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ARTICLE 4 GENERAL REQUIREMENTS AND MINIMUM DESIGN STANDARDS

The Planning Commission, in considering an application for the subdivision of land, shall be guided by the policy consideration specified in Article 1, Section 1.400 of these Subdivision Regulations and the following general requirements and principles of designing subdivisions.

Section 4.100 General Location & Site Requirements

Land proposed for subdivision shall be of suitable characteristics. The following are specific cases where the land shall be considered unsuitable and the Planning Commission act accordingly.

The Planning Commission shall designate other lands as unsuitable for subdivision if such subdivision is incompatible with the Comprehensive Plan or otherwise incompatible health, safety or welfare of the development.

4.101 Land Subject to Flooding

Land subject to flooding shall not be platted for residential use or for any other use which may increase the danger to health, life, or property or aggravate erosion or flood hazards.

Such land within the subdivision shall be set aside on the plat for such uses as will not be endangered by periodic or occasional inundation or will not result in conditions contrary to the public welfare. To insure that lots will be located only where they will provide flood-free house sites, the Planning Commission may require the subdivider to provide elevation and flood profiles sufficient to demonstrate that the house sites will be completely free from the danger of flooding. The floor elevations of houses shall be high enough to be well above the floodplain as defined in Section 7.400. Fill may not be used to raise the land in the Floodplain areas except where express permission has been granted by the appropriate governing authority.

4.102 Land of Unsuitable Topography, Soil & Other

If the Planning Commission finds that land proposed to be subdivided is unsuitable for subdivision development due to bad drainage, steep slopes, rock formations, and other such conditions as may increase the danger to health, life, or property or aggravate erosion or flood hazards; and, if from adequate investigations conducted by all the public agencies concerned it has been determined that in the best interest of the public, the land should not be platted and developed for the purpose proposed, the Planning Commission shall not approve the land for subdivision unless adequate methods are formulated by the

subdivider for meeting the problems that will be created by the subdivision and development of the land.

4.103 Areas Premature for Development

The Planning Commission may refuse to approve what it considers to be scattered or premature subdivision of land which would involve danger or injury to the public health, safety, welfare, or prosperity by reason of lack of adequate water supply, adequate fire protection, proper drainage, adequate roads and lack of public sewers in the Urban Service Area of the two (2) mile distance from the respective corporate limits of the City of Simpsonville and City of Shelbyville or public services; or which would necessitate an excessive expenditure of public funds for the supply of such services such as undue maintenance costs for adequate roads.

4.104 Preservation of Existing Community Assets

In all subdivisions, due regard shall be given for historical elements or natural features which add attractiveness and value to the subdivision and the community. Included in such features are large trees, unusual rock formations, and watercourses. The Planning Commission may prepare a list of all such features within its area of jurisdiction which it deems worthy of preservation.

4.105 Conformity with Adopted Policies

A proposed subdivision shall conform in general the Statement of Objectives, and the Comprehensive Plan.

Section 4.200 Streets

4.201 Conformity with the Comprehensive Plan, Street System and Official Map

The width and locations of all streets in a proposed subdivision shall conform with the street system as included in the Comprehensive Plan.

4.202 Relation to Topography

Streets shall be related to topography in their design in order to produce most usable building sites, whenever possible at or above the grades of the streets; to provide proper drainage for storm water; and to produce proper grades and curbs as required by these Subdivision Regulations.

4.203 Continuation of Streets into Adjacent Property

Streets shall be arranged to provide for the continuation of principal streets between adjacent properties where such continuation is necessary for convenient movement of traffic, effective fire protection, and efficient provision of utilities, and particularly where such continuation is in accordance with the Comprehensive Plan. If the adjacent property is undeveloped and the street must be a dead-end street temporarily, the right-of-way and improvements shall be extended to the property line. A temporary circular turnaround of a minimum of twenty-five (25) feet in radius or larger to accommodate a school bus, or as an classification street and centered with the street's centerline, shall be provided on all temporary dead-end streets, with the notation on the plat that any land used for the above purpose outside the street right-of-way shall revert to abutters whenever the street is continued. The street system for the proposed subdivision shall provide for extending existing streets at the same or greater width, but in no case shall a street extension be of a lesser width than the minimum width required in these regulations for a street in its category.

