Conservation Development Design Standards Policy

Section 1 Open Space Standards

1.1 Minimum Required Open Space

At least fifty percent (50%) of the land area in the Conservation Development Design shall be set aside as protected open space. Open space shall be comprised of both Primary Conservation Areas and Secondary Conservation Areas as defined in section 1.4 Types of Open Space. In cases where the Primary Conservation Area approaches 50% of the land, additional conservation area may be required but in no case can the Zoning Administrator require more than 60% Open Space.

1.2 General Criteria

The following criteria apply to all Conservation Development Design projects:

A. All primary conservation areas and designated secondary areas shall be protected from clearing, grading, filling, or other construction related disturbance except as may be approved by the Zoning Administrator.
B. The open space area shall be reasonably contiguous, coherently configured, substantial in size, and shall normally abut existing or potential open space on adjacent properties. In general, the area shall occupy at least three (3) acres. It shall not exceed a length-to-width ratio more than 4:1. Smaller or disconnected conservation areas should be avoided except to preserve isolated heritage trees or other features of value for conservation as approved by the Zoning Administrator.
C. The pedestrian circulation system shall be designed to assure that pedestrians can walk safely and easily on the site, between properties and activities or special features within the neighborhood open space system. Roadside footpaths should connect with off-road trails, and link with existing or potential open space on adjoining parcels.
D. Common areas (neighborhood greens), cut-de-sac islands, and both sides of new streets shall be landscaped primarily with native species shade trees and flowering shrubs with high wildlife conservation value.

1.3 Open Space Location Standards

A. Undivided Preserves. Both Primary and Secondary Conservation Areas shall be located or maintained in substantial and cohesive preserves which adjoin housing or development areas that have been designed compactly to form larger conservation units to be enjoyed by all residents of the development. Such open space shall be directly accessible to the largest number of lots within the development. To achieve this, the majority of lots should abut the open space to provide residents with direct views and access. Safe and convenient pedestrian access to the open space from all adjoining house lots shall be provided, except in the case of farmland or other resource areas vulnerable to trampling damage or human disturbance.

B. Interconnected Network. As these standards are implemented, the protected open space in each new subdivision should be effectively designed to adjoin each other, and/or to other permanently protected lands, so that they may ultimately form an inter-connected network of Primary and Secondary Conservation Areas.

1.4 Types of Open Space

Open space shall be comprised of two types of land: “Primary Conservation Areas” and “Secondary Conservation Areas” and shall be configured to create or maintain interconnected networks of conservation lands.

A. Primary Conservation Areas form the core of the open space to be protected. They are the first type of open space to be designated on a Site Analysis Map to satisfy the minimum open space requirement and consist of the following site features:

1. Wetlands, including, but not limited to, streams, creeks, ponds, reservoirs, and adjoining land areas identified in one or more of the following:
    a) The National Wetlands Inventory maps prepared by the U.S. Fish and Wildlife Service
    b) Soil maps published by the County Soil Survey prepared by the U.S.D.A. Natural Resources Conservation U.S.D.A. Natural Resources Conservation Service (where “very poorly drained” soils can be considered as a proxy for wetlands);
    c) A required Environmental Assessment or Environmental Impact Statement;
    d) A site analysis conducted by a registered engineer, land surveyor, landscape architect, architect or land planner.
2. Floodplains (100-year) and alluvial soils identified as part of:

a) Flood Insurance Study prepared by the Federal Emergency Management Agency (FEMA); and
b) The Soil Survey prepared by the U.S.D.A. Natural Resources Conservation Service.

8. Secondary Conservation Areas consist of unconstrained land that would otherwise be permissible for building and include the site features listed below. Following the site walk, the Zoning Administrator may require an independent, third-party study of any of the site features.

1. Woodlands / Significant Heritage Trees — including forests and significant heritage trees as defined in the town's Land Development Code (LDC).
2. Natural areas and wildlife habitats and corridors identified in the Waxhaw 2040 Comprehensive Plan or most current Open Space map and previously unidentified environmentally sensitive areas may be required as determined by the Zoning Administrator.

Where the goal of the Open Space Development project is to conserve woodlands/ significant heritage trees and/or natural areas and wildlife habitats, the following criteria apply:

G-1 Locate dwellings in unwooded parts of the site away from mature forests, natural areas, and/or wildlife corridors.

G-2 Design development around existing heritage trees, hedgerows and tree lines between fields or meadows. The impact on larger woodlands (greater than five acres), especially those containing mature trees, natural areas, and/or wildlife corridors should be minimized.

G-3 When any woodland is developed, care shall be taken to locate buildings, streets, yards, and septic disposal fields to avoid heritage trees, mature forests, natural areas, and/or wildlife corridors.

3. Farmland, whether actively farmed or not, includes cropland, fields, pastures, existing significant homestead/structures, and meadows.

