

ARTICLE IV. - SUBDIVISIONS

Sec. 4.1 - General provisions.

(a) *Authority and Jurisdiction.*

- (i) This section, enacted in accordance with the provisions of NCGS 160D, Article 8 shall apply to all of Jackson County not within the jurisdictions of the various municipalities and the Qualla Boundary.
- (ii) For the purposes of this section, the term "Director" shall refer to the Planning Director unless otherwise stated.
- (iii) Public health, safety, economy, good order, appearance, convenience, morals, and the general welfare require the harmonious, orderly, and progressive development of land within the jurisdiction of the County. In furtherance of this intent, regulation of land subdivision by the County has the purposes, among others, to:
 - 1) Encourage economically sound and stable development in the County;
 - 2) Ensure the timely provision and coordination of required streets and highways, utilities, and other facilities and services to new land developments;
 - 3) Ensure adequate provision of safe and convenient traffic access and circulation;
 - 4) Ensure provision of needed community open spaces in new land developments through the dedication or reservation of land for recreational, educational, and other public purposes or the provision of funds in lieu of dedication;
 - 5) Ensure, in general, the wise and timely development of new areas, in harmony with the land development plan and other official plans of the County; and
 - 6) Ensure accurate public records of land ownership, to facilitate land ownership transfer, the effective conduct of public and private business, and the protection of private property rights.

(b) *Improvements.*

- (i) Before final plat approval, each subdivision shall either contain the improvements specified in this section which apply to the classification of the subdivision submitted and all conditions of approval or a satisfactory performance guarantee shall have been posted with the County pursuant to Section 4.9, Completion and Maintenance Guarantees. The improvements shall be installed in accordance with the requirements of this section and paid for by the subdivider, unless other means of financing are specifically allowed within the requirements of this article and paid for by the subdivider. Land shall be dedicated and reserved in each subdivision as specified in this article. Each subdivision shall adhere to the minimum standards of design established by this section.

(c) *Intent.*

- (i) This section is intended to provide for the harmonious development of the County jurisdiction and in particular for the following:
 - 1) The coordination of streets within subdivisions with other existing or planned streets or official map streets;
 - 2) Appropriate shapes and sizes of lots;
 - 3) The provision of land and of easements for utilities and other public facilities and services; and
 - 4) A distribution of population and traffic which will tend to create conditions favorable to health, safety, convenience, prosperity, and general welfare.

- (ii) Regulations set forth in this section are part of a system of regulations governing land subdivision, development and use and construction and improvements on land, supplementing and supplemented by health, drainage improvement, steep slope, flood hazard, and other land use regulations and controls.
 - (iii) Applications for subdivision approval shall be considered in relation to all such regulations applicable in the particular case and not only in relation to the subdivision regulations set forth in this section. Where there are conflicts between the regulations in this section and other lawfully adopted regulations involved in such considerations, those which establish the highest requirements or most stringent limitations shall govern except where specific exceptions are set forth in such regulations.
- (d) *Applicability.*
- (i) Unless stated otherwise, the standards contained in this section apply to all subdivisions of land, including family, minor and major subdivisions.
 - (ii) Compliance required. Within the jurisdiction of this UDO, no subdivision shall be made, platted, or recorded for any purpose, nor shall parcels resulting from such subdivision be sold or offered for sale unless such subdivision meets all the requirements of this section and applicable related regulations of the UDO.
 - (iii) No lot shall be approved unless an adequate portion thereof is suitable for a use permitted by land development regulations or other applicable regulations of the County. In particular, no lot shall be platted for building purposes unless it contains an adequate building site, under applicable regulations.
 - (iv) Plat approval required. No plat of any subdivision within such jurisdiction shall be filed or recorded by the County Register of Deeds until it shall have been submitted to and approved by the appropriate authority and such approval entered in writing on the plat per Section 3.7.16-17 of this ordinance.
- (e) *Exemptions.*
- (i) Any plat of property exempt from the regulations of this section shall be certified as exempt by the Director or, in the limited circumstances specified in G.S. 47-30(f)(11), a professional land surveyor prior to such plat being recorded. Such plat is not exempt from any zoning, water supply, watershed, or other local ordinances. Any exemption from the regulations of this UDO shall not be deemed an exemption from any other applicable ordinance.
 - (ii) The following divisions of land shall also be exempt from the standards of this section.
 - 1) The combination or recombination of portions of previously platted lots where the total number of lots is not increased and the resultant lots are equal to or exceed the standards of the County as shown in this section.
 - 2) The division of land into parcels greater than ten acres where no street right-of-way dedication is involved.
 - 3) The public acquisition by purchase of strips of land for widening or opening of streets.
 - 4) The division of a tract in single ownership, the entire area of which is no greater than two acres, into not more than three lots, if no street right-of-way dedication is involved and where the resultant lots are equal to or exceed the standards of the County, as shown in this article.
 - 5) A re-subdivision which involves only the removal of interior lot lines, with the outside perimeter of the property remaining unchanged, resulting in fewer parcels than were contained in the original parcel.
 - 6) A re-subdivision which involves only the removal or relocation of easements on the property.
 - 7) A re-subdivision which involves only the changing of notations written on the plat or correction of errors in an existing legal description, provided that no additional building lots are created.

- 8) A division of land pursuant to an allocation of land by court decree.
- 9) The division of land into cemetery plots.
- 10) A division of land involving no more than two (2) parcels for the sale, gift, or exchange of tracts between adjoining land owners, provided that no additional building sites are created.
- 11) A division of a building site containing an existing dwelling which has been located on an agriculturally used site for at least ten (10) years.
- 12) A division or re-subdivision of land for the acquisition by the public or by a utility for street right-of-way or easement.
- 13) The division of a tract into parcels in accordance with the terms of a probated will or in accordance with intestate succession under G.S. ch. 29.

(f) *Phasing.*

- (i) A subdivision may be developed in phases, in accordance with the provisions of this section.
- (ii) Each phase shall contain at least six lots, unless shown on a phasing plan approved by the Director as part of the preliminary subdivision plan review after expressly determining that the proposed phasing makes it unlikely that a subdivider could abandon a final phase that contains a required extension of a road or other infrastructure.
- (iii) A phasing plan shall be submitted showing the phases of development and the requirements of this section that will be satisfied in each phase which is approved by the Planning Board as part of the preliminary plan.
- (iv) Open space, if required by Section 4.3.2, 4.3.3 or 4.3.4, shall be measured cumulatively in all approved phases and shall meet the requirements for open space for each phase of the subdivision.
- (v) The degree and extent of roads, water supply, sewage disposal, stormwater management, erosion and sedimentation control, and other required improvements in the phase and previously approved phases is sufficient to serve or handle all development within the phase. Roads constructed in an earlier phase shall be designed and constructed to accommodate the total number of homes and/or lots, including those proposed for later phases, that will be served by the road(s). Lots may be recorded, and public improvements may be constructed in phases, unless set forth as part of the preliminary subdivision plan.
- (vi) The Planning Board may not approve a phasing plan when in its opinion such phasing will not provide for adequate public facilities to support any such phase independent of the overall development plan. In approving phasing plans, the Planning Board may require that additional streets, water and sewer facilities or other required public facilities be constructed as part of the phase in order to ensure that sufficient public facilities will be in place to support such phase independent of any future development.
- (vii) The Planning Board may approve a time line of up to ten years for the development of the subdivision. A single two-year extension of time for development of the subdivision may be granted by the Planning Board provided justification is given for the request and the request is submitted prior to the expiration of the initial ten-year period. If the final plat for any phase of the subdivision is not submitted in accordance with the approved schedule, the preliminary plat shall be resubmitted to the Director for review and approval. Such resubmittal shall be in accordance with the requirements of Article III: Permits and Procedures.

(g) *Acceptance.*

- (i) Effect of plat approval on status of dedication, acceptance. The effect of plat approval on the status of dedications is as follows:
 - 1) The approval of a plat shall not be deemed to constitute or effect an acceptance by the public for maintenance purposes of the dedication of any road, ground, or other improvements shown upon the plat.

- 2) Acceptance of such dedications shall be only by resolution of the Board of Commissioners or appropriate action by the State Department of Transportation. The Board of Commissioners shall consider such resolutions only on determination that any required improvements have been properly installed and all applicable conditions met, as set out in Article III: Permits and Procedures and Article IV: Subdivisions of this UDO.

(h) *Non-applicability.*

- (i) The enactment of this section shall in no way affect the running of any amortization provisions or enforcement actions, or otherwise cure any existing land use violations.

(i) *Aggregation.*

- (i) For any tract of land, no more than eight lots may be created by means of the family and/or minor subdivision review process. It is the intent of this section to preclude any attempt to avoid the major subdivision review process by the sequential subdivision of land into two or more family or minor subdivisions. To that end, two or more subdivisions shall be aggregated and treated as a single subdivision under this section when they are either contiguous to one another or contiguous to property owned or controlled by person owning or controlling the land to be subdivided.

Sec. 4.2 - Subdivision classifications.

(a) *Subdivision.*

- (i) A subdivision includes all divisions of a tract or parcel of land into two or more lots, building sites, or other divisions for the purpose of sale or building development, whether immediate or future, and includes all divisions of land involving the dedication of a new street or a change in existing streets. See Major and Minor Subdivisions below.

(b) *Major Subdivision.*

- 1) A major subdivision Level 1 represents the division of property into more than eight lots, but less than 100 lots, or more than eight dwelling units, buildings, or 60 or more bedrooms. The map for the major subdivision Level 1 shall include the design, improvements, as well as the existing conditions in and around, the location, subdivision name, acreage, owner and more as detailed in the Section 3.7.16.

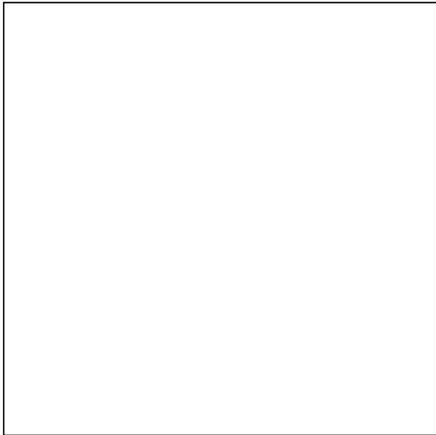
- 2) A Major Subdivision Level 2 represents the division of property into 100 or more lots. The map for the major subdivision Level 2 shall include the design, improvements, as well as the existing conditions in and around the location, subdivision name, acreage, owner and more as detailed in Section 3.7.16

(c) *Minor Subdivision*

- (i) A minor subdivision refers to the creation of less than eight lots or less-buildings with:
 - 1) Adequate access to an existing state-maintained road or non-state-maintained road which is constructed to minimum state standards as verified by the state department of transportation; and
 - 2) No new public or community wastewater is proposed.
- (ii) There shall be no requirement to establish a property owners' association for a minor subdivision unless required by law; however, adequate provisions shall be made for the maintenance and repair of roads and other community facilities and property, if any.
- (iii) When subdividing a single lot into two lots, the Planning Director may provide exceptions in accordance with Section 3.7.1, Administrative Adjustment, from one or more of such standards where strict compliance would constitute a practical difficulty or unnecessary hardship, and where such exception would not contravene the general intent and purpose of this section or be a detriment to the public safety and welfare.