4.204 Right-of-Ways and Minimum Design Standards

Right-of-ways to be dedicated for new streets measured from the lot line to the opposite lot line shall be in conformity with the Comprehensive Plan and its major thoroughfare plan and where not specified shall meet the following standards which, in addition to the right-of-way widths includes requirements for minimum horizontal and vertical curves, maximum and minimum grades, and minimum sight distances. (See standards in Section 4.206 on following pages).

The 50' right-of-way will be maintained with the developer showing on his plans a easement for the county to ingress and egress adequate for maintenance when the construction limits exceed the 50' right-of-way that is dedicated.

4.205 Permanent Dead-End Streets

Where a street is designed so as to have one end permanently closed, it shall not be longer than one thousand (1,000) feet for greater traffic convenience and effective police and fire protection, and shall have at its closed end a circular turnaround with a minimum pavement of fifty (50) feet radius. Such dead-end street shall not come closer than one hundred (100) feet from the boundary of a subdivision if its continuation is not needed for access to adjoining property. The Planning Commission may require the reservation of a twenty (20) foot wide easement between the end of the proposed dead-end street and an adjacent piece of property to accommodate pedestrian traffic or utilities.

In the City of Shelbyville and the City of Simpsonville the minimum width of pavement in a cul-de-sac that has a center island should by twenty-four (24) feet of pavement radius.

4.206 Street Design Standards

SPECIFICATIONS FOR NEW ROADS BUILT IN SHELBY COUNTY, KENTUCKY

RESIDENTIAL AND SUBDIVISION:

Right-of-way	50 feet
Roadway width	26 feet
	18 feet - Dead end less than 500 feet
Roadway pavement thickness	8 inches DGA
	2 inches Asphalt Base
	1 1/2 inches Class I Surface

Entrance pipe - Corrugated metal, minimum 28 feet long, 15 inches diameter.

COMMERCIAL AND INDUSTRIAL:

Right-of-way	50 feet
Roadway width	26 feet
Roadway pavement thickness	9 inches DGA
	5 inches Asphalt Base
	1 1/2 inches Class I Surface

Entrance pipe - Corrugated metal, minimum 28 feet long, 15 inches diameter.

Street Classifications: FOR THE CITY OF SHELBYVILLE

Minimum width of right-of-way in feet:

Arterial	Collector & Secondary	Minor	Marginal Access & Cul-de-sacs	Alleys
80'	60'	50'	50'	20'

Minimum width of pavement in feet:

Arterial	Collector & Secondary	Minor	Marginal Access & Cul-de-sacs	Alleys
40 + C&G	36 + C&G	26' + C&G in R-3, R-4 & Commercial 24 + C&G in R-1 and R-2 26 No C&G in Industrial	18 + C&G	16' + C&G

Minimum radius of horizontal curves in feet:

Arterial	Collector & Secondary	Minor	Marginal Access & Cul-de-sacs	Alleys
400'	300'	100' except for street intersection corners	---	---

Minimum length of vertical curves as measured from center line of right-of-way in feet:

Arterial	Collector & Secondary	Minor	Marginal Access & Cul-de-sacs	Alleys
200' except not less than 50' for each 1% algebraic difference of grade	200' but not less than 50' for each 1% algebraic difference of grade	100' but not less than 25' for crest curve for each 1% algebraic difference of grade	80'	80'

Maximum length of tangents between reverse curves in feet:

Arterial	Collector & Secondary	Minor	Marginal Access & Cul-de-sacs	Alleys
300'	200'	100' except where excessive grades may be reduced to reasonable grades by shortening tangent	50'	50'

Curbs and gutters shall be required.

Sidewalks shall be required in Residential and Commercial. However, subdivisions exceeding two (2) acres in size with 200 feet minimum road frontage may be excepted from this provision by the Planning Commission.

Streetlights shall be provided in all types of subdivision.

