2. Floor area ratios shall be reduced by the Board on a case-by-case basis because village shop buildings and their parking areas should typically be allowed to occupy up to 80 percent of their building sites, with relatively little land between structures or between structures and the sidewalk.

3. Minimum Lot Size: The minimum lot size for non-residential uses in Village Mixed Use/Commercial Subdistrict shall be determined by adding 20 percent to the land area needed for the structure, on-lot parking, ingress/egress, and any on-site infrastructure that is required (e.g., septic disposal areas, stormwater management areas). The additional 20 percent shall be constitute setbacks and landscaped buffers.

4. Minimum Street Frontage: 50 feet

5. Setback Regulations:

Front: no minimum required; maximum setback 15 feet

Rear: 20 feet minimum

Side: 5 feet

6. Maximum Height Regulations: 35 feet (but 75 feet for church steeples)

7. Additional Design Standards

a. New buildings shall be subject to a maximum front setback (the "build-to" line) in order to maintain a strong sense of streetscape. Such buildings shall generally be two-story, with ground floor space generally reserved for pedestrian-oriented retailing and services, with offices and housing above.

b. Each Village Mixed Use/Commercial Area shall have a primary common or green of at least 10,000 square feet, which should ideally be surrounded by two-story development that may include commercial, residential, civic and institutional uses.

This primary common shall border on the principal street running through the Mixed Use/Commercial Area, or be located so as to constitute the "terminal vista" of that street.

This central green shall be located within 1500 feet of 80% of all dwelling units in the village. (Alternatively, two greens of at least 6,000 sq. ft. may be substituted for the central green, in order to meet the distance/proximity standard.) The type of trees and shrubs used shall be such that vistas through the open space are largely unobstructed. Greens shall be landscaped using elements of formal gardens, walkways, monuments, statues, gazebos, fountains, park benches and pedestrian-scale lamp posts. They shall be designed as attractive gathering places for all village residents in both day and evening. No Green shall contain more than 10% coverage by impervious surfaces.

8. Parking

- a. Non-residential off-street parking shall be to the side or rear, or located within internal parking areas not visible from the street.
- b. On-street parking spaces along the street frontage of a lot (except where there are driveway curb-cuts) shall be counted toward the minimum number of parking spaces required for the use on that lot.
- c. On-street parking spaces shall be designed to be parallel to the curb.
- d. Off-street parking may be located within 600 feet (measured along a publicly accessible route) from the lot containing the use to which the parking is accessory. Said lot containing the parking shall be owned or leased to the owner of the principal use, or the lot containing the parking shall be dedicated to parking for as long as the use to which it is accessory shall continue and it is owned by an entity capable of assuring its maintenance as accessory parking

V. Discretionary Density Bonuses

Additional density may be allowed when one of the following public benefits is proposed:

A. Public Usage of Greenway Land

The Board may encourage the dedication of land for public use (including active and passive recreation areas, municipal buildings, etc.) according to the following standards: *A density bonus for greater public usage of greenway land in new subdivisions shall be computed on the basis of a maximum of one dwelling unit per five acres of greenway land or per 2500 feet of trail that becomes publicly accessible.* The decision whether to accept an applicant's offer to dedicate greenway land to public usage within a proposed subdivision shall be at the discretion of the Board, which shall be guided by the recommendations contained in the Open Space Plan, particularly those sections dealing with active recreational facilities and passive trail networks.

B. Endowment For Greenway Maintenance

1. When greenway land is to be donated to a land trust or to the municipality, the Board may allow up to a ten percent density bonus to generate additional income to the applicant for the sole purpose of endowing a permanent fund to offset continuing costs of maintaining the greenway land (involving activities such as mowing meadows, removing invasive vines, paying insurance premiums and local taxes, etc.), including costs associated with active or passive recreation facilities. Spending from this fund should be

restricted to expenditure of interest so that the principal may be preserved. Assuming an annual average interest rate of five percent, the amount designated for the Endowment Fund shall be at least twenty (20) times the estimated annual maintenance costs. Such estimate shall be prepared by an agency, firm, or organization acceptable to the Board, and with experience in managing conservation land and recreational facilities.

2. Because additional dwellings, beyond the maximum that would ordinarily be permitted, may reasonably be considered to be net of development costs and represent true profit, 75% of the net selling price of the endowment lots shall be donated by the applicant to the Greenway Maintenance Endowment Fund for the greenway lands within the subdivision. This fund shall be transferred by the developer to the designated entity with ownership and maintenance responsibilities, at the time this entity is created.