(d) *Family Subdivision*

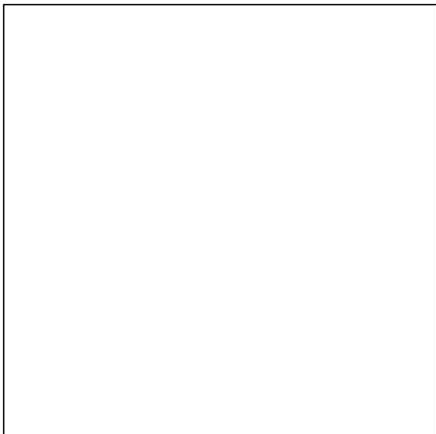
- (i) Family subdivisions shall comply with the standards of general applicability contained in subsection 4.1 (d) above, except as provided herein.
 - (ii) The standards relating to easements contained in Section 4.6, preservation of water areas contained in Section 4.10, and public access contained in Section 4.3.5 (g) shall not apply to family subdivisions.
 - (iii) The standards relating to stormwater drainage contained in Section 4.4 shall not apply to family subdivisions provided such subdivision shall comply with the provisions of the County sediment control provisions, if applicable, and provided further that such subdivisions shall comply with the provisions of Section 3.7.8 if land-disturbing activities equal or exceed one acre.
 - (iv) Family subdivisions shall comply with the standards relating to roads contained in Section 4.3.5 with one exception: access to the state highway system may be by means of a minimum 14-foot roadway if compliance with the private roadway standards is unfeasible and a hardship.
 - (v) There shall be no requirement to establish a property owners' association for a family subdivision unless regulated by other law; however, adequate provisions shall be made for the maintenance and repair of roads and other community facilities and property, if any.
- (e) *Estate Lot Subdivision*
- (i) Estate lot subdivisions may be developed as an alternative to the open space requirements as established by Section 4.3 In addition to other applicable standards of this UDO and other applicable regulations, estate lot subdivisions shall comply with the standards contained in this section.
 - 1) Minimum lot size. Each lot within an estate lot subdivision shall contain at least three acres of land area.
 - 2) Maximum disturbed area. No more than 33 percent of the area of a lot within an estate lot subdivision may be permanently cleared of natural vegetation or otherwise disturbed. A greater area may be cleared of natural vegetation provided that any portion greater than 33 percent of the lot area is revegetated in accordance with a landscape plan approved by the Director. Vegetation shall not be removed from those areas identified in Section 4.9 (e) (i) unless approved by the Planning Board.
 - 3) Maximum impervious surface. No more than 15 percent of the area of a lot within an estate lot subdivision may be covered with impervious surfaces.
 - 4) Protection of primary conservation areas. Optimal open space areas, as specified in Section 4.9 (e) (i) shall be protected in accordance with the standards of this section with the exception that such areas need not be included within the open space of the subdivision and may be included within the boundaries of an estate lot.
 - 5) Plats and restrictive covenants. The plat of an estate lot subdivision shall bear a notation concerning the maximum disturbed area, the maximum impervious surface and the protection of primary conservation areas, and restrictive covenants so limiting the use and/or development of any such lot shall be recorded in the County office of the Register of Deeds. The restrictive covenants shall be reviewed and approved by the Planning Board prior to recordation.
- (f) *Cluster Development*
- (i) Cluster development is allowed in all districts and watershed areas with exception to WS-I watershed areas under the following conditions:
 - 1) Minimum lot sizes are not applicable to single-family cluster development projects. Density limits shall not exceed the most restrictive limits found in Section 5.7.2 (b) (vii) (Mountain and Hillside Development), Section 5.4.4 (a) (ii) (Watershed Areas), and Article IX (Regulated Districts).



- 2) All built-upon area shall be designed and located to minimize stormwater runoff impact to the receiving waters and minimize concentrated stormwater flow. See also Section 4.3.4 for open space requirements and design for cluster developments.
- 3) The remainder of the tract shall remain in a vegetated or natural state. The title to the open space area shall be conveyed to a property owner's association for management; to a local government for preservation as a park or open space; or to a conservation organization for preservation in a permanent easement. Where a property owner's association is not incorporated, a maintenance agreement shall be filed with the property deeds and a copy submitted to the division of environmental management.

(g) *Conservation Design*

- (i) *Purpose and Requirements.* The requirements in this section are intended to provide for a major subdivision design that is better suited to the natural features of the land or would blend into the character of a rural area. See also Section 4.3.3 Conservation Subdivision Open Space.



- (ii) *Protect Assets.* It is required that part of the subdivision site which is not devoted to lots and associated roads and utilities be set aside as usable open space. Conservation subdivisions shall be designed with development areas situated on those parts of the subdivision site best suited to accommodate development with the least adverse impact. Conservation design allows smaller and less costly networks of roads and utilities, encourages closer-knit and potentially safer neighborhoods, preserves sensitive farmland, woodlands, scenic views and open space, and reduces the amount of impervious surface and resulting stormwater runoff. The open space provided by conservation design can be used to provide recreational opportunities for the subdivision's residents or employees, to conserve and protect significant natural areas and environmentally sensitive areas, to conserve important historic resources, and/or to conserve productive farming and forestry uses.
- (iii) *Required Open Space.* Land within the subdivision site that is not contained in lots or in rights-of-way or parcels devoted to accommodating necessary roads and utilities shall be in one or more connected parcels dedicated or reserved as permanent open space. Lands identified as optimal conservation areas pursuant to Section 4.3.2 (e) shall be deemed permanent open space in accordance with this section. When optimal conservation areas do not equal or exceed 20 percent of the land area of the subdivision, additional open space shall be designated so that at least 20 percent of the area of the subdivision is made permanent open space.
- (iv) Subdivisions within the Cashiers Commercial Area intended for commercial uses shall be exempt from the open space requirement contained herein but shall comply with the requirements for preservation of water areas contained in Section 4.10.

Sec. 4.3 - Subdivision design.

Sec. 4.3.1 Lots.

(a) *General Design Criteria*

- (i) *Adequate Space.* Lot size, width, depth, shape and orientation shall be appropriate for location within the subdivision and location of the subdivision, and for the type of development and use contemplated. All lots shall provide adequate building space in accordance with the development standards contained in Subsection 4.1(c) of this article. Lots which are smaller than the minimum required for residential lots shall be identified on the plat as: "Not for a residential building site. No residential building permit shall be issued, nor shall any residential building be erected on this lot."

(b) *Lots.*

(i) *Minimum Dimensions.*

- 1) Minimum lot dimensions shall be as specified in any regulations applicable to the area in which the proposed subdivision is located, subject to increases as required by the County Public Health Department's Division of Environmental Health for residential lots not served by public water supply and public sanitary sewerage. For the purpose of calculating built-upon area, total project area shall include total acreage in the tract on which the project is to be developed.
- 2) Depth and width of lots subdivided for nonresidential purposes shall be adequate for off-street parking and service facilities required by the type of use and development anticipated. Where such lots are to be used for purposes requiring water for domestic use and sanitary sewage disposal and where public water and/or sanitary sewerage is not provided, they shall also conform to the minimum area requirements set by the County Public Health Department's Division of Environmental Health.

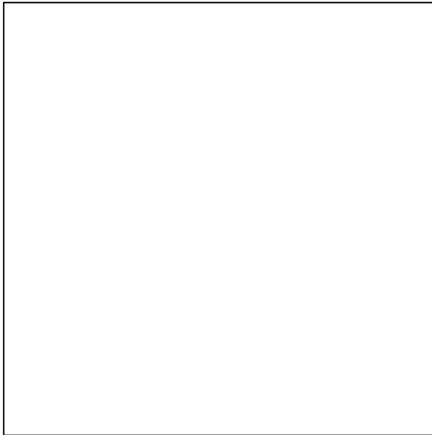
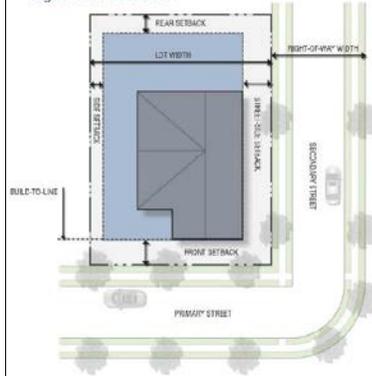


Figure 4.3 Setbacks



- (ii) *Setbacks.* Minimum building setback lines are regulated by the zoning district in which the property is located or State Building Code.
- (iii) *Double Frontage (Through and Reversed Frontage Lots).* In general, double frontage and reverse frontage lots shall be avoided except where essential to provide residential separation from traffic arteries or to overcome other disadvantages of orientation or topography or to provide protection for adjacent uses.
 - 1) A planting screen easement of at least ten feet shall be provided along the line of lots abutting traffic arteries or other disadvantageous uses, across which there shall be no right of access unless specifically authorized by the Planning Director. The screening shall be installed by the subdivider and maintained by his successors in title utilizing only those species designated in the species list contained in the list in the respective Appendices for each Regulated District in Article IX.
- (iv) *Side Lot Lines.* Side lot lines shall be substantially perpendicular or radial to street lines unless a satisfactory lot pattern, easement pattern and area for access can otherwise be provided.
- (v) *Lot Lines and Utility Easements.* Lot lines shall be so arranged with respect to utility easements as to permit efficient installation of utilities without unnecessary irregularities in alignment.
- (vi) *Suitable Building Sites; Identification of Lots Not for Building.* Lots for building shall contain suitable building sites, and lots not to be built upon shall be identified in accordance with the following:
 - 1) No subdivision shall be approved unless it has been determined that each lot or parcel intended for building contains a building site:
 - a) Determined by licensed professional engineer, landscape architect, or other qualified professional, to be free from inundation and safely accessible from an approved street during rainfall of ten-year return frequency.
 - b) Of configuration reasonably adapted to building.
 - c) Suitable for potential building use as permitted by any regulations applicable to the area in which the proposed subdivision is located and any other applicable ordinances, including, without limitation, the County flood damage prevention ordinance and mountain and hillside development ordinance.