Street Classifications: FOR THE CITY OF SIMPSONVILLE

Minimum width of right-of-way in feet:

Arterial	Collector & Secondary	Minor	Marginal Access & Cul-de-sacs	Alleys
80'	60'	50'	50'	20'

Minimum width of pavement in feet:

Arterial	Collector & Secondary	Minor	Marginal Access & Cul-de-sacs	Alleys
40' + 2' C&G	36' + 2' C&G	26' + 2' C&G in R-1, R-2, R-3, R-4 & Commercial 26' No C&G in Industrial No On-Street Parking	26' + 2' C&G No On-Street Parking	16' + 2' C&G

Minimum radius of horizontal curves in feet:

Arterial	Collector & Secondary	Minor	Marginal Access & Cul-de-sacs	Alleys
400'	300'	100' except for street intersection corners	---	---

Minimum length of vertical curves as measured from center line of right-of-way in feet:

Arterial	Collector & Secondary	Minor	Marginal Access & Cul-de-sacs	Alleys
200' except not less than 50' for each 1% algebraic difference of grade	200' but not less than 50' for each 1% algebraic difference of grade	100' but not less than 25' for crest curve for each 1% algebraic difference of grade	80'	80'

Maximum length of tangents between reverse curves in feet:

Arterial	Collector & Secondary	Minor	Marginal Access & Cul-de-sacs	Alleys
300'	200'	100' except where excessive grades may be reduced to reasonable grades by shortening tangent	50'	50'

Existing Streets

Sufficient right-of-way, consistent Street Design Standards in Section 4.204, shall be dedicated along any existing street along which a subdivision is proposed.

Sidewalks

Sidewalks, curbs and gutters are required in all major residential subdivisions. However, subdivisions exceeding two (2) acres in size with 200 feet of minimum road frontage may be excepted from this provision by the Planning Commission.

Utilities

Underground utilities are to be required within the boundaries of all residential subdivisions. This provision applies to distribution lines in a subdivision, however, excludes major transmission lines.

Street Lighting

Adequate street lighting shall be provided in all types of subdivisions.

4.207 Existing Streets, Realignment or Widening

Where a subdivision is proposed along an existing street, a street indicated for widening or realignment half of the additional width needed to bring existing right-of-way to the required right-of-way will be dedicated by the property on each side of the existing street as it is proposed for subdivision. Such areas shall be shown and marked on the Subdivision Plat "Reserved for Street Alignment (or Widening) Purposes."

Simpsonville:

Sufficient right-of-way, consistent Street Design Standards in Section 4.204, shall be dedicated along any existing street along which a subdivision is proposed.

4.208 Increased Right-of-Way

If extraordinary physical conditions render, it impractical for a subdivision in an area zoned commercial to provide for the required parking by the Zoning Regulations, the Planning Commission may require the right-of-way be increased ten (10) feet, for the side of the street where the subdivision is proposed.

4.209 Hazardous or Conflicting Conditions

When a proposed subdivision contains or is adjacent to an existing or proposed arterial street, right-of-ways, railroad right-of-ways, or conflicting detrimental or hazardous land uses, the Planning Commission may require marginal access streets, reverse frontage lots, lots with rear service alleys, lots with additional depth, or other measures which may be necessary for protection of abutting properties and the maintenance or function of major traffic arteries.

4.210 Street Intersections

Street intersections shall not involve more than four (4) street approaches, merging lanes and acceleration lanes considered parts of one street approach. Within forty (40) feet measured for each street from the closest intersection of right-of-way lines, such streets shall intersect as much as possible at a ninety (90) degree angle, and in no case shall the angle be less than seventy-five (75) degrees. No cross intersections of center lines of other than minor or marginal

access streets shall be closer than eight hundred (800) feet apart, unless the Planning Commission deems it unrealistic under extraordinary physical conditions. Offset intersection of center lines shall not be closer than one-hundred and fifty (150) feet. Except in a City Central Business District, and unless extraordinary physical conditions necessitate a retaining wall to be approved by the Planning Commission, within the triangular area formed at corners by the intersecting street centerlines, for a distance of ninety (90) feet on each from their point of intersection, and the diagonal connecting the end points of the these lines, visibility for traffic safety shall be provided, and by excavating if necessary. Nothing in the way of fences, walls, hedges, or other landscaping, shall be permitted to obstruct such visibility for a height of ten (10) feet. Grades at street intersections shall be limited on two percent (2%) for a distance of seventy-five (75) feet from the intersection of the centerlines. All street intersection corners shall be rounded by curves of radii of at least twenty-five (25) feet.

4.211 Street Names

Subdivision streets shall be identified by proposed names. In case of proposed streets which are clearly aligned with existing streets, these new streets shall bear the name of the existing street. In no other case shall the names of the proposed streets duplicate or be phonetically similar to an existing street name irrespective of the use of a different suffix, such as street, avenue, boulevard, driveway, place, court or other.