Where the goal of the Conservation Development Design project is to conserve farmland, the following guidelines apply:

G-1 Locate building lots in forested areas (per guidelines provided above pertaining to heritage tree and/or natural area development) away from existing grazing areas, cropland, feedlots, and similar uses.

G-2 If development must be located on open fields or pastures because of greater constraints on other parts of the site, dwellings should be sited in locations at the far edge of a field, as seen from a public road.

G-3 Identify the most productive portions of existing grazing areas and cropland and locate building lots on less productive land.

G-4 Provide buffers between house lots and cropland or pastures, to reduce the potential for conflict between residents and farming activities. Such buffers shall generally be 75 feet in width and shall be managed to encourage the growth of successional woodland or other habitat.

4. Slopes greater than 15% which require special site planning due to their erosion potential, limitations for septic tank nitrification fields, and terrain or elevation changes. Such areas may be suitable for building, but higher site preparation and construction costs are to be expected.

5. Historic and/or archaeological sites, including, but not limited to, sites listed on the National Register of Historic Places or included on the State's National Register study list, designated as a local historic landmark or district.

Where the goal of the Conservation Development Design project is to conserve historic and archaeological sites and structures, the following guidelines apply:

G-1 Design around and preserve sites of historic, archaeological or cultural value to safeguard the character of the feature(s), including fences and walls, farm outbuildings, burial grounds, abandoned roads, and earthworks.

G-2 Locate new streets, driveways, fences, and utilities so as not to intrude on rural, historic landscapes. Wherever possible, streets and driveways are to follow existing hedgerows, fence lines, and historic farm drives.

G-3 Include plantings in new developments that reflect natural and historic landscape materials and are in harmony with the character of the area.

G-4 Ensure that building designs and styles used in new construction are compatible with the architectural style of historic buildings located on or adjacent to the site, especially in terms of scale, height, roof shape, and exterior materials.

6. Scenic views (viewsheds), especially of natural and cultural features from designated scenic road corridors, including "views from the road" as well as views outward from potential home sites.

Where the goal of the Conservation Development Design project is to conserve scenic views, the following guidelines apply:

G-1 Leave scenic views and vistas unblocked or uninterrupted, particularly as seen from public roadways. Consider "no-build, no-plant" buffers along public roadways where views or vistas are prominent or locally significant. In wooded areas where enclosure is a feature to be maintained, consider a "no-build, no-cut" buffer created through the preservation of existing vegetation.

G-2 Where development is located in unwooded areas clearly visible from existing public roads, it should be buffered from direct view by a vegetative buffer or a naturalistic earth berm constructed to reflect the topography of the surrounding area or located out of sight on slopes below existing ridge lines.

G-3 Respect rural roadside character and vehicular carrying capacity by avoiding development fronting on existing public roads, e.g., limiting access to all lots from interior rather than exterior roads.

G-4 Protect rural roadside character and scenic views by providing conservancy lots (e.g., ten acres or more in size) adjacent to existing public roads.

G-5 Avoid siting new construction on prominent hilltops or ridges, or so close to hilltops and ridges that rooflines break the horizon (unless such buildings can be effectively screened or buffered with trees).

7. Power line easements have very strict land use limitations and are not typically included in open space calculations. However, to encourage conservation design, the Town will allow 25% of the easement land area to be counted toward the conservation area requirement.

8. Section 8.9 (H) of the LDC requires the dedication of parkland to the town, or a fee in lieu of the land dedication. Conservation design allows for 50% of the required land dedication to be counted towards the conservation area requirement. If the Board of Commissioners opts for a payment in lieu of land dedication, the amount of the payment will be calculated according to Section 8.9 (H) of the LDC and then reduced by 50%.

Section 3 The Design Process

3.1. Yield Plan

A yield plan is defined as the maximum number of lots reasonably achievable on the property, based on a conventional subdivision design plan where lots meet or exceed the minimum dimensions required for lots in conventional subdivisions, conforming to the Town of Waxhaw's regulations governing lot dimensions, land suitable for development, and street design. The Yield Plan shall be prepared by the applicant, showing how the tract of land could be subdivided to yield the maximum number of buildable residential lots. Although the Yield Plan does not have to meet formal requirements for a site design plan and is not intended to involve significant engineering or surveying costs, the design must be realistic and economically capable of being graded and constructed, given site features and all applicable regulations. Potential building lots and streets must not be shown in areas that would not ordinarily be permitted in a conventional plan.

The Yield Plan shall contain the following information:

a. Existing topography shown at 2' contour interval with the location of all areas unsuited for development, including wetland locations, 100-year floodplains, and slopes exceeding 25 percent.

b. The proposed arrangement of lots, including size and number, and streets within the subdivision, including right-of-way widths, public water and sewer utilities; and

c. When a project is not suitable for public utilities, the location of individual wells and septic systems must be shown along with areas identified for primary and secondary drainage fields; in concurrence with Union County Environmental Health standards.