- d) Without danger from subsidence, heaving, erosion or slippage of soils; from hazards or nuisances incidental to airports as related to potential uses of such lots; or from other menaces to health, safety or the general welfare.
- 2) As guides for such determinations, the applicable approval authority shall give due consideration to limitations, standards and requirements established in ordinances and regulations adopted in conformance with the national flood insurance program, provision of water and sewerage, proposed drainage and potential types of occupancy and the like.
- 3) Where a lot or parcel is not intended for building, such requirements shall not apply, but such lot or parcel, which might be for utility substations, rights-of-way, and the like, shall be identified on the plat and the limitation noted thus: "Not for a residential building site. No residential building permit shall be issued, nor shall any residential building be erected on this lot."

4.3.2 Open Space—Major Subdivisions- Level 1 and Level 2

(a) *Purpose.*

- (i) The standards in this section seek to achieve the goals of preserving land for recreational opportunities, preferably in a natural or semi-natural state, in perpetuity. Objectives of the open space standards in this section are primarily related to the provision of recreational opportunities, but open space can also serve environmental, scenic, and agricultural purposes and provide habitat for wildlife

(b) *Applicability.*

- (i) Open space standards are applicable to Level 1 and Level 2 major subdivisions- .

(c) *Flexibility.*

- (i) Recognizing that one approach does not work for all situations, the open space features and standards set forth in Section 4.3.2 (e) provide open space options in Level 1 and Level 2 major subdivisions. Persons wishing to subdivide property should determine which option will work best for them and prepare their subdivision plat in compliance with the requirements of that option.

(d) *Designation of Land for Open Space.*

- (i) Open space areas as required by the Table 4.1 below must be identified on subdivision plats. Areas designated as open space shall be maintained as open space and shall not be developed for purposes other than for recreation.
- (ii) Maintenance of the open space shall be the responsibility of the homeowner's association or other entity created for this purpose. See also Section 4.8.
- (iii) A percentage of the lot area shall be designated as open space as required by Table 4.1. In determining the amount of open space required the acreage of all lots, excluding road rights-of-way, and easements, shall be totaled. The required open space shall be a percentage of this total as required by Table 4.1 below.
- (iv) Individual areas designated as open space areas shall not contain less than 2,500 square feet, although smaller areas may be approved by the Planning Board if the intent of this section is determined to be met. The Planning Board, in their review of the preliminary plat, shall assure that open space areas are conveniently located and accessible to all lots. Open space areas shall have connections to subdivision roads and/or trail systems that will permit access by all subdivision residents.
- (v) Except in a family subdivision, no lot shall contain any areas protected as water areas as defined herein. No lot in a Level 1 or Level 2 major subdivision shall contain areas identified as open space.
- (vi) Land to be designated as open space shall meet the standards set forth in Section 4.3.2 (e). In addition to these standards, any land designated as a future greenway on any official plan

adopted by the County shall be designated as open space. The land to be designated as open space must be approved by the County Planning Board as part of the subdivision preliminary plat approval process.

Table 4.1: Open Space Requirements	
Number of lots or buildings	Open Space Requirement
Less than 8	None
8—20	10% of total lot area ¹
21—50	15% of total lot area
More than 51	20% of total lot area
¹ Total lot area = area of all lots excluding road rights-of-way, easements, etc.	

(e) *Open Space Use Standards*

- (i) The following areas within the proposed subdivision are considered optimal for preservation as open space and shall be given highest priority for designation as open space on the plat of any Level 1 or Level 2 major subdivision:
 - 1) Designated floodways and special flood hazard areas identified on the flood insurance rate maps for the County prepared by the Federal Emergency Management Agency (FEMA).
 - 2) Natural watercourses and any adjoining areas required to be maintained in a natural vegetated and unaltered state by the County watershed protection regulations.
 - 3) Steep slopes as defined by the County mountain and hillside development provisions.
 - 4) Areas adjacent to rivers, creeks, streams, and other water bodies that may serve as buffers for the water bodies.
 - 5) Any environmentally sensitive areas where development might threaten water quality or ecosystems (e.g., watershed buffers, groundwater recharge areas).
 - 6) Any identified important historic resources (e.g., homesteads, mills, barns, archeological sites) identified from a local archeological or architectural survey or an individual site survey.
 - 7) Productive farmland or forest land intended for continued agricultural and/or forestry use and placed in the County's farmland preservation program and/or covered by a forestry management plan.

(f) *Limitations*

- (i) No more than 50 percent of the area(s) designated as open space may have the natural ground cover substantially altered or converted to a recreational use.
- (ii) No more than 50 percent of the net open space shall be covered by permanent water bodies or streams; their buffers shall not be included in the calculation of this 50 percent restriction.
- (iii) Impervious surfaces shall not exceed 12 percent of open space areas.

- (iv) On golf courses, natural areas that are a part of the course are considered open space. Unnatural streams, ponds, or water hazards are not considered open space.
 - (v) A developer or landowner may submit a written request for a waiver from these rules. The request shall come before the Planning Board and be decided upon with a simple majority vote.
 - (vi) Open space may be used to provide active and/or passive outdoor recreation opportunities, either for the general public or for the subdivision's residents or employees and their guests provided that all standards as set forth in applicable local, State, and Federal ordinances and regulations for use of these areas are followed.
- (g) *Allowable/Qualified Open Space*
- (i) Wooded, uncleared, and undeveloped areas in a natural state that may provide wildlife habitat.
 - (ii) Recreation areas including those that alter the natural ground cover, such as swimming pools, tennis courts, basketball courts, shuffleboard courts, batting cages, and other uses befitting the intent of this article.
 - (iii) Water bodies and streams and their buffers, including trout stream buffers.
 - (iv) Greenways dedicated to environmental, scenic, or recreational purposes.
 - (v) Lands for passive, non-motorized recreation, including activities such as running/walking, hiking, biking, primitive camping, disc (Frisbee) golf, and similar low-impact outdoor activities.

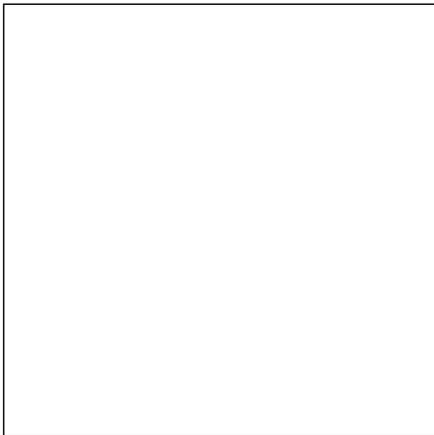


Figure 4.4: Community gardens qualify as open space



Source: cityofpowell.us

- (vi) Active recreational facilities including volleyball courts, playing fields, and playgrounds provided they have pervious surfaces.
 - (vii) Community and private gardens.
 - (viii) Farmland for crop and livestock fields including horse pastures, but not including structures or homes on farm properties.
 - (ix) In the community open space, community amenities such as public decks, plazas, picnic shelters, gazebos, outdoor stages, or similar accessory structures.
- (h) *Areas Not Allowed as Open Space.*
- (i) Public or private sheds, open or enclosed storage facilities, barns, or similar accessory structures.
 - (ii) Areas for motorized recreational use such as boat ramps and off-road/four-wheeling trails.

- (iii) Any public or private road, driveway, or parking area, regardless of whether it is paved, unpaved, gravel, tile, brick, or pervious pavers. Rights-of-way and areas reserved for any existing or future road are also excluded.
 - (iv) Solid waste disposal areas (including dumpster location sites).
 - (v) Areas for aboveground utility structures as well as cleared areas for solar panels or telecommunications installations (such as satellite dishes), whether for public or private use.
 - (vi) Land that is contaminated with hazardous or toxic waste or materials as defined by state or federal regulations (except land covered by an approved mitigation plan and deemed acceptable to the County).
 - (vii) All other impervious or unnatural ground covers or land uses.
- (i) *Location and Design.*
- (i) The location, size and character of required open space shall be appropriate to its intended use (e.g., open space proposed to be used for recreation, particularly active recreation, shall be located and designed so as to be conveniently and safely reached and used by those persons it is intended to serve, and open space proposed to be used for ball fields, playing fields, or other extensive active recreational facilities should be located on land that is relatively flat and dry.
 - (ii) Open space shall be spatially arranged to provide connections among open space areas. Connected open space provides channels for stormwater flow and infiltration, useable recreation areas, and wildlife corridors. When possible, open space shall be arranged so as to connect across property lines. Natural areas in conservation subdivisions should connect to adjacent areas of open space and existing habitat on surrounding properties. Open space areas should maintain a minimum 50-foot width for the entire extent of the open space, except for trails or other connections between open space areas.
 - (iii) Sidewalks may be provided per Section 4.3.5 (j).
 - (iv) The State requires a riparian protection zone (minimum 30-foot buffer from top of bank) on both sides of named trout waters and their tributaries. The protection of stream banks provides many benefits, including providing natural habitat corridors for native species and protecting the quality and integrity of streams and their banks. Additionally, it limits development in areas prone to flooding and actually helps decrease the volume of stormwater runoff, particulate matter, and contaminants entering the streams. The mandated stream buffers shall be incorporated into open space requirements.
- (j) *Open Space Dedication or Reservation*
- (i) Open space shall be dedicated or reserved in accordance with the standards contained herein.
 - 1) Land designated as open space to meet the requirements of this section shall be conveyed to a property owners' association or similar legal entity or to a public agency or nonprofit organization that is organized for, capable of, and willing to accept responsibility for managing the open space for its intended purpose and that will ensure subdivision property owners access to and use of the open space.
 - 2) Each dedicated or reserved open space parcel shall be shown on all subdivision plans and on a record plat recorded with the County Register of Deeds, with a notation of its area and its intended open space use. The owner of an open space parcel may rededicate or re-reserve the parcel for another open space use allowed under this section by recording a record plat showing the parcel and its new intended open space use.
 - 3) Open space area, with the prior written consent of the County, shall be designated prior to, or concurrent with, the recording of the final subdivision plat. The method of conservation shall be stated on the submitted subdivision plat(s) and shall be approved by the County planning department. Open space shall be dedicated to, owned, and maintained in perpetuity by any of the following:

- a) A homeowners' association, having acquired fee simple title to the open space from the developer, in which membership is mandatory for all homeowners within the development.
 - i) Any conveyance to a homeowners' association shall be subject to restrictive covenants and easements reviewed by the Director and recorded and filed at the time the subdivision plat for the project area is recorded.
 - ii) The covenants and easements shall provide for the establishment of a homeowner's association before any homes are sold, where membership is mandatory for the initial home buyer and any successive buyer, the association is responsible for liability insurance and local taxes on common open space and recreational facilities owned by it, and any fees levied by the association that remain unpaid will become a lien on the individual property in accordance with procedures established under the dedication or organization document.
- b) A perpetual conservation easement on the open space held and enforced by an established land trust or conservation organization;
 - i) With its prior express written consent, a governmental body (e.g., the County Department of Parks and Recreation, State of North Carolina, United States government); or
 - ii) Any other structure or entity designed to afford such perpetual maintenance for the open space as same may be approved in advance by the County Planning Board.
- (k) *Open Space Maintenance.*
 - (i) The owner of the open space shall be responsible for maintaining the open space so that it continues to effectively function for its intended use, and any dedication or conveyance of an open space parcel shall provide for such responsibility. Where the subdivision is located within a Watershed Protection District, retention of undeveloped open space in a vegetated or natural state shall be ensured by maintenance provisions filed with the County Planning Department, either as part of recorded documentation providing for establishment of a property owners' association or similar legal entity that is to be responsible for maintenance and control of open space or in a maintenance agreement recorded with the property deeds.
- (l) *Fee-In-Lieu.*
 - (i) For all open space requirements not involving property designated as a greenway on any official plan adopted by the County, a property owner may elect to pay a fee-in-lieu of open space instead of providing the required open space provided that the Planning Board finds during the preliminary plat review that there is reasonable existing or future open space proximate to the subject parcel available for use by the future residents of the proposed subdivision.
 - (ii) This fee shall be calculated by using the pro rata value of the designated property relative to the value of the entire site to be developed using tax appraisal data; for properties covered by agricultural or other exemptions, the County may utilize a separate appraisal method in its sole discretion. Funds collected in this manner shall be maintained in a separate account and shall be used to purchase property, or to enhance recreational use of property, or to implement projects identified in the Greenway Master Plan and/or the County parks and recreation master plan provided such features are reasonably proximate to the site(s) from which the funds are collected (located in the same County commissioner district as the subdivision providing the fee in lieu). Where practical, the collected fees for each project shall be designated for specific parks and recreation acquisitions and/or enhancements by the County.
 - (iii) For developments and subdivisions containing more than 50 residential units, the fee-in-lieu option may only be used for up to 50 percent of the open space requirements in order to ensure that these larger projects provide on-site open space for their residents.
- (m) *Mitigation Program.*

- (i) For all open space requirements not involving property designated as a greenway on any official plan adopted by the County, a property owner may elect to donate property of equal value located in any area of the County to a program that would preserve it as public open space accessible to all residents of and visitors to the County in lieu of providing open space within the proposed development. The value of the property required for open space shall be calculated by using the pro rata value of the designated property relative to the value of the entire site to be developed using tax appraisal data. The value of the property to be donated shall be calculated in the same way. The value of properties covered by agricultural or other exemptions may be calculated by the County using a separate appraisal method in its sole discretion.
- (ii) *Standards for Property to Be Donated.*
 - 1) *Property to be donated to the County in lieu of dedicating open space within a subdivision shall meet the following standards:*
 - a) The property shall be maintained as public open space, with a written agreement guaranteeing the preservation of the open space.
 - b) The property must be donated to a unit of government, public agency, or nonprofit organization that is organized for, capable of, and willing to accept responsibility for managing the property for its intended purpose as open space and that will ensure County residents and visitors direct access to and use of the property as public open space.
 - c) Direct access to the property by the public must be maintained in perpetuity, with a written agreement guaranteeing direct access by the public.
 - d) Donation of the property as mitigation in lieu of providing all or any portion of the required open space within the subdivision must be approved by the Planning Board.
 - e) The property to be donated as mitigation must be identified in an official plan adopted by the County as suitable (desirable) for public open space.
 - 2) *Standards for Dedication of Land.*
 - a) Property to be provided as mitigation in lieu of providing open space within a subdivision shall be donated to a public agency or nonprofit organization. Said public agency shall be organized for, capable of, and willing to accept responsibility for managing the property for open space purposes. The final recorded plat for subdivisions that donate land as mitigation in lieu of providing open space in the subdivision shall have a note stating that land has been donated as mitigation and providing the acreage, location, and deed reference of the property donated. The standards set forth in Section 4.3.2(d) above for dedication of open space shall be met when donating land as mitigation in lieu of providing open space within a subdivision.

Sec. 4.3.3 Open Space—Conservation Subdivisions.

- (a) *Required Open Space.*
 - (i) The open space provided by conservation design can be used to provide recreational opportunities for the subdivision's residents or employees, to conserve and protect significant natural areas and environmentally sensitive areas, to conserve important historic resources, and/or to conserve productive farming and forestry uses.
 - 1) Land within the subdivision site that is not contained in lots or in rights-of-way or parcels devoted to accommodating necessary roads and utilities shall be in one or more connected parcels dedicated or reserved as permanent open space.
 - 2) Lands identified as optimal conservation areas pursuant to subsection (b) of this section shall be deemed permanent open space in accordance with this section. When optimal conservation areas do not equal or exceed 20 percent of the land area of the subdivision,

additional open space shall be designated so that at least 20 percent of the area of the subdivision is made permanent open space.

- (ii) Subdivisions within the Cashiers Commercial Area intended for commercial uses shall be exempt from the open space requirement contained herein but shall comply with the requirements for preservation of water areas contained in Section 4.10.

(b) *Open Space Use, Location and*

- (i) The following areas are considered optimal conservation areas and shall be designated as open space on the plat of any conservation subdivision as necessary to meet the required 20 percent of land area:
 - 1) Designated floodways and special flood hazard areas identified as part of a flood insurance study prepared by FEMA.
 - 2) Natural watercourses and any adjoining areas required to be maintained in a natural vegetated and unaltered state by this article or other applicable regulations.
 - 3) Any environmentally sensitive areas where development might threaten water quality or ecosystems (e.g., watershed buffers, groundwater recharge areas).
 - 4) Any identified important historic resources (e.g., homesteads, mills, barns, archeological sites) identified from a local archeological or architectural survey or an individual site survey.
 - 5) Productive farmland or forest land intended for continued agricultural and/or forestry use.
 - 6) Steep slopes (those exceeding 35 percent).
 - 7) Any identified sensitive natural area as defined herein.
- (ii) Open space may be used to provide active and/or passive outdoor recreation opportunities, either for the general public or for the subdivision's residents or employees and their guests provided that all standards as set forth in applicable local, state, and federal ordinances and regulations for use of these areas are followed. Impervious surfaces in required open space are limited to ten percent of the open space not contained within the optimal conservation area. Note: This does not preclude a membership requirement or monetary charge for use of recreation facilities, such as a golf, swim, or tennis club, as long as subdivision residents have an opportunity to join the club or pay to use club facilities;
- (iii) Sidewalks may be provided by the developer, if approved by the Planning Board, to access a pedestrian destination point, such as a school, park, etc., and may constitute part of the open space requirements.
- (iv) The location, size, character, and shape of required open space shall be appropriate to its intended use (e.g., open space proposed to be used for recreation, particularly active recreation), shall be located and designed so as to be conveniently and safely reached and used by those persons it is intended to serve, and open space proposed to be used for ball fields, playing fields, or other extensive active recreational facilities should be located on land that is relatively flat and dry).

(c) *Design Procedure*

- (i) The following conservation design procedures shall be used in evaluating [Level 1 and Level 2](#) major subdivision applications:
 - 1) Existing features/site analysis. An existing features/site analysis map shall be submitted to the Planning Department. The map shall indicate all features that exist on the subject site as described in this section.
 - 2) Identification of open space conservation areas. Open space areas shall be identified. Guidance as to which parts to classify as open space areas shall be based upon three factors:

- a) On-site visits by the Director, the subdivider and the site designer.
 - b) The open space standards described in Section 4.3.3(b).
 - c) The evaluation criteria as shown in Section 4.3.3(d).
- 3) Principal structure setback from open spaces. Any principal structures must be set back a minimum of 30 feet from all open space lot lines. Provided, however, the Director may reduce this setback requirement when, due to soil types, topography or other site considerations, strict compliance would result in practical difficulty or unnecessary hardship and when adequate assurances have been given for the protection of the open space.
 - 4) Street, trail, and sidewalk locations and alignments. All streets, sidewalks, and trails shall be located and aligned on the site in the most reasonable and economical manner. Trails shall be provided from housing clusters to the designated open space.
- (d) *Evaluation Criteria*
- (i) For any given site, resources may vary widely by importance. Likewise, for each type of resource, there should be examples of greater or lesser significance. In evaluating the layout of a site, the following evaluation criteria will be considered in determining the site's features and allowing for site design flexibility:
 - 1) The open space shall be reasonably contiguous and shall abut existing open space on adjacent sites.
 - 2) Wetlands, flood hazard areas and natural watercourses with associated buffers shall not be cleared, filled or graded except as authorized by State, Federal and other applicable regulations and as may be approved by the Planning Director. Water features shall constitute no more than 50 percent of the open space area.
 - 3) Dwellings shall be located in unwooded parts of the site to prevent unnecessary clearing practices. Exceptions may be made when a site investigation by County staff reveals all or part of wooded areas are not worth saving due to tree decay/disease or unsightly overgrowth.
 - 4) The impacts on larger woodlands over five acres shall be minimized as much as practical.
 - 5) Where farmland preservation is the goal of a site design, dwellings shall be located away from active farming areas, as is practical.
 - 6) Where preserving scenic views is the goal of a site design, such scenic views should remain unblocked and uninterrupted. In wooded areas, where enclosure (i.e., a tree canopy) is a feature to be maintained, a no-cut and no-build buffer shall be considered along the public roadway.
 - 7) Where historic or archeological preservation is the goal of a site design, new streets, driveways, fences and/or utilities shall not interfere with the historic site. Building designs of the new homes shall reflect the qualities and designs of the historic buildings, as much as is practical.
 - 8) Where power line rights-of-way are proposed to be included as part of the open space, the right-of-way shall not exceed 50 percent of the required permanent open space.

Sec. 4.3.4 Open Space—Cluster Development.

- (a) *Open Space Use, Location and Design*
- (i) All built-upon area shall be designed and located to minimize stormwater runoff impact to the receiving waters and minimize concentrated stormwater flow.
 - (ii) The remainder of the tract shall remain in a vegetated or natural state. The title to the open space area shall be conveyed to a property owners' association for management; to a local government for preservation as a park or open space; or to a conservation organization for preservation in a

permanent easement. Where a property owners' association is not incorporated, a maintenance agreement shall be filed with the property deeds and a copy submitted to the division of environmental management.

- (iii) A minimum 30-foot vegetative buffer for development activities is required along all perennial waters defined as:
 - 1) Streams and impoundments indicated on the most recent versions of United States Geological Survey (USGS) 1:24,000 (7.5 minute) scale topographic maps.
 - 2) Streams and impoundments, including natural or manmade surface channels in which water flows most of the year.
 - 3) Streams and impoundments as determined by local government studies.
- (iv) No new development is allowed in the buffer except for water-dependent structures. Other structures (not to include slated decks) such as flag poles, signs and security lights which result in only minor increases in impervious area, and public projects such as road crossings and greenways where no practical alternative exists would be allowed. These activities should minimize built-upon surface area, direct runoff away from the surface waters and maximize the utilization of stormwater best management practices. Additional development that would reduce the area of vegetative buffer shall be prohibited.
- (v) Development projects permitted under the Special Intensity Allocation (SIA) shall provide a minimum 50-foot vegetative buffer. Desirable artificial stream bank or shoreline stabilization is permitted.