4.212 Private Roads

Private roads are prohibited except for Planned Unit Developments i.e. shopping centers, multi-family developments, etc. that shall require the approval of the City Engineer or the County Road Engineer.

Section 4.300 Lots

4.301 Arrangement in Relation to Street

The arrangement of lots shall be such that there will be no foreseeable difficulties, for reasons of topography or other conditions, in locating a building on each lot and in providing access to building on such lots from an approved street. All lots shall front on a public street and, without invalidating any of the provisions of the Shelby County Zoning Regulations, such frontage will extend a minimum of fifty (50) feet except for lots which front on turnarounds for permanent dead-end streets or on curves of a minimum radius of one hundred (100) feet which shall be allowed a minimum of fifty (50) feet. In no case, however, shall the width of the lot at the building line be less than sixty (60) feet.

4.302 Lot Dimensions and Area

Lot dimensions and area shall conform to the applicable requirements of the Shelby County Zoning Regulations. But no lot shall have a depth in excess of four (4) times its width at the building line. Depth shall be measured from the front lot line.

4.303 Access to Lots

Lots shall have their primary access only from an approved street in accordance with these regulations and specifically Section 4.302 and Article 5. All points of access from an arterial street shall be approved by the Planning Commission, which may require that several such lots be served by a combined marginal access street in order to limit possible traffic hazards on such street. In no case shall access to a lot be closer than one hundred and twenty-five (125) feet from an intersection with an arterial street. If access to a lot is from a collector or a marginal access street, a distance of no less than seventy-five (75) feet from an intersection shall be free from such access. If access to a lot is from a minor street, a distance of not less than fifty (50) feet shall be free from such access. In all cases, if a lot abuts an intersection of two classes of streets, access shall be from the lower class of street. Alleys shall not be deemed as streets to provide primary access for any use. Where a watercourse separates the buildable area of a lot from the access street, provision shall be made for the installation of a culvert or other structure of a design approved by the designated engineer or authorized person.

In the City of Shelbyville and the City of Simpsonville a minimum 18 foot width driveway shall be required so that two (2) vehicles can park off street, side by side.

Section 4.400 Blocks

4.401 Block Lengths

For greater traffic convenience and police and fire protection, block lengths shall not exceed twelve hundred (1,200) feet, except when the Planning Commission deems it impractical or necessary to allow otherwise to secure efficient use of land under extraordinary physical conditions, in which case the Planning Commission may require the reservation through the block of a ten (10) foot wide easement to accommodate utilities, pedestrian traffic, or safety measures.

4.402 Block Width

Generally, blocks shall be at least twice the minimum lot depth allowing two (2) tiers of lots. However, where extraordinary physical conditions exist, or where lots might otherwise front on an arterial street, the Planning Commission may approve a single tier of lots of minimum depths.

Section 4.500 Building Lines

4.501 Building Setback Lines

The building setback line shall comply with the requirements of the Shelby County Zoning Regulations. Except in a Central Business District zone and where no zoning specifies a building setback line, such line shall follow the established setback line of established adjoining properties, or their average if they vary; otherwise, it shall be no less than twenty-five (25) feet from the street right-of-way line, other than State Highway where it shall be no less than one hundred (100) feet from the center line. While buildings shall be generally built on the established building setback line, with the approval of the Planning Commission recorded on the final plat, buildings in residential areas may be setback further provided that the privacy of homes and yards involved is maintained.

4.502 Yard Requirements

Yard requirements for residential subdivisions or portions thereof, shall be in accordance with the requirement of the *Shelby County Zoning Regulations*.

Section 4.600 Easements

Easements on adjoining properties shall connect as deemed necessary.

4.601 Utility Easements

Where topography or other conditions are such as to make impractical the inclusion of utilities or drainage facilities within the street right-of-way, perpetual unobstructed easements at least twelve (12) feet in width or as approved by the utility company for poles, wires, conduits, storm sewers, sanitary sewers, gas mains, water mains or other utilities shall be provided across property outside the street right-of-way lines and with satisfactory access to the street. The Planning Commission may require such easement to be centered along all rear lot lines; as well as along side lot lines where is deemed necessary by the Planning Commission.