3. When estimating the projected maintenance costs of the greenway land, greenway land that is not accessible by the subdivision residents for their common enjoyment need not be included in the calculations. Such lands would typically include areas designated on the Final Plan for Conservancy Lots or as land reserved for future agricultural, horticultural, silvicultural, or equestrian uses, which may be leased or sold to another party for those express purposes, and which are protected from future development by a permanent conservation easement. In such cases, the density bonus shall be adjusted proportionately to reflect only the acreage that is accessible to residents for their passive or active recreation.

C. Provision of Affordable Housing

A density increase is permitted where the subdivision proposal provides on-site or off-site housing opportunities for low- or moderate-income families. When off-site housing provision is proposed, the Board shall require evidence that these units will in fact be constructed by a certain date. The amount of density increase shall be based on the following standard: *For each affordable housing unit provided under this section, one additional building lot or dwelling unit shall be permitted, up to a maximum 15 percent increase in dwelling units. Affordable housing is herein defined as units sold or rented to families earning up to 120 percent of the area median income, adjusted for family size, as determined by the U.S. Department of Housing and Urban Development.*

VI. Ownership And Maintenance Of Greenway Land And Common Facilities

A. Development Restrictions

All greenway land shall be permanently restricted from future subdivision and development. Under no circumstances shall any development be permitted in the open space at any time, except for those uses listed in Section 106.

B. Ownership Options

The following methods may be used, either individually or in combination, to own common facilities. Common facilities shall not be transferred to another entity except for transfer to another method of ownership permitted under this section, and then only when

there is no change in the common facilities or in the open space ratio of the overall development. Ownership methods shall conform to the following:

1. Fee Simple Dedication to the Municipality. The municipality may, but shall not be required to, accept any portion of the common facilities, provided that:
 - a. There is no cost of acquisition to the municipality; and,
 - b. The municipality agrees to and has access to maintain such facilities.
2. Condominium Association. Common facilities may be controlled through the use of condominium agreements. Such agreements shall be in accordance with relevant state law. All open land and common facilities shall be held as "common element."
3. Homeowners' Association. Common facilities may be held in common ownership by a homeowners' association, subject to all of the provisions for homeowners' associations set forth in state regulations and statutes. In addition, the following regulations shall be met:
 - a. The applicant shall provide the municipality a description of the organization of the proposed association, including its by-laws, and all documents governing ownership, maintenance, and use restrictions for common facilities;
 - b. The proposed association shall be established by the owner or applicant and shall be operating (with financial subsidization by the owner or applicant, if necessary) before the sale of any dwelling units in the development;
 - c. Membership in the association shall be automatic (mandatory) for all purchasers of dwelling units therein and their successors in title;
 - d. The association shall be responsible for maintenance and insurance of common facilities;
 - e. The by-laws shall confer legal authority on the association to place a lien on the real property of any member who falls delinquent in his dues. Such dues shall be paid with the accrued interest before the lien may be lifted;
 - f. Written notice of any proposed transfer of common facilities by the association or the assumption of maintenance for common facilities must be given to all members of the association and to the municipality no less than thirty days prior to such event; and
 - g. The association shall have adequate staff to administer, maintain, and operate such common facilities.
4. Private Conservation Organization or the County. With permission of the municipality, an owner may transfer either fee simple title of the open space or easements on the open space to a private non-profit conservation organization or to the County provided that:
 - a. The conservation organization is acceptable to the municipality and is a bona fide conservation organization intended to exist indefinitely;
 - b. The conveyance contains appropriate provisions for proper reverter or retransfer in the event that the organization or _____ County becomes unwilling or unable to continue carrying out its functions;
 - c. The greenway land is permanently restricted from future development through a conservation easement and the municipality is given the ability to enforce these restrictions; and
 - d. A maintenance agreement acceptable to the municipality is established between the owner and the organization or _____ County.

5. Dedication of Easements to the Municipality. The municipality may, but shall not be required to, accept easements for public use of any portion of the common land or facilities. In such cases, the facility remains in the ownership of the condominium association, homeowners' association, or private conservation organization while the easements are held by the municipality. In addition, the following regulations shall apply:

- a. There shall be no cost of acquisition to the municipality;
- b. Any such easements for public use shall be accessible to the residents of the municipality; and
- c. A satisfactory maintenance agreement shall be reached between the owner and the municipality.

6. Non-Common Private Ownership. Up to 80 percent of the required greenway land may be included within one or more large "conservancy lots" of at least 10 acres provided the open space is permanently restricted from future development through a conservation easement, except for those uses listed in Section 106, and that the municipality is given the ability to enforce these restrictions.

Conservancy Lot.

A large, privately-owned lot comprising part of an area of open land. The purpose of the conservancy lot is to provide surrounding residents with visual access to greenway land, while keeping the land under private ownership and maintenance. Only a small portion of such lots may be developed; the remainder must be protected through conservation easements and used in conformance with standard for greenway land. Public access to conservancy lots is not required.