3.2 Existing Features/Site Analysis

An Existing Features/Site Analysis Map analyzing each site's significant features is required for all proposed subdivisions to provide a basis of the open space design process. The Map shall identify, at minimum, those natural, historic, cultural and scenic features listed in Sections 1.4A and 1.4B without distinction as to whether they are Primary or Secondary Conservation Areas.

3.3 Conservation Design Process

Following the constraints established in the Existing Features/Site Analysis Map, an Overlay Plan (see Section 5 Specifications for Sketch Plan) shall be designed around both the Primary and Secondary Conservation Areas, which together constitute the required open space. The design process can then continue with the delineation of potential building sites and road alignments, with lot lines being drawn in as the final step. These steps in the design process are further described below.

A. Open Space Designation: During this initial step, all potential Conservation Areas, both Primary and Secondary, shall be identified, using the Existing Features/Site Analysis Map. Primary Conservation Areas shall consist of those features described in Section 1.4.A above. Secondary Conservation Areas shall include the most sensitive and noteworthy natural, scenic, and cultural resources as described in Section 1.48. above. Guidance as to which parts of the remaining land to classify Secondary Conservation Areas shall be based upon:

- On-site visits,
- The Open Space Standards contained in Section 1 above; and
- The Evaluation Criteria contained in Section 4 below.

B. Building Site Location: In this step, potential site locations for dwelling units and other structures are tentatively located with consideration for advantageous circulation patterns. Such sites may be situated around the Primary and Secondary Conservation Areas to permit the enjoyment of these areas without negatively impacting them.

C. Street Alignment and Trail Networks: This step consists of designing a circulation pattern that will allow buildings to be located in a way that best fulfills conservation and scenic goals while providing vehicular access to each dwelling or other structure in the most reasonable and economical manner. This arrangement shall be served by a network of informal trails connecting development focal points and neighborhood areas with open space features within the conservation lands. The arrangement of lots and access streets shall avoid or at least minimizes impacts to both Primary and Secondary Conservation Areas. Wetland crossings and streets traversing slopes over 15 percent shall be strongly discouraged unless such streets link one buildable portion of a site with another when no other means of access is available. Street connections shall generally be encouraged to minimize the number of new cut-de-sacs to be maintained and to facilitate easy access to and from building units on different parts of the property and on adjoining parcels. Where cut-de-sacs are necessary, those serving six (6) or fewer units may be designed with “T-turnarounds” facilitating three-point turns. Cut-de-sacs serving more than six units shall generally be designed with a central island containing indigenous trees and shrubs, either conserved or planted. All cut-de-sacs should provide trail access to the open space and/or other nearby streets. The creation of single-loaded access streets is encouraged to maximize the number of units in new developments that may enjoy views of open space. To make this approach economical, narrower lots and strategically spaced flag lots, both of which help make the street system more efficient, are permitted in Conservation Development Designs.

D. Drawing in the Lot Lines: The final step consists of drawing in lot lines around potential unit sites. Each lot must contain a buildable area of sufficient size to accommodate the building (such as a single-family detached dwelling) along with customary accessory uses, including, but not limited to, storage buildings and garages, patios and decks, lawns, and driveways. Individual wells and septic systems, where these are to be provided, may be located within the undivided conservation lands if sufficient space is not available on the lots.

4. Sketch Plan

4.1 Components of Sketch Plans

The Sketch Plan required by LDC Section 5.8 shall consist of three parts:

1. An Existing Features/Site Analysis Map including:
   a. Primary Conservation Areas
   b. Secondary Conservation Areas
   c. Transportation and Utility Systems: street rights-of-way, easements, public and private water and sewer lines and storm drainage facilities
2. A Yield Plan as described in Section 3.1 of this document.
3. An Overlay Plan shall contain the following information:
   a. The proposed arrangement of lots within the subdivision, including size, orientation and number.
   b. The proposed approximate lot and street layout within the subdivision, including travel way and right-of-way widths, and connection to existing streets.
   c. The location, type, and area of the open space proposed in the subdivision, including open space to be preserved:
      i. In a separate lot or lots under the ownership of a homeowners' association or equivalent.
      ii. In a separate lot or lots through dedication for public use, such as a park site, to a unit of local government, state government or a private land conservancy.
   d. The location of proposed water supply and sewage disposal facilities, including:
      i. Well sites for individual and community water systems.
      ii. Nitrification fields and land application areas for community sewage disposal systems employing subsurface disposal and spray irrigation, respectively.
      iii. Nitrification fields and land application areas for individual on- and off-lot sewage disposal systems employing subsurface disposal and spray irrigation, respectively.
      IV. Public water and sewer lines, where such facilities are available or capable of being extended.

The Overlay Plan shall be submitted by the applicant as a diagrammatic basis for informal discussion with the Planning Staff regarding the design of a proposed subdivision or land development. It shall be drawn by a licensed landscape architect, or a site planner experienced in conservation subdivision design. Civil engineers and surveyors may also be integral to the design team at this stage.