4.602 Drainage Easements

If a perennial blue line stream flows through or is adjacent to the proposed subdivision, the plat plan shall provide for an easement for a floodway at least seventy-five (75) feet measured on each side from the thread of the watercourse. The floodway easement shall provide for future improvement of the stream channel as adjacent areas become more developed and runoff rates increase.

4.603 Easements for Pedestrian Access

The Planning Commission may require, in order to facilitate pedestrian access from streets to schools, parks, playgrounds, or other nearby streets, a perpetual unobstructed easement at least twenty (20) feet in width.

Section 4.700 Reservation of Acreage for Community Facilities

The subdivider shall consider, and the Commission shall take into account during its review of the Preliminary Layout, in the light of the Comprehensive Plan and the community facilities studies and standards included, the adequacy of existing or proposed community facilities which will serve the additional population to occupy the new housing in a proposed subdivision. Accordingly, and if deemed necessary, the subdivider shall provide or the Planning Commission shall require adequate, convenient and suitable acreage for community facilities generally and for parks, playgrounds, tot lots, open spaces, and schools specifically, as per the standards included in the Comprehensive Plan, to be dedicated or reserved as a condition precedent to approval of the Subdivision Plat.

Section 4.800 Soil Erosion and Sediment Control

4.801 Findings of Fact

The following findings of fact are made:

- a. Losses Resulting from Soil Erosion: Within Shelby County soil erosion from construction sites contributes to the impairment of the floodplain, increased road maintenance costs, clogging of storm sewers, degradation of land surfaces and streams, flooding, and dusty conditions when eroded material on streets dries; and
- b. Causes of Soil Erosion: Significant erosion results from rainfall and runoff over unprotected soil. Erosion is increased by intense rainfalls along slopes, steep slopes, and lack of adequate vegetative cover. These conditions are in part caused by or aggravated by improper construction, grading excavation which results in removal of natural ground cover without taking appropriate steps to control erosion problems.

4.802 Purposes And Objectives

The intent of this regulation is to:

- a. Reduce soil erosion in Shelby County; and
- b. Provide procedures for submission, review and approval of erosion control plans to be submitted with preliminary plats and development plans.

4.803 Scope Of Coverage

The following are included within the scope of this regulation.

- a. All persons submitting to the Commission a subdivision plan or a development plan of any type must include a note on the preliminary plan stating that no grading excavating, stripping, filling or other disturbance of the natural ground cover shall take place prior to approval of an erosion control plan. Where critical conditions exist on the subject property the Commission may require the developer to indicate on the preliminary plan the methods which will be used to comply with the regulation. An erosion control plan shall be submitted with the preliminary plan and shall be considered as a part of the required review document;
- b. Any person disturbing the natural ground cover in an area for which there is an approved erosion control plan shall conform to the requirements of such plan without exception;
- c. Exceptions

No separate erosion control plan shall be required for the following: (Each subsection of this section shall constitute a separate, independent exception)

- 1) Finished grading and excavation below finished grade:
 - a) For basements and footings of single-family or duplex residential structure;
 - b) For retaining walls;
 - c) For swimming pools;
 - d) For cemeteries for human or animal burial; and
 - e) For accessory structures related to single-family residences or duplex structures authorized by a valid zoning permit: provided the disturbed material or fill is handled in such a manner as to conform to the approved erosion control plan for the area or where no erosion control plan is in effect such work must be done in a manner which presents no significant erosion hazard.
- 2) An excavation or fill provided:
 - a) Is less than four (4) feet in vertical depth at its deepest point as measured from the natural ground;
 - b) Does not result in a total quantity of more than four hundred (400) cubic yards of material being removed from, deposited on or disturbed on any lot, parcel or subdivision thereof;