Sec. 4.3.5 Street Standards.

- (a) *Relation to Transportation and Land Development Plans.*
 - (i) Arrangement, character, extent, width, grade, and location of all roads shall conform to the officially adopted Thoroughfare Plan or Comprehensive Transportation Plan, the adopted County Land Development Plan or elements thereof and any other adopted plan and shall be considered in relation to the following:
 - 1) Existing and proposed transportation patterns.
 - 2) Topographic and other natural features.
 - 3) Public convenience and safety.
 - 4) Appropriate relation to proposed uses of land to be served by such streets and existing or potential land uses in adjoining areas.
 - (ii) The subdivider shall dedicate lands and fund necessary road improvements in conformity with adopted transportation or land use plans to the extent that such are adequately related to the traffic expected to be generated by the subdivision.
- (b) *Public Roads.*
 - (i) All subdivision lots shall abut a public or private road for a distance of at least 30 feet. Public subdivision roads shall be designed and built according to the standards in the North Carolina Department of Transportation's Subdivision Roads Minimum Construction Standards. These roads shall be maintained by the developer/owner until the North Carolina Department of Transportation assumes responsibility for maintenance. Roads which are not eligible to be put on the State Transportation system because there are too few residences shall nevertheless be dedicated for public use and shall be built in accordance with State Department of Transportation Standards. Where a road has been offered for public dedication, that offer may not be withdrawn without prior approval from the Director.
- (c) *Private Roads*
 - (i) *Design Criteria.*

- 1) Roads that are not required to be constructed to state standards will be privately maintained, and maintenance responsibilities shall be noted on the final plat. Regardless of the designation of the road, every lot shall have access to a road that is sufficient to provide a means of ingress and egress for emergency vehicles as well as all those likely to need or desire access to the property for its intended use. (Sec. 28-62.1. B)
- 2) Roads shall be designed by a registered professional engineer or professional land surveyor licensed to work in North Carolina, as provided for by G.S. 89C-3. Prior to approval of a final plat for a subdivision the engineer or land surveyor who designed the roads shall certify that the roads have been constructed in accordance with the approved plans. If a surety bond or other financial guarantee is provided in lieu of constructing roads prior to approval of the final plat, the financial guarantee shall not be considered to be satisfied until the engineer or land surveyor who designed the roads has certified that the roads have been constructed in accordance with the approved plans.
- 3) Minimum Private roads proposed to serve lots and/or home sites in subdivisions shall comply with the following minimum design standards in Table 4.2.

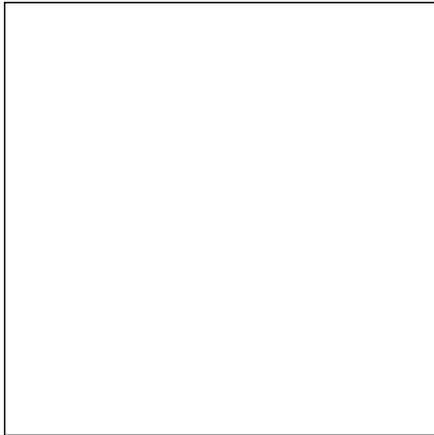
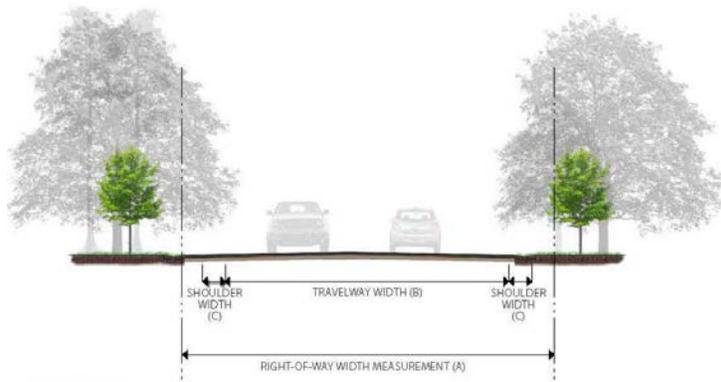


Figure 4.5: Typical Street Cross-Section



Source: Stewart

TABLE 4.2: Subdivision Road Requirements

ROAD TYPE	MIN. ROW WIDTH (A)	TRAVELWAY WIDTH (B)	SHOULDER WIDTH (C)
SHARED DRIVE (UP TO 8 UNITS SERVED)	30'	10'	2'
MINOR RESIDENTIAL (9-12 UNITS SERVED)	35'	14'	2'
RESIDENTIAL (13-20 UNITS SERVED)	45'	16'	2'
MAJOR RESIDENTIAL (21-50 UNITS SERVED)	45'	18'	3'

COLLECTOR (OVER 50 UNITS SERVED)	45'	20'	3'
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Notes:

- The minimum road right-of-way width shall be increased to the extent necessary to keep all grading and land disturbing activity within the road right-of-way.
 - Traffic generated by amenities such as golf courses, restaurants, etc. located within the proposed subdivision shall be considered in determining the appropriate standards for the road(s) serving the development and/or providing access to the amenity. This shall be done by identifying the vehicle trips estimated to be generated by the proposed amenity and relating these vehicle trips to those generated by a single-family dwelling. It shall be assumed that a single-family dwelling generates eight vehicle trips per day. Estimated traffic generation shall be as set forth in the NCDOT Traffic Engineering Manual.
 - If the shared drive or minor residential road is more than 500 feet long, a turnout must be provided as set forth in Section 4.3.5 (c)(i)5) below.
- 5) *Turnouts.* The turnouts must be a minimum of 50 feet long and provide for a total travelway width of 18 feet with an additional three feet width cleared of trees, brush, and undergrowth. If the turnout is located on the fill side of the road, it shall have a total travelway width of 20 feet with an additional three feet width cleared of trees, brush, and undergrowth. The location of turnouts on shared drives and minor residential roads shall be approved by the Planning Board. Items to be considered in the review of turnout locations shall include the road grade, slope of the bank (if turnout to be located on fill side of the road), width of the turnout, vertical and horizontal curves, and compaction of the subsoil and base as set forth in Table 4.3.

Road Section Grade	Road Centerline Radius	Turnout Spacing
≤ 12%	> 90 Feet	700 Feet
≤ 12%	90—70 Feet	600 Feet
≤ 12%	69—60 Feet	500 Feet
≤ 12%	59—50 Feet	400 Feet
≤ 12%	< 50 Feet	300 Feet
> 12%	> 90 Feet	350 Feet
> 12%	90—70 Feet	300 Feet

> 12%	69—60 Feet	250 Feet
> 12%	59—50 Feet	200 Feet
> 12%	< 50 Feet	150 Feet

6) The maximum length for road types shall be as follows:

Shared Drive	2,650 feet (approximately ½ mile)
Minor Residential	5,300 feet (approximately 1 mile)
Residential	10,600 feet (approximately 2 miles)

¹ If the road length exceeds the maximum for that road type, the road shall be constructed to the standards of the next type regardless of the number of homes/lots served.

- 7) Maximum cut slope: 1 ½:1; maximum fill slope: 2:1. Steeper slopes may be permitted if certified by a professional engineer and approved by the Subdivision Ordinance Enforcement Officer. A bench with a minimum width of 5 feet shall be provided at the toe of all fill slopes greater than 10 feet in vertical height. All cut and fill slopes greater than 20 feet in vertical height shall have a bench with a minimum width of 5 feet for every 10 feet in vertical height. An illustration depicting the benching of cut and fill slopes is available on the County Planning Department website <https://www.planning.jacksonnc.org/> and from the Planning Department office.
- 8) Development access roads in subdivisions with more than 100 lots and/or dwelling units proposed and sections of roads within a subdivision providing access to more than 100 lots shall be constructed to NC DOT subdivision roads minimum construction standards.
- 9) All lots in a residential subdivision shall abut an access road meeting one of the classifications identified in the Table 4.2: Subdivision Road Requirements.
- 10) Subdivisions shall abut and be accessed from a public road or have a deeded right-of-way (minimum width of 45 feet) to a public road. If access is provided by a deeded right-of-way, an access road meeting the road construction standards for the number of lots served shall be constructed within the deeded right-of-way.
- 11) Sections of road, including shared drives, with a grade in excess of 15 percent shall be paved, with the pavement extending 100 feet from the section of road with a grade in excess of 15 percent. The length of road sections with a grade greater than 15 percent shall not exceed 300 feet in length, and a leveling area shall be provided at each end of the road segment with a grade exceeding 15 percent. The grade of the leveling area shall not exceed 12 percent and shall be at least 100 feet in length.

- 12) The grade of residential roads and major residential roads may be increased up to a grade of 20 percent upon approval of the Planning Board in order to minimize grading and/or vegetation removal. The section of road with a grade in excess of 15 percent shall be paved, shall not exceed 300 feet in length, and a leveling area shall be provided at each end of the road segment with a grade exceeding 15 percent. The grade of the leveling area shall not exceed 12 percent and it shall be at least 100 feet in length.
- 13) The grade of collector roads may be increased up to a grade of 18 percent upon approval of the Planning Board in order to minimize grading and/or vegetation removal. The section of road with a grade in excess of 15 percent shall be paved, shall not exceed 300 feet in length, and a leveling area shall be provided at each end of the road segment with a grade exceeding 15 percent. The grade of the leveling area shall not exceed 12 percent and it shall be at least 100 feet in length.
- 14) A two-foot wide shoulder shall be provided on each side of shared driveways, minor residential, and residential roads. A three-foot-wide shoulder shall be provided on each side of major residential and collector roads. The shoulder shall be at approximately the same finish grade as the road bed and shall be compacted to a minimum compaction rating of 95 proctor. Shoulders may be grassed, graveled, or paved.
- 15) The travelway width for all roads except collector and development access roads may be reduced to one lane (minimum width nine feet) in areas with steep slopes to reduce grading and preserve existing vegetation upon approval of the Planning Board. The maximum length of the one lane segment shall be 1,000 feet and a pull out(s) meeting the standards set forth above shall be provided. A road shoulder with a minimum width of two feet shall be maintained on each side of the one lane road segments.
- 16) Leveling areas must be provided for all roads at all intersections. The leveling area shall have a maximum grade of five percent extending 50 feet from the intersection.
- 17) The travelway width shall be increased when the road centerline radius is less than 90 feet. For centerline radii between 90 feet and 70 feet, the travelway width shall be increased 25 percent; for centerline radii between 70 feet and 60 feet, increase the travelway width 35 percent; for centerline radii between 60 feet and 50 feet, increase the travelway width 45 percent; and for centerline radii less than 50 feet, increase the travelway width 50 percent.
- 18) The width of the corridor cleared/graded for road construction shall not exceed 90 feet for 80 percent of the length of the road. For 20 percent of the length of the road, the corridor may be cleared/graded to a maximum width of 135 feet for the road construction. The maximum height of the corridor (combined cut and fill slopes) shall be 60 feet.
- 19) An overhead clearance of 14 feet shall be provided on all roads.
- 20) ~~Alternatives and modifications to these standards that reduce land disturbance and vegetation removal, such as one-way roads and loop roads, and/or that are necessitated by the natural physical features of the property and not otherwise provided for in these standards may be approved by the Planning Board. The request for such alternative or modification shall be submitted by the property owner/developer to the planning department for review and conveyance to the Planning Board.~~
- 21) Vertical Curves. Formula for determination of length of vertical curve required to provide minimum sight distances shall be as follows:
 - a) $[L = KA]$
 - L = Length of vertical curve in feet
 - K = Rate of vertical curvature in feet per percent of A
 - A = Algebraic difference in grades in percent