- c) Does not impair existing surface drainage, constitute a potential erosion hazard, or act as a source of sedimentation to any adjacent land or water course;
 - d) Has no final slopes steeper than one (1) foot vertical in three (3) feet horizontal;
 - e) Has proper vegetative cover re-established as soon as possible on all disturbed areas; and
 - f) Has no fill places on a surface having a slope steeper than five (5) feet horizontal to one (1) foot vertical.
- 3) Accepted agricultural land management practices such as plowing, cultivation, construction of agricultural structures nursery operations such as the removal and/or transplanting of cultivated sod, shrubs, and trees, tree cuttings at or above existing ground level, and logging operations leaving the stump, ground cover and root mat intact.
- 4) Grading as a maintenance measure, or for landscaping purposes on existing developed lots or parcels, provided:
- a) The aggregate area(s) affected, or stripped at any one time does not exceed 10,000 square feet, and is not within a natural drainage way (i.e. designated flood plain);
 - b) The grade change does not exceed eighteen (18) inches at any point and does not alter the drainage pattern;
 - c) Proper vegetative cover is re-established as soon as possible on all disturbed areas; and
 - d) The grading does not involve a quantity of material in excess of one hundred (100) cubic yards.
- 5) Installation of lateral sewer lines, telephone lines, electricity lines, gas lines or other public service facilities.

4.804 Procedures and Standards for Approving Soil Erosion Control Plans

- a. Administrative Procedure Applications for approval of erosion control plans shall be submitted to the Commission with a preliminary plat or development plan.
 - 1) The application shall contain the applicant's name and address and other relevant information requested. It shall contain a proposed erosion control plan containing the information required by Section 4.804(c). The plan shall be designed as suggested in the Kentucky Best Management Practices for Construction Activities (Natural Resource Conservation Service, Division of Conservation: Division of Water, Natural Resources and Environmental Protection Cabinet: or the U.S. Department of Agriculture). The plan must be also be

signed by the property owner or an authorized agent as well as a registered professional engineer or licensed landscape architect if submitted in association with a major subdivision plat or development plan.

- b. Contents of the Soil Erosion Plan For purposes of obtaining an approved erosion control plan or for coordination with a major subdivision plat or development plan, an erosion control plan containing the following information must be submitted:
- 1) The erosion control plan shall be drawn at scale of 1" = 100 feet (or less) indicating the site location as well as the adjacent properties and the identification of any structure or natural feature on the land adjacent to the site and within two hundred and fifty (250) feet which has a significant impact on drainage or silt controls.
 - 2) Property boundary bearings and distances for the site on which the work is to be performed.
 - 3) A soil survey or a description of the main soil types (available from the Shelby County Soil Conservation District).
 - 4) The anticipated time of exposure of each area prior to the completion of effective erosion and sediment control measures.
 - 5) Existing topography at contour intervals not exceeding five (5) feet.
 - 6) Proposed topography at contour intervals not exceeding two (2) feet.
 - 7) Location and identification of all site features (either man-made or natural) which have a significant impact on drainage or silt controls.
 - 8) Location and identification of any proposed additional structures or development on the site, except single-family and two-family residential structures and their accessory structures in a subdivision structures in a subdivision.
 - 9) Plans and specifications for all drainage provisions, retaining walls, cribbing, planting, anti-erosion devices or other protective devices (whether temporary or permanent) to be constructed in connection with, or as a part of the proposed work, together with a map showing the drainage area of land tributary to the site and a statement explaining the amount of estimated runoff used to determine the design characteristics of any drainage device. Upstream drainage must be considered and explained is any adverse effect is possible.

10) Plans for removal, re-contouring or other final disposition of sediment basins of other structural improvements or devices included in the plan.

11) If a sedimentation basin is required, it should be designed by a registered engineer in accordance with standard guidelines for detaining sedimentation.

c. Factors which shall be considered in Reviewing Applications:

- 1) The development should relate to the specific site conditions.
- 2) The plan should keep land grading and land disturbance to a minimum under the circumstances.
- 3) Both surface and storm water drainage systems should be integrated to accommodate the increased runoff during land grading.
- 4) To prevent soil erosion, existing temporary and future protective vegetative cover should be emphasized.
- 5) The plan shall coordinate grading operation and sediment control measures so as to minimize land exposure to erosion.
- 6) Sediment basins below high sediment producing areas should be planned, installed, and maintained as safety devices to catch and trap excessive sediment from the development site.
- 7) The plan should utilize available technology to keep soil erosion to a minimum level.

d. Special Conditions Attached to Plans

Upon consideration of the factors listed above and for the purposes of this regulation, conditions may be attached to the approval of erosion control plans. It is intended that these conditions be added to a plan for certain areas or problems to provide two basic results:

- 1) Temporary cover during the grading and development period.
- 2) Permanent grass and vegetal cover for the area.
- 3) Stabilization by means of mulching (non-vegetative materials).
- 4) Sodding the area subject to erosion.

- 5) Use of low-growing plants, vines, shrubs or other ground covers to stabilize sediment producing areas.
 - 6) Construction of diversionary channels and terraces across the slope.
 - 7) Construction of structures that will stabilize the grade in water channels.
 - 8) Construction of sediment basins shall be in accordance with the Soil Erosion and Sediment Control Guidelines for Shelby County so that failure of structure would not result in loss of life or interruption of use or service of public utilities.
 - 9) Use of grassed waterways for the safe disposal of runoff water.
 - 10) Staging development to avoid having large areas in an erosive condition at one time.
 - 11) Utilization of existing topography in planning development to minimize erosion, such as planning roadways parallel to contours.
 - 12) Leaving critical areas in an undisturbed condition of correction of critical areas which cause erosion hazard.
 - 13) Implementation of straw bales, and or silt checks, silt traps and silt fences.
- e. The Commission may submit the Plans to the Soil Conservation Field Office for review and comment.

4.805 Failure to Complete Work or Comply with Terms of Plan

In the event of failure to complete the work or failure to comply with all the requirements, conditions and terms of the plan, the Commission may order the stoppage of work which in its opinion contributes to or creates any dangerous condition(s) or which is not in compliance with the intent of this regulation: it may order such work as in its opinion, is necessary to eliminate any dangerous conditions, to leave the site in a safe condition, and to achieve compliance with the intent of this regulation; the Commission may instruct the Administrator to refuse to issue any additional zoning permits; and/or it may order work authorized by the plan or permit to be completed to a safe condition. The Developer shall continue to be firmly bound under the continuing obligation for the payment of all necessary costs and expenses that may be incurred or expended by the Commission or its consultants in causing the work to be done.

4.806 Violations and Penalties

- a. **Violations**
Whenever by the provisions of this regulation the performance of any act is required or the performance of any act is prohibited, a failure to comply with such provisions shall constitute a violation of this regulation.
- b. **Correction of Violations**
All violations shall be corrected within seven (7) calendar days after written notice issued by the Administrator. If the violation is not corrected within seven (7) days of the written notice, the Administrator may issue a stop use order to the violator to cease all work. The Commission may initiate prosecution in District Court or may refer the violation to the County Attorney which may initiate civil compliance procedures. Any recoverable cost of corrective action shall be in addition to fines imposed under penalty provisions of this regulation.

4.807 Definitions

- a. **Erosion**
The process by which the ground surface is worn away by the action of wind or water.
- b. **Excavation or Cut**
Any act by which soil or rock is cut into, dug, quarried, uncovered, removed, displaces or relocated, and shall include the conditions resulting there from.
- c. **Fill**
A deposit of soil, rock or other non-deteriorating material used by man, or to replace or supplement the original soil or sub-soil.
- d. **Grading**
Any stripping, excavating, filling, stockpiling of soil or any combination thereof, and shall include the land in its excavated or filled condition.
- e. **Natural Features**
Shall include but not limited to, existing water courses, soils, vegetation (including grasses, shrubs, legumes, etc.) and tree stands having trees five (5) inches or greater in diameter or fifteen (15) feet or greater in height, whichever is less.
- f. **Natural Ground Surface**
Any ground surface in its original state before any grading, excavation or filling, and shall be established by the road or street inspector and/or an engineer or landscape architect when there is any question of its location.

- g. Sediment
Any solid material, both mineral and organic that is in suspension, is being transported, or has been moved from its site or origin by air, water or gravity as a product of erosion.
- h. Slope
Any incline, exposed surface of a fill excavation or natural terrain.
- i. Soil
All earth material of whatever origin that overlies bedrock, and may includes the decomposed zone of bedrock which can be readily excavated by mechanical equipment.
- j. Stripping
Any activity which removes or significantly disturbs the vegetative surface cover including clearing and grubbing operations.

Section 4.850 Hydraulic Study/Analysis

The adverse effects of storm water being generated by new development in Shelby County has become a problem, which must be addressed.

In an effort to minimize the adverse effects of storm water generated by new developments the Triple S Planning and Zoning Commission, in its capacity to protect the public health, safety, comfort, and general welfare of the citizens of Shelby County, will require that all new developments have a hydraulic study/analysis completed before any approval is given by the Commission. This requirement will become effective May 1, 2002.