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Table 4.5: Vertical Curvature Standards	
Crest	10
Sag	10
Stop	5

- 22) Minimum private roads proposed to serve lots and/or home sites in subdivisions shall comply with the following minimum construction standards:

Table 4.6: Private and Subdivision Road Construction Standards		
Road Type	Base Course	Pavement Surface
Shared Drive	4" ABC ¹ or STBC ²	Not required unless grade > 15%
Minor Residential	6" ABC or STBC	AST ³
Residential	6" ABC or STBC	1 ½" SF9.5A ⁴ or S9.5B ⁵
Major Residential	8" ABC or STBC	1 ½" SF9.5A or S9.5B
	Or 6" ABC or STBC	2" SF9.5 or S9.5B
Collector	8" ABC or STBC	2" SF9.5A or S9.5B

¹ ABC Aggregate Base Course

² STBC Soil Type Base Course

³ AST Asphalt Surface Treatment, Mix design to be approved by Planning Board

⁴ SF9.5A Asphalt Concrete Surface Treatment, Type SF9.5A

⁵ S9.5B Asphalt Concrete Surface Course, Type S9.5B

- 23) Approved pervious paving materials are encouraged to be used in lieu of the paving materials listed above. Pervious paving materials shall be approved by the Planning Board.
- 24) The right-of-way widths and construction standards specified above are for private roads. NCDOT will not assume maintenance of these roads. In order for NCDOT to assume

maintenance of roads, they must meet NCDOT standards as set forth in the publication "NCDOT Subdivision Roads Minimum Construction Standards."

Base and subsoil shall be compacted to a minimum rating of 95 proctor.

(d) *Dead-End Roads*

- (i) Dead end roads shall provide a turnaround at the end of the road to permit general traffic, emergency vehicles, and general service vehicles to turn. If a bulb turnaround is provided, the turnaround shall meet the following standards:
 - 1) Minimum ROW radius: 45 feet.
 - 2) Minimum pavement radius: 30 feet.
 - 3) T-turnarounds and hammerhead turnarounds may be used in lieu of a bulb turnaround on dead end roads. The minimum length of the maneuvering segment shall be 45 feet and the minimum width shall be 18 feet.

(e) *Driveways*

- (i) Curb cuts, where provided in the subdivision, shall begin not less than three feet from lot lines as projected to meet the line of the pavement edge. Design and construction of portions of driveways within rights-of-way shall be constructed in accordance with the requirements of the NCDOT. The approving authority may permit the establishment of shared driveways on property lines provided that mutual access easements are delineated upon the subdivision plat and all relevant deeds.
- (ii) If extraordinary surface or subsurface conditions, terrain, the general drainage pattern in the area, existing or probable development in the vicinity, or other circumstances exist or occur, the Planning Director, upon making supporting written findings, may establish greater requirements in particular cases.

(f) *Access to Public Lands*

- (i) Cemeteries and gravesites shall be identified during the application process and protected during development of subdivisions by a 20-foot buffer, and family members shall be assured reasonable access thereto during development and thereafter. Anyone subdividing properties containing roads, trails and other travel ways which have historically provided public access to national forests and other public lands is encouraged to provide for continued public access thereto.

(g) *Traffic Control*

- (i) All subdivision road intersections including those with existing state-maintained roadways shall be constructed using traffic control standards as designated in the "Manual on Uniform Traffic Control Devices" (MUTCD), "North Carolina Supplement to the Manual on Uniform Traffic Control Devices." All signage shall meet the requirements of the MUTCD.

(h) *Intersections*

- (i) The most desirable intersections are those with angles of 75 to 90 degrees. Intersections with angles from 60 to 75 degrees are acceptable under extreme conditions as determined by the Planning Director.
- (ii) Minimum sight distance triangle for stop condition when connecting new local residential roads or residential collector roads to existing state-maintained roads is 70 feet along the existing road right-of-way and 10 feet along the new road right-of-way.
- (iii) All internal intersections shall have minimum 20 feet radius.

(i) *Sidewalks and Ramps*

- (i) *General.* Sidewalks may be provided for all Level 1 and Level 2 major subdivisions to access a pedestrian destination point, such as a school, park, etc., and may constitute part of the open space requirements.

(ii) *ADA Compliance.* All sidewalks shall meet requirements of the "Americans With Disabilities Act." In accordance with G.S. 136-44.14, all street curbs in the State of North Carolina being constructed or reconstructed for maintenance procedures, traffic operations, repairs, correction of utilities or altered for any reason after September 1, 1973, shall provide wheel chair ramps for the physically handicapped at all intersections where curb and gutter is provided and at other major points of pedestrian flow. Wheel chair ramps and depressed curbs shall be constructed in accordance with details contained in NCDOT's, Division of Highways publication entitled, "Guidelines, Curb Cuts and Ramps for Handicapped Persons."

(j) *Street Names and Signage.*

(i) In accordance with Chapter 26, Article II of the Jackson County Code of Ordinances, street names, prefixes, suffixes and addresses shall conform to the guidelines and policies set forth by Jackson County. Appropriate street name signs which meet standard County specifications shall be placed at all street intersections. The developer shall bear the expense.

(ii) Proposed street names shall be submitted and subject to the approval of the Jackson County, as appropriate. New names shall not duplicate or be similar to existing street names. Existing street names, however, shall be extended where appropriate.

(Ord. No. O2019-01(2), 2-4-2020)

Sec. 4.4 - Stormwater drainage standards

(a) *General Requirements.*

(i) Drainage systems shall be designed utilizing low-impact design to limit disruption of natural water flows by eliminating stormwater runoff, increasing on-site infiltration and eliminating contaminants.

(ii) This system design shall be rendered in a drainage plan, which is a written or graphic concept plan of the proposed post-development stormwater management system. The drainage plan shall, at a minimum, include the following: preliminary selection and location of proposed structural stormwater controls; low impact design elements; location of existing and proposed conveyance systems such as grass channels, swales, and storm drains; flow paths; location of flood plain/floodway limits; relationship of site to upstream and downstream properties and drainages; and preliminary location of proposed stream channel modifications, such as bridge or culvert crossings.

(iii) The approval of the drainage plan of any subdivision shall require an enforceable restriction on property usage that runs with the land, such as recorded deed restrictions or protective covenants, to ensure that future development and redevelopment maintains the site consistent with the approved project plans.

(iv) Where major new drainage ways are required in a subdivision, they shall be coordinated with existing and proposed general drainage systems and designed with due regard for safety, appearance and geological effects.

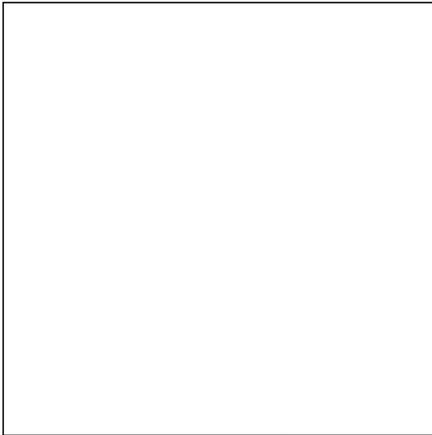


Figure 4.8: Examples of Stormwater Control Measures



Source: Stewart

- (v) Aboveground drainage ways shall be:
 - 1) Located and constructed to maintain a natural appearance;
 - 2) Limited to safe water depths in easily accessible areas; and
 - 3) Designed to avoid excessive rates of flow, erosion, or overflow into developed areas subject to damage.
- (vi) Watercourses and natural water areas downstream, from any land disturbing activity shall be protected from increased degradation by accelerated erosion caused by increased velocity of runoff from the land disturbing activity in accordance with the County sediment control provision. In circumstances where the impact of new drainage would be likely to damage or destroy significant existing natural water areas, such drainage shall not be discharged through or into such areas.
- (vii) The development area of any lot shall conform with subsection (iii) of this section.
- (b) *Development Standards for Low Density Projects*
 - (i) Stormwater runoff from the development area shall be transported from the development by vegetated conveyances to the maximum extent practicable.
- (c) *Development Standards for High Density Projects.*

- (i) The measures shall control and treat the difference in stormwater runoff volume leaving the development area between the pre- and post-development conditions for, at a minimum, the ten-year, 24-hour storm. This standard refers to the surface runoff resulting from a 24-hour rainfall of an intensity expected to be equaled or exceeded, on average, once in ten years. Runoff volume drawdown time shall be a minimum of 24 hours, but not more than 120 hours.
 - (ii) All structural stormwater treatment systems used to meet the requirements of this section shall be designed to have a minimum of 85 percent average annual removal for total suspended solids (TSS).
- (d) *Stormwater Drainage Facilities*
- (i) The application shall be accompanied by a description of the proposed method of providing stormwater drainage. The subdivider shall provide a drainage system that diverts stormwater runoff away from surface waters and incorporates best management practices to minimize water quality impacts. Consistent with Section 5.3.9 (Stormwater Provisions), subdivisions qualifying for the special intensity allocation shall provide non-structural methods of managing stormwater runoff.
- (e) *Erosion and Sedimentation Control*
- (i) The application shall, where required, be accompanied by a written statement that a sedimentation and erosion control plan has been submitted to and approved by the State Division of Land Quality.
- (f) *Roads Constructed in Critical Areas and Watershed Buffer Areas*
- (i) Where possible, roads should be located outside of critical areas and watershed buffer areas. Roads constructed within these areas shall be designed and constructed so to minimize their impact on water quality.
- (g) *Erosion Protection; Preservation of Topsoil and Vegetation*
- (i) In general, during the preparation of the subdivision and installation of improvements, appropriate measures shall be taken to prevent erosion and damaging siltation on the property and on adjoining land or water areas in accord with the Article V, Section 5.3, Erosion and Sedimentation Control.
 - (ii) In any grading or filling operations, desirable topsoil shall be conserved and redistributed as such, particularly to cover exposed subsoils.
 - (iii) Trees, shrubs and ground cover existing at the beginning of development operations shall be preserved to the maximum extent reasonably feasible where they are of species and in locations likely to add amenity to the completed development.
 - (iv) Ground cover. All land within the subdivision right-of-way which is not used for structures, vehicular or pedestrian traffic, or for other approved landscaping shall be provided with grass or other ground cover, appropriately installed, and consistent with the requirements of the County sediment control regulations. Ground cover may include appropriate plant materials preserved in place.
 - (v) The Planning Director may require preservation of specified trees or other vegetation in connection with a particular development, except upon findings that such preservation is not feasible in view of the requirements for the installation of public utilities and facilities.
 - (vi) The Planning Director may grant a conditional approval of a preliminary subdivision plat, provided that an erosion control plan approval letter is submitted to the Planning Department within 90 days and prior to commencement of site preparation or other land-disturbing activities.
- (h) *Adequacy*
- (i) All storm drainage shall be adequate so that the road may be maintained without excessive cost, and not cause flooding on private property from storm runoff of the design frequency. The minimum design frequency shall be as follows:

- 1) Storm sewer collector and lateral ditches: ten years.
 - 2) Cross drainage: 25 years.
 - 3) Minimum cross pipe diameter is 18 inches; minimum driveway pipe diameter is 15 inches.
 - 4) All drainage shall be consistent with criteria found in NCDOT Guidelines for Drainage Studies and Hydraulic Design.
 - 5) In areas where ditch grades or quantities of flow make it impracticable to establish and maintain vegetation, an erosive resistant lining such as paving, matting or rip rap shall be required. Subsurface drainage shall be adequate to maintain a stable subgrade.
- (i) *Structures (Culverts, Dams, Retaining Walls, and Bridges)*
- (ii) Design, construction, and installation of culverts, dams, and retaining walls shall comply with NCDOT standards as set forth in NCDOT Subdivision Roads Minimum Construction Standards, unless other standards are approved by the Planning Board. Bridges shall have a travelway width equal to that required for the road type (including required shoulder width) and shall comply with the requirements of the U.S. Army Corps of Engineers and other permitting agencies. All bridge designs shall be prepared and/or approved by a licensed professional engineer registered in North Carolina. The Planning Director shall review permit documentation for bridges to assure that all required approvals have been obtained prior to construction.

Sec. 4.5 - Utility and infrastructure standards.

(a) *General*

- (i) Subdivision development shall comply with the standards established by the utility company or agency providing the utility service and with the standards of the NCDOT as set forth in NCDOT's Subdivision Roads Minimum Construction Standards (latest edition).

(b) *Above Ground Utilities.*

- (i) Poles and other above-ground utilities which are to remain inside the right-of-way shall be located at or as near as practical to the right-of-way line. As a minimum, above-ground utilities shall be located outside the shoulder/ditch for the road section involved.
- (ii) Where there are curbed sections, above-ground utilities should be located as far as practical behind sidewalks. There is no single minimum dimension for setback of poles, fire hydrants, etc., behind curbs; however, where there are curbed sections and no sidewalks, six feet will be used as a design safety concept guide. Where dimensional or other characteristics of such land are such that they could not be used for other purposes under the zoning applying in the district, the plan shall indicate and restrict use to easement or substation purposes, and requirements generally applicable to access, dimensions or other characteristics of that land shall not apply. Departmental reports in such cases shall include findings as to the effect of the proposed location in adjacent uses, preservation of areas of major ecological importance, and as to whether sites for substations, if involved, are adequate to provide required screening.

(c) *Public Water Supply*

- (i) Public water supply is required in a subdivision as follows:
- 1) Any subdivision, including estate, family, minor and major, which has public water system lines available shall be required to extend the public water system throughout the subdivision to each lot located therein.
 - 2) All required water line extensions shall include appropriate valves, hydrants, taps and service to the property line of each lot as required by the standards of the provider of the service.
 - 3) For subdivisions located within the jurisdiction of this section, the term "available" shall mean that there is an existing water line of adequate size and water flow and/or pressure, as determined by the water provider, abutting the property and/or right-of-way, provided there

are no legal or documented topographic constraints which prevent the subdivider from connecting onto and extending the existing system to the subdivision.

- 4) Every lot in a Level 1 or Level 2 major subdivision shall be served by a permitted public or community water system or served by individual wells approved by the County division of environmental health.

(d) *Public Sanitary Sewer*

- (i) Public sanitary sewer is required as follows:

- 1) Any subdivision, including estate, family, minor and Level 1 or Level 2 major subdivisions, which has public sewer system lines available shall be required to extend the public sewer system throughout the subdivision to each lot located therein.
- 2) All required sewer line extensions shall include appropriate manholes, lift stations, pumps, cleanouts, taps and service to the property line of each lot as required by the standards of the provider of the service.
- 3) For subdivisions located within the jurisdiction of this section, the term "available" shall mean that there is an existing sewer line of adequate size and flow, as determined by the utility provider, abutting the property and/or right-of-way, provided there are no legal or topographic constraints which prevent the subdivider from connection onto and extending the existing system to the subdivision.

- (ii) Every lot in a Level 1 or Level 2 major subdivision shall be served by a public sewer or, where public sewer is not required, by a permitted community sewer system or an individual on-site septic system approved by the County Public Health Department.

(e) *Exceptions.*

- (i) Where subdivisions are proposed, and no public or community sewer is available, the applicant should review a soils map of the property and be knowledgeable of the suitability of ground absorption systems for the development.

(f) *Fire Protection*

- (i) All lots served by a municipal public water supply system in a subdivision shall also be afforded fire protection by means of hydrants, installed under uniform standards and specifications. Final plats shall indicate that any qualified water ponds shall be made available to emergency personnel for the purpose of pumping water.

Sec. 4.6 - Easements.

(a) *Utility Easements*

- (i) Easements for utilities shall be provided where necessary along front, rear, or side lot lines in the subdivision, but shall not be required to center on such lines. Such easements shall be sufficiently wide to provide for installation of such utilities and access for maintenance and operation.
- (ii) Where it is proposed to locate major utilities easements (defined for purposes of this section as being 20 feet or more in width) and/or sites for substations, such as pumping stations, relay towers, pressure regulating stations and the like, in a subdivision, procedures shall be as generally provided for minor and family subdivisions.

(b) *Minor Drainage*

- (i) For purposes of this section, minor drainage easements are defined as those providing for drainage of surface waters from four or fewer lots, and not involving water bodies of substantial significance in the ecology of the area, as determined by the Planning Director. Minor drainage easements, where required, shall be permitted to cross lots at other points only where such arrangement is found by the Planning Director to be practically necessary as a result of topography or soils conditions or improved flow and where such arrangement will leave a suitable

buildable area, safe from inundation, erosion or subsidence, and safely accessible from approved roads. Where necessary for operation, construction or maintenance, the Planning Director may require, in accord with the terms of the easement, minor drainage easements to be kept free of trees and other obstructions.

(c) *Utilities in Drainage Easements.*

- (i) Utilities in drainage easements shall be permitted only upon specific authorization by the Planning Director and only in locations authorized.

Sec. 4.7 - Markers and monuments

- (a) Monuments, complying with the requirements of G.S. 47-30 and the current edition of the Standards of Practice for Land Surveying in North Carolina, shall be placed in all subdivisions.
- (b) Any permanent monuments or markers displaced or destroyed during the course of development or construction in the subdivision shall be accurately witnessed and replaced upon completion of such development or construction.

Sec. 4.8 - Homeowner/property owner associations.

(a) *Establishment*

- (i) If a property owners' association or similar legal entity is to be responsible for the maintenance and control of roads, open space, recreational facilities, or other common areas and facilities associated with a subdivision, it shall be established so that it has clear legal authority to maintain and exercise control over the common areas and facilities, including the power to compel contributions from subdivision residents to cover their proportionate shares of the costs associated with the maintenance of the common areas and facilities. Such association or similar legal entity shall be established before any dwelling unit or lot in the subdivision is sold or any building in the subdivision is occupied.

(b) *Documentation*

- (i) Documents providing for the establishment of a property owners' association or similar legal entity in accord with this section shall be submitted to and approved by the County Attorney before any plat for the development is recorded. The review by the County Attorney shall be limited to ensuring that the property owners' association or similar legal entity is established so that it has clear legal authority to maintain and exercise control over the common areas and facilities, including the power to compel contributions from subdivision residents to cover their proportionate shares of the costs associated with the maintenance of the common areas and facilities.

(c) *Maintenance of Private Subdivision Roads*

- (i) Private subdivision roads shall be maintained privately by a property owners' association. Subdivisions of eight lots or less and family subdivisions shall not be required to establish a property owner's association for the maintenance of private roads in the subdivision. A maintenance agreement that establishes responsibility for maintenance of these roads shall be required for subdivisions of eight lots or less. The maintenance agreement for private subdivision roads shall include, but not be limited to, the items listed below. In lieu of the legally incorporated property owners' association identified below, subdivisions of eight lots or less may provide an agreement including all lot owners.
- 1) Reserved.
 - 2) A legally incorporated property owners' association shall be established for the property owners within the entire subdivision.
 - 3) All property owners within the subdivision shall be members of the property owners' association.

- 4) The subdivider shall convey, in a fee simple ownership, all neighborhood private roads within the subdivision to the property owners' association.
- 5) The passage of the responsibility for maintenance of neighborhood private roads from the developer to the property owners' association shall be noted in the deed of each purchaser of property within the subdivision.
- 6) At the time of preparation of the sales agreement, the developer shall include a disclosure statement to the prospective buyer. The disclosure statement shall:
 - a) Provide an explanation of the consequences and responsibilities regarding the maintenance of a private road and shall fully and accurately disclose the party who shall be responsible for the construction and maintenance of the subdivision roads.
 - b) Shall state that the owners of property in this subdivision are responsible for maintaining and repairing the roads as well as paying the costs thereof if the roads are private and will not be dedicated to NCDOT for maintenance.
 - c) Shall state that County and other governmental services may be restricted or not provided for owners of property using private roads for access.
- 7) The buyer of the subject real estate shall receive and sign an acknowledgment of receipt of a separate instrument known as the subdivision streets disclosure statement.
- 8) A copy of the disclosure statement required by this section shall be provided to the Planning Department at the time of the submittal of the final plat.

Sec. 4.9 - Completion and maintenance guarantees.