The hydraulic study/analysis shall be presented with the preliminary request and finalized for the final approval process. The hydraulic study/analysis shall be prepared by a licensed professional engineer, licensed in the Commonwealth of Kentucky. The study shall be certified by the engineer's signature and seal. The result of this study will be to certify that appropriate measures have been identified and taken to satisfy the requirement that no off-site or on-site property owner will suffer any water related damages as a result of new development constructed as designed in accordance with the study.

The standard to be used for determining water related damages or its impact is the 100-year storm frequency. The engineer shall certify that the peak runoff from any new development, which may also be a part of an existing or on going development, shall not be greater than the peak run off for a 100 year storm prior to the new development and that appropriate measures have been identified and taken to satisfy this requirement.

This certification shall be placed on the final plat of record, signed and sealed by the engineer.

A hydraulic study/analysis will not be required for agricultural tracts.

Adopted April 16, 2002
Triple S Planning Commission

Section 4.900 Open Space

4.901 Open Space Defined

Any parcel or area of land or water essentially unimproved and set aside, dedicated, designated or reserved for public or private use, enjoyment as well as the use and enjoyment of owners, occupants, and their guests, of land adjoining or neighboring such open spaces. Open space may include parks, commons, plazas, community green or lawn, landscaped buffers or other areas, decorative plantings, formal or informal gardens, pedestrian walkways or paths, and active or passive recreation areas (swimming pools, tennis courts, playgrounds, etc.). Open space shall not include streets, or any area within residential lots.

4.902 Development Requirements

The following requirements shall be met when designing a residential subdivision:

- 1) Developments exceeding twenty-five (25) lots or units shall provide a minimum of 1,000 square feet of land area for every lot or unit of maximum density based on the underlying zoning classification (see section 4.903 below for density calculations). Developments providing a minimum lot size of one (1) acre or more, or a minimum of one (1) unit per acre are exempt from this requirement.
- 2) Developments shall not be phased to avoid the minimum site size standards, which trigger these requirements.
- 3) Open space shall have a minimum contiguous area of 5,000 square feet, and each open space area within a development shall be a minimum dimension of fifty (50) feet in width and length.
- 4) No more than forty (40) percent of the required open space shall be located within floodplains, wetlands, steep slope areas (3:1 max. slope), utility easements, etc. The remaining sixty (60) percent of the required open space shall be buildable land.

- 5) At least five (5) percent of the buildable land shall be within one (1) formal open space classification. A minimum of fifty (50) percent of the perimeter shall be bounded by right-of-way or fronted by buildings. Formal open spaces are generally planned and structured areas that include formally designed landscaped plantings. Examples include squares, plazas & parks. Formal open spaces shall be centrally located, and when appropriate, terminate vistas, and visually align with one another as viewed along key street axes whenever practicable. Adjacent lots and buildings shall be oriented toward formal open spaces.



Good example of formal open space design.

- 6) A mechanism for the maintenance of said open space areas shall be provided in the protective covenants for the development.

4.903 Open Space Calculation

Open space shall be calculated by using the following methods:

- 1) Standard Density Calculation Determination

Acre = 43,560 square feet

MLS = Minimum Lot Size per zoning district

DUA = Dwelling Units per Acre

$$(43,560 / \text{MLS}) = \text{DUA}$$

Example: R-1 zoning district classification

$$(43,560 / 12,500) = 3.48 \text{ dwelling units per acre}$$

- 2) Permitted Gross Density Calculation

GLA = Gross Land Area

DUA = Dwelling Units per Acre

PGRU = Permitted Gross Residential Units/Lots

$$\text{GLA} \times \text{DUA} = \text{PGRU}$$

Example: 100 Acre Parcel (Gross Land Area)

R-1 zoning district allows 3.48 dwelling units per acre

$100 \times 3.48 = 348$ maximum dwelling units/lots allowed on a 100 acre parcel.

3) Open Space Calculation

PGRU = Permitted Gross Residential Units/Lots

OSU = Open Space per Unit

OS = Open Space

$$\text{PGRU} \times \text{OSU} = \text{OS}$$

Example: 348 x 1,000 square feet per unit = 348,000 square feet or
7.99 acres of open space (7.99%).