(a) *Completion.*

- (i) All applicants shall be required to complete all the street, sanitary sewer and storm drainage, sidewalks, street signs, monuments, erosion control, street lights, and other required improvements as approved by the Planning Director, prior to approval of the final plat or Certificate of Occupancy for projects not requiring a platting process, except as provided in Subsection (b) below concerning performance guarantees.
- (ii) All required improvements shall be inspected and approved by appropriate public officials or agencies.

(b) *Performance Guarantees (Sec. 28-94).*

- (i) In lieu of completion of all or part of required improvements prior to approval of subdivision final plats or approved phased development, the applicant may post a performance guarantee in the amount as indicated under subsection (d) of this section for the construction, installation and dedication of the uncompleted portion of the required improvements.
 - 1) Type of guarantee. The type of the guarantee shall be as provided herein.
 - a) Surety bond issued by any company authorized to do business in the State..
 - b) Letter of Credit issued by any financial institution licensed to do business in this State. The terms of the letter shall include the absolute right of the County Manager to withdraw funds from the bank forthwith upon the County Manager's certifying to the bank that the terms and conditions of the performance guarantee have been breached. The expiration date of the letter of credit shall be at least six months past the anticipated completion date of the required improvements.
 - c) Other forms of guarantee that provides equal security to a surety bond or letter of credit.

- d) No person shall have or may claim any rights under or to any performance guarantee provided pursuant to this subsection or in the proceeds of any such performance guarantee other than the following:
 - i. The local government to whom such performance guarantee is provided.
 - ii. The developer at whose request or for whose benefit such performance guarantee is given.
 - iii. The person or entity issuing or providing such performance guarantee at the request of or for the benefit of the developer.

(c) *Guarantee Time Limits*

- (i) Extensions for performance guarantees may be granted by the Planning Director subject to a review of the circumstances surrounding the request for an extension and the record of the applicant. Property owners in the development shall be notified and shall be given an opportunity to comment on the request for an extension of the performance guarantee.

(d) *Amount and Terms of Guarantee.*

- (i) The amount and terms, of the guarantee shall be as provided herein. Following receipt of such recommendations, the Planning Director shall review the information submitted as to the amount and terms of the performance guarantee, including the time of initiation and completion of the work; provisions concerning extensions for cause; and provisions for release of the guarantee upon completion of the work. If the information is complete and the guarantee amount is deemed satisfactory, the Planning Director shall administratively approve the performance guarantee package.
- (ii) The guarantee shall be 1.25 times the executed construction contract amount or the certified cost estimate, whichever is provided. The amount of the guarantee shall be sufficient to provide adequate funds to the County to ensure, in the case of default, the installation of all required improvements uncompleted at the time of default. In reviewing the amount of the performance guarantee, the Planning Director shall consider the difficulty of restarting a closed project, the size and complexity of the required improvements, the record of the applicant and the site conditions.
- (iii) The Planning Director may authorize reductions in the amount of the performance guarantee in light of the completion of guaranteed improvements when doing so is fair and equitable and would not be contrary to the public interest.
- (iv) The performance guarantee shall only be used for completion of the required improvements and not for repairs or maintenance.

(e) *Inspections; Reports; Cost Responsibility*

- (i) Procedures for inspections and reports and the responsibility shall be as provided herein.
 - 1) The applicant shall have a registered, licensed professional make regular inspections to document progress based on the required construction schedule and provide a final inspection report to confirm work has been completed per ordinance regulations.
 - 2) Within ten days of such inspections, copies of reports of the results thereof shall be provided to the Planning Director.
 - 3) The full cost of making such inspections and preparing such reports shall be paid by the applicant.

(f) *Action on Inspection Reports.*

- (i) The following actions may be taken on inspection reports:

- 1) Reports indicating satisfaction of requirements. Where such reports indicate satisfactory completion of work within time limits set and in accord with other terms of the performance guarantee, for agreed-upon stages or for the entire work, the Planning Director shall so indicate by first class mail to the applicant, any surety company involved and the County Manager. The County Manager, upon such notification and any further assurance he may require from the County attorney or governmental bodies exercising operating control, shall then release the performance guarantee in accordance with the terms thereof.
 - 2) Reports indicating failure to satisfy requirements. Where such reports indicate failure to complete work on schedule in full compliance with the terms of the performance guarantee, the Planning Director shall so indicate by first class mail to the applicant, governmental bodies exercising control, any surety company involved, and the County Manager. Such notice shall indicate that, unless action required under the terms of the performance guarantee is completed within 30 days of the date of such notification, the performance guarantee or portions thereof, set forth in its terms, shall be called. Unless such action is completed, as evidenced by inspections and reports from governmental bodies exercising control transmitted through the Planning Director, the County Manager shall call the performance guarantee or affected portions thereof.
 - 3) Reports indicating unsatisfactory progress. Where such reports indicate that work initiated appears unlikely to be completed on schedule, and where the performance guarantee provides for extension of time for cause, the Planning Director shall notify the applicant by first class mail and any surety company involved concerning the potential need for an application for such extension. Where such notice has been given, no application for an extension shall be given after expiration of the original schedule date.
- (g) *Failure to Complete Work Under Performance Guarantee.*
- (i) Where work required under the terms of any performance guarantee given pursuant to this article is not completed by the applicant as specified therein, the County Manager, following the call of the guarantee, shall take such action as is appropriate in the circumstances of the case to procure the completion of the required improvements at the earliest reasonable time, according to the plans and specifications.
- (h) *Maintenance of Land and Improvements.*
- (i) The applicant shall maintain all land and required improvements offered for dedication in a subdivision in satisfactory condition until acceptance of the dedication.
- (i) *Guarantee of Other Governmental Agency or Public Utility.*
- (i) Where all or part of required subdivision improvements are to be completed by another government agency or public utility, the Planning Director may accept the written guarantee of such agency to complete such improvements within a time to be mutually agreed upon, with time for completion limited as provided in Section (d)(1) this section.
- (j) *Building Permits and Certificates of Occupancy*
- (i) Building permits may not be issued for construction of residential structures in a subdivision prior to completion of required improvements unless a performance guarantee has been approved by the Planning Director.
 - (ii) Certificates of occupancy may be issued, and buildings occupied only when all of the following improvements are available and as further provided in Section (iii) below:
 - 1) Roads and driveways shall be passable for private, service and emergency vehicles under normal weather conditions.
 - 2) Drainage shall be installed and operative, thus ensuring that, under normal weather conditions, there will be no flooding of the building site or access ways to the site.
 - 3) Erosion protection, acceptable under normal weather conditions, shall be installed.

- 4) Domestic water supply and sanitary sewerage shall be installed and operative.
- (iii) No such permits or certificates shall be issued unless all remaining required improvements are covered by a performance guarantee and the applicant accepts responsibility pending completion of all required improvements.

Sec. 4.10 - Preservation and stormwater control measures for water areas

- (a) *Intent.* It is the intent of this article both to safeguard existing and potential development in appropriate locations and to preserve and promote a desirable ecological balance. Insofar as is reasonably practicable, subdivisions shall, therefore, be located, designed and improved to:
 - (i) Preserve important natural water areas and related vegetation and wildlife habitats;
 - (ii) Avoid creation of upstream impoundments or downstream runoff harmful to such complexes or to existing or potential development in appropriate locations; and
 - (iii) Maintain desirable groundwater levels.
- (b) *Maintenance of Natural Watercourses.* Standards for maintenance of natural watercourses are as provided herein.
 - (i) Where a proposed subdivision is traversed by or includes in whole or in part a natural watercourse, as defined herein, the following requirements shall apply:
 - 1) Such natural watercourse shall be maintained in its natural state except for those vehicular or utility crossings which are necessary and deemed unavoidable by the approving authority;
 - 2) Bordering lands within 30 feet of the edge of any natural watercourse shall be maintained in a naturally vegetated and unaltered state;
 - 3) Bordering lands likely to be inundated at the period of high water during periods of rainfall of ten-year return frequency shall be maintained in a naturally vegetated and unaltered state;
 - 4) Any area designated as a floodway on the most recently adopted flood insurance rate map for the County shall be maintained in a naturally vegetated and unaltered state;
 - 5) Any area designated as a special flood hazard area inundated by the 100-year flood on the most recently adopted flood insurance rate map for the County shall be designated as open space on any plat for a [Level 1](#) or [Level 2](#) major subdivision. It shall not be necessary that it be maintained in a naturally vegetated and unaltered state except as required by subsection 4) of this section.
 - 6) Any other suitable protective strips deemed necessary by the Planning Director shall be protected.
 - (ii) The Planning Director and/or his/her designee, as a condition for plat approval, may make such requirements as are reasonable for the protection of such areas, including the following:
 - 1) The Planning Director may require that streets and/or parkways shall border such areas, setting them apart from residential or other intensive uses; or
 - 2) The Planning Director may require that all or part of such area shall be platted as part of residential or other lots.
 - (iii) In making decisions concerning such requirements, the Planning Director shall consider topography, drainage patterns, soil types, character of existing and potential upland uses, ground cover, erosion control requirements, character of the area to be protected, the adequacy of proposed filter areas, and the like.
 - (iv) The development area for any lot shall be delineated on subdivision plats. Those areas described in Section(b)(i) above shall not be included in the area of any lot intended for development and shall be set aside for the common use and enjoyment of occupants of the subdivision, and arrangements for maintenance by a property owners' association, management

group or other acceptable arrangement shall be made. These areas shall be designated for permanent protection on the subdivision plat and recorded deeds, with appropriate recorded deed restrictions for the use and protection of these areas stipulated, and all management responsibilities set forth in property owners' association bylaws or other appropriate and binding documents for the development.

- (c) *Changes in Location or Extent of Significant Natural Waterways and Water Areas.* The Planning Director may approve plats depicting changes in the location or extent of significant natural waterways and/or water areas only in the following circumstances:
 - (i) When necessary to accommodate unavoidable vehicular or pedestrian crossings;
 - (ii) When such changes will not adversely affect desirable ecological conditions, drainage or water retention or result in undesirable location or amount of upstream impoundment or downstream discharge; and
 - (iii) The subdivider has obtained all necessary state and federal permits.
 - (iv) No-rise certifications shall be required where regulatory floodways are concerned.
- (d) *Minor Incursion for Recreational Purposes.* Minor incursions into areas protected under this section may be permitted for the purpose of providing pedestrian and bicycle access for passive recreational activities. Such incursions shall be permitted only if shown on the preliminary and final plats and approved by the Planning Director.

Sec. 4.11 - Required certifications.

- (a) Certifications are required per North Carolina General Statutes.

Sec. 4.12- Variances and Appeals

- (a) Variance requests will be in processed per Section 3.7.20.
- (b) Appeals to the Administrator's decision will be processed per 3.7.2.

Sec. 4.12-13 - Reserved—Mixed use multifamily subdivision